

Case No. 24-0014-EL-BLN

Notice of Adjustment

Part 1 of 2

Letter of Notification for the Vassell – Green Chapel 345 kV Transmission Line Project



An **AEP** Company

BOUNDLESS ENERGY™

PUCO Case No. 24-0014-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.

March 19, 2024

LETTER OF NOTIFICATION FOR THE VASSELL – GREEN CHAPEL 345 KV TRANSMISSION LINE PROJECT

ADJUSTMENT SUMMARY

AEP Ohio Transmission Company, Inc. (the “Company”) submitted a Letter of Notification (“LON”) to the Ohio Power Siting Board (“OPSB”) on January 19, 2024, for the Vassell – Green Chapel 345 kV Transmission Line Project (the “Project”) under Case No. 24-0014-EL-BLN. The LON is currently under review by OPSB.

The purpose of the Notice of Adjustment is to document changes to the Vassell – Green Chapel 345 kV Transmission Line alignment since the January 19, 2024 LON submittal and to include these adjustments in OPSB’s current review of the Project. It is the Company’s goal to have the final order for Case No. 24-0014-EL-BLN include the below proposed shifts.

Given the expedited schedule to meet the required in-service date, the LON submitted in January 2024 included a centerline that was subject to change. Over the past two months, detailed engineering, environmental surveys, and landowner negotiations have progressed and resulted in centerline shifts on the Vassell – Green Chapel 345 kV Transmission Line in three locations.

Two of the shifts move proposed structures outside of delineated wetland boundaries (Pages 4-5, and 12-15 in Map 3, Appendix A). These two shifts eliminate all proposed structures from being located within known wetlands and do not impact any additional landowners or create new impacts to other sensitive resources.

The third shift (Pages 8-9 in Map 3, Appendix A) occurred in response to landowner requests during negotiations for acquiring right-of-way (“ROW”) for the Project. The landowner, currently affected by a portion of the proposed 150-foot ROW, requested that the Company use a larger portion of their property along the parcel boundary. The Company evaluated the adjustment and concluded that the shift is in an open agricultural field and does not create any additional impacts to the surrounding built or natural environments. Additionally, the route adjustment eliminates the need to obtain ROW from two other landowners.

Cumulatively, the revised alignment reduces environmental impacts and the total number of landowners impacted by the Project. At this time the remainder of the centerline provided in the January 2024 Application is unchanged.

Sections B(8), B(9)(a), B(10)(b), B(10)(c), B(10)(d), B(10)(e), and B(10)(f) are updated below to reflect the current proposed shifts and the adjusted 150-foot-wide ROW. New information is identified via **bold text** and inaccurate existing information is identified via ~~striketrough text~~. All other sections of the Application not identified and redlined below remain unchanged.

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B(8) Property Agreements

The applicant shall 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.

Overall, the revised alignment reduces the total number of landowners impacted by the Project. A revised list of properties required for the Project are provided in **Appendix C**. The easement form exhibit provided in Appendix C represents the minimum easement rights the Company would require in order to construct, operate, and maintain these facilities.

B(9) Technical Features

The applicant shall 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 Vassell – Green Chapel 345 kV Transmission Line is estimated to include the following:

Voltage: 345 kV
Conductors: (3) 2-Bundle 1590 kCM Falcon ACSS (54/19)
Static Wire: 2x (1) 144 Ct OPGW
Insulators: Polymer
ROW Width: 150 feet
Structure type: ~~Forty (40)~~ **Forty-three (43)** Steel monopole, V-String insulators, tangent structures on custom concrete pier with anchor bolt foundation
~~Seven (7)~~ **Five (5)** Steel monopole, suspension insulators, running corner structures on custom concrete pier with anchor bolt foundation
Seventeen (17) Steel monopole, strain insulator, dead-end structure on concrete pier with anchor bolt foundation

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 occupies approximately ~~230~~ **233** acres. Based on email correspondence with the Delaware County Auditor's office on December 18, 2023, no properties registered as agricultural district land are crossed by the Project. Based on email correspondence with the Licking County Auditor's office on

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October 8, 2023, three properties registered as agricultural district land are crossed by the Project. The Licking County Auditor and Delaware County Auditor confirmed that the existing list of parcels is current and accurate on January 17, 2024 **and February 23, 2024**, respectively. Overall, the Project crosses a combined ~~20.3~~ **19.9** acres of agricultural district land in Licking County. However, agricultural impacts will be minimized, as the proposed structures are monopoles which reduces the footprint and agricultural activities are a compatible and permitted use with a transmission right-of-way.

The Project occupies approximately ~~230~~ **233** acres. Approximately ~~189~~ **193** acres of the site has historically been used for row crop land and ~~13.7~~ **13.1** acres has historically been used for pasture/hayfields.

Two (2) Ohio Department of Agriculture (ODA) conservation easements are located approximately 0.4 mile east of Center Village Road and Edwards Road (see Map 2 in **Appendix A**). However, the Project does not cross either of these (or any other) ODA conservation easements.

B(10)(c) Archaeological and Cultural Resources

Provide a description of the applicant’s investigation concerning the presence or absence of significant archaeological 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 Phase I Archaeological and Phase I History/Architectural surveys, which involved subsurface testing and visual inspection for an area encompassing the Project. No previously unrecorded resources that were identified were considered as being landmarks or eligible for the National Register of Historic Places. As a result, the Company recommended to the SHPO that the Project would have no adverse effect on historic properties and no further cultural resource work would be necessary. In their response, dated January 8, 2024, SHPO supported the consultant’s recommendations. See Appendix E.

Additional coordination was conducted with SHPO for the revised alignment, recommending that the Project would have no adverse effect on historic properties and no further cultural resource work would be necessary. In their response, dated March 11, 2024, SHPO supported the consultant’s recommendations. See Appendix E.

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 stormwater discharges under General Permit OHC000006. The Company will also

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coordinate stormwater permitting needs with the appropriate local entities as required. The Company will implement and maintain best management practices (BMPs) as outlined in the Project-specific Storm Water Pollution Prevention Plan (SWPPP) to minimize erosion control sediment to protect surface water quality during storm events.

Wetland and stream delineation field surveys were completed within the Proposed Route's 150-foot-wide right-of-way (ROW) for the Project by the Company's consultant in June 2023 and between September to December 2023. **Due to route adjustments, additional ecological surveys were completed within the adjusted Proposed Route's 150-foot wide ROW between January 25 to 31, 2024 (see Original and Addendum #1 Ecological Report in Appendix F). As a result of the Addendum #1 Ecological Survey, the current and complete Proposed Route's 150-foot ROW has been surveyed (see Appendix F).** The Company's consultant identified a total of ~~four~~ **one** palustrine emergent (PEM) wetland, ~~10~~ **seven** palustrine forested (PFO) wetlands, ~~two~~ **six** PEM/PFO wetland complexes, and one palustrine scrub-shrub (PSS)/PFO wetland complex within the proposed 150-foot ROW. Additionally, 13 streams (six perennial streams, five intermittent streams, and two ephemeral streams) and one pond were identified within the proposed 150-foot ROW.

Ponds and streams are not anticipated to be disturbed by construction activities, as they will be spanned or the Company will install temporary timber matting above the Ordinary Highwater Mark (OWHM) to avoid permanent impacts. Based on preliminary engineering design, ~~four~~ **no** structures are currently located within delineated PFO wetlands. Additionally, approximately ~~8.2~~ **7.2** acres of **non-mechanized** ROW tree clearing will occur in delineated PFO wetlands.

~~It is anticipated that the Project will require a Clean Water Act (CWA) Section 404/401 Permit authorization via the United States Army Corps of Engineers (USACE) under a Nationwide Permit 57 and a Section 401 CWA Isolated Wetland Permit approval with the Ohio Environmental Protection Agency (OEPA). Therefore, the Company intends to obtain approvals from both the USACE and OEPA prior to the commencement of construction activities for the Project.~~

As a result of the route adjustments included within the Addendum #1 Ecological Report, the Company is re-evaluating the need for construction and forestry needs to perform non-mechanized clearing of trees (i.e., root structures of trees remain intact) in order to determine the level of permitting compliance with the Clean Water Act (CWA) Permits. Prior to construction within jurisdictional waters (wetlands and/or streams), the Company intends to attain the necessary approvals from either or both the USACE or Ohio Environmental Protection Agency (OEPA), if warranted.

The FEMA Flood Insurance Rate Map (FIRM) was reviewed to identify any floodplains/flood hazard areas that have been mapped within the Project Area (specifically, map number 39089C0120H, 39089C0140H, and 39089C0139H). Based on this mapping, FEMA-designated 100-year floodplains associated with Duncan Run and Kiber Run are crossed by the proposed alignment; however, no proposed structures are planned to be located within the floodplain areas. Local floodplain permitting,

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if deemed necessary for the Project, will be coordinated with agencies of jurisdiction as applicable prior to construction.

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.

As part of the ecological study completed for the Project, a coordination letter was submitted to the United States Fish and Wildlife Service (USFWS) Ohio Ecological Services Field Office seeking technical assistance on the Project for potential impacts to threatened or endangered species. The September 11, 2023, response letter from the USFWS (see **Appendix E**) indicated that the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) occur throughout the state of Ohio. The USFWS indicated that seasonal tree clearing would be required if suitable bat habitat trees were identified. Any tree clearing required for the Project will adhere to seasonal restrictions (March 31 through October 1); therefore, adverse impacts to protected bat species are not anticipated as a result of the Project. Due to the Project type, size, and location, USFWS does not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species.

A coordination letter was submitted to the Ohio Department of Natural Resources (ODNR) Division of Wildlife (DOW) Ohio Natural Heritage Program (ONHP) and the ODNR - Office of Real Estate seeking an environmental review of the proposed Project for potential impacts on state listed and federally listed threatened or endangered species. Correspondence from ODNR DOW/OHNP and the ODNR – Office of Real Estate was received on October 13, 2023 (See **Appendix E**).

According to the DOW, the Project is within the range of the state and federally endangered Indiana bat, the state and federally endangered northern long-eared bat, the state endangered little brown bat (*Myotis lucifugus*), and the state endangered tricolored bat (*Perimyotis subflavus*). Additionally, the DOW indicated that the southern portion of the Project is within the vicinity of records for the northern long-eared bat. Because of the presence of state endangered bat species established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area.

Similar to the USFWS response, ODNR recommends cutting between October 1 and March 31 to avoid impacts to these protected bat species. Based on a desktop survey for caves, mines, and other potential openings, no winter hibernacula were identified within 0.25 mile of the Project (See **Appendix F**). Approximately ~~25~~ **29.5** acres of tree clearing are anticipated for the Project, which will occur within the seasonal restrictions. Therefore, no additional coordination with ODNR regarding bat species is required.

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The ODNR-DOW indicated that the Project is within the range of five mussel species: the federally endangered rayed bean (*Villosa fabalis*), the federally endangered snuffbox (*Epioblasma triquetra*), the federally threatened rabbitsfoot (*Quadrula cylindrica cylindrica*), the state threatened salamander mussel (*Simpsonaias ambigua*), and the state threatened pondhorn (*Uniomerus tetralasmus*). No in-water work within a perennial stream is proposed for the Project; therefore, these species are not anticipated to be impacted by the Project.

In addition, the ODNR lists the Project in the range of the northern harrier (*Circus hudsonius*). The ODNR recommends that nesting habitats for the listed species be avoided during their nesting periods. The professional survey completed for avian resources concluded no suitable habitat was observed for the northern harrier in the Project area; therefore, no impacts to this bird species are anticipated.

Of the previously ten state and/or federal listed threatened and endangered species identified within range of the Project area as identified within the Original Ecological Report (December 2023), no habitat for any of the listed aquatic or bird species were identified within the Addendum #1 Project Survey Area. However, the four bat species (Indiana bat, Northern long-eared bat, little brown bat, and tricolored bat) were identified as having potential summer roosting habitat and no hibernacula within the Addendum #1 Project Survey area, which is consistent with the original threatened and endangered species coordination for the original route for this Project. Therefore, no further coordination with either the USFWS and/or ODNR is warranted. A copy of the Addendum #1 Ecological Report with further discussion of threatened and endangered species has been provided in Appendix F.

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B(10)(f) Areas of Ecological Concern

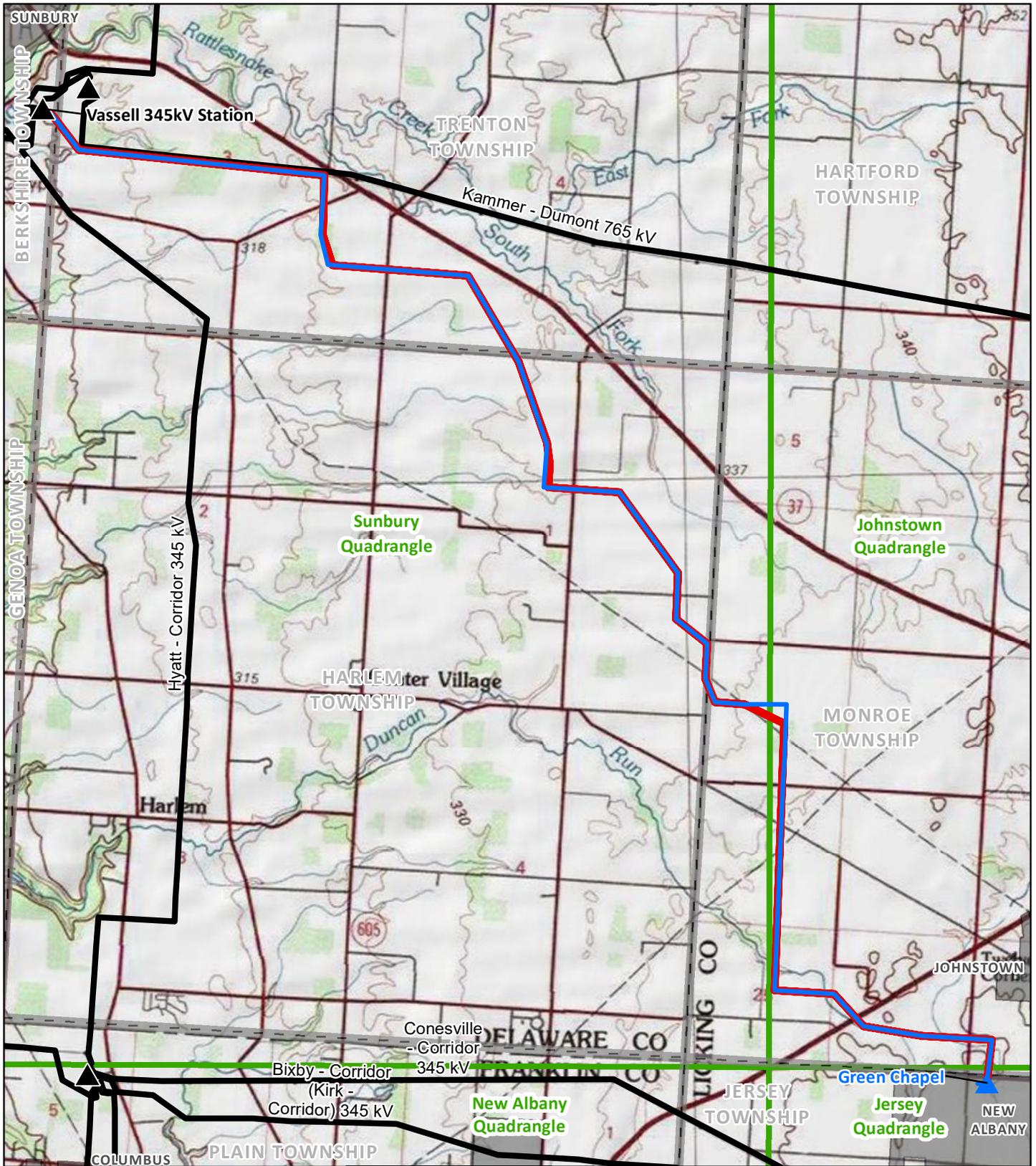
Provide a description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife 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.

Within the proposed 150-foot ROW, the Company's consultant has identified ~~four~~ **one** PEM wetland, ~~10~~ **seven** PFO wetlands, ~~two~~ **six** PEM/PFO wetland complexes, and one PSS/PFO wetland complex within the proposed ROW. ~~Four~~ **No** preliminary structure locations are within a ~~PFO delineated wetland~~ **any of the delineated wetlands; however, non-mechanized ROW clearing in such wetlands will be necessary.**

Within the proposed 150-foot ROW, the Company's consultant has identified 13 streams (two ephemeral streams, five intermittent streams, and six perennial streams) and one pond. No preliminary structure locations are within a delineated stream or pond. Approximately ~~25~~ **29.5** acres of ROW tree clearing is anticipated for the Project, of which, ~~8.2~~ **7.2** acres occurs in delineated PFO wetlands.

Based on a review of the Protected Areas Database of the United States as well as the Conservation Easement Database, there are no state or national parks, forests, or wildlife areas within the vicinity of the Project.

Appendix A Project Maps



 Proposed AEP Substation	 Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
 Existing AEP Substation	 Municipality
 Proposed Vassell - Green Chapel 345 kV Transmission Line	 Township Boundary
	 USGS 7.5' Topographic Quad Boundary

Sources:
USGS (2021)

StatePlane
Ohio North
NAD 83

March 06, 2024

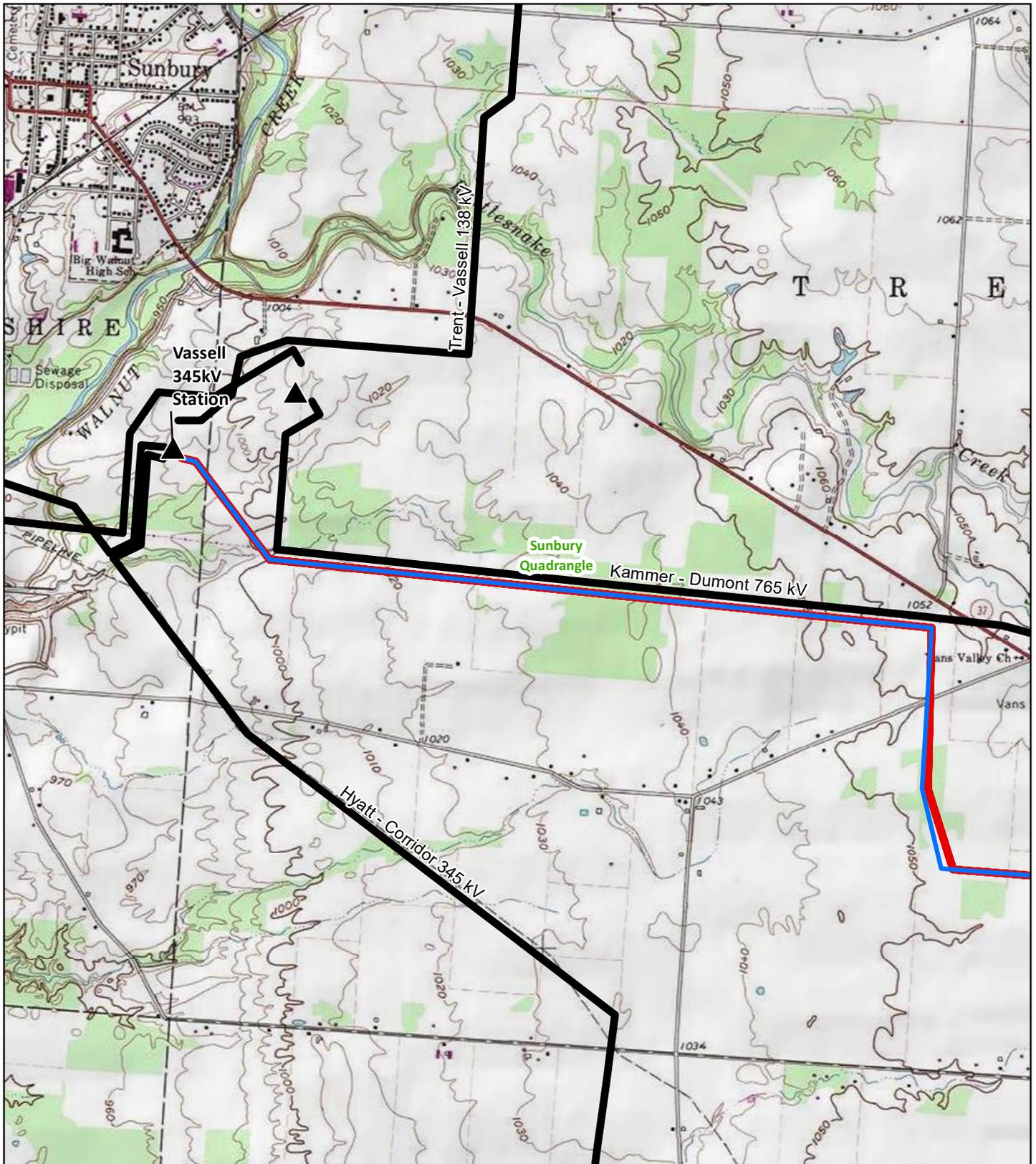



Map 1
Project Overview

 Vassell - Green Chapel 345 kV Transmission Line Project

0 0.5 1 1.5
Miles





- ▲ Existing AEP Substation
- Proposed Vassell - Green Chapel 345 kV Transmission Line
- Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
- Existing AEP Transmission Line
- USGS 7.5' Topographic Quad Boundary

Sources:
USGS (2021)

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StatePlane
Ohio North
NAD 83

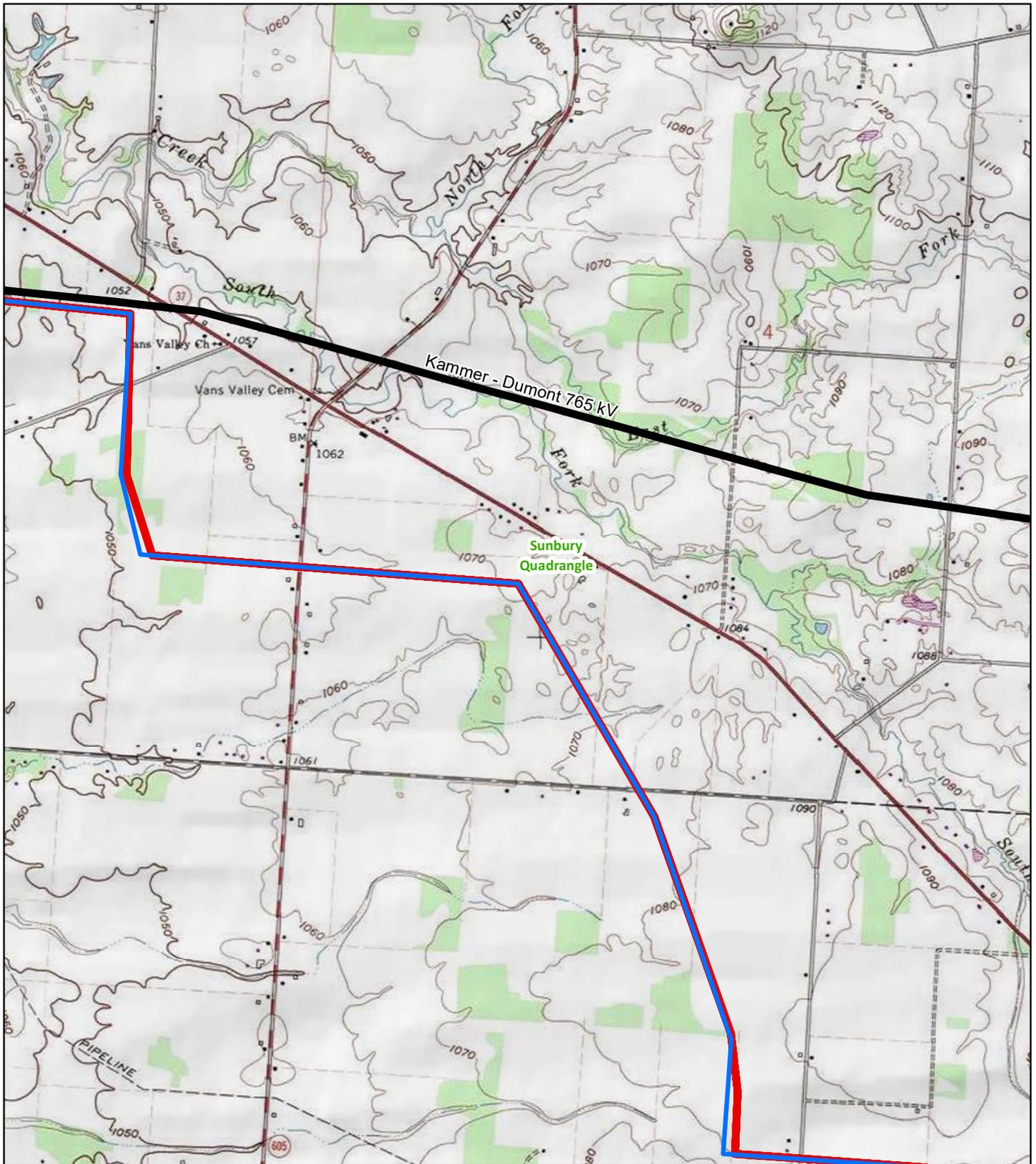
March 06, 2024



Map 2
Project Area

Vassell - Green Chapel 345 kV
Transmission Line Project

0 1,000 2,000
Feet



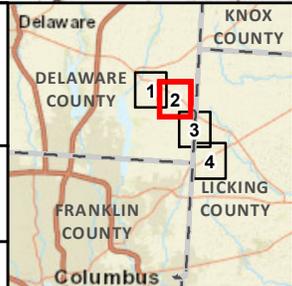
- Proposed Vassell - Green Chapel 345 kV Transmission Line
- Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
- Existing AEP Transmission Line
- USGS 7.5' Topographic Quad Boundary

Sources:
USGS (2021)

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StatePlane
Ohio North
NAD 83

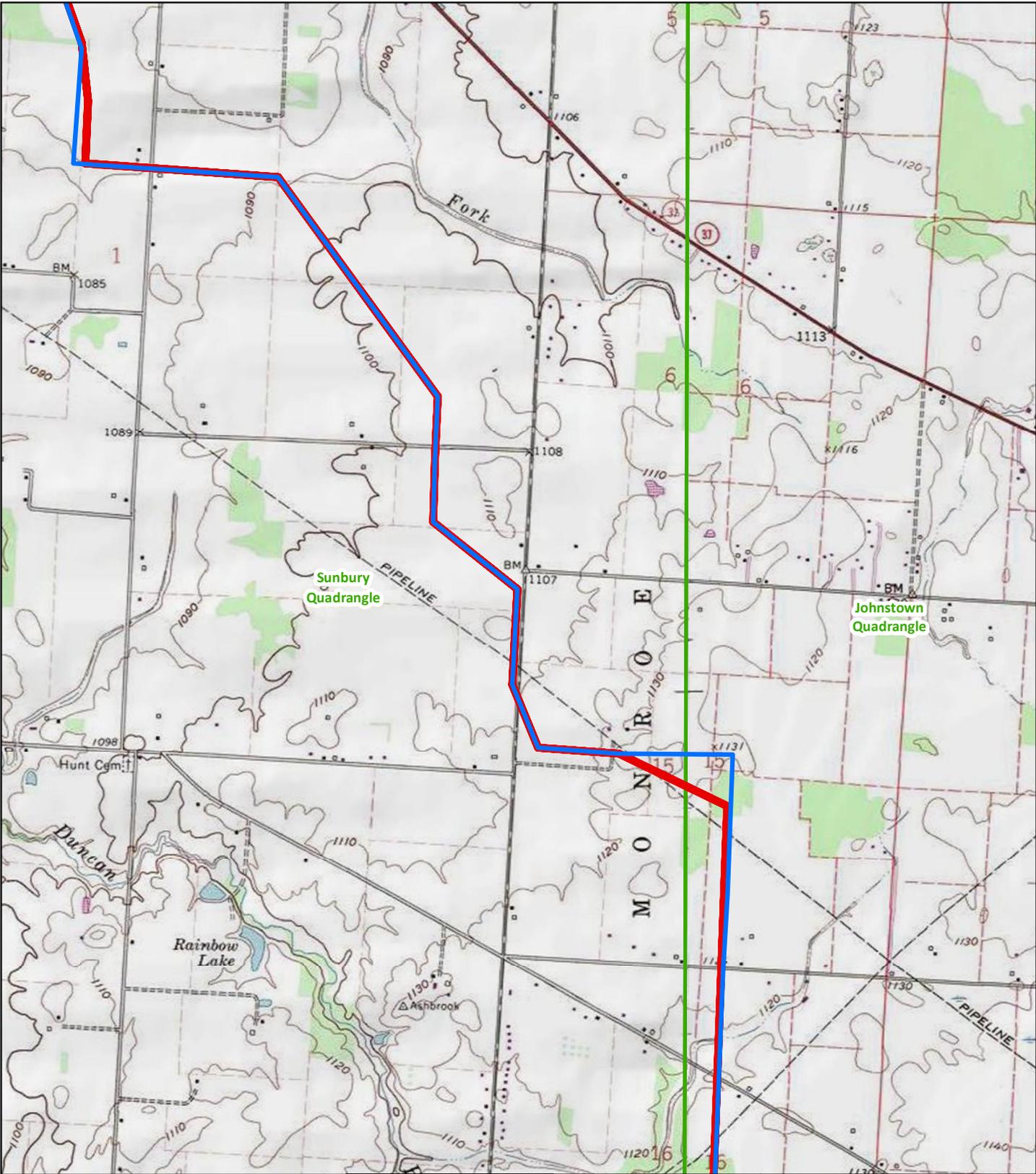
March 06, 2024



Map 2
Project Area

Vassell - Green Chapel 345 kV
Transmission Line Project

0 1,000 2,000
Feet



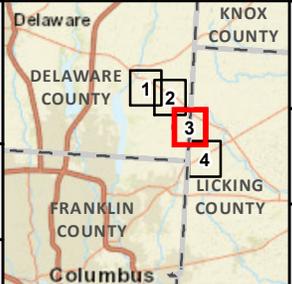
- Proposed Vassell - Green Chapel 345 kV Transmission Line
- Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
- USGS 7.5' Topographic Quad Boundary

Sources:
USGS (2021)

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StatePlane
Ohio North
NAD 83

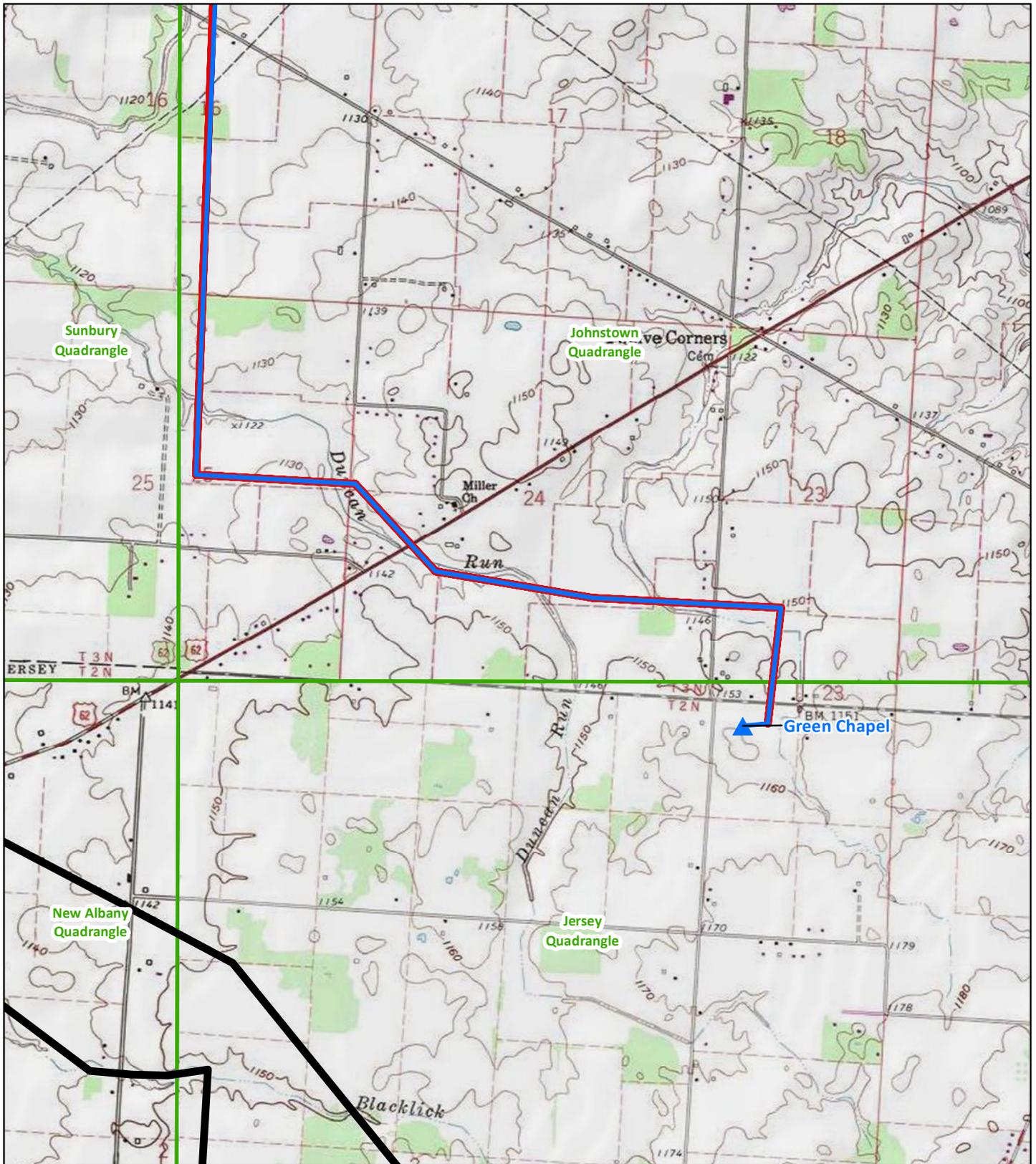
March 06, 2024



Map 2
Project Area

Vassell - Green Chapel 345 kV
Transmission Line Project

0 1,000 2,000
Feet



-  Proposed AEP Substation
-  Proposed Vassell - Green Chapel 345 kV Transmission Line
-  Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
-  Existing AEP Transmission Line
-  USGS 7.5' Topographic Quad Boundary

