

February 1, 2021

Ms. Tanowa Troupe
Docketing Division
The Public Utilities Commission of Ohio
180 East Broad Street
Columbus, OH 43215-3793

Letter of Notification
Highland-Magellan No. 2 138 kV Transmission Line Project
Case No. 21-0015-EL-BLN
Supplemental Information

Dear Ms. Troupe:

Please find attached a supplemental wetland report for the above-mentioned Letter of Notification application filed on January 25, 2021.

Based on feedback from Norfolk Southern, a minor adjustment to the project's centerline at the railroad crossing was made. As shown on Exhibit 3 of the Letter of Notification, the adjustment of the transmission centerline requires an additional structure, proposed structure 19A, to be installed at the railroad crossing between proposed structures 19 and 20.

The area of proposed structure 19A was not part of the original wetland survey and therefore additional field assessments were conducted on January 22, 2021. Results of the 1.85-acre survey identified one wetland totaling 0.05-acre. The newly identified wetland will be avoided and will not be impacted as part of this project

If there are any questions concerning this matter, please contact me at 330-384-2526.

Sincerely,



Scott M. Humphrys
Transmission Siting Supervisor
Energy Delivery Transmission and Substation Design
FirstEnergy Service Company

Attachments

MAGELLAN CUSTOMER INTERCONNECT – HIGHLAND - MAGELLAN 138 KV TRANSMISSION LINE PROJECT

ADDENDUM WETLAND DELINEATION AND STREAM ASSESSMENT REPORT

Prepared for:
American Transmission Systems, Inc.
a FirstEnergy Company
76 South Main Street
Akron, Ohio 44308



525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

January 2021

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	METHODOLOGY	2
2.1	DELINEATION MANUALS	2
2.2	WINTER DELINEATION	2
3.0	RESULTS	3
3.1	WETLAND DELINEATION	3
3.1.1	Preliminary Soils Evaluation	3
3.1.2	National Wetland Inventory Map Review	4
3.1.3	Delineated Wetlands	4
3.1.4	Delineated Wetlands ORAM V5.0 Results	6
3.2	STREAM CROSSINGS	6
3.2.1	Qualitative Habitat Evaluation Index.....	6
3.2.2	Primary Headwater Habitat Evaluation Index	6
3.3	PONDS	6
4.0	SUMMARY	7
5.0	REFERENCES	8

TABLES

Number

- | | |
|---|--|
| 1 | Soil Map Units and Descriptions within the Magellan Customer Interconnect – Highland - Magellan Substation 138 kV Transmission Line Project Addendum Survey Area |
| 2 | Delineated Wetlands within the Magellan Customer Interconnect – Highland - Magellan Substation 138 kV Transmission Line Project Addendum Survey Area |

FIGURES

Number

- | | |
|---|--|
| 1 | Overview Map |
| 2 | Soil Map Unit and National Wetland Inventory Map |
| 3 | Wetland Delineation and Stream Assessment Map |

APPENDICES

Appendix

- | | |
|---|--|
| A | U.S. Army Corps of Engineers Data Forms – Upland Sample Points |
| B | Upland Sample Points and Site Photographs |
| C | U.S. Army Corps of Engineers Data Forms - Wetland Reference |
| D | OEPA Wetland ORAM Forms |
| E | Representative Wetland Photographs |

LIST OF ACRONYMS and ABBREVIATIONS

ATSI	American Transmission Systems, Inc.
DBH	Diameter at Breast Height
°F	Degree Fahrenheit
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
GPS	Global Positioning System
HHEI	Headwater Habitat Evaluation Index
IBI	Index of Biotic Integrity
KV	Kilovolts
NRCS	Natural Resources Conservation Service
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
PAB	Palustrine Aquatic Bed
PEM	Palustrine Emergent
PML	Palustrine Moss-Lichen
PFO	Palustrine Forested
PHWH	Primary Headwater Habitat
PSS	Palustrine Scrub/Shrub
PUB	Palustrine Unconsolidated Bottom
PUS	Palustrine Unconsolidated Shore
PRB	Palustrine Rock Bottom
QHEI	Qualitative Habitat Evaluation Index
ROW	Right-Of-Way
UPL	Upland
U.S.	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WWH	Warmwater Habitat

1.0 INTRODUCTION

American Transmission Systems, Inc. (ATSI), a FirstEnergy Company (FirstEnergy), is proposing to construct the Magellan Customer Interconnect – Highland - Magellan 138 kV Transmission Line near Lordstown, Trumbull County, Ohio. AECOM completed a wetland delineation and stream assessment for 4.48-miles of the proposed Highland-Magellan 138 kV Transmission Line and results of the field investigations were included within the *December 2020 - Magellan Customer Interconnect – Highland – Magellan 138kV Transmission Line Wetland and Stream Assessment Report* (December 2020 Report). Since the completion of this report, ATSI shifted their alignment and added one new structure (Structure 19A) to avoid a longitudinal crossing to an existing Norfolk Southern (NS) railroad. This Addendum Wetland Delineation and Stream Assessment Report for the Magellan Customer Interconnect – Highland-Magellan 138kV Transmission Line Project is associated with the 1.85-acre additional survey area (Addendum Survey Area) that includes results of the environmental survey located outside the survey area of the December 2020 Report. The Addendum Survey Area can be located on the United States Geological Survey (USGS) Warren, Ohio 7.5-minute series topographical quadrangles (National Geographic Society, 2013) and centroid coordinates are 41.1527, -80.8552 (Figure 1).

Land uses within the Addendum Survey Area include roadways, railroads, open land, and immature forested areas. The Addendum Survey Area is centered on hillside shoulder which generally drains to the north towards a NS railroad or south towards a commercial property. All drainage for the site eventually flows into unnamed tributaries (UNTs) of Mud Creek which discharge into Mud Creek and eventually to the Mahoning River in Ohio. Under the Ohio Administrative Code (OAC) Chapter 3745-1 aquatic life habitat use designation lists Mud Creek as Warmwater Habitat (WWH) (State of Ohio 2018). The UNTs of Mud Creek that are adjacent to the Addendum Survey Area drain into an assessed tributary of Mud Creek.

The watershed identified in the Project area is Mud Creek (Hydrologic Unit Code (HUC): 050301030602). According to the OEPA 2020 Ohio Integrated Water Quality Monitoring and Assessment, Mahoning River (upper) Watershed Report, the Mud Creek Watershed is listed as aquatic life and recreation impaired, and the use attainment for fish tissue is unknown. The recreational use of this watershed has been impacted by upstream loading of *Escherichia coli* bacteria (OEPA 2020).

As per the Section 401 Water Quality Certification (WQC) for Nationwide Permit and Stream Eligibility Web Map website (Ohio Environmental Protection Agency (OEPA)), the Addendum Survey Area is located within an Eligible area and impacts to streams, if required, could be authorized by the United States Army Corps of Engineers (USACE) under the Nationwide Permit Conditions.

2.0 METHODOLOGY

Prior to conducting field surveys, digital and published county Natural Resources Conservation Service (NRCS) soil surveys, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps, and USGS 7.5-minute topographic maps were reviewed as an exercise to identify the occurrence and location of wetland areas (Figure 2). The purpose of the field survey was to assess whether wetlands and other “waters of the U.S.” are present within the Addendum Survey Area, which consisted of a 1.85-acre area as displayed on Figures 2 and 3. AECOM completed the site assessment for the Addendum Survey Area on January 22, 2021 and complete methodology for the wetland delineation and stream assessment is provided within the December 2020 Report. However, a brief reference to the manuals utilized for this assessment is provided as Section 2.1 followed by methodologies for winter delineations as Section 2.2.

2.1 DELINEATION MANUALS

AECOM completed the wetland delineation in accordance with the USACE *1987 Wetland Delineation Manual (1987 Manual)* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) (Regional Supplement)* (USACE 2012). The classification of wetland habitats as palustrine emergent (PEM), palustrine forest (PFO), palustrine unconsolidated bottom (PUB), and palustrine scrub-shrub (PSS) were accomplished by adhering to the methodology within *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979) and vegetation was assigned an indicator status based on *2018 National Wetland Plant List* (Lichvar et al. 2016). Wetland areas were further assessed utilizing Ohio Environmental Protection Agency (OEPA) *Ohio Rapid Assessment Method for Wetlands v. 5.0 (ORAM)* to determine the relative ecological quality and level of disturbance of a particular wetland.

