

Letter of Notification for the Celtic 345 kV Extension Project



An **AEP** Company

BOUNDLESS ENERGY™

PUCO Case No. 24-0936-EL-BLN

Submitted to:
The Ohio Power Siting Board
Pursuant to Ohio Administrative Code
Section 4906-6-05

Submitted by:
AEP Ohio Transmission Company, Inc.

October 16, 2024

Letter of Notification

Celtic 345 kV Extension Project

4906-6-05

American Electric Power (“AEP”) Ohio Transmission Company, Inc. (the “Company”) (“AEP Ohio Transco”) is providing the following information to the Ohio Power Siting Board (OPSB) in accordance with the accelerated application requirements of Ohio Administrative Code Section 4906-6-05.

4906-6-05(B) General Information

B(1) Project Description

Provide the name of the project and applicant's reference number, names and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a letter of notification or construction notice application.

The Company proposes the Celtic 345 kV Extension Project (the “Project”) in Jerome Township, Union County, Ohio. The Project consists of constructing 1.2 miles of 345 kV transmission line from the Hayden-Hyatt 345 kV Adjustment Project (Case No. 24-0850-EL-BLN) to the Celtic Station (approved in Case No. 23-1098-EL-BLN) to provide new electric service to the Celtic Station. The Project will primarily consist of double-circuit steel monopoles and will require a 150-foot right-of-way (“ROW”). The proposed route corridor and the associated projects are shown on **Exhibit 1** and **Exhibit 2** in **Appendix A**.

The Project meets the requirements for a Letter of Notification (LON) because it is within the types of projects defined by Item (1)(d)(ii) of 4906-1-01 *Appendix A Application Requirement Matrix For Electric Power Transmission Lines* of which states:

(1) New construction, extension, or relocation of single or multiple circuit electric power transmission line(s), or upgrading existing transmission or distribution line(s) for operation at a higher transmission voltage, as follows:

(d)Line(s) primarily needed to attract or meet the requirements of a specific customer or customers, as follows:

(ii) Any portion of the line is on property owned by someone other than the specific customer or applicant

The Project has been assigned PUCO Case No. 24-0936-EL-BLN.

B(2) Statement of Need

If the proposed project is an electric power transmission line or gas pipeline, the applicant provide a statement explaining the need for the proposed facility.

An existing customer has requested additional service to support an estimated projected load of 440 MW. Initial service to the customer is fed from the Company's Kileville Station, with additional capacity being added after the construction of the proposed Jerome Station (approved in Case No. 23-0531-EL-BLN). However, in order to comply with North American Electric Reliability Corporation requirements (N-1 and N-1-1 contingency scenarios) and meet the customer's total load demand, the Company will be required to install a new 345/138 kV source station, Celtic Station (approved in Case No. 23-1098-EL-BLN). The 345 kV sources to the Celtic Station will be established by rerouting & cutting-into the Hayden – Hyatt 345 kV line, filed separately with the OPSB, and constructing approximately 1.2 miles of double circuit 345 kV line, which is the subject of this filing. Celtic Station will provide an additional source to the customer's load in the area.

Failure to move forward with the proposed Project will result in the Company's inability to serve the customer's load expectations, thereby jeopardizing the customer's plans in the area (440 MW peak).

The need for the customer driven supplemental project was presented and reviewed with stakeholders during the February 17, 2023 PJM SRRTEP meeting. The solution was presented and reviewed with stakeholders during the May 9, 2023 PJM TEAC meeting, see Appendix B. Following the PJM stakeholder process, a PJM identifier was assigned to the Project, s3441.4. This Project was included in the Company's 2024 Long Term Forecast Report and can be found on pages 115 and 116, see Appendix B.

B(3) Project Location

Provide the location of the project in relation to existing or proposed lines and substations shown on an area system map of sufficient scale and size to show existing and proposed transmission facilities in the project area.

The Project is in Jerome Township, Union County, Ohio. **Exhibit 1** in **Appendix A** shows the Project area on a United States Geological Survey (USGS) Marysville topographic quadrangle map in relation to existing facilities. **Exhibit 2** in **Appendix A** identifies the Project on aerial imagery.

B(4) Alternatives Considered

Describe the alternatives considered and reasons why the proposed location or route is best suited for the proposed facility, including, but not be limited to, impacts associated with socioeconomic, ecological, construction, or engineering aspects of the project.

There are no other proposed route corridors for the Project. The Project proposes to parallel the Kileville-Jerome 138 kV Transmission Line Project (Approved in Case No. 24-0115-EL-BLN) and consolidate the footprint of utilities in this area into a single corridor. Due to the significant development occurring in the area, other alternatives were limited. Alternative route corridors beyond the proposed route corridor would require impacting future planned developments or adding additional line length and increasing the number of property owners impacted. The proposed Project will not result in impacts to wetlands, streams, or known cultural resource areas eligible for the National Register of Historic Places, therefore, no other

alternatives were considered for the Project. The location of the Project minimizes impacts to the community and the environment, while satisfying the customer's engineering and construction needs. The Project represents the most suitable location and most appropriate solution for meeting the Company's and specific customer's needs in the area. Based on the information gathered, the Company selected the proposed route corridor as shown on **Exhibit 2** in **Appendix A**.

B(5) Public Information Program

Describe its public information program to inform affected property owners and residents of the nature of the project and the proposed timeframe for project construction and restoration activities.

The Company will inform affected property owners, tenants, and local officials about this Project through several methods. Within seven days of filing this LON, the Company will issue a public notice in a newspaper of general circulation in the Project area. The notice will comply with all requirements of Ohio Administrative Code ("OAC") Section 4906-6-08(A)(1-6). Further, the Company will mail a letter, via first class mail, to affected landowners, tenants, contiguous landowners, and any other landowner the Company may approach for an easement necessary for the construction, operation, or maintenance of the Project. The letter will comply with all requirements of OAC Section 4906-6-08(B). The Company maintains a website (<http://aeptransmission.com/ohio/>) which provides the public access to an electronic copy of this LON and the public notice for this LON. An electronic copy of the LON will be served to the public library and select municipal officials in each political subdivision for this Project. The Company retains ROW land agents that discuss Project timelines, construction and restoration activities and convey information to affected owners and tenants throughout the Project area.

B(6) Construction Schedule

Provide an anticipated construction schedule and proposed in-service date of the project.

Construction of the Project is planned to start in April 2025 with a proposed in-service date of November 2025.

B(7) Area Map

Provide a map of at least 1:24,000 scale clearly depicting the facility and proposed limits of disturbance with clearly marked streets, roads, and highways, and an aerial image.

Exhibit 1 in **Appendix A** provides the proposed Project area on a map of 1:24,000-scale (1-inch equals 3,000 feet) on the Marysville USGS 7.5-minute topographic map. **Exhibit 2** in **Appendix A** shows the Project area on ESRI World Imagery at a scale of 1:13,000-scale (1-inch equals 1000 feet). The ESRI World Imagery is dated June 2024.

B(8) Property Agreements

Provide a list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the facility and a list of the additional properties for which such agreements have not been obtained.

A list of properties for which the company will need to obtain easements/options for the proposed route corridor is provided below.

Parcel Number	Agreement Type	Easement Agreement/ Option Obtained
1500270060000	Ohio Power Company Owned	N/A
1500270090010	Ohio Power Company Owned	N/A
1500270091000	Ohio Power Company Owned	N/A
1500270100000	Ohio Power Company Owned	N/A
1500270101000	Ohio Power Company Owned	N/A
1500300190000	New Easement	No
1500300201000	Easement	Yes
1500300200000	Easement	Yes
1500280050000	Easement	Yes

*Option has been obtained by Company

The form easements in **Appendix C** represents the easement rights the Company would seek if condemnation proceedings were necessary to construct, operate, and maintain these facilities.

B(9) Technical Features

Describe the following information regarding the technical features of the project:

B(9)(a) Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.

The Project construction is estimated to include the following:

Voltage: 345 kV
Conductors: (6) 2-bundle 1272 KCM 54/19 ACSR "Pheasant"
Static Wire: (1) 7#8 Alumoweld
1. 144-ct Fiber OPGW
Insulators: Polymer
ROW Width: 150 feet
Structure Types:
(9) Monopole Custom Double-circuit Davit arm Suspension
(3) Monopole Custom Double-circuit Davit arm Deadend
(1) 2-Pole Custom Double-circuit Deadend

B(9)(b) Electric and Magnetic Fields

No occupied residences or institutions are located within 100 feet of the Project route centerline.

B(9)(c) Project Costs

The estimated capital cost of the project.

The capital cost estimate for the Project, which is comprised of applicable tangible and capital costs, is approximately \$ \$12,138,000 using a Class 4 estimate. The Project cost, pursuant to the PJM OATT, will be recovered in the AEP Ohio Transco FERC formula rate (Attachment H-20 to the PJM OATT) and allocated to the AEP Zone.

B(10) Social and Economic Impacts

The applicant shall describe the social and ecological impacts of the project.

B(10)(a) Provide a brief, general description of land use within the vicinity of the proposed project, including a list of municipalities, townships, and counties affected.

The Project is in Jerome Township, Union County, Ohio. Land use around the Project area includes open land to be developed. Large commercial and industrial facilities are currently under development in this area. There are no schools, hospitals, places of worship, or airports within 1,000 feet of the Project.

B(10)(b) Agricultural Land Information

Provide the acreage and a general description of all agricultural land, and separately all agricultural district land, existing at least sixty days prior to submission of the application within the potential disturbance area of the project.

The Project does not impact agricultural land. The Union County Auditor's office was contacted to obtain information about Agricultural District Lands and received the requested data via email on September 17, 2024. No Agricultural District Lands are within the potential disturbance area of the Project.

B(10)(c) Archaeological and Cultural Resources

Provide a description of the applicant's investigation concerning the presence or absence of significant archeological or cultural resources that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

The Company's consultant completed an addendum cultural resources review for the Celtic 345kV Extension Project. The Project route corridor was previously investigated for cultural resources by several previous surveys. These investigations did not result in the identification of any archaeological deposits or significant architectural resources within the Project's area of potential effect. There are no history/architecture resources identified as eligible or potentially eligible for the inclusion on the National Register of Historic Places. No further cultural resource management work is considered to be necessary. The Ohio State Historic Preservation Office ("SHPO") agreed with this recommendation on March 29, 2024, and agrees that no additional archaeological surveys are required. No further coordination with the SHPO is necessary unless the Project changes or additional resources are discovered during implementation of the Project. Correspondence with the SHPO received to date is provided in **Appendix D**.

B(10)(d) Local, State, and Federal Agency Correspondence

Provide a list of the local, state, and federal governmental agencies known to have requirements that must be met in connection with the construction of the project, and a list of documents that have been or are being filed with those agencies in connection with siting and constructing the project.

A Notice of Intent will be filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHC00006. The Company will also coordinate storm water permitting needs with local government agencies as necessary. The Company will implement and maintain best management practices as outlined in the project-specific Stormwater Pollution Prevention Plan to minimize erosion and sediment runoff to protect surface water quality during storm events.

The Company's consultant conducted a wetland and waterbodies delineation survey as part of the survey effort for Project. Field surveys confirmed one perennial stream (stream 1), one intermittent stream (stream 2) and one open water feature (retention pond) are crossed by the route corridor. All delineated features are anticipated to be spanned by the Project. The Ecological Survey Report is provided in **Appendix E**. Project construction activities are not expected to result in the discharge of fill material in the wetland, streams or ponds identified, therefore a permit with the U.S. Army Corps of Engineering and/or the Ohio Environmental Protection Agency (OEPA) is not anticipated for the Project.

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) Map Number 39159C0480D (effective 2008-12-16), the Project is not within the boundaries of any 100-year floodplains or floodways and therefore will not require any floodplain permitting.

There are no other known local, state, or federal requirements that must be met prior to commencement of the Project.

B(10)(e) Threatened, Endangered, and Rare Species

Provide a description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

Coordination letters were sent to U.S. Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources-Division of Wildlife (ODNR-DOW). The USFWS response was received on March 2, 2023, and ODNR-DOW's response was received on March 8, 2023. Copies of the agencies' correspondence letters are provided in **Appendix D**.

Based on consultation from the USFWS, the Project area lies within range of two federally listed species: the endangered Indiana bat (*Myotis sodalis*) and the threatened northern long-eared bat (*Myotis septentrionalis*). The USFWS indicated that the Project is in the vicinity of one or more confirmed records of Indiana bats and recommends avoiding tree removal whenever possible. If no caves or abandoned mines are present and trees greater than or equal to 3 inches dbh cannot be avoided, USFWS recommends removal

only occur between October 1 and March 31. A habitat survey was conducted as part of the Ecological Survey Report (**Appendix E**) and determined that the Project area contains potentially suitable foraging and roosting habitat for the Indiana bat and the northern long-eared bat. However, no potential suitable hibernacula were observed. Approximately 0.5 acre of tree clearing within the 150-foot ROW is proposed for the Project. The Company anticipates clearing activities will occur between October 1 and March 31, to avoid adverse effects of the Indiana bat or the northern long-eared bat.

ODNR-DOW stated that the Project is within the vicinity records for the Indiana bat and that the entire state of Ohio is within the range of the northern long-eared bat, the little brown bat (*Myotis lucifugus*), and the tricolored bat (*Perimyotis subflavus*). If trees must be cut, ODNR-DOW recommended cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices holes or cavities, as well as trees with diameter at breast height (dbh) \geq 20 inches. ODNR-DOW also recommended that a desktop habitat assessment be conducted, followed by a field assessment if needed, to determine if there are potential hibernaculum(a) present within 0.25 miles of the Project area. The Company's consultant completed a desktop habitat assessment in accordance with the 2023 Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines. No active or abandoned mines, areas with karst geology, or areas with karst features were identified within 0.25-mile buffer of the Project area. In addition, no potential bat hibernacula were observed within the Project area during the field surveys. However, potentially suitable summer foraging and roosting habitat was observed within the Project area. Approximately 0.5 acre of tree clearing within the 150-foot ROW is proposed for the Project. As mentioned previously, the Company anticipates clearing activities will occur between October 1 and March 31, to avoid adverse effects of Indiana bat, northern long-eared bat, little brown bat, or tricolored bat.