Sources:
USGS (2021)

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StatePlane
Ohio North
NAD 83

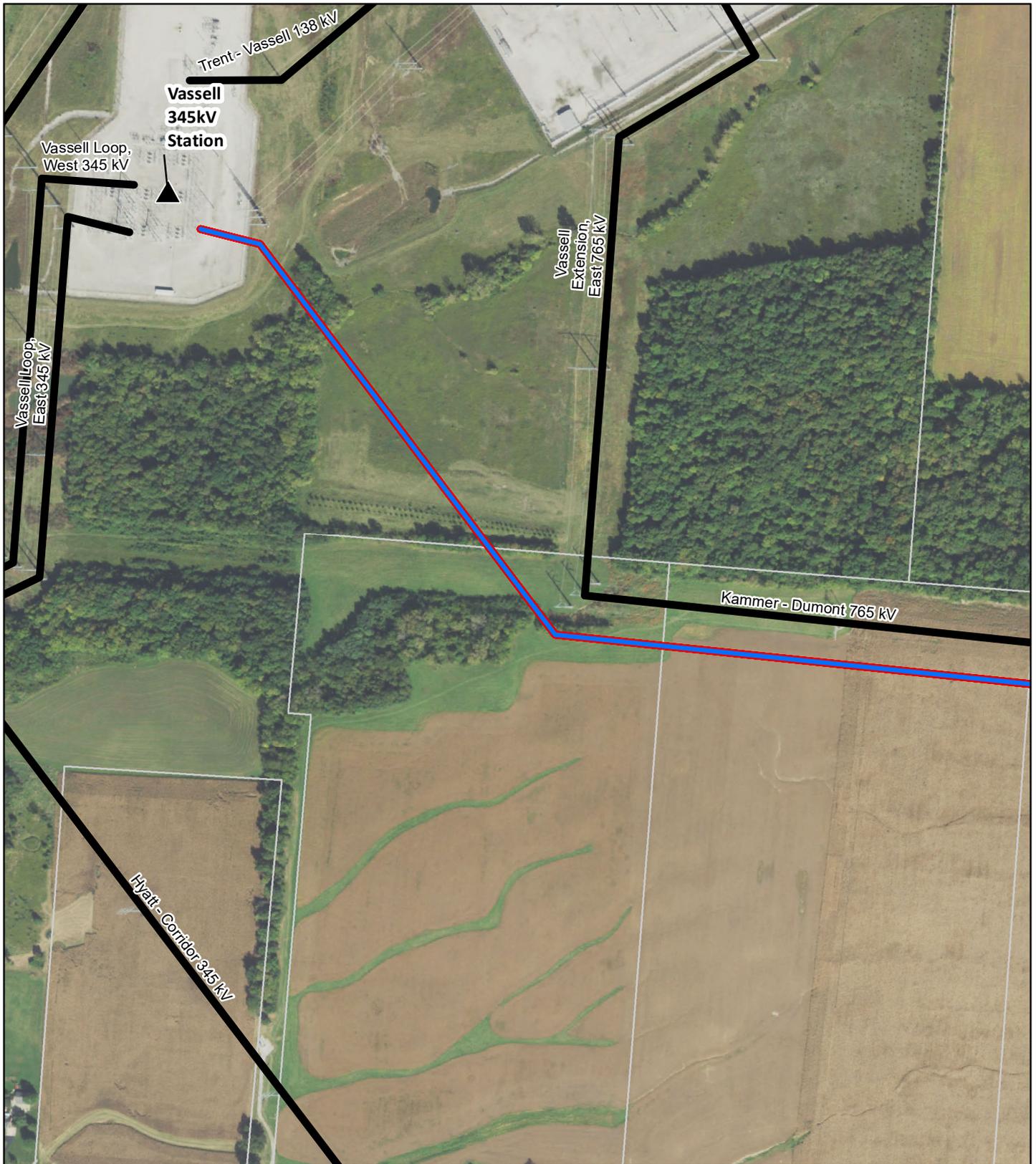
March 06, 2024



Map 2
Project Area

Vassell - Green Chapel 345 kV
Transmission Line Project

0 1,000 2,000
Feet



- ▲ Existing AEP Substation
- Proposed Vassell - Green Chapel 345 kV Transmission Line
- Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
- Existing AEP Transmission Line
- Parcel Boundary

Sources:
NAIP Imagery (USDA 2022)

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StatePlane
Ohio South
NAD 83

March 14, 2024



Map 3
Aerial Map

Vassell - Green Chapel 345 kV
Transmission Line Project

0 250 500 750
Feet



Kammer - Dumont 765 kV

- Proposed Vassell - Green Chapel 345 kV Transmission Line
- Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
- Existing AEP Transmission Line
- Parcel Boundary

Sources:
NAIP Imagery (USDA 2022)

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StatePlane
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Map 3
Aerial Map

An AEP Company

Vassell - Green Chapel 345 kV
Transmission Line Project

0 250 500 750

Feet



Kammer - Dumont 765 kV

37

Proposed Vassell - Green
 — Chapel 345 kV Transmission
 Line
 Vassell - Green Chapel
 — 345kV Transmission Line
 (filed on 1/19/24)
 — Existing AEP Transmission
 Line
 □ Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)
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 NAD 83
 March 14, 2024

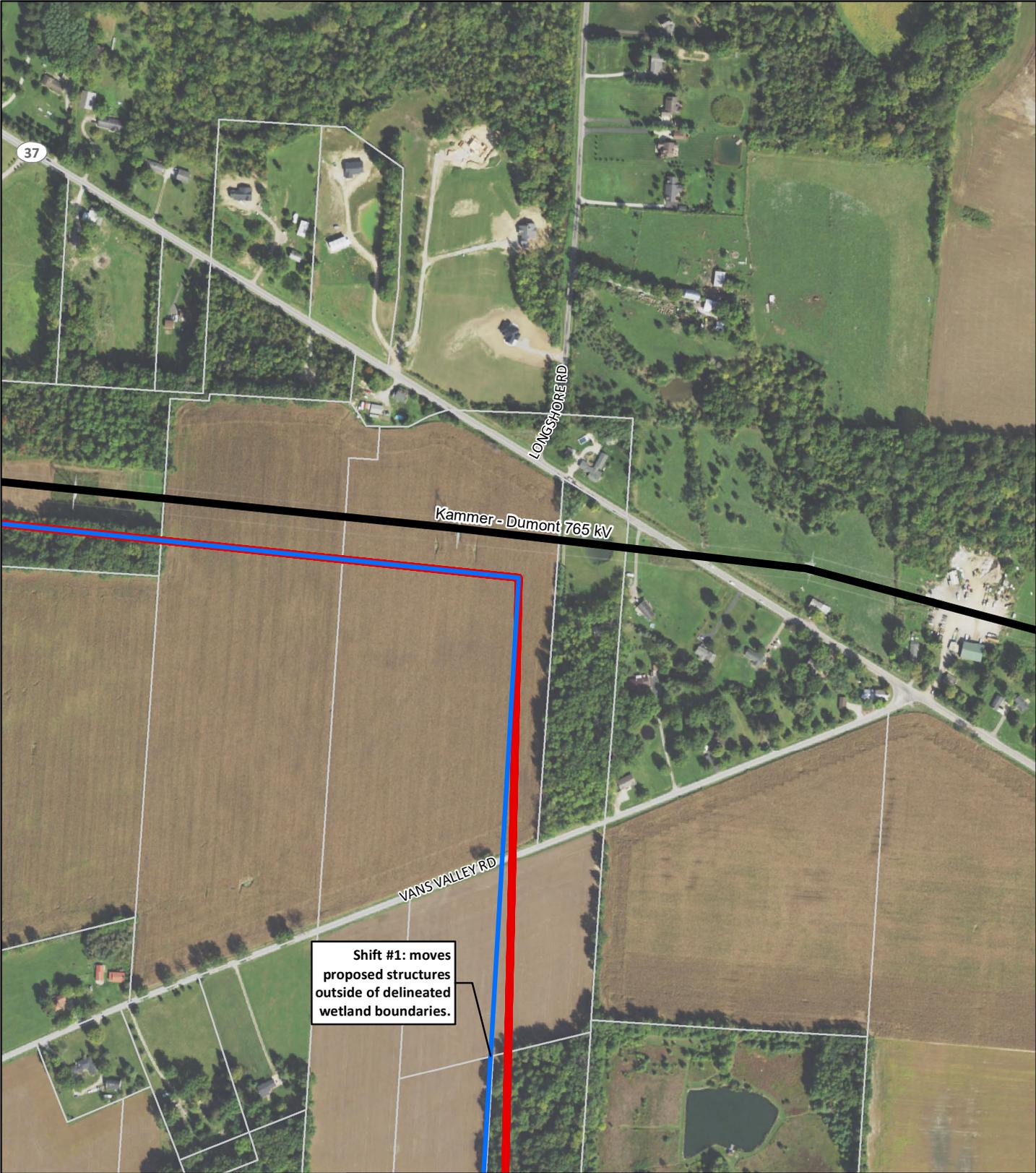


Map 3
Aerial Map

AEP OHIO
 An AEP Company

Vassell - Green Chapel 345 kV
 Transmission Line Project

0 250 500 750
 Feet



Shift #1: moves proposed structures outside of delineated wetland boundaries.

- Proposed Vassell - Green Chapel 345 kV Transmission Line
- Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
- Existing AEP Transmission Line
- Parcel Boundary

Sources:
NAIP Imagery (USDA 2022)

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StatePlane
Ohio South
NAD 83

March 14, 2024



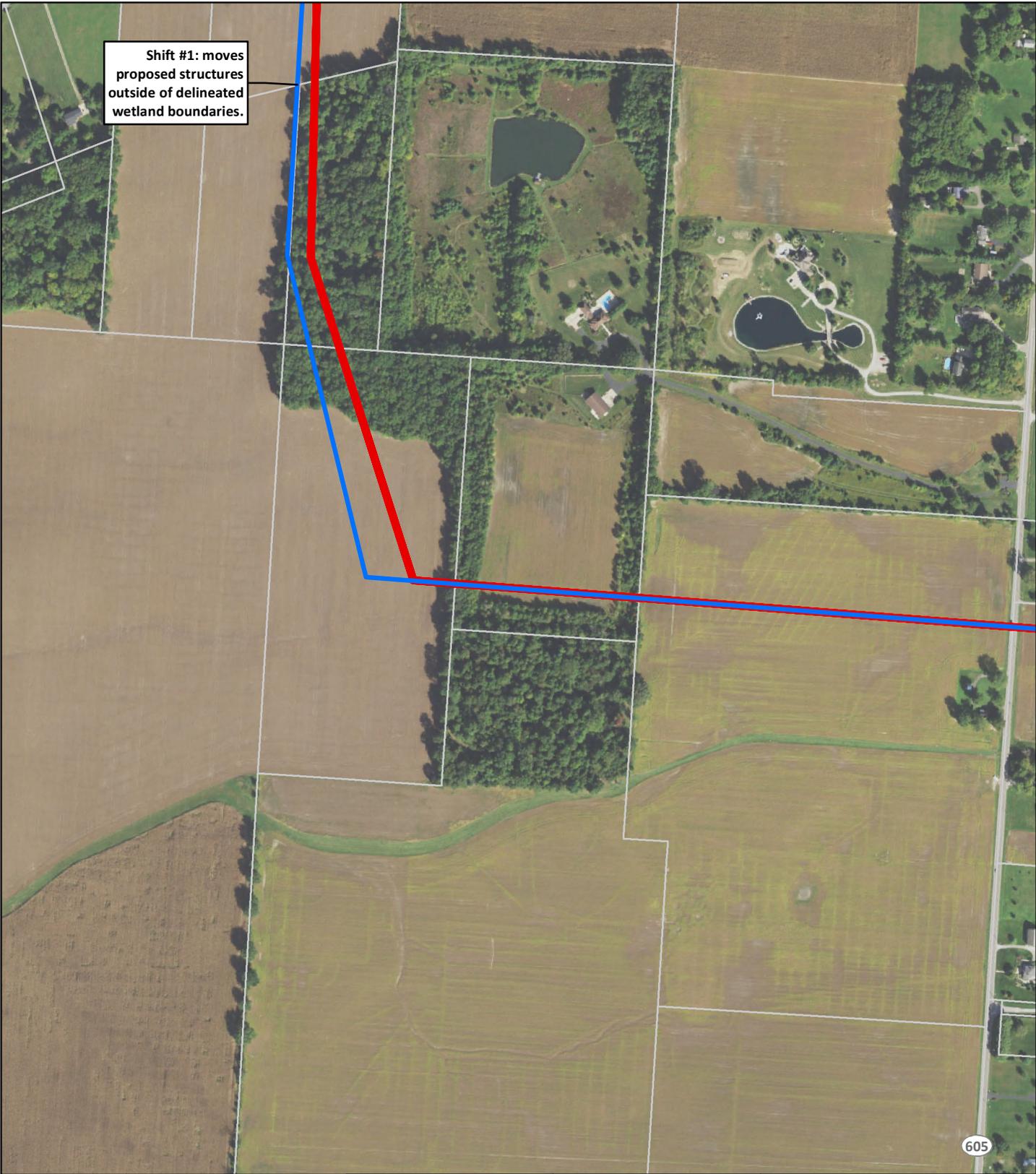
Map 3
Aerial Map

An AEP Company

**Vassell - Green Chapel 345 kV
Transmission Line Project**

0 250 500 750

Feet



Shift #1: moves proposed structures outside of delineated wetland boundaries.

605

Proposed Vassell - Green
 — Chapel 345 kV Transmission Line
 Vassell - Green Chapel
 — 345kV Transmission Line
 (filed on 1/19/24)
 □ Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)
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 March 14, 2024

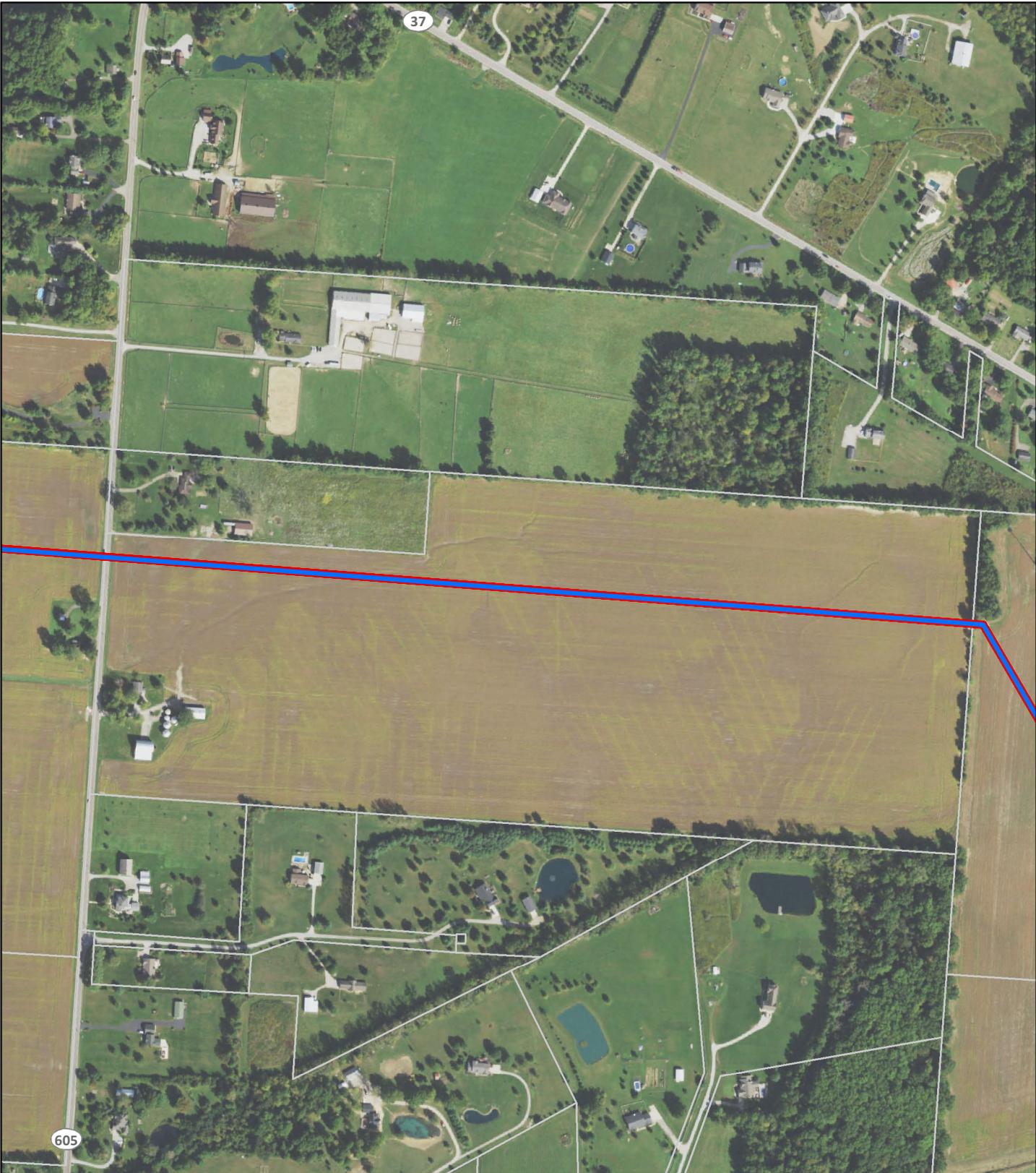


Map 3
Aerial Map

AEP OHIO
 An AEP Company

Vassell - Green Chapel 345 kV
 Transmission Line Project

0 250 500 750
 Feet



Proposed Vassell - Green
 Chapel 345 kV Transmission
 Line
 Vassell - Green Chapel
 345kV Transmission Line
 (filed on 1/19/24)
 Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)
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Map 3
Aerial Map

AEP OHIO
 An AEP Company

Vassell - Green Chapel 345 kV
 Transmission Line Project

0 250 500 750
 Feet



Proposed Vassell - Green
 — Chapel 345 kV Transmission
 Line
 Vassell - Green Chapel
 — 345kV Transmission Line
 (filed on 1/19/24)
 □ Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)

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StatePlane
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March 14, 2024

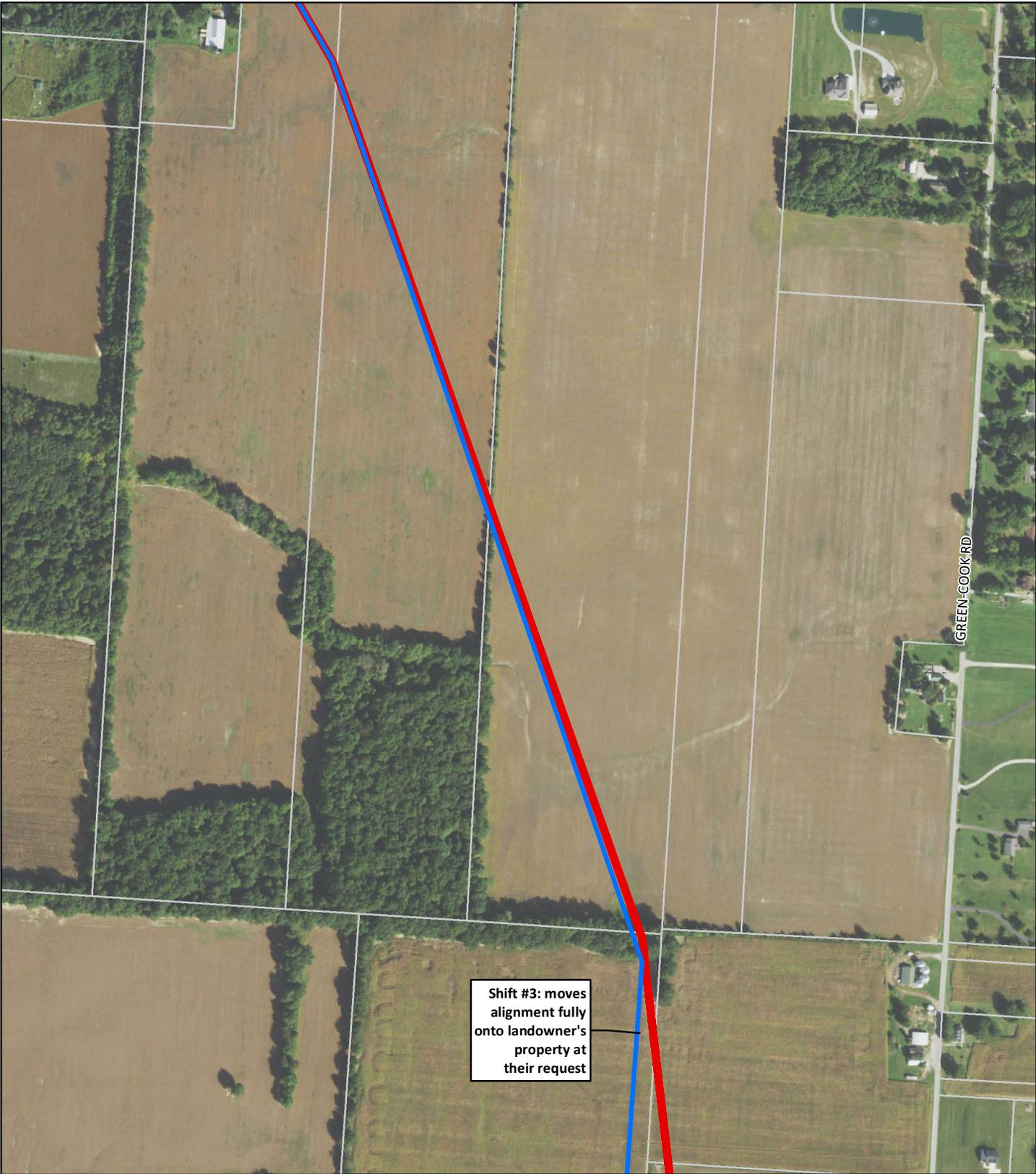


Map 3
Aerial Map

AEP OHIO
 An AEP Company

Vassell - Green Chapel 345 kV
 Transmission Line Project

0 250 500 750
 Feet



Shift #3: moves alignment fully onto landowner's property at their request

GREEN-COOK RD

Proposed Vassell - Green Chapel 345 kV Transmission Line
 Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
 Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)
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 StatePlane Ohio South NAD 83
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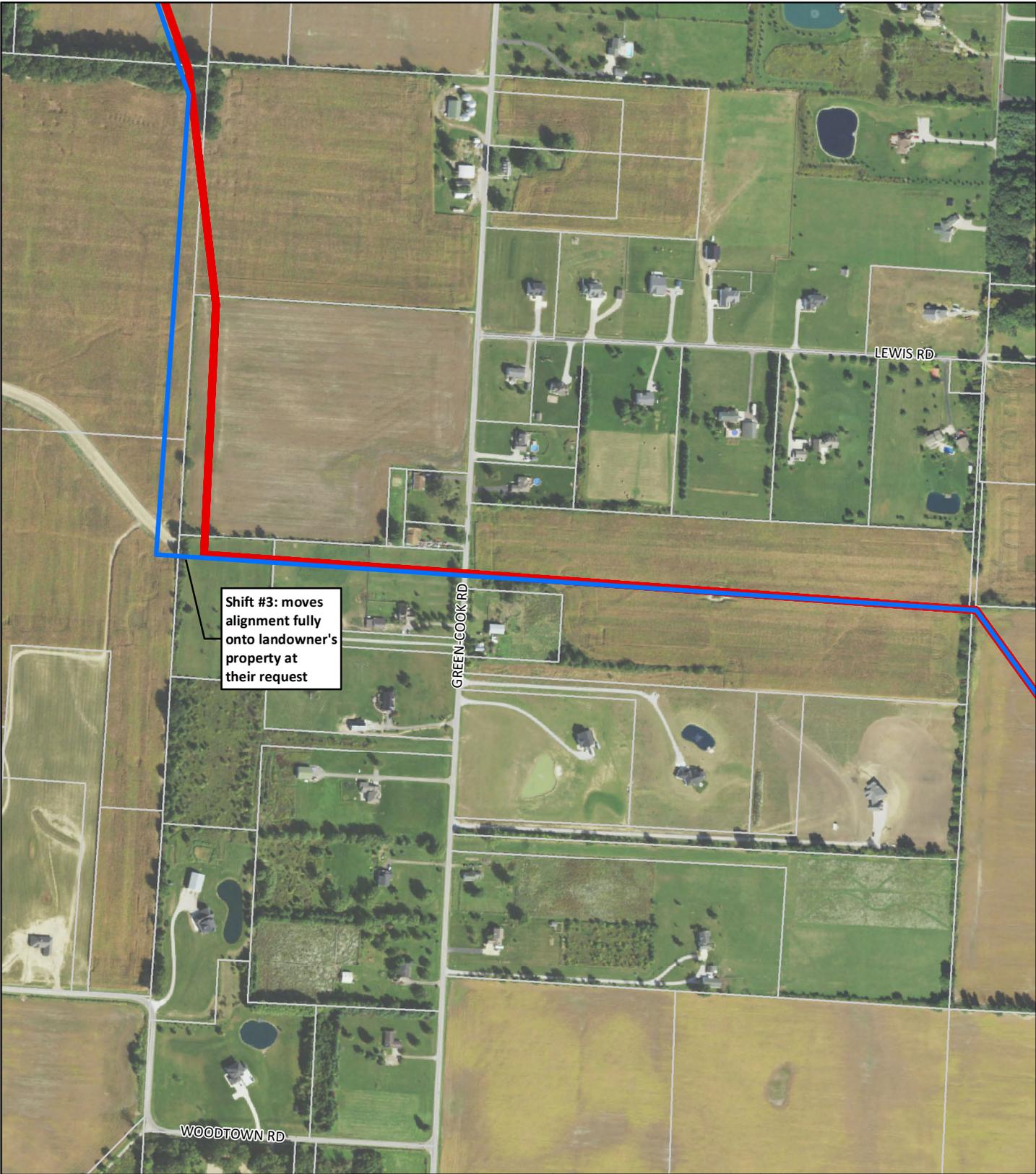


Map 3
Aerial Map

Vassell - Green Chapel 345 kV Transmission Line Project

AEP OHIO
 An AEP Company

0 250 500 750
 Feet



Shift #3: moves alignment fully onto landowner's property at their request

Proposed Vassell - Green
 — Chapel 345 kV Transmission Line
 Vassell - Green Chapel
 — 345kV Transmission Line
 (filed on 1/19/24)
 □ Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)
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Map 3
Aerial Map

AEP OHIO
 An AEP Company

Vassell - Green Chapel 345 kV
 Transmission Line Project

0 250 500 750
 Feet



Proposed Vassell - Green
 — Chapel 345 kV Transmission
 Line
 Vassell - Green Chapel
 — 345kV Transmission Line
 (filed on 1/19/24)
 □ Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)

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StatePlane
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 NAD 83

March 14, 2024

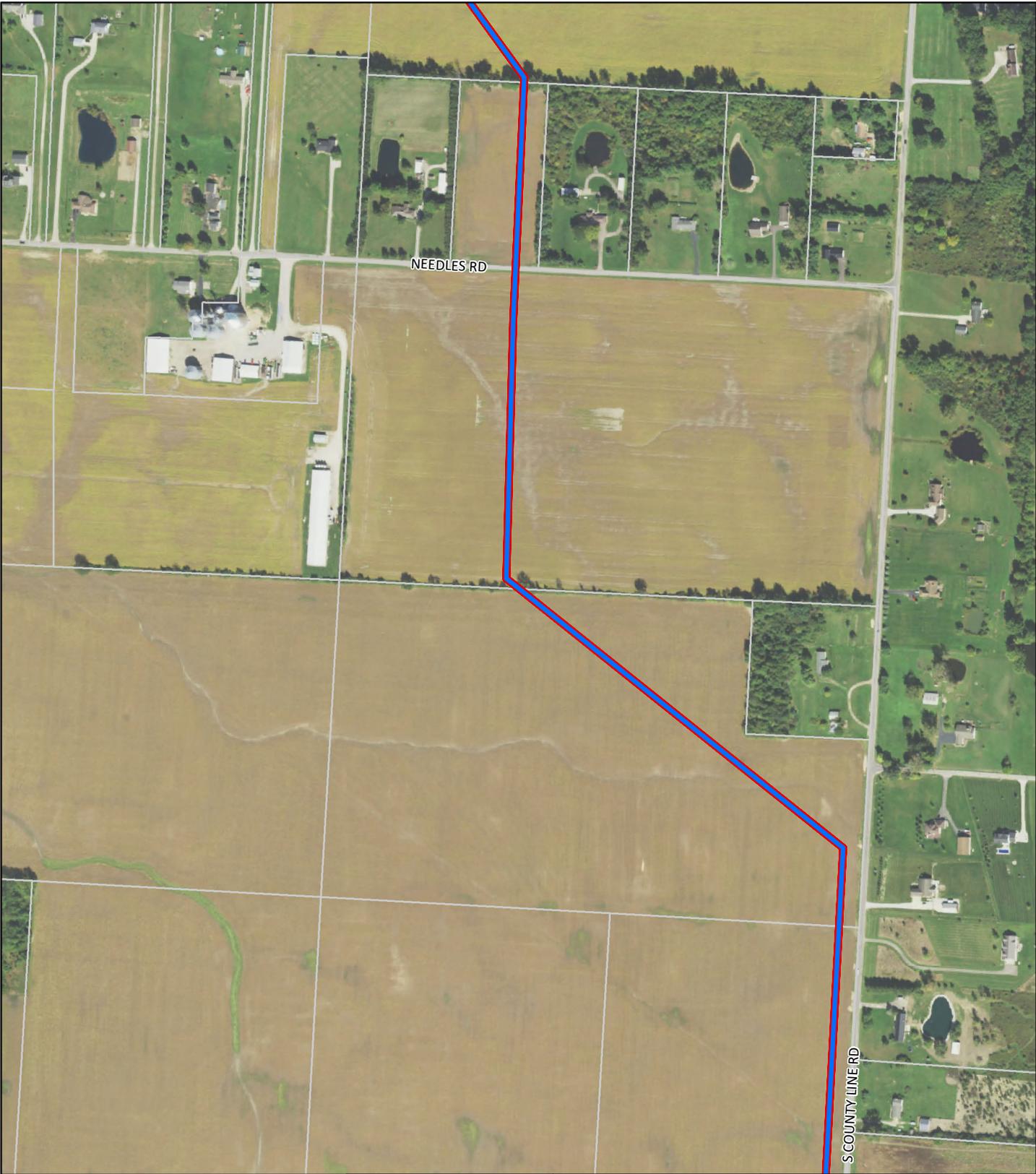


Map 3
Aerial Map

AEP OHIO
 An AEP Company

Vassell - Green Chapel 345 kV
 Transmission Line Project

0 250 500 750
 Feet



Proposed Vassell - Green
 — Chapel 345 kV Transmission
 Line
 Vassell - Green Chapel
 — 345kV Transmission Line
 (filed on 1/19/24)
 □ Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)

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March 14, 2024

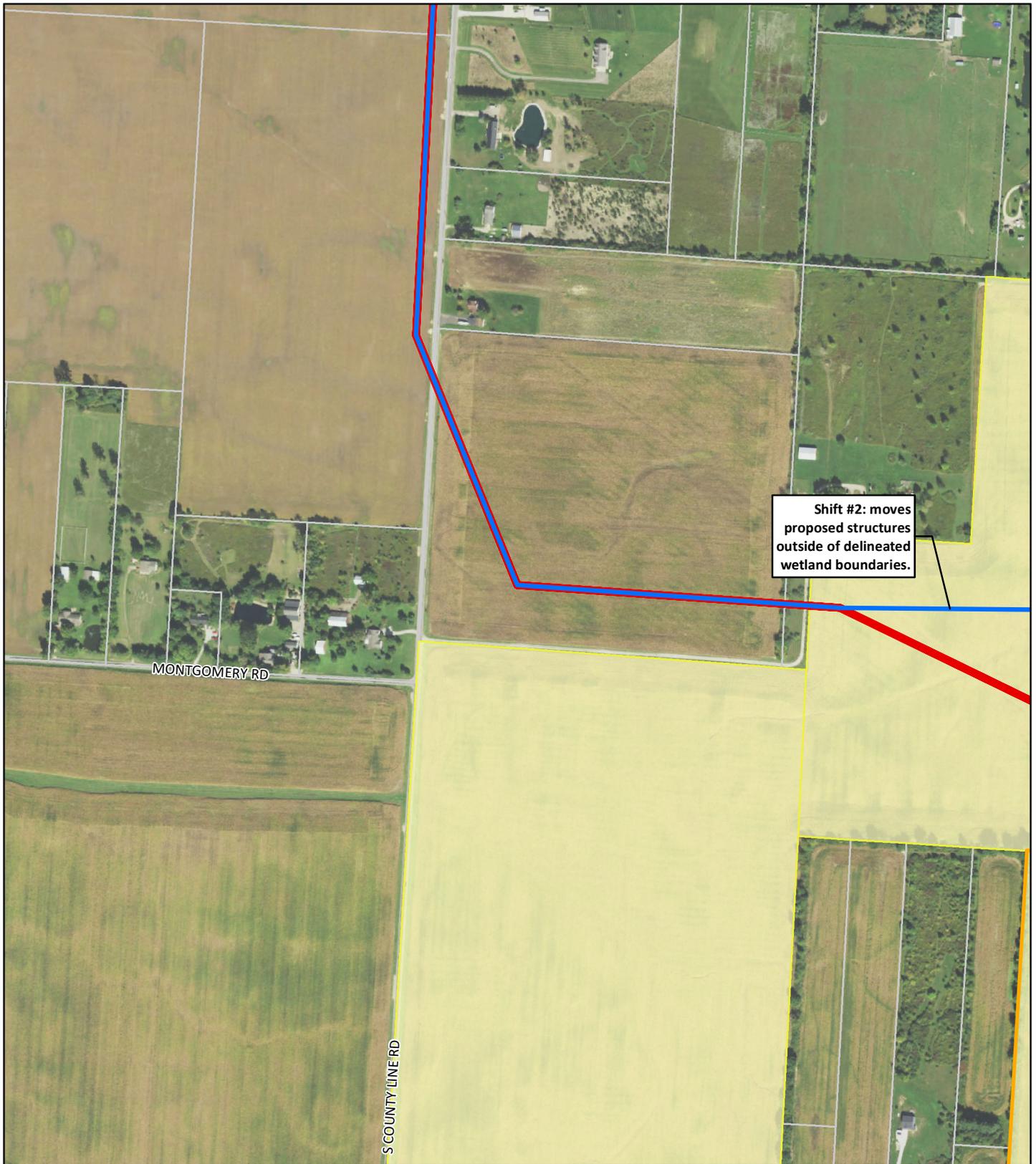


Map 3
Aerial Map

AEP OHIO
 An AEP Company

Vassell - Green Chapel 345 kV
 Transmission Line Project

0 250 500 750
 Feet



Shift #2: moves proposed structures outside of delineated wetland boundaries.

