

Case No. 22-0774-EL-BLN

Part 6 of 14



Ecological Survey Report

AEP Ohio Transmission Company
Wakatomika Switch-West Trinway Project
Knox, Coshocton and Muskingum Counties, Ohio

GAI Project Number: R200062.28, Task 001
June 2022



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Prepared for: AEP Ohio Transmission Company
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1.0 Introduction

GAI Consultants, Inc. (GAI), on behalf of American Electric Power Ohio Transmission Company (AEP), completed an ecological review for the Wakatomika Switch-West Trinway Project (Project) located in Knox, Coshocton, and Muskingum Counties, Ohio (OH). The Project involves rebuilding approximately 16.0-mile portion of the Philo-Howard 138kV transmission line from the existing Wakatomika Switch to the existing West Trinway Station along the current transmission right-of-way and removal of the existing steel lattice tower structures.

Ecological reviews were conducted during March and April 2022. The study area consisted of a 100-foot-wide corridor centered along the existing transmission line, as shown on Figure 1.

The Project study area is located within the Brush Run-Kokosing River (United States Geological Survey [USGS] Hydrologic Unit Code [HUC] # 050400030402), Headwaters Wakatomika Creek (# 050400040101), Winding Fork (# 050400040102), Jug Run-Wakatomika Creek (# 050400040104), Black Run-Wakatomika Creek (# 050400040201), Little Wakatomika Creek (# 050400040203), and Town of Frazeyburg-Wakatomika Creek (# 050400040204) watersheds.

This report details the results of the ecological reviews regarding the existence of aquatic resources within the Project area (Figure 2). The United States Army Corps of Engineers (USACE) Wetland Determination Data Forms are provided in Appendix B. Ohio Rapid Assessment Method for Wetlands (ORAM) Data Forms are provided in Appendix C and Ohio Environmental Protection Agency (OEPA) Primary Headwater Habitat Evaluation (HHEI) Data Forms are provided in Appendix D.

2.0 Methods

2.1 Wetlands

The 1987 USACE *Corps of Engineers Wetlands Delineation Manual* (Wetlands Delineation Manual) (USACE, 1987) and the 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0* (Regional Supplement) (USACE, 2012) describe the methods used to identify and delineate wetlands that fall under the jurisdiction of the USACE. This approach recognizes the three parameters of wetland hydrology, hydrophytic vegetation, and hydric soils to identify and delineate wetland boundaries. In accordance with the Wetlands Delineation Manual and Regional Supplement, GAI completed preliminary data gathering and onsite inspections.

2.1.1 Preliminary Data Gathering

The preliminary data gathering is used to compile and review information that may be helpful in identifying wetlands and/or areas that warrant further inspection during the investigation. The preliminary data gathering includes a review of the following:

- ▶ USGS 7.5-minute topographic mapping for Newark (USGS, 1982) and Coshocton (1984), Ohio (Figure 1);
- ▶ National Wetlands Inventory (NWI) mapping (USFWS, 2020) (Figure 2);
- ▶ Federal Emergency Management Agency (FEMA), National Flood Hazard Layer (FEMA, 2020) (Figure 2); and,
- ▶ United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS, 2020) soil mapping (Figure 2).

Topographic mapping is used to identify mapped streams and the overall shape of the landscape in the Project area to determine potential locations for wetlands, such as floodplains and depressions. National Wetlands Inventory (NWI) mapping is used to determine locations where probable wetlands are located based on infrared photography. Soil mapping is reviewed

to determine the location and extent of mapped hydric soils that have a high probability of containing wetlands.

2.1.2 Onsite Inspection

The methodology described in the Regional Supplement identifies areas meeting the definition of a wetland by evaluating three parameters: hydrology, vegetation, and soil. During the onsite inspection, GAI staff traversed the Project study area on foot to determine if any indicators of wetlands were present. When indicators of wetlands are observed, an observation point is established, and a Wetland Determination Data Form is completed to determine if all three wetland indicators are present.

Wetland boundaries are determined by looking for locations in which one of the three wetland indicators would transition into an upland characteristic. When the transition is identified, a Data Form is completed in the Upland Area. Wetland boundaries are then marked in the field using pink flagging labeled "WETLAND DELINEATION." The locations of the flags are recorded using a Global Positioning System (GPS) unit. Each wetland is codified with a unique identifier indicating the feature type and number (e.g., W001).

Wetlands are then classified using the *Classification of Wetlands and Deepwater Habitats of the United States* as modified for NWI Mapping Convention. This system classifies wetlands based on topographic position and vegetation type. Palustrine system wetlands found within the study area are classified as Palustrine Emergent (PEM), Palustrine Scrub-Shrub (PSS), Palustrine Forested (PFO), or Palustrine Unconsolidated Bottom (PUB) based on aerial coverage of the vegetative community across the extent of the wetland boundary (Cowardin et al., 1979).

2.2 Waterbodies

As with wetlands, Sections 404 and Section 401 of the Clean Water Act (CWA) and state regulations protect waterbodies in OH. Generally, waterbodies are defined as environmental features that have defined beds and banks, ordinary high-water mark (OHWM), and contain flowing or standing water for at least a portion of the year.

2.2.1 Preliminary Data Gathering

During the preliminary data gathering, the USGS 7.5-minute topographic mapping is examined for the presence of mapped waterbodies including perennial and intermittent streams. In addition, the topographic mapping is used to identify areas likely to contain unmapped waterbodies including ephemeral streams (USGS, 1983, 1981) (Figure 1).

The OEPA 401 Water Quality Certification for the 2017 Nationwide Permits Stream Eligibility Web Map (OEPA, 2017) is used to determine eligibility for coverage under the 401 Water Quality Certification (WQC) for the 2017 Nationwide Permits (NWP). Furthermore, the map is used to identify any ineligible areas that may require a CWA Section 401 individual permit from the OEPA should stream impacts occur within the Project area (OEPA, 2017) (Figure 3).

2.2.2 Onsite Inspection

During the onsite inspection, GAI staff traversed the study area, concurrently with the wetland inspection, whereby waterbodies are identified. Waterbodies are identified based on the morphological and hydrologic characteristics of the channel and the presence of aquatic macroinvertebrates.

When a waterbody is identified, field measurements are collected. The measurements include top-of-bank width, top-of-bank depth, pool depth, water depth, OHWM width, and OHWM depth. A detailed description of substrate composition is also recorded. Waterbodies are then delineated using white flagging marked with the GAI stream code (e.g., S001). The tops-of-bank for streams wider than 10 feet are delineated, while the centerline of smaller

streams is delineated. The locations of the flags are recorded using a sub-meter-capable handheld GPS unit.

2.3 Rare, Threatened, and Endangered Species

GAI conducts a literature review of potential Rare, Threatened, and Endangered (RTE) species in the vicinity of the Project study area. Potential habitat for RTE species is noted during the ecological review.

2.3.1 Preliminary Data Gathering

A request for review of the Ohio Natural Heritage Database is submitted to the Ohio Department of Natural Resources (ODNR) to determine if any state-listed Threatened or Endangered species occur within a one-mile (1.0 mi) radius of the Project area. A request is also submitted to the United States Fish and Wildlife Service (USFWS) Ohio Ecological Services Field Office to determine if any federally-listed Threatened or Endangered species occur within the vicinity of the Project area.

2.3.2 Onsite Inspection

During the onsite inspection, GAI staff traverse the study area in conjunction with the wetland and waterbody inspections to determine if suitable habitat for state- and/or federally-listed RTE species is present within the study area.

3.0 Results

3.1 Wetlands

3.1.1 Preliminary Data Gathering

Desktop review of available USFWS NWI digital data for the Project revealed seventeen (17) NWI mapped wetlands within the Project study Area (USFWS, 2020).

NWI Disposition Table

NWI Code	NWI Description	Figure Number	Related Field Inventoried Resource	Comments
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheet 3	S078	UNT to Wakatomika Creek
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheets 5 and 6	S077	UNT to Wakatomika Creek
R5UBH	Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded	Fig. 2, Sheet 6	S076	Wakatomika Creek
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheet 7	S075	UNT to Wakatomika Creek
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheets 10 and 11	S069	UNT to South Run

NWI Code	NWI Description	Figure Number	Related Field Inventoried Resource	Comments
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheet 13	S065	South Run headwaters
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheets 14 and 15	S063	UNT to Winding Fork
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheet 17	S060	UNT to Winding Fork
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheets 21 and 22	S058	Oxley Run
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheet 26	S054	Winding Fork
R5UBH	Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded	Fig. 2, Sheet 36	S042	Fivemile Run
PEM1C	Palustrine, Emergent, Persistent, Seasonally Flooded	Fig. 2, Sheet 36	W031-PEM-CAT1	PEM wetland abutting Fivemile Run
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheets 37	S039	UNT to Fivemile Run
R5UBH	Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded	Fig. 2, Sheets 39	S037	UNT to Fivemile Run
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheets 40	N/A	Stream channel falls outside of the study area
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheets 41 and 42	S035	UNT to Fivemile Run
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Fig. 2, Sheets 45 and 46	S031	UNT to Wakatomika Creek

According to the USDA-NRCS soil mapping, sixty-six (66) soil map units are located within the Project study area (Figure 2). Three (3) of the soil map units is classified as hydric: Melvin silt loam, 0 to 3 percent slopes (Mg), Holly silt loam (Ho), Sebring silt loam (Se). Ten (10) soil map units are also known to contain hydric inclusions: Fitchville silt loam, 0 to 3 percent slopes (FhA), Glenford silt loam, 0 to 3 percent slopes (GnA), Glenford silt loam, 3 to 8 percent slopes (GnB), Orrville silt loam, 0 to 3 percent slopes (Or), Fitchville silt loam, 2 to 6 percent slopes (FcB), Glenford silt loam, 2 to 6 percent slopes (GnB), Gresham silt loam, 2 to 6 percent slopes (GrB), Jimtown silt loam, 0 to 2 percent slopes (JmA), Titusville silt loam, 2 to 6 percent slopes (TvB), Markland silt loam, 2 to 6 percent slopes (MaB).

3.1.2 Onsite Inspection

Forty-two (42) wetlands were identified and delineated within the Project study area. Thirty-eight (38) wetlands were classified as PEM, three (3) were classified as PSS, and one (1) was classified as PUB. To document site conditions, USACE Data Forms were completed for each wetland and upland reference. Information on the delineated wetlands can be found in Table 1 and photographs of the wetlands are included in Appendix A.

3.1.3 Regulatory Discussion

The USACE guidance classifies waters of the United States (WOTUS) into four (4) categories: territorial seas and traditional navigable waters (TNWs), tributaries, lakes, ponds, and impoundments of jurisdictional waters, and adjacent wetlands. Territorial seas and TNWs include large rivers and lakes and tidally-influenced waterbodies used in interstate or foreign commerce. Tributaries include naturally occurring perennial and intermittent rivers and streams that contribute surface flow to TNWs in a typical year. Tributaries include ditches if they satisfy the flow conditions of the perennial and intermittent tributary definition, were constructed in or relocate a tributary, or were constructed in an adjacent wetland and contribute perennial or intermittent flow to a TNW in a typical year. Lakes and ponds, and impoundments of jurisdictional waters are standing bodies of open water that contribute surface water flow to a TNW or territorial sea in a typical year. Adjacent wetlands are wetlands that physically touch (abut) other jurisdictional waters or are inundated by jurisdictional waters in a typical year. Wetlands physically separated from other jurisdictional waters by an artificial berm, dike, or similar artificial feature must have a direct hydrologic surface connection to the jurisdictional water in a typical year to be considered adjacent (USACE 2019).

The status of wetlands is partially determined based on the classification of the waterbody that the wetland is associated with, and the degree of that association. Wetlands that abut or are adjacent to WOTUS are jurisdictional.

Wetlands that do not exhibit an association with surface water are categorized as non-jurisdictional under present USACE guidance and policy (USACE 2019). These wetlands are regulated by the OEPA Division of Surface Water and may require an Isolated Wetland Permit.

As regulated by OH Administrative Code (OAC) rules 3745-1-50 through 3745-1-54, wetlands were evaluated using the ORAM to determine the appropriate wetland category. Any wetland score that fell within a gray zone between categories was scored one of two ways. Either the wetland was assigned to the higher of the two categories or it was assessed using a non-rapid method to determine its quality (Mack, 2001). The category assigned to a particular wetland determines the requirement, if any, for additional levels of protection administered by the OEPA.

3.2 Waterbodies

3.2.1 Preliminary Data Gathering

Desktop review of the available USGS topographic mapping revealed thirteen previously mapped stream segments located within the Project study area (Figure 1). Desktop review of the OEPA's Stream Eligibility Web Map revealed the Project is located within watersheds categorized as "Eligible" for automatic 401 WQC coverage (Figure 3).

3.2.2 Onsite Inspection

Fifty-six stream segments were identified and delineated within the Project study area. Fifteen stream segments are classified as having a perennial flow regime, thirty-four stream segments are classified as having intermittent flow regime, and seven stream segments are classified as having ephemeral flow regime. Information on the delineated stream segments and their classifications can be found in Table 2, and photographs of the identified stream segments are included in Appendix A.

3.2.3 Regulatory Discussion

As with wetlands, present USACE guidance and policy determines the jurisdictional status of waterbodies identified during the Project. TNWs and tributaries are considered jurisdictional.

Streams are generally defined as environmental features that have defined beds and banks, an OHWM, and contain flowing or standing waters for at least a portion of the year (USACE, 2005). Streams were classified as perennial, intermittent, or ephemeral based upon presence of flow, estimated duration of flow, streambed characteristics, and presence of aquatic biota. The USACE Jurisdictional Determination Form Instructional Guidebook (USACE, 2007) and the revised definition of "Waters of the United States" (WOTUS) (USACE, 2021) were used to determine stream classification and flow status.

As regulated by OAC Chapter 3745-1, streams were assessed according to OEPA guidance using either the HHEI for watersheds less than one-square-mile in size, or the Qualitative Habitat Evaluation Index (QHEI) for watersheds between one and 20 square miles in size (OEPA, 2020).

Ephemeral streams are regulated by the USACE as WOTUS. OEPA considers ephemeral streams as "waters of the state" (Ohio Revised Code, Section 6111), and thus regulated according to the state's 401 Water Quality Standards.

3.3 Rare, Threatened, and Endangered Species

3.3.1 Preliminary Data Gathering

A desktop review of the ODNR, Division of Wildlife's OH's Listed Species revealed 337 Endangered, Threatened, Species of Concern, and Species of Interest located in OH (ODNR, 2021). Eighteen (18) of the state-listed species are considered federally endangered, and five (5) are federally threatened.

A review of the USFWS *County Distribution of Federally-Listed Threatened, Endangered, Proposed, and Candidate Species for Ohio*, as well as the USFWS Information for Planning and Consultation (IPaC) website revealed two federally-endangered or -threatened species and one candidate species that may occur within the Project study area (USFWS, 2021). The list of species includes the following:

- ▶ Indiana bat (*Myotis sodalis*) – Endangered;
- ▶ Northern long-eared bat (*Myotis septentrionalis*) – Threatened; and
- ▶ Monarch butterfly (*Danaus plexippus*) – Candidate.

Additionally, there are five (5) migratory bird species that may occur within the Project study area.

ODNR and USFWS RTE Species and Critical Habitat Review Results

Common Name	Scientific Name	Habitat Type	Listing Status ¹	Habitat Type Present Within the Project Area?	Impacts to Habitat/Species Anticipated?	Restricted Construction Dates
Amphibians						
Eastern Hellbender ⁴	<i>Cryptobranchus alleganiensis alleganiensis</i>	Perennial streams with large flat rocks.	E, FSC	No	No; In-stream work is not proposed in perennial streams	-
Eastern Spadefoot Toad ⁴	<i>Scaphiopus holbrookii</i>	Sandy soils that are associated with river valleys and flooded agricultural fields or other water holding depressions.	E	No	No; Per ODNR response, the project is not likely to impact this species	-
Bats						
Indiana bat ^{3, 4}	<i>Myotis sodalis</i>	Trees >3" dbh, caves abandoned mines, wooded areas with loose tree bark or dead or dying trees.	E, FE	Yes	No; Avoided with winter tree clearing	April 1 to September 30
Northern long-eared bat ^{3, 4}	<i>Myotis septentrionalis</i>	Roost in cavities or in crevices of both live trees and snags; Hibernates in caves and mines with constant temperatures, high humidity, and no air currents.	SC, FT	Yes	No; Avoided with winter tree clearing	April 1 to September 30
Little brown bat ⁴	<i>Myotis lucifugus</i>	Roost in cavities or in crevices of both live trees and snags; Hibernates in caves and mines with constant temperatures, high humidity, and no air currents.	E	Yes	No; Avoided with winter tree clearing	April 1 to September 30
Tricolored bat ⁴	<i>Perimyotis subflavus</i>	Roost in cavities or in crevices of both live trees and snags; Hibernates in caves and mines with constant temperatures, high humidity, and no air currents.	E	Yes	No; Avoided with winter tree clearing	April 1 to September 30
Birds						
American bittern ⁴	<i>Botaurus lentiginosus</i>	Freshwater marshes.	E	No		May 1 to July 31