According to the ODNR-DOW response letter, the Natural Heritage Database has record of four state listed species within one mile of the project's proposed corridor centerline. These species include the state endangered king rail (*Rallus elegans*) (nesting period May 1st to July 31st), the state threatened least bittern (*Ixobrychus exilis*) (nesting period April 15th to July 31st), and two state species of concern: the sora rail (*Porzana carolina*) and the Virginia rail (*Rallus limicola*). No suitable habitat was observed within the Project area for the state endangered king rail and the state threatened least bittern. Potential suitable habitats were observed within the Project area for the sora rail and the Virginia rail. However, no in-water work is proposed for this Project and therefore, the Project is not likely to impact these species per the habitat survey detailed in the Ecological Survey Report (**Appendix E**).

According to the ODNR-DOW response letter, the Project is within the range of seven protected mussel species: the federally endangered snuffbox (*Epioblasma triquetra*), federally endangered northern riffleshell (*Epioblasma torulosa rangiana*), federally endangered clubshell (*Pleurobema clava*), federally endangered rayed bean (*Villosa fabalis*), federally threatened rabbitsfoot (*Quadrula cylindrica cylindrica*), state endangered elephant-ear (*Elliptio crassidens crassidens*), and state threatened pondhorn (*Unio merus tetralasmus*). Due to the location and that there is no in-water work proposed in a perennial stream, ODNR-DOW stated that this Project is not likely to impact these mussel species.

According to the ODNR-DOW response letter, the Project is within the range of the state endangered American bittern (*Botaurus lentiginosus*). This bird species nests in large wetlands with dense vegetation. If this type of habitat will be impacted, ODNR-DOW stated that construction should be avoided during the species' nesting period of May 1 to July 31. No suitable habitat was observed within the Project area, therefore no impacts to American bittern are anticipated and no time of year restrictions are required for construction.

B(10)(f) Areas of Ecological Concern

Provide a description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

As stated in Section B(10)(e), a copy of the correspondence letters received from the USFWS and ODNR-DOW are provided in **Appendix D**. USFWS indicated no impacts to proposed or designated critical habitats, which is still true with the proposed route adjustment.

The Company's consultant conducted a wetland and waterbodies delineation survey as part of the Project. One perennial stream, one intermittent stream, and one open water feature (retention pond) are crossed by the route corridor but are anticipated to be spanned by the Project. The Project construction activities are not expected to result in discharge of fill in any of the delineated features. The Project is not expected to impact any streams. The Ecological Survey Report is provided in **Appendix E**.

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) Map Number 39159C0480D (effective 2008-12-16), the Project is not within the boundaries of any 100-year floodplains or floodways.

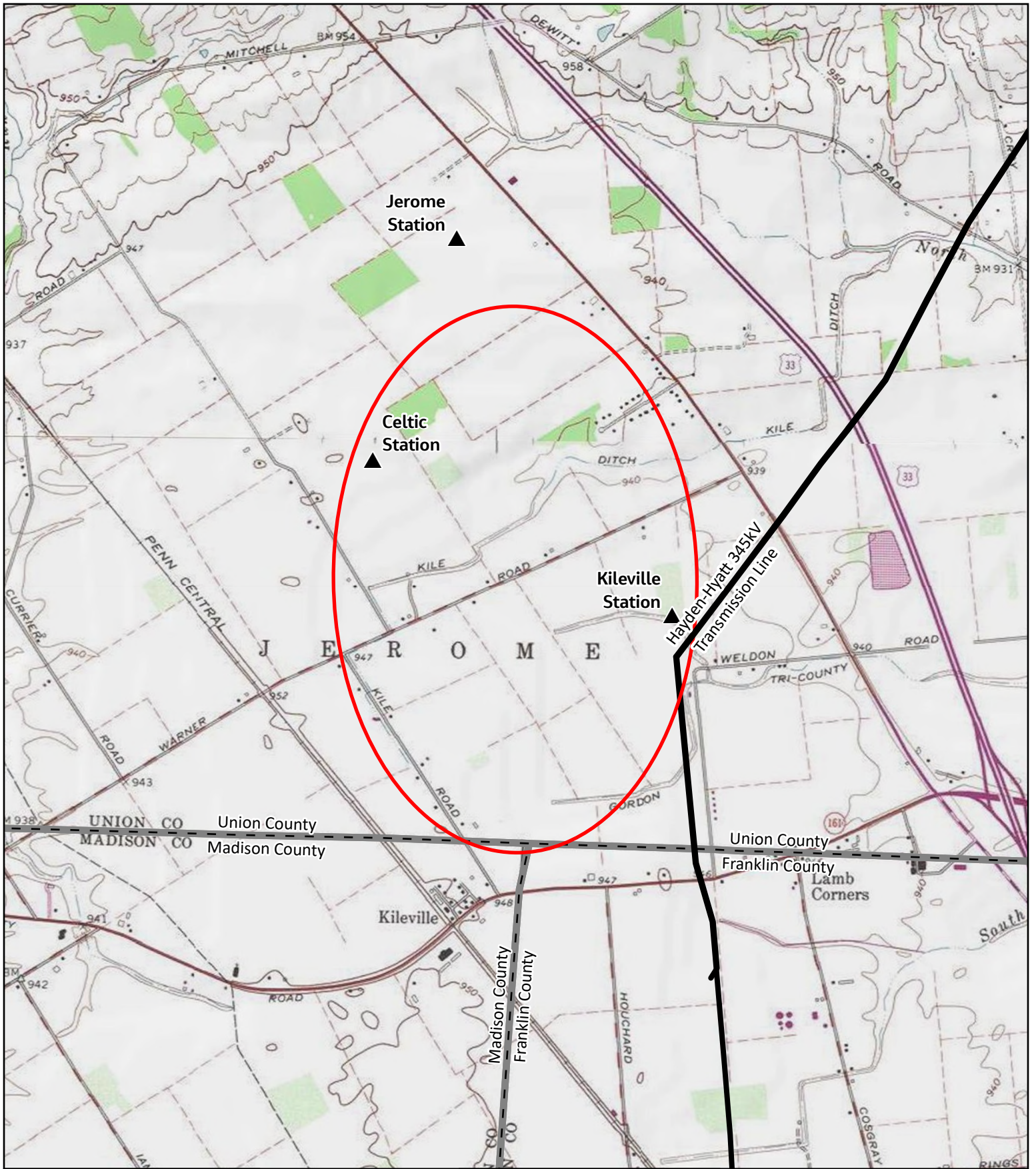
B(10)(g) Unusual Conditions





Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

To the best of the Company's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

LETTER OF NOTIFICATION FOR THE CELTIC 345 KV EXTENSION PROJECT


Appendix A Project Maps



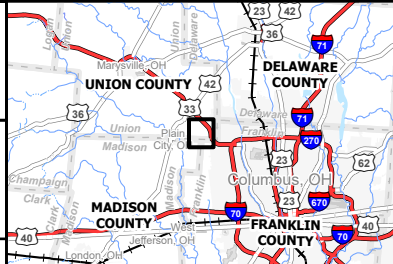
-  Existing Station
-  Project Area
-  Existing Transmission Line
-  County Boundaries

Base Map Source:
USGS Topographic Map
Shawnee Hills and Hilliard
Quadrangle

Coordinate System
State Plane Ohio North
FIPS 3401 (US Feet)
Datum: NAD 1983
Scale: 1:24,000


N


9/27/2024



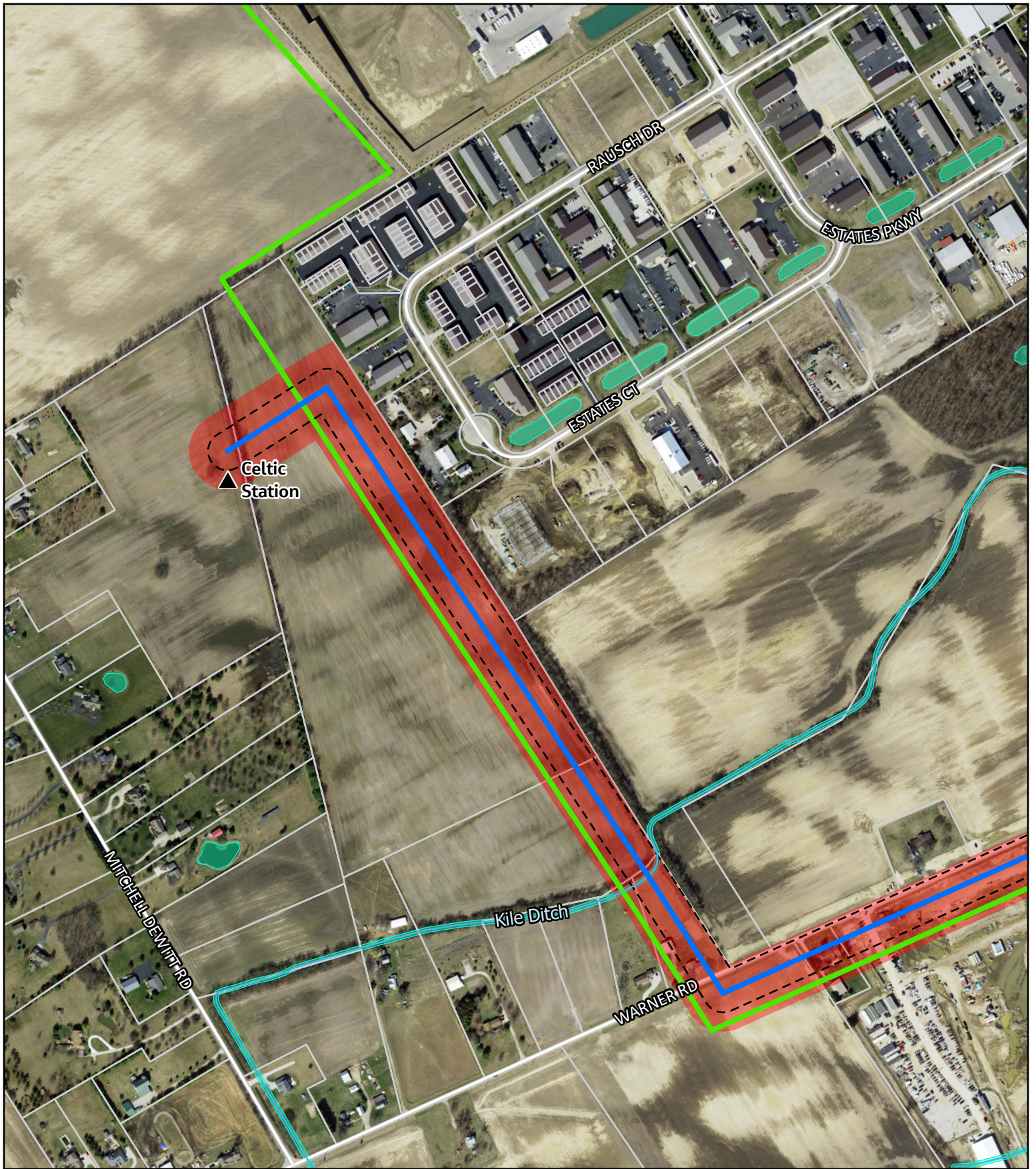
**Exhibit 1
Topographic Overview**

Celtic 345 kV Extension Project
Union County, OH



0 2,000 4,000

Feet



- ▲ Existing Station
- Project Route Centerline
- - - Project 150ft ROW
- █ Project Route Corridor
- Existing Transmission Line
- Hayden-Hyatt 345kV Adjustment
- Project (OPSB Case No. 24-0850-EL-BLN)
- Kileville-Jerome 138kV Transmission (Approved in Case No. 24-0115-EL-BLN)
- NHD Stream
- NWI Wetlands
- ▭ Parcel Boundary
- Road Centerline

Base Map Source:
ESRI Aerial Imagery

Coordinate System
State Plane Ohio North
FIPS 3401 (US Feet)
Datum: NAD 1983
Scale: 1:6,000