Stream assessments were conducted using the methods described in the OEPA’s *Methods for Assessing Habitat in Flowing Waters: Using OEPA’s Qualitative Habitat Evaluation Index* (Rankin 2006) and/or *Field Evaluation Manual for Ohio’s Primary Headwater Habitat Streams, Version 3* (Ohio EPA 2018).

2.2 WINTER DELINEATION

Due to seasonal conditions including outside of normal growing season, vegetation sampling for wetland delineation can be challenging when some plants are covered by snow, die back (dormancy) due to freezing temperature or other factors (USACE, 2012). The field assessment for the Addendum Survey Area was completed on January 22, 2021, which occurred outside of the normal growing season. As the vegetation identified during this assessment would be considered naturally problematic, the absence of one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology would indicate that the questionable area is likely a non-wetland unless soils and/or hydrology are also disturbed

or problematic. Where hydrology and/or hydric soils are present, the landscape position and recent precipitation events will be evaluated to determine if the hydrology would be frequently present within the wetland area. Additionally, identifiable characteristics on remnant vegetation such as leaf scars, buds, inflorescence, roots, and other unique features that would allow for positive identifications to the species level that would assist in the determination of boundary of a wetland area. If there is a presence of hydrology and/or hydric soils, the area will be presumed as a wetland or a second site visit may be warranted.

3.0 RESULTS

AECOM completed a wetland delineation and stream assessment for the Addendum Survey Area on January 22, 2021. The existing site and weather conditions displayed scattered patches of snow cover with a maximum of 0.25-inches of cover with most areas displaying exposed vegetation and/or ground cover. The Addendum Survey Area is centered along an existing gravel/grass road near the hilltop that slopes downward to the north and south. Based on current and past aerial imagery, the southern portion of the Addendum Survey Area was clear cut in the early 2000s and vegetation is naturally recovering from this disturbance.

The woody vegetation present at the site still had remnant identifiable characteristics including leaf scars, bark, and buds that allowed for accurate identification to the species level. However, herbaceous vegetation was mostly dormant and/or degraded to the point that identification of species was not possible in most cases. As a result, four areas were sampled that displayed potentially hydrophytic vegetation and only one of these areas, Wetland MCI-37, had the presence of hydric soils. The three upland areas include UPL-2021-01-22-BJM-001 through 003 and completed USACE Determination Data Forms are provided as Appendix A. Photographs of the upland sample points and representative site conditions are provided in Appendix B and photograph locations are provided on Figure 3.

Due to the presence of hydric soils, the Wetland MCI-37, was preliminary identified as a PFO wetland habitat until an additional site investigation during the growing season can be completed and the boundary of the wetland can be confirmed. This Wetland MCI-37 is discussed in the following sections. No streams and/or ponds were identified within the Addendum Survey Area.

3.1 WETLAND DELINEATION

3.1.1 Preliminary Soils Evaluation

According to the USDA/NRCS Web Soil Surveys of Trumbull County, Ohio (USDA NRCS 2018) and the NRCS Hydric Soils Lists of Ohio, two soil map units are located within the Addendum Project Area. One of these soil units, WbB, is listed as having hydric inclusions due to displaying hydric soils within a minor component of the soil map unit (USDA NRCS 2018). Table 1 provides a detailed overview of

all soil series and soil map units within the Addendum Survey Area. Soil map units located within the AECOM survey area are shown on Figure 2.

TABLE 1
SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE MAGELLAN CUSTOMER INTERCONNECT –
HIGHLAND - MAGELLAN 138 KV TRANSMISSION LINE PROJECT ADDENDUM SURVEY AREA

Soil Series ¹	Symbol ¹	Map Unit Description ¹	Topographic Setting ²	Hydric ³	Hydric Component (%)
Lordstown	LrC	Lordstown loam, 6 to 12 percent slopes	Hillsides on till plains	No	-
Wadsworth	WbB	Wadsworth silt loam, 2 to 6 percent slopes	Depressions	Yes*	Frenchtown (8%)

NOTES:

(1) Data sources include:

USDA. NRCS. 2018. Web Soil Survey. Available online at: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

USDA. NRCS. 2018. National Hydric Soils List by State. Available online at: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>

USDA. SCS. 1989. Soil Survey of Trumbull County, Ohio

(2) Web Soil Survey provides the Topographic Setting for each soil map unit.

(3) Soils that are identified as hydric with an asterisk represent soils with hydric inclusions within the identified topographic settings.

3.1.2 National Wetland Inventory Map Review

According to NWI maps of the Warren, Ohio quadrangles, the Addendum Survey Area does not contain any NWI mapped wetlands. NWI mapped wetlands adjacent to the Addendum Survey Area are displayed on Figure 2.

3.1.3 Delineated Wetlands

During the delineation, AECOM identified a total one PFO wetland habitat within the Addendum Survey Area. The locations and approximate extent of the wetland identified within the Addendum Survey Area is shown Figure 3. A detailed description of the wetland area is provided within the USACE wetland determination data and ORAM forms provided in Appendices C and D, respectively. Color photographs taken of the wetland habitat have been provided in Appendix E.

TABLE 2
DELINEATED WETLANDS WITHIN THE MAGELLAN CUSTOMER INTERCONNECT –
HIGHLAND - MAGELLAN 138 KV TRANSMISSION LINE PROJECT ADDENDUM SURVEY AREA

Wetland Name	Latitude	Longitude	Cowardin Classification ¹	NWI Classification	ORAM Score ²	ORAM Category ²	Acreage within Survey Area
Wetland MCI-37	41.152605	-80.855365	PFO	N/A	25	Category 1	0.05
Total: 25	PFO: 1						0.05

Cowardin Classification¹: PEM = palustrine emergent; PSS = Palustrine scrub/shrub, and PFO=palustrine forested

ORAM Category²: The Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms

3.1.4 Delineated Wetlands ORAM V5.0 Results

Within the Addendum Survey Area, one PFO wetland was classified as a Category 1 wetland. This wetland continues outside of the survey area and the estimated extent of the wetland boundary is included within the scoring boundary of the ORAM assessment provided in Appendix D. A summary of classification of this ORAM score has been provided below as well as in Table 2.

Category 1 Wetlands

Wetland MCI-37 was classified as a Category 1 wetland with a score of 25. The wetland exhibited very narrow upland buffers with very low and low intensity of the surrounding land use (e.g., 2nd growth forest, old field, shrubland, young second growth forest). The wetland displayed previous disturbances from stormwater input from adjacent roads/commercial properties and is likely only saturated seasonally from snow melt and/or other precipitation or runoff events. The wetland habitat exhibited moderately good development and is actively recovering from previous forest clearing, selective cutting, and shrub/sapling removal.

Category 2 Wetlands

No Category 2 wetlands were identified within the Project boundary.

Category 3 Wetlands

No Category 3 wetlands were identified within the Project boundary.

3.2 STREAM CROSSINGS

AECOM did not identify any streams within the Addendum Survey Area.

3.2.1 Qualitative Habitat Evaluation Index

No QHEI streams were identified within the Addendum Survey Area.

3.2.2 Primary Headwater Habitat Evaluation Index

No HHEI streams were identified within the Addendum Survey Area.

3.3 PONDS

No ponds were identified within the Addendum Survey Area.

4.0 SUMMARY

The wetland delineation and stream assessment for the Addendum Survey Area was completed on January 22, 2021 with the identification of one Category 1, PFO wetland, no streams, and/or ponds. Additionally, three upland data points and five photograph locations characterize the upland communities identified within the Addendum Survey Area. The Wetland MCI-37 originates in the survey area located south of Structure 19A and drains down a hillside and potentially connects directly to a wetland swale along the edge of the commercial property. The wetland swale continues outside of the survey area towards the east and west and eventually discharges into a UNT to Mud Creek. As a result, the Wetland MCI-37 would likely be considered by the USACE as a “Water of the U.S.” as per the updated June 22, 2020, Navigable Waters Protection Rule under the Clean Water Act (CWA). However, only the USACE through a jurisdictional determination could evaluate the resource as a “Water of the U.S.”.

Even though Wetland MCI-37 was identified outside of the growing season, the transect upland points (UPL-2021-01-22-002 and 003) represent that the wetland does not continue to the east and the boundary was established to exhibit a maximum or worst-case scenario. Furthermore, the northern boundary of the wetland originates at the start of the hillside and drains towards the south and does not extend into the proposed transmission line right-of-way. As the herbaceous vegetation was degraded and hydrology component could vary during seasonal snow melt and time of the year, AECOM recommends that a second site visit or re-verification be completed during seasonal conditions. If a re-verification is not possible due to time and/or property permission, AECOM recommends that the area established as Wetland MCI-37 be considered a PFO wetland.