Common Name	Scientific Name	Habitat Type	Listing Status ¹	Habitat Type Present Within the Project Area?	Impacts to Habitat/Species Anticipated?	Restricted Construction Dates
Cerulean Warbler ^{2, 4}	<i>Setophaga cerulea</i>	Large tracts of older deciduous forests with tall trees.	SC	No	No; Known habitat types are not present within the Project area	-
Northern Harrier ⁴	<i>Circus hudsonis</i>	Large marshes and grasslands.	E	Yes	Yes	April 15 to July 31
Fish						
American eel ⁴	<i>Anguilla rostrata</i>	Freshwater lakes, streams, and rivers.	T	Yes	No; In-stream work is not proposed in perennial streams	March 15 to June 30
Mountain madtom ⁴	<i>Noturus eleutherus</i>	Deep swift riffles of large rivers.	T	No	No; In-stream work is not proposed in perennial streams	March 15 to June 30
Northern madtom ⁴	<i>Noturus stigmosus</i>	Deep swift riffles of large rivers.	E	No	No; In-stream work is not proposed in perennial streams	March 15 to June 30
Spotted Darter ⁴	<i>Etheostoma maculatum</i>	Large rubble and boulder areas, adjacent to or in swift deep riffles, in small to medium, clear rivers.	E	No	No; In-stream work is not proposed in perennial streams	March 15 to June 30
Tippecanoe darter ⁴	<i>Etheostoma Tippecanoe</i>	Medium to large streams and rivers in the Ohio River Drainage. Found in riffles of moderate current with a substrate of gravel and small cobble sized rocks.	T	Yes	No; In-stream work is not proposed in perennial streams	March 15 to June 30
Mussels						
Fanshell ⁴	<i>Cyprogenia stegaria</i>	Substrates including sand, gravel, cobble and mixed materials on the bottoms of streams and rivers. Free flowing, clean and well oxygenated water.	E, FE	Yes	No; In-stream work is not proposed in perennial streams	-
Snuffbox ⁴	<i>Epioblasma triquetra</i>	Sand, gravel, or cobble substrates in swift small and medium-sized rivers. Individuals are often buried deep in the sediment.	E, FE	Yes	No; In-stream work is not proposed in perennial streams	-
Long-solid ⁴	<i>Fusconaia maculata maculata</i>	Small to large rivers in gravel with strong current.	E	No	No; In-stream work is not proposed in perennial streams	-

Common Name	Scientific Name	Habitat Type	Listing Status ¹	Habitat Type Present Within the Project Area?	Impacts to Habitat/Species Anticipated?	Restricted Construction Dates
Mussels (continued)						
Sheepnose ⁴	<i>Plethobasus cyphus</i>	Larger rivers and streams. Usually found in shallow areas with moderate to swift currents that flow over coarse sand and gravel.	FE	Yes	No; In-stream work is not proposed in perennial streams	-
Clubshell ⁴	<i>Pleurobema clava</i>	Clean, loose sand and gravel in medium to small rivers and streams.	FE	Yes	No; In-stream work is not proposed in perennial streams	-
Rabbitsfoot ⁴	<i>Quadrula cylindrica cylindrica</i>	Small to medium sized rivers of moderate current with clear, relatively shallow water and a mixture of sand and gravel substrates.	FT	Yes	No; In-stream work is not proposed in perennial streams	-
Rayed bean ⁴	<i>Villosa fabalis</i>	Smaller, headwater creeks, found in large rivers and wave washed areas. Gravel or sand substrates and in roots of aquatic vegetation.	FE	Yes	No; In-stream work is not proposed in perennial streams	-
Black sandshell ⁴	<i>Ligumia recta</i>	Rivers with strong currents and lakes with a firm substrate of gravel or sand.	T	No	No; In-stream work is not proposed in perennial streams	-
Threehorn wartyback ⁴	<i>Obliquaria reflexa</i>	Medium to large rivers, substrates include gravel, gravel-sand, or gravel-mud with a moderate current.	T	No	No; In-stream work is not proposed in perennial streams	-
Fawnsfoot ⁴	<i>Truncilla donaciformis</i>	Large rivers or the lower reaches of medium-sized streams in sand or gravel.	T	No	No; In-stream work is not proposed in perennial streams	-
Ohio pigtoe ⁴	<i>Pleurobema cordatum</i>	Medium-sized rivers with mud, sand, gravel or cobble.	E	No	No; In-stream work is not proposed in perennial streams	-
Sharp-ridged pocketbook ⁴	<i>Lampsilis ovata</i>	Large rivers in coarse sand or gravel.	E	No	No; In-stream work is not proposed in perennial streams	-
Pink mucket ⁴	<i>Lampsilis orbiculata</i>	Large stream reaches where flowing water covers beds of cobble, gravel and sand.	FE	No	No; In-stream work is not proposed in perennial streams	-
Purple cat's paw ⁴	<i>Epioblasma obliquata</i>	Shallow, gravelly riffle zones in larger rivers.	FE	No	No; In-stream work is not proposed in perennial streams	-
Round hickorynut ^{3, 5}	<i>Obovaria subrotunda</i>	Streams and rivers with sand gravel in riffle and run habitats. Also found in sandy mud.	FT ⁵	Yes	No; In-stream work is not proposed in perennial streams	-

Notes:

- 1 E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; FE = federal endangered; FT = federal threatened; FSC = federal species of concern; FC = federal candidate.
- 2 Natural Heritage Database record at or within a one-mile radius of the Project area.
- 3 Federally listed species, migratory bird, or species of concern comments included in the USFWS response, dated June 14, 2022.
- 4 ODNR, Division of Wildlife (DOW) comments included in the ODNR response, dated June 13, 2022.
- 5 Species currently proposed for listing as federally threatened.

The ODNR and USFWS consultation letters were submitted on May 13, 2022. Responses from USFWS were received on June 14, 2022. A response from ODNR was received on June 13, 2022. The USFWS and ODNR responses are included in Appendix E.

The USFWS identified that the Indiana bat, northern long-eared bat, and Round hickorynut mussel may be present in the vicinity of the Project. The ODNR identified that the entire state of Ohio is within the range of the Indiana bat, the northern long-eared bat, the little brown bat, and the tricolored bat. The ODNR also identified that the eastern hellbender, eastern spadefoot toad, three bird species, five fish species, and 14 mussel species may be present in the vicinity of the Project.

Potential habitat for RTE species was evaluated within the Project study area. Habitat encountered within the study area consisted of maintained transmission line right-of-way, mixed deciduous forest, agricultural fields, residential properties, and open pasture. Habitat for two state- and federally-listed bat species (Indiana bat and northern long-eared bat) is present; however, tree clearing would occur between October 1st and March 31st to avoid impacts to these species. Habitat for monarch butterfly is present as milkweed plants are commonly found within open non-forested meadow-like areas, such as transmission line ROWs. Potential effects on the monarch butterfly are dependent upon the time of year construction activities occur. However, as a candidate species, special protection is not required for monarch butterfly at this time. Representative photographs of the identified habitat types are included in Appendix A.

One (1) stream segment (S076) was identified as Wakatomika Creek which is designated as exceptional warmwater habitat (EWH) / cold water habitat (CWH) by OAC Chapter Rule 3745-1-24. One (1) stream segment (S054) was identified as Winding Fork which is designated as exceptional warmwater habitat (EWH) by OAC Chapter Rule 3745-1-24. Three (3) stream segments (S065, S058, S042) were identified as South Branch, Oxley Run, and Fivemile Run which are designated as warmwater habitat (WWH) by OAC Chapter Rule 3745-1-24.

4.0 Conclusions

Ecological reviews were conducted within the Project study area during March and April 2022. Fifty-six (56) streams (15 perennial, 34 intermittent, 7 ephemeral) were identified within the Project study area. Forty-two (42) wetlands were identified within the Project study area. Summaries of the delineated aquatic features are provided in Tables 1 and 2, and a map of their locations is depicted on Figure 2. Photographs of the wetland and stream features are included in Appendix A. Wetland Determination Data Forms documenting the investigation are provided in Appendix B, with ORAM and HHEI Data Forms provided in Appendix C and D, respectively.

The jurisdictional status of these features is considered preliminary and should be confirmed with the USACE and state agencies through the JD process.

5.0 References

- Cowardin, D. M., V. Carter, F. C. Golet, and E. T. La Roe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. United States Department of the Interior, Fish and Wildlife Service. Publication No. FWS/OBS 79/31. Washington, D.C.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. United States Department of the Army, United States Army Engineer Waterways Experiment Station. Technical Report Y-87-1. Vicksburg, Mississippi.
- Federal Emergency Management Agency. 2020. National Flood Hazard Layer Web Map Service (WMS). Available from <https://hazards.fema.gov/femaportal/wps/portal/NFHLWMSkmzdownload>.
- Mack, John J. 2001. Ohio Rapid Assessment Methods for Wetlands Manual for Using Version 5.0. Ohio EPA Technical Bulletin Wetland/2001-1-1. Ohio Environmental Protection Agency, Division of Surface Water, 401 Wetland Ecology Unit, Columbus, Ohio.
- Ohio Administrative Code. 2011. State of Ohio: Water Quality Standards, Chapter 3745-1.
- Ohio Department of Natural Resources, Division of Wildlife. 2021. Ohio's Listed Species. <https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/wildlife/state-listed-species>.
- Ohio Department of Natural Resources, Division of Wildlife. 2020. State-Listed Species by County. <https://ohiodnr.gov/static/documents/wildlife/state-listed-species/hancock.pdf>.
- Ohio Environmental Protection Agency. 2006. Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI). Ohio EPA Division of Surface Water, Columbus, Ohio.
- Ohio Environmental Protection Agency. 2020. Field Methods for Evaluating Primary Headwater Streams in Ohio. Version 4.1. Ohio EPA Division of Surface Water, Columbus, Ohio. 130 pp.
- Ohio Environmental Protection Agency, Division of Surface Water. 2017. 401 Water Quality Certification for the Nationwide Permits Stream Eligibility Web Map (2017 Reissuance). <http://oeqa.maps.arcgis.com/apps/webappviewer/index.html?id=e6b46d29a38f46229c1eb47deefe49b6>.
- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Coshocton County, Ohio. Available online at <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Knox County, Ohio. Available online at <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Muskingum County, Ohio. Available online at <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- United States Army Corps of Engineers. 2005. Regulatory Guidance Letter No. 05-05. Ordinary High Water Mark Identification. Available from <http://www.nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl05-05.pdf>.
- United States Army Corps of Engineers. 2007. *Jurisdictional Determination Form Instructional Guidebook*. Available from http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/jd_guidebook_051207final.pdf.

- United States Army Corps of Engineers. 2020. National Wetland Plant List, version 3.5. U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, New Hampshire. Available from https://cwbi-app.sec.usace.army.mil/nwpl_static/v34/home/home.html. Accessed March 2022.
- United States Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains Piedmont Region Version 2.0. ERDC/EL TR 12-9. Vicksburg, Mississippi: United States Army Engineer Research and Development Center.
- United States Fish and Wildlife Service. 2018. County Distribution of Federally-Listed Endangered, Threatened, and Proposed Species. United States Fish and Wildlife Service, Endangered Species, Midwest Region. Available from <https://www.fws.gov/midwest/endangered/lists/ohio-cty.html>.
- United States Fish and Wildlife Service. 2019. National Wetlands Inventory for Ohio. Washington, D.C.: United States Fish and Wildlife Service, Division of Habitat and Resource Conservation. Available from <http://www.fws.gov/wetlands/Data/Mapper.html>.
- United States Fish and Wildlife Service, Environmental Conservation Online System. Information for Planning and Consultation. <https://ecos.fws.gov/ipac/>.
- United States Geological Survey. 1982. Newark, Ohio 7.5-Minute Topographic Quadrangle (1:24,000).
- United States Geological Survey. 1984. Coshocton, Ohio 7.5-Minute Topographic Quadrangle (1:24,000).

TABLES

Table 1
Wetlands Identified Within the Project Study Area

Wetland ID ¹	Location		Isolated?	Habitat Type ³	Delineated Area (acre) ⁴	ORAM		Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland
	Latitude ²	Longitude ²				Score ⁵	Category ⁶		
W062-PEM-CATMOD2	40.325311	-82.233717	No	PEM	0.103414	36	Modified 2	180/180	None
W061-PEM-CAT2	40.317983	-82.228307	No	PEM	0.082866	32	2	176/176	None
W060-PSS-CATMOD2	40.313939	-82.225531	No	PSS	1.081001	40	Modified 2	174/174	None
W059-PEM-CAT2	40.312612	-82.224701	No	PEM	0.071352	30	2	174/174	None
W058-PSS-CATMOD2	40.31192	-82.224087	No	PSS	0.721263	42	Modified 2	173/173	None
W057-PEM-CATMOD2	40.306867	-82.220491	No	PEM	0.042767	38	Modified 2	172/172	None
W056-PEM-CAT2	40.304225	-82.218516	No	PEM	0.635269	33	2	170, 171/170, 171	None
W055-PEM-CATMOD2	40.297539	-82.213824	No	PEM	0.057835	37	Modified 2	167/167	None
W054-PEM-CAT2	40.293035	-82.210562	No	PEM	0.165154	30	2	165, 166/165, 166	None
W053-PEM-CAT1	40.292542	-82.210208	No	PEM	0.057482	29	1	165, 166/165, 166	None
W052-PEM-CAT2	40.28866	-82.207227	No	PEM	0.031841	32	2	163/163	None
W051-PEM-CAT1	40.284478	-82.203377	No	PEM	0.227976	27	1	162/162	None
W050-PEM-CATMOD2	40.284012	-82.20296	No	PEM	0.123321	36	Modified 2	161/161	None
W049-PEM-CAT2	40.277208	-82.196949	No	PEM	0.035314	34	2	158/158	None
W048-PEM-CATMOD2	40.274882	-82.194923	No	PEM	0.571978	36	Modified 2	157/157	None

Wetland ID ¹	Location		Isolated?	Habitat Type ³	Delineated Area (acre) ⁴	ORAM		Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland
	Latitude ²	Longitude ²				Score ⁵	Category ⁶		
W047-PEM-CATMOD2	40.270681	-82.19125	No	PEM	0.044414	38	Modified 2	156/156	None
W046-PEM-CAT2	40.253465	-82.176273	No	PEM	0.030039	30	2	149/149	None
W045-PEM-CAT2	40.252622	-82.175651	No	PEM	0.193468	34	2	148/148	None
W044-PEM-CAT2	40.248941	-82.172357	No	PEM	0.499391	31	2	146/146	None
W043-PEM-CATMOD2	40.247162	-82.170986	No	PEM	0.09067	42	Modified 2	146/146	None
W042-PEM-CAT2	40.241134	-82.165602	No	PEM	0.187227	31	2	143/143	None
W041-PEM-CAT1	40.232624	-82.158799	No	PEM	0.225005	22	1	140/140	None
W040-PEM-CAT1	40.232298	-82.15823	No	PEM	0.038809	22	1	140/140	None
W039-PEM-CAT1	40.231217	-82.157501	No	PEM	0.149401	27	1	140/140	None
W038-PEM-CAT2	40.230585	-82.157094	No	PEM	0.169306	31	2	139/139	None
W037-PEM-CATMOD2	40.230324	-82.157015	No	PEM	0.030333	36	Modified 2	139/139	None
W036-PEM-CAT2	40.222557	-82.150877	No	PEM	0.306041	34	2	137/137	None
W035-PEM-CATMOD2	40.221513	-82.15022	No	PEM	0.06777	35	Modified 2	136/136	None
W034-PSS-CATMOD2	40.212137	-82.142614	No	PSS	0.043714	43	Modified 2	61, 72, 133/133	None
W033-PEM-CATMOD2	40.208122	-82.139478	No	PEM	0.007522	36	Modified 2	132/132	None
W032-PEM-CAT2	40.197673	-82.129802	No	PEM	0.111507	32	2	127/127	None

Wetland ID ¹	Location		Isolated?	Habitat Type ³	Delineated Area (acre) ⁴	ORAM		Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland
	Latitude ²	Longitude ²				Score ⁵	Category ⁶		
W031-PEM-CAT1	40.190037	-82.120412	No	PEM	1.320229	23	1	123/123	None
W030-PEM-CATMOD2	40.188461	-82.118436	No	PEM	0.012972	37	Modified 2	122, 123/122, 123	None
W029-PEM-CATMOD2	40.184215	-82.11313	No	PEM	0.191425	35	Modified 2	121/121	None
W028-PEM-CATMOD2	40.183995	-82.112767	No	PEM	0.140836	35	Modified 2	120/120	None
W027-PEM-CAT1	40.178201	-82.106502	No	PEM	0.054227	24	1	118, 119/118, 119	None
W026-PEM-CATMOD2	40.176694	-82.105436	No	PEM	0.114958	35	Modified 2	118/118	None
W025-PUB-CATMOD2	40.172264	-82.100889	No	PUB	0.166245	39	Modified 2	116/116	None
W024-PEM-CAT2	40.169382	-82.098315	No	PEM	0.045041	32	2	115/115	None
W019-PEM-CATMOD2	40.151015	-82.080997	No	PEM	0.184051	40	Modified 2	109/109	None
W018-PEM-CAT1	40.147618	-82.077398	No	PEM	0.027909	19	1	107/107	None
W017-PEM-CAT1	40.147352	-82.077083	No	PEM	0.031633	15	1	107/107	None
Total:					8.492976				

Notes:

¹ GAI map designation.

² North American Datum, 1983.

³ PEM - Palustrine Emergent.

⁴ Total acreage of wetland located within the Project study area.

⁵ Interim scoring breakpoints for wetland regulatory categories for ORAM v 5.0 Score: Category 1 score 0 - 29.9; Category 1 or 2 gray zone ORAM score 30 - 34.9; Category modified 2 ORAM score 35 - 44.9; Category 2 ORAM score 45 - 59.9; Category 2 or 3 ORAM score 60 - 64.9; Category 3 ORAM score 65 - 100. OEPA Ecology Unit Division of Surface Water. *ORAM v. 5.0 Qualitative Score Calibration*. Dated August 15, 2000. http://www.epa.ohio.gov/portals/35/401/oram50sc_s.pdf.

⁶ OAC Rule 3745-1-54(C)(2) defines Category 1 wetlands as wetlands which "...support minimal wildlife habitat, and minimal hydrological and recreation functions," and as wetlands which have "...hydrologic isolation, low species diversity, a predominance of non-native species, no significant habitat or wildlife use, and limited potential to achieve beneficial wetland functions." Category 2 wetlands are defined as wetlands which "...support moderate wildlife habitat, or hydrological or recreational functions," and as wetlands which are "...dominated by native species but generally without the presence of, or habitat for, rare, threatened or endangered species; and wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions." Degraded but Restorable Category 2 Wetlands are according to OAC Rule 3745-1-54(C) states that wetlands that are assigned to Category 2 constitute the broad middle category that "...support moderate wildlife habitat, or hydrological or recreational functions," but also include "...wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions." OAC Rule 3745-1-54(C)(2) defines Category 3 wetlands as wetlands which "...support superior habitat, or hydrological or recreational functions," and as wetlands which have "...high levels of diversity, a high proportion of native species, or high functional values."