N

10/15/2024

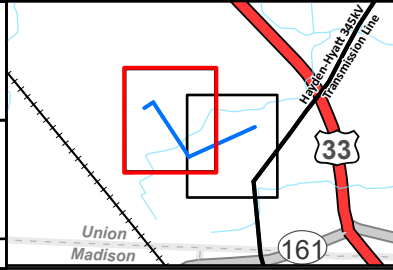
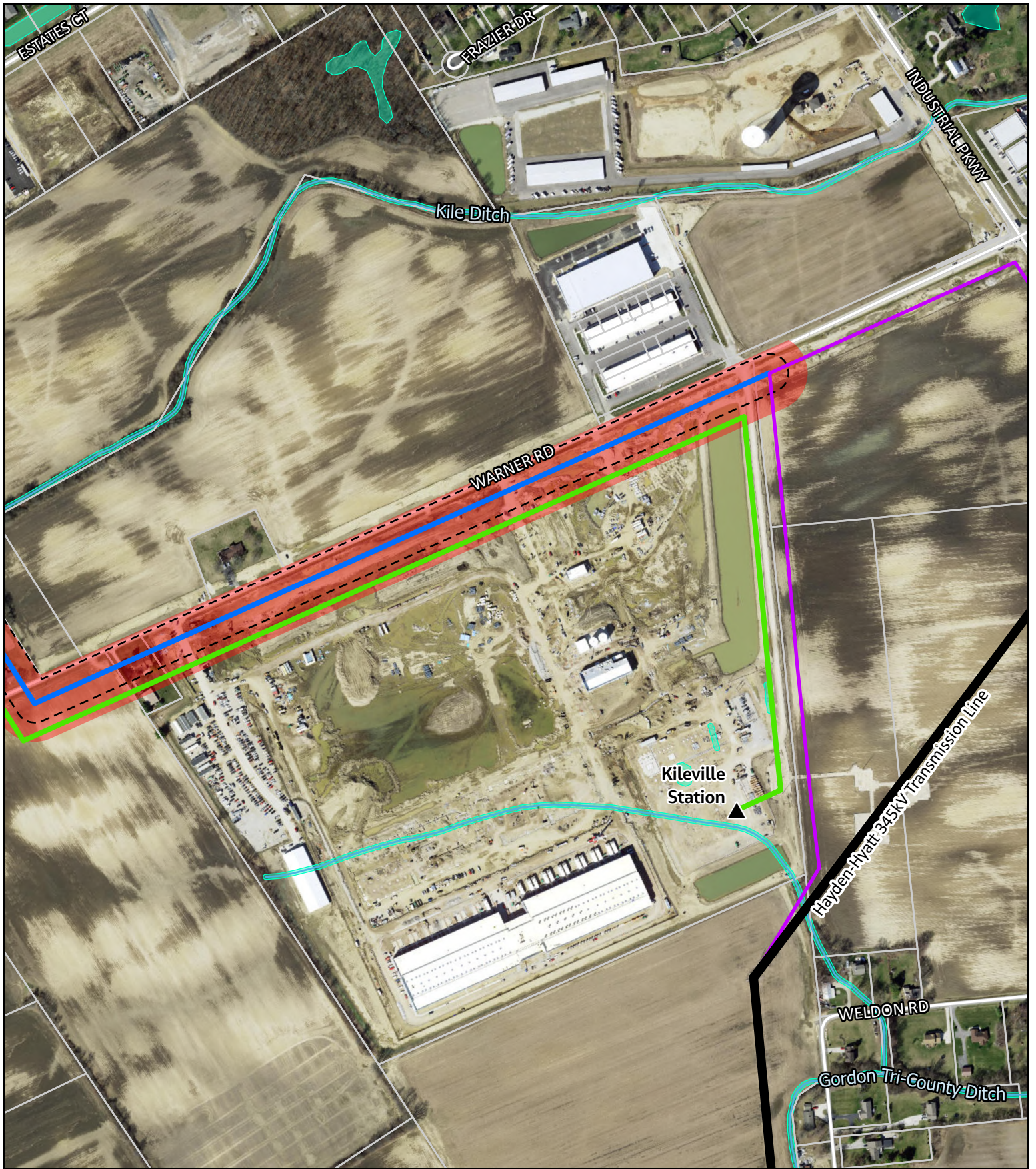


Exhibit 2
Aerial Overview

Celtic 345 kV Extension Project
Union County, OH

0 250 500 1,000

Feet



- ▲ Existing Station
- Project Route Centerline
- - - Project 150ft ROW
- Project Route Corridor
- Existing Transmission Line
- Hayden-Hyatt 345kV Adjustment
- Project (OPSB Case No. 24-0850-EL-BLN)
- Kileville-Jerome 138kV Transmission (Approved in Case No. 24-0115-EL-BLN)
- NHD Stream
- NWI Wetlands
- ▭ Parcel Boundary
- ▭ Road Centerline

Base Map Source:
ESRI Aerial Imagery

Coordinate System
State Plane Ohio North
FIPS 3401 (US Feet)
Datum: NAD 1983
Scale: 1:6,000

N

10/15/2024

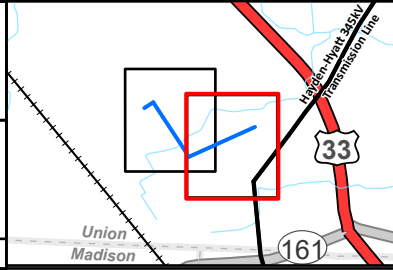


Exhibit 2
Aerial Overview

Celtic 345 kV Extension Project
Union County, OH

AEP OHIO TRANSMISSION COMPANY
© AEP Company
BOUNDLESS ENERGY

0 250 500 1,000

Feet

LETTER OF NOTIFICATION FOR THE CELTIC 345 KV EXTENSION PROJECT

Appendix B Long Term Forecast Report and PJM Solution Submittal

AEP Transmission Zone M-3 Process Jerome

Need Number: AEP-2021-OH049

Process Stage: Solution Meeting 5/9/2023

Previously Presented: Needs Meeting 7/16/2021, Need Meeting 9/17/2021 & Need Meeting 2/17/2023

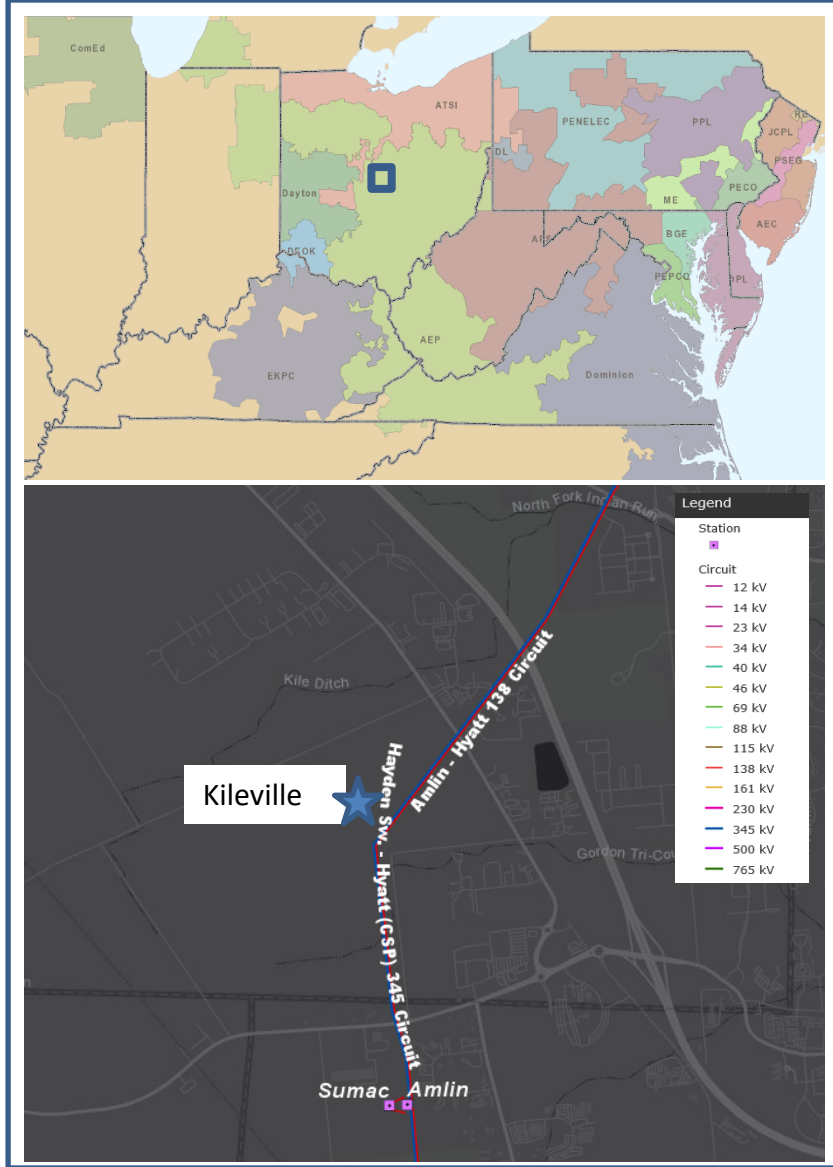
Project Driver: Customer Service

Specific Assumption Reference: AEP Connection Requirements for the AEP Transmission System (AEP Assumptions Slide 12)

Problem Statement:

Jerome Delivery Point (AEP) 138 kV:

- A customer has requested new transmission service in Plain City, Ohio.
- The delivery point will be used to serve a customer with high potential for rapid load growth. The initial load will be 106 MW with a potential future peak load demand of 203 MW.
- Service is requested by June 2024.
- The customer communicated a much more aggressive load ramp/build out schedule that would put their peak load at approximately 160 MW by early 2025 at the site.
- This Need was originally presented as a Buckeye Power request; The customer has since requested service from AEP Ohio at the site. As part of this request, the customer has indicated the need for additional feeds at the delivery which will bring the load amount up to 203 MW.



Need Number: AEP-2021-OH049

Process Stage: Solutions Meeting 5/9/2023

Proposed Solution:

The following scope of work is all direct connect facilities to physically connect demand to the grid.

- **Jerome 138 kV:** Construct a greenfield Jerome station with (11) 138kV 63kA 4000A circuit breakers in breaker and half bus configuration. Construct ~ 2.5 miles of double circuit 138kV transmission line extending from Celtic & Kileville stations utilizing 2-bundled ACSS Cardinal 954 (45/7) conductor, SE rating 1061 MVA. Construct ~1.6 miles of double circuit 138kV transmission line extending from Jerome to cut-in back to Hyatt – Amlin line utilizing 2-bundled ACSS Cardinal 954 (45/7) conductor, SE rating 1061 MVA. Construct (4) 138 kV tie lines to the customers dead end structures ~0.05 miles utilizing ACSR Dove 556.5 (26/7) conductor SE 284 MVA. Customers will be directly connected at this station. Cost: **\$30 M**

PUCO Form FE-T9:
Specifications of Planned Electric Transmission Lines

12	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Unable to serve new customer
13	MISCELLANEOUS:	
1	LINE NAME AND NUMBER:	Celtic - Hayden (TP2021576)
2	POINTS OF ORIGIN AND TERMINATION	Celtic - Hayden INTERMEDIATE STATIONS - N/A
3	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	3.9 mi / 150 ft / 2 circuit (0.2 mi of line work)
4	VOLTAGE: DESIGN / OPERATE	345 kV / 345 kV
5	APPLICATION FOR CERTIFICATE:	2023
6	CONSTRUCTION:	2024
7	CAPITAL INVESTMENT:	\$3.84 M
8	PLANNED SUBSTATION:	Celtic
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
11	PURPOSE OF THE PLANNED TRANSMISSION LINE	Service to new customer
12	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Unable to serve new customer
13	MISCELLANEOUS:	
1	LINE NAME AND NUMBER:	Jerome - Rohan #1 138 kV (TP2021576)
2	POINTS OF ORIGIN AND TERMINATION	Jerome - Rohan #1 INTERMEDIATE STATIONS - N/A
3	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	0.05 mi / 100 ft / 1 circuit
4	VOLTAGE: DESIGN / OPERATE	138 kV / 138 kV
5	APPLICATION FOR CERTIFICATE:	2023
6	CONSTRUCTION:	2024
7	CAPITAL INVESTMENT:	\$0.11 M
8	PLANNED SUBSTATION:	Jerome
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
11	PURPOSE OF THE PLANNED TRANSMISSION LINE	Service to new customer
12	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Unable to serve new customer
13	MISCELLANEOUS:	
1	LINE NAME AND NUMBER:	Jerome - Rohan #2 138 kV (TP2021576)
2	POINTS OF ORIGIN AND TERMINATION	Jerome - Rohan #2 INTERMEDIATE STATIONS - N/A
3	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	0.05 mi / 100 ft / 1 circuit
4	VOLTAGE: DESIGN / OPERATE	138 kV / 138 kV
5	APPLICATION FOR CERTIFICATE:	2023
6	CONSTRUCTION:	2024
7	CAPITAL INVESTMENT:	\$0.11 M
8	PLANNED SUBSTATION:	Jerome
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
11	PURPOSE OF THE PLANNED TRANSMISSION LINE	Service to new customer
12	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Unable to serve new customer
13	MISCELLANEOUS:	
1	LINE NAME AND NUMBER:	Jerome - Rohan #3 138 kV (TP2021576)
2	POINTS OF ORIGIN AND TERMINATION	Jerome - Rohan #3 INTERMEDIATE STATIONS - N/A
3	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	0.05 mi / 100 ft / 1 circuit
4	VOLTAGE: DESIGN / OPERATE	138 kV / 138 kV
5	APPLICATION FOR CERTIFICATE:	2023
6	CONSTRUCTION:	2024
7	CAPITAL INVESTMENT:	\$0.11 M
8	PLANNED SUBSTATION:	Jerome
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
11	PURPOSE OF THE PLANNED TRANSMISSION LINE	Service to new customer