Proposed Vassell - Green
 — Chapel 345 kV Transmission Line
 Vassell - Green Chapel
 — 345kV Transmission Line (filed on 1/19/24)
 ODA Conservation Easement
 Agricultural District Parcel
 Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)
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 Ohio South
 NAD 83
 March 14, 2024

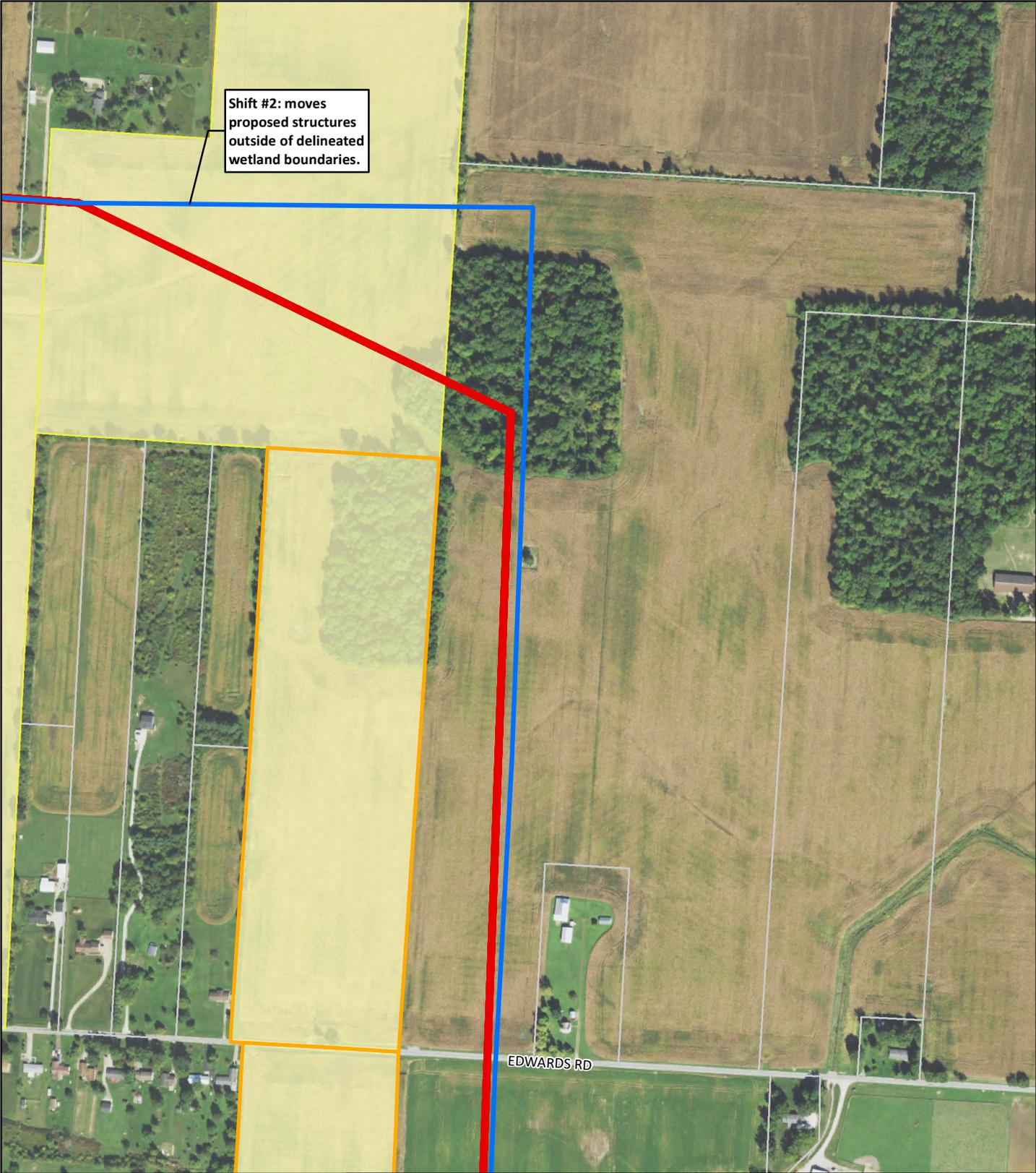


Map 3
Aerial Map

AEP OHIO
 An AEP Company

Vassell - Green Chapel 345 kV
 Transmission Line Project

0 250 500 750
 Feet



Shift #2: moves proposed structures outside of delineated wetland boundaries.

EDWARDS RD

- Proposed Vassell - Green
- Chapel 345 kV Transmission Line
- Vassell - Green Chapel
- 345kV Transmission Line (filed on 1/19/24)
- ODA Conservation Easement
- Agricultural District Parcel
- Parcel Boundary

Sources:
NAIP Imagery (USDA 2022)

Page 13 of 18

StatePlane
Ohio South
NAD 83

March 14, 2024



Map 3
Aerial Map



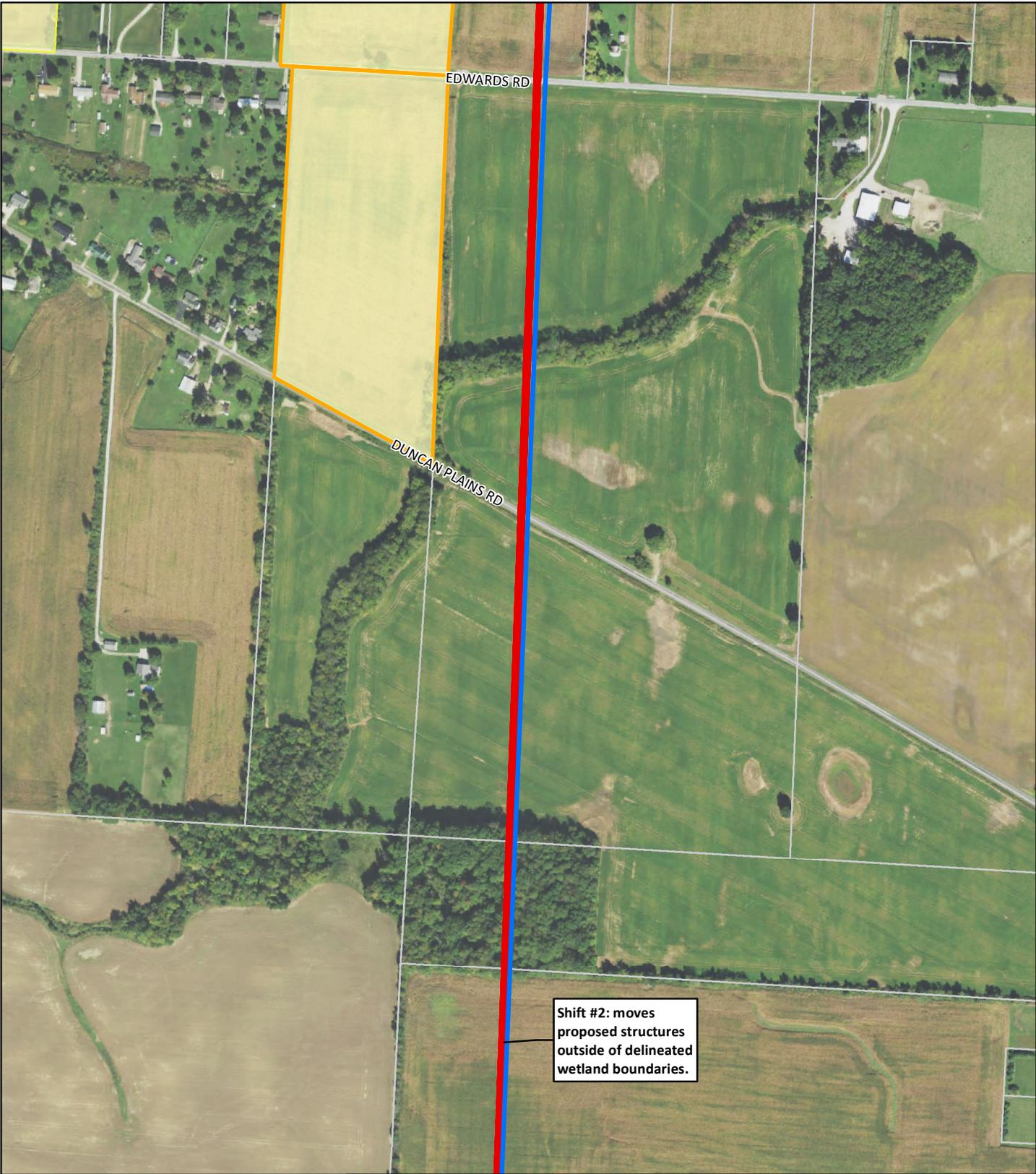
An AEP Company

Vassell - Green Chapel 345 kV
Transmission Line Project

0 250 500 750



Feet



Proposed Vassell - Green
 — Chapel 345 kV Transmission Line
 — Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
 — ODA Conservation Easement
 — Agricultural District Parcel
 — Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)

Page 14 of 18

StatePlane
 Ohio South
 NAD 83

March 14, 2024

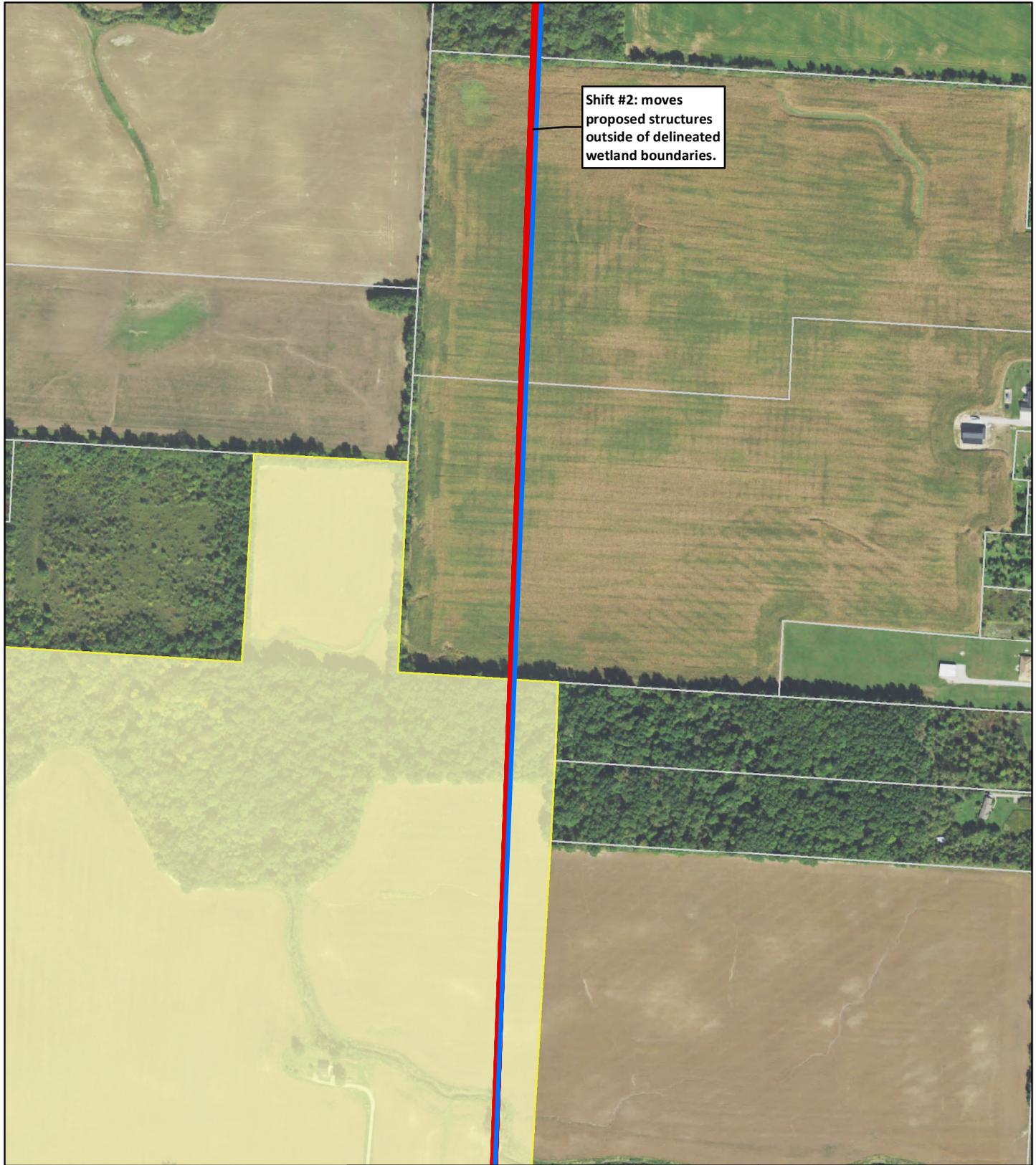


Map 3
Aerial Map

AEP OHIO
 An AEP Company

Vassell - Green Chapel 345 kV
 Transmission Line Project

0 250 500 750
 Feet

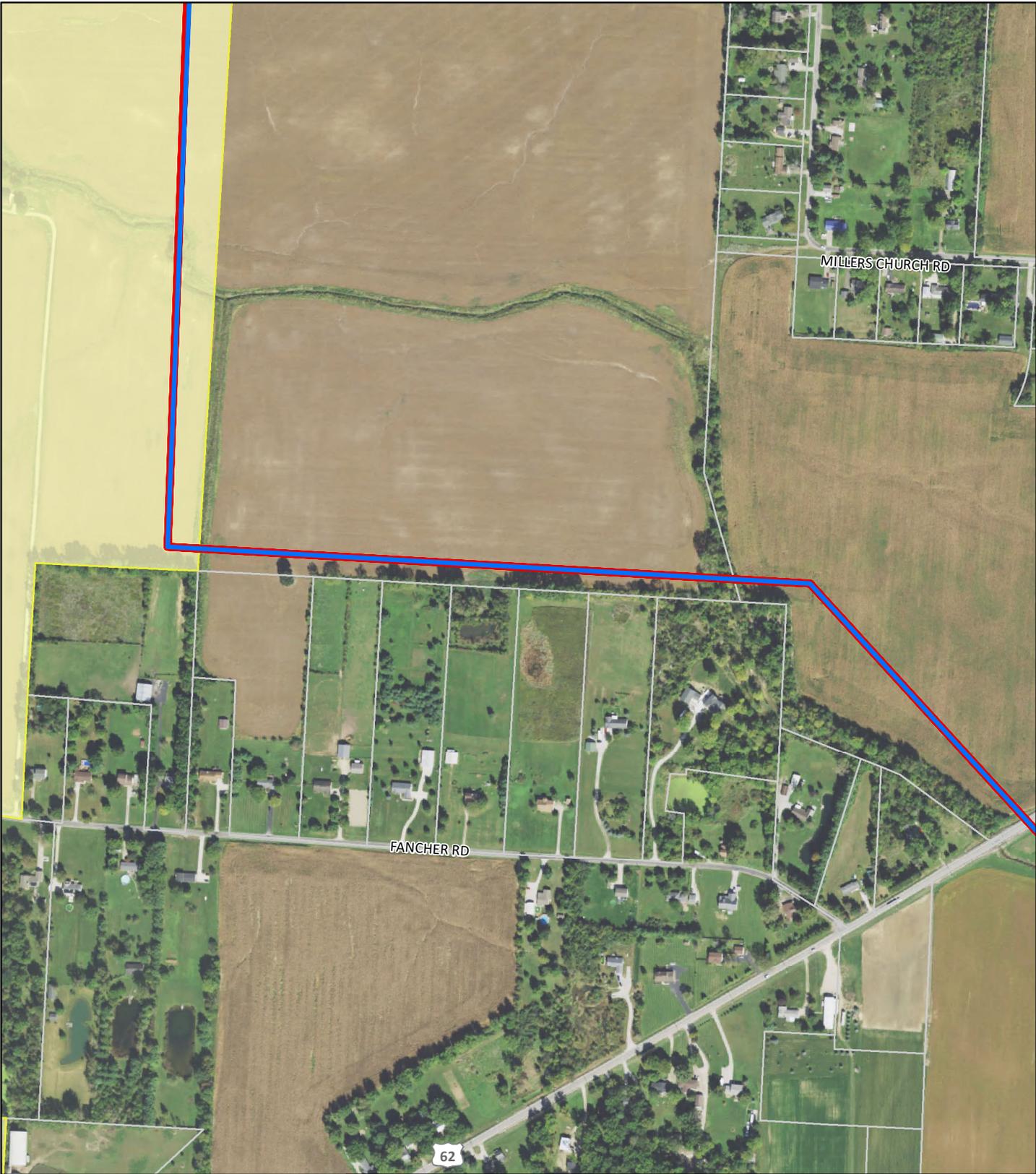


Proposed Vassell - Green
 Chapel 345 kV Transmission
 Line
 Vassell - Green Chapel
 345kV Transmission Line
 (filed on 1/19/24)
 Agricultural District Parcel
 Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)
 Page 15 of 18
 StatePlane
 Ohio South
 NAD 83
 March 14, 2024



Map 3
Aerial Map
 Vassell - Green Chapel 345 kV
 Transmission Line Project
 0 250 500 750
 Feet



Proposed Vassell - Green
 — Chapel 345 kV Transmission Line
 — Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
 Agricultural District Parcel
 Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)

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StatePlane
 Ohio South
 NAD 83

March 14, 2024

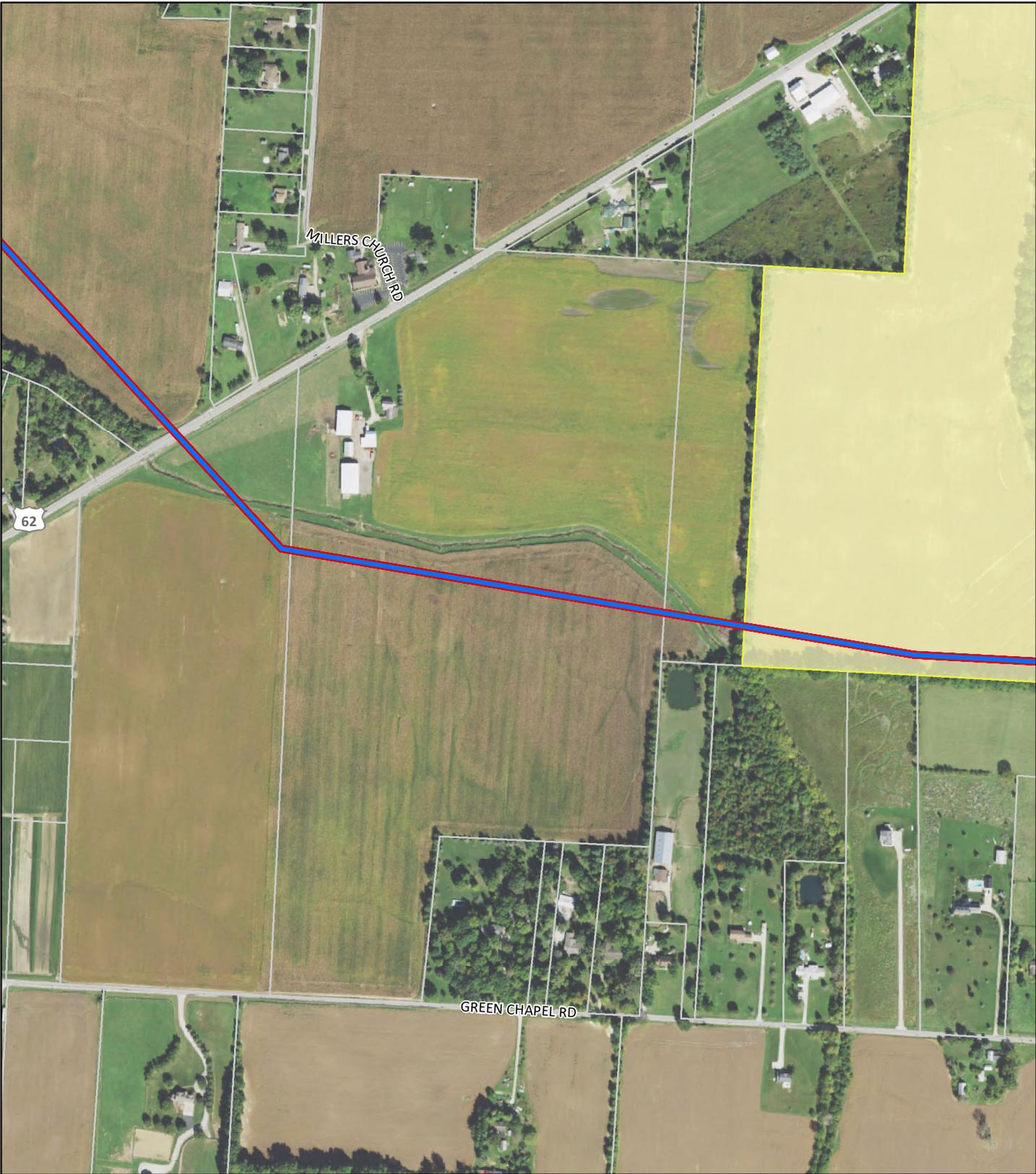


Map 3
Aerial Map

AEP OHIO
 An AEP Company

Vassell - Green Chapel 345 kV
 Transmission Line Project

0 250 500 750
 Feet



Proposed Vassell - Green
 Chapel 345 kV Transmission
 Line
 Vassell - Green Chapel
 345kV Transmission Line
 (filed on 1/19/24)
 Agricultural District Parcel
 Parcel Boundary

Sources:
 NAIP Imagery (USDA 2022)
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 StatePlane
 Ohio South
 NAD 83
 March 14, 2024

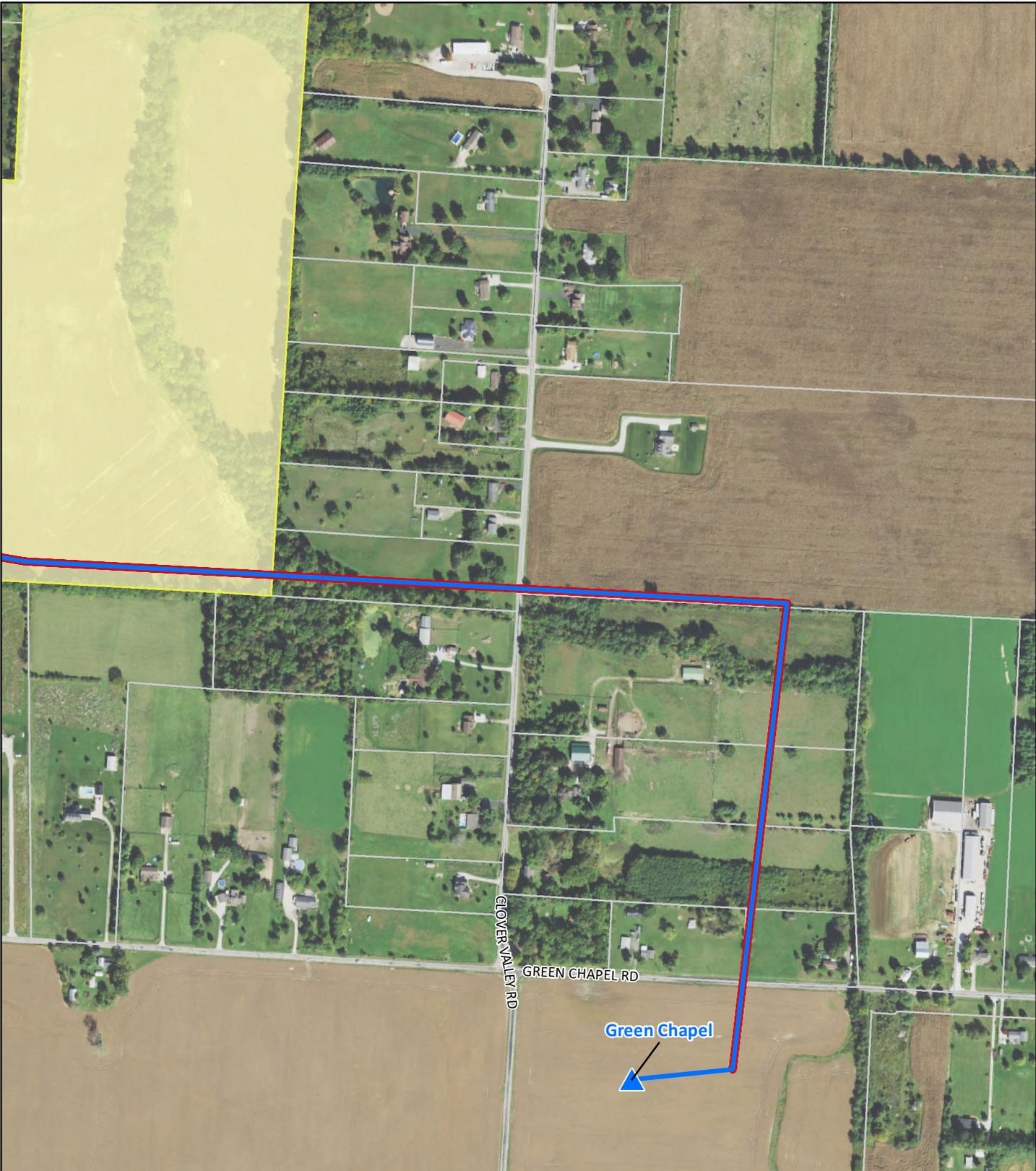


Map 3
Aerial Map

**Vassell - Green Chapel 345 kV
 Transmission Line Project**

AEP OHIO
 An AEP Company

0 250 500 750
 Feet



- ▲ Proposed AEP Substation
- Proposed Vassell - Green Chapel 345 kV Transmission Line
- Vassell - Green Chapel 345kV Transmission Line (filed on 1/19/24)
- Agricultural District Parcel
- Parcel Boundary

Sources:
NAIP Imagery (USDA 2022)

Page 18 of 18

StatePlane
Ohio South
NAD 83

March 14, 2024



Map 3
Aerial Map



An AEP Company

**Vassell - Green Chapel 345 kV
Transmission Line Project**



0 250 500 750
Feet

Appendix C Property Agreements and Form Easement

Property Parcel Number	Agreement Type	Easement or Option Obtained (Yes/No)
052-172590-00.000	New Easement	No
052-172614-00.000	New Easement	No
052-172668-00.000	New Easement	No
052-173712-00.000	New Easement	Yes
052-172740-00.000	New Easement	Yes
052-173490-00.007	New Easement	Yes
052-172752-00.000	New Easement	Yes
052-172752-00.001	New Easement	Yes
052-172890-00.000	New Easement	Yes
052-172890-00.001	New Easement	Yes
052-173094-01.000	New Easement	No
052-173094-03.000	New Easement	No
052-173616-00.000	New Easement	No
052-173658-00.000	New Easement	Yes No
052-173664-00.000	New Easement	Yes No
052-173706-00.000	New Easement	Yes
052-173844-00.000	New Easement	No
052-174000-00.000	New Easement	Yes
052-174156-00.000	New Easement	No
052-174156-00.009	New Easement	No
052-174834-00.000	New Easement	Yes
052-175698-00.000	New Easement	Yes
052-175806-00.000	New Easement	No
316-110-02-014-000	New Easement	Yes
316-110-02-015-002	New Easement	No
316-110-02-017-003	New Easement	No
316-110-02-017-007	New Easement	No
316-110-02-021-000	New Easement	No
316-110-02-022-000	New Easement	No
316-110-03-001-000	New Easement	No
316-110-03-003-000	New Easement	No
316-120-01-001-000	New Easement	No
316-120-01-002-000	New Easement	No
316-120-01-003-000	New Easement	No
316-120-01-003-001	New Easement	No
316-120-01-033-003	New Easement	No
316-140-01-001-000	New Easement	Yes
316-140-01-008-000	New Easement	No
316-140-01-010-001	New Easement	Yes

Property Parcel Number	Agreement Type	Easement or Option Obtained (Yes/No)
316-140-01-010-015	New Easement	Yes
316-140-01-049-000	New Easement	No
316-140-01-051-000	New Easement	No
316-140-01-054-000	New Easement	No
416-320-01-006-000	New Easement	Yes No
416-330-01-001-000	New Easement	Yes No
416-330-01-009-000	New Easement	Yes
416-330-01-011-000	New Easement	No Yes
416-330-01-012-000	New Easement	Yes
416-330-01-013-000	New Easement	Yes
416-340-01-024-000	New Easement	No
416-340-01-025-000	New Easement	No
416-340-01-026-000	New Easement	No
416-340-01-029-000	New Easement	No
416-340-01-030-001	New Easement	No
416-340-01-039-000	New Easement	No
416-340-01-040-000	New Easement	Yes No
416-340-01-043-000	New Easement	Yes No
416-340-01-048-000	New Easement	No
416-340-01-067-000	New Easement	No
416-340-01-070-005	New Easement	No
416-430-01-030-000	New Easement	Yes
416-430-01-031-000	New Easement	Yes
416-430-01-062-000	New Easement	No
416-430-01-066-000	New Easement	Yes
416-430-01-067-000	New Easement	No Yes
416-430-01-068-000	New Easement	No
416-430-01-069-001	New Easement	No

Line Name: Vassell - Green Chapel

Line No.: TLN380:OH422

Easement No.:

EASEMENT AND RIGHT OF WAY

On this _____ day of _____, 202__, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and the covenants hereinafter set forth, [landowner name and marital status], whose address is _____ (“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, 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 _____, and Township of _____ and being a part of [abbreviated legal description] (“Grantor’s Property”).

Contingent provision: [Spouse of Grantor, if any] join herein for the purpose of releasing all dower rights in regard to the Easement.

Grantor claims title by [name of vesting instrument] dated _____ from [name of first grantor], recorded on _____ at [record volume, page] in the _____ County Recorder’s Office.

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

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, if any, up to twenty (20) feet in any direction, and also shift the location of such 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.

Pursuant to R.C. 163.02, Grantor possesses a right of repurchase pursuant to R.C. 163.211 if AEP decides not to use Grantor's Property for the purpose stated in the appropriation petition and Grantor provides timely notice of a desire to repurchase.

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 hereunto set their hand(s) and seal(s) as of the last date set forth below.

GRANTOR

SIGNATURE BLOCK FOR A BUSINESS ENTITY / TRUST:

[name of entity/trust & 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 _____, 202__ by _____, the _____ [title] _____ of _____ [name of entity/trust] _____, a/an _____ [state of incorporation and type of entity/trust] _____, on behalf of _____ [name of entity/trust] _____.

Notary

SIGNATURE BLOCK FOR AN INDIVIDUAL:

[Typed name of individual]

State of Ohio §

§ SS:

County of _____ §

This instrument was acknowledged before me on this _____ day of _____, 202__ 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.