Table 2
Waterbodies Identified Within the Project Study Area

Stream ID ¹	Location		Stream Type	Stream Name	Delineated Length (feet) ³	Bankfull Width (feet) ⁴	OHWM Width (feet)	Field Evaluation			Ohio EPA 401 Eligibility ⁸
	Latitude ²	Longitude ²						Method	Score ^{5, 6}	Category / Rating / OAC Designation ⁷	
S079	40.330231	-82.237234	Perennial	UNT to Wakatomika Creek	140	5	4	HHEI	51	Class II PHW	Ineligible
S078	40.325261	-82.233713	Perennial	UNT to Wakatomika Creek	122	5	4	HHEI	51	Class II PHW	Ineligible
S077	40.313988	-82.225554	Perennial	UNT to Wakatomika Creek	786	8	8	HHEI	65	Class II PHW	Ineligible
S076	40.312371	-82.22443	Perennial	Wakatomika Creek	148	25	25	Chapter 3745-1-24	N/A	EW/CWH	Ineligible
S075	40.307033	-82.220612	Perennial	UNT to Wakatomika Creek	133	5	4.5	HHEI	65	Class II PHW	Ineligible
S074	40.30588	-82.219916	Intermittent	UNT to Wakatomika Creek	46	3	2.5	HHEI	27	Class I PHW	Ineligible
S073	40.304902	-82.219072	Intermittent	UNT to Wakatomika Creek	170	3	2.5	HHEI	43	Class II PHW	Ineligible
S072	40.304277	-82.218773	Intermittent	UNT to Wakatomika Creek	239	3	2.5	HHEI	40	Class II PHW	Ineligible
S071	40.297652	-82.213883	Intermittent	UNT to South Run	56	2	1.5	HHEI	24	Class I PHW	Ineligible
S070	40.297726	-82.213907	Intermittent	UNT to South Run	182	5	4.5	HHEI	40	Class II PHW	Ineligible
S069	40.293195	-82.210658	Perennial	UNT to South Run	126	7	6.5	HHEI	61	Class II PHW	Ineligible
S068	40.288701	-82.207266	Intermittent	UNT to South Run	135	4	3.5	HHEI	50	Class II PHW	Ineligible
S067	40.28647	-82.205288	Intermittent	UNT to South Run	116	5	4.5	HHEI	51	Modified Class II PHW	Ineligible
S066	40.286282	-82.205123	Intermittent	UNT to South Run	123	4	3.5	HHEI	35	Modified Class II PHW	Ineligible
S065	40.284621	-82.203517	Intermittent	South Run	363	3	2.5	Chapter 3745-1-24	N/A	WWH	Ineligible
S064	40.283898	-82.202969	Intermittent	UNT to South Run	99	3	2.5	HHEI	34	Modified Class II PHW	Ineligible

Stream ID ¹	Location		Stream Type	Stream Name	Delineated Length (feet) ³	Bankfull Width (feet) ⁴	OHWM Width (feet)	Field Evaluation			Ohio EPA 401 Eligibility ⁸
	Latitude ²	Longitude ²						Method	Score ^{5, 6}	Category / Rating / OAC Designation ⁷	
S063	40.277102	-82.196855	Intermittent	UNT to Winding Fork	177	6	5.5	HHEI	52	Modified Class II PHW	Ineligible
S062	40.276151	-82.195994	Intermittent	UNT to Winding Fork	143	4	3.5	HHEI	50	Modified Class II PHW	Ineligible
S061	40.270575	-82.191114	Ephemeral	UNT to Winding Fork	129	3	2	HHEI	25	Class I PHW	Ineligible
S060	40.265111	-82.186397	Intermittent	UNT to Winding Fork	143	5	4.5	HHEI	39	Modified Class II PHW	Ineligible
S059	40.252748	-82.17573	Intermittent	UNT to Oxley Run	514	3	2	HHEI	25	Class I PHW	Possibly Eligible
S058	40.248493	-82.172023	Perennial	Oxley Run	369	7	6.5	Chapter 3745-1-24	N/A	WWH	Possibly Eligible
S057	40.247118	-82.17098	Intermittent	UNT to Oxley Run	132	4	3.5	HHEI	47	Class II PHW	Possibly Eligible
S056	40.24675	-82.170665	Intermittent	UNT to Oxley Run	44	4	3.5	HHEI	39	Class II PHW	Possibly Eligible
S055	40.246659	-82.170617	Intermittent	UNT to Oxley Run	26	4	3.5	HHEI	39	Class II PHW	Possibly Eligible
S054	40.230657	-82.157195	Perennial	Winding Fork	216	35	35	Chapter 3745-1-24	N/A	EWB	Ineligible
S053	40.222052	-82.150566	Intermittent	UNT to Winding Fork	36	3	2	HHEI	26	Class I PHW	Ineligible
S052	40.222038	-82.150653	Intermittent	UNT to Winding Fork	76	3	2	HHEI	24	Class I PHW	Ineligible
S051	40.213799	-82.143897	Intermittent	UNT to Nickel Valley Run	148	4	3.5	HHEI	47	Class II PHW	Ineligible
S050	40.212321	-82.142525	Intermittent	UNT to Nickel Valley Run	452	5	4.5	HHEI	52	Class II PHW	Ineligible
S049	40.207927	-82.139397	Intermittent	UNT to Nickel Valley Run	111	3	2	HHEI	23	Class I PHW	Ineligible
S048	40.207241	-82.138748	Intermittent	UNT to Nickel Valley Run	158	3	2	HHEI	23	Class I PHW	Ineligible
S047	40.205596	-82.137454	Ephemeral	UNT to Nickel Valley Run	171	3	2	HHEI	22	Class I PHW	Ineligible

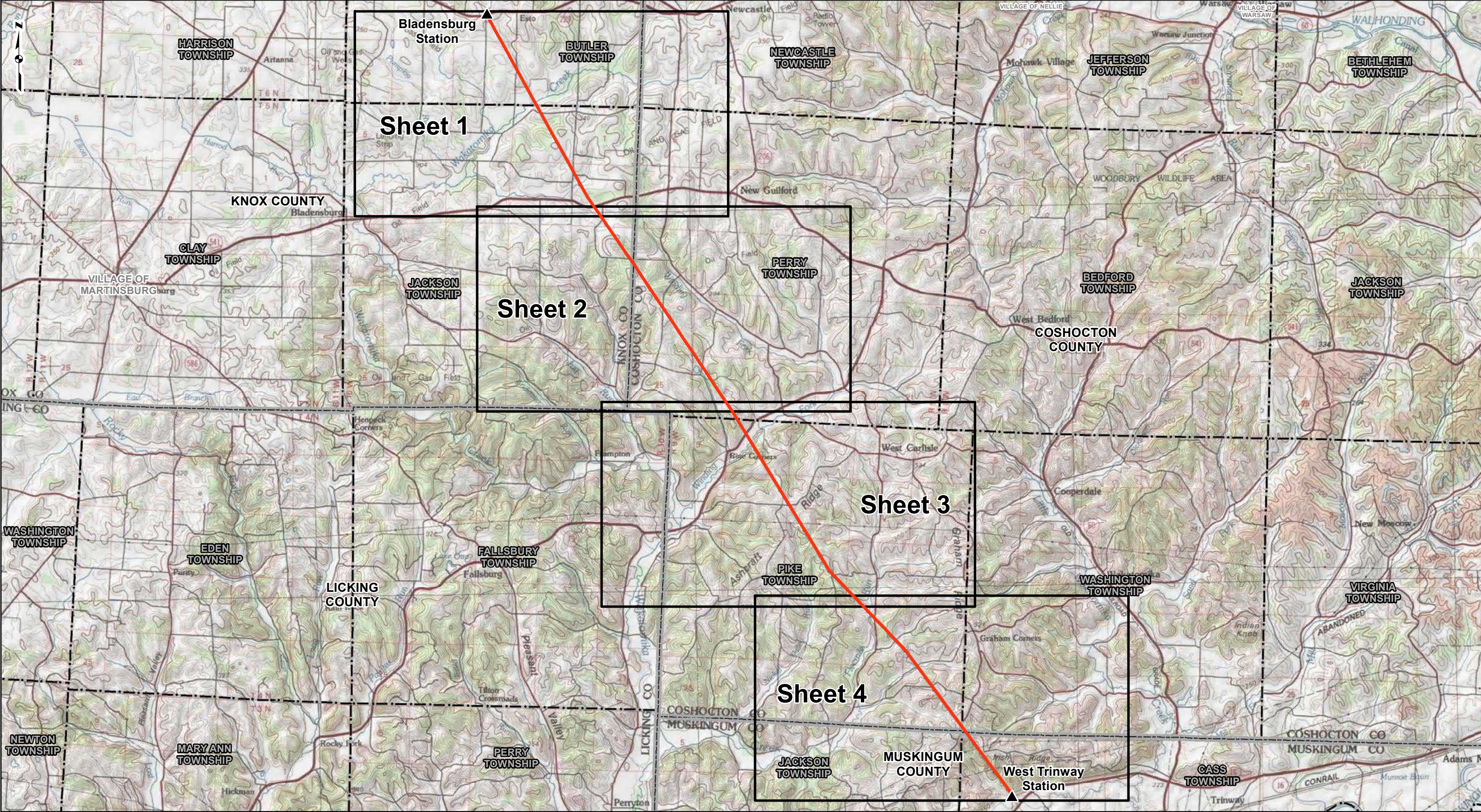
Stream ID ¹	Location		Stream Type	Stream Name	Delineated Length (feet) ³	Bankfull Width (feet) ⁴	OHWM Width (feet)	Field Evaluation			Ohio EPA 401 Eligibility ⁸
	Latitude ²	Longitude ²						Method	Score ^{5, 6}	Category / Rating / OAC Designation ⁷	
S046	40.203306	-82.135648	Intermittent	UNT to Nickel Valley Run	130	5	4	HHEI	56	Class II PHW	Ineligible
S045	40.19984	-82.132486	Ephemeral	UNT to Fivemile Run	149	4	3	HHEI	29	Class I PHW	Possibly Eligible
S044	40.197499	-82.129392	Intermittent	UNT to Fivemile Run	48	3	2	HHEI	24	Class I PHW	Possibly Eligible
S043	40.195361	-82.127138	Intermittent	UNT to Fivemile Run	195	5	4.5	HHEI	56	Class II PHW	Possibly Eligible
S042	40.190661	-82.121334	Perennial	Fivemile Run	592	15	14	Chapter 3745-1-24	N/A	WWH	Possibly Eligible
S041	40.189278	-82.119488	Perennial	UNT to Fivemile Run	133	5	4.5	HHEI	64	Modified Class II PHW	Possibly Eligible
S040	40.188508	-82.118586	Intermittent	UNT to Fivemile Run	142	3	2.5	HHEI	30	Class II PHW	Possibly Eligible
S039	40.184101	-82.112993	Perennial	UNT to Fivemile Run	194	8	7	HHEI	65	Class II PHW	Possibly Eligible
S038	40.17867	-82.107089	Intermittent	UNT to Fivemile Run	770	4	3.5	HHEI	34	Modified Class II PHW	Possibly Eligible
S037	40.177734	-82.106355	Perennial	UNT to Fivemile Run	173	9	8.5	HHEI	63	Class II PHW	Possibly Eligible
S036	40.169844	-82.098753	Intermittent	UNT to Fivemile Run	134	3	2.5	HHEI	40	Class II PHW	Possibly Eligible
S035	40.166807	-82.095956	Perennial	UNT to Fivemile Run	207	8	7.5	HHEI	52	Class II PHW	Possibly Eligible
S034	40.16646	-82.09537	Intermittent	UNT to Fivemile Run	358	6	5.5	HHEI	42	Class II PHW	Possibly Eligible
S033	40.149444	-82.079092	Ephemeral	UNT to Wakatomika Creek	83	3	2	HHEI	22	Class I PHW	Possibly Eligible
S032	40.149308	-82.079148	Intermittent	UNT to Wakatomika Creek	158	3	2.5	HHEI	37	Class II PHW	Possibly Eligible
S031	40.151136	-82.08091	Perennial	UNT to Wakatomika Creek	315	6	5.5	HHEI	55	Class II PHW	Possibly Eligible
S030	40.155172	-82.084748	Ephemeral	UNT to Wakatomika Creek	132	3	2.5	HHEI	22	Class I PHW	Possibly Eligible

Stream ID ¹	Location		Stream Type	Stream Name	Delineated Length (feet) ³	Bankfull Width (feet) ⁴	OHWM Width (feet)	Field Evaluation			Ohio EPA 401 Eligibility ⁸
	Latitude ²	Longitude ²						Method	Score ^{5, 6}	Category / Rating / OAC Designation ⁷	
S029	40.155217	-82.084878	Intermittent	UNT to Wakatomika Creek	195	5	4.5	HHEI	45	Class II PHW	Possibly Eligible
S028	40.157959	-82.08744	Ephemeral	UNT to Wakatomika Creek	167	4	3.5	HHEI	32	Class II PHW	Possibly Eligible
S027	40.158337	-82.087891	Intermittent	UNT to Wakatomika Creek	176	6	5.5	HHEI	55	Class II PHW	Possibly Eligible
S026	40.158905	-82.088228	Intermittent	UNT to Wakatomika Creek	57	4	3.5	HHEI	41	Class II PHW	Possibly Eligible
S025	40.15873	-82.088437	Perennial	UNT to Wakatomika Creek	385	7	6.5	HHEI	62	Class II PHW	Possibly Eligible
S024	40.161011	-82.090374	Ephemeral	UNT to Wakatomika Creek	197	3	2	HHEI	21	Class II PHW	Possibly Eligible
Total:					11,937						

Notes:

- ¹ GAI map designation.
- ² North American Datum, 1983.
- ³ Total stream length (in feet) located within the Project study area.
- ⁴ Width in feet from tops of stream bank
- ⁵ Categorization for OEPA Headwater Habitat Evaluation Index (HHEI) Primary Head Water (PHW) habitats. HHEI Score and comparison to HHEI Flow Chart places streams into six PHW categories: Rheocrene, Class I (natural channel), Class I (modified channel), Class II (natural channel), Class II (modified channel), Class III.
- ⁶ Narrative rating for headwater streams using the OEPA Qualitative Habitat Evaluation Index (QHEI). Excellent = ≥70; Good = 55 - 60; Fair = 43 - 54; Poor = 30 - 42; Very Poor = <30.
- ⁷ As defined by OAC Chapter 3745-1 Water Quality Standards, Water use designations and statewide criteria (OAC 3745-1-07). http://www.epa.ohio.gov/dsw/rules/3745_1.aspx.
- ⁸ As defined by the 401 WQC conditions for stream eligibility coverage under the 2022 NWP program. Streams located in Possibly Eligible areas are eligible for coverage if the pH is <6.5 or stream flow is ephemeral. Streams located in Possibly Eligible areas are also eligible for coverage if the HHEI score is <50, or if the HHEI score is between 50-69 and substrate composition is ≤10% coarse types (includes cumulative percentage of bedrock, boulders, boulder slabs, and cobble).

FIGURES



PROJECT LOCATION



COSHOCTON, MUSKINGUM, AND KNOX COUNTIES, OHIO

REFERENCE: USGS 30'x60' TOPOGRAPHIC QUADRANGLES: NEWARK (1982) AND COSHOCTON (1984), OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 05/2022.

LEGEND

- ▲ Existing Substation
- Proposed Transmission Line
- County Boundary
- Township Boundary
- City Boundary

0 0.75 1.5 3 Miles

FIGURE 1
PROJECT LOCATION MAP
SHEET INDEX



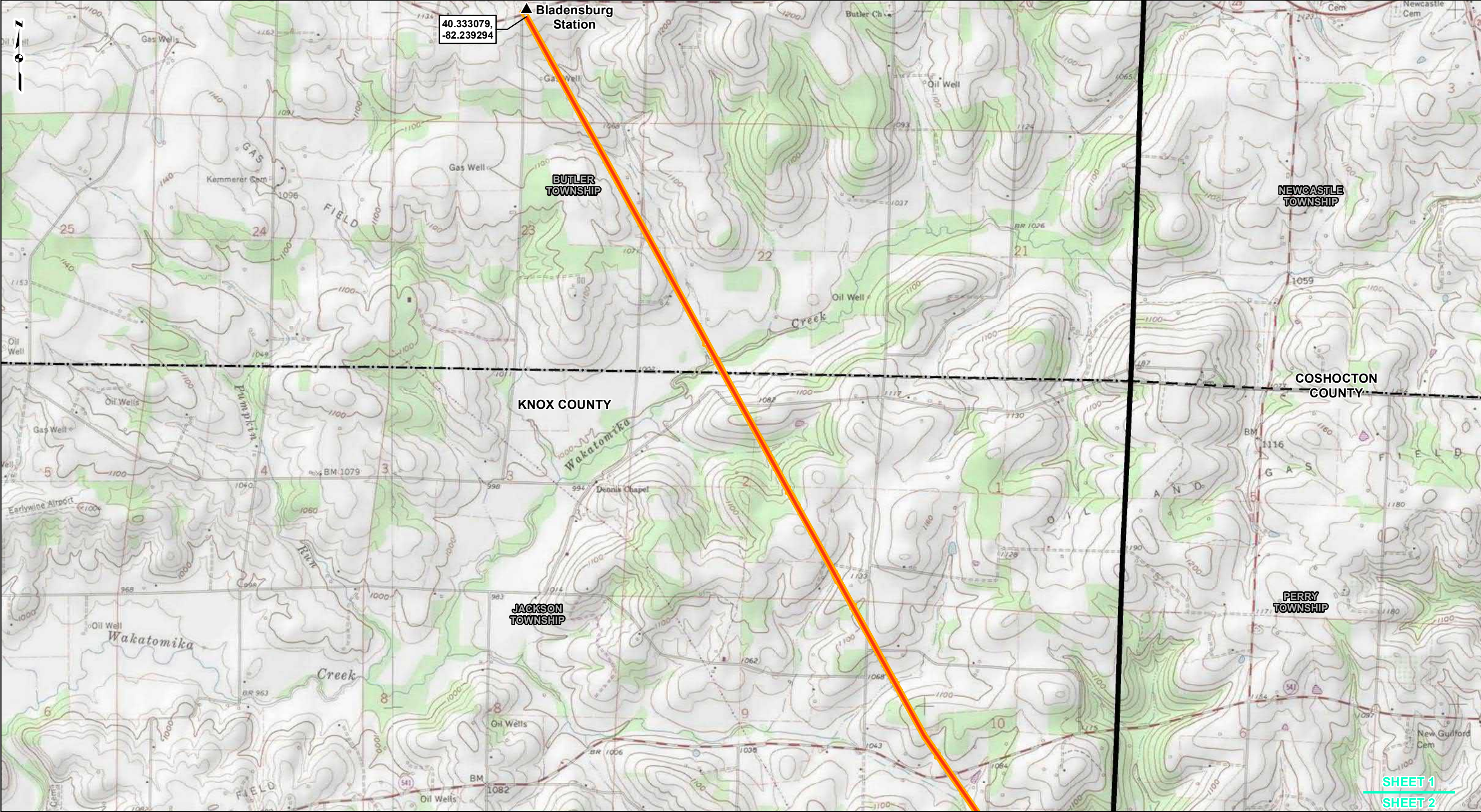
WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER



AMERICAN
ELECTRIC
POWER

DRAWN BY: EFJ
CHECKED: KLV

DATE: 5/13/2022
APPROVED: JJN








PROJECT LOCATION



COSHOCTON, MUSKINGUM, AND KNOX COUNTIES, OHIO



REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: PERRYTON (1981), TRINWAY (1981), MARTINSBURG (1981), AND WALHONDING (1981), OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 05/2022.