PUCO Form FE-T9:
Specifications of Planned Electric Transmission Lines

12	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Unable to serve new customer
13	MISCELLANEOUS:	
1	LINE NAME AND NUMBER:	Badger - Gondor #4 138 kV (TP2021766)
2	POINTS OF ORIGIN AND TERMINATION	Badger - Gondor #4 INTERMEDIATE STATIONS - N/A
3	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	0.05 mi / 100 ft / 1 circuit
4	VOLTAGE: DESIGN / OPERATE	138 kV / 138 kV
5	APPLICATION FOR CERTIFICATE:	2023
6	CONSTRUCTION:	2024
7	CAPITAL INVESTMENT:	\$0.22 M
8	PLANNED SUBSTATION:	Badger & Gondor
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
11	PURPOSE OF THE PLANNED TRANSMISSION LINE	Service to new customer
12	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Unable to serve new customer
13	MISCELLANEOUS:	
1	LINE NAME AND NUMBER:	Celtic - Jerome & Jerome - Kileville 138 kV (TP2021576)
2	POINTS OF ORIGIN AND TERMINATION	Celtic - Jerome & Jerome - Kileville INTERMEDIATE STATIONS - N/A
3	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	2.3 mi / 100 ft / 2 circuit
4	VOLTAGE: DESIGN / OPERATE	138 kV / 138 kV
5	APPLICATION FOR CERTIFICATE:	2023
6	CONSTRUCTION:	2024
7	CAPITAL INVESTMENT:	\$15.88 M
8	PLANNED SUBSTATION:	Celtic & Jerome
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
11	PURPOSE OF THE PLANNED TRANSMISSION LINE	Service to new customer
12	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Unable to serve new customer
13	MISCELLANEOUS:	
1	LINE NAME AND NUMBER:	Jerome Extension 138 kV (TP2021576)
2	POINTS OF ORIGIN AND TERMINATION	Jerome - Hyatt INTERMEDIATE STATIONS - N/A
3	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	1.33 mi / 100 ft / 2 circuit
4	VOLTAGE: DESIGN / OPERATE	138 kV / 138 kV
5	APPLICATION FOR CERTIFICATE:	2024
6	CONSTRUCTION:	2024
7	CAPITAL INVESTMENT:	\$10.83 M
8	PLANNED SUBSTATION:	Jerome
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
11	PURPOSE OF THE PLANNED TRANSMISSION LINE	Service to new customer
12	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Unable to serve new customer
13	MISCELLANEOUS:	
1	LINE NAME AND NUMBER:	Celtic - Hyatt 345 kV (TP2021576)
2	POINTS OF ORIGIN AND TERMINATION	Celtic - Hyatt INTERMEDIATE STATIONS - N/A
3	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	8.72 mi / 150 ft / 2 circuit (0.2 mi of line work)
4	VOLTAGE: DESIGN / OPERATE	345 kV / 345 kV
5	APPLICATION FOR CERTIFICATE:	2023
6	CONSTRUCTION:	2024
7	CAPITAL INVESTMENT:	\$3.84 M
8	PLANNED SUBSTATION:	Celtic
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
11	PURPOSE OF THE PLANNED TRANSMISSION LINE	Service to new customer

LETTER OF NOTIFICATION FOR THE CELTIC 345 KV EXTENSION PROJECT

Appendix C Form Easements

Line No.:
Easement No.:

EASEMENT AND RIGHT OF WAY

On this _____ day of _____, 20__, in consideration of Ten and NO/100 Dollars (\$10.00), and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and the covenants hereinafter set forth, [Landowner(s)], married / unmarried / marital status unknown, whose address is [mailing address] (“Grantor”), whether one or more persons, hereby grants, sells, conveys, and warrants to AEP Ohio Transmission Company, Inc., an Ohio corporation, a unit of American Electric Power, whose principal business address is 1 Riverside Plaza, Columbus, Ohio 43215 (“AEP”) and its successors and affiliates, a permanent easement and right of way (“Easement”) for a single electric transmission line not to exceed [345] kV, [for distribution purposes,] and for internal communication purposes related to the supply of electricity (the “Transmission Line”), being, in, on, over, under, through and across the following described lands of Grantor, situated in the State of Ohio, County of [County], and Township of [Township] and being a part of [Legal Description from easement or title report] (“Grantor’s Property”).

[Names of all dower interest parties] join herein for the purpose of releasing all dower rights in regard to the Easement.

Grantor claims title by [name of vesting instrument] dated x/xx/xxxx from [insert name of first grantor, et al.], recorded on x/xx/xxxx in [record volume, page] in the [County] County Recorder’s Office.

Auditor/Key/Tax Number: [Insert Parcel Information]

The Easement Area is more fully described and depicted on Exhibit "A", a copy of which is attached hereto and made a part hereof ("Easement Area").

GRANTOR FURTHER GRANTS AEP THE FOLLOWING RIGHTS:

The right, now or in the future, to construct, reconstruct, operate, maintain, alter, improve, inspect, patrol, protect, repair, remove, replace, upgrade and relocate within the Easement Area, structures and appurtenant equipment necessary for the Transmission Line.

The right, in AEP's discretion, now or in the future, to cut down, trim or remove, and otherwise control, any and all trees, overhanging branches, vegetation or brush situated within the Easement Area and any temporary access roads or temporary workspaces identified on Exhibit "A" outside the Easement Area. Provided, however, that AEP shall not use herbicides or similar products for these purposes on any portions of the Grantor's Property maintained for residential or agricultural use. AEP shall also have the right to cut down, trim or remove trees situated on Grantor's Property which adjoin the Easement Area within the Tree Protection Zone when in the reasonable opinion of AEP those trees are dead, dying, diseased, leaning, or structurally defective and may endanger the safety of, or interfere with the construction, operation or maintenance of AEP's facilities or ingress or egress to, from or along the Easement Area. The Tree Protection Zone extends eighty feet on all sides of the Easement Area depicted in Exhibit A.

AEP shall also have the right of reasonable ingress and egress over, across and upon the Easement Area only, unless additional access routes are depicted in the attached Exhibit A. Provided, however, that in the event access over, across and upon the Easement Area – and access routes, if any, shown in Exhibit A – shall become blocked or otherwise rendered unsafe or hazardous for use, AEP may temporarily access the Easement Area from other points across Grantor's Property, so long as that access is both reasonable and limited to the duration of the interference or safety hazard. AEP shall return the access area to its preexisting condition or pay damages to Grantor.

AEP shall also have the right to use temporary workspaces and temporary access roads outside the Easement Area, if any are shown on Exhibit A, in connection with its initial construction of the Transmission Line. AEP may shift the location of such temporary workspaces and/or temporary access roads, if any, up to twenty (20) feet in any direction, as field conditions or other requirements dictate. Upon completion of the overall Transmission Line project, but in no event later than two (2) years following the start of construction on Grantor's Property, AEP shall remove its equipment from all such temporary workspaces and temporary access roads outside the Easement Area, and AEP's temporary rights outside of the Easement Area shall automatically cease, terminate and revert to Grantor. AEP shall return any such areas to their preexisting condition or pay damages to Grantor as soon as practicable.

THIS GRANT IS SUBJECT TO THE FOLLOWING CONDITIONS:

Grantor reserves the right to cultivate annual crops, pasture, construct fences (provided gates are installed that adequately provide AEP the access rights conveyed herein) and roads or otherwise use Grantor's Property encumbered by this Easement in any way not inconsistent with the rights herein granted. In no event, however, shall Grantor, its heirs, successors, affiliates and assigns

plant or cultivate any trees or place, construct, install, erect or permit any temporary or permanent building, structure, improvement or obstruction including but not limited to, storage tanks, billboards, signs, sheds, dumpsters, light poles, water impoundments, above ground irrigation systems, swimming pools or wells, or permit any alteration of the ground elevation, over, or within the Easement Area. AEP may, at Grantor's cost, remove any structure or obstruction if placed within the Easement Area, and may re-grade any alterations of the ground elevation within the Easement Area.

AEP agrees to repair or pay Grantor for actual damages sustained by Grantor to crops, fences, gates, irrigation and drainage systems, drives, or lawns that are permitted herein, when such damages arise out of AEP's exercise of the rights herein granted.

This instrument contains the complete agreement, expressed or implied between the parties herein and shall inure to the benefit of and be binding on their respective successors, affiliates, heirs, executors, and administrators.

This Easement may be executed in counterparts, each of which shall be deemed an original, but all of which, taken together, shall constitute one and the same instrument.

Any remaining space on this page left intentionally blank. See next page(s) for signature(s).

IN WITNESS WHEREOF, said Grantor have hereunto set their hand(s) and seal(s) as of the last date set forth below.

GRANTOR

[FOR A BUSINESS ENTITY / TRUST]

[name of entity/trust with kind of business association identified]

By: _____

Print name: _____

Its Authorized Signer

State of Ohio §

§ SS:

County of _____ §

This instrument was acknowledged before me on this _____ day of _____, 2021 by _____, the _____ of [entity/trust], a/an [state of incorporation] [type of entity/trust], on behalf of [entity/trust].

Notary

[FOR AN INDIVIDUAL]

[name of individual]

State of Ohio §

§ SS:

County of _____ §

This instrument was acknowledged before me on this _____ day of _____, 2021 by [name of individual].

Notary

This instrument prepared by Marland Turner, American Electric Power Service Corporation, 1 Riverside Plaza, Columbus, OH 43215 for and on behalf of AEP Ohio Transmission Company, Inc., a unit of American Electric Power.

When recorded return to: American Electric Power – Transmission Right of Way, 8600 Smith’s Mill Road, New Albany, OH 43054.

LETTER OF NOTIFICATION FOR THE CELTIC 345 KV EXTENSION PROJECT

Appendix D Agency Coordination Letters



In reply, refer to
2023-UNI-58026

March 29, 2024

Mr. Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212

RE: Kileville-Jerome Project, Jerome Township, Union County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received March 19, 2024, regarding the proposed Kileville-Jerome Project, Jerome Township, Union County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum: Phase I Cultural Resource Management Investigations for the Kileville-Jerome Project in Jerome Township, Union County, Ohio* by Ryan J. Weller (Weller & Associates, Inc. 2024). This project addresses transmission line reroutes and easement adjustments that extend beyond areas previously surveyed in relation to this project.

A literature review, visual inspection, surface collection, shovel probe, and shovel test unit excavations were completed as part of the investigations. No previously identified archaeological sites are located within the project area; however, these investigations identified two (2) previously unrecorded archaeological sites, Ohio Archaeological Inventory (OAI) sites #33UN1146 and 33UN1147. These sites are recommended not eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with this recommendation and no additional archaeological investigation is needed. These investigations did not identify any new architectural resources fifty (50) years or older within the Area of Potential Effects (APE).

Based on the information provided, we agree the project, as proposed, will continue to have no effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional archaeological resources are discovered during implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me by email at cgullett@ohiohistory.org. Thank you for your cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read "Catherine Gullett".

Catherine Gullett, Project Reviews Coordinator - Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No: 1102320



In reply, refer to
2023-UNI-58026

June 15, 2023

Mr. Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212

RE: Kileville-Jerome Project, Jerome Township, Union County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received May 18, 2023 regarding the proposed Kileville-Jerome Project, Jerome Township, Union County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Cultural Resource Investigations for the 33.9 ha (83.8 ac) Kileville-Jerome Project in Jerome Township, Union County, Ohio* by Seth T. Cooper and Scott McIntosh (Weller & Associates, Inc. 2023).

A literature review, visual inspection, surface collection, shovel probe, and shovel test unit excavations were completed as part of the investigations. No previously identified archaeological sites are located within the project area and no new archaeological sites were identified during survey. Our office agrees no additional archaeological investigation is needed.

A literature review and field survey were completed as part of the investigations. One (1) resource fifty years of age or older was identified within the Area of Potential Effects (APE). Weller recommends this property is not eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with Weller's recommendation of eligibility.

Based on the information provided, we agree the project as proposed will have no effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional historic properties are discovered during implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me at (614) 298-2022, or by e-mail at khorrocks@ohiohistory.org or Joy Williams at jwilliams@ohiohistory.org. Thank you for your cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read "Krista Horrocks".

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1098326



In reply, refer to
2023-UNI-57514

April 24, 2023

Mr. Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212

RE: Celtic Station Project, Jerome Township, Union County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received March 27, 2023 regarding the proposed Celtic Station Project, Jerome Township, Union County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Cultural Resource Management Investigations for the 23.5 ha (58.1 ac) Celtic Station Project in Jerome Township, Union County, Ohio* by Ryan J. Weller and Scott McIntosh (Weller & Associates, Inc., 2023).

A literature review, visual inspection, surface collection, shovel probe, and shovel test unit excavation was completed as part of the investigations. No previously identified archaeological site is located within the project area. One (1) new archaeological site was identified during survey, Ohio Archaeological Inventory (OAI) #33UN1109. The site is recommended not eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with this recommendation and no additional archaeological survey is necessary.

A literature review and field survey were completed as part of the investigations. A total of five (5) resources fifty years of age or older were identified within the Area of Potential Effects (APE). Weller recommends none of these properties are eligible for listing in the NRHP. Our office agrees with Weller's recommendations of eligibility.

Based on the information provided, we agree that the project as proposed will have no effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional historic properties are discovered during implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me at (614) 298-2022, or by e-mail at khorrocks@ohiohistory.org or Joy Williams at jwilliams@ohiohistory.org. Thank you for your cooperation.

Sincerely,

A handwritten signature in blue ink, appearing to read "Krista Horrocks".

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1097537



In reply, refer to
2023-UNI-58027

June 15, 2023

Mr. Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212

RE: Celtic Extension Project, Jerome Township, Union County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received May 18, 2023 regarding the proposed Celtic Extension Project, Jerome Township, Union County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Cultural Resource Investigations for the 20.4 ha (50.5 ac) Celtic Extension Project in Jerome Township, Union County, Ohio* by Seth T. Cooper and Scott McIntosh (Weller & Associates, Inc. 2023).

A literature review, visual inspection, surface collection, shovel probe, and shovel test unit excavations were completed as part of the investigations. No previously identified archaeological sites are located within the project area. One (1) new archaeological site was identified during survey, Ohio Archaeological Inventory (OAI) 33UN1128. The site is recommended not eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with this recommendation and no additional archaeological investigation is needed.

A literature review and field survey were completed as part of the investigations. A total of two (2) extant resources fifty years of age or older were identified within the Area of Potential Effects (APE). Weller recommends these properties are not eligible for listing in the NRHP. Our office agrees with Weller's recommendations of eligibility.