The information contained in this wetland delineation report is for a survey area that may be much larger than the actual Project limits-of-disturbance; therefore, lengths and acreages listed in this report may not constitute the actual impacts of the Project defined in subsequent permit applications. If necessary, a separate report that identifies the actual Project impacts will be provided with agency submittals.

The field survey results presented herein apply to the existing and reasonably foreseeable site conditions at the time of our assessment. They cannot apply to site changes of which AECOM is unaware and has not had the opportunity to review. Changes in the condition of a property may occur with time due to natural processes or human impacts at the Project site or on adjacent properties. Changes in applicable standards may also occur as a result of legislation or the expansion of knowledge over time. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond the control of AECOM.

5.0 REFERENCES

- Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. Office of Biological Services, U.S. Fish and Wildlife Service, Washington, D.C.
- Environmental Laboratory. 1987. *U.S. Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station: Vicksburg, Mississippi.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2018. The National Wetland Plant List: 2016 wetland ratings. *Phytoneuron* 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X
- Mack, John J. 2001. *Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms*. *Ohio EPA Technical Report WET/2001-1*. Ohio Environmental Protection Agency, Division of Surface Water, 401/Wetland Ecology Unit, Columbus, Ohio.
- National Geographic Society. 2013. Seamless Layer 2013 (Topo Source: Seamless Digital Raster Graphic-N.P.S. Natural Physical Map & U.S.G.S. Topographic Map i-cubed USGS Quad(s): Newton Falls and Warren, Ohio).
- Ohio EPA. 2018. *Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams*. Version 3.0. Ohio EPA Division of Surface Water, Columbus, Ohio.
- Ohio EPA. 2017. All Counties, Cities, and Townships in Ohio. Grant of Clean Water Act Section 401 Water Quality Certification. Authorization of discharge of dredge or fill material to various waters of the State for the following Nationwide Permits as published in January 6, 2017, Federal Register (Volume 82, Number 4) O EPA ID Number 165184 Access at: <https://www.epa.ohio.gov/Portals/35/401/Final%20Signed%20401%20WQC%20NWP%202017.pdf>
- Ohio EPA. 2020. Integrated Water Quality Monitoring and Assessment Report. Accessed at <https://www.epa.ohio.gov/dsw/tmdl/OhioIntegratedReport#123145148-2018>
- Rankin, Edward T. 2006. *Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI)*. Ohio EPA Ecological Assessment Section, Division of Surface Water, Columbus, Ohio.
- State of Ohio. 2018. Ohio Administrative Code, Chapter 3745-1: Water Quality Standards. Ohio Environmental Protection Agency, Division of Surface Water, Columbus, Ohio. Accessed at https://www.epa.ohio.gov/dsw/rules/3745_1#use%20designations
- U.S. Army Corps of Engineers (USACE). 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J.R. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Department of Agriculture (USDA), Soil Conservation Service (SCS). 1989. Soil Survey of Trumbull County, Ohio.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2017. Web Soil Survey, Trumbull County, Ohio. Available online at:
<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2015. National Hydric Soils List.
<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>.

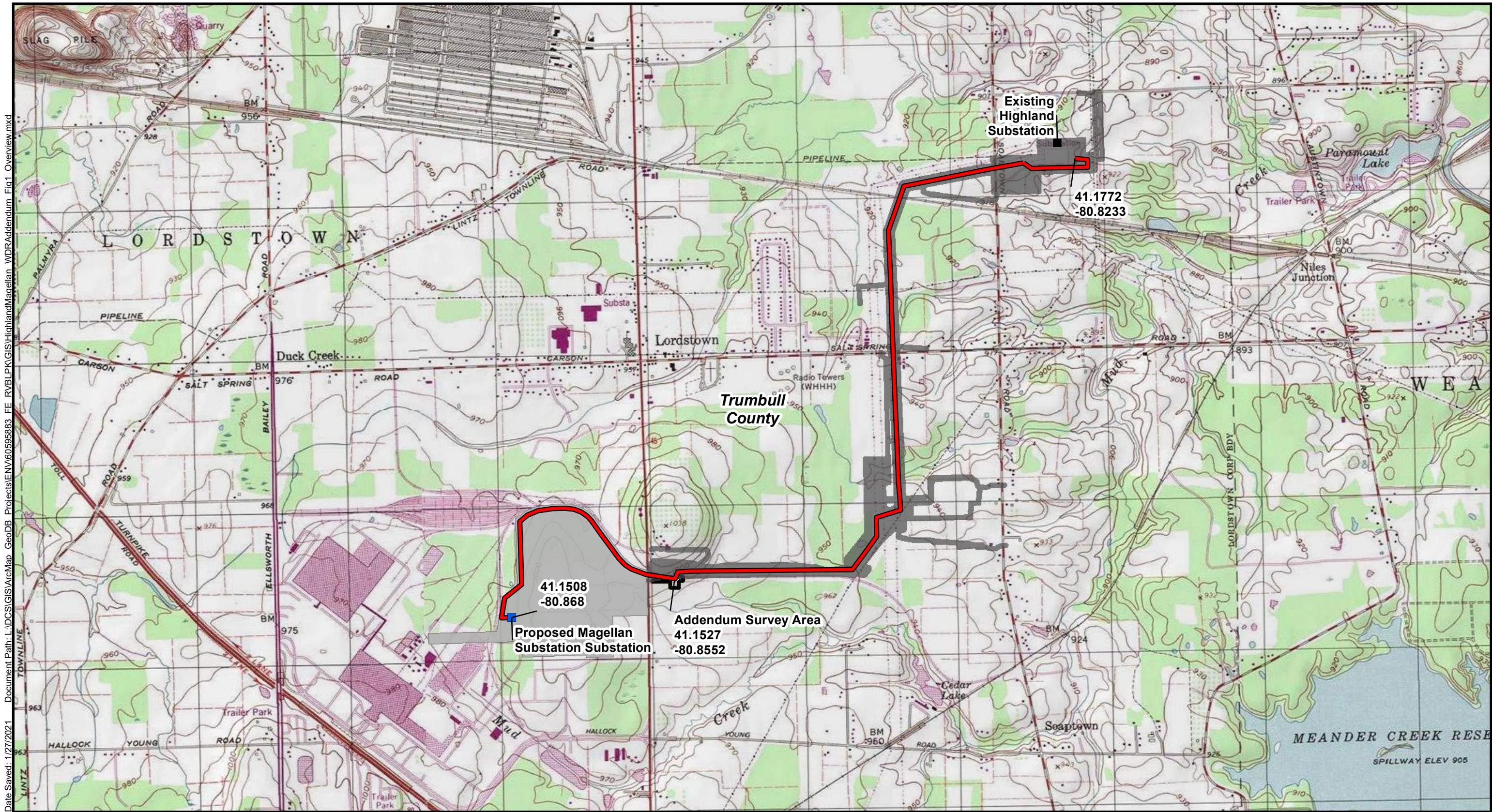
U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2017. National Weather Service- Wetland Climate Evaluation Database (WETS Table).
<http://www.wcc.nrcs.usda.gov/climate/wetlands.html>.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2019. Web Soil Survey (GIS Shapefile).
<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

United States Fish and Wildlife Service (USFWS). 2020. National Wetlands Inventory website. United States Department of the Interior, Fish and Wildlife Service, Washington, District of Columbia. Accessed at <http://www.fws.gov/wetlands>

FIGURES

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LEGEND

- Existing Substation
- Proposed Magellan Substation
- Proposed Highland-Magellan 138kV Transmission Line
- AECOM Survey Area (December 2020 - Wetland Delineation and Stream Assessment)
- AECOM Survey Area (Addendum Wetland Delineation and Stream Assessment)
- GM Motors, LLC (GM) Lordstown Battery Cell Plant Project Survey Area