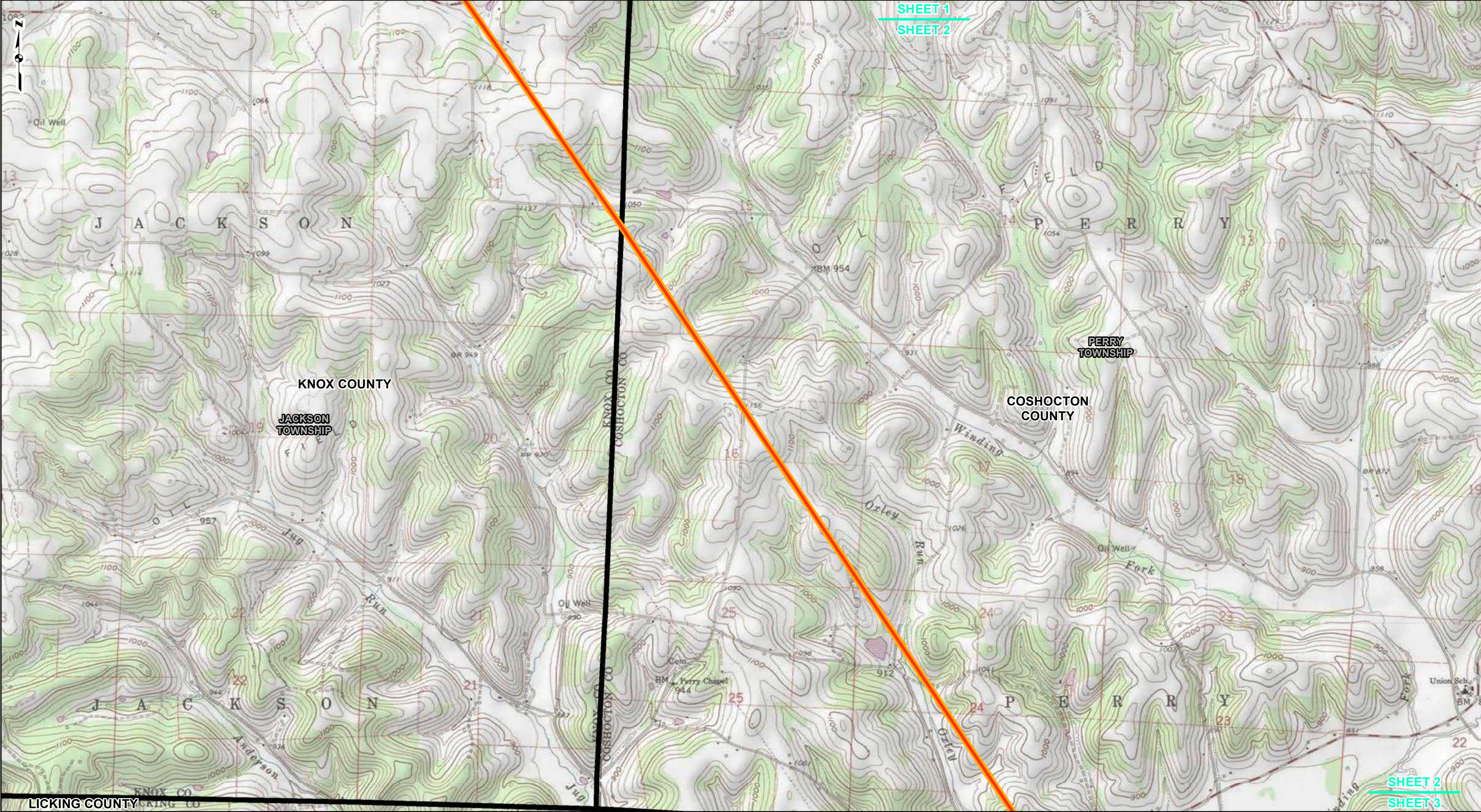
LEGEND

 Existing Substation	 Township Boundary
 Proposed Transmission Line	 County Boundary
 Study Area	

0 1,000 2,000 4,000 Feet

FIGURE 1
PROJECT LOCATION MAP
SHEET 1 OF 4

	WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ		DATE: 5/13/2022
CHECKED: KLV		APPROVED: JJN



PROJECT LOCATION



COSHOCTON, MUSKINGUM, AND KNOX COUNTIES, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: PERRYTON (1981), TRINWAY (1981), MARTINSBURG (1981), AND WALHONDING (1981), OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 05/2022.

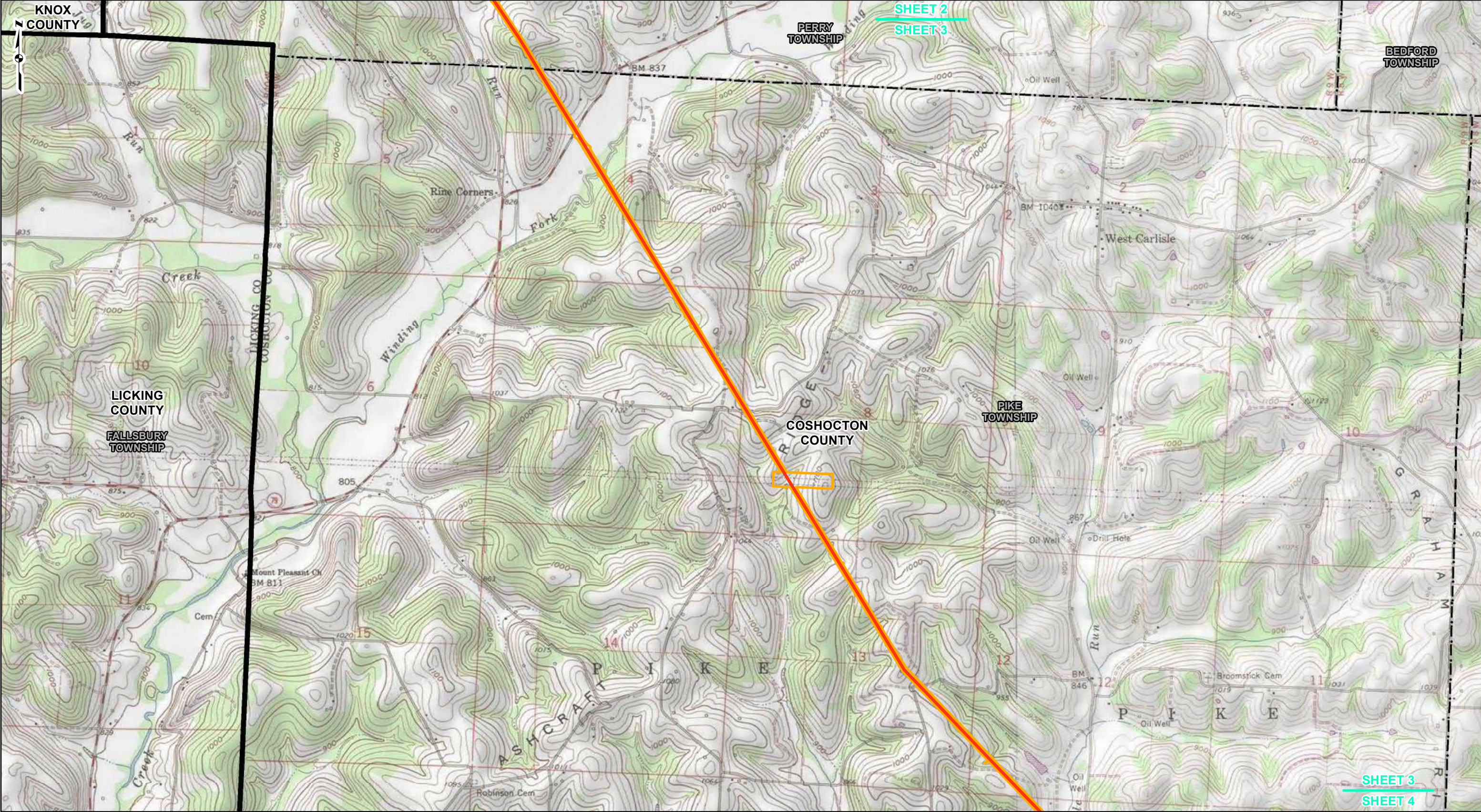
LEGEND

Existing Substation	Township Boundary
Proposed Transmission Line	County Boundary
Study Area	

0 1,000 2,000 4,000 Feet

FIGURE 1
PROJECT LOCATION MAP
SHEET 2 OF 4

	WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT	
AMERICAN ELECTRIC POWER		
DRAWN BY: EFJ		DATE: 5/13/2022
CHECKED: KLV		APPROVED: JJN



PROJECT LOCATION



COSHOCTON, MUSKINGUM, AND KNOX COUNTIES, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: PERRYTON (1981), TRINWAY (1981), MARTINSBURG (1981), AND WALHONDING (1981), OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 05/2022.

LEGEND

- ▲ Existing Substation
- Proposed Transmission Line
- Study Area
- ▭ Township Boundary
- ▭ County Boundary

0 1,000 2,000 4,000 Feet

FIGURE 1
PROJECT LOCATION MAP
SHEET 3 OF 4

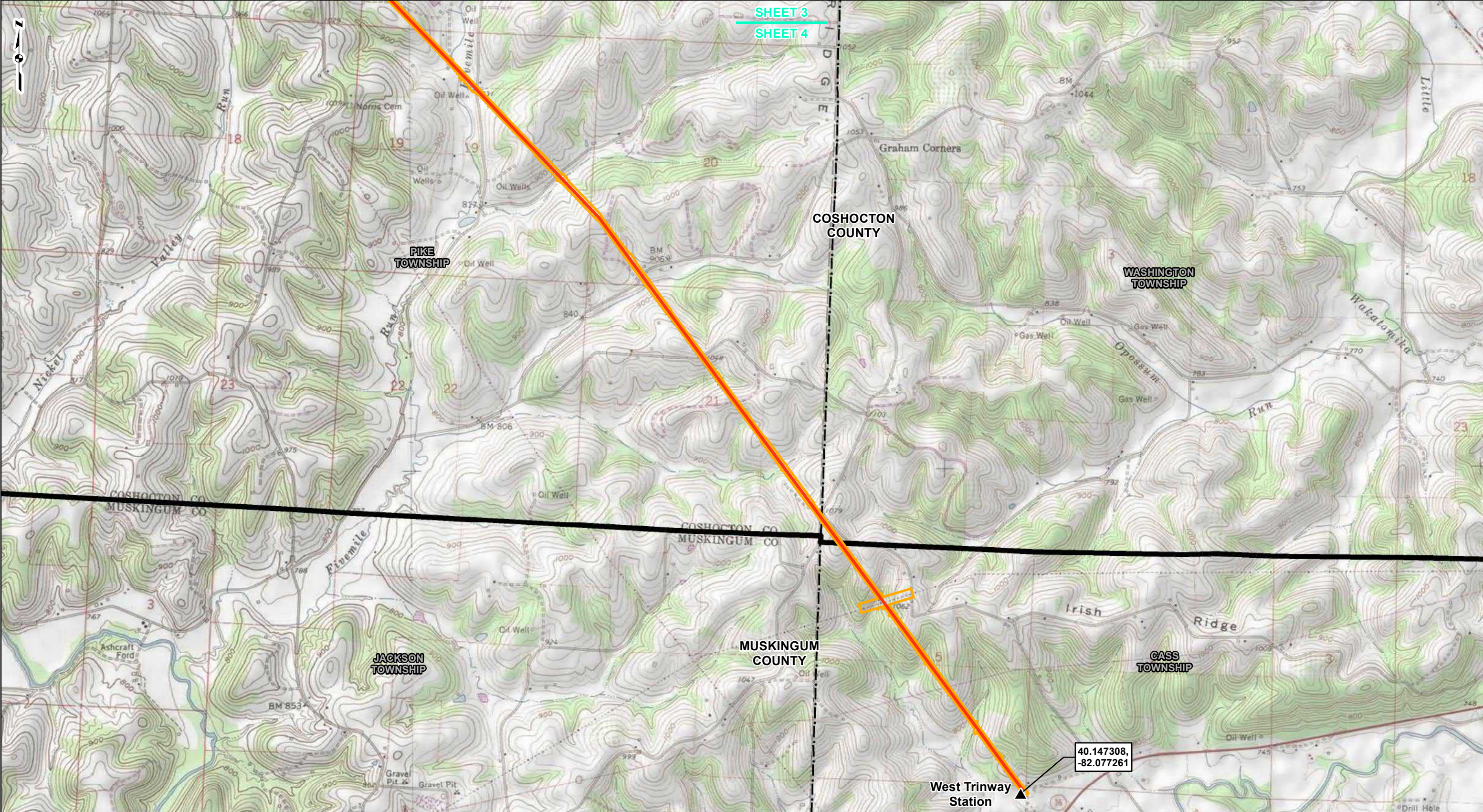


WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER



DRAWN BY: EFJ
CHECKED: KLV

DATE: 5/13/2022
APPROVED: JJN



PROJECT LOCATION



COSHOOTON, MUSKINGUM, AND KNOX COUNTIES, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: PERRYTON (1981), TRINWAY (1981), MARTINSBURG (1981), AND WALHONDING (1981), OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 05/2022.

LEGEND

- ▲ Existing Substation
- Proposed Transmission Line
- Study Area
- Township Boundary
- County Boundary

0 1,000 2,000 4,000 Feet

FIGURE 1
PROJECT LOCATION MAP
SHEET 4 OF 4

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: EFJ
CHECKED: KLV
DATE: 5/13/2022
APPROVED: JJN



PROJECT LOCATION



COSHOCTON, MUSKINGUM, AND KNOX COUNTIES, OHIO

REFERENCE: USGS 30'x60' TOPOGRAPHIC QUADRANGLES: NEWARK (1982) AND COSHOCTON (1984), OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 05/2022.

LEGEND

- Study Area
- County Boundary
- Sheet Index

0 0.75 1.5 3 Miles

FIGURE 2
RESOURCE LOCATION MAP
SHEET INDEX



WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

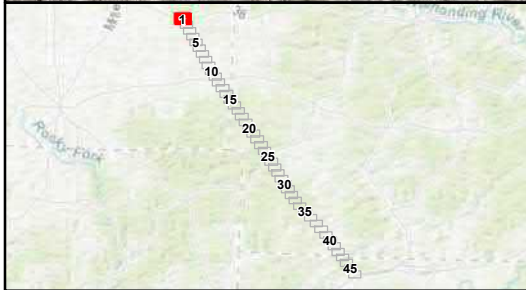


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DATE: 5/13/2022
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SHEET 1
SHEET 2



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0

100

200

400

Feet

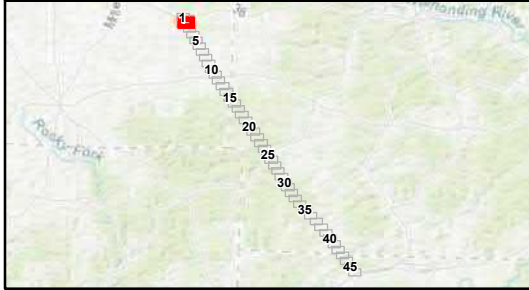
FIGURE 2
RESOURCE LOCATION MAP
SHEET 1 OF 46

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: EFJ
CHECKED: KLV

DATE: 5/13/2022
APPROVED: JJN

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Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