Based on the information provided, we agree the project as proposed will have no effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional historic properties are discovered during implementation of this project. In such a situation, this office should be contacted. Our office requests Weller & Associates, Inc. complete the OAI form for 33UN1128 as soon as possible. Please notify our office when that form has been completed. If you have any questions, please contact me at (614) 298-2022, or by e-mail at khorrocks@ohiohistory.org or Joy Williams at jwilliams@ohiohistory.org. Thank you for your cooperation.

Sincerely,

A handwritten signature in blue ink, appearing to read "Krista Horrocks".

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1098327



Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate
John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6621
Fax: (614) 267-4764

March 8, 2023

Michelle Kearns
Stantec Consulting Services, Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204

Re: 23-0178; AEP Celtic Extension 345 kV Line Project

Project: The proposed project involves the new construction of approximately 1.5-miles of 345 kilovolt (kV) line to connect the proposed Celtic Station to the proposed Kileville Station.

Location: The proposed project is located in Jerome Township, Union County, Ohio.

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

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

Least Bittern (*Ixobrychus exilis*), T
Sora Rail (*Porzana carolina*), SC
King Rail (*Rallus elegans*), E
Virginia Rail (*Rallus limicola*), SC

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The project is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible.

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "[RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES](#)." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species.

Federally Endangered

snuffbox (*Epioblasma triquetra*)
Northern riffleshell (*Epioblasma torulosa rangiana*)
clubshell (*Pleurobema clava*)
rayed bean (*Villosa fabalis*)

Federally Threatened

rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Endangered

elephant-ear (*Elliptio crassidens crassidens*)

State Threatened

pondhorn (*Unio merus tetralasmus*)

Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact these species.

The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the king rail (*Rallus elegans*), a state endangered bird. Nests for this species are deep bowls constructed out of grass and usually hidden very well in marsh vegetation. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

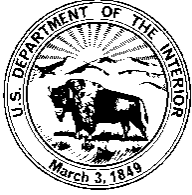
Water Resources: The Division of Water Resources has the following comment.

The [local floodplain administrator](#) should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator

United States Department of the Interior



FISH AND WILDLIFE SERVICE

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



March 2, 2023

Project Code: 2023-0042739

Dear Ms. Kearns:

The U.S. Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: The proposed project is in the vicinity of one or more confirmed records of Indiana bats. Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see <https://ecos.fws.gov/ecp/species/9045>), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are known or assumed present. Please note that, because Indiana bat presence has already been

confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for this species.

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

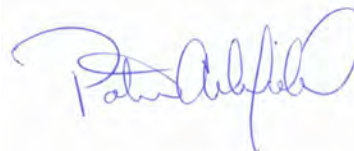
Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing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

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

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,



Patrice Ashfield
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Eileen Wyza, ODNR-DOW

LETTER OF NOTIFICATION FOR THE CELTIC 345 KV EXTENSION PROJECT

Appendix E Ecological Survey Report



Hayden - Hyatt 345 kV
Transmission Line Project
Union County, Ohio

Ecological Survey Report

Prepared for:

AEP Ohio Transmission Company, Inc.
8600 Smiths Mill Road
New Albany, OH 43054

Prepared by:

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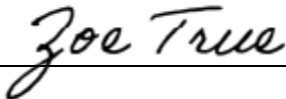
August 23, 2024

Sign-off Sheet

The conclusions in the Report titled Hayden – Hyatt 345 kV Transmission Line Project are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from AEP Ohio Transmission Company, Inc. (the "Client") and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided by the Client to applicable authorities having jurisdiction and to other third parties in connection with the project, Stantec disclaims any legal duty based upon warranty, reliance or any other theory to any third party, and will not be liable to such third party for any damages or losses of any kind that may result.

Prepared by 
(signature)

Zoe True

Reviewed by 
(signature)

Charlie Allen

Reviewed by 
(signature)

Tiffany Fritchley

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Introduction
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1.0 INTRODUCTION

AEP Ohio Transmission Company, Inc. (AEP) is proposing to construct a new 345 kilovolt (kV) transmission line, Hayden – Hyatt, in Union County, Ohio that is part of the larger Jerome Loop Connection Project. Hayden – Hyatt 345 kV Transmission Line Project (Project) is located in Union County, Ohio (Figure 1, Appendix B). The Project will include approximately 1 mile of new 345 kV line to connect the Kileville Station to the existing Hayden-Hyatt transmission line. A 300-foot survey corridor, totaling approximately 32 acres (the Project area) was surveyed for wetlands, waterbodies, open water features, upland drainage features, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services Inc. (Stantec) biologists on August 12, 2024 (Figure 2, Appendix B). The approximate locations of features located up to 50 feet outside of the Project area were also recorded during the field surveys, where landowner access was permitted. However, no data forms were collected on features that did not extend into the Project area. These features are shown on the Figure 2 maps in Appendix B as “approximate” wetlands, streams (waterways), open waters, and upland drainage features.

Methods
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2.0 METHODS

2.1 WETLAND DELINEATION

Prior to completing the field surveys, a desktop review of the Project area was conducted using U.S. Geological Survey (USGS) topographic maps, National Wetlands Inventory (NWI) maps, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, and aerial imagery mapping. Stantec completed a wetland delineation study in accordance with the *Corps of Engineers Wetlands Delineation Manual* (USACE Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Version 2.0; USACE 2010). Wetland categories were classified using the Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 (Mack 2001).

2.2 STREAM DELINEATION

Streams that demonstrated a continuously defined channel (bed and bank), ordinary high-water mark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project area, per the protocols outlined in the USACE's *Guidance on Ordinary High Water Mark Identification* (Regulatory Guidance Letter, No. 05-05; USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definitions in the Federal Register/Vol. 67, No. 10 (USACE 2002) and determined as potential waters of the U.S. (WOTUS) in reference to the current guidance per interpretation of WOTUS that is consistent with the pre-2015 regulatory regime (40 CFR 230.3(s)) (USEPA 2022). Functional assessment of streams within the Project area was based on completion of the Ohio Environmental Protection Agency's (OEPA) *Headwater Habitat Evaluation Index* (HHEI; OEPA 2020) and/or *Qualitative Habitat Evaluation Index* (QHEI; OEPA 2006). The centerline and/or the OHWM locations of each waterway were identified and surveyed using a handheld sub-meter accuracy global positioning system (GPS) unit and mapped with geographic information systems (GIS) software. Additionally, the locations of upland drainage features (which lacked a continuously defined bed and bank/OHWM) identified within the Project area were also recorded with a sub-meter accuracy GPS unit during the field surveys.

2.3 RARE SPECIES

Prior to conducting the field surveys, Stantec contacted the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) for information regarding rare, threatened, or endangered species and their habitats of concern within the vicinity of the Project area (Appendix E – Agency Correspondence). To assess potential impacts to rare, threatened, or endangered species, Stantec scientists conducted a pedestrian reconnaissance of the Project area, collected information on existing habitats within the Project area, and assessed the potential for these habitats to be used by these species.

Results
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3.0 RESULTS

3.1 TERRESTRIAL HABITAT

Stantec completed field surveys within the Project area on August 12, 2024, for potentially suitable habitats for threatened and endangered species. Figure 3 (Appendix B) shows the land cover, vegetation communities, and any identified rare, threatened, or endangered species habitats observed within the Project area during the habitat assessment surveys. Representative photographs of the vegetation communities/habitats identified within the Project area are included in Appendix D of this report (photo locations are shown on Figure 3 in Appendix B). Information regarding the vegetation communities/habitats identified within the Project area are provided in Table 1.

Table 1. Vegetation Communities and Land Cover Found within the Hyden-Hyatt 345 kV Transmission Line Project Area, Union County, Ohio

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
Agricultural Field	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa). Dominant plant species included common dandelion (<i>Taraxacum officinale</i>), ground ivy (<i>Glechoma hederacea</i>), corn (<i>Zea mays</i>) and soybean (<i>Glycine max</i>).	No	17.57
Early Successional Deciduous Forest	Intermediate disturbance (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa, and structures). Dominant species included, common hackberry (<i>Celtis occidentalis</i>), white oak (<i>Quercus alba</i>), amur honeysuckle (<i>Lonicera maackii</i>), American elm (<i>Ulmus americana</i>), American sycamore (<i>Platanus occidentalis</i>), black cherry (<i>Prunus serotina</i>), pin oak (<i>Quercus palustris</i>), osage orange (<i>Maclura pomifera</i>), green ash (<i>Fraxinus pennsylvanica</i>), and red maple (<i>Acer rubrum</i>).	No	0.49
Existing Roadway	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa).	No	3.32
Maintained ROW	Moderate to Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non-native species, and/or	No	8.44

Results
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Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
	native highly tolerant taxa, and structures). Dominant plant species included Kentucky bluegrass (<i>Poa pratensis</i>), red fescue (<i>Festuca rubra</i>), tall fescue (<i>Festuca arundinacea</i>) common dandelion, and ground ivy.		
Scrub-shrub	Intermediate disturbance (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa, and structures). Dominant species included eastern cottonwood (<i>Populus deltoides</i>), Queen Anne's lace (<i>Daucus carota</i>), giant ragweed (<i>Ambrosia trifida</i>), creeping thistle (<i>Cirsium arvense</i>), horseweed (<i>Erigeron canadensis</i>), green foxtail (<i>Setaria virida</i>), and poison ivy (<i>Toxicodendron radicans</i>).	No	0.88
Industrial Land	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa).	No	1.10
Palustrine Emergent (PEM) Wetland	Intermediate disturbance (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa, and structures). Dominant species included, marsh primrose-willow (<i>Ludwigia palustris</i>), northern water-plantain (<i>Alisma triviale</i>), rice cut grass (<i>Leersia oryzoides</i>), large barnyard grass (<i>Echinochloa crusgalli</i>).	No	0.03
TOTAL			31.83

3.2 WETLANDS

Desktop analysis determined that the Project area contains two NWI features. Table 2 summarizes the NWI disposition within the Project area and their related field identified features. One wetland was identified during field surveys conducted on August 12, 2024. Information regarding the wetland resources within the Project area and proposed impacts are summarized in Table 3 and Appendix A. Two sample points (SP01, SP02) were collected to document the existing conditions within the Project area. The wetland determination data forms are included in Appendix C, representative photographs of the sample points are included in Appendix D, and the locations of the sample points are depicted on Figure 2, Appendix B.

Results
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Table 2. Summary of NWI Disposition within the Hayden-Hyatt 345 kV Transmission Line Project, Union County, Ohio

NWI Code	NWI Description	Figure 2 Page Number	Related Field Inventoried Resource	Comments
PFO1A	Palustrine, Forested, Broad-leaved Deciduous, Temporarily Flooded	2	N/A	Field observation determined area was gravel and considered industrial habitat.
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	2	SP01 and SP02	Delineated to be Wetland 1.

Table 3. Summary of Wetland Resources Found within the Hayden-Hyatt 345 kV Transmission Line Project, Union County, Ohio

Wetland ID	Location			Isolated? ²	Habitat Type ^{3,4}	Delineated Area within Project Area (acre)	Total Delineated Area (acre)	ORAM ⁵		Nearest Proposed Structure Number	Existing Structure Number in Wetland	Proposed Structure Number in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude	Photo Location ¹					Score	Category					Temporary Matting Area (acre)	Permanent Impact Area (acre)
Wetland 1	40.116636	-83.197547	2	No	PEM	0.03	0.05	16	1	TBD ⁶	None	TBD ⁶	N/A	TBD ⁶	TBD ⁶
Total:						0.03	0.05						Total:	TBD ⁶	TBD ⁶

¹ Appendix B - Figure 2 and Appendix D – Photo log D-1

² Pending USACE jurisdictional review

³ Habitat type based on Cowardin et al. (1979).

⁴ PEM = Palustrine Emergent Wetland

⁵ ORAM Score and Category are based on the Ohio Rapid Assessment Method for Wetland v. 5.0 (Mack 2001).

⁶To be determined. Impact information and/or structure installation method is unknown at this time.

Results
 August 23, 2024

3.3 STREAMS

No streams were observed within the Project area during field surveys on August 12, 2024.

3.4 OPEN WATERS

One open water feature (i.e., ponds, lakes) was delineated within the Project area during the field surveys completed on August 12, 2024. Information regarding the open water feature identified within the Project area is summarized in Table 4 and is depicted on Figure 2 (Appendix B). Representative photographs of the open water feature are included in Appendix D of this report (photo locations are shown on Figure 2, Appendix B).