0 0.5 1
Miles

BASE MAP SOURCE:
ArcGIS Online, USA Topo Maps

Trumbull County, OH

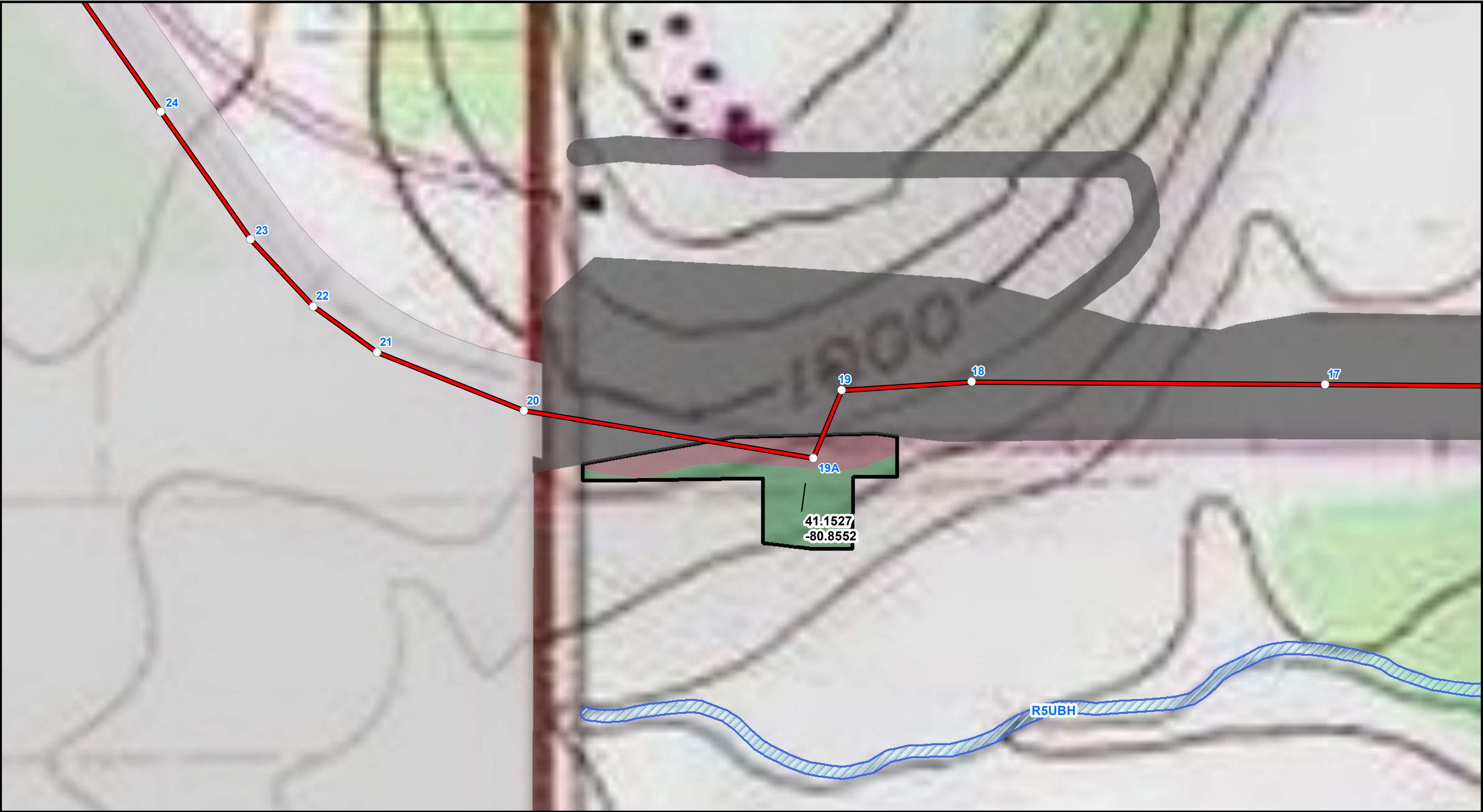
ATSI Highland-Magellan 138 kV
Transmission Line Project Addendum


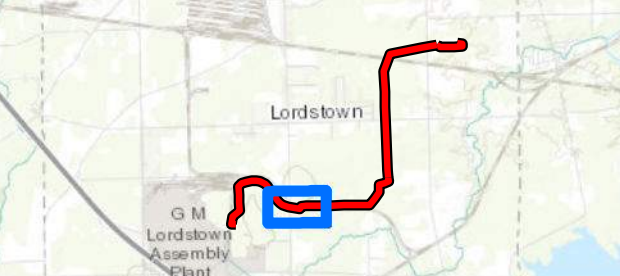









FIGURE 1
OVERVIEW MAP

JOB NO. 60630407

AECOM

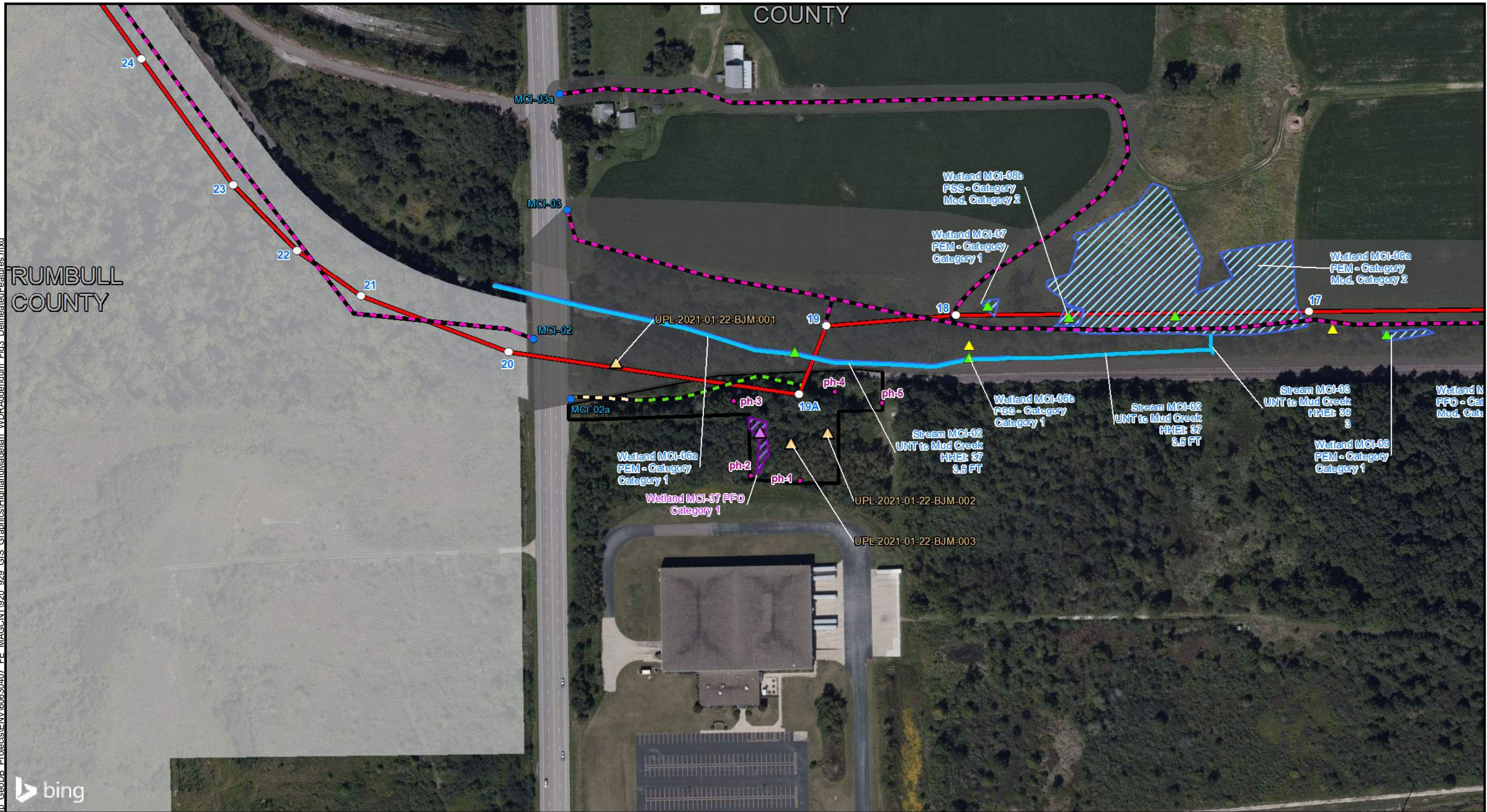
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LEGEND		 0 200 400 Feet		ATSI Highland-Magellan 138 kV Transmission Line Project Addendum
 Proposed Structure	 Existing Structure			
 GM Motors, LLC (GM) Lordstown Battery Cell Plant Project Survey Area	 AECOM Survey Area (December 2020 - Wetland Delineation and Stream Assessment)	 AECOM Survey Area (Addendum Wetland Delineation and Stream Assessment)	 WbB	FIGURE 2 SOIL MAP UNIT AND NATIONAL WETLAND INVENTORY MAP JOB NO. 60630407 
 MUSYM	 LrC			