Appendix E Agency Coordination



In reply, refer to
2023-DEL-59893

March 11, 2024

Ryan Weller
Weller & Associates, Inc.
1395 W. Fifth Ave.
Columbus, OH 43212
rweller@wellercrm.com

RE: Vassell-Green Chapel 345kV North Transmission Line Greenfield Project, Delaware and Licking Counties, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received February 19, 2024, regarding the proposed Vassell-Green Chapel 345kV North Transmission Line Greenfield Transmission Line Greenfield Project, Delaware and Licking Counties, 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 4906-4 & 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 letter report titled *Addendum Cultural Resource Management Investigations for the Vassell-Green Chapel North 345kV Greenfield Transmission Line Project in Delaware and Licking Counties, Ohio* by Ryan J. Weller (Weller & Associates, Inc. 2024). This project involved the investigation of several areas associated with reroutes for a proposed transmission line.

A literature review, visual inspection, shovel test unit excavation, and surface collection were completed as part of the investigations. Portions of the addendum project area had been previously investigated for cultural resources. Three (3) archaeological sites, Ohio Archaeological Inventory (OAI) #33DL3693, #33DL3694, and #33LI3631 were identified within the addendum project during survey. These sites were not recommended as eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with this recommendation and no additional archaeological survey is needed. There were no additional architectural resources 50 years of age or older identified within the Area of Potential Effects (APE) of the addendum project during survey.

Based on the information provided, we continue to agree the project, as proposed, will have no adverse effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional cultural resources are discovered during the implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me by e-mail 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
Resource Protection and Review
State Historic Preservation Office

RPR Serial No: 1101917



Ohio Department of Natural Resources

MIKE DeWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate
Tara Paciorek, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6661
Fax: (614) 267-4764

October 13, 2023

Anna Findish
AECOM
707 Grant Street
Pittsburgh, Pennsylvania 15219

Re: 23-1066; AEP Vassell - Green Chapel North Enhancement

Project: The proposed project involves the implementation of improvements between the existing Vassell Station and a proposed station (approximately 12.4 miles).

Location: The proposed project is located in Berkshire, Trenton, and Harlem townships, Delaware County, and Monroe and Jersey townships, Licking County, Ohio.

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

Natural Heritage Database: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project area. Records searched date from 1980.

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

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

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

The portion of the project south of Duncan Plains Road is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species. Because presence of state endangered bat species has been established in this 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 endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. 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. However, if trees are present within this area, (outside of the area delineated above) and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "[OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING](#)". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW.

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.

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

Federally Endangered

rayed bean (*Villosa fabalis*)

snuffbox (*Epioblasma triquetra*)

Federally Threatened

rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Threatened

Salamander Mussel (*Simpsonaias ambigua*)

pondhorn (*Unio merus tetralasmus*)

This project must not have an impact on native mussels. This applies to both listed and non-listed species, as all species of mussel are protected in Ohio. Per the Ohio Mussel Survey Protocol (2022), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide

information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the [Ohio Mussel Survey Protocol](#). If there is no in-water work proposed, impacts to mussels are not likely.

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 aquatic species.

The project is within the range of the northern harrier (*Circus hudsonius*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

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

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

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

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew 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



September 11, 2023

Project Code: 2023-0125820

Dear Anna Findish:

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

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

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

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

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

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

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

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

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

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

Sincerely,

A handwritten signature in blue ink that reads "Scott Hicks". The signature is written in a cursive style.

Scott Hicks
Acting Field Office Supervisor

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

Appendix F Wetland Delineation Report

VASSELL – GREEN CHAPEL NORTH PROJECT

DELAWARE AND LICKING COUNTY, OHIO

ADDENDUM #1 ECOLOGICAL REPORT

Prepared for:

American Electric Power Ohio Transmission Company
8600 Smiths Mill Road
New Albany, Ohio 43054



Prepared by:

AECOM

525 Vine Street, Suite 1900
Cincinnati, Ohio 45202

Project #: 60702685

February 2024

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APPENDIX A	Wetland Data Form and Photographic Record
APPENDIX B	Habitat Photographic Record
APPENDIX C	December 2023 – Original Report and Addendum #1 Comparison Map

1.0 INTRODUCTION

American Electric Power, Ohio Transmission Company (AEP Ohio Transco) is proposing improvements between the existing Vassell Station and a proposed station as part of the Vassell-Green Chapel North Project, (Project) which was covered in the December 2023 – Original Ecological Report (AECOM, 2023). Since the December 2023 – Original Ecological Report, the Addendum #1 Ecological Report was completed to capture the following adjustments:

- Properties that were denied access for survey as noted in the December 2023 – Original Ecological Report);
- Reduced environmental disturbances to wetlands by shifting the previously named Structures (22, 40, 50, and 58) outside of wetland complexes (W-MRK-001, W-MRK-013, W-MRK-030, and W-MRK-035); and
- Route adjustments to address landowner concerns between Structure 51 to 53, Structures 38 to 40, and Structures 12 to 24.

For visual representation of these changes, a summary figure has been provided within **Appendix C** that displays the original and revised routes, structures, as well as survey areas associated with the December 2023 – Original Ecological Report and this Addendum #1 Ecological Report. Due to the proposed route adjustments, the portions of the survey areas excluded due to landowner permissions for survey from the December 2023 – Original Ecological Report were only included within this Addendum #1 Ecological Report for only the portions of the survey areas that overlap the 300-foot-wide survey area associated with the current proposed alignment. Therefore, this Addendum #1 Ecological Report specifies any features identified within 45.46 acres of additional review areas identified as Addendum #1 Project Survey Area in Delaware and Licking Counties, Ohio (OH). The Addendum #1 Project Survey Area associated with this Addendum #1 Ecological Report is located within Jersey, Johnstown, and Sunbury, OH United States Geological Survey (USGS) 7.5-minute topographical quadrangles as displayed on the Project Overview (**Figure 1**).

The purpose of the field survey was to assess the presence of wetlands and possible “waters of the United States” (WOTUS) that occur within the proposed Project survey area. Secondary, land uses were also recorded to classify and characterize potential habitat for threatened and endangered species. This report will be used to assist AEP Ohio Transco’s efforts to identify potential WOTUS as well as threatened and endangered species habitat present within the proposed Project survey area to avoid or minimize impacts during construction activities.

2.0 METHODOLOGY

A comprehensive methodology of the field surveys and data reviews are included within the December 2023 - Original Ecological Report and a brief summary of the delineation and agency coordination

methodology has been provided below. The field survey was completed for Addendum #1 Project Survey Area centered along areas previously listed as “no access”, for a 300-foot corridor along the proposed transmission line centerline. The Addendum #1 Project Survey Area is approximately 45.46 acres. Prior to conducting field surveys, digital United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data, USGS National Hydrography Dataset (NHD), FEMA 100-year floodplain data (FEMA), and USGS 7.5-minute topographic maps were reviewed as an exercise to identify the occurrence and location of potential wetland areas.

Field survey activities included recording the physical boundaries of observed water features using submeter capable EOS Arrow Global Positioning System (GPS) units in conjunction with ArcGIS Field Maps application on iPad tablets. The GPS data was imported into ArcMap Geographic Information System (GIS) software, where the data was reviewed, edited for accuracy, and compiled in a format suitable for transfer and use by AEP Ohio Transco. Water features were delineated and assessed based upon the appropriate procedures detailed below. Land uses observed within the Project survey area were assigned a general classification based upon the principal land characteristics and vegetation cover of the location.

3.0 RESULTS

On January 25, 26, 30, and 31, 2024, AECOM ecologists walked the Addendum #1 Project Survey Area to conduct the site assessment. Within the Addendum #1 Project Survey Area, two PFO wetlands (W-MRK-030 and W-MRK-016) and one stream (W-MRK-005) were extended, which portions of these wetlands were previously delineated as part of the original survey. Previously recorded data forms and photographs of delineated AECOM wetlands, streams, ponds, and upland drainage features within the vicinity of the Project survey area are contained within the December 2023 - Original Ecological Report (AECOM, 2023).

3.1 WETLAND DELINEATION

3.1.1 PRELIMINARY SOILS EVALUATION

According to the USDA/NRCS Web Soil Survey, Delaware and Licking Counties have a total of five soil map units identified within the Addendum #1 Project Survey Area for both counties (USDA NRCS, 2021). These soil map units are:

- Bennington silt loam, 0 to 2 percent slopes (BeA)
- Bennington silt loam, 2 to 6 percent slopes (BeB)
- Centerburg silt loam, 2 to 6 percent slopes (Cen1B1)
- Centerburg silt loam, 6 to 12 percent slopes, eroded (Cen1C2)
- Pewamo silty clay loam, 0 to 1 percent slopes (PwA)

Of these, all five soil map units were previously described in the December 2023 - Original Ecological Report and characteristics of hydric conditions was previously provided within this report. Soil Map units located in the Addendum #1 Project Survey Area and vicinity are shown in **Figure 2**.

3.1.2 NATIONAL WETLANDS INVENTORY MAP REVIEW

According to NWI data covering the Project location, the Addendum #1 Project Survey Area contains four previously verified NWI mapped wetlands that were included within the December 2023 – Original Ecological Report. These NWI Mapped wetlands include three palustrine forested, broad-leaved deciduous, seasonally flooded (PFO1C) as W-MRK-013, W-MRK-030, and W-MRK-005. Additionally, the one palustrine emergent, persistent, seasonally flooded (PEM1C) NWI mapped wetland was field verified as W-MRK-016. Of these wetlands, only W-MRK-030 and W-MRK-016 were extended within the NWI mapped wetland areas and the other two wetlands were field verified within the Addendum #1 Project Survey Area as upland. The locations of the NWI mapped wetlands in the Project vicinity are shown on **Figure 2**.

3.1.3 DELINEATED WETLANDS

During the field survey, no new wetlands were delineated within the Addendum #1 Project Survey Area. A total of one wetland that was included within the December 2023 – Original Ecological Report was extended within the Addendum #1 Project Survey Area. The boundaries for the adjusted, and/or previous delineated wetland boundaries are displayed on **Figure 3**. Text that is highlighted in yellow indicates a change from the December 2023 – Original Ecological Report.

AECOM has given all wetlands within the Addendum #1 Project Survey Area a provisional determination of non-isolated. Final jurisdictional status can only be determined by the USACE, and AECOM assessments are provisional. Details for previous and new delineated wetlands within the Project area are provided in **Table 3**, with changes to previous features or new features highlighted as “yellow”. The revised data forms and photographs for the extended features within the Addendum #1 Project Survey Area are provided in **Appendix A**. Previous data forms and photographs of other features within the Original Project Survey Area are contained within the December 2023 – Original Ecological Report.

TABLE 1: SUMMARY OF DELINEATED WETLANDS WITHIN THE ADDENDUM #1 PROJECT SURVEY AREA

Wetland ID	Location		Isolated?	Habitat Type	Delineated Area (acre)	ORAM		Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland	Proposed Structure # in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (acre)	Permanent Impact Area (acre)
W-CRW-001	40.224988	-82.850404	Yes	PEM	0.210	29	1	63	None	None	TBD	TBD	TBD
W-MRK-001	40.222487	-82.826070	No	PEM	0.356	39	2	58	None	None	TBD	TBD	TBD
	40.222258	-82.827372		PFO	3.988				None	None	TBD	TBD	TBD
W-MRK-002	40.222414	-82.824598	No	PEM	0.226	39	2	57	None	None	TBD	TBD	TBD
	40.222070	-82.824641		PFO	0.551				None	None	TBD	TBD	TBD
W-MRK-004	40.148161	-82.748641	Yes	PFO	0.367	35	2	17	None	None	TBD	TBD	TBD
W-MRK-005	40.147472	-82.748273	Yes	PFO	0.034	35	2	17	None	None	TBD	TBD	TBD
W-MRK-006	40.128403	-82.725013	No	PEM	0.016	23	1	5	None	None	TBD	TBD	TBD
W-MRK-007	40.128079	-82.725113	No	PFO	0.516	35.5	2	5	None	None	TBD	TBD	TBD
W-MRK-011	40.187063	-82.776704	Yes	PEM	0.422	12	1	36	None	None	TBD	TBD	TBD
W-MRK-012	40.215830	-82.813053	Yes	PFO	0.540	26	1	52	None	None	TBD	TBD	TBD
W-MRK-013	40.214477	-82.813157	Yes	PFO	3.490	26	1	52	None	None	TBD	TBD	TBD
W-MRK-014	40.213258	-82.812144	Yes	PFO	0.261	26	1	51	None	None	TBD	TBD	TBD
W-MRK-016	40.132913	-82.744998	Yes	PEM	0.285	19	1	11	None	None	TBD	TBD	TBD
	40.132786	-82.745138		PFO	0.266				None	None	TBD	TBD	TBD
W-MRK-017	40.140132	-82.749653	Yes	PFO	0.150	35	2	15	None	None	TBD	TBD	TBD
W-MRK-020	40.221870	-82.818920	Yes	PSS	1.120	31	2	55	None	None	TBD	TBD	TBD
	40.224070	-82.846010		PFO	0.737				None	None	TBD	TBD	TBD
W-MRK-022	40.128340	-82.731160	No	PEM	0.679	15	1	62	None	None	TBD	TBD	TBD
W-MRK-030	40.192450	-82.781720	Yes	PEM	0.434	45	2	22	None	None	TBD	TBD	TBD
	40.163095	-82.747505		PFO	7.05				None	None	TBD	TBD	TBD
W-MRK-034	40.187063	-82.776704	No	PEM	0.06	14	1	7	None	None	TBD	TBD	TBD
W-MRK-035	40.215830	-82.813053	No	PFO	0.266	30	2	40	None	None	TBD	TBD	TBD
P-MRK-003	40.124774	-82.719418	No	N/A	0.129	N/A	N/A	2	None	None	TBD	TBD	TBD
P-MRK-004	40.127664	-82.723867	No	N/A	0.339	N/A	N/A	5	None	None	TBD	TBD	TBD
Total:					22.492							TBD	TBD

Note: Attributes highlighted as “Yellow” within the table above illustrate the changes since the December 2023 – Original Report. The changes identified are associated with extension of previously identified resources, shift of structures, and no new wetlands were identified.

3.2 STREAM DELINATION

During the field survey, no new streams were delineated within the Addendum #1 Project Survey Area. However, one stream (S-MRK-005) was extended within the Addendum #1 Project Survey Area that was originally included within in the December 2023 – Original Ecological Report. The previously delineated and extended streams are provided on **Figure 3**. Based on the extension of the one stream, no revisions to the previously completed HHEI form was necessary. As a result, no additional data forms and/or photographs are provided within this Addendum #1 Ecological Report. Previous photographs and data forms are enclosed within the December 2023 – Original Ecological Report.

AECOM has provided a provisional determination that all delineated streams within the Project survey area appear to be jurisdictional (i.e., WOTUS), based on their observed or presumed confluence with downstream waters. Final jurisdictional status can only be determined by the USACE, and AECOM assessments are provisional. A summary of the delineated features for the entire Project both Original and Addendum #1 Project Survey area are provided in **Table 4**, with extended or adjusted features highlighted as “yellow”.

TABLE 2: SUMMARY OF DELINEATED STREAMS WITHIN THE ADDENDUM #1 PROJECT SURVEY AREA

Stream ID	Location		Stream Type	Stream Name	Delineated Length (feet)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation			Ohio EPA 401 Eligibility	Stream Crossing ?	Proposed Impacts	
	Latitude	Longitude						Method	Score	Category / Rating / OAC Designation			Fill Type	Area (acre)
S-CRW-001	40.22706	-82.85052	Intermittent	UNT to Big Walnut Creek	409	2.5	11	HHEI	75	Class III PHW	Eligible	TBD	TBD	TBD
S-MRK-001	40.22222	-82.82706	Ephemeral	UNT to Big Walnut Creek	218	2.5	1.75	HHEI	13	Class I PHW	Eligible	TBD	TBD	TBD
S-MRK-002	40.20528	-82.78772	Intermittent	UNT to Hoover Reservoir	1,865	6	2.5	HHEI	40	Class II PHW	Eligible	TBD	TBD	TBD
S-MRK-005	40.15297	-82.74773	Perennial	UNT to Duncan Run	1,076	16	9	QHEI	40	Poor	Eligible	TBD	TBD	TBD
S-MRK-006	40.12718	-82.71824	Intermittent	Kiber Run	469	8	3	CH 3745-1	N/A	Warmwater Habitat	Eligible	TBD	TBD	TBD
S-MRK-007	40.12840	-82.72470	Perennial	Kiber Run	1,327	10	6.5	CH 3745-1	N/A	Warmwater Habitat	Eligible	TBD	TBD	TBD
S-MRK-008	40.12808	-82.72432	Intermittent	UNT to Kiber Run	170	10	6.5	HHEI	37	Class II PHW	Eligible	TBD	TBD	TBD
S-MRK-009-x1	40.13005	-82.737656	Perennial	Duncan Run	1,200	6	11	CH 3745-1	N/A	Warmwater Habitat	Eligible	TBD	TBD	TBD
S-MRK-009-x2	40.128761	-82.731214	Perennial	Duncan Run	1,437	6	11	CH 3745-1	N/A	Warmwater Habitat	Eligible	TBD	TBD	TBD
S-MRK-015	40.20369	-82.77273	Perennial	Duncan Run	409	3.5	2	CH 3745-1	N/A	Warmwater Habitat	Eligible	TBD	TBD	TBD
S-MRK-016	40.13277	-82.74191	Ephemeral	UNT to Duncan Run	74	2	1	HHEI	10	Modified Class I	Eligible	TBD	TBD	TBD
S-MRK-017	40.13478	-82.74848	Intermittent	UNT to Duncan Run	1,395	2	1	HHEI	50	Modified Class II	Eligible	TBD	TBD	TBD
S-MRK-018	40.13621	-82.74888	Perennial	Duncan Run	841	15	6	CH 3745-1	N/A	Warmwater Habitat	Eligible	TBD	TBD	TBD
S-MRK-023	40.22408	-82.84764	Perennial	UNT to Big Walnut Creek	443	6	6	HHEI	55	Class III PHW	Eligible	TBD	TBD	TBD
Total:					11,333									TBD

Note: Attributes highlighted as “Yellow” within the table above illustrate the changes since the December 2023 – Original Report. The changes identified are associated with extension of previously identified resources and no new streams were identified.

3.2.1 OEPA STREAM ELIGIBILITY

OEPA stream eligibility for 401 Water Quality Certification mapping was reviewed for the Addendum #1 Project Survey Area. The Addendum #1 Project Survey Area crosses two OEPA stream eligibility watersheds which were included in the December 2023 - Original Ecological Report, those two watersheds are:

- Hoover Reservoir – Big Walnut Creek, 050600011308 (Eligible)
- Duncan Run, 050600011307 (Eligible)

Please refer to the original report for detailed information regarding the stream eligibility (AECOM, 2023). Updated OEPA stream eligibility mapping for the Project vicinity is provided on **Figure 2**.

3.3 FEMA 100 YEAR FLOODPLAINS

Mapped FEMA designated 100-year floodplains and floodways are displayed on **Figure 2**. Regulated FEMA 100-year floodplains are located within the Addendum #1 Project Survey Area, but no FEMA regulated floodways are located within the Project survey area (FEMA, 2007). The mapped 100-year floodplain within the Addendum #1 Project Survey Area is located between Structures 10 and 11 as displayed on **Figure 2**.

3.4 PONDS

No ponds were identified within the Addendum #1 Project Survey Area.

3.5 UPLAND DRAINAGE FEATURES

No upland drainage features were identified within the Addendum #1 Project Survey Area.

3.6 VEGETATIVE COMMUNITIES

AECOM ecologists conducted a general habitat survey in conjunction with the stream and wetland field surveys. The habitat types observed within the Addendum #1 Project Survey Area includes Agricultural Row-Crop, Woodland, Pasture/Hay Fields, Wetlands/Streams/Ponds, Urban, Landscaped, and Scrub-Shrub Habitat. Vegetative communities are depicted visually on aerial photography in **Figure 5**. Representative photographs of the vegetative communities in the Project survey area are provided as **Appendix B**.

TABLE 5 - VEGETATIVE COMMUNITIES WITHIN THE ADDENDUM #1 SURVEY AREA

Vegetative Community	Description	Approximate Acreage Within the Addendum #1 Project Survey Area	Approximate Percentage Within the Addendum #1 Project Survey Area
Agriculture Row-Crop	Agricultural lands being utilized for row-crop production and associated activities, typically devoid of vegetation outside of the target crop and opportunistic/invasive species.	36.84	81.02
Landscaped Areas	Landscaped areas, including residential properties and commercial properties, were observed within the Project vicinity. These landscaped areas within the Project survey area and adjacent areas are frequently mowed grasses and forbs.	0.23	0.51
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey area of the Project in the form of successional old-field communities. These communities are the earliest stages of recolonization by plants following disturbance. This community type is typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed, in which case they remain as old fields. The old-field areas within the study corridors and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs.	0.01	0.02
Pasture/Hay Fields	Cattle and/or horse pasture, and hay fields, dominated by seasonally mowed and grazed areas of grasses and forbs.	0.53	1.17
Scrub-Shrub	Scrub-shrub habitats represent the successional stage between old-field and second growth forest, and often emerge in recently harvested forests responding to the lightness of the remaining canopy. Dominant species consist of herbaceous communities similar to that of old field habitat with 30% or greater coverage of woody species that are not trees (including sapling trees generally <3" dbh and <20' in height).	0.37	0.81
Urban	Urban areas are areas developed with residential and commercial land uses, including roads, buildings and parking lots. These areas are generally devoid of significant woody and herbaceous vegetation.	0.60	1.32
Wetlands/Streams/Ponds	Streams and wetlands were observed both within and beyond the survey area for the Project.	3.35	7.37
Woodland (Mixed-Deciduous)	Woodlands (floodplain, upland, successional-mixed, etc) are present along the Project survey area. Woody species dominating these areas included Box elder (<i>Fraxinus pennsylvanica</i>), and Red maple (<i>Acer rubrum</i>)	3.54	7.79
Totals:		45.47	100%

Note: This table represents the habitat identified within the Addendum #1 Project Survey Area, only. For complete habitats identified within the Project Survey Area, combine the acreage presented within the December 2023 – Original Report with the quantities identified within the table above.

3.7 RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION

Protected Species Agency Consultation –

A species list and overall assessment of the potential for rare, threatened, and endangered species, is provided within the December 2023 - Original Ecological Report. The Addendum #1 Project Survey Area is located within the previously consulted areas in September and October 2023 and no further coordination is necessary.

4.0 SUMMARY

The ecological field survey of the Addendum #1 Project Survey Area was completed to survey areas where property permissions were denied within the December 2023 – Original Report (See Appendix C), incorporates the shift of previously named Structures (22, 40, 50, and 58) outside of wetlands (W-MRK-001, W-MRK-013, W-MRK-030, and W-MRK-035), as well as incorporates new route adjustments as per landowner request between Structures 51 to 53, Structures 38 to 40, and Structures 12 to 24. As a result of the additional review areas, a total of two previously delineated PFO wetlands were extended (W-MRK-016 and W-MRK-030) as well as one perennial stream (S-MRK-005) within the Addendum #1 Project Survey Area.

Of the previously ten state and/or federal listed threatened or endangered species identified within range of the Project area as identified within the December 2023 – Original Report, no habitat for any of the listed aquatic or bird species were identified within the Addendum #1 Project Survey Area. However, the four bat species (Indiana bat – *Myotis sodalists*; Northern long-eared bat - *Myotis septentrionalis*; little brown bat – *Myotis lucifugus*; and tricolored bat – *Perimyotis subflavus*) were identified as having potential summer roosting habitat and no hibernacula within the Project Survey area, which is consistent with the December 2023 – Original Report. If tree clearing cannot be completed during the seasonal tree clearing restriction (October 1 to March 31), further coordination with the ODNR/USFWS is still warranted as part of the Addendum #1 Ecological Report. Therefore, the original assessment regarding threatened and endangered species included within the December 2023 – Original Report is still consistent with the Addendum #1 Ecological Report findings and no further coordination with ODNR and/or USFWS is warranted.

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

5.0 REFERENCES

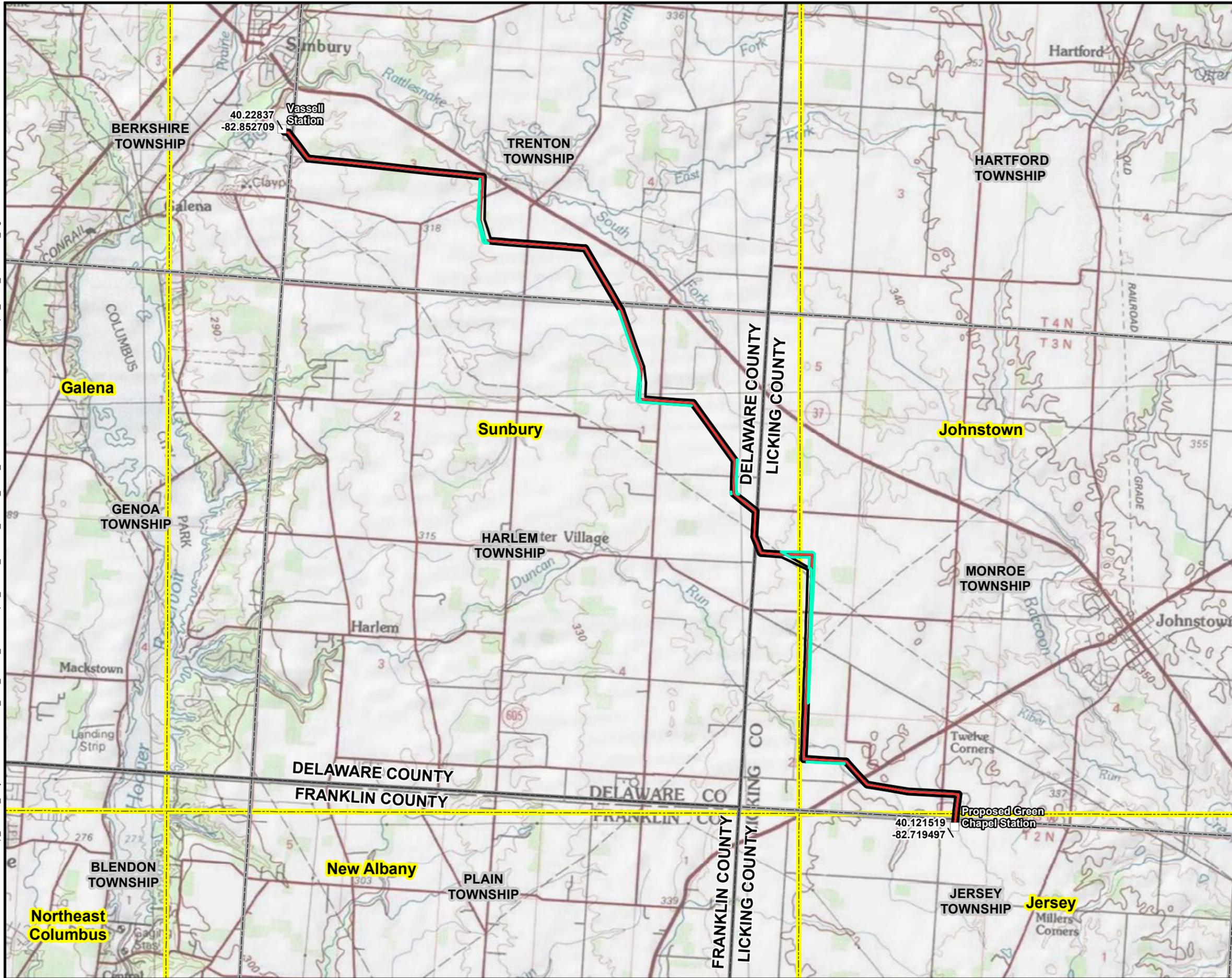
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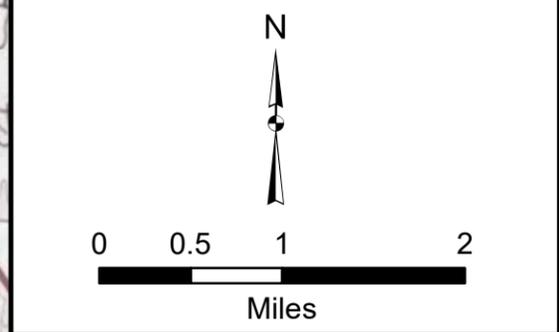
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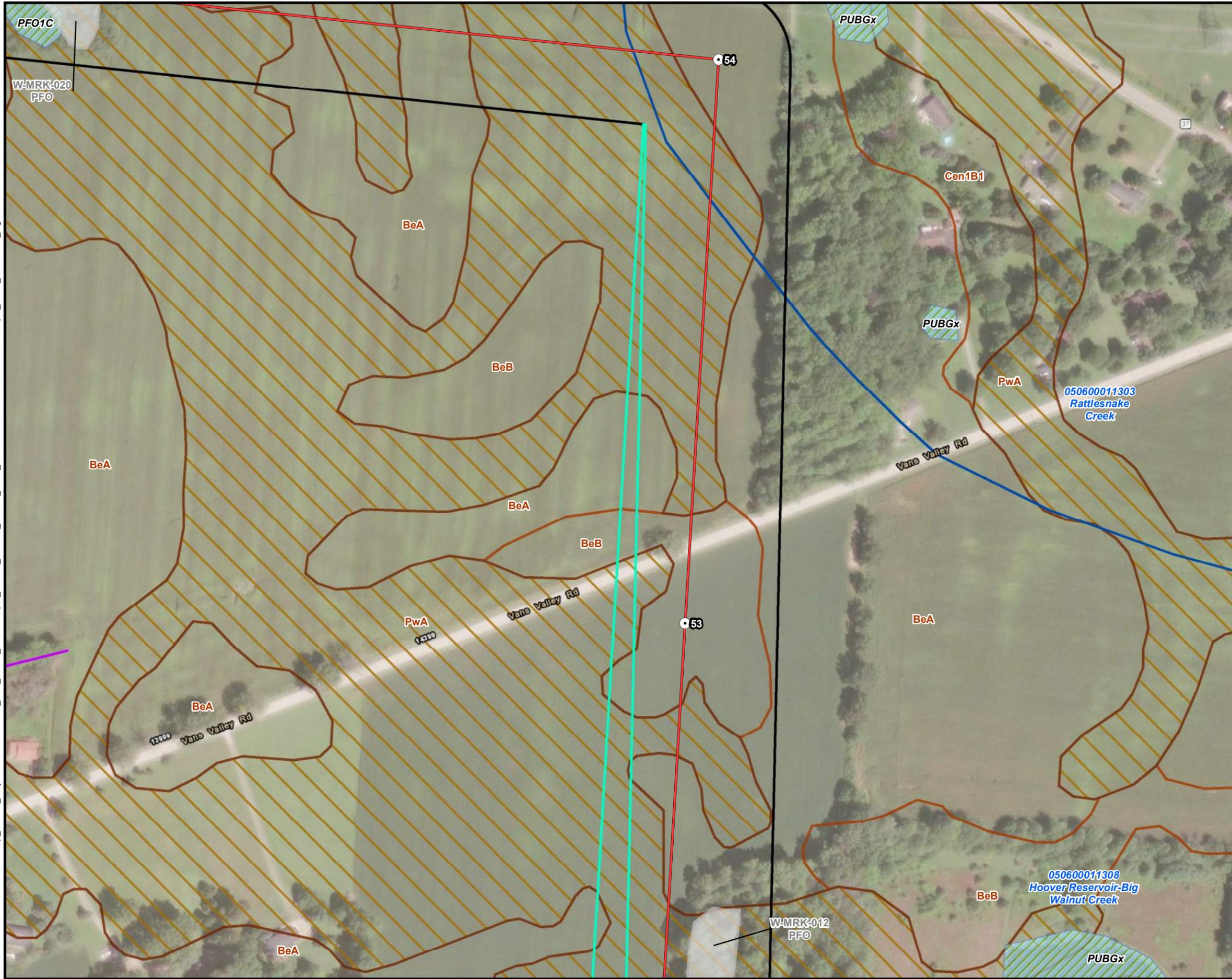
Legend

- Station
- Vassell - Green Chapel North Route
- December 2023 Report - Project Survey Area
- Addendum 1 Project Survey Area
- Ohio USGS 7.5' Topographic Quadrangle
- Township Boundary
- County Boundary



Vassell - Green Chapel North Project Addendum 1

FIGURE 1 PROJECT OVERVIEW	
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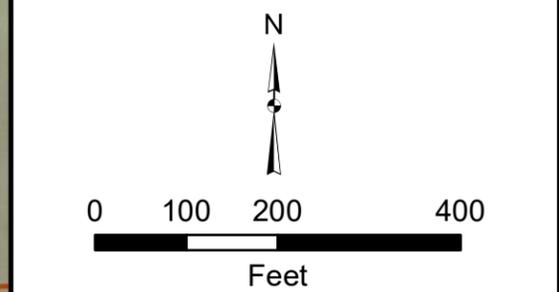
- ### Legend
- Structure
 - Vassell - Green Chapel North Route
 - NHD Stream (USGS)
 - Previously Delineated PFO Wetland
 - Addendum 1 Project Survey Area
 - December 2023 Report - Project Survey Area
 - NWI Wetland (USFWS)
 - HUC 12 (USGS)
 - SSURGO Soil Map Unit (NRCS)
 - Hydric SSURGO Soil Map Unit (NRCS)

Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

BeB - Bennington silt loam, 2 to 6 percent slopes

PwA - Pewamo silty clay loam, 0 to 1 percent slopes



Vassel - Green Chapel North Project Addendum 1

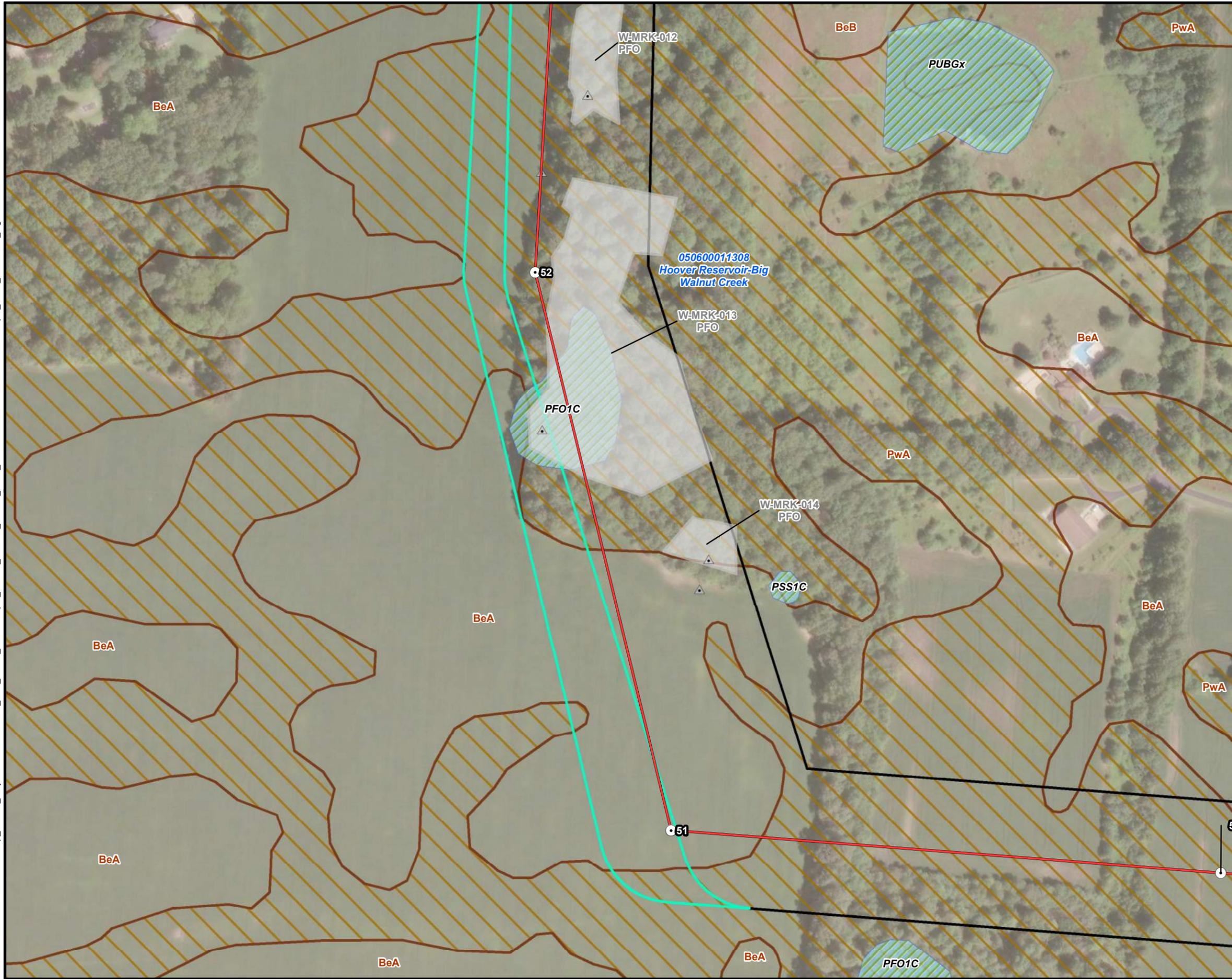
FIGURE 2 SHEET 1 OF 13 SOIL MAP AND NATIONAL WETLANDS INVENTORY MAP	
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Case No. 24-0014-EL-BLN

Notice of Adjustment

Part 2 of 2

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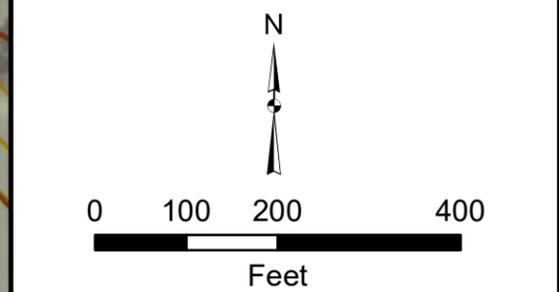


- Legend**
- Structure
 - ▲ Previous Wetland Data Point
 - ▲ Previous Upland Data Point
 - Vassel - Green Chapel North Route
 - ▭ Previously Delineated PFO Wetland
 - ▭ Addendum 1 Project Survey Area
 - ▭ December 2023 Report - Project Survey Area
 - ▨ NW1 Wetland (USFWS)
 - ▭ HUC 12 (USGS)
 - ▭ SSURGO Soil Map Unit (NRCS)
 - ▨ Hydric SSURGO Soil Map Unit (NRCS)

Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

PwA - Pewamo silty clay loam, 0 to 1 percent slopes



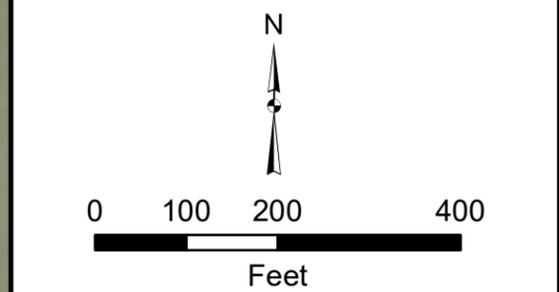
Vassel - Green Chapel North Project Addendum 1

FIGURE 2 SHEET 2 OF 13 SOIL MAP AND NATIONAL WETLANDS INVENTORY MAP	
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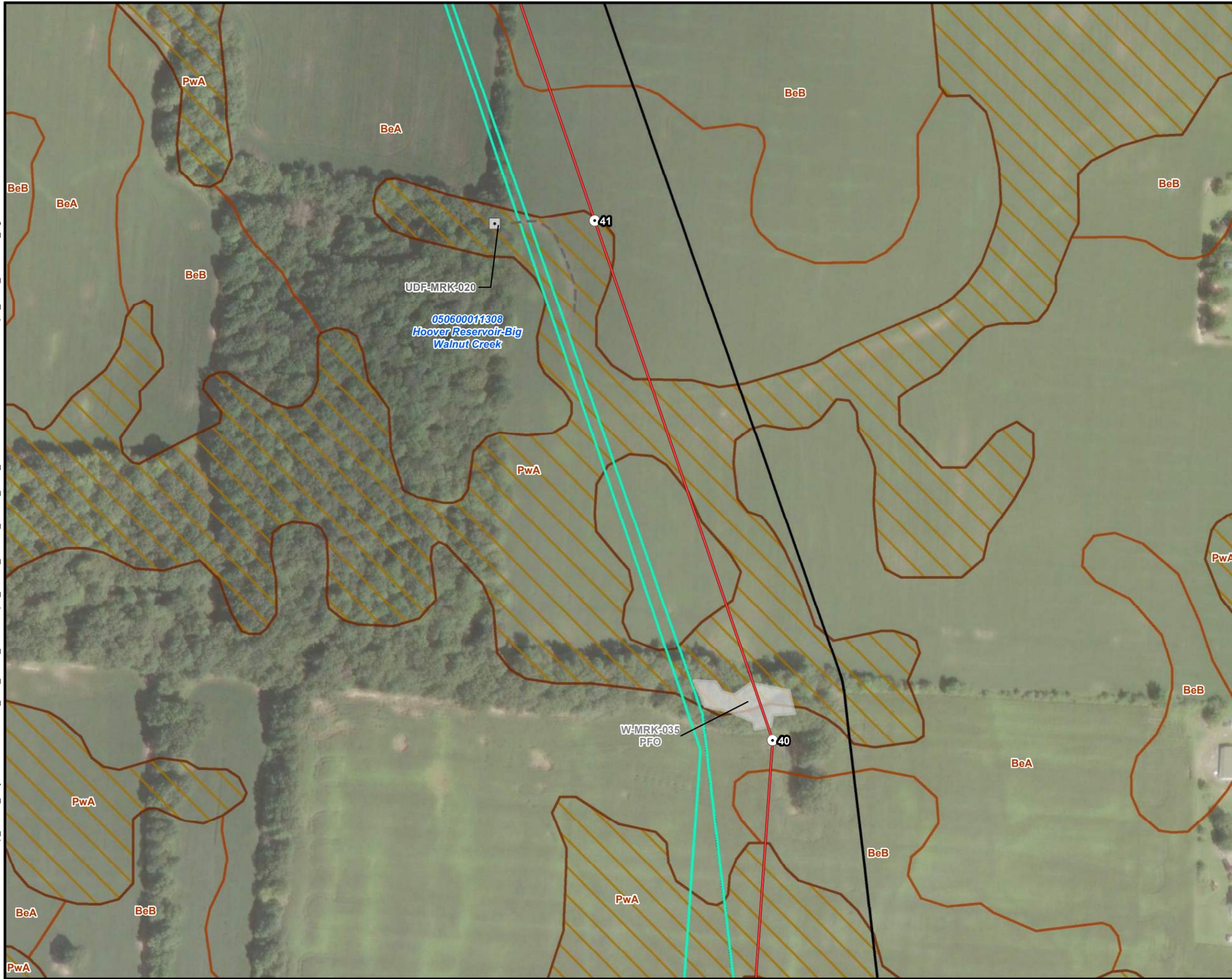
- Legend**
- Structure
 - Vassell - Green Chapel North Route
 - NHD Stream (USGS)
 - ▭ Addendum 1 Project Survey Area
 - ▭ December 2023 Report - Project Survey Area
 - ▭ HUC 12 (USGS)
 - ▭ SSURGO Soil Map Unit (NRCS)
 - ▭ Hydric SSURGO Soil Map Unit (NRCS)
- Soil Map Unit Description**
- BeA - Bennington silt loam, 0 to 2 percent slopes
 - BeB - Bennington silt loam, 2 to 6 percent slopes
 - PwA - Pewamo silty clay loam, 0 to 1 percent slopes



 Vassell - Green Chapel North Project Addendum 1

FIGURE 2 SHEET 3 OF 13 SOIL MAP AND NATIONAL WETLANDS INVENTORY MAP	
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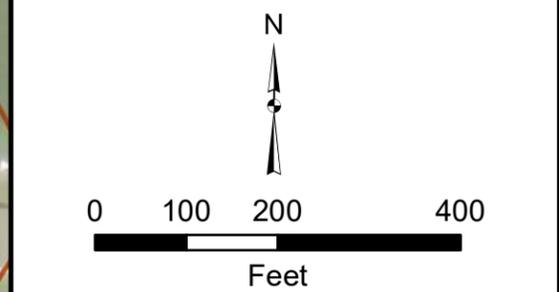
- Legend**
- Structure
 - ◻ Culvert
 - Vassell - Green Chapel North Route
 - - - Previously Delineated Upland Drainage Feature
 - ▭ Previously Delineated PFO Wetland
 - ▭ Addendum 1 Project Survey Area
 - ▭ December 2023 Report - Project Survey Area
 - ▭ HUC 12 (USGS)
 - ▭ SSURGO Soil Map Unit (NRCS)
 - ▭ Hydric SSURGO Soil Map Unit (NRCS)

Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

BeB - Bennington silt loam, 2 to 6 percent slopes

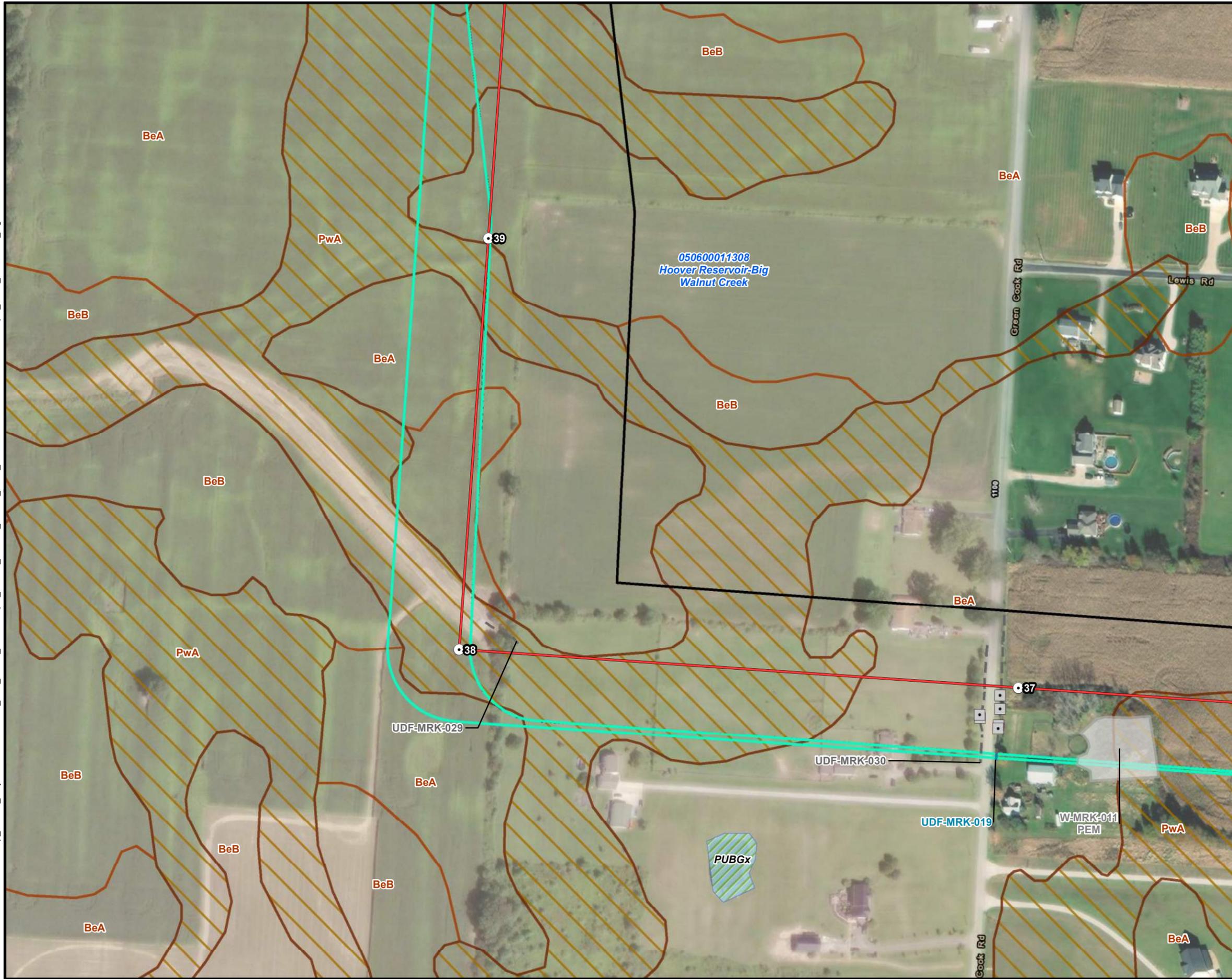
PwA - Pewamo silty clay loam, 0 to 1 percent slopes



Vassel - Green Chapel North Project Addendum 1

FIGURE 2
 SHEET 4 OF 13
 NATIONAL WETLANDS INVENTORY MAP

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Legend

- Structure
- Culvert
- Vassell - Green Chapel North Route
- Upland Drainage Feature
- Previously Delineated Upland Drainage Feature
- ▭ Previously Delineated PEM Wetland
- ▭ Addendum 1 Project Survey Area
- ▭ December 2023 Report - Project Survey Area
- ▨ NWI Wetland (USFWS)
- ▭ HUC 12 (USGS)
- ▭ SSURGO Soil Map Unit (NRCS)
- ▨ Hydric SSURGO Soil Map Unit (NRCS)

Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

BeB - Bennington silt loam, 2 to 6 percent slopes

PwA - Pewamo silty clay loam, 0 to 1 percent slopes

Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

BeB - Bennington silt loam, 2 to 6 percent slopes

PwA - Pewamo silty clay loam, 0 to 1 percent slopes

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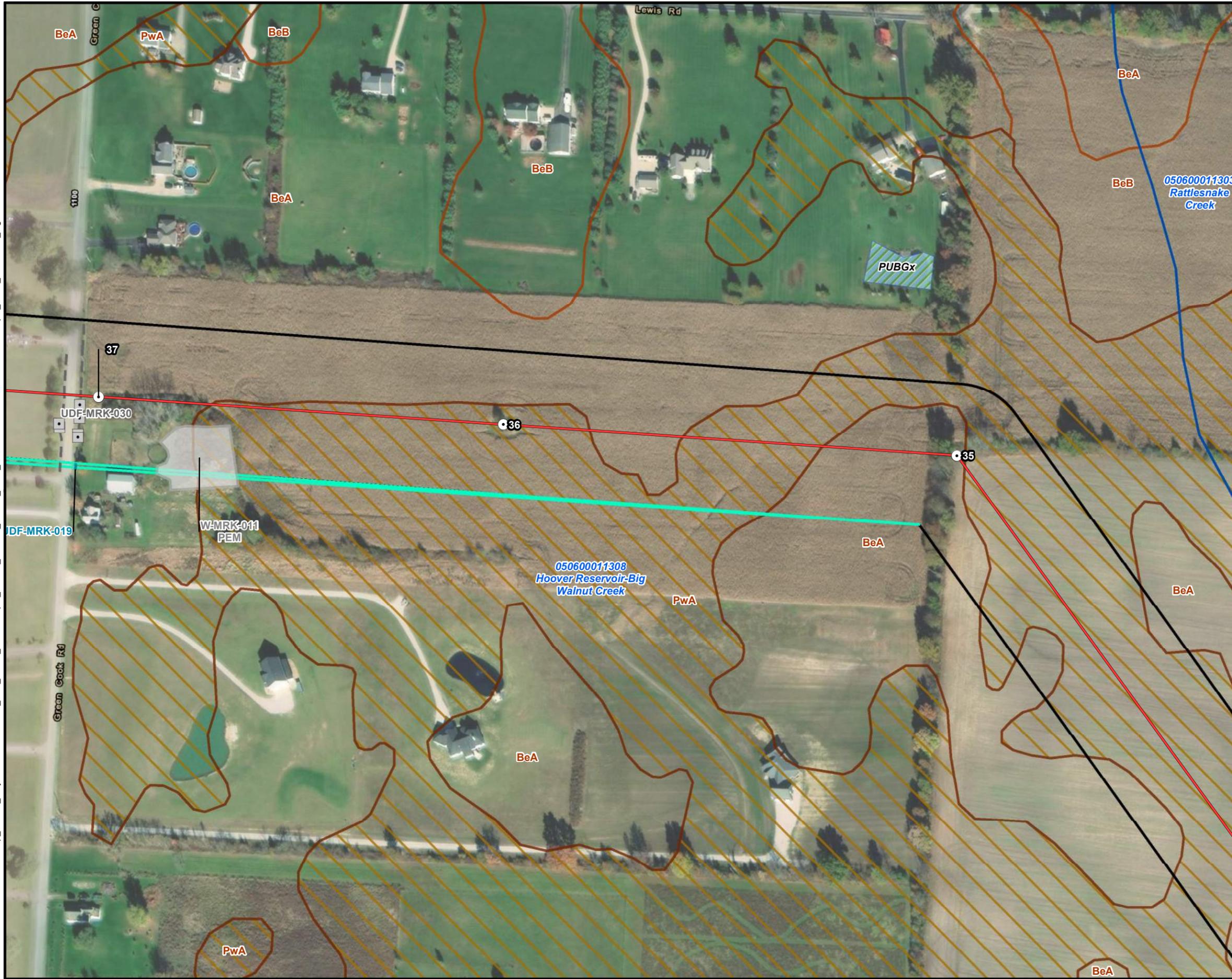
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Vassel - Green Chapel North Project Addendum 1

FIGURE 2
 SHEET 5 OF 13
 SOIL MAP AND
 NATIONAL WETLANDS INVENTORY MAP

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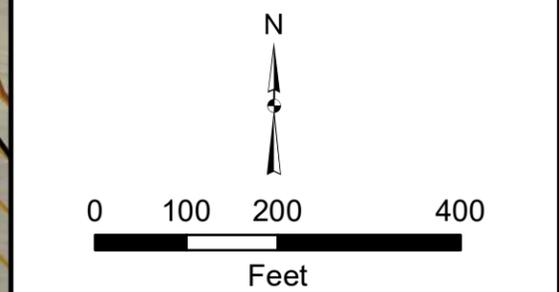


- Legend**
- Structure
 - Culvert
 - Vassell - Green Chapel North Route
 - Upland Drainage Feature
 - - - Previously Delineated Upland Drainage Feature
 - ▭ Previously Delineated PEM Wetland
 - ▭ Addendum 1 Project Survey Area
 - ▭ December 2023 Report - Project Survey Area
 - ▨ NWI Wetland (USFWS)
 - ▭ HUC 12 (USGS)
 - ▭ SSURGO Soil Map Unit (NRCS)
 - ▨ Hydric SSURGO Soil Map Unit (NRCS)

Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

PwA - Pewamo silty clay loam, 0 to 1 percent slopes

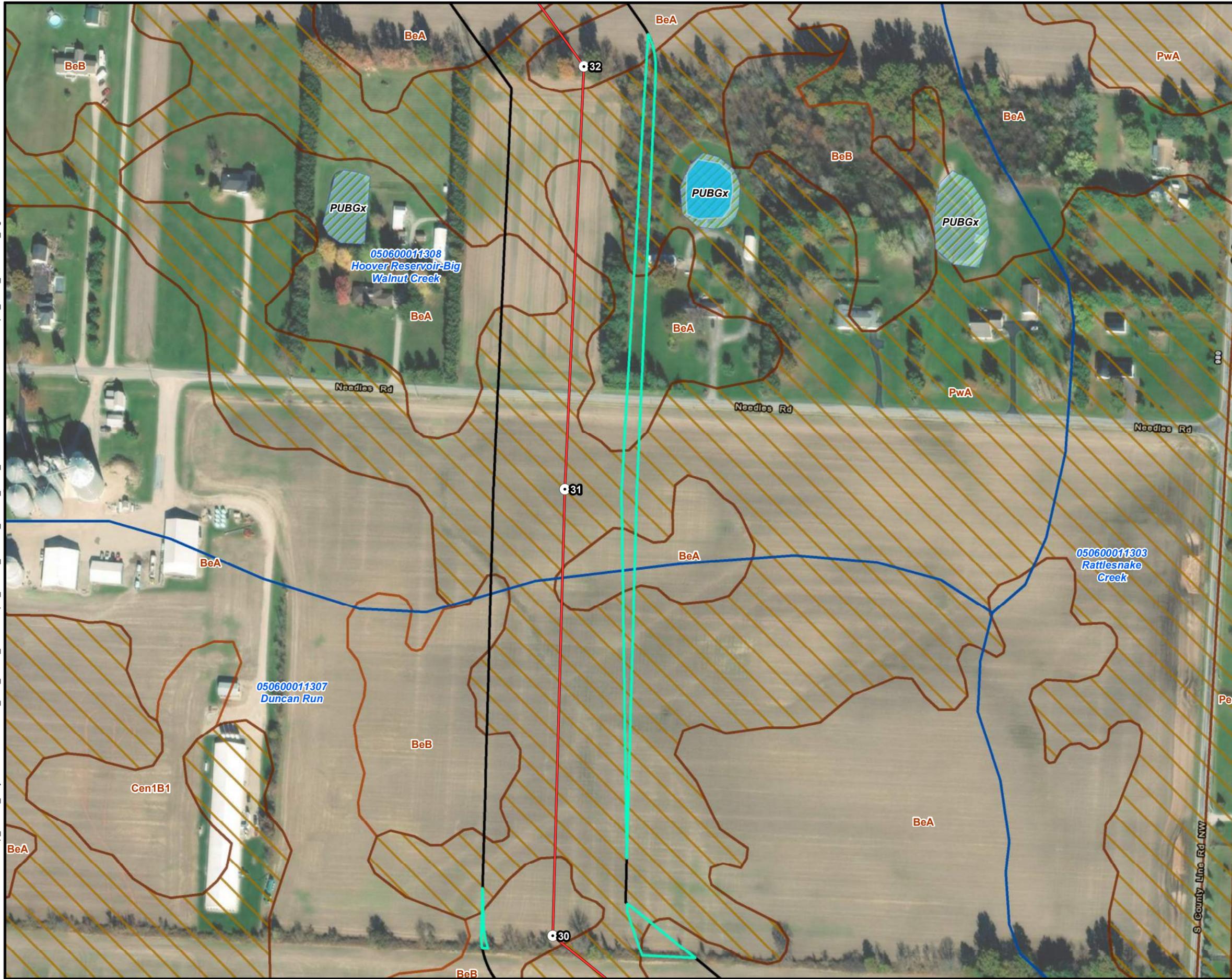


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FIGURE 2 SHEET 6 OF 13 NATIONAL WETLANDS INVENTORY MAP	
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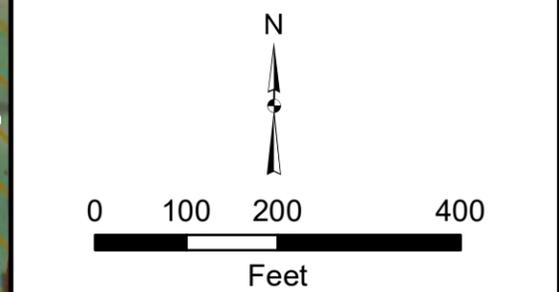
- Legend**
- Structure
 - Vassel - Green Chapel North Route
 - ▭ Addendum 1 Project Survey Area
 - ▭ December 2023 Report - Project Survey Area
 - ▨ NWI Wetland (USFWS)
 - NHD Waterbody (USGS)
 - HUC 12 (USGS)
 - ▭ SSURGO Soil Map Unit (NRCS)
 - ▭ Hydric SSURGO Soil Map Unit (NRCS)

Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

BeB - Bennington silt loam, 2 to 6 percent slopes

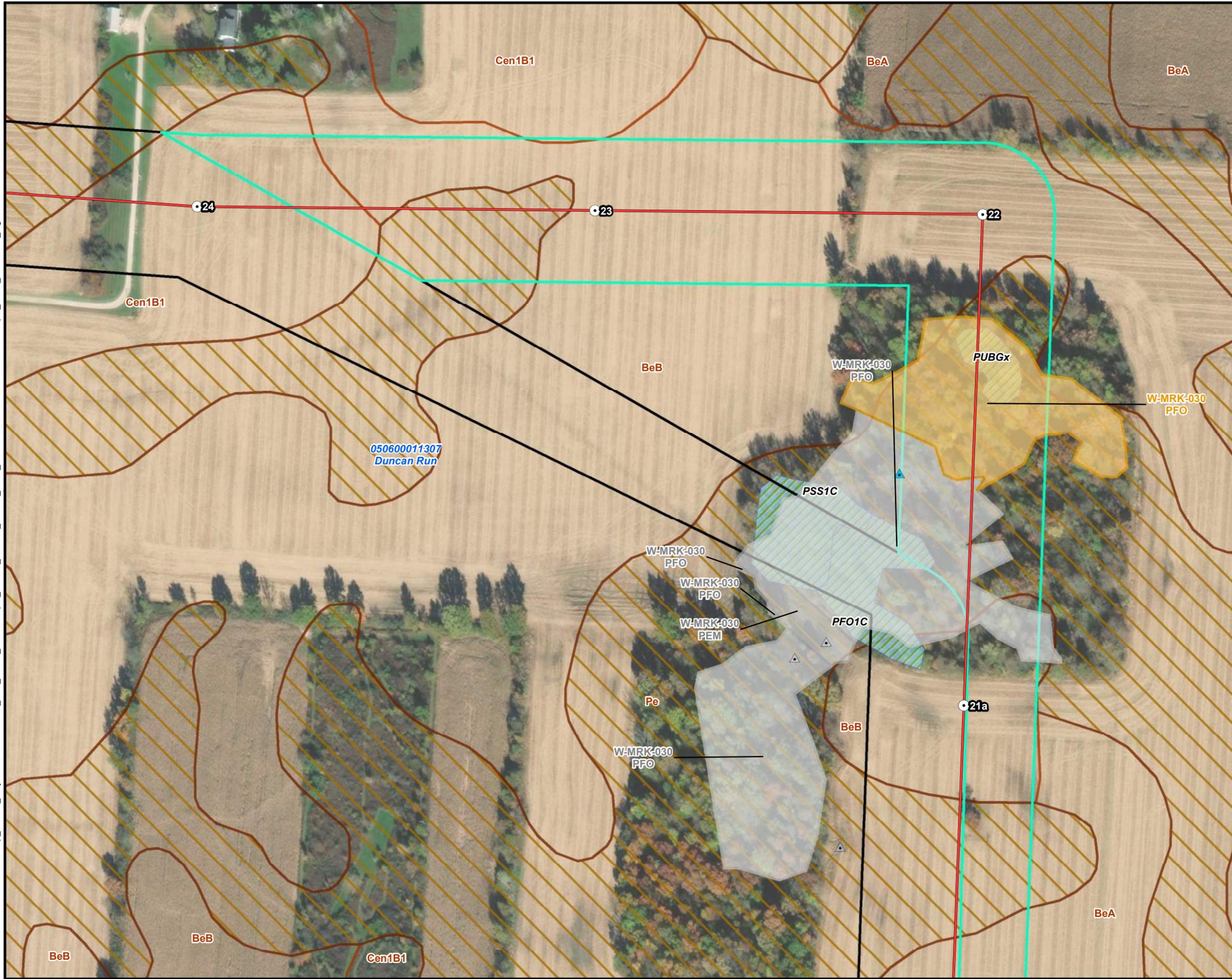
PwA - Pewamo silty clay loam, 0 to 1 percent slopes



Vassel - Green Chapel North Project Addendum 1

FIGURE 2 SHEET 7 OF 13 NATIONAL WETLANDS INVENTORY MAP	
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Legend

- Structure
- Previous Wetland Data Point
- Wetland Data Point
- Previous Upland Data Point
- Vassel - Green Chapel North Route
- Delineated PFO Wetland
- Previously Delineated PEM Wetland
- Previously Delineated PFO Wetland
- Addendum 1 Project Survey Area
- December 2023 Report - Project Survey Area
- NWI Wetland (USFWS)
- HUC 12 (USGS)
- SSURGO Soil Map Unit (NRCS)
- Hydric SSURGO Soil Map Unit (NRCS)

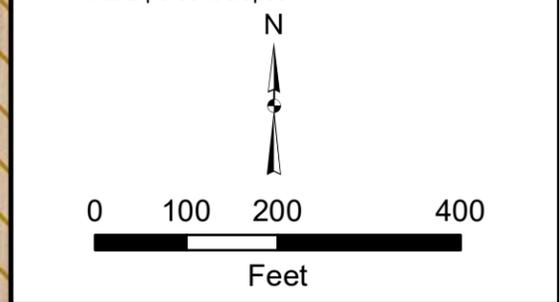
Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

BeB - Bennington silt loam, 2 to 6 percent slopes

Cen1B1 - Centerburg silt loam, 2 to 6 percent slopes

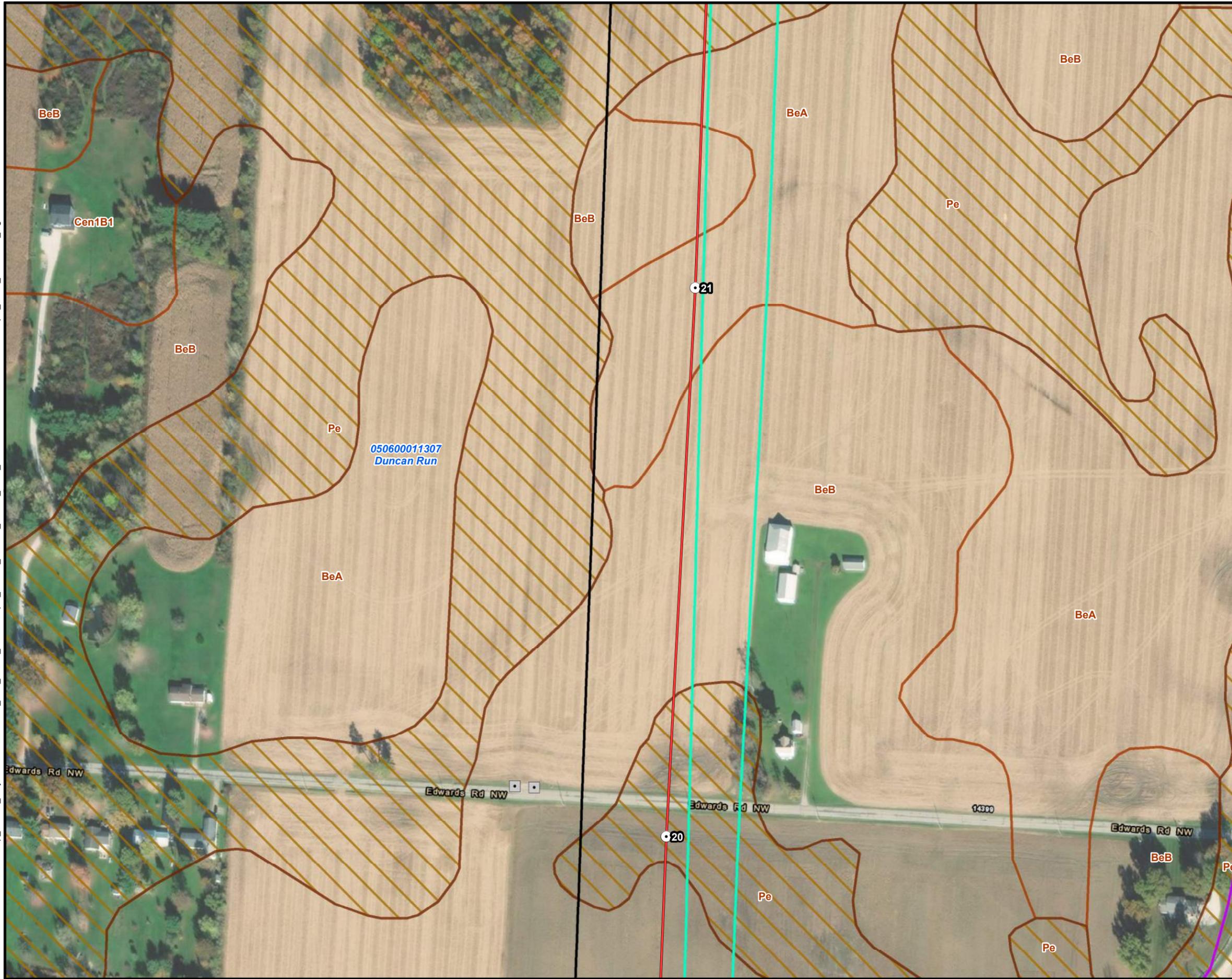
Pe - Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes



Vassel - Green Chapel
North Project
Addendum 1

FIGURE 2 SHEET 8 OF 13 NATIONAL WETLANDS INVENTORY MAP	
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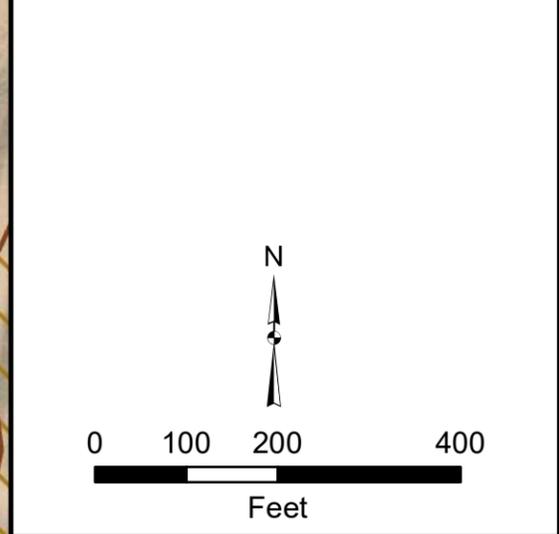
- Legend**
- Structure
 - Culvert
 - Vassell - Green Chapel North Route
 - NHD Stream (USGS)
 - ▭ Addendum 1 Project Survey Area
 - ▭ December 2023 Report - Project Survey Area
 - ▭ HUC 12 (USGS)
 - ▭ SSURGO Soil Map Unit (NRCS)
 - ▭ Hydric SSURGO Soil Map Unit (NRCS)

Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

BeB - Bennington silt loam, 2 to 6 percent slopes

Pe - Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes



Vassell - Green Chapel North Project Addendum 1

FIGURE 2 SHEET 9 OF 13 SOIL MAP AND NATIONAL WETLANDS INVENTORY MAP	
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- Legend**
- Structure
 - ▲ Previous Wetland Data Point
 - ▲ Previous Upland Data Point
 - Culvert
 - Vassell - Green Chapel North Route
 - - - Previously Delineated Ephemeral Stream
 - - - Previously Delineated Intermittent Stream
 - - - Previously Delineated Perennial Stream
 - NHD Stream (USGS)
 - ▨ Delineated PFO Wetland
 - ▨ Previously Delineated PEM Wetland
 - ▨ Previously Delineated PFO Wetland
 - ▨ Addendum 1 Project Survey Area
 - ▨ December 2023 Report - Project Survey Area
 - ▨ NWI Wetland (USFWS)
 - ▨ NHD Waterbody (USGS)
 - ▨ NFHL 100-Year Floodplain (FEMA)
 - ▨ HUC 12 (USGS)
 - ▨ SSURGO Soil Map Unit (NRCS)
 - ▨ Hydric SSURGO Soil Map Unit (NRCS)

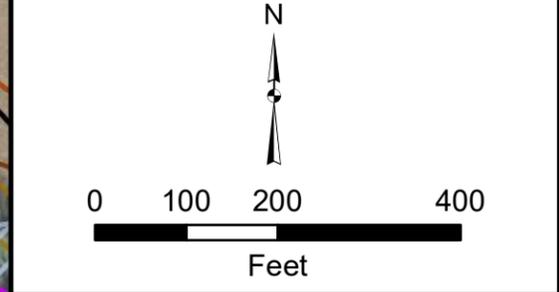
Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

BeB - Bennington silt loam, 2 to 6 percent slopes

Cen1C2 - Centerburg silt loam, 6 to 12 percent slopes, eroded

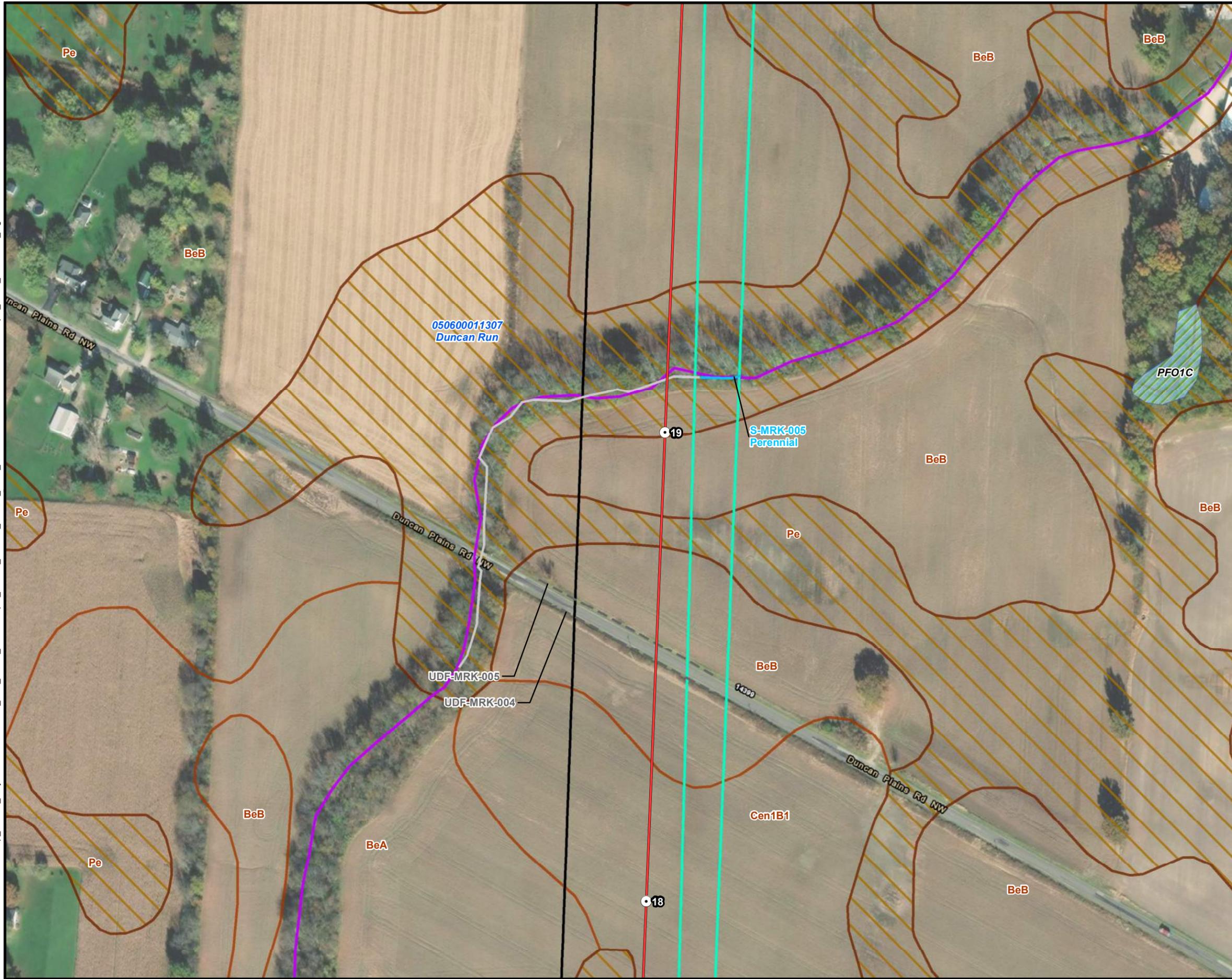
Pe - Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes



Vassel - Green Chapel North Project Addendum 1

FIGURE 2 SHEET 10 OF 13 SOIL MAP AND NATIONAL WETLANDS INVENTORY MAP	
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- Legend**
- Structure
 - Vassel - Green Chapel North Route
 - Delineated Perennial Stream
 - Previously Delineated Perennial Stream
 - Previously Delineated Upland Drainage Feature
 - NHD Stream (USGS)
 - ▭ Addendum 1 Project Survey Area
 - ▭ December 2023 Report - Project Survey Area
 - ▨ NWI Wetland (USFWS)
 - ▭ HUC 12 (USGS)
 - ▭ SSURGO Soil Map Unit (NRCS)
 - ▨ Hydric SSURGO Soil Map Unit (NRCS)

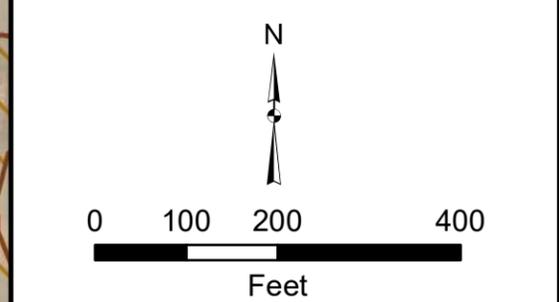
Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

BeB - Bennington silt loam, 2 to 6 percent slopes

Cen1B1 - Centerburg silt loam, 2 to 6 percent slopes

Pe - Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes

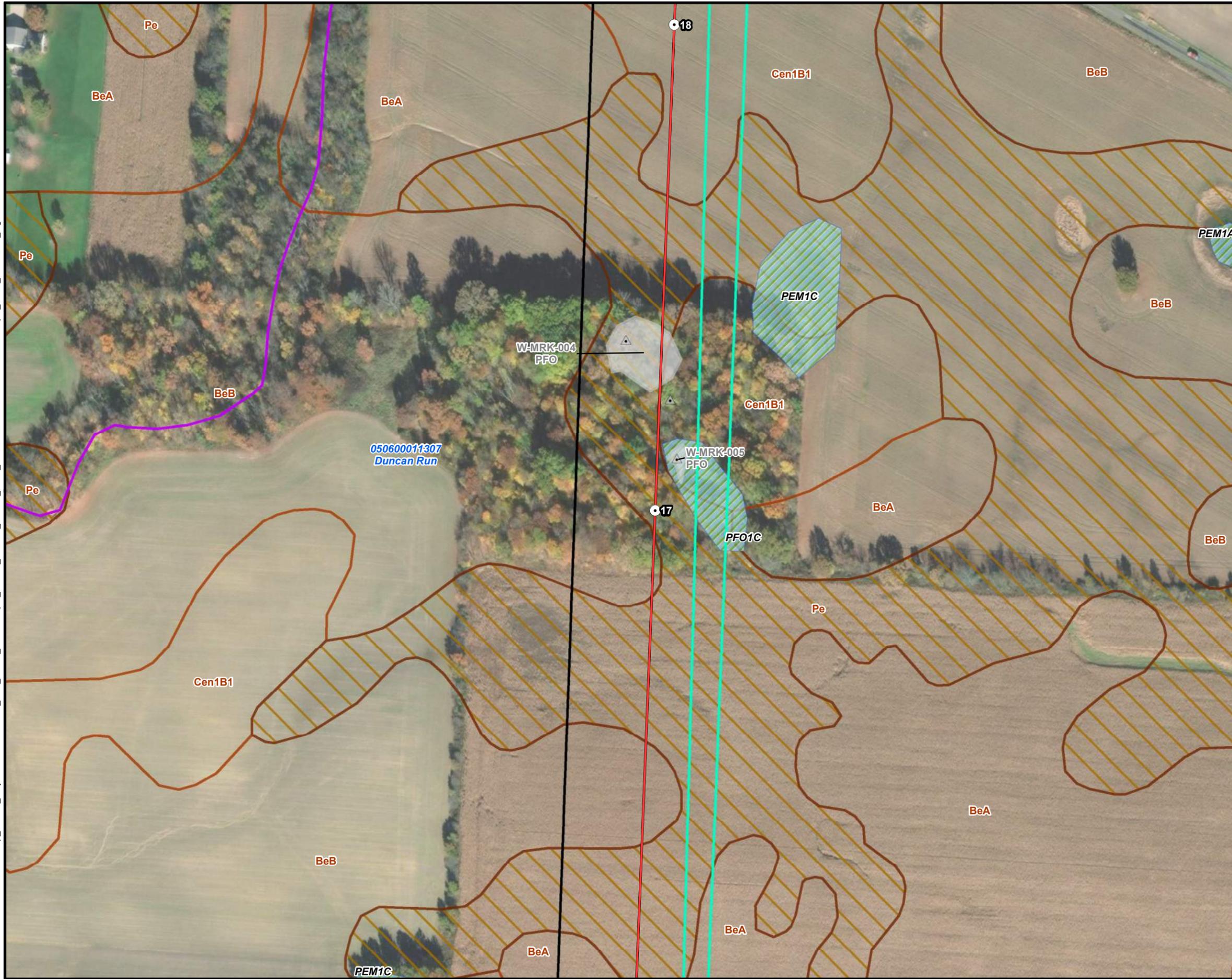


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 Vassel - Green Chapel North Project Addendum 1

FIGURE 2
 SHEET 11 OF 13
 SOIL MAP AND
 NATIONAL WETLANDS INVENTORY MAP

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- ### Legend
- Structure
 - Previous Wetland Data Point
 - Previous Upland Data Point
 - Vassell - Green Chapel North Route
 - NHD Stream (USGS)
 - Previously Delineated PFO Wetland
 - Addendum 1 Project Survey Area
 - December 2023 Report - Project Survey Area
 - NWI Wetland (USFWS)
 - HUC 12 (USGS)
 - SSURGO Soil Map Unit (NRCS)
 - Hydric SSURGO Soil Map Unit (NRCS)

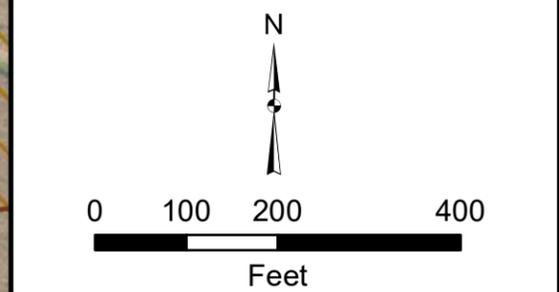
Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

BeB - Bennington silt loam, 2 to 6 percent slopes

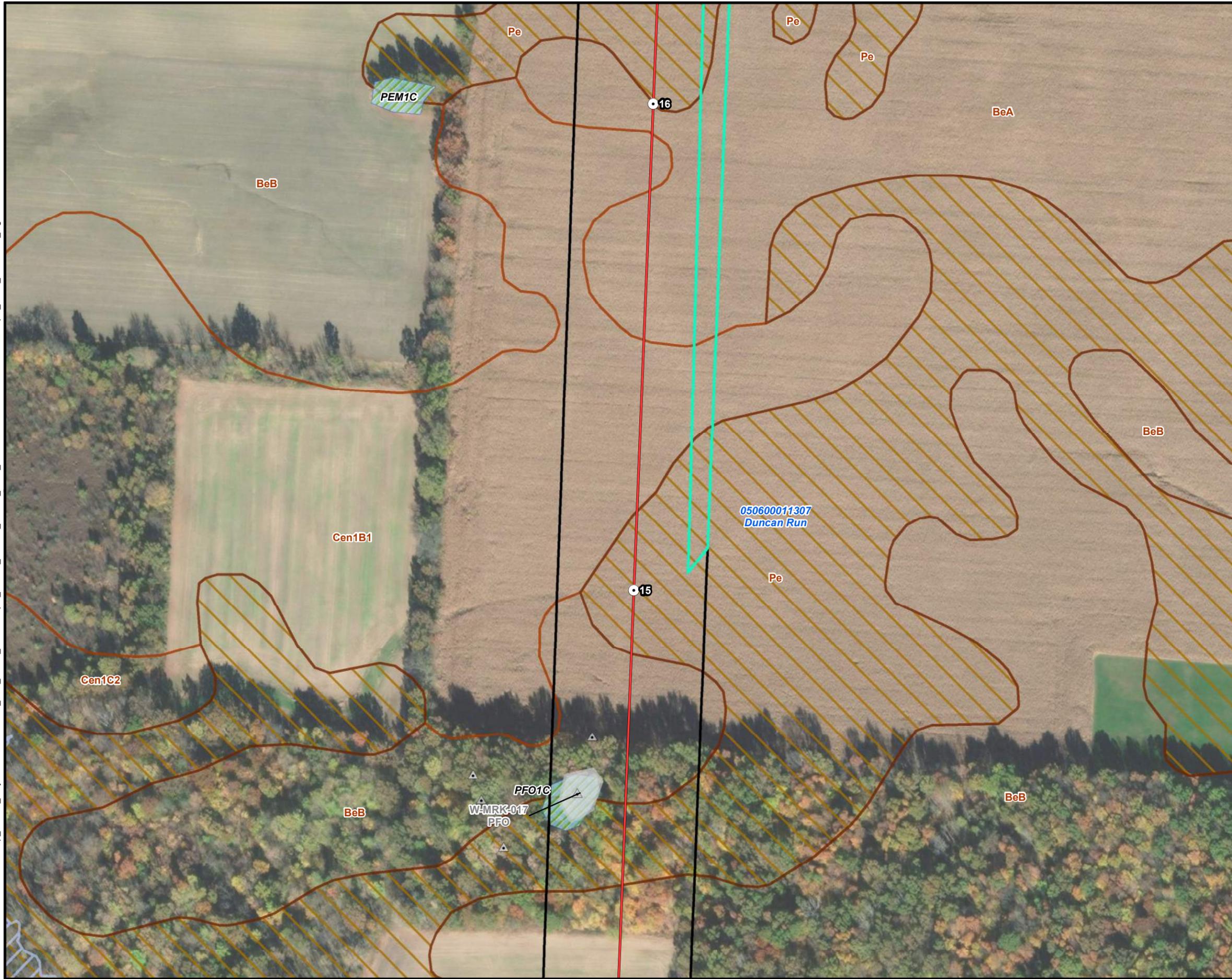
Cen1B1 - Centerburg silt loam, 2 to 6 percent slopes

Pe - Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes



Vassell - Green Chapel North Project Addendum 1

FIGURE 2 SHEET 12 OF 13 SOIL MAP AND NATIONAL WETLANDS INVENTORY MAP	
DATE: 2/17/2024	1 INCH = 200 FEET
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JOB NO.: 60702685	AECOM



- ### Legend
- Structure
 - ▲ Previous Wetland Data Point
 - ▲ Previous Upland Data Point
 - Vassell - Green Chapel North Route
 - ▭ Previously Delineated PFO Wetland
 - ▭ Addendum 1 Project Survey Area
 - ▭ December 2023 Report - Project Survey Area
 - ▨ NWI Wetland (USFWS)
 - ▨ NFHL 100-Year Floodplain (FEMA)
 - ▨ HUC 12 (USGS)
 - ▨ SSURGO Soil Map Unit (NRCS)
 - ▨ Hydric SSURGO Soil Map Unit (NRCS)

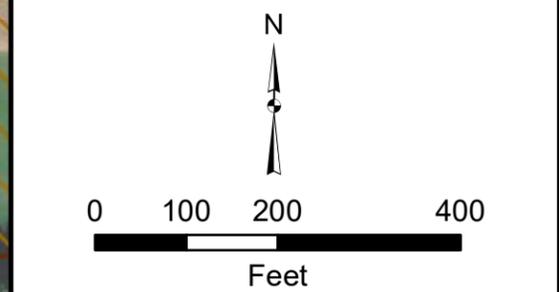
Soil Map Unit Description

BeA - Bennington silt loam, 0 to 2 percent slopes

BeB - Bennington silt loam, 2 to 6 percent slopes

Cen1B1 - Centerburg silt loam, 2 to 6 percent slopes

Pe - Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes



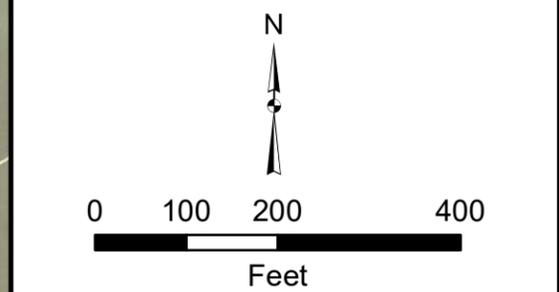
 Vassell - Green Chapel North Project Addendum 1

FIGURE 2 SHEET 13 OF 13 SOIL MAP AND NATIONAL WETLANDS INVENTORY MAP	
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- ### Legend
- Structure
 - December 2023 Report - Project Survey Area
 - Addendum 1 Project Survey Area
 - Vassell - Green Chapel North Route
 - NHD Stream (USGS)
 - Contour (5-Ft)
 - Previously Delineated PFO Wetland

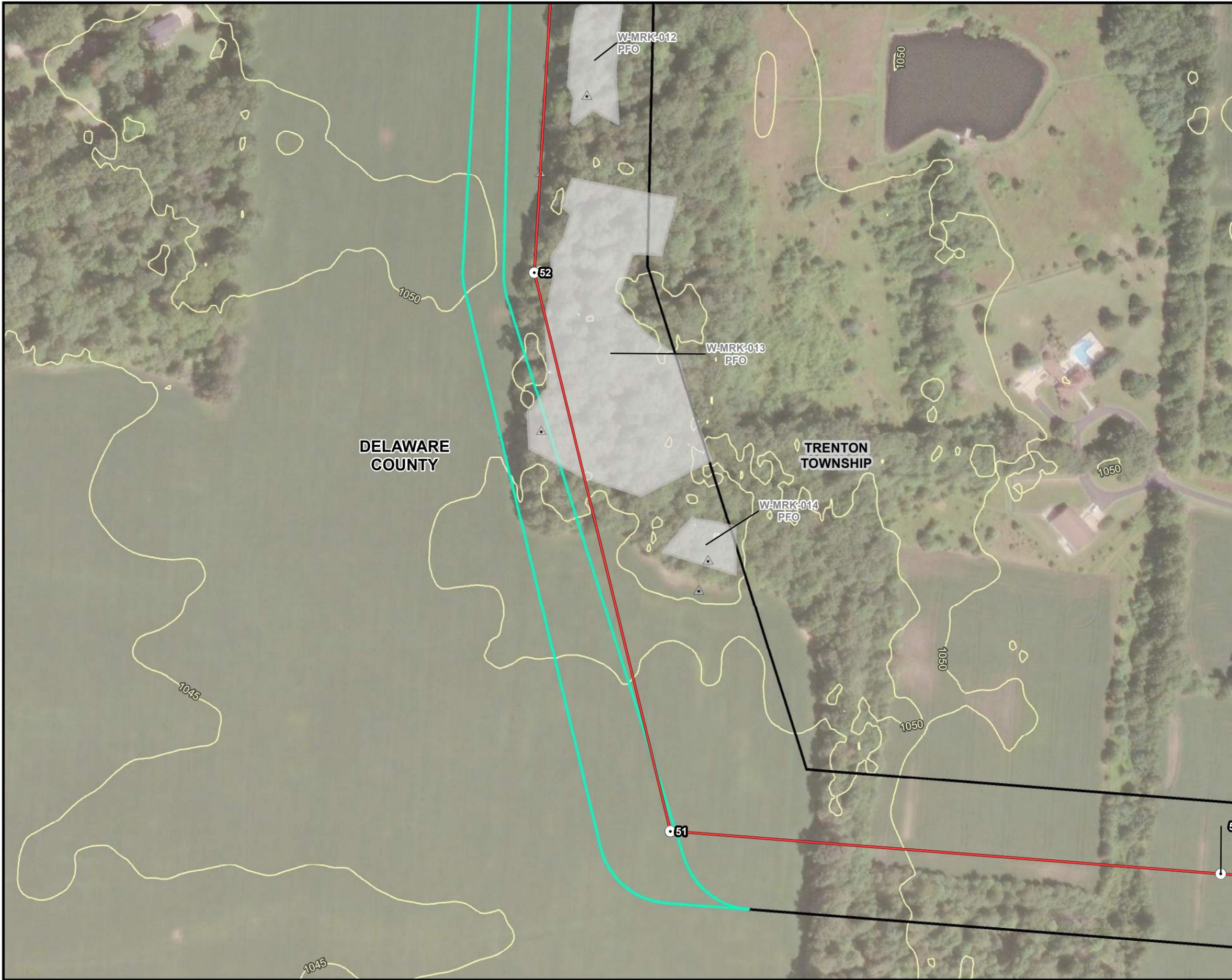


 Vassel - Green Chapel North Project Addendum 1

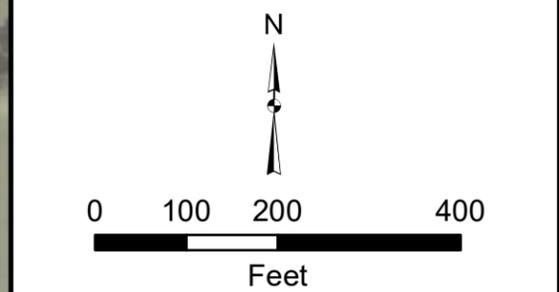
FIGURE 3
SHEET 1 OF 13
WETLAND DELINEATION AND
STREAM ASSESSMENT MAP

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JOB NO.: 60702685	AECOM

Date Saved: 2/16/2024
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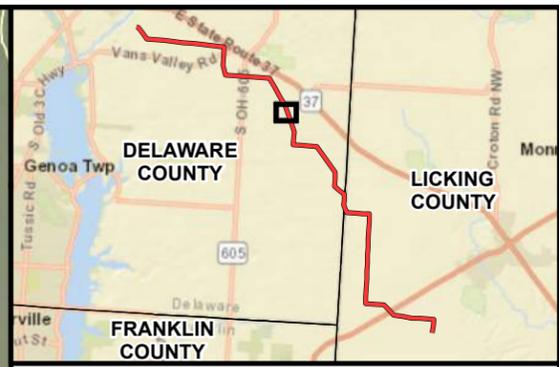
- ### Legend
- Structure
 - Previous Wetland Data Point
 - Previous Upland Data Point
 - December 2023 Report - Project Survey Area
 - Addendum 1 Project Survey Area
 - Vassell - Green Chapel North Route
 - Contour (5-Ft)
 - Previously Delineated PFO Wetland



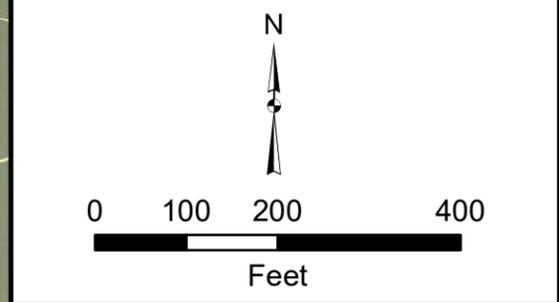
 Vassell - Green Chapel North Project Addendum 1

FIGURE 3 SHEET 2 OF 13 WETLAND DELINEATION AND STREAM ASSESSMENT MAP	
DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM

Date Saved: 2/16/2024
Document Path: X:\DCS\GIS\ArcMap_GeoDB_Projects\ENR\60702685_AEP_Vassel_GreenChapel_North\2_MXD\1_WDR\0_North_Route\Addendum 1\VasselGreenChapel_North_WDRAdd1_Fig3.mxd



- Legend**
- Structure
 - ▭ December 2023 Report - Project Survey Area
 - ▭ Addendum 1 Project Survey Area
 - Vassell - Green Chapel North Route
 - NHD Stream (USGS)
 - Contour (5-Ft)

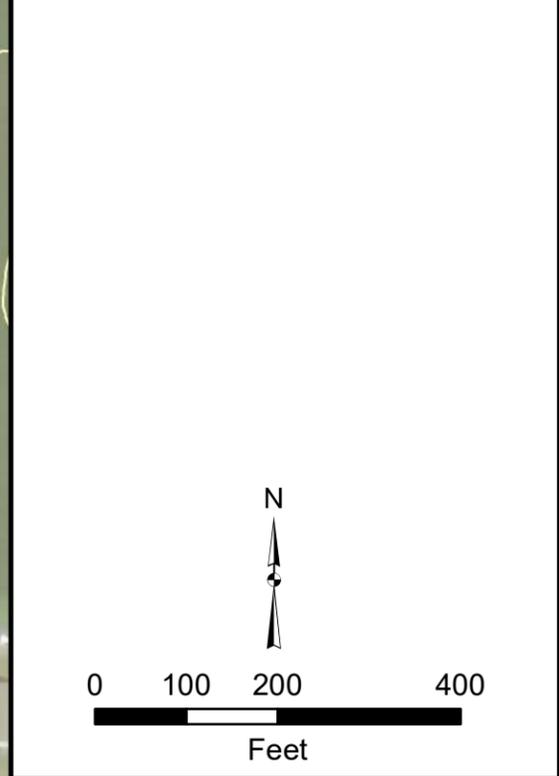


 Vassell - Green Chapel North Project Addendum 1

FIGURE 3 SHEET 3 OF 13 WETLAND DELINEATION AND STREAM ASSESSMENT MAP	
DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



- Legend**
- Structure
 - ▭ December 2023 Report - Project Survey Area
 - ▭ Addendum 1 Project Survey Area
 - Culvert
 - Vassel - Green Chapel North Route
 - - - Previously Delineated Upland Drainage Feature
 - Contour (5-Ft)
 - ▭ Previously Delineated PFO Wetland



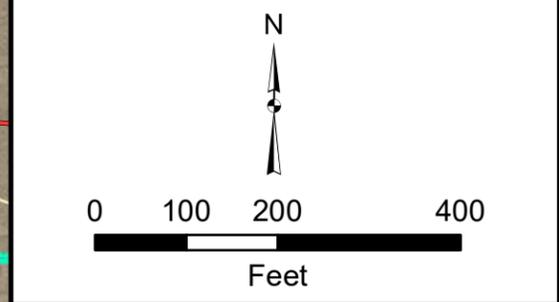
 Vassel - Green Chapel North Project Addendum 1

FIGURE 3
 SHEET 4 OF 13
 WETLAND DELINEATION AND
 STREAM ASSESSMENT MAP

DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



- Legend**
- Structure
 - ▭ December 2023 Report - Project Survey Area
 - ▭ Addendum 1 Project Survey Area
 - Culvert
 - Vassell - Green Chapel North Route
 - Upland Drainage Feature
 - Previously Delineated Upland Drainage Feature
 - Contour (5-Ft)
 - ▭ Previously Delineated PEM Wetland



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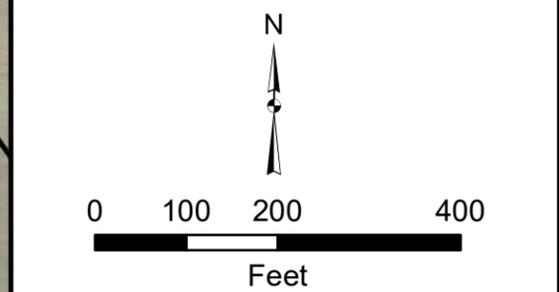
FIGURE 3
 SHEET 5 OF 13
 WETLAND DELINEATION AND
 STREAM ASSESSMENT MAP

DATE: 2/17/2024	1 INCH = 200 FEET
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JOB NO.: 60702685	AECOM

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- Legend**
- Structure
 - December 2023 Report - Project Survey Area
 - Addendum 1 Project Survey Area
 - Culvert
 - Vassell - Green Chapel North Route
 - Upland Drainage Feature
 - Previously Delineated Upland Drainage Feature
 - Contour (5-Ft)
 - Previously Delineated PEM Wetland



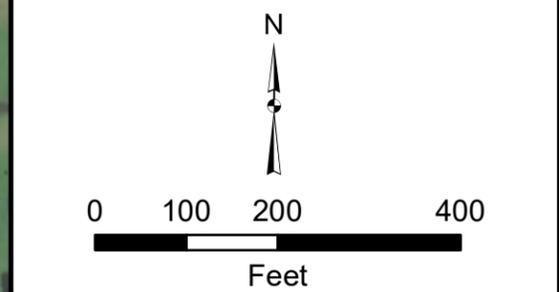
Vassel - Green Chapel North Project Addendum 1

FIGURE 3 SHEET 6 OF 13 WETLAND DELINEATION AND STREAM ASSESSMENT MAP	
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JOB NO.: 60702685	AECOM