Table 4. Summary of Open Water Features Found within the Hayden-Hyatt 345 kV Transmission Line Project, Union County, Ohio

Open Water ID	Location			Open Water Type	Delineated area (acre)	Nearest Proposed Structure Number	Proposed Impacts	
	Latitude	Longitude	Photo Location ¹				Fill type	Area (acre)
Open Water 1	40.117043	-83.197782	1	Retention Pond	0.02	N/A	N/A	N/A
Total:					0.02		Total:	N/A

¹- Photolog in appendix D.1

3.5 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Table 5. Summary of Potential Federal and Ohio State-Listed Species within the Hyden-Hyatt 345 kV Transmission Line Project, Union County, Ohio

Common/Scientific Names	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix D)	Potential Impacts and Avoidance Dates
Indiana Bat/ <i>Myotis sodalis</i>	E	E	<p>The Indiana bat is likely distributed over the entire State of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas. Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007, USFWS 2023). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).</p>	<p>No potentially suitable winter hibernacula were observed within the Project area. However, suitable summer roost and foraging habitat (early successional forest) was observed within the Project area.</p>	<p>ODNR – This Project lies within the vicinity of records for the Indiana bat. Therefore, summer tree clearing is not recommended, and additional summer surveys would not constitute a presence/absence survey. The ODNR DOW recommends tree clearing only occur between October 1 and March 31 and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. In addition, the DOW recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area.</p> <p>USFWS – The Project lies within the vicinity of one or more confirmed records of Indiana bats. If the proposed Project area contains trees ≥3 inches dbh, the USFWS recommends that trees be saved wherever possible. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, USFWS recommends that removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats.</p>	<p>Stantec completed a desktop habitat assessment in accordance with the 2024 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2024) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2024a) and locations of known or suspect karst geology (ODNR 2024b). The desktop assessment did not identify any karst features or abandoned or active mines within 3 miles of the Project area (Figure 4; Appendix B). Potentially suitable summer foraging and roosting habitat was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable roosting habitat and will proceed in accordance with agency recommendations.</p> <p>Avoidance Dates: April 1 through September 30</p>
Northern Long-eared Bat/ <i>Myotis septentrionalis</i>	E	E	<p>The northern long-eared bat is found throughout Ohio. This species generally forages in forested habitat and openings in forested habitat and utilizes cracks, cavities, and loose bark within live and dead trees, as well as buildings as roosting habitat (Brack et al. 2010; USFWS 2023). The species utilizes caves and abandoned mines as winter hibernacula. Various sized caves are used providing they have a constant temperature, high humidity, and little to no air current (Brack et al. 2010).</p>	<p>No potentially suitable winter hibernacula were observed within the Project area. However, suitable summer roost and foraging habitat (early successional forest) was observed within the Project area.</p>	<p>ODNR - This Project lies within the range of the northern long-eared bat. The ODNR DOW recommends tree clearing only occur between October 1 and March 31 and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. In addition, the DOW recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area.</p> <p>USFWS – If the proposed Project area contains trees ≥3 inches dbh, the USFWS recommends that trees be saved wherever possible. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, USFWS recommends that removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal tree clearing is recommended to avoid adverse effects to the northern long-eared bat.</p>	<p>Stantec completed a desktop habitat assessment in accordance with the 2024 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2024) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2024a) and locations of known or suspect karst geology (ODNR 2024b). The desktop assessment did not identify any karst features or abandoned or active mines within 3 miles of the Project area (Figure 4; Appendix B). Potentially suitable summer foraging and roosting habitat was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable roosting habitat and will proceed in accordance with agency recommendations.</p> <p>Avoidance Dates: April 1 through September 30</p>

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Common/Scientific Names	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix D)	Potential Impacts and Avoidance Dates
Little Brown Bat/ <i>Myotis lucifugus</i>	E	N/A	This bat uses a wide range of habitats and man-made structures for roosting, including buildings and attics. Less frequently, they use hollows of trees. Winter hibernation sites typically consist of caves, tunnels, abandoned mines. Foraging habitat for this species generally occurs over water, along the edges of lakes and stream or in woodlands near waterbodies (NatureServe 2023).	No potentially suitable winter hibernacula were observed within the Project area. However, suitable summer roost habitat (early successional forest) was observed within the Project area.	ODNR - This Project lies within the range of the little brown bat. The ODNR DOW recommends tree clearing only occur between October 1 and March 31 and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. In addition, the DOW recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. USFWS – No comment.	Stantec completed a desktop habitat assessment in accordance with the 2024 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2024) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2024a) and locations of known or suspect karst geology (ODNR 2024b). The desktop assessment did not identify any karst features or abandoned or active mines within 3 miles of the Project area (Figure 4; Appendix B). Potentially suitable summer foraging and roosting habitat was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable roosting habitat and will proceed in accordance with agency recommendations. Avoidance Dates: April 1 through September 30
Tricolored Bat/ <i>Perimyotis subflavus</i>	E	PE	This species is found throughout Ohio and is associated with forested landscapes, foraging near trees and along waterways. Maternity and summer roosts usually occur in dead or live tree foliage, or in the south, in clumps of Spanish moss. Maternity colonies may also use tree cavities or man-made structures, such as buildings or bridges. Caves, mines, and rock crevices may be used as night roosts between foraging (NatureServe 2023).	No potentially suitable winter hibernacula were observed within the Project area. However, suitable summer roost habitat (early successional forest) was observed within the Project area.	ODNR - This Project lies within the range of the tricolored bat. The ODNR DOW recommends tree clearing only occur between October 1 and March 31 and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. In addition, the DOW recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. USFWS – No comment.	Stantec completed a desktop habitat assessment in accordance with the 2024 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2024) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2024a) and locations of known or suspect karst geology (ODNR 2024b). The desktop assessment did not identify any karst features or abandoned or active mines within 3 miles of the Project area (Figure 4; Appendix B). Potentially suitable summer foraging and roosting habitat was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable roosting habitat and will proceed in accordance with agency recommendations. Avoidance Dates: April 1 through September 30
Snuffbox / <i>Epioblasma triquetra</i>	E	E	Occurs in medium-sized streams to large rivers generally on mud, rocky, gravel, or sand substrates in flowing water. Often deeply buried in substrate and overlooked by collectors (NatureServe 2023).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – Due to the Project type, size, and location, the USFWS does not anticipate adverse effects to this species.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.
Clubshell / <i>Pleurobema clava</i>	E	E	This is a species of small to medium-sized rivers and streams; generally found in clean, coarse sand and gravel in runs, often just downstream of a riffle, and cannot tolerate mud or slackwater conditions (NatureServe 2023).	No suitable habitat was observed within the Project area	ODNR – The Project is within the range of this species. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.

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Common/Scientific Names	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix D)	Potential Impacts and Avoidance Dates
					USFWS – Due to the Project type, size, and location, the USFWS does not anticipate adverse effects to this species.	
Northern Riffleshell / <i>Epioblasma torulosa rangiana</i>	E	E	Preferred habitat is swiftly moving water. The high oxygen concentrations in swift streams may be necessary for survival. It is a species of riffle areas of smaller streams, and as such has fared better than larger river species (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – Due to the Project type, size, and location, the USFWS does not anticipate adverse effects to this species.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.
Rayed Bean / <i>Villosa fabalis</i>	E	E	It is generally known from smaller headwater creeks, but records exist in larger rivers. They are usually found in or near shoal or riffle areas, and in the shallow wave-washed areas of glacial lakes, including Lake Erie (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – Due to the Project type, size, and location, the USFWS does not anticipate adverse effects to this species.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.
Rabbitsfoot / <i>Quadrula cylindrica cylindrica</i>	E	T	The typical habitat is small to medium rivers with moderate to swift currents, and in smaller streams it inhabits bars or gravel and cobble close to the fast current (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – Due to the Project type, size, and location, the USFWS does not anticipate adverse effects to this species.	No suitable habitat was observed within the Project area. In addition, due to the location and habitat within the Project area, this Project is not likely to impact this species.
Elephant-ear / <i>Elliptio crassidens</i>	E	N/A	An inhabitant of channels in large creeks to rivers with moderate to swift currents, primarily on sand and limestone or rock substrates (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – No comment.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.
Pondhorn / <i>Unio merus tetralasmus</i>	T	N/A	Typically inhabits quiet or slow-moving, shallow waters of shoughs, borrow pits, ponds, ditches, and meandering streams. It is tolerant of poor water conditions and can be found well buried in a substrate of fine silt and/or mud (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – No comment.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.
American Bittern / <i>Botaurus lentiginosus</i>	E	N/A	Occurs primarily in large freshwater and (less often) brackish marshes, including lake and pond edges where cattails, sedges, or bulrushes are plentiful and marshes where there are patches of open water and aquatic bed vegetation (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. If large undisturbed wetlands with scattered small pools amongst dense vegetation, bogs, large wet meadows, or shrubby swamps will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, the Project is not likely to impact this species. USFWS – No comment.	No suitable habitat was observed within the Project area. Therefore, this Project is not likely to impact this species.

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Common/Scientific Names	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix D)	Potential Impacts and Avoidance Dates
King Rail / <i>Rallus elegans</i>	E	N/A	Occurs in freshwater marshes, upland – wetland marsh edges, rice fields or similar flooded farmlands, shrub swamps (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. If areas with marsh vegetation will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If no wetland habitat will be impacted, the Project is not likely to impact this species. The National Heritage Database also lists this species within one mile of the Project area. USFWS – No comment.	No suitable habitat was observed within the Project area. Therefore, this Project is not likely to impact this species.
Least Bittern / <i>Ixobrychus exilis</i>	T	N/A	Occurs in tall emergent vegetation in marshes, primarily freshwater, less commonly in coastal brackish marshes and mangrove swamps. Prefers marshes with scattered bushes or other woody growth (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. If emergent wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this habitat will not be impacted, this Project is not likely to impact this species. The National Heritage Database also lists this species within one mile of the Project area. USFWS – No comment.	No suitable habitat was observed within the Project area. Therefore, this Project is not likely to impact this species.
Sora Rail / <i>Porzana carolina</i>	SC	N/A	Occurs in primarily shallow freshwater emergent wetlands, less frequently in bogs, fens, wet meadows, and flooded fields, sometimes foraging on open mudflats adjacent to marshy habitat (NatureServe 2024).	Potentially suitable habitat was observed within the Project area (wetland 1).	ODNR – The National Heritage Database lists this species within one mile of the Project area. USFWS – No comment.	Potentially suitable habitat was observed within the Project area. However, no in-water work is proposed to occur by AEP. Therefore, no impacts to this species are anticipated.
Virginia Rail / <i>Rallus limicola</i>	SC	N/A	Occurs in freshwater and occasionally brackish marshes, mostly in cattails, reeds, and deep grasses, also in or close to other emergent vegetation. Inhabits shallow, freshwater, emergent wetlands of every size and type from roadside ditches and borders of lakes and streams to large cattail marshes (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The National Heritage Database lists this species within one mile of the Project area. USFWS – No comment.	No suitable habitat was observed within the Project area. Therefore, this Project is not likely to impact this species.

*Status key: E=Endangered; T=Threatened; PE=Proposed Endangered, SC=Species of Concern

**The information is based on the literature review response information from ODNR and USFWS and is study area/project specific.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Stantec conducted a wetland and waterbodies delineation and a preliminary habitat assessment for threatened and endangered species within the Project area on August 12, 2024. During the field surveys, one wetland, and one open water feature were observed within the Project area. No streams were observed within the Project area.

The information provided by Stantec regarding wetland and stream boundaries is based on an analysis of the wetland and upland conditions present within the Project area at the time of the field work. The delineations were performed by experienced and qualified professionals using regulatory agency-accepted practices and sound professional judgment.

A technical assistance request letter was submitted to the USFWS on February 13, 2023, and a response letter was received on March 2, 2023. According to the USFWS response letter, the proposed Project is in the vicinity of one or more confirmed records of the federally endangered Indiana bat and the entire State of Ohio lies within the range of the federally threatened northern long-eared bat. **Therefore, USFWS recommends that trees \geq 3 inches diameter at breast height (dbh) be saved wherever possible and any tree removal that is unavoidable should only occur between October 1 and March 31 to avoid adverse effects to these species.**

The Project area contains potentially suitable foraging and roosting habitat for the Indiana bat and northern long-eared bat. No potentially suitable hibernacula were observed within the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable habitat and will proceed in accordance with agency recommendations.

The USFWS also stated that they do not anticipate adverse effects to any other federally endangered, threatened, proposed or candidate species due to the Project type, size, and location. The USFWS response letter also recommends that the proposed Project avoid and minimize impacts to all wetland habitats to the maximum extent possible and natural buffers around streams and wetlands should be preserved to enhance beneficial functions (Appendix E).

An ODNR Ohio Natural Heritage Program data request and environmental review request letter was sent to the ODNR Office of Real Estate on February 13, 2023. The ODNR Office of Real Estate response letter dated March 8, 2023, stated that the Project is within the vicinity of records for the federal and state endangered Indiana bat and entire state of Ohio is within the range of the federally threatened and state endangered northern long-eared bat (now federally endangered), and state endangered little brown bat and tricolored bat. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. The DOW also recommends a desktop habitat assessment, followed by a field assessment if needed, is conducted to determine if there are potential hibernaculum(a) present within 3 miles of the Project area. Stantec completed a desktop habitat assessment in accordance with the

Conclusions and Recommendations
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2024 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2024) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2024a) and locations of known or suspect karst geology (ODNR 2024b). The desktop assessment did not identify any karst features or abandoned or active mines within 3 miles of the Project area (Figure 4; Appendix B). In addition, no potentially suitable winter hibernacula were observed during the field surveys. However, potentially suitable foraging and roosting habitat was observed within the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable habitat and will proceed in accordance with agency recommendations.

According to the ODNR response letter, the Project is within the range of the federally endangered snuffbox, clubshell, northern riffleshell, and rayed bean, the federally threatened rabbitsfoot, the state endangered elephant-ear and the state threatened pondhorn freshwater mussels. However, the DOW states due to the location, and that no in-water work is proposed in a perennial stream of sufficient size, the Project is not likely to impact these species. In addition, no in-water work in any perennial stream is proposed by AEP, therefore, impacts to freshwater mussel species are not anticipated.

The ODNR response letter stated the Project is within the range of the American bittern, a state listed endangered bird. ODNR recommends that if large undisturbed wetlands with scattered small pools amongst dense vegetation will be impacted by the Project, construction should be avoided in this habitat during this species' nesting period of May 1 through July 31. However, if this type of habitat will not be impacted, the Project is not likely to impact this species. No suitable habitat was observed within the Project area and, therefore, this Project is not likely to impact this species.

The ODNR response letter stated the Project is within the range of the king rail, a state listed endangered bird. ODNR recommends that if marsh grass habitat will be impacted by the Project, construction should be avoided in this habitat during this species' nesting period of May 1 through July 31. However, if this type of habitat will not be impacted, the Project is not likely to impact this species. No suitable habitat was observed within the Project area and, therefore, this Project is not likely to impact this species.