BASE MAP SOURCE:
ArcGIS Online, USA Topo Maps

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LEGEND

December 2020 - Upland Data Point

Addendum Upland Data Point

December 2020 - Wetland Data Point

Addendum Wetland Data Point

Addendum Photograph Location (PH)

Existing Substation

Proposed Structure

Existing Structures

Existing Grass Access Road

Existing Gravel Access Road

Existing Paved Access Road

Proposed Temporary Access

Proposed Highland-Magellan 138kV Transmission Line

December 2020 - Delineated Stream (HHEI)

Access Entrance

Addendum Delineated Wetland

December 2020 - Delineated Wetland

GM Motors, LLC (GM) Lordstown Battery Cell Plant Project Survey Area

AECOM Survey Area (December 2020 - Wetland Delineation and Stream Assessment)

AECOM Survey Area (Addendum Wetland Delineation and Stream Assessment)

0 200 400

Feet

BASE MAP SOURCE:
ArcGIS Online, ESRI World Imagery (Clarity)



ATSI

Highland-Magellan 138 kV
Transmission Line Project Addendum

FIGURE 3

WETLAND DELINEATION AND
STREAM ASSESSMENT MAP

JOB NO. 60630407

AECOM

APPENDIX A
U.S. ARMY CORPS OF ENGINEERS DATA FORMS
UPLAND SAMPLE POINTS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Magellan Interconnect Project - Addendum
City/County: Trumbull
Sampling Date: 22-Jan-21
Applicant/Owner: FirstEnergy
State: Ohio
Sampling Point: UPL-2021-01-21-BJM-001
Investigator(s): Brian Miller
Section, Township, Range: S. T. 3N R. 4W
Landform (hillslope, terrace, etc.): Flat
Local relief (concave, convex, none): none
Slope: 1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR R
Lat.: 41.153066
Long.: -80.856553
Datum: NAD83
Soil Map Unit Name: Lordstown loam, 6 to 12 percent slopes
NWI classification: NA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐
Are Vegetation ☒ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: (Explain alternative procedures here or in a separate report.) The upland reference point (UPL-2021-01-21-BJM-001) is situated with the previous survey area of the December 2020 Report and documents an area that showed on aerial imagery as a difference of vegetation stratum than the surrounding area. As this difference in vegetation extends upslope and into the Addendum Survey Area, the sample point was collected to represent the conditions of this area at center of the area where the proposed transmission line centerline will be located. Based on past aerial imagery, this area was previously disturbed from grading activities and was previously exposed dirt/ground. The vegetation displayed a dominance Phalaris arundinacea but lacked hydric soils and indicators for wetland hydrology.	

Hydrology

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0 Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0 Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0 Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A			
Remarks: No primary and/or secondary wetland hydrology indicators were identified within the survey area.			

VEGETATION - Use scientific names of plants

Sampling Point: UPL-2021-01-21-BJM-001

Tree Stratum (Plot size: 30ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	0	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. _____	0	<input type="checkbox"/>	_____	
3. _____	0	<input type="checkbox"/>	_____	
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
6. _____	0	<input type="checkbox"/>	_____	
7. _____	0	<input type="checkbox"/>	_____	
Sapling/Shrub Stratum (Plot size: 15ft radius)		0 = Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>85</u> x 2 = <u>170</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>15</u> x 4 = <u>60</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>230</u> (B) Prevalence Index = B/A = <u>2.300</u>
1. _____	0	<input type="checkbox"/>	_____	
2. _____	0	<input type="checkbox"/>	_____	
3. _____	0	<input type="checkbox"/>	_____	
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
6. _____	0	<input type="checkbox"/>	_____	
Herb Stratum (Plot size: 5ft radius)		0 = Total Cover		Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <i>Phalaris arundinacea</i>	85	<input checked="" type="checkbox"/>	FACW	
2. <i>Arctium minus</i>	15	<input type="checkbox"/>	FACU	
3. _____	0	<input type="checkbox"/>	_____	
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
6. _____	0	<input type="checkbox"/>	_____	
7. _____	0	<input type="checkbox"/>	_____	
8. _____	0	<input type="checkbox"/>	_____	
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
11. _____	0	<input type="checkbox"/>	_____	
12. _____	0	<input type="checkbox"/>	_____	
Woody Vine Stratum (Plot size: _____)		100 = Total Cover		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 3.28 ft (1m) tall.. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.
1. _____	0	<input type="checkbox"/>	_____	
2. _____	0	<input type="checkbox"/>	_____	
3. _____	0	<input type="checkbox"/>	_____	
4. _____	0	<input type="checkbox"/>	_____	
		0 = Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>

Remarks: (Include photo numbers here or on a separate sheet.)
 See Appendix B of the Wetland Delineation and Stream Assessment Report for representative photographs of the habitat and soil profile. Due to delineations completed outside of the normal growing season, vegetation within the herbaceous stratum was not able to be fully identified. Based on past aerial imagery, the dominance of Phalaris arundinacea may be attributed to past earth disturbance within the area.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: UPL-2021-01-21-BJM-001

[illegible]

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Magellan Interconnect Project - Addendum **City/County:** Trumbull **Sampling Date:** 22-Jan-21
Applicant/Owner: FirstEnergy **State:** Ohio **Sampling Point:** UPL-2021-01-21-BJM-002
Investigator(s): Brian Miller **Section, Township, Range:** S. T. 3N R. 4W
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** none **Slope:** 1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR R **Lat.:** 41.152552 **Long.:** -80.854854 **Datum:** NAD83
Soil Map Unit Name: Wadsworth silt loam, 2 to 6 percent slopes **NWI classification:** NA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐
Are Vegetation ☒ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: (Explain alternative procedures here or in a separate report.) The upland reference point (UPL-2021-01-21-BJM-002) is situated on a south facing hillside located southeast of Structure 19A and at the same elevation as the Wetland MCI-37. The sample point is representing the immature forested area that is recovering from previous clear-cutting activities. The sample point is identified as an upland area due to the lack of all three wetland criteria.	

Hydrology

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0 Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0 Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0			
Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A			
Remarks: No primary and/or secondary wetland hydrology indicators were identified within the survey area.			

VEGETATION - Use scientific names of plants

Sampling Point: UPL-2021-01-21-BJM-002

Tree Stratum (Plot size: 30ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Tilia americana</i>	25	<input checked="" type="checkbox"/>	FACU	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>20.0%</u> (A/B)
2. <i>Quercus rubra</i>	10	<input checked="" type="checkbox"/>	FACU	
3. <i>Prunus serotina</i>	5	<input type="checkbox"/>	FACU	
4. <i>Acer rubrum</i>	5	<input type="checkbox"/>	FAC	
5. _____	0	<input type="checkbox"/>	_____	
6. _____	0	<input type="checkbox"/>	_____	
7. _____	0	<input type="checkbox"/>	_____	
Sapling/Shrub Stratum (Plot size: 15ft radius)		45 = Total Cover		Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>65</u> x 4 = <u>260</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>105</u> (A) <u>380</u> (B) Prevalence Index = B/A = <u>3.619</u>
1. <i>Acer rubrum</i>	35	<input checked="" type="checkbox"/>	FAC	
2. <i>Rubus allegheniensis</i>	15	<input checked="" type="checkbox"/>	FACU	
3. <i>Rosa multiflora</i>	5	<input type="checkbox"/>	FACU	
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
6. _____	0	<input type="checkbox"/>	_____	
Herb Stratum (Plot size: 5ft radius)		55 = Total Cover		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is > 50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <i>Galium aparine</i>	5	<input checked="" type="checkbox"/>	FACU	
2. _____	0	<input type="checkbox"/>	_____	
3. _____	0	<input type="checkbox"/>	_____	
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
6. _____	0	<input type="checkbox"/>	_____	
7. _____	0	<input type="checkbox"/>	_____	
8. _____	0	<input type="checkbox"/>	_____	
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
11. _____	0	<input type="checkbox"/>	_____	
12. _____	0	<input type="checkbox"/>	_____	
Woody Vine Stratum (Plot size: _____)		5 = Total Cover		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 3.28 ft (1m) tall.. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.
1. _____	0	<input type="checkbox"/>	_____	
2. _____	0	<input type="checkbox"/>	_____	
3. _____	0	<input type="checkbox"/>	_____	
4. _____	0	<input type="checkbox"/>	_____	
		0 = Total Cover		Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>

Remarks: (Include photo numbers here or on a separate sheet.)
 See Appendix B of the Wetland Delineation and Stream Assessment Report for representative photographs of the habitat and soil profile. Due to delineations completed outside of the normal growing season, vegetation within the herbaceous stratum was not able to be fully identified. Based on past aerial imagery, the area was previous clear cut and has naturally restored to an immature forest.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: UPL-2021-01-21-BJM-002