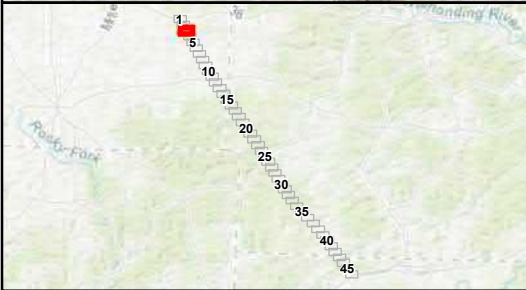
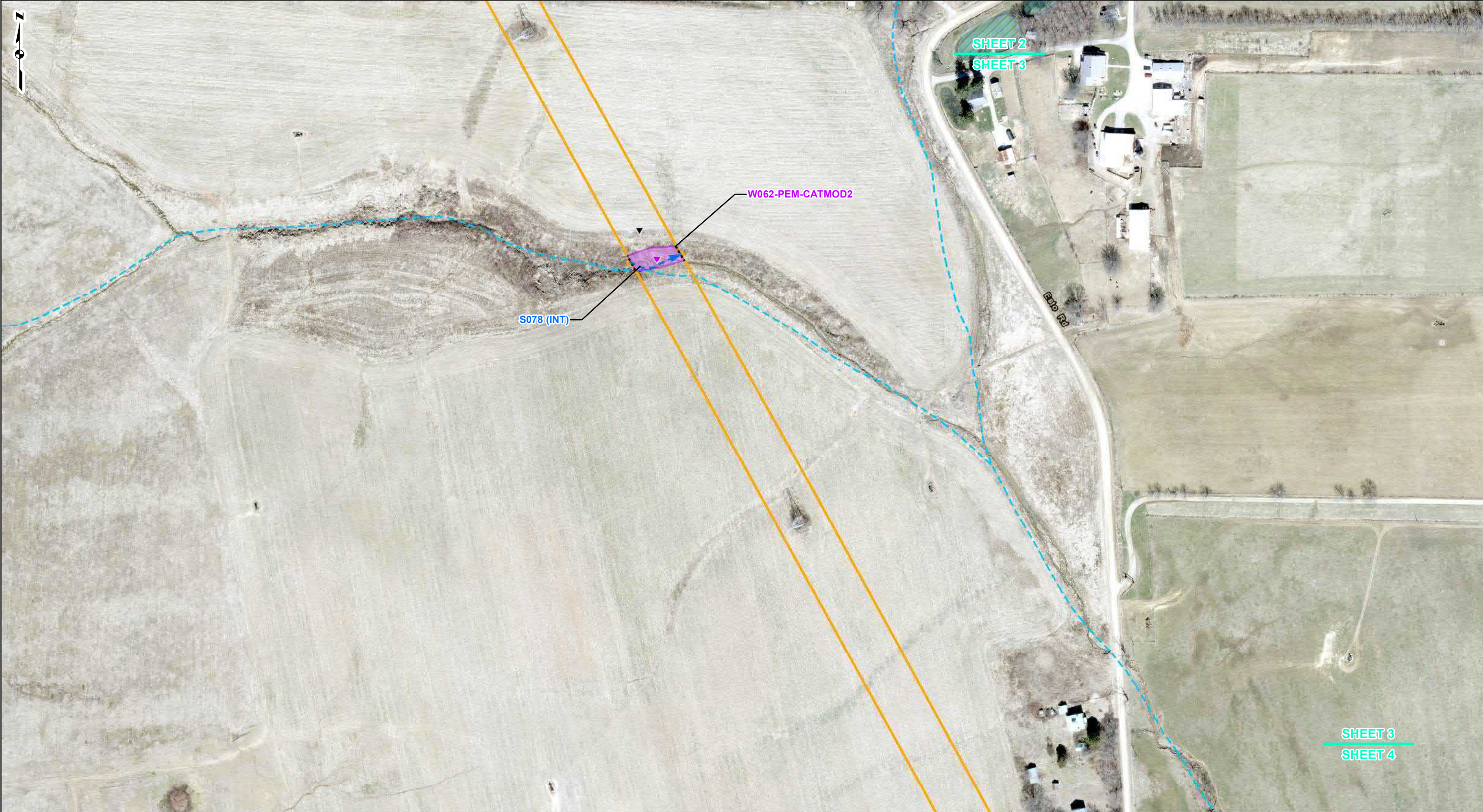
SHEET 2 OF 46

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

DRAWN BY: EFJ
CHECKED: KLV

DATE: 5/13/2022
APPROVED: JJN

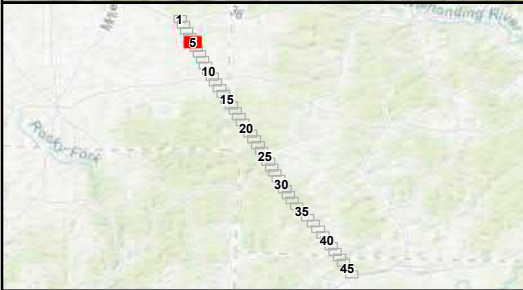
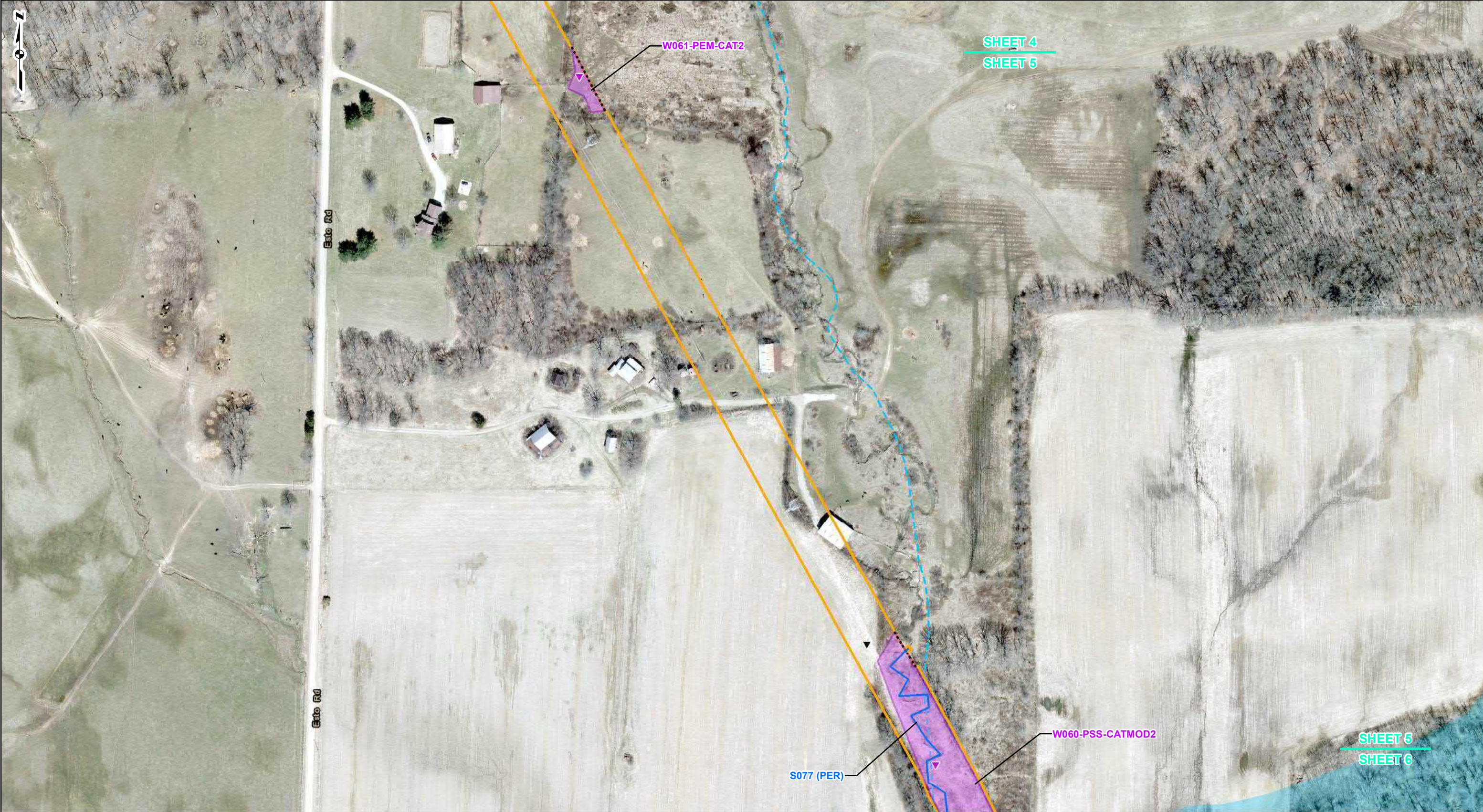


REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep	Stormwater Erosion	Open-Ended Boundary	NHD Stream
Soil Test Pit	Stream Type:	Wetland	NWI Wetland
Upland Data Point	Ephemeral	Pond	100-Year FEMA Floodplain
Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

FIGURE 2 RESOURCE LOCATION MAP SHEET 3 OF 46	
WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ CHECKED: KLV	DATE: 5/13/2022 APPROVED: JJN

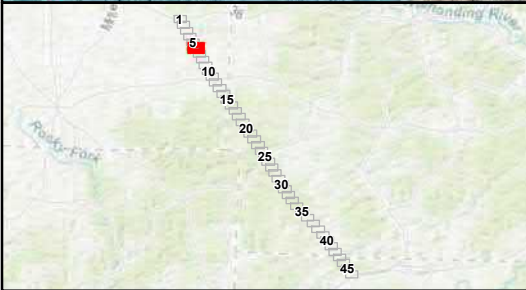
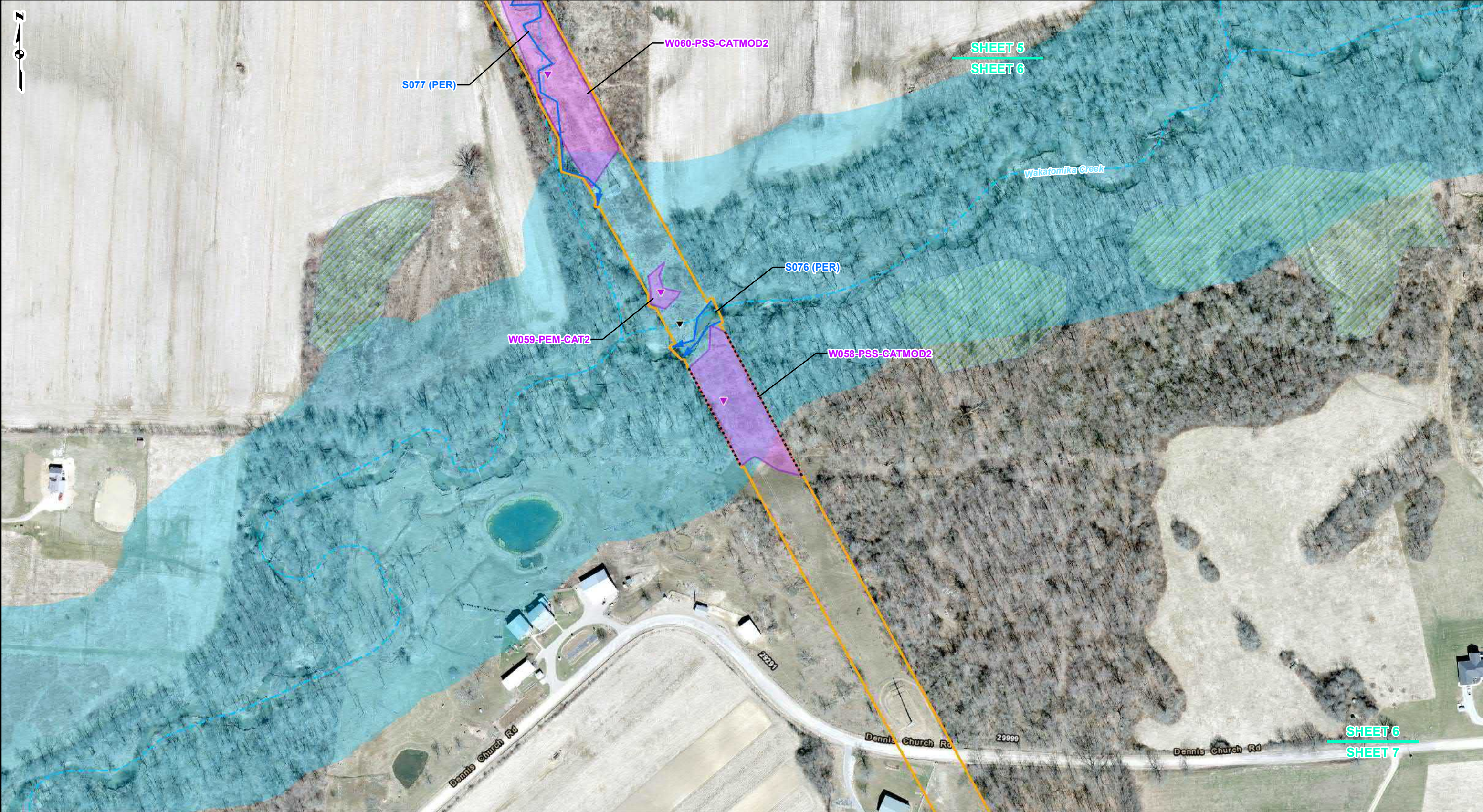


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LEGEND			
	Groundwater Seep		Stormwater Erosion
	Soil Test Pit		Wetland
	Upland Data Point		Pond
	Wetland Data Point		Study Area
	Culvert		Open-Ended Boundary
			Stream Type:
			Ephemeral
			Intermittent
			Perennial
			NHD Stream
			NWI Wetland
			100-Year FEMA Floodplain

0 100 200 400 Feet

FIGURE 2 RESOURCE LOCATION MAP SHEET 5 OF 46		
	WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ		DATE: 5/13/2022
CHECKED: KLV		APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 6 OF 46

gal consultants

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER
SOUNDLESS ENERGY

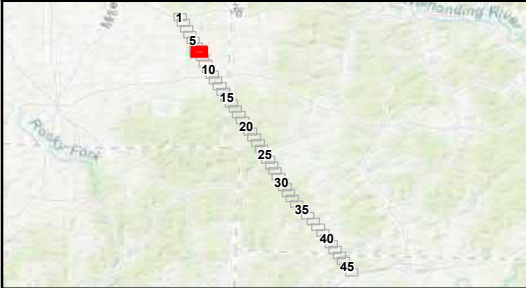
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DATE: 5/13/2022

APPROVED: JJN

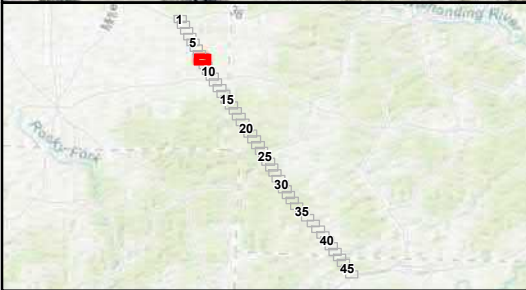
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REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

LEGEND			
	Groundwater Seep		Stormwater Erosion
	Soil Test Pit		Stream Type:
	Upland Data Point		Ephemeral
	Wetland Data Point		Intermittent
	Culvert		Perennial
	Open-Ended Boundary		Wetland
	Pond		100-Year FEMA Floodplain
	Study Area		

FIGURE 2 RESOURCE LOCATION MAP SHEET 7 OF 46	
WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ	DATE: 5/13/2022
CHECKED: KLV	APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

LEGEND

Groundwater Seep	Stormwater Erosion	Open-Ended Boundary	NHD Stream
Soil Test Pit	Stream Type:	Wetland	NWI Wetland
Upland Data Point	Ephemeral	Pond	100-Year FEMA Floodplain
Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

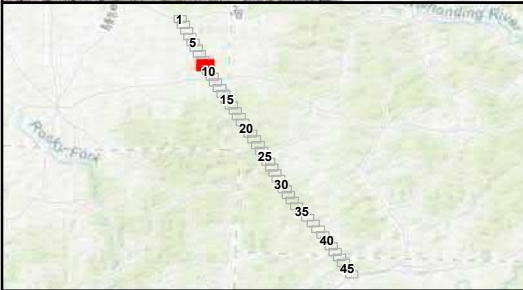
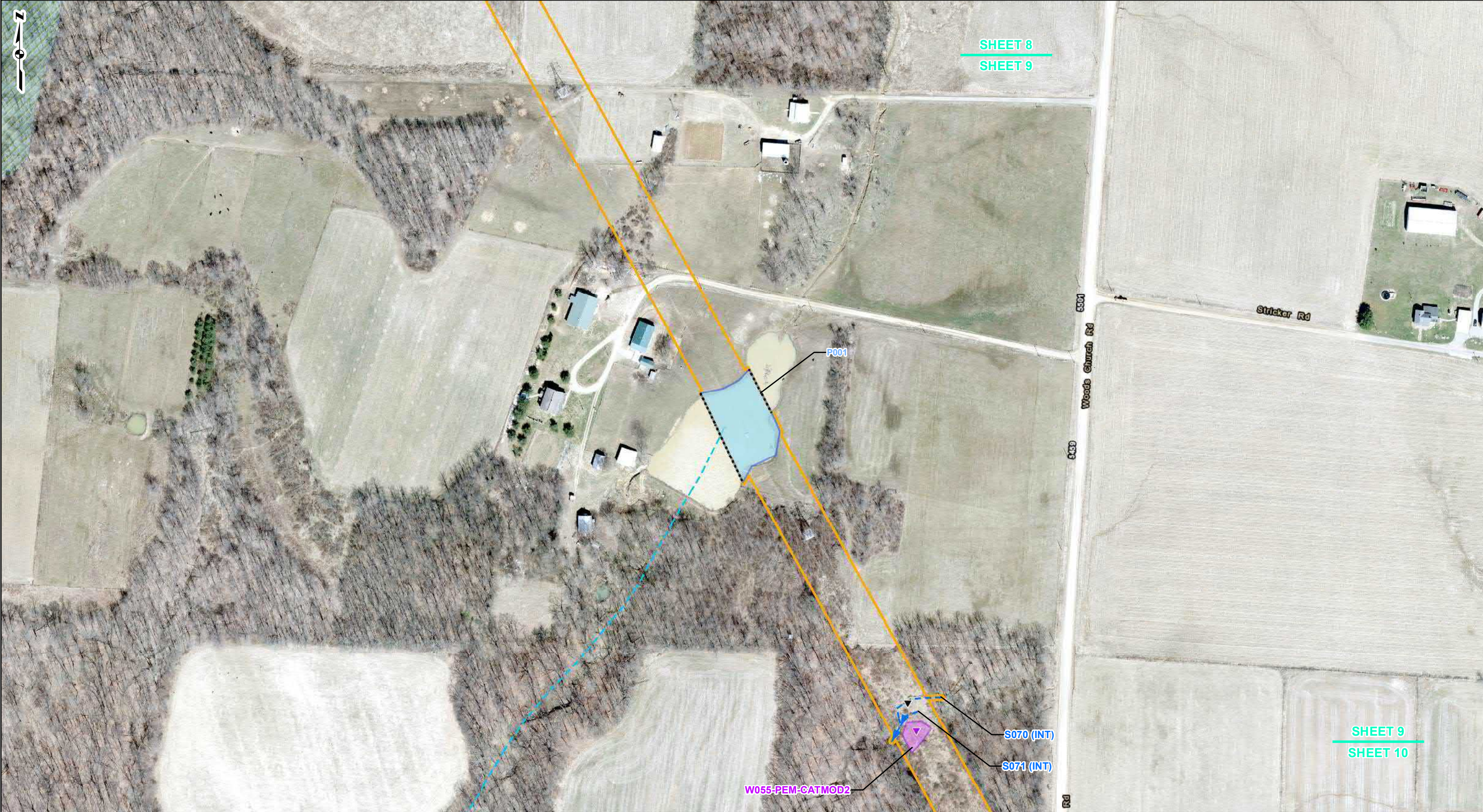
FIGURE 2
RESOURCE LOCATION MAP
SHEET 8 OF 46