Date Saved: 2/16/2024
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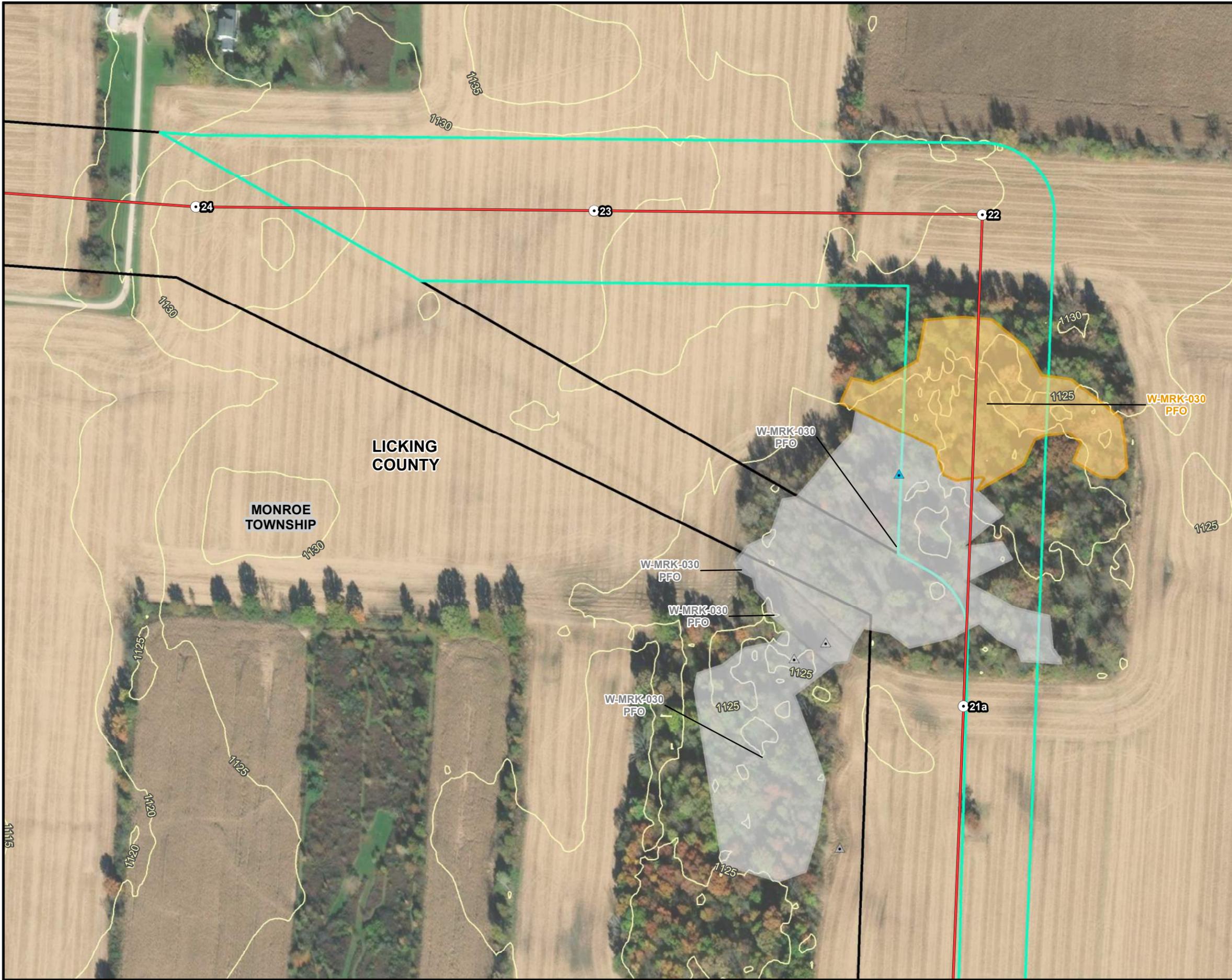


- Legend**
- Structure
 - December 2023 Report - Project Survey Area
 - Addendum 1 Project Survey Area
 - Vassell - Green Chapel North Route
 - Contour (5-Ft)

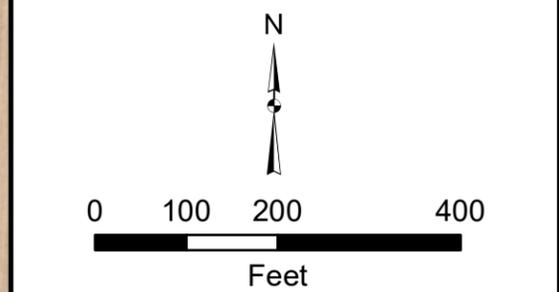


		Vassell - Green Chapel North Project Addendum 1	
FIGURE 3 SHEET 7 OF 13 WETLAND DELINEATION AND STREAM ASSESSMENT MAP			
DATE: 2/17/2024	1 INCH = 200 FEET		
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JOB NO.: 60702685	AECOM		

Date Saved: 2/16/2024
Document Path: X:\DCS\GIS\ArctMap_GeoDB_Projects\ENV\60702685_AEP_Vassel_GreenChapel_North\WDR\Addendum 1\WDRAdd1_Fig3.mxd



- ### Legend
- Structure
 - ▲ Previous Wetland Data Point
 - ▲ Wetland Data Point
 - ▲ Previous Upland Data Point
 - ▭ December 2023 Report - Project Survey Area
 - ▭ Addendum 1 Project Survey Area
 - Vassell - Green Chapel North Route
 - Contour (5-Ft)
 - Delineated PFO Wetland
 - Previously Delineated PEM Wetland
 - Previously Delineated PFO Wetland



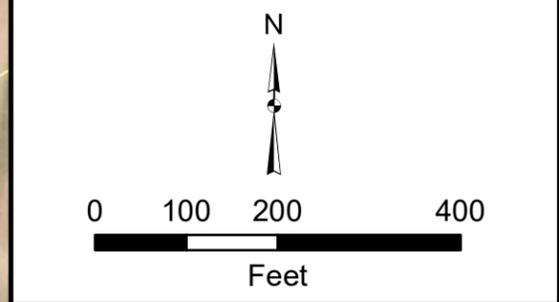
 Vassell - Green Chapel North Project Addendum 1

FIGURE 3 SHEET 8 OF 13 WETLAND DELINEATION AND STREAM ASSESSMENT MAP	
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JOB NO.: 60702685	AECOM

Date Saved: 2/16/2024
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- Legend**
- Structure
 - December 2023 Report - Project Survey Area
 - Addendum 1 Project Survey Area
 - Culvert
 - Vassell - Green Chapel North Route
 - NHD Stream (USGS)
 - Contour (5-Ft)



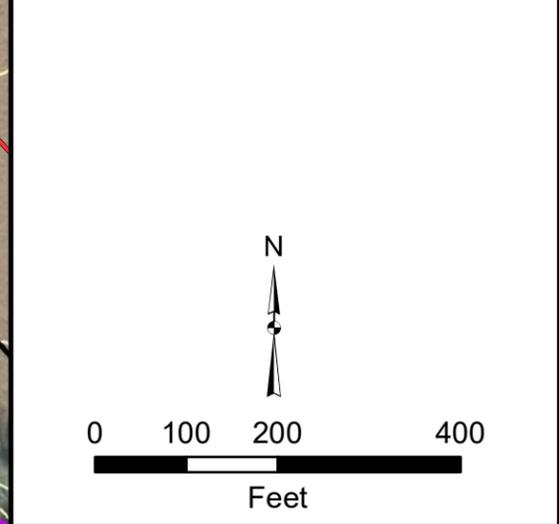
 Vassell - Green Chapel North Project Addendum 1

FIGURE 3 SHEET 9 OF 13 WETLAND DELINEATION AND STREAM ASSESSMENT MAP	
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JOB NO.: 60702685	AECOM

Date Saved: 2/16/2024
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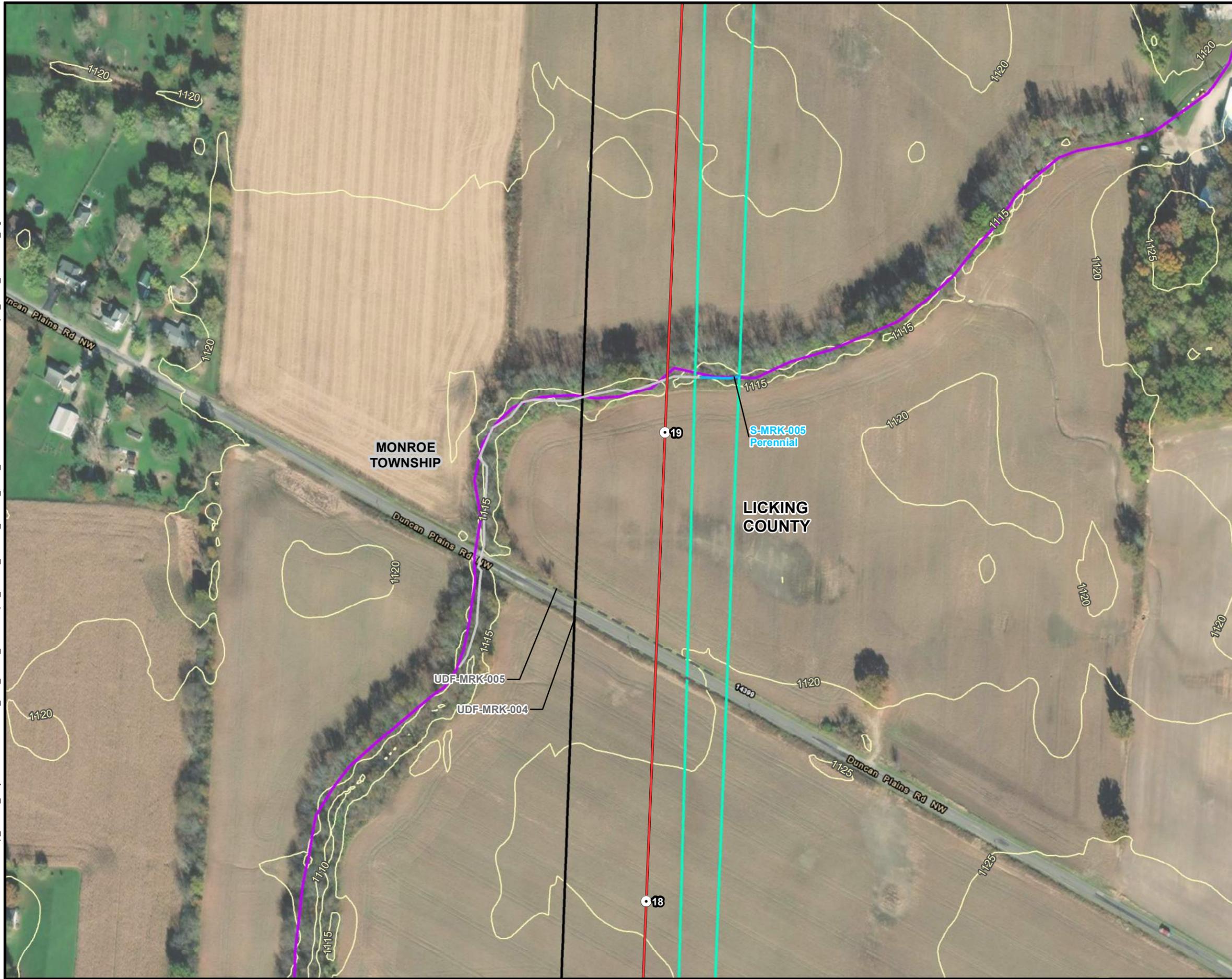


- ### Legend
- Structure
 - ▲ Previous Wetland Data Point
 - ▲ Previous Upland Data Point
 - ▭ December 2023 Report - Project Survey Area
 - ▭ Addendum 1 Project Survey Area
 - Previously Delineated Ephemeral Stream
 - Previously Delineated Intermittent Stream
 - Previously Delineated Perennial Stream
 - Culvert
 - Vassell - Green Chapel North Route
 - NHD Stream (USGS)
 - Contour (5-Ft)
 - Delineated PFO Wetland
 - Previously Delineated PEM Wetland
 - Previously Delineated PFO Wetland

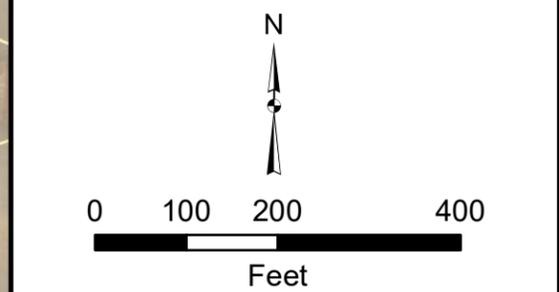


Vassell - Green Chapel North Project Addendum 1

FIGURE 3 SHEET 10 OF 13 WETLAND DELINEATION AND STREAM ASSESSMENT MAP	
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JOB NO.: 60702685	AECOM



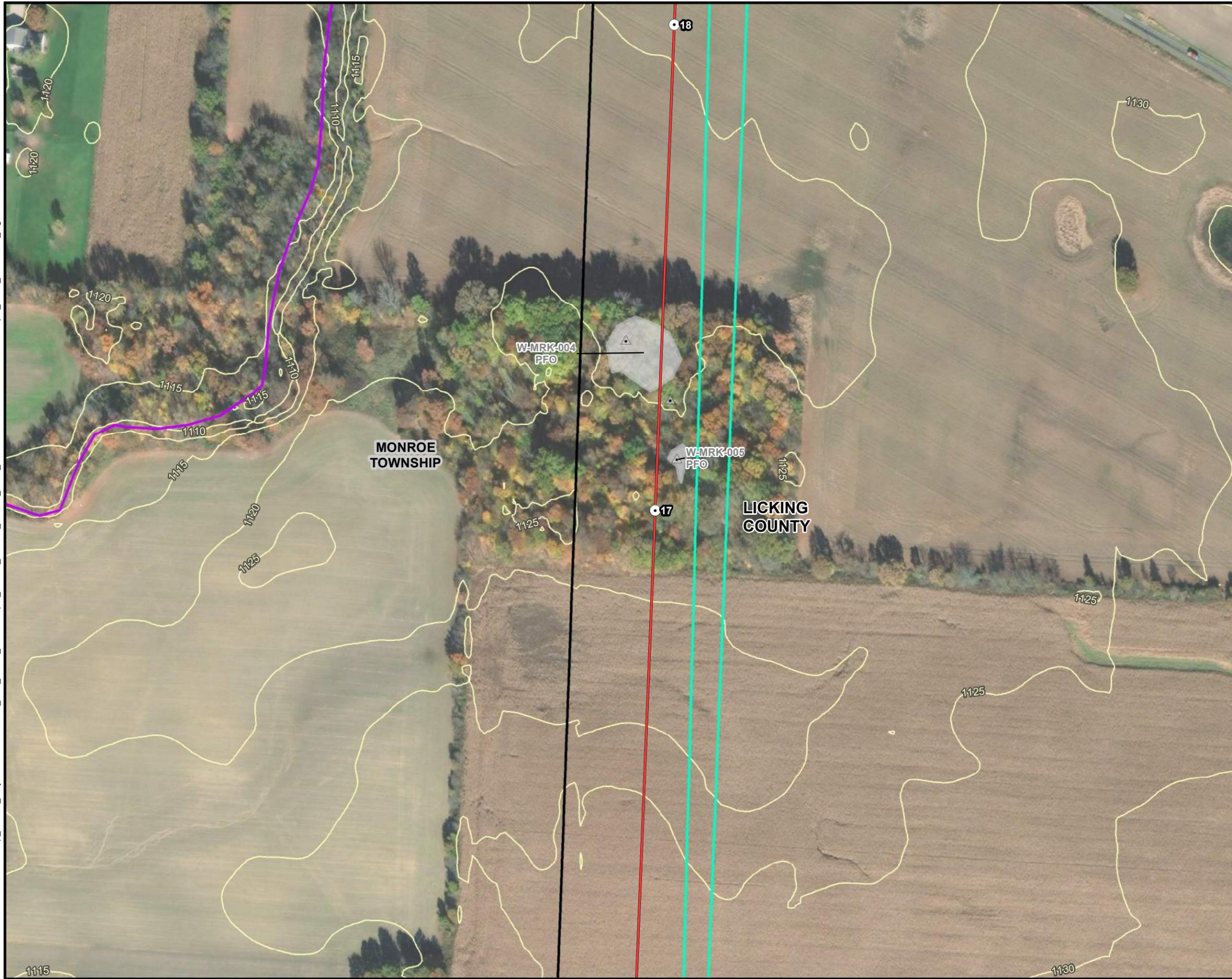
- Legend**
- Structure
 - ▭ December 2023 Report - Project Survey Area
 - ▭ Addendum 1 Project Survey Area
 - Delineated Perennial Stream
 - Previously Delineated Perennial Stream
 - Vassell - Green Chapel North Route
 - Previously Delineated Upland Drainage Feature
 - NHD Stream (USGS)
 - Contour (5-Ft)



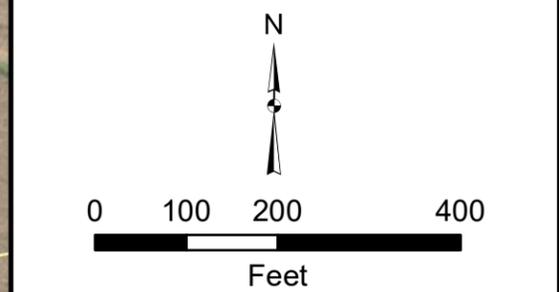
 Vassell - Green Chapel North Project Addendum 1

FIGURE 3 SHEET 11 OF 13 WETLAND DELINEATION AND STREAM ASSESSMENT MAP	
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JOB NO.: 60702685	AECOM

Date Saved: 2/16/2024
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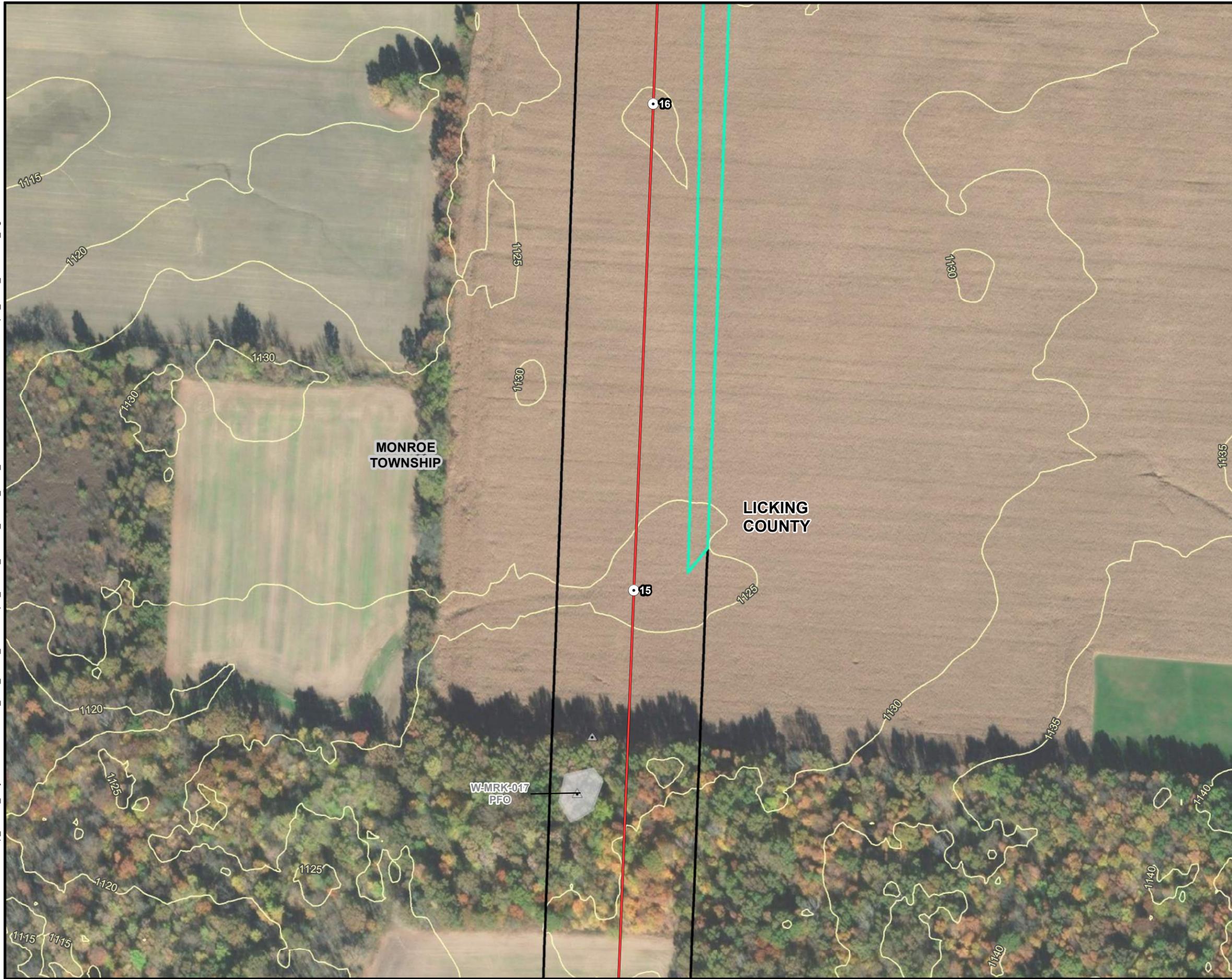
- Legend**
- Structure
 - ▲ Previous Wetland Data Point
 - ▲ Previous Upland Data Point
 - ▭ December 2023 Report - Project Survey Area
 - ▭ Addendum 1 Project Survey Area
 - Vassell - Green Chapel North Route
 - NHD Stream (USGS)
 - Contour (5-Ft)
 - ▭ Previously Delineated PFO Wetland



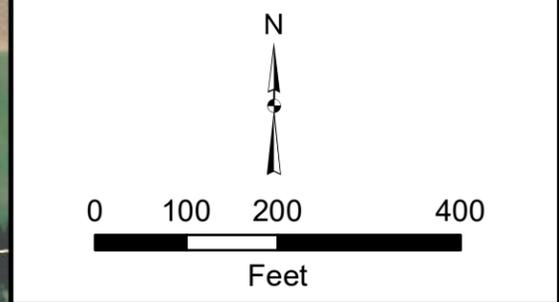
 Vassell - Green Chapel North Project Addendum 1

FIGURE 3 SHEET 12 OF 13 WETLAND DELINEATION AND STREAM ASSESSMENT MAP	
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JOB NO.: 60702685	AECOM

Date Saved: 2/16/2024
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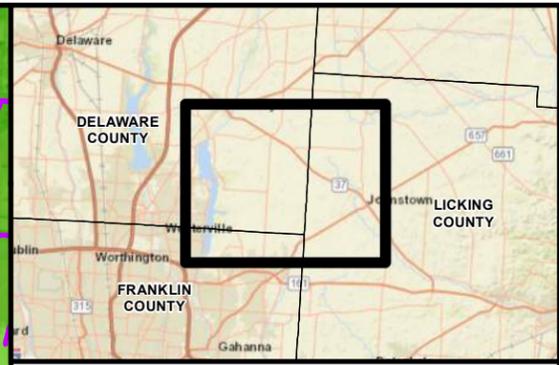
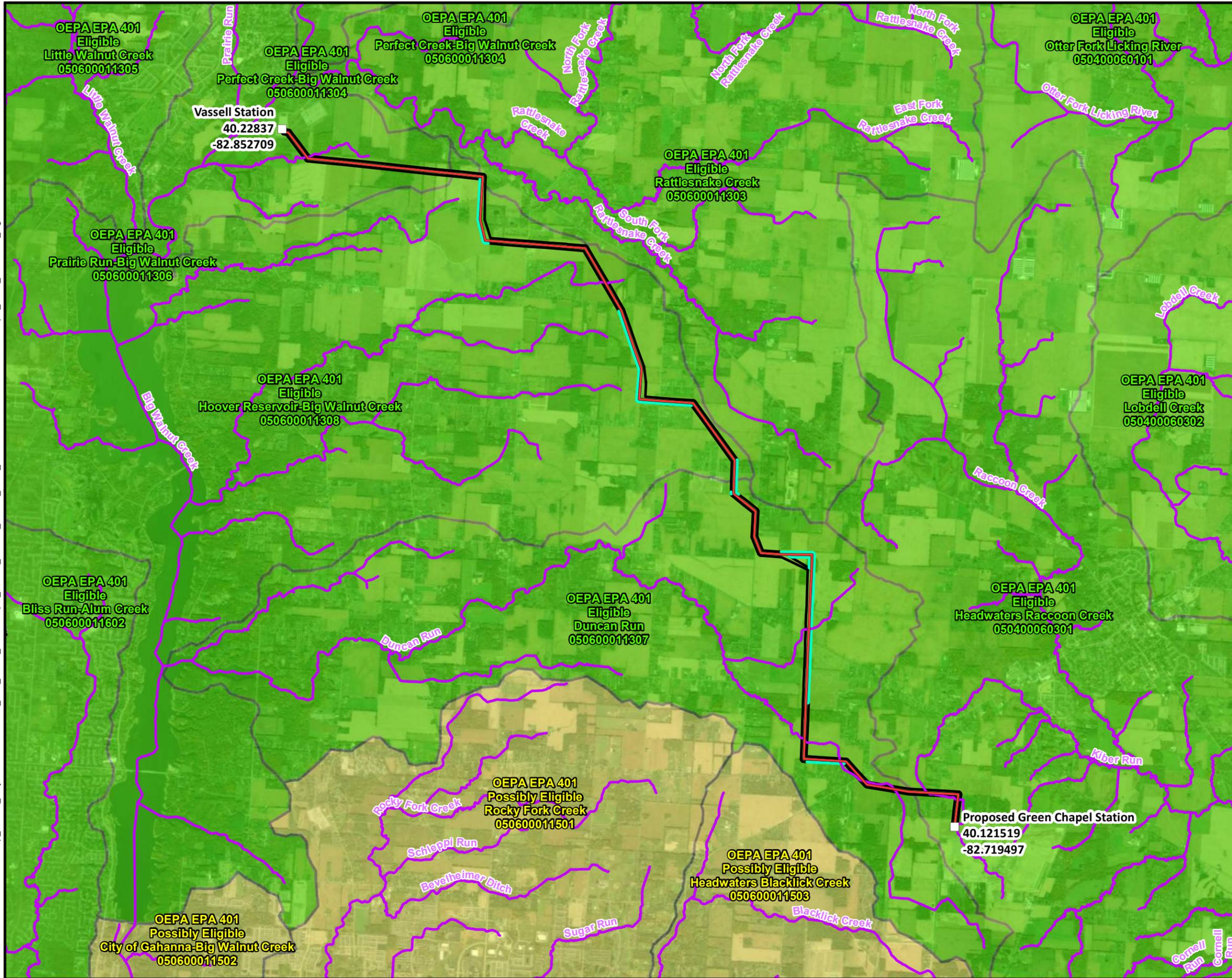
- Legend**
- Structure
 - ▲ Previous Wetland Data Point
 - ▲ Previous Upland Data Point
 - ▭ December 2023 Report - Project Survey Area
 - ▭ Addendum 1 Project Survey Area
 - Vassell - Green Chapel North Route
 - Contour (5-Ft)
 - ▭ Previously Delineated PFO Wetland



 Vassell - Green Chapel North Project Addendum 1

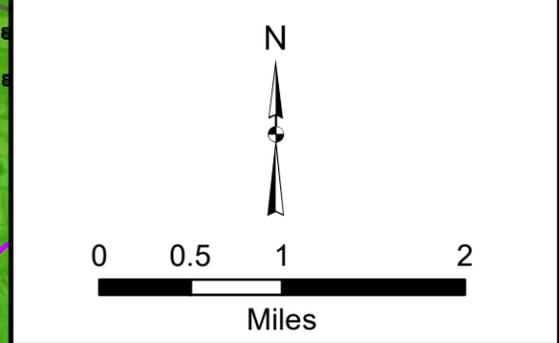
FIGURE 3 SHEET 13 OF 13 WETLAND DELINEATION AND STREAM ASSESSMENT MAP	
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- Legend**
- Station
 - Vassell - Green Chapel North Route
 - NHD Stream (USGS)
 - Addendum 1 Project Survey Area
 - December 2023 Report - Project Survey Area

- OEPA Eligibility:**
- Eligible
 - Possibly Eligible



Vassel - Green Chapel North Project
Addendum 1

FIGURE 4	
STREAM ELIGIBILITY MAP	
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JOB NO.: 60702685	AECOM

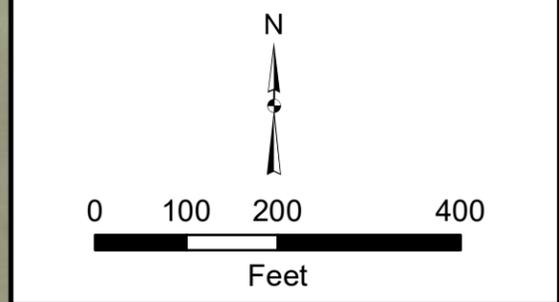


Legend

- December 2023 Report Photo
- Vassell - Green Chapel North Route
- ▭ December 2023 Report - Project Survey Area
- ▭ Addendum 1 Project Survey Area

Vegetative Communities Type

- Agricultural Row-Crop
- Urban



 Vassell - Green Chapel North Project Addendum 1

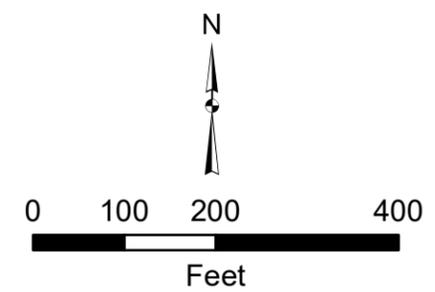
FIGURE 5
 SHEET 1 OF 13
 VEGETATIVE COMMUNITIES
 ASSESSMENT MAP

DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM





- Legend**
- December 2023 Report Photo
 - Vassell - Green Chapel North Route
 - ▭ December 2023 Report - Project Survey Area
 - ▭ Addendum 1 Project Survey Area
- Vegetative Communities Type**
- Agricultural Row-Crop



 Vassell - Green Chapel North Project Addendum 1

FIGURE 5
SHEET 3 OF 13
VEGETATIVE COMMUNITIES
ASSESSMENT MAP

DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



Legend

- December 2023 Report Photo
- Vassell - Green Chapel North Route
- ▭ December 2023 Report - Project Survey Area
- ▭ Addendum 1 Project Survey Area

Vegetative Communities Type

- Agricultural Row-Crop
- Woodland

N

0 100 200 400
Feet

Vassell - Green Chapel
North Project
Addendum 1

FIGURE 5
 SHEET 4 OF 13
 VEGETATIVE COMMUNITIES
 ASSESSMENT MAP

DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM

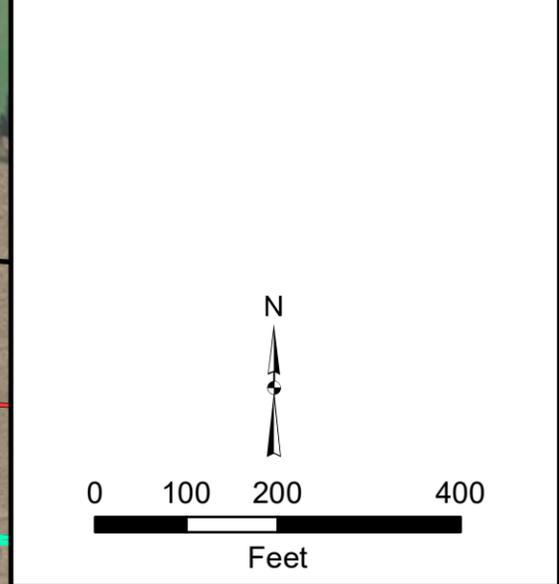


Legend

- Addendum 1 Photo
- December 2023 Report Photo
- Vassell - Green Chapel North Route
- ▭ December 2023 Report - Project Survey Area
- ▭ Addendum 1 Project Survey Area