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

[illegible]

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck Mineral (S1)
 - ☐ Sandy Gleyed Matrix (S4)
 - ☐ Sandy Redox (S5)
 - ☐ Stripped Matrix (S6)
 - ☐ Dark Surface (S7) (LRR R, MLRA 149B)
 - ☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - ☐ Loamy Mucky Mineral (F1) LRR K, L)
 - ☐ Loamy Gleyed Matrix (F2)
 - ☐ Depleted Matrix (F3)
 - ☐ Redox Dark Surface (F6)
 - ☐ Depleted Dark Surface (F7)
 - ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils : ³

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Due to the absence of wetland hydrology, a dominance of hydrophytic vegetation, and lack of hydric soils, the upland reference point was not associated with a wetland habitat.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Magellan Interconnect Project - Addendum **City/County:** Trumbull **Sampling Date:** 22-Jan-21
Applicant/Owner: FirstEnergy **State:** Ohio **Sampling Point:** UPL-2021-01-21-BJM-003
Investigator(s): Brian Miller **Section, Township, Range:** S. T. 3N R. 4W
Landform (hillslope, terrace, etc.): Flat **Local relief (concave, convex, none):** none **Slope:** 1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR R **Lat.:** 41.152519 **Long.:** -80.855110 **Datum:** NAD83
Soil Map Unit Name: Wadsworth silt loam, 2 to 6 percent slopes **NWI classification:** NA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , **Soil** ☐ , **or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ☒ No ☐
Are Vegetation ☒ , **Soil** ☐ , **or Hydrology** ☐ **naturally problematic?** (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: (Explain alternative procedures here or in a separate report.) The upland reference point (UPL-2021-01-21-BJM-003) is situated on a south facing hillside located south of Structure 19A and between the Wetland MCI-37 and UPL-2021-01-21-BJM-002. The sample point is an upland representative to Wetland MCI-37 and is in an immature forested area that is recovering from previous clear-cutting activities. The sample point is identified as an upland area due to the absence of wetland hydrology and hydric soils.	

Hydrology

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0 Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0 Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0			
Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A			
Remarks: No primary and/or secondary wetland hydrology indicators were identified within the survey area.			

VEGETATION - Use scientific names of plants

Sampling Point: UPL-2021-01-21-BJM-003

Tree Stratum	(Plot size: 30ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Ulmus americana</i>		15	<input checked="" type="checkbox"/>	FACW
2. <i>Acer rubrum</i>		10	<input checked="" type="checkbox"/>	FAC
3. <i>Quercus rubra</i>		5	<input type="checkbox"/>	FACU
4. _____		0	<input type="checkbox"/>	
5. _____		0	<input type="checkbox"/>	
6. _____		0	<input type="checkbox"/>	
7. _____		0	<input type="checkbox"/>	
		30	= Total Cover	
Sapling/Shrub Stratum	(Plot size: 15ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Acer rubrum</i>		25	<input checked="" type="checkbox"/>	FAC
2. <i>Rubus allegheniensis</i>		20	<input checked="" type="checkbox"/>	FACU
3. _____		0	<input type="checkbox"/>	
4. _____		0	<input type="checkbox"/>	
5. _____		0	<input type="checkbox"/>	
6. _____		0	<input type="checkbox"/>	
7. _____		0	<input type="checkbox"/>	
		45	= Total Cover	
Herb Stratum	(Plot size: 5ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Microstegium vimineum</i>		25	<input checked="" type="checkbox"/>	FAC
2. <i>Galium aparine</i>		10	<input checked="" type="checkbox"/>	FACU
3. <i>Aster sp.</i>		2	<input type="checkbox"/>	
4. _____		0	<input type="checkbox"/>	
5. _____		0	<input type="checkbox"/>	
6. _____		0	<input type="checkbox"/>	
7. _____		0	<input type="checkbox"/>	
8. _____		0	<input type="checkbox"/>	
9. _____		0	<input type="checkbox"/>	
10. _____		0	<input type="checkbox"/>	
11. _____		0	<input type="checkbox"/>	
12. _____		0	<input type="checkbox"/>	
		37	= Total Cover	
Woody Vine Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____		0	<input type="checkbox"/>	
2. _____		0	<input type="checkbox"/>	
3. _____		0	<input type="checkbox"/>	
4. _____		0	<input type="checkbox"/>	
		0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>60</u>	x 3 = <u>180</u>
FACU species <u>35</u>	x 4 = <u>140</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>110</u> (A)	<u>350</u> (B)
Prevalence Index = B/A = <u>3.182</u>	

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☐ Prevalence Index is ≤3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

Woody vine - 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.)

See Appendix B of the Wetland Delineation and Stream Assessment Report for representative photographs of the habitat and soil profile. Due to delineations completed outside of the normal growing season, vegetation within the herbaceous stratum was not able to be fully identified. As a result, vegetation indicates that there is a potential for a dominance of hydrophytic vegetation, however; identification of the herbaceous during seasonal conditions species may indicate otherwise. Based on past aerial imagery, the area was previous clear cut and has naturally restored to an immature forest.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: UPL-2021-01-21-BJM-003

[illegible]

APPENDIX B

UPLAND SAMPLE POINTS AND SITE PHOTOGRAPHS

Client Name:

American Transmission Systems, Inc,
a FirstEnergy Company

Site Location:

Highland-Magellan 138 kV Transmission Line Project
Addendum

Project No.

60630407

Date:

01/22/2021

Description:

Facing North

Photograph:

1

Resource:

UPL-2021-01-
22-BJM-001

Upland sample
point displaying
disturbed open-
field

**Date:**

01/22/2021

Description:

Facing East

Photograph:

2

Resource:

UPL-2021-01-
22-BJM-001

Upland sample
point displaying
disturbed open-
field



Client Name:American Transmission Systems, Inc,
a FirstEnergy Company**Site Location:**Highland-Magellan 138 kV Transmission Line Project
Addendum**Project No.**

60630407

Date:

01/22/2021

Description:

Facing South

Photograph:

3

Resource:UPL-2021-01-
22-BJM-001Upland sample
point displaying
disturbed open-
field**Date:**

01/22/2021

Description:

Facing West

Photograph:

4

Resource:UPL-2021-01-
22-BJM-001Upland sample
point displaying
disturbed open-
field

Client Name:

American Transmission Systems, Inc,
a FirstEnergy Company

Site Location:

Highland-Magellan 138 kV Transmission Line Project
Addendum

Project No.

60630407

Date:

01/22/2021

Description:

Soil Profile

Photograph:

5

Resource:

UPL-2021-01-
22-BJM-001

Upland sample
point displaying
disturbed open-
field

**Date:**

01/22/2021

Description:

Facing North

Photograph:

6

Resource:

UPL-2021-01-
22-BJM-002

Upland sample
point displaying
immature forest.



Client Name:

American Transmission Systems, Inc,
a FirstEnergy Company

Site Location:

Highland-Magellan 138 kV Transmission Line Project
Addendum

Project No.

60630407

Date:

01/22/2021

Description:

Facing East

Photograph:

7

Resource:

UPL-2021-01-
22-BJM-002

Upland sample
point displaying
immature forest.

**Date:**

01/22/2021

Description:

Facing South

Photograph:

8

Resource:

UPL-2021-01-
22-BJM-002

Upland sample
point displaying
immature forest



Client Name:American Transmission Systems, Inc,
a FirstEnergy Company**Site Location:**Highland-Magellan 138 kV Transmission Line Project
Addendum**Project No.**

60630407

Date:

01/22/2021

Description:

Facing West

Photograph:

9

Resource:UPL-2021-01-
22-BJM-002Upland sample
point displaying
immature forest.**Date:**

01/22/2021

Description:

Soil Profile

Photograph:

10

Resource:UPL-2021-01-
22-BJM-002Upland sample
point displaying
immature forest

Client Name:

American Transmission Systems, Inc,
a FirstEnergy Company

Site Location:

Highland-Magellan 138 kV Transmission Line Project
Addendum

Project No.