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

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CHECKED: KLV

DATE: 5/13/2022
APPROVED: JJN

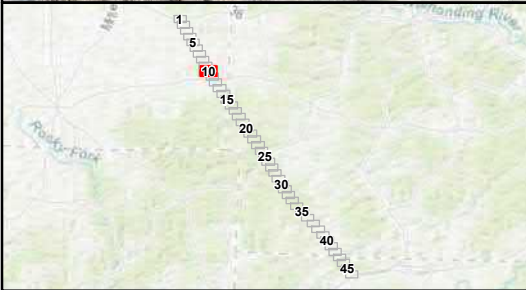
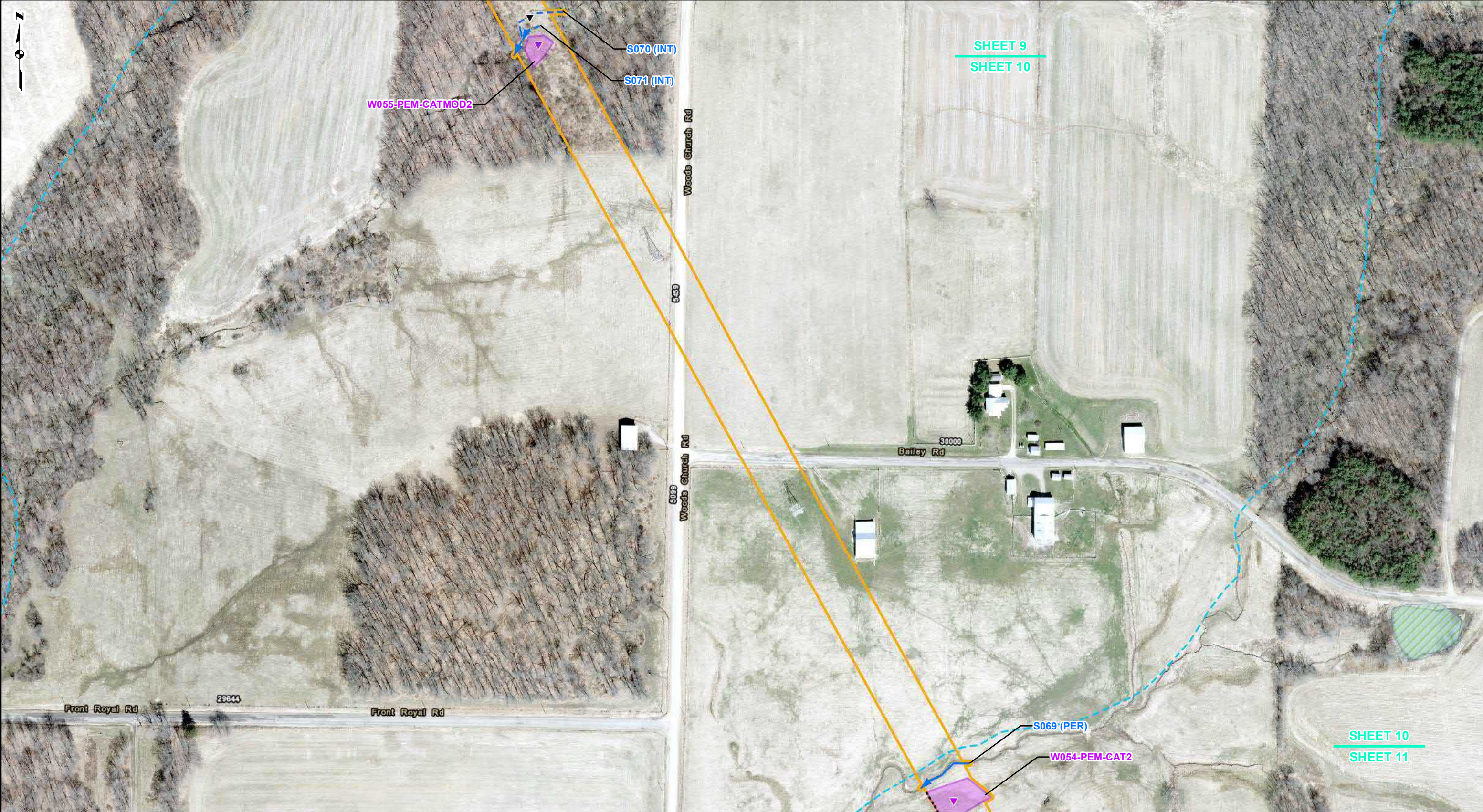


REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

LEGEND			
Groundwater Seep	Stormwater Erosion	Open-Ended Boundary	NHD Stream
Soil Test Pit	Stream Type:	Wetland	NWI Wetland
Upland Data Point	Ephemeral	Pond	100-Year FEMA Floodplain
Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

FIGURE 2 RESOURCE LOCATION MAP SHEET 9 OF 46		
	WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ CHECKED: KLV		DATE: 5/13/2022 APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 10 OF 46

WAKATOMIKA SWITCH-WEST TRINWAY

TRANSMISSION LINE PROJECT

AMERICAN ELECTRIC POWER

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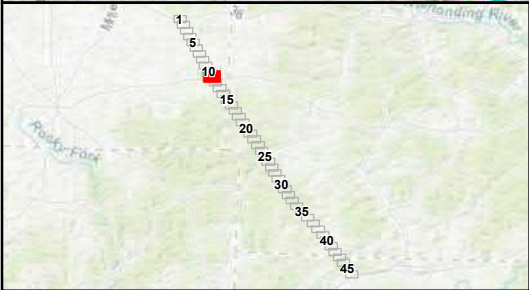
DATE: 5/13/2022

APPROVED: JJN



SHEET 10
SHEET 11

SHEET 11
SHEET 12



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

LEGEND

Groundwater Seep	Stormwater Erosion	Open-Ended Boundary	NHD Stream
Soil Test Pit	Stream Type:	Wetland	NWI Wetland
Upland Data Point	Ephemeral	Pond	100-Year FEMA Floodplain
Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

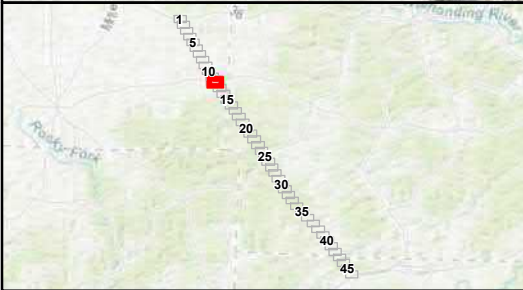
**FIGURE 2
RESOURCE LOCATION MAP
SHEET 11 OF 46**

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

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DATE: 5/13/2022
APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 12 OF 46

G&L CONSULTANTS

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

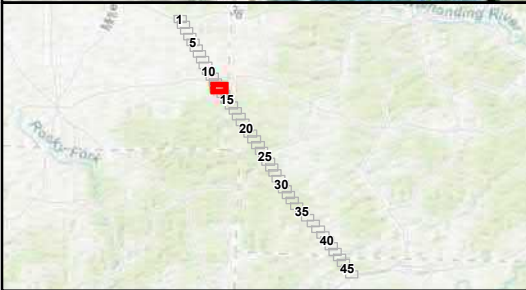
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DATE: 5/13/2022

APPROVED: JJN

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Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

Stormwater Erosion

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

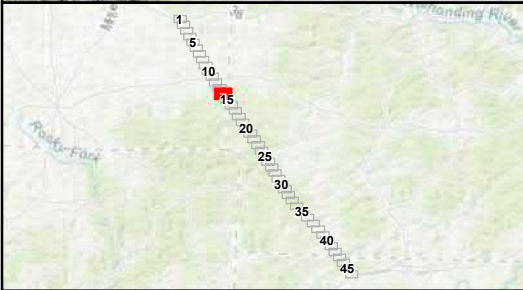
RESOURCE LOCATION MAP

SHEET 13 OF 46

**WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT**
AMERICAN ELECTRIC POWER

DRAWN BY: EFJ
CHECKED: KLV

DATE: 5/13/2022
APPROVED: JJN

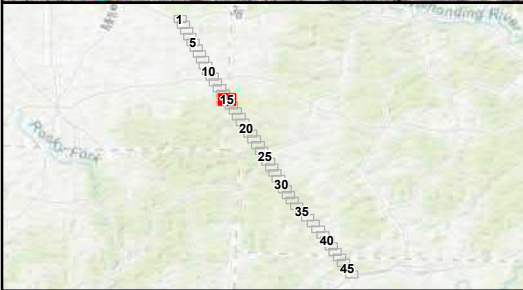


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LEGEND			
Groundwater Seep	Stormwater Erosion	Open-Ended Boundary	NHD Stream
Soil Test Pit	Stream Type:	Wetland	NWI Wetland
Upland Data Point	Ephemeral	Pond	100-Year FEMA Floodplain
Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

FIGURE 2 RESOURCE LOCATION MAP SHEET 14 OF 46		
	WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ CHECKED: KLV		DATE: 5/13/2022 APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

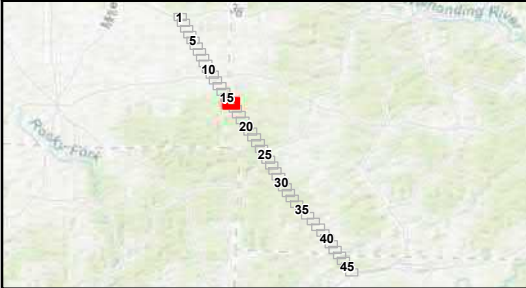
SHEET 15 OF 46

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

DRAWN BY: EFJ
CHECKED: KLV

DATE: 5/13/2022
APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0

100

200

400

Feet

gci consultants

**WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER**

**AMERICAN
ELECTRIC
POWER**

BOUNDLESS ENERGY

DRAWN BY: EFJ

CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN

FIGURE 2

RESOURCE LOCATION MAP

SHEET 16 OF 46

gci consultants

**WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER**

**AMERICAN
ELECTRIC
POWER**

BOUNDLESS ENERGY

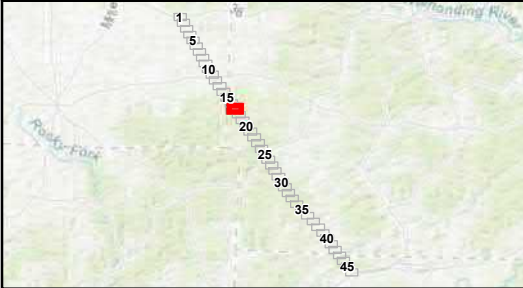
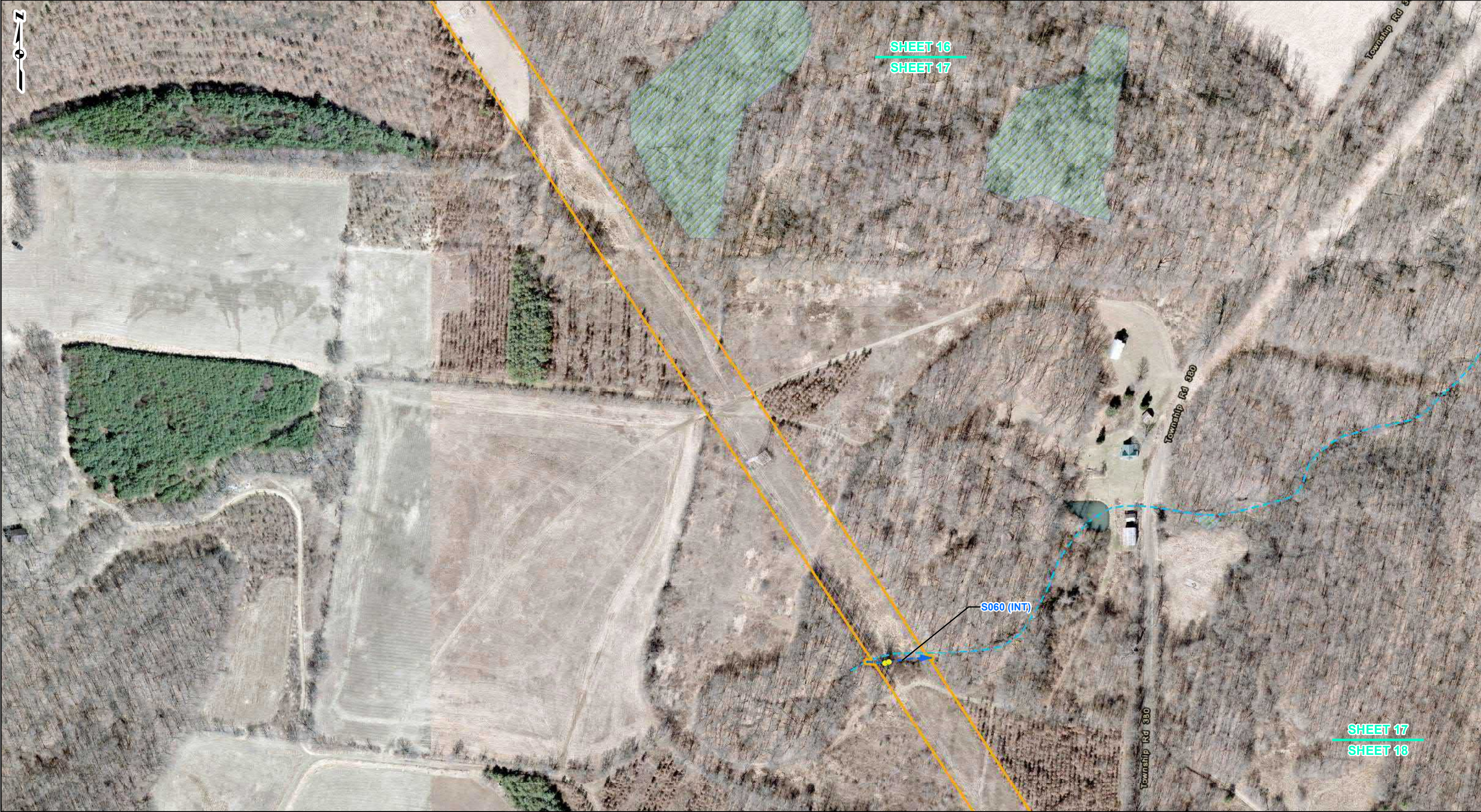
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CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN

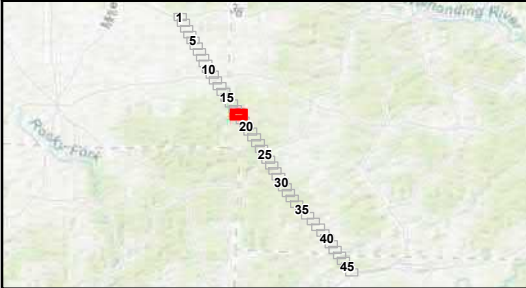
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REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

LEGEND			
	Groundwater Seep		Stormwater Erosion
	Soil Test Pit		Stream Type:
	Upland Data Point		Ephemeral
	Wetland Data Point		Intermittent
	Culvert		Perennial
	Open-Ended Boundary		Wetland
	Pond		100-Year FEMA Floodplain
	Study Area		

FIGURE 2 RESOURCE LOCATION MAP SHEET 17 OF 46		
	WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ CHECKED: KLV		DATE: 5/13/2022 APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 18 OF 46

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**WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT**

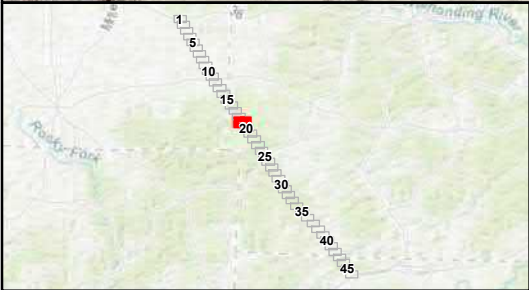
AMERICAN ELECTRIC POWER

DRAWN BY: EFJ

CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 19 OF 46

GAI CONSULTANTS

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

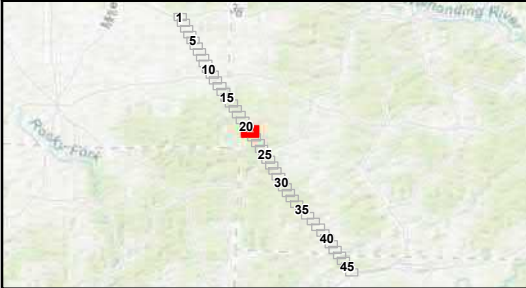
AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