The ODNR response letter stated the Project is within the range of the least bittern, a state listed threatened bird. ODNR recommends that if densely vegetated emergent wetlands will be impacted, construction should be avoided in this habitat during this species' nesting period of May 1 through July 31. However, if this type of habitat will not be impacted, this Project is not likely to impact this species. No suitable habitat was observed within the Project area, and, therefore, this Project is not likely to impact this species.

According to the ODNR response letter, the Natural Heritage Database lists the state species of concern sora rail and Virginia rail, and the state endangered king rail bird species occur within one mile of the Project area. No suitable habitat was observed within the Project area, and, therefore, this Project is not likely to impact this species.

References

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5.0 REFERENCES

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6.0 APPENDICES

APPENDIX A WETLAND IMPACTS TABLE

Table 2. Summary of NWI Disposition within the Hayden-Hyatt 345 kV Transmission Line Project, Union County, Ohio

NWI Code	NWI Description	Figure 2 Page Number	Related Field Inventoried Resource	Comments
PFO1A	Palustrine, Forested, Broad-leaved Deciduous, Temporarily Flooded	2	N/A	Field observation determined area was gravel and considered industrial habitat.
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	2	SP01 and SP02	Delineated to be Wetland 1.

Table 3. Summary of Wetland Resources Found within the Hayden-Hyatt 345 kV Transmission Line Project, Union County, Ohio

Wetland ID	Location			Isolated? ²	Habitat Type ^{3,4}	Delineated Area within Project Area (acre)	Total Delineated Area (acre)	ORAM ⁵		Nearest Proposed Structure Number	Existing Structure Number in Wetland	Proposed Structure Number in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude	Photo Location ¹					Score	Category					Temporary Matting Area (acre)	Permanent Impact Area (acre)
Wetland 1	40.116636	-83.197547	2	No	PEM	0.03	0.05	16	1	TBD ⁶	None	TBD ⁶	N/A	TBD ⁶	TBD ⁶
Total:						0.03	0.05						Total:	TBD ⁶	TBD ⁶

¹ Appendix B - Figure 2 and Appendix D – Photo log D-1
² Pending USACE jurisdictional review
³ Habitat type based on Cowardin et al. (1979).
⁴ PEM = Palustrine Emergent Wetland
⁵ ORAM Score and Category are based on the Ohio Rapid Assessment Method for Wetland v. 5.0 (Mack 2001).
⁶To be determined. Impact information and/or structure installation method is unknown at this time.

Table 4. Summary of Open Water Features Found within the Hayden-Hyatt 345 kV Transmission Line Project, Union County, Ohio

Open Water ID	Location			Open Water Type	Delineated area (acre)	Nearest Proposed Structure Number	Proposed Impacts	
	Latitude	Longitude	Photo Location ¹				Fill type	Area (acre)
Open Water 1	40.117043	-83.197782	1	Retention Pond	0.02	N/A	N/A	N/A
Total:					0.02	Total:	N/A	

¹ Photolog in appendix D.1

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APPENDIX B FIGURES

B.1 PROJECT LOCATION MAP

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B.2 WETLAND AND WATERBODY DELINEATION MAP

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August 23, 2024

B.3 HABITAT ASSESSMENT MAP

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Figure No.

3

Title

Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc.
Hayden - Hyatt 345 kV Line

193708932

Project Location
Union County, Ohio

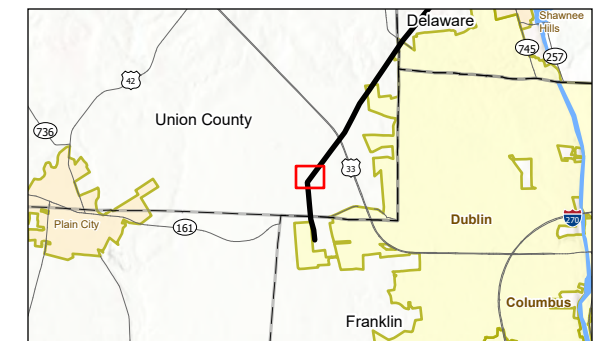
Prepared by MEK on 2024-08-08
TR by CA on 2024-08-22
IR by TF on 2024-08-23



0 100 200 Feet
(At original document size of 11x17)
1:2,400

Legend

- Existing Transmission Line
- Proposed 345 kV Transmission Line
- Project Area
- Photo Location
- Culvert
- Upland Drainage Feature
- Approximate Upland Drainage Feature
- Field Delineated Open Water
- Approximate Open Water
- Field Delineated Emergent Wetland
- Habitat Area**
- Agricultural Land
- Early Successional Deciduous Forest
- Scrub Shrub
- Maintained ROW
- Industrial Land
- Existing Roadway



- Notes
1. Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
 2. Data Sources: Stantec, AEP, USGS, NADS
 3. Background: NAIP 2023



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B.4 HIBERNACULA DESKTOP STUDY MAP

\\Corp.ads\data\Virtual_Workspace\workgroup\1937\Active\193708932-193708936_Jerome_Loop\03_data\gis\mxd\eco\193708932_Hayden_Hyatt_Eco.aprx Revised: 2024-08-23

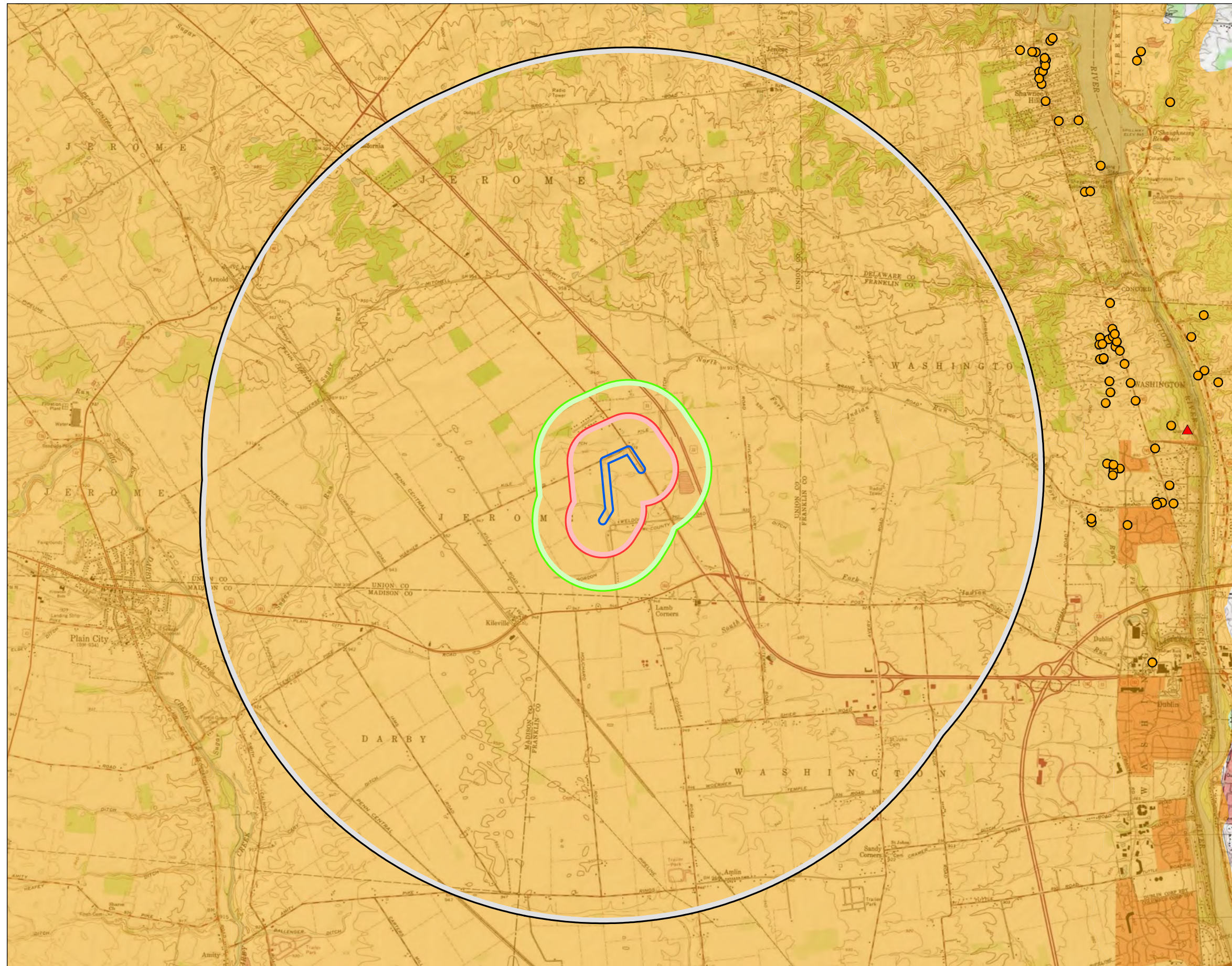


Figure No.

4

Title

Bat Hibernacula Desktop Study Map

Client/Project
AEP Ohio Transmission Company, Inc.
Hayden - Hyatt 345 kV Line

193708932









Project Location
Union County, Ohio

Prepared by MEK on 2024-08-08
TR by CA on 2024-08-22
IR by TF on 2024-08-23

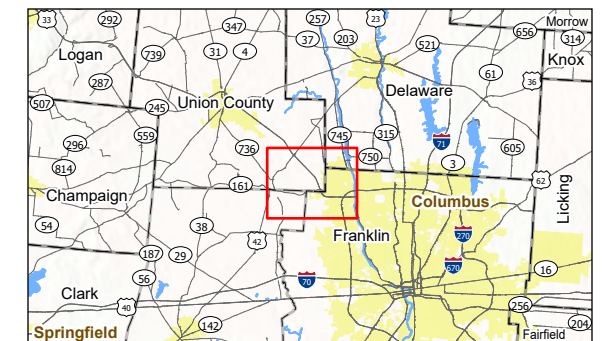


0 2,000 4,000 Feet
(At original document size of 11x17)
1:48,000

Legend

-  Project Area
-  0.25-Mile Project Area Buffer
-  0.5-Mile Project Area Buffer
-  3-Mile Project Area Buffer
-  Karst Feature
-  Area of Karst Geology
-  Mine Opening
-  Underground Mine*

*No features within data frame



- Notes
1. Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
 2. Data Sources: Stantec, AEP, USGS, NADS
 3. Background: USGS 7.5' Topographic Quadrangles - Hilliard, OH (1974), Shawnee Hills, OH (1975)



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APPENDIX C FIELD COLLECTED DATA FORMS

C.1 WETLAND DETERMINATION FORMS

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Hayden Hyatt City/County: Union County Sampling Date: 08/12/2024
 Applicant/Owner: AEP State: OH Sampling Point: SP01
 Investigator(s): C.Allen M. Kearns Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1
 Subregion (LRR or MLRA): LRR M, MLRA Lat: 40.116829 Long: -83.197703 Datum: WGS84
 Soil Map Unit Name: Brookston silty clay loam, fine texture, 0 to 2 percent slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.)	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% - 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
0 = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: SP01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix			Redox Features				Texture	Remarks	
	Color (moist)		%	Color (moist)	%	Type ¹	Loc ²			
0-8	2.5YR 6/1		75	10YR 6/8	25	C	M	Clay		
8-15	Gray 1 2.5/10Y		100					Clay		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Coast Prairie Redox (A16)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Red Parent Material (F21)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Other (Explain in Remarks)	

Restrictive Layer (if observed): Type: <u>Refusal</u> Depth (inches): <u>15+</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks:
Refusal

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<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"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on 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"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Water Table Present Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> Saturation Present Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Hayden Hyatt City/County: Union County Sampling Date: 08/12/2024
 Applicant/Owner: AEP State: OH Sampling Point: SP02
 Investigator(s): C.Allen M. Kearns Section, Township, Range: _____

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____

Subregion (LRR or MLRA): LRR M, MLRA Lat: 40.116826 Long: -83.197699 Datum: WGS84

Soil Map Unit Name: Brookston silty clay loam, fine texture, 0 to 2 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = 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>2</u> x 3 = <u>6</u> FACU species <u>3</u> x 4 = <u>12</u> UPL species <u>1</u> x 5 = <u>5</u> Column Totals: <u>6</u> (A) <u>23</u> (B) Prevalence Index = B/A = <u>3.83</u>
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Daucus carota</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Ambrosia trifida</u>	<u>15</u>	<u>No</u>	<u>FAC</u>	
3. <u>Cirsium arvense</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Erigeron canadensis</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
5. <u>Setaria viridis</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
6. <u>Toxicodendron radicans</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation

- 2 - Dominance Test is >50%

- 3 - Prevalence Index is ≤3.0¹

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

- Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>
--	-----------------------

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/2	100					Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)
	<input type="checkbox"/> Coast Prairie Redox (A16)
	<input type="checkbox"/> Iron-Manganese Masses (F12)
	<input type="checkbox"/> Red Parent Material (F21)
	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> Other (Explain in Remarks)

Restrictive Layer (if observed): Type: <u>Refusal</u> Depth (inches): <u>8+</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

Remarks:
Refusal

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<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"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on 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"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendices
August 23, 2024

C.2 ORAMS

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.