60630407

Date:

01/22/2021

Description:

Facing North

Photograph:

11

Resource:

UPL-2021-01-
22-BJM-003

Upland sample
point displaying
immature forest

**Date:**

01/22/2021

Description:

Facing East

Photograph:

12

Resource:

UPL-2021-01-
22-BJM-003

Upland sample
point displaying
immature forest



Client Name:American Transmission Systems, Inc,
a FirstEnergy Company**Site Location:**Highland-Magellan 138 kV Transmission Line Project
Addendum**Project No.**

60630407

Date:

01/22/2021

Description:

Facing South

Photograph:

13

Resource:UPL-2021-01-
22-BJM-003Upland sample
point displaying
immature forest**Date:**

01/22/2021

Description:

Facing West

Photograph:

14

Resource:UPL-2021-01-
22-BJM-003Upland sample
point displaying
immature forest

Client Name:

American Transmission Systems, Inc,
a FirstEnergy Company

Site Location:

Highland-Magellan 138 kV Transmission Line Project
Addendum

Project No.

60630407

Date:

01/22/2021

Description:

Soil Profile

Photograph:

15

Resource:

UPL-2021-01-
22-BJM-003

Upland sample
point displaying
immature forest

**Date:**

01/22/2021

Description:

Facing North

Photograph:

16

Resource:

PH-1

Southern edge of
Addendum
Survey Area
located upslope
PEM swale.



Client Name:

American Transmission Systems, Inc,
a FirstEnergy Company

Site Location:

Highland-Magellan 138 kV Transmission Line Project
Addendum

Project No.

60630407

Date:

01/22/2021

Description:

Facing East

Photograph:

17

Resource:

PH-1

Southern edge of
Addendum
Survey Area
located upslope
PEM swale.

**Date:**

01/22/2021

Description:

Facing South

Photograph:

18

Resource:

PH-1

Southern edge of
Addendum
Survey Area
located upslope
PEM swale.



Client Name:American Transmission Systems, Inc,
a FirstEnergy Company**Site Location:**Highland-Magellan 138 kV Transmission Line Project
Addendum**Project No.**

60630407

Date:

01/22/2021

Description:

Facing West

Photograph:

19

Resource:

PH-1

Southern edge of
Addendum
Survey Area
located upslope
PEM swale.**Date:**

01/22/2021

Description:

Facing North

Photograph:

20

Resource:

PH-2

Southwestern
edge of
Addendum
Survey Area
located near
Wetland MCI-37

Client Name:American Transmission Systems, Inc,
a FirstEnergy Company**Site Location:**Highland-Magellan 138 kV Transmission Line Project
Addendum**Project No.**

60630407

Date:

01/22/2021

Description:

Facing East

Photograph:

21

Resource:

PH-2

Southernwestern
edge of
Addendum
Survey Area
located near
Wetland MCI-37**Date:**

01/22/2021

Description:

Facing South

Photograph:

22

Resource:

PH-2

Southernwestern
edge of
Addendum
Survey Area
located near
Wetland MCI-37

Client Name:

American Transmission Systems, Inc,
a FirstEnergy Company

Site Location:

Highland-Magellan 138 kV Transmission Line Project
Addendum

Project No.

60630407

Date:

01/22/2021

Description:

Facing West

Photograph:

23

Resource:

PH-2

Southernwestern
edge of
Addendum
Survey Area
located near
Wetland MCI-37

**Date:**

01/22/2021

Description:

Facing North

Photograph:

24

Resource:

PH-3

Located south of
existing grass
road in a
immature
forested
shoulder.



Client Name:

American Transmission Systems, Inc,
a FirstEnergy Company

Site Location:

Highland-Magellan 138 kV Transmission Line Project
Addendum

Project No.

60630407

Date:

01/22/2021

Description:

Facing East

Photograph:

25

Resource:

PH-3

Located south of
existing grass
road in a
immature
forested
shoulder.

**Date:**

01/22/2021

Description:

Facing South

Photograph:

26

Resource:

PH-3

Located south of
existing grass
road in a
immature
forested
shoulder.



Client Name:

American Transmission Systems, Inc,
a FirstEnergy Company

Site Location:

Highland-Magellan 138 kV Transmission Line Project
Addendum

Project No.

60630407

Date:

01/22/2021

Description:

Facing West

Photograph:

27

Resource:

PH-3

Located south of
existing grass
road in a
immature
forested
shoulder.

**Date:**

01/22/2021

Description:

Facing North

Photograph:

28

Resource:

PH-4

Located east of
Proposed
Structure 19A
and along an
existing
grass/dirt road.



Client Name:American Transmission Systems, Inc,
a FirstEnergy Company**Site Location:**Highland-Magellan 138 kV Transmission Line Project
Addendum**Project No.**

60630407

Date:

01/22/2021

Description:

Facing East

Photograph:

29

Resource:

PH-4

Located east of
Proposed
Structure 19A
and along an
existing
grass/dirt road.**Date:**

01/22/2021

Description:

Facing South

Photograph:

30

Resource:

PH-4

Located east of
Proposed
Structure 19A
and along an
existing
grass/dirt road.

Client Name:

American Transmission Systems, Inc,
a FirstEnergy Company

Site Location:

Highland-Magellan 138 kV Transmission Line Project
Addendum

Project No.

60630407

Date:

01/22/2021

Description:

Facing West

Photograph:

31

Resource:

PH-4

Located east of
Proposed
Structure 19A
and along an
existing
grass/dirt road.

**Date:**

01/22/2021

Description:

Facing North

Photograph:

32

Resource:

PH-5

Located Eastern
Edge of
Addendum
Study Area and
along an existing
underground
water line right-
of-way.



Client Name:American Transmission Systems, Inc,
a FirstEnergy Company**Site Location:**Highland-Magellan 138 kV Transmission Line Project
Addendum**Project No.**

60630407

Date:

01/22/2021

Description:

Facing East

Photograph:

33

Resource:

PH-5

Located Eastern
Edge of
Addendum
Study Area and
along an existing
underground
water line right-
of-way.**Date:**

01/22/2021

Description:

Facing South

Photograph:

34

Resource:

PH-5

Located Eastern
Edge of
Addendum
Study Area and
along an existing
underground
water line right-
of-way.



PHOTOGRAPHIC RECORD

Upland Sample Points and Site Photographs

Client Name:

American Transmission Systems, Inc,
a FirstEnergy Company

Site Location:

Highland-Magellan 138 kV Transmission Line Project
Addendum

Project No.

60630407

Date:

01/22/2021

Description:

Facing West

Photograph:

35

Resource:

PH-5

Located Eastern
Edge of
Addendum
Study Area and
along an existing
underground
water line right-
of-way.

**Date:****Description:****Photograph:****Resource:**

APPENDIX C
U.S. ARMY CORPS OF ENGINEERS DATA FORMS
WETLAND REFERENCE

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Magellan Interconnect Project - Addendum

City/County: Trumbull

Sampling Date: 22-Jan-21

Applicant/Owner: FirstEnergy

State: Ohio

Sampling Point:

Wetland MCI-37

Investigator(s): Brian Miller

Section, Township, Range: S.

T. 3N

R. 4W

Landform (hillslope, terrace, etc.): Flat

Local relief (concave, convex, none): concave

Slope: 1.0 % / 0.6 °

Subregion (LRR or MLRA): LRR R

Lat.: 41.152601

Long.: -80.855436

Datum: NAD83

Soil Map Unit Name: Wadsworth silt loam, 2 to 6 percent slopes

NWI classification: NA

Are climatic/hydrologic conditions on the site typical for this time of year?

Yes ☒ No ☐

(If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present?

Yes ☒ No ☐

Are Vegetation ☒ , Soil ☐ , or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="radio"/> No <input type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>		
Wetland Hydrology Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>		
Remarks: (Explain alternative procedures here or in a separate report.) <p>A PFO portion of a PFO/PEM wetland complex located on a south facing hillside that drains towards the south and into the PEM portion of the wetland located along the edge of a commercial property. The PEM portion of the wetland is located outside of the survey area and extents of the entire wetland complex was estimated based on aerial imagery. The PFO portion of the wetland identified within the Addendum Survey Area was characterized by the dominance of hydrophytic vegetation within the tree and shrub/sapling strata. Due to winter conditions, the herbaceous vegetation could not be fully identified to the species level and assumed that hydrophytic vegetation would be dominant for the stratum due to the identification of Japanese Silt Grass. The hydrologic conditions for the PFO portion of the wetland is associated with precipitation events and hillside runoff that collects in a slightly depressed area that drains towards a PEM drainage swale.</p>			

Hydrology

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (minimum of 2 required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input checked="" type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0 Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0 Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A			
Remarks: <p>The "Other" indicator was selected for an identification of wetland hydrology due to the delineations being completed outside of the normal growing season and there was the presence of hydric soils with a potential dominance of hydrophytic vegetation. Additionally, some of the woody saplings and/or trees within the sample area display the presence of buttress roots. It is likely that the wetland would display more hydrologic indicators during seasonal conditions.</p>			