DRAWN BY: EFJ

CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN

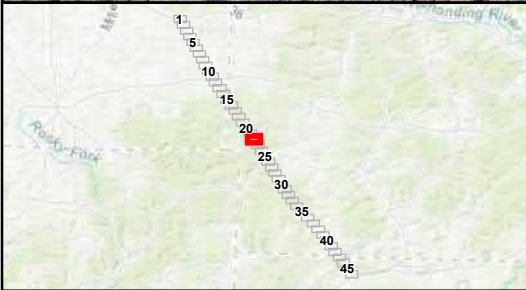
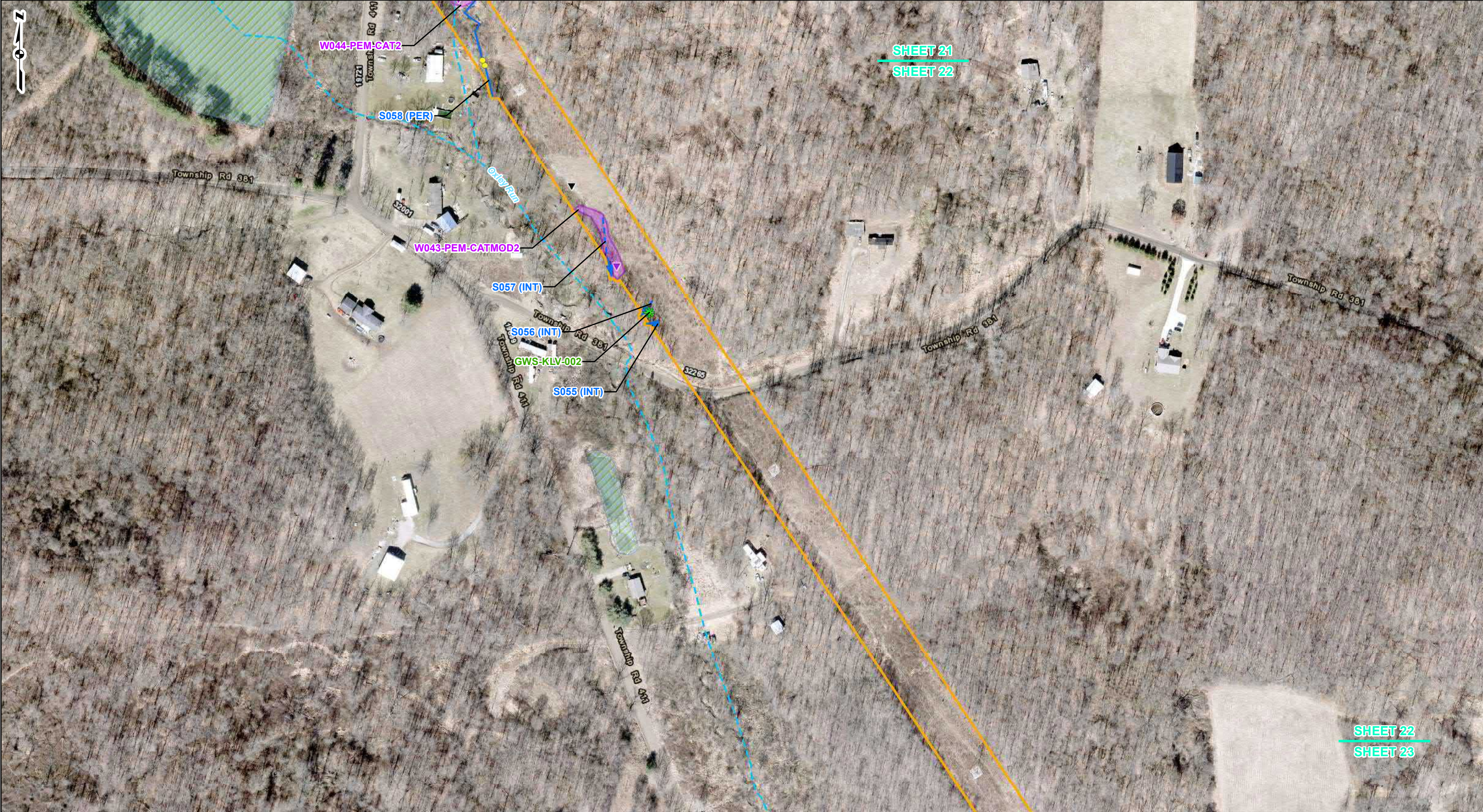


REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

LEGEND			
	Groundwater Seep		Stormwater Erosion
	Soil Test Pit		Stream Type:
	Upland Data Point		Ephemeral
	Wetland Data Point		Intermittent
	Culvert		Perennial
	Open-Ended Boundary		Wetland
	Pond		NWI Wetland
	Study Area		100-Year FEMA Floodplain

0 100 200 400 Feet

FIGURE 2 RESOURCE LOCATION MAP SHEET 21 OF 46		
	WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ CHECKED: KLV		DATE: 5/13/2022 APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0

100

200

400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 22 OF 46

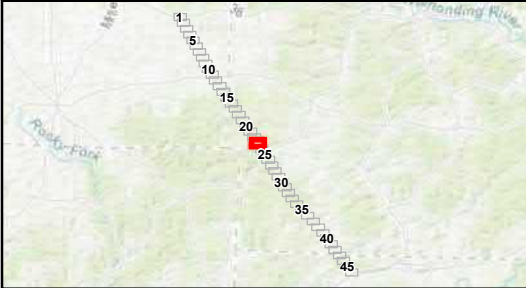
WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: EFJ

CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 23 OF 46

GAI consultants

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

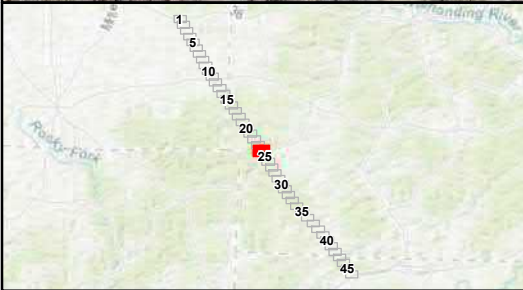
AMERICAN
ELECTRIC
POWER
BOUNDLESS ENERGY

DRAWN BY: EFJ

CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN

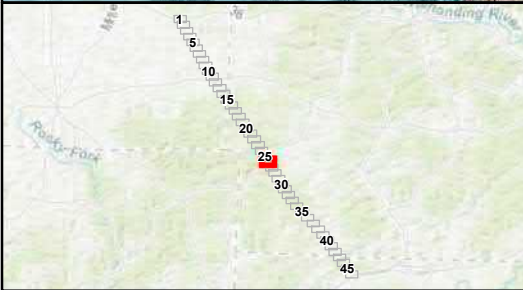
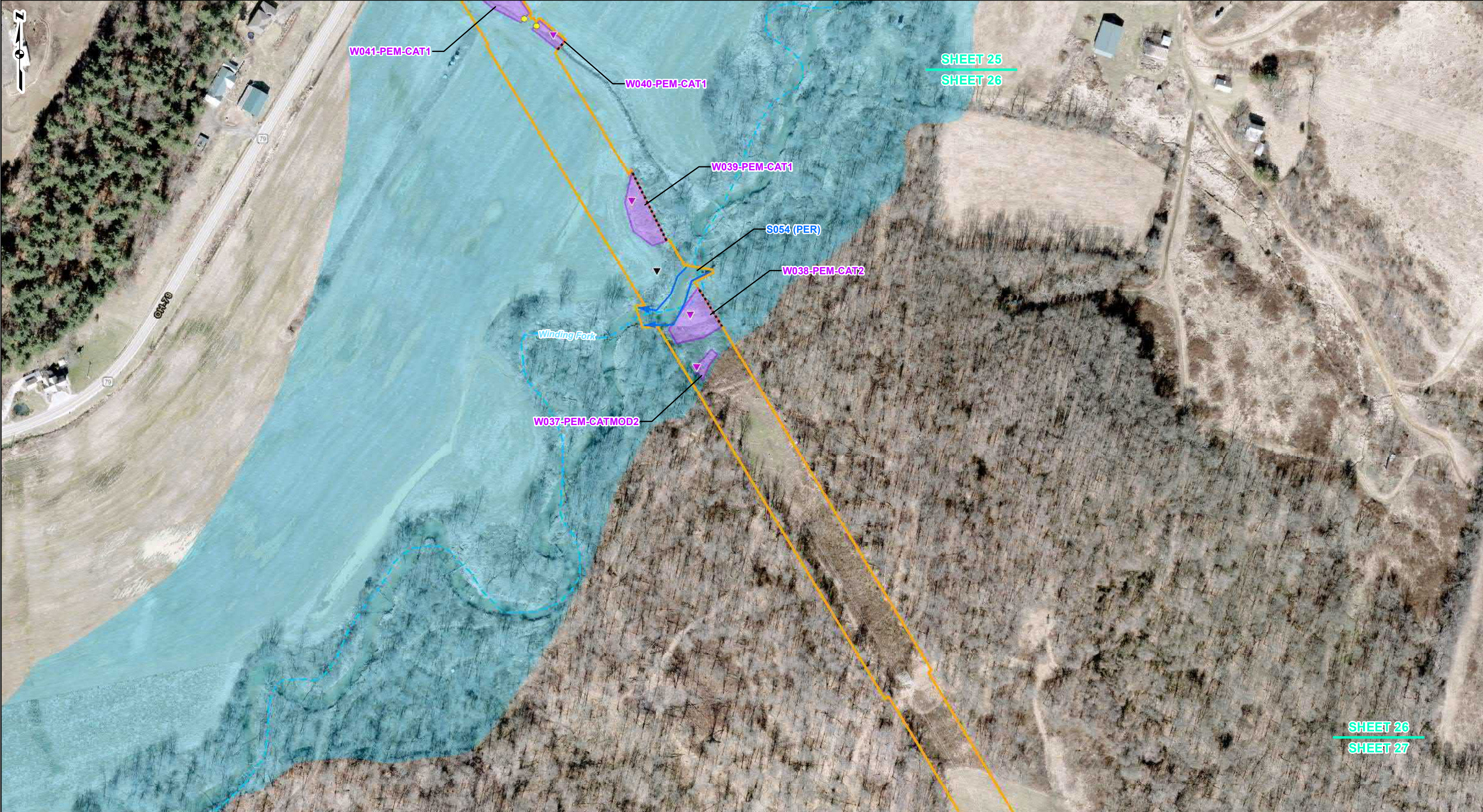


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LEGEND			
Groundwater Seep	Stormwater Erosion	Open-Ended Boundary	NHD Stream
Soil Test Pit	Stream Type:	Wetland	NWI Wetland
Upland Data Point	Ephemeral	Pond	100-Year FEMA Floodplain
Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

FIGURE 2 RESOURCE LOCATION MAP SHEET 24 OF 46		
	WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ CHECKED: KLV		DATE: 5/13/2022 APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 26 OF 46

GAI CONSULTANTS

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

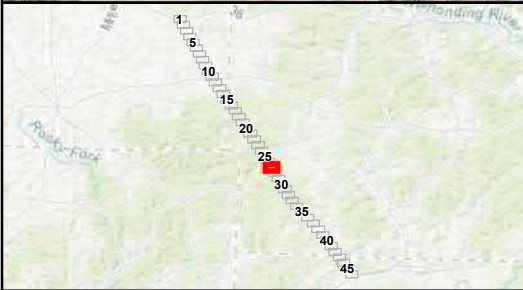
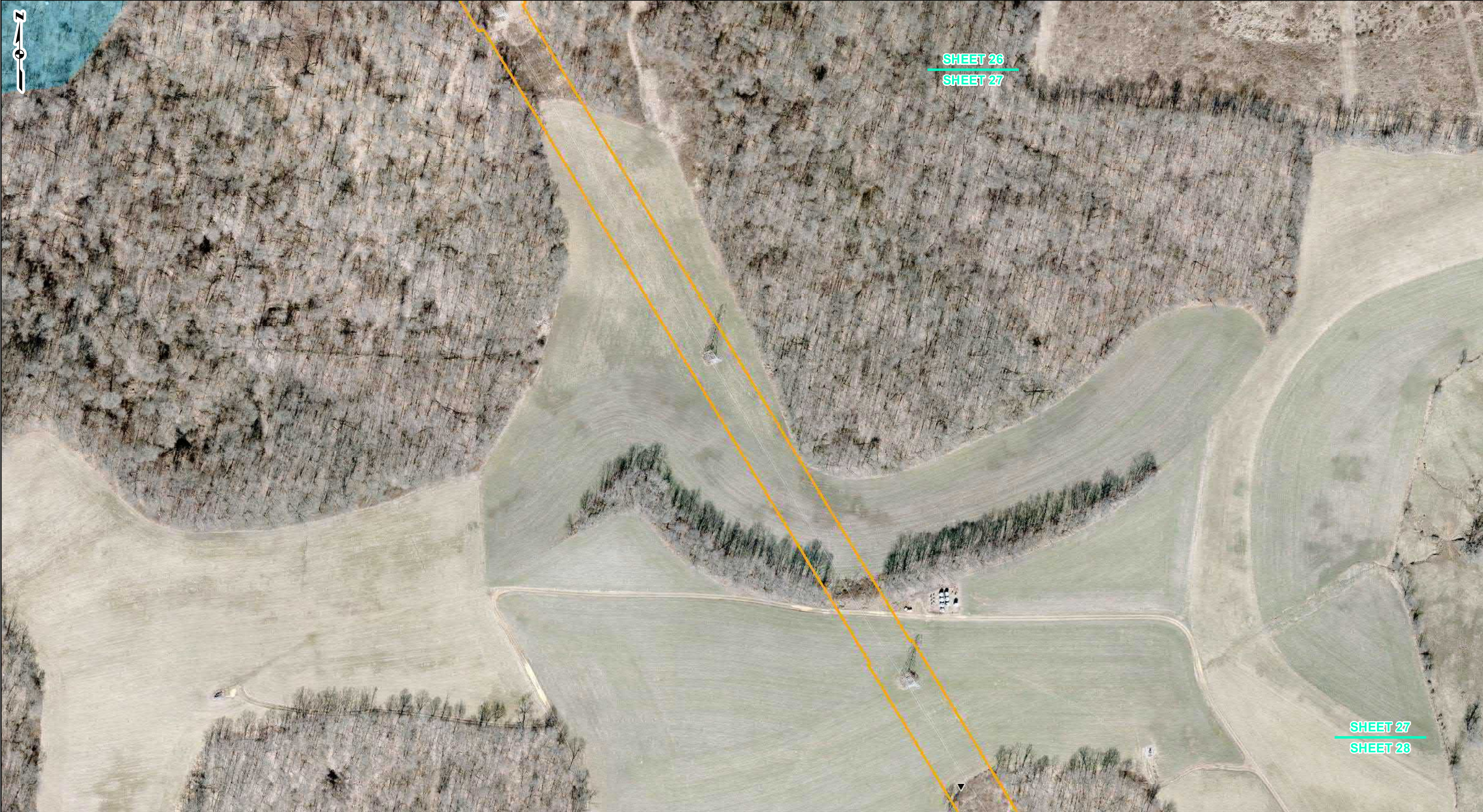
AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

DRAWN BY: EFJ

CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 27 OF 46

GAI CONSULTANTS

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

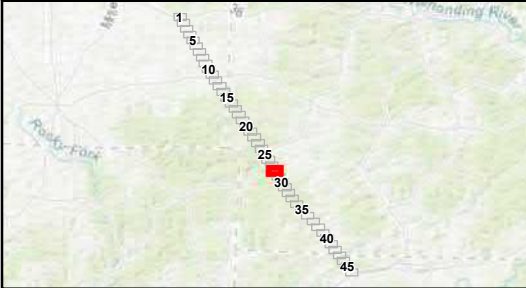
AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

DRAWN BY: EFJ

CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN

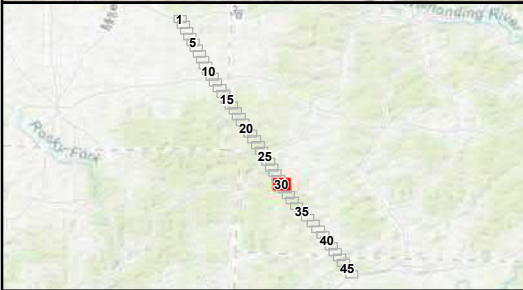
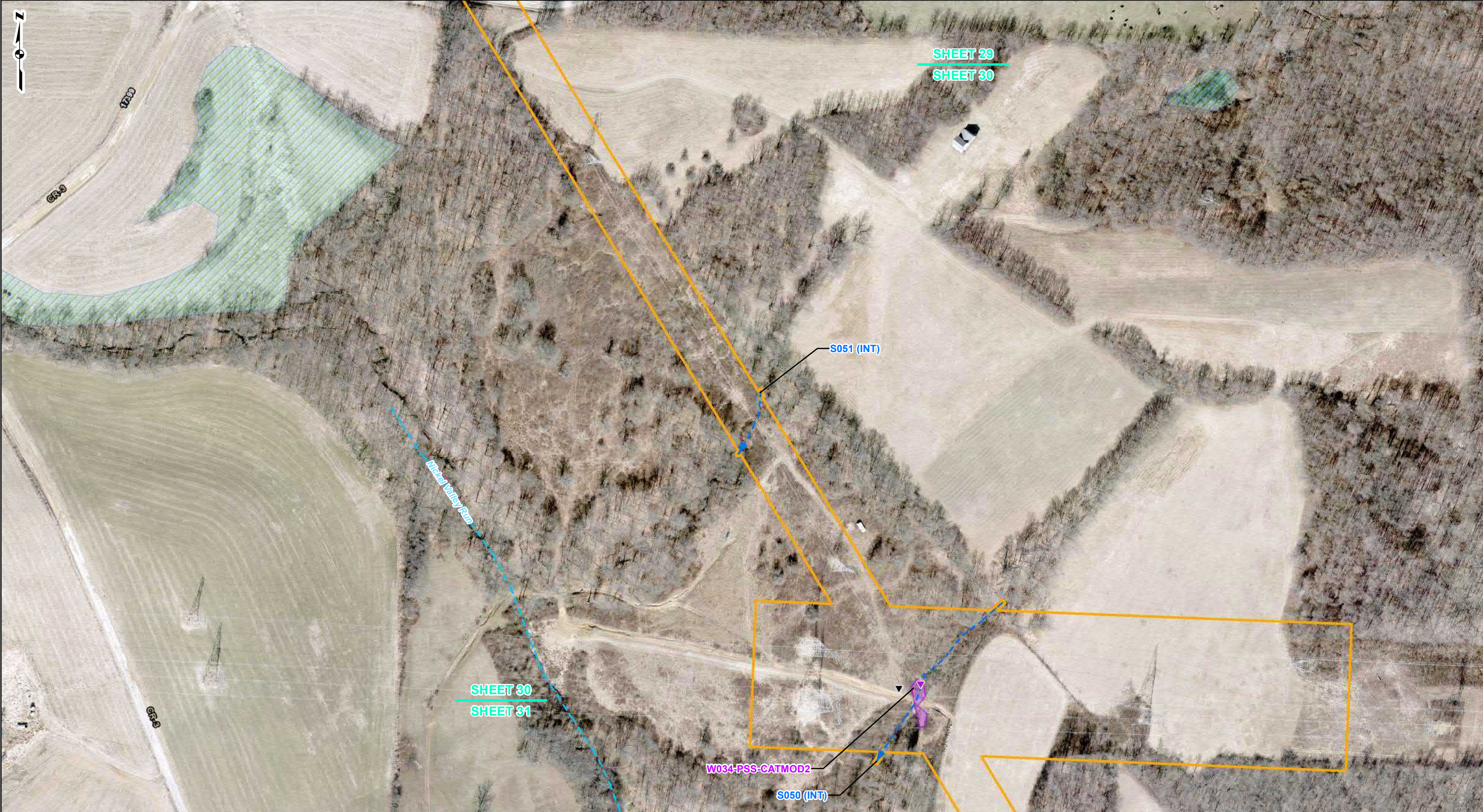


REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

LEGEND			
Groundwater Seep	Stormwater Erosion	Open-Ended Boundary	NHD Stream
Soil Test Pit	Stream Type:	Wetland	NWI Wetland
Upland Data Point	Ephemeral	Pond	100-Year FEMA Floodplain
Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

FIGURE 2 RESOURCE LOCATION MAP SHEET 28 OF 46		
	WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ CHECKED: KLV		DATE: 5/13/2022 APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 30 OF 46

GAI CONSULTANTS

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

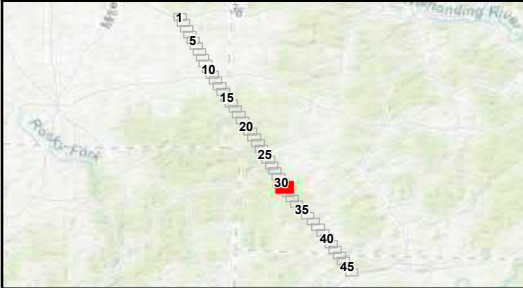
AMERICAN ELECTRIC POWER
SOUNDLESS ENERGY

DRAWN BY: EFJ

DATE: 5/13/2022

CHECKED: KLV

APPROVED: JJN

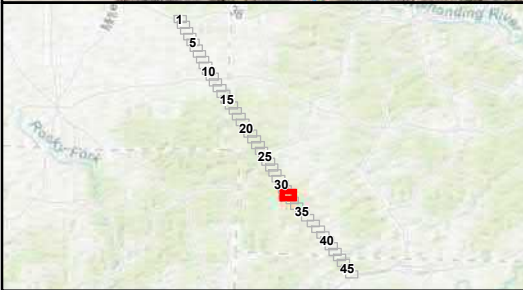


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LEGEND			
	Groundwater Seep		Stormwater Erosion
	Soil Test Pit		Stream Type:
	Upland Data Point		Ephemeral
	Wetland Data Point		Intermittent
	Culvert		Perennial
	Open-Ended Boundary		Wetland
	Pond		100-Year FEMA Floodplain
	Study Area		NWI Wetland
	NHD Stream		100-Year FEMA Floodplain

0 100 200 400 Feet

FIGURE 2 RESOURCE LOCATION MAP SHEET 31 OF 46		
	WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ CHECKED: KLV		DATE: 5/13/2022 APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

LEGEND

Groundwater Seep	Stormwater Erosion	Open-Ended Boundary	NHD Stream
Soil Test Pit	Stream Type:	Wetland	NWI Wetland
Upland Data Point	Ephemeral	Pond	100-Year FEMA Floodplain
Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

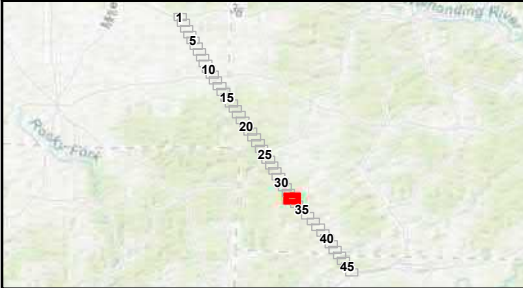
FIGURE 2
RESOURCE LOCATION MAP
SHEET 32 OF 46

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

DRAWN BY: EFJ
CHECKED: KLV

DATE: 5/13/2022
APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 33 OF 46

GAI CONSULTANTS

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

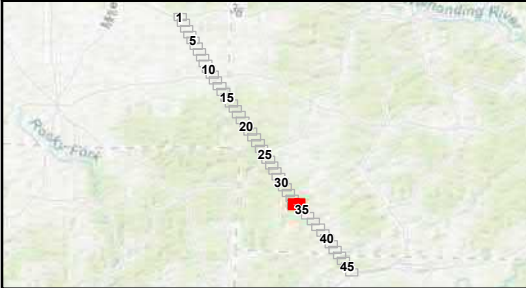
AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

DRAWN BY: EFJ

CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

LEGEND

Groundwater Seep	Stormwater Erosion	Open-Ended Boundary	NHD Stream
Soil Test Pit	Stream Type:	Wetland	NWI Wetland
Upland Data Point	Ephemeral	Pond	100-Year FEMA Floodplain
Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

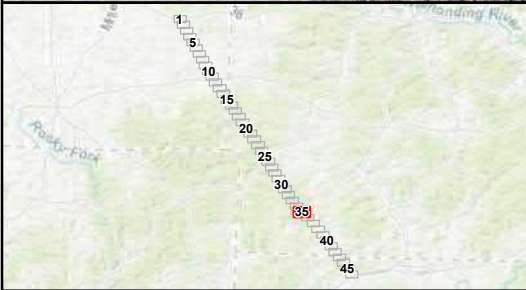
FIGURE 2
RESOURCE LOCATION MAP
SHEET 34 OF 46

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

DRAWN BY: EFJ
CHECKED: KLV

DATE: 5/13/2022
APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0

100

200

400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 35 OF 46

G&J CONSULTANTS

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

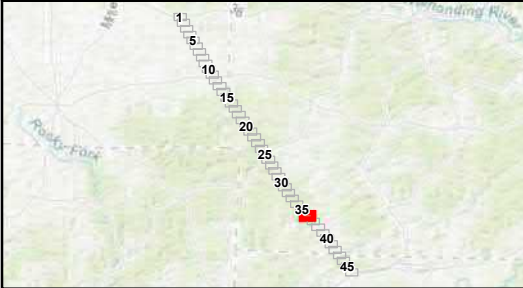
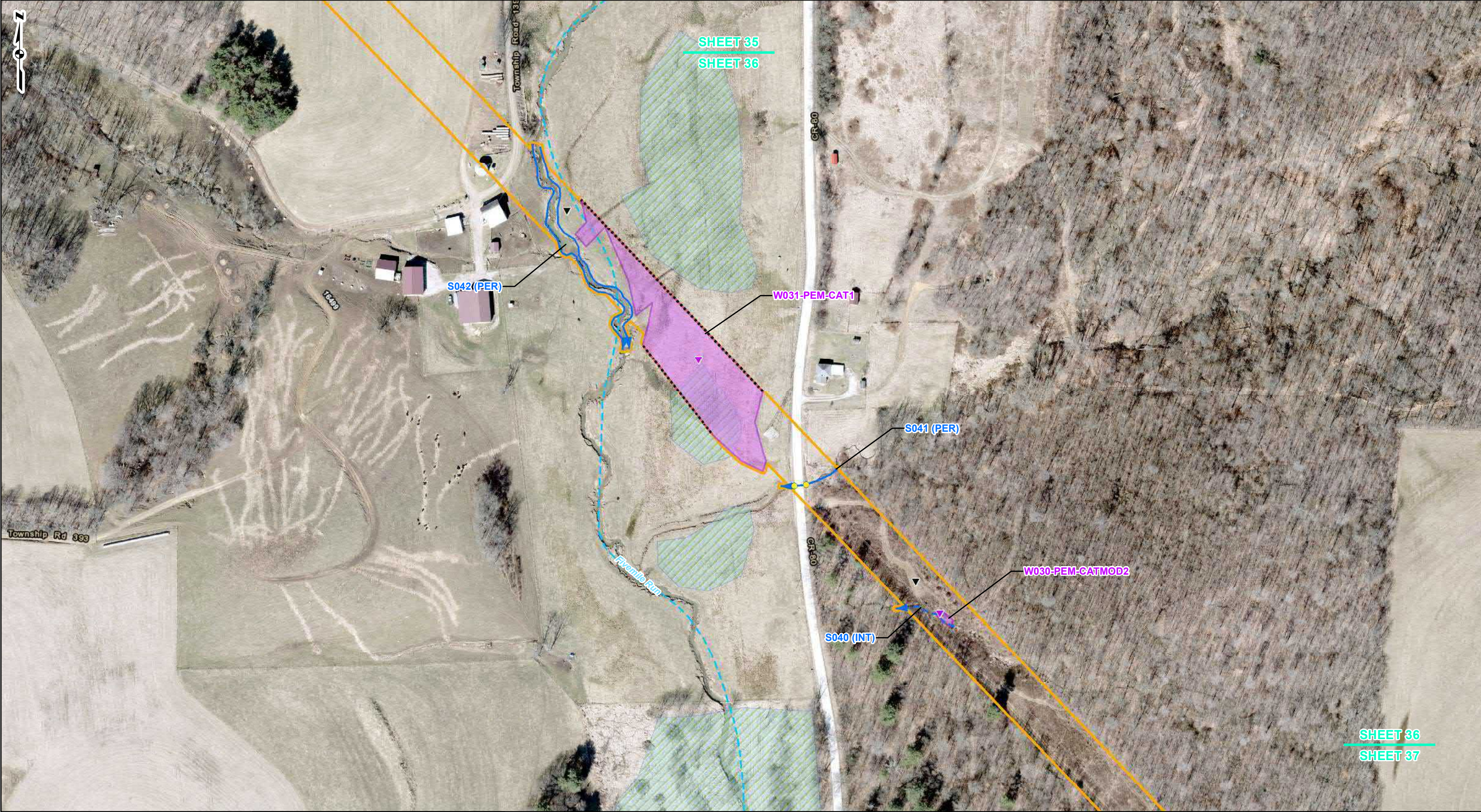
DRAWN BY: EFJ

CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN

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REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0100200400

Feet

FIGURE 2

RESOURCE LOCATION MAP

SHEET 36 OF 46

GAI CONSULTANTS

WAKATOMIKA SWITCH-WEST TRINWAY

TRANSMISSION LINE PROJECT

AMERICAN ELECTRIC POWER

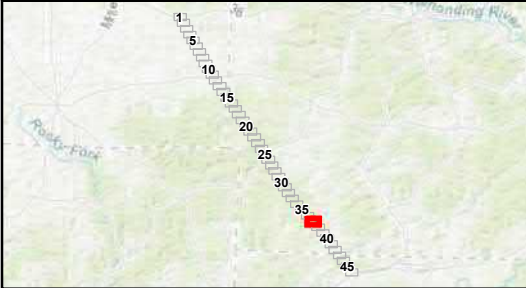
AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

DRAWN BY: EFJ

CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN

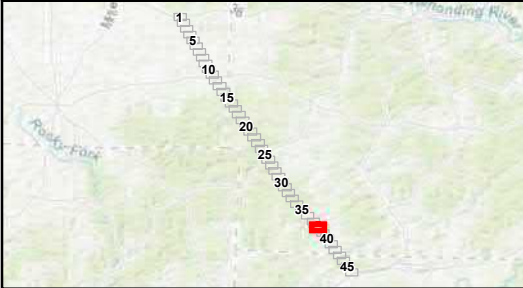


REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

LEGEND			
Groundwater Seep	Stormwater Erosion	Open-Ended Boundary	NHD Stream
Soil Test Pit	Stream Type:	Wetland	NWI Wetland
Upland Data Point	Ephemeral	Pond	100-Year FEMA Floodplain
Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

FIGURE 2 RESOURCE LOCATION MAP SHEET 37 OF 46	
WAKATOMIKA SWITCH-WEST TRINWAY TRANSMISSION LINE PROJECT AMERICAN ELECTRIC POWER	
DRAWN BY: EFJ CHECKED: KLV	DATE: 5/13/2022 APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

Groundwater Seep

Soil Test Pit

Upland Data Point

Wetland Data Point

Culvert

Stormwater Erosion

Stream Type:

Ephemeral

Intermittent

Perennial

Open-Ended Boundary

Wetland

Pond

Study Area

NHD Stream

NWI Wetland

100-Year FEMA Floodplain

0

100

200

400

Feet

gel consultants

**WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER**

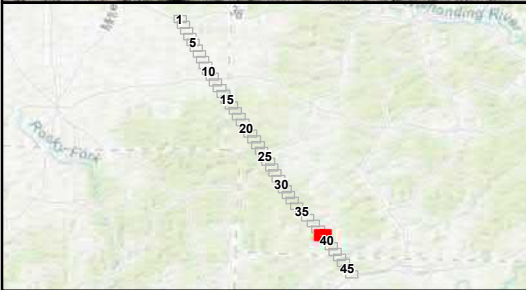
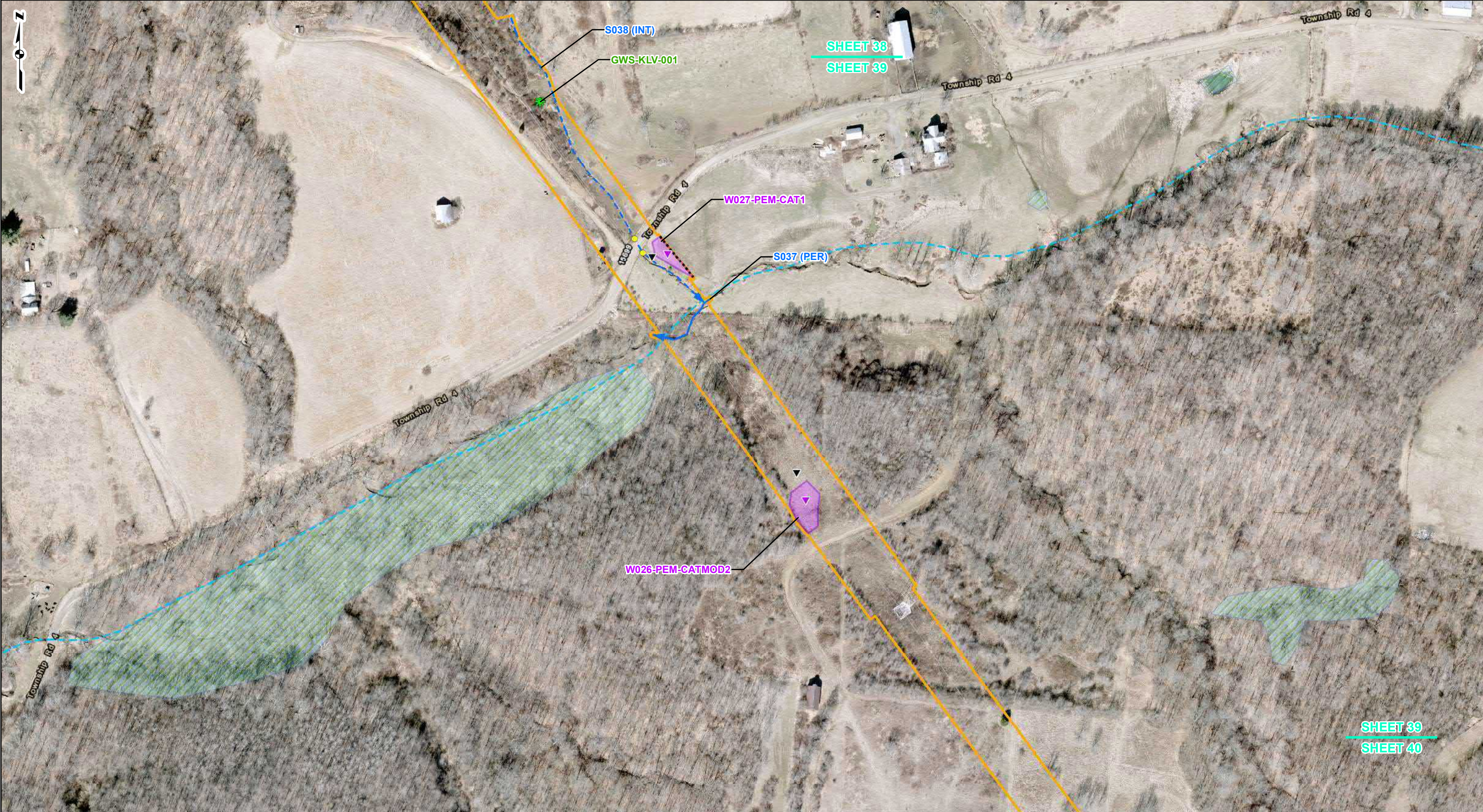
**AMERICAN
ELECTRIC
POWER**
BOUNDLESS ENERGY

DRAWN BY: EFJ

CHECKED: KLV

DATE: 5/13/2022

APPROVED: JJN



REFERENCE: AERIAL IMAGERY, OHIO STATE IMAGERY PROGRAM (OSIP), 2019-2020. WORLD TRANSPORTATION, ESRI, ARCGIS ONLINE, ACCESSED 05/2022. NATIONAL HYDROGRAPHY DATASET (NHD) STREAMS, USGS, 2020. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2020. 100-YEAR FLOODPLAINS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2021.

LEGEND

Groundwater Seep	Stormwater Erosion	Open-Ended Boundary	NHD Stream
Soil Test Pit	Stream Type:	Wetland	NWI Wetland
Upland Data Point	Ephemeral	Pond	100-Year FEMA Floodplain
Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

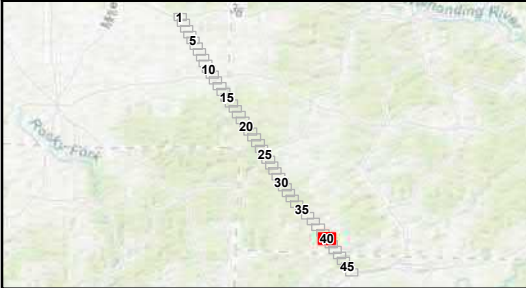
FIGURE 2
RESOURCE LOCATION MAP
SHEET 39 OF 46

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

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LEGEND

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Soil Test Pit	Stream Type:	Wetland	NWI Wetland
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Wetland Data Point	Intermittent	Study Area	
Culvert	Perennial		

0 100 200 400 Feet

FIGURE 2
RESOURCE LOCATION MAP
SHEET 40 OF 46

WAKATOMIKA SWITCH-WEST TRINWAY
TRANSMISSION LINE PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

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8/17/2022 5:15:33 PM

in

Case No(s). 22-0774-EL-BLN

Summary: Correspondence Letter of Notification Part 6 of 14 electronically filed by
Hector Garcia-Santana on behalf of AEP Ohio Transmission Company, Inc.