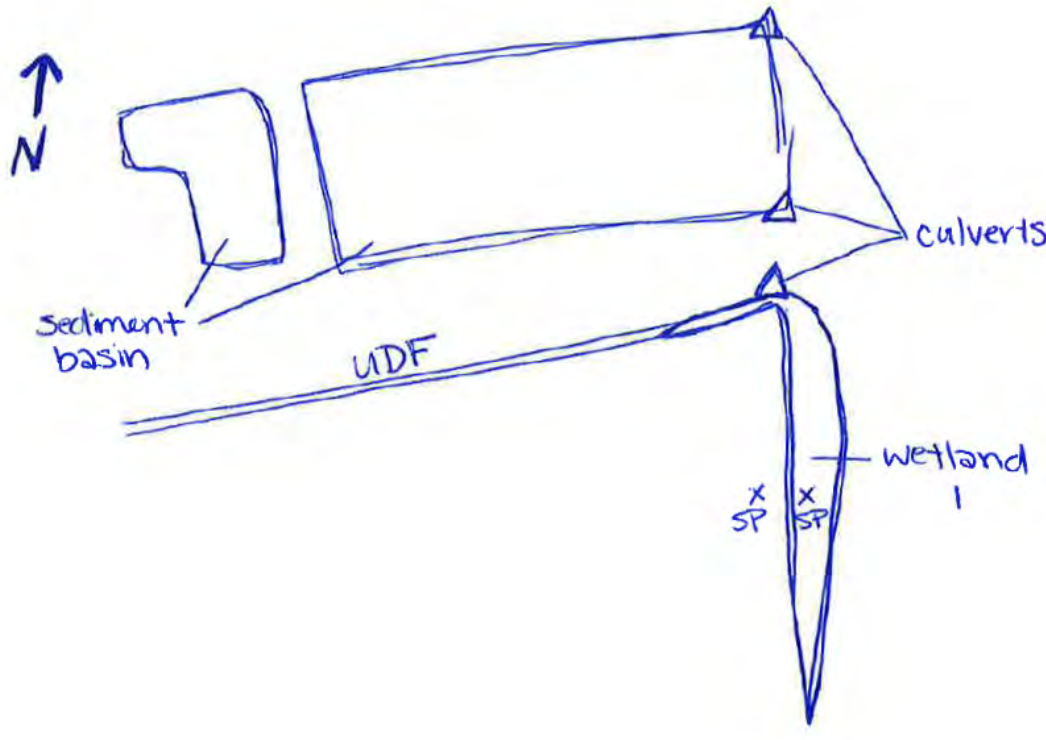
The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as 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:	Samantha Heitzenrater
Date:	8/12/2024
Affiliation:	Stantec
Address:	1500 Lake Shore Drive, Suite 100, Columbus, OH 43204
Phone Number:	614-607-2458
e-mail address:	samantha.heitzenrater@stantec.com
Name of Wetland:	Wetland 1
Vegetation Communit(ies):	PEM
HGM Class(es):	Depression
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	40.116748, -83.197607
USGS Quad Name	Hilliard
County	Union
Township	Jerome
Section and Subsection	N/A
Hydrologic Unit Code	050600011203
Site Visit	8/12/2024
National Wetland Inventory Map	No
Ohio Wetland Inventory Map	No
Soil Survey	Union County Soil Survey
Delineation report/map	Wetland and Waterbody Delineation Report

Name of Wetland: Wetland 1	
Wetland Size (acres, hectares): 0.03 acre within Project area, 0.05 acre total	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 16	Category: 1

Scoring Boundary Worksheet

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

Hayden-Hyatt 345 kV Line Project

Samantha Heitzenrater

8/12/2024

#	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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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.

Hayden-Hyatt 345 kV Line Project

Samantha Heitzenrater

8/12/2024

#	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 <input type="checkbox"/> Wetland should be evaluated for possible Category 3 status Go to Question 2	NO <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Wetland is a Category 3 wetland. Go to Question 3	NO <input checked="" type="checkbox"/> Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES <input type="checkbox"/> Wetland is a Category 3 wetland Go to Question 4	NO <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Wetland is a Category 3 wetland Go to Question 5	NO <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Wetland is a Category 1 wetland Go to Question 6	NO <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Wetland is a Category 3 wetland Go to Question 7	NO <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Wetland is a Category 3 wetland Go to Question 8a	NO <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Wetland is a Category 3 wetland. Go to Question 8b	NO <input checked="" type="checkbox"/> Go to Question 8b

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES <input type="checkbox"/> Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Go to Question 9b	NO <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Wetland should be evaluated for possible Category 3 status Go to Question 10	NO <input type="checkbox"/> 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 <input type="checkbox"/> Go to Question 9d	NO <input type="checkbox"/> 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 <input type="checkbox"/> Wetland is a Category 3 wetland Go to Question 10	NO <input type="checkbox"/> 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 <input type="checkbox"/> Wetland should be evaluated for possible Category 3 status Go to Question 10	NO <input type="checkbox"/> 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 <input type="checkbox"/> Wetland is a Category 3 wetland. Go to Question 11	NO <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO <input checked="" type="checkbox"/> Complete Quantitative Rating

Table 1. Characteristic plant species.

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

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

Site: Hayden-Hyatt 345kV Line Project	Rater(s): Samantha Heitzenrater	Date: 8/12/2024
--	--	------------------------

0	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)

3	3
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

5	8
max 30 pts.	subtotal

Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

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

7	15
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

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

15
subtotal this page

Site: Hayden-Hyatt 345kV Line Project	Rater(s): Samantha Heitzenrater	Date: 8/12/2024
--	--	------------------------

15

subtotal first page

0	15
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

1	16
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

16

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

Hayden-Hyatt 345kV Line Project

Samantha Heitzenrater

8/12/2024

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	NO	If yes, Category 3.
	Question 4. Significant bird habitat	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	NO	If yes, Category 1.
	Question 6. Bogs	NO	If yes, Category 3.
	Question 7. Fens	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	NO	If yes, Category 3
Question 11. Relict Wet Prairies	NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	3	
	Metric 3. Hydrology	5	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersed, microtopography	1	
	TOTAL SCORE	16	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES <input type="checkbox"/> Wetland is categorized as a Category 3 wetland	NO <input checked="" type="checkbox"/>	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 <input type="checkbox"/> Wetland should be evaluated for possible Category 3 status	NO <input checked="" type="checkbox"/>	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 <input type="checkbox"/> Wetland is categorized as a Category 1 wetland	NO <input checked="" type="checkbox"/>	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 <input checked="" type="checkbox"/> Wetland is assigned to the appropriate category based on the scoring range	NO <input type="checkbox"/>	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 <input type="checkbox"/> Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO <input checked="" type="checkbox"/>	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 <input type="checkbox"/> Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO <input checked="" type="checkbox"/> 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
Category 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

End of Ohio Rapid Assessment Method for Wetlands.

Appendices
August 23, 2024

APPENDIX D REPRESENTATIVE PHOTOGRAPHS

D.1 WETLAND AND WATERBODY PHOTOGRAPHS

AEP Ohio Transmission Company, Inc.
Hayden-Hyatt 345 kV Transmission Line Project
Union County, Ohio



Photo Location 1. View of Open Water 1. Photograph taken facing west.



Photo Location 1. View of Open Water 1. Photograph taken facing southwest.

AEP Ohio Transmission Company, Inc.
Hayden-Hyatt 345 kV Transmission Line Project
Union County, Ohio



Photo Location 2. View of wetland determination sample point (SP01; PEM). Photograph taken facing west.



Photo Location 2. View of wetland determination sample point (SP01; PEM), soil profile.

AEP Ohio Transmission Company, Inc.
Hayden-Hyatt 345 kV Transmission Line Project
Union County, Ohio



Photo Location 2. View of Wetland 1 (PEM). Photograph taken facing north.



Photo Location 2. View of Wetland 1 (PEM). Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
Hayden-Hyatt 345 kV Transmission Line Project
Union County, Ohio



Photo Location 2. View of Wetland 1 (PEM). Photograph taken facing west.



Photo Location 3. View of wetland determination sample point (SP02; upland). Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
Hayden-Hyatt 345 kV Transmission Line Project
Union County, Ohio



Photo Location 3. View of wetland determination sample point (SP02; upland), soil profile.



Photo Location 4. View of Wetland 1 (PEM). Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
Hayden-Hyatt 345 kV Transmission Line Project
Union County, Ohio



Photo Location 5. View of typical upland drainage feature (UDF). Photograph taken facing north.



Photo Location 5. View of UDF. Photograph taken facing south.

Appendices
August 23, 2024

D.2 HABITAT PHOTOGRAPHS

AEP Ohio Transmission Company, Inc.
Hayden-Hyatt 345 kV Transmission Line Project
Union County, Ohio



Photo Location 1. View of early successional deciduous forest habitat. Photograph taken facing southwest.



Photo Location 2. View of maintained Right of Way (ROW) habitat. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
Hayden-Hyatt 345 kV Transmission Line Project
Union County, Ohio



Photo Location 3. View of maintained ROW habitat. Photograph taken facing west.



Photo Location 4. View of existing roadway and maintained ROW habitat. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
Hayden-Hyatt 345 kV Transmission Line Project
Union County, Ohio



Photo Location 5. View of existing roadway, agricultural field, and maintained ROW habitats. Photograph taken facing south.



Photo Location 5. View of existing roadway, maintained ROW, and agricultural field habitats. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
Hayden-Hyatt 345 kV Transmission Line Project
Union County, Ohio



Photo Location 6. View of maintained ROW habitat. Photograph taken facing south.



Photo Location 7. View of typical culvert. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
Hayden-Hyatt 345 kV Transmission Line Project
Union County, Ohio



Photo Location 8. View of scrub-shrub habitat. Photograph taken facing northeast.

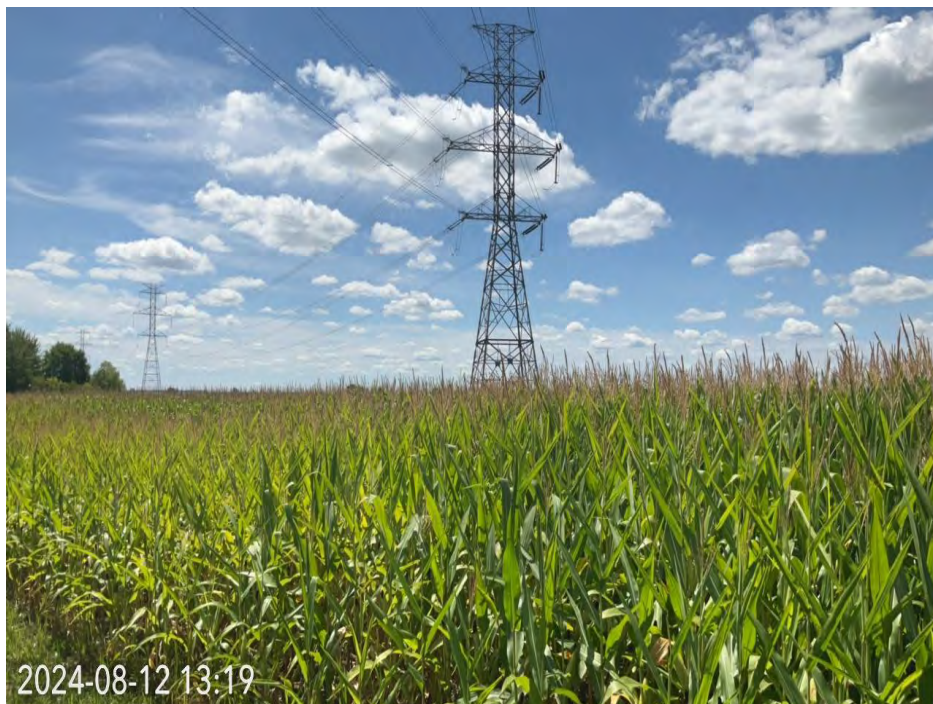


Photo Location 8. View of agricultural field habitat. Photograph taken facing southwest.

Appendices
August 23, 2024

APPENDIX E AGENCY CORRESPONDENCE



Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate
John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6621
Fax: (614) 267-4764

March 8, 2023

Michelle Kearns
Stantec Consulting Services, Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204

Re: 23-0178; AEP Celtic Extension 345 kV Line Project

Project: The proposed project involves the new construction of approximately 1.5-miles of 345 kilovolt (kV) line to connect the proposed Celtic Station to the proposed Kileville Station.

Location: The proposed project is located in Jerome Township, Union County, Ohio.

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

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

Least Bittern (*Ixobrychus exilis*), T
Sora Rail (*Porzana carolina*), SC
King Rail (*Rallus elegans*), E
Virginia Rail (*Rallus limicola*), SC

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The project is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH \geq 20 if possible.

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "[RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES](#)." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species.

Federally Endangered

snuffbox (*Epioblasma triquetra*)
Northern riffleshell (*Epioblasma torulosa rangiana*)
clubshell (*Pleurobema clava*)
rayed bean (*Villosa fabalis*)

Federally Threatened

rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Endangered

elephant-ear (*Elliptio crassidens crassidens*)

State Threatened

pondhorn (*Unio merus tetralasmus*)

Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact these species.

The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the king rail (*Rallus elegans*), a state endangered bird. Nests for this species are deep bowls constructed out of grass and usually hidden very well in marsh vegetation. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

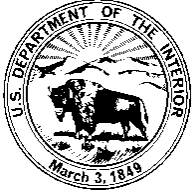
Water Resources: The Division of Water Resources has the following comment.

The [local floodplain administrator](#) should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator

United States Department of the Interior



FISH AND WILDLIFE SERVICE

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



March 2, 2023

Project Code: 2023-0042739

Dear Ms. Kearns:

The U.S. Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: The proposed project is in the vicinity of one or more confirmed records of Indiana bats. Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see <https://ecos.fws.gov/ecp/species/9045>), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are known or assumed present. Please note that, because Indiana bat presence has already been

confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for this species.

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

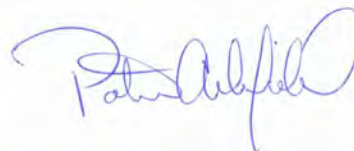
Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing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

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

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,



Patrice Ashfield
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Eileen Wyza, ODNR-DOW