VEGETATION - Use scientific names of plants

Sampling Point: Wetland MCI-37

Tree Stratum	(Plot size: 30ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Ulmus americana</i>		35	<input checked="" type="checkbox"/>	FACW
2. <i>Quercus rubra</i>		5	<input type="checkbox"/>	FACU
3. _____		0	<input type="checkbox"/>	
4. _____		0	<input type="checkbox"/>	
5. _____		0	<input type="checkbox"/>	
6. _____		0	<input type="checkbox"/>	
7. _____		0	<input type="checkbox"/>	
		40	= Total Cover	
Sapling/Shrub Stratum	(Plot size: 15ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Acer rubrum</i>		25	<input checked="" type="checkbox"/>	FAC
2. <i>Rubus allegheniensis</i>		5	<input type="checkbox"/>	FACU
3. _____		0	<input type="checkbox"/>	
4. _____		0	<input type="checkbox"/>	
5. _____		0	<input type="checkbox"/>	
6. _____		0	<input type="checkbox"/>	
7. _____		0	<input type="checkbox"/>	
		30	= Total Cover	
Herb Stratum	(Plot size: 5ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Microstegium vimineum</i>		15	<input checked="" type="checkbox"/>	FAC
2. <i>Poa sp.</i>		5	<input checked="" type="checkbox"/>	FAC
3. <i>Galium aparine</i>		2	<input type="checkbox"/>	FACU
4. _____		0	<input type="checkbox"/>	
5. _____		0	<input type="checkbox"/>	
6. _____		0	<input type="checkbox"/>	
7. _____		0	<input type="checkbox"/>	
8. _____		0	<input type="checkbox"/>	
9. _____		0	<input type="checkbox"/>	
10. _____		0	<input type="checkbox"/>	
11. _____		0	<input type="checkbox"/>	
12. _____		0	<input type="checkbox"/>	
		22	= Total Cover	
Woody Vine Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____		0	<input type="checkbox"/>	
2. _____		0	<input type="checkbox"/>	
3. _____		0	<input type="checkbox"/>	
4. _____		0	<input type="checkbox"/>	
		0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>35</u>	x 2 = <u>70</u>
FAC species <u>45</u>	x 3 = <u>135</u>
FACU species <u>12</u>	x 4 = <u>48</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>92</u> (A)	<u>253</u> (B)

Prevalence Index = B/A = 2.750

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☒ Prevalence Index is ≤ 3.0 ¹

☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation ¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

Woody vine - 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.)

See Appendix E of the Wetland Delineation and Stream Assessment Report for representative photographs of the habitat and soil profile. Due to delineations completed outside of the normal growing season, vegetation within the herbaceous stratum was not able to be fully identified. The boundary of the wetland was established by the dominance of *Ulmus americana* and *Acer rubra* and site visit during seasonal conditions may be warranted to refine the boundary. Based on aerial imagery (current/past), the PFO wetland area was located within an aerial that was clear cut in the early 2000s.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: Wetland MCI-37

[illegible]

APPENDIX D
OEPA WETLAND ORAM FORMS

Version 5.0	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization
	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet

Ohio EPA, Division of Surface Water Final:
February 1, 2001

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland may be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To properly answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at:
<http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx>

Background Information

Name:	Brian J. Miller
Date:	1/22/2021
Affiliation:	AECOM
Address:	Foster Plaza 6, 681 Anderson Drive, Suite 120, Pittsburgh, PA 15220
Phone Number:	412-667-9172
e-mail address:	brian.miller1@aecom.com
Name of Wetland:	Wetland MCI-37
Vegetation Communit(ies):	PFO
HGM Class(es):	Depressed

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.

See Figures 1, 2, and 3 of Wetland Delineation and Stream Assessment Report.

Lat/Long or UTM Coordinate:	41.152594, -80.855403
USGS Quad Name:	Warren
County:	Trumbull
Township:	Urban
Section and Subsection:	T3N R4W
Hydrologic Unit Code:	Mud Creek (Hydrologic Unit Code (HUC): 050301030602)
Site Visit:	1/22/2021
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	See Figure 2
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	Wetland MCI-37		
Wetland Size (delineated acres):	0.05	Wetland Size (Estimated total acres):	0.71

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



Comments, Narrative Discussion, Justification of Category Changes:

A PFO portion of a PFO/PEM wetland complex located on a south facing hillside that drains towards the south and into the PEM portion of the wetland located along the edge of a commercial property. The PEM portion of the wetland is located outside of the survey area and extents of the entire wetland complex was estimated based on aerial imagery. The PFO portion of the wetland identified within the Addendum Survey Area was characterized by the dominance of hydrophytic vegetation within the tree and shrub/sapling strata. Due to winter conditions, the herbaceous vegetation could not be fully identified to the species level and assumed that hydrophytic vegetation would be dominant for the stratum due to the identification of Japanese Silt Grass. The hydrologic conditions for the PFO portion of the wetland is associated with precipitation events and hillside runoff that collects in a slightly depressed area that drains towards a PEM drainage swale.

Final score:	25	Category:	1
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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

Wetland ID:	Wetland MCI-37
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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

Wetland ID:	Wetland MCI-37
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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.

Wetland ID:	Wetland MCI-37
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Site:	Magellan Interconnect Project	Rater(s):	Brian J. Miller	Date:	1/22/2021
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1.0	1.0
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)

Field ID:

Wetland MCI-37

Delineated acres:	0.05
Total acres:	0.71

6.0	7.0
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), shrubland, 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)

7.0	14.0
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 one.

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

- | | |
|--|---|
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input checked="" type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

9.0	23.0
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 one and assign score.

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

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

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

Check all disturbances observed

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

23.0
subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID:	Wetland MCI-37
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Site:	Magellan Interconnect Project	Rater(s):	Brian J. Miller	Date:	1/22/2021
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23.0
subtotal this page

Field ID:
Wetland MCI-37

0.0	23.0
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 5 Qualitative Rating (-10)

2.0	25.0
max 20pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☒ 1 Shrub
- ☒ 1 Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other _____

6b. horizontal (plan view) Interspersions.

Select only one.

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

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

- | | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's 1 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 2 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 3 vegetation and is of high quality |

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species

Native spp are dominant component of the vegetation, mod 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 to

A predominance of native species, with nonnative spp high 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 |

25.0	TOTAL (Max 100 pts)
1	Category

Wetland ID:	Wetland MCI-37
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ORAM Summary Worksheet

		Circle answer or insert score		Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	*NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	1		
	Metric 2. Buffers and surrounding land use	6		
	Metric 3. Hydrology	7		
	Metric 4. Habitat	9		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersions, microtopography	2		
	TOTAL SCORE	25		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	Wetland MCI-37
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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 OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category				
Choose one	*Category 1	Category 2	Category 3	

End of Ohio Rapid Assessment Method for Wetlands.

APPENDIX E
REPRESENTATIVE WETLAND PHOTOGRAPHS

Client Name: American Transmission Systems, Inc, a FirstEnergy Company	Site Location: Highland-Magellan 138 kV Transmission Line Project Addendum	Project No. 60630407
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Date: 01/22/2021	
Description: Facing North	
Photograph: 1	
Resource: Wetland MCI-37 PFO Category 1	
Date: 01/22/2021	
Description: Facing East	
Photograph: 2	
Resource: Wetland MCI-37 PFO Category 1	

Client Name:American Transmission Systems, Inc,
a FirstEnergy Company**Site Location:**Highland-Magellan 138 kV Transmission Line Project
Addendum**Project No.**

60630407

Date:

01/22/2021

Description:

Facing South

Photograph:

3

Resource:

Wetland MCI-37

PFO

Category 1

**Date:**

01/22/2021

Description:

Facing West

Photograph:

4

Resource:


Wetland MCI-37

PFO

Category 1



Client Name: American Transmission Systems, Inc, a FirstEnergy Company	Site Location: Highland-Magellan 138 kV Transmission Line Project Addendum	Project No. 60630407
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Date: 01/22/2021	
Description: Soil Profile Photograph: 5 Resource: Wetland MCI-37 PFO Category 1	
Date:	
Description:	
Photograph:	
Resource:	

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

2/1/2021 1:30:47 PM

in

Case No(s). 21-0015-EL-BLN

Summary: Notice Supplemental Information for Letter of Notification for Project electronically filed by Ms. Devan K Flahive on behalf of American Transmission Systems Incorporated