Vegetative Communities Type

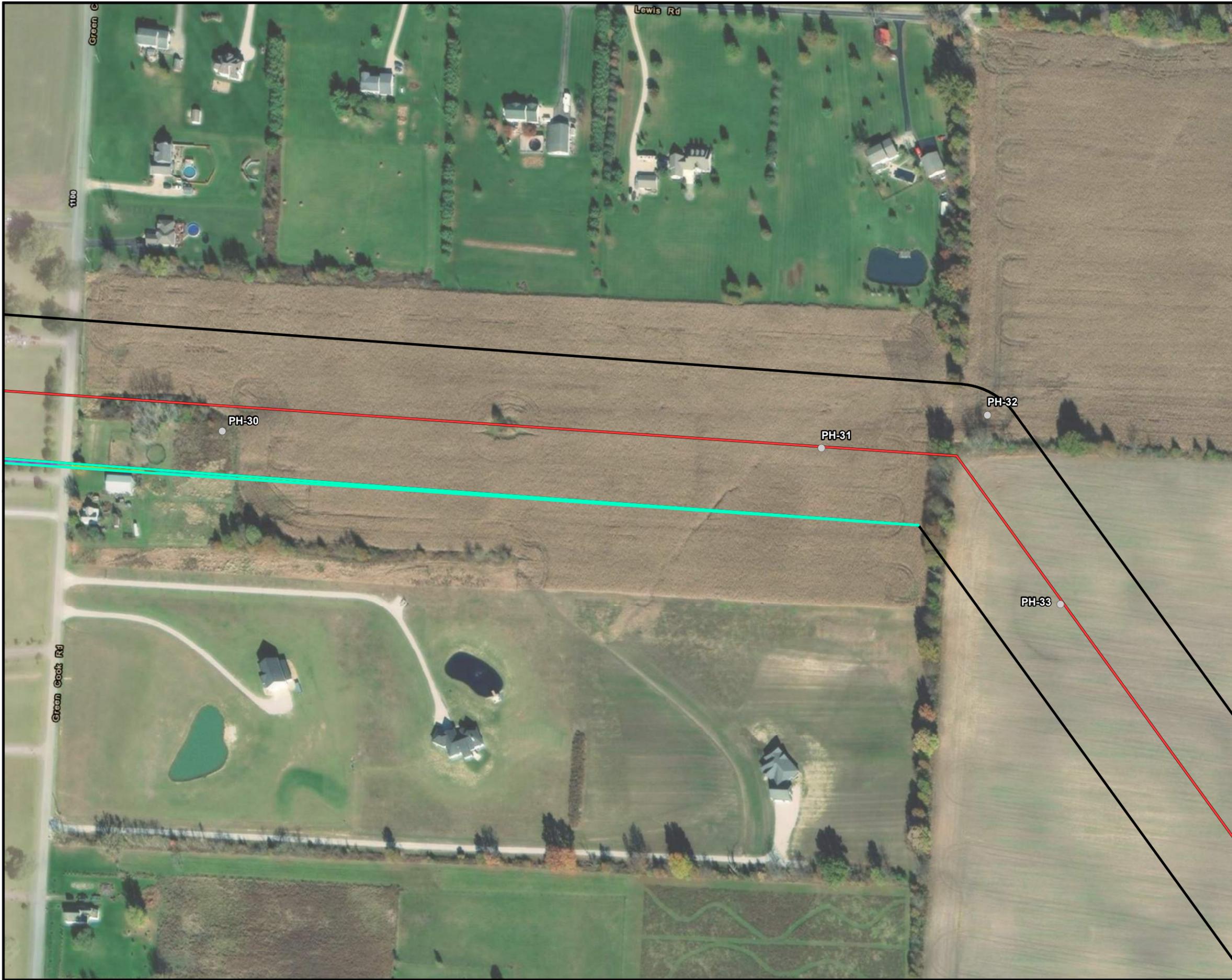
- Agricultural Row-Crop
- Landscaped
- Old Field
- Pasture/Hay Fields
- Wetlands/Streams/Ponds
- Urban
- Woodland



 Vassell - Green Chapel North Project Addendum 1

FIGURE 5
 SHEET 5 OF 13
 VEGETATIVE COMMUNITIES
 ASSESSMENT MAP

DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



Legend

- December 2023 Report Photo
- Vassell - Green Chapel North Route
- ▭ December 2023 Report - Project Survey Area
- ▭ Addendum 1 Project Survey Area

Vegetative Communities Type

- Agricultural Row-Crop
- Landscaped
- Old Field
- Wetlands/Streams/Ponds
- Urban

PH-30 PH-31 PH-32 PH-33

Green Cook Rd Lewis Rd

0 100 200 400
Feet

N

 Vassell - Green Chapel North Project Addendum 1

FIGURE 5 SHEET 6 OF 13 VEGETATIVE COMMUNITIES ASSESSMENT MAP	
DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM

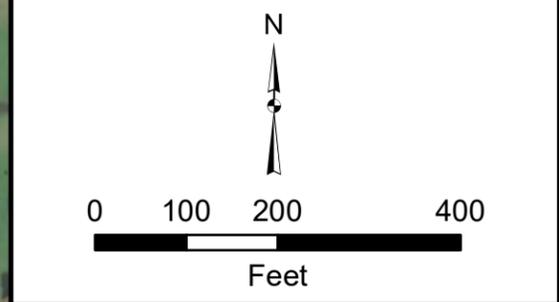


Legend

- December 2023 Report Photo
- Vassell - Green Chapel North Route
- ▭ December 2023 Report - Project Survey Area
- ▭ Addendum 1 Project Survey Area

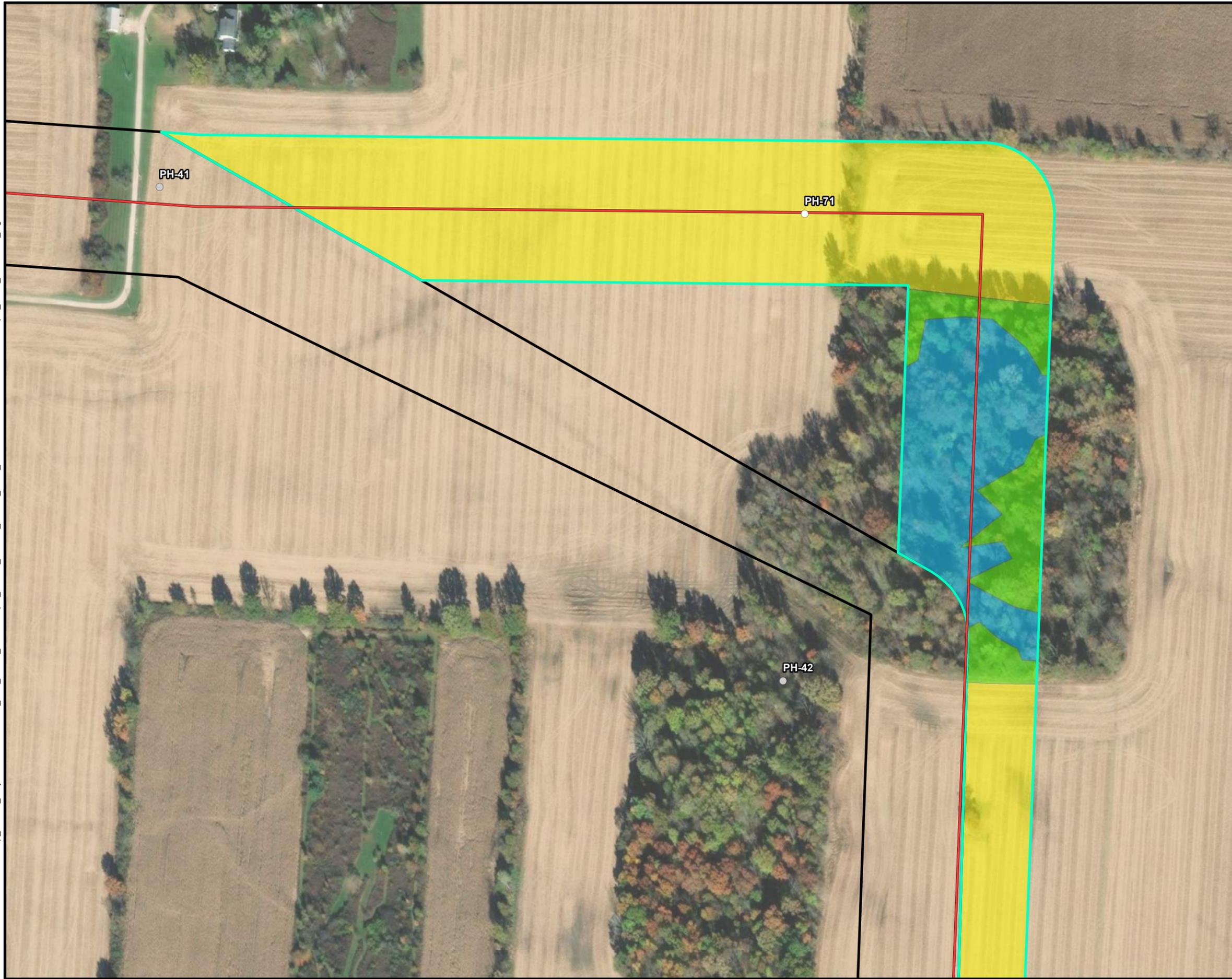
Vegetative Communities Type

- Agricultural Row-Crop
- Scrub/Shrub
- Urban
- Woodland



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 Vassell - Green Chapel North Project Addendum 1

FIGURE 5 SHEET 7 OF 13 VEGETATIVE COMMUNITIES ASSESSMENT MAP	
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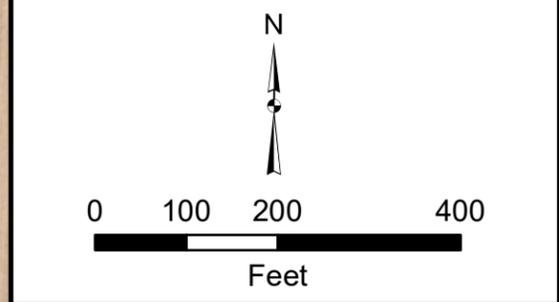


Legend

- Addendum 1 Photo
- December 2023 Report Photo
- Vassell - Green Chapel North Route
- ▭ December 2023 Report - Project Survey Area
- ▭ Addendum 1 Project Survey Area

Vegetative Communities Type

- Agricultural Row-Crop
- Wetlands/Streams/Ponds
- Woodland



 Vassell - Green Chapel North Project Addendum 1

FIGURE 5
 SHEET 8 OF 13
 VEGETATIVE COMMUNITIES
 ASSESSMENT MAP

DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



Legend

- Addendum 1 Photo
- Vassell - Green Chapel North Route
- ▣ December 2023 Report - Project Survey Area
- ▭ Addendum 1 Project Survey Area

Vegetative Communities Type

- Agricultural Row-Crop
- Landscaped
- Urban

N

0 100 200 400

Feet

Vassell - Green Chapel
 North Project
 Addendum 1

FIGURE 5 SHEET 9 OF 13 VEGETATIVE COMMUNITIES ASSESSMENT MAP	
DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



Legend

- December 2023 Report Photo
- Vassell - Green Chapel North Route
- ▭ December 2023 Report - Project Survey Area
- ▭ Addendum 1 Project Survey Area

Vegetative Communities Type

- Agricultural Row-Crop
- Pasture/Hay Fields
- Wetlands/Streams/Ponds
- Woodland

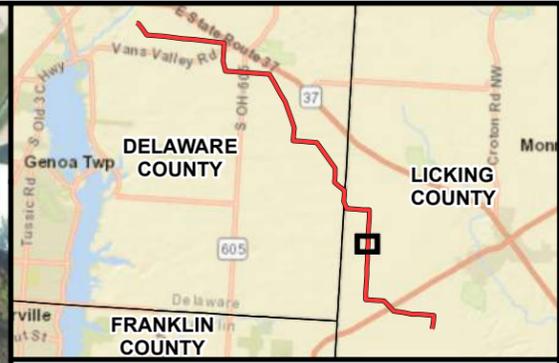
N

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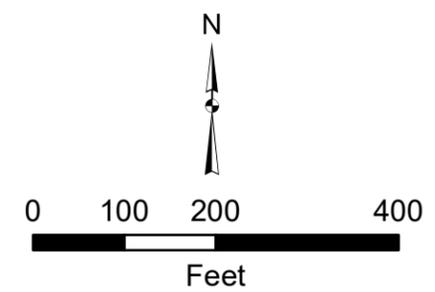
Feet

Vassell - Green Chapel
 North Project
 Addendum 1

FIGURE 5 SHEET 10 OF 13 VEGETATIVE COMMUNITIES ASSESSMENT MAP	
DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



- Legend**
- December 2023 Report Photo
 - Vassell - Green Chapel North Route
 - ▭ December 2023 Report - Project Survey Area
 - ▭ Addendum 1 Project Survey Area
- Vegetative Communities Type**
- Agricultural Row-Crop
 - Wetlands/Streams/Ponds
 - Urban
 - Woodland



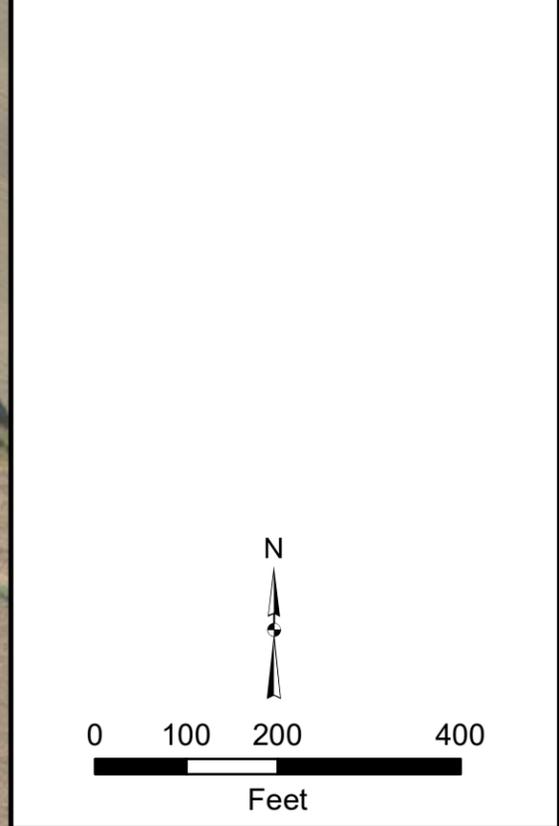
 Vassell - Green Chapel North Project Addendum 1

FIGURE 5
 SHEET 11 OF 13
 VEGETATIVE COMMUNITIES
 ASSESSMENT MAP

DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



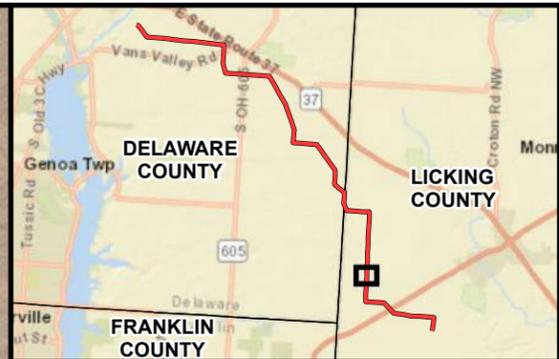
- Legend**
- December 2023 Report Photo
 - Vassell - Green Chapel North Route
 - December 2023 Report - Project Survey Area
 - ▭ Addendum 1 Project Survey Area
- Vegetative Communities Type**
- Agricultural Row-Crop
 - Woodland



 Vassell - Green Chapel North Project Addendum 1

FIGURE 5
 SHEET 12 OF 13
 VEGETATIVE COMMUNITIES
 ASSESSMENT MAP

DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



Legend

- December 2023 Report Photo
- Vassell - Green Chapel North Route
- ▭ December 2023 Report - Project Survey Area
- ▭ Addendum 1 Project Survey Area

Vegetative Communities Type

- ▭ Agricultural Row-Crop

0 100 200 400
Feet

Vassell - Green Chapel
North Project
Addendum 1

FIGURE 5
 SHEET 13 OF 13
 VEGETATIVE COMMUNITIES
 ASSESSMENT MAP

DATE: 2/17/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM

APPENDIX A
WETLAND DATA FORM
AND REPRESENTATIVE PHOTOGRAPHS

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Vassell-Green Chapel City/County: Licking Sampling Date: 25-Jan-24
 Applicant/Owner: AEP State: OH Sampling Point: W-MRK-016 PFO
 Investigator(s): MRK, KRS Section, Township, Range: S 25 T 3N R 15W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): concave
 Slope: 1.0% / 0.6 ° Lat.: 40.13284 Long.: -82.74541 Datum: NAD83
 Soil Map Unit Name: Pe : Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes NWI classification: PEM1C

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: This PFO section of a PEM/PFO wetland complex is located in a depression that is collecting surface runoff. Water drains from the main section of the wetland which is PEM into the PFO edge. The wetland boundary follows edge of depression.	

VEGETATION - Use scientific names of plants.

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				
1. <u>Quercus palustris</u>	40	<input checked="" type="checkbox"/> 100.0%	FACW	Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
	40	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> radius)				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>75</u> x 2 = <u>150</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>80</u> (A) <u>165</u> (B) Prevalence Index = B/A = <u>2.063</u>
1. <u>Quercus palustris</u>	5	<input checked="" type="checkbox"/> 50.0%	FACW	
2. <u>Quercus macrocarpa</u>	5	<input checked="" type="checkbox"/> 50.0%	FAC	
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
	10	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is > 50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Phalaris arundinacea</u>	30	<input checked="" type="checkbox"/> 100.0%	FACW	
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
	30	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation indicators are present. Note: Wetland was extended on 1/25/2024 and vegetation was degraded from seasonal conditions. However, vegetation still had identifiable characteristics and the extension datapoint is representative of the original data collected on 9/14/2023.

SOIL

Sampling Point: **W-MRK-016 PFO**

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				
0-16	10YR	3/1	80	10YR	4/6	20	C	M,PL	Silty Clay Loam	10% oxidized rhizospheres

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	Indicators for Problematic Hydric Soils ³ :
<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"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 Hydric soil indicator is present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	

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

Remarks:
 The source of hydrology is surface runoff. Several primary and secondary hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Enter Project/Site City/County: _____ Sampling Date: 17-Feb-24
 Applicant/Owner: Enter Applicant Owner State: _____ Sampling Point: Enter ID
 Investigator(s): Enter Investigator Section, Township, Range: S _____ T _____ R _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope: 0.0% / 0.0 ° Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: _____	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: _____)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Herb Stratum (Plot size: _____)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
3. _____	0	<input type="checkbox"/> 0.0%		
4. _____	0	<input type="checkbox"/> 0.0%		
5. _____	0	<input type="checkbox"/> 0.0%		
6. _____	0	<input type="checkbox"/> 0.0%		
7. _____	0	<input type="checkbox"/> 0.0%		
8. _____	0	<input type="checkbox"/> 0.0%		
9. _____	0	<input type="checkbox"/> 0.0%		
10. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	0	<input type="checkbox"/> 0.0%		
2. _____	0	<input type="checkbox"/> 0.0%		
0 = Total Cover				

Dominance Test worksheet:

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

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

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

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>0</u>	x 3 =	<u>0</u>
FACU species	<u>0</u>	x 4 =	<u>0</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals:	<u>0</u>	(A)	<u>0</u> (B)

Prevalence Index = B/A = 0.000

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)

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

Hydrophytic Vegetation Present? Yes No

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

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

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Vassell-Green Chapel City/County: Licking Sampling Date: 30-Jan-24
 Applicant/Owner: AEP State: OH Sampling Point: **W-MRK-030 PFO**
 Investigator(s): MRK, KAY Section, Township, Range: S 15 T 3N R 15W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): concave
 Slope: 1.0% / 0.6° Lat.: 40.16161 Long.: -82.74894 Datum: NAD83

Soil Map Unit Name: Pe: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: This PFO section of a PEM/PFO wetland complex is located in a depression surrounding a PEM section. Surface runoff drains out of the PFO section to the south, flows into the PEM, and flows north into another PFO section.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover		Dominant Species? Rel.Strat. Cover	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)					
1. <u>Acer rubrum</u>	30	<input checked="" type="checkbox"/>	50.0%	FAC	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. <u>Acer saccharinum</u>	30	<input checked="" type="checkbox"/>	50.0%	FACW	
3. _____	0	<input type="checkbox"/>	0.0%	_____	
4. _____	0	<input type="checkbox"/>	0.0%	_____	
5. _____	0	<input type="checkbox"/>	0.0%	0	
	60	=	Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)					
1. <u>Ulmus rubra</u>	30	<input checked="" type="checkbox"/>	50.0%	FAC	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>85</u> x 2 = <u>170</u> FAC species <u>115</u> x 3 = <u>345</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>200</u> (A) <u>515</u> (B) Prevalence Index = B/A = <u>2.575</u>
2. <u>Acer rubrum</u>	25	<input checked="" type="checkbox"/>	41.7%	FAC	
3. <u>Lindera benzoin</u>	5	<input type="checkbox"/>	8.3%	FACW	
4. _____	0	<input type="checkbox"/>	0.0%	_____	
5. _____	0	<input type="checkbox"/>	0.0%	_____	
	60	=	Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Phalaris arundinacea</u>	50	<input checked="" type="checkbox"/>	62.5%	FACW	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is > 50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Toxicodendron radicans</u>	30	<input checked="" type="checkbox"/>	37.5%	FAC	
3. _____	0	<input type="checkbox"/>	0.0%	_____	
4. _____	0	<input type="checkbox"/>	0.0%	_____	
5. _____	0	<input type="checkbox"/>	0.0%	_____	
6. _____	0	<input type="checkbox"/>	0.0%	_____	
7. _____	0	<input type="checkbox"/>	0.0%	_____	
8. _____	0	<input type="checkbox"/>	0.0%	_____	
9. _____	0	<input type="checkbox"/>	0.0%	_____	
10. _____	0	<input type="checkbox"/>	0.0%	_____	
	80	=	Total Cover		
Woody Vine Stratum (Plot size: _____)					
1. _____	0	<input type="checkbox"/>	0.0%	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
2. _____	0	<input type="checkbox"/>	0.0%	_____	
	0	=	Total Cover		

Remarks: (Include photo numbers here or on a separate sheet.)
 Vegetation does meet hydrophytic criteria.

¹Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **W-MRK-030 PFO**

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			
0-16	10YR	3/2	80	10YR	4/6	20	C	M	Silty Clay Loam

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<p>Indicators for Problematic Hydric Soils ³:</p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) <p>³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
<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"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Soils meet hydric conditions.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): <u>0</u>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): <u>0</u>	

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

Remarks:
The source of hydrology is surface runoff.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Vassell-Green Chapel City/County: Licking Sampling Date: 30-Jan-24
 Applicant/Owner: AEP State: OH Sampling Point: **W-MRK-030 UPL**
 Investigator(s): MRK, KAY Section, Township, Range: S 15 T 3N R 15W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): flat
 Slope: 1.0% / 0.6 ° Lat.: 40.16054 Long.: -82.74862 Datum: NAD83

Soil Map Unit Name: Pe: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes NWI classification: NA
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Upland data point for W-MRK-030. Upland data was collected within an agricultural field next to the forest edge.	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. _____	0	<input type="checkbox"/> 0.0%	_____	Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
2. _____	0	<input type="checkbox"/> 0.0%	_____	
3. _____	0	<input type="checkbox"/> 0.0%	_____	
4. _____	0	<input type="checkbox"/> 0.0%	_____	
5. _____	0	<input type="checkbox"/> 0.0%	_____	
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u> radius)				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>10</u> x 3 = <u>30</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>100</u> x 5 = <u>500</u> Column Totals: <u>110</u> (A) <u>530</u> (B) Prevalence Index = B/A = <u>4.818</u>
1. _____	0	<input type="checkbox"/> 0.0%	_____	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
3. _____	0	<input type="checkbox"/> 0.0%	_____	
4. _____	0	<input type="checkbox"/> 0.0%	_____	
5. _____	0	<input type="checkbox"/> 0.0%	_____	
0 = Total Cover				
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Zea mays</u>	100	<input checked="" type="checkbox"/> 90.9%	UPL	
2. <u>Setaria pumila</u>	10	<input type="checkbox"/> 9.1%	FAC	
3. _____	0	<input type="checkbox"/> 0.0%	_____	
4. _____	0	<input type="checkbox"/> 0.0%	_____	
5. _____	0	<input type="checkbox"/> 0.0%	_____	
6. _____	0	<input type="checkbox"/> 0.0%	_____	
7. _____	0	<input type="checkbox"/> 0.0%	_____	
8. _____	0	<input type="checkbox"/> 0.0%	_____	
9. _____	0	<input type="checkbox"/> 0.0%	_____	
10. _____	0	<input type="checkbox"/> 0.0%	_____	
110 = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	0	<input type="checkbox"/> 0.0%	_____	
2. _____	0	<input type="checkbox"/> 0.0%	_____	
0 = Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is > 50% <input type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>				

Remarks: (Include photo numbers here or on a separate sheet.)
 Vegetation does not meet hydrophytic criteria.

SOIL

Sampling Point: **W-MRK-030 UPL**

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		
0-16	10YR	3/2	100				Silty Clay Loam	

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	Indicators for Problematic Hydric Soils ³:
<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"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Soils do not meet hydric criteria.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> 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)
	<input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	

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

Remarks:
No source of hydrology was observed.

Version 5.0	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization	
	<table style="width: 100%; border: none;"> <tr> <td style="border: none; vertical-align: top;"> Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet </td> <td style="border: none; vertical-align: middle; padding-left: 20px;"> Ohio EPA, Division of Surface Water Final: February 1, 2001 </td> </tr> </table>	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet
Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001	

Instructions

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

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

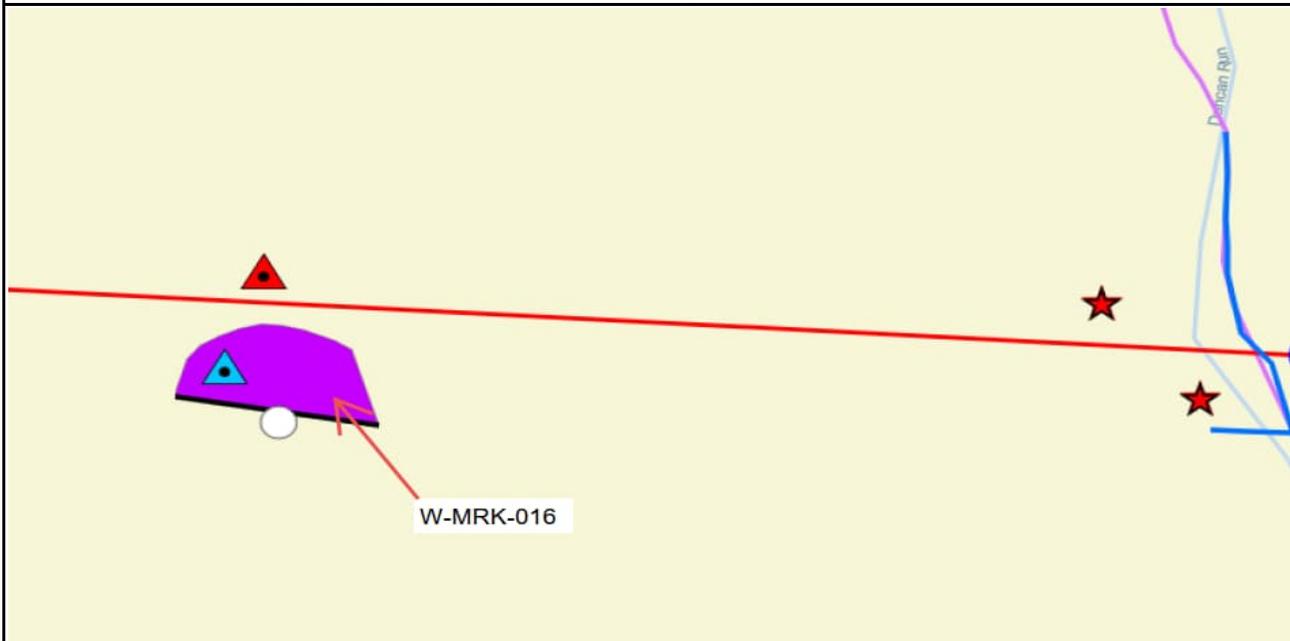
It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To properly answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual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

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

Background Information

Name:	MRK, TW
Date:	1/25/2024
Affiliation:	AECOM
Address:	707 Grant Street, 5th Floor, Pittsburgh, PA 15219
Phone Number:	814-516-1130
e-mail address:	matthew.kline@aecom.com
Name of Wetland:	W-MRK-016
Vegetation Communit(ies):	PEM/PFO
HGM Class(es):	Depressional

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



Lat/Long or UTM Coordinate:	40.132939, -82.745182
USGS Quad Name:	Johnstown
County:	Licking
Township:	3N
Section and Subsection:	15W
Hydrologic Unit Code:	HUC12- 050600011307 Duncan Run
Site Visit:	1/25/2024
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	See Figure 2
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-MRK-016		
Wetland Size (delineated acres):	0.55	Wetland Size (Estimated total acres):	1.80

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



Comments, Narrative Discussion, Justification of Category Changes:

This PEM wetland is located in a depression at the edge of an agricultural field. Depression is collecting surface runoff which drains to the south. Wetland continues outside of the current study area.

Final score:	19	Category:	1
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Wetland ID:	W-MRK-016
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Scoring Boundary Worksheet

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

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		X
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		X

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Wetland ID:	W-MRK-016
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Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <http://www.dnr.state.oh.us/dnap>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	*NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	*NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	*NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	*NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	*NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	*NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	*NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	*NO Go to Question 8b

Wetland ID: W-MRK-016

<p>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?</p>	<p>YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a</p>	<p>*NO Go to Question 9a</p>
<p>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?</p>	<p>YES Go to Question 9b</p>	<p>*NO Go to Question 10</p>
<p>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?</p>	<p>YES Wetland should be evaluated for possible Category 3 status Go to Question 10</p>	<p>*NO Go to Question 9c</p>
<p>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.</p>	<p>YES Go to Question 9d</p>	<p>*NO Go to Question 10</p>
<p>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?</p>	<p>YES Wetland is a Category 3 wetland Go to Question 10</p>	<p>NO Go to Question 9e</p>
<p>9e Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?</p>	<p>YES Wetland should be evaluated for possible Category 3 status Go to Question 10</p>	<p>NO Go to Question 10</p>
<p>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.</p>	<p>YES Wetland is a Category 3 wetland. Go to Question 11</p>	<p>*NO Go to Question 11</p>
<p>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.).</p>	<p>YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating</p>	<p>*NO Complete Quantitative Rating</p>

Wetland ID:	W-MRK-016
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Table 1. Characteristic plant species.				
invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
<i>Lythrum salicaria</i>	<i>Zygadenus elegans</i> var. <i>glaucus</i>	<i>Calla palustris</i>	<i>Carex cryptolepis</i>	<i>Calamagrostis canadensis</i>
<i>Myriophyllum spicatum</i>	<i>Cacalia plantaginea</i>	<i>Carex atlantica</i> var. <i>capillacea</i>	<i>Carex lasiocarpa</i>	<i>Calamagrostis stricta</i>
<i>Najas minor</i>	<i>Carex flava</i>	<i>Carex echinata</i>	<i>Carex stricta</i>	<i>Carex atherodes</i>
<i>Phalaris arundinacea</i>	<i>Carex sterilis</i>	<i>Carex oligosperma</i>	<i>Cladium mariscoides</i>	<i>Carex buxbaumii</i>
<i>Phragmites australis</i>	<i>Carex stricta</i>	<i>Carex trisperma</i>	<i>Calamagrostis stricta</i>	<i>Carex pellita</i>
<i>Potamogeton crispus</i>	<i>Deschampsia caespitosa</i>	<i>Chamaedaphne calyculata</i>	<i>Calamagrostis canadensis</i>	<i>Carex sartwellii</i>
<i>Ranunculus ficaria</i>	<i>Eleocharis rostellata</i>	<i>Decodon verticillatus</i>	<i>Quercus palustris</i>	<i>Gentiana andrewsii</i>
<i>Rhamnus frangula</i>	<i>Eriophorum viridicarinatum</i>	<i>Eriophorum virginicum</i>		<i>Helianthus grosseserratus</i>
<i>Typha angustifolia</i>	<i>Gentianopsis</i> spp.	<i>Larix laricina</i>		<i>Liatris spicata</i>
<i>Typha xglauca</i>	<i>Lobelia kalmii</i>	<i>Nemopanthus mucronatus</i>		<i>Lysimachia quadriflora</i>
	<i>Parnassia glauca</i>	<i>Scheuchzeria palustris</i>		<i>Lythrum alatum</i>
	<i>Potentilla fruticosa</i>	<i>Sphagnum</i> spp.		<i>Pycnanthemum virginianum</i>
	<i>Rhamnus alnifolia</i>	<i>Vaccinium macrocarpon</i>		<i>Silphium terebinthinaceum</i>
	<i>Rhynchospora capillacea</i>	<i>Vaccinium corymbosum</i>		<i>Sorghastrum nutans</i>
	<i>Salix candida</i>	<i>Vaccinium oxycoccos</i>		<i>Spartina pectinata</i>
	<i>Salix myricoides</i>	<i>Woodwardia virginica</i>		<i>Solidago riddellii</i>
	<i>Salix serissima</i>	<i>Xyris difformis</i>		
	<i>Solidago ohioensis</i>			
	<i>Tofieldia glutinosa</i>			
	<i>Triglochin maritimum</i>			
	<i>Triglochin palustre</i>			

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

Wetland ID: W-MRK-016

Site: Vassell-Green Chapel Rater(s): MRK, TW Date: 1/25/2024

2.0 2.0

Metric 1. Wetland Area (size).

Field ID: W-MRK-016 PEM/PFO

max 6 pts subtotal

- Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) x 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)

Table with 2 columns: Delineated acres (0.55), Total acres (1.80)

3.0 5.0

Metric 2. Upland buffers and surrounding land use.

max 14 pts subtotal

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

8.0 13.0

Metric 3. Hydrology.

max 30 pts subtotal

- 3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) x Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) x <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (12) Recovered (7) x Recovering (3) Recent or no recovery (1)

- 3b. Connectivity. Score all that apply. 100 year floodplain (1) Between stream/lake and other human use (1) x Part of wetland/upland (e.g. forest), complex (1) Part of riparian or upland corridor (1) 3d. Duration inundation/saturation. Score one or dbl check. Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) x Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1) Check all disturbances observed ditch x tile dike weir stormwater input point source (nonstormwater) filling/grading road bed/RR track dredging Other:

8.0 21.0

Metric 4. Habitat Alteration and Development.

max 20 pts subtotal

- 4a. Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) x Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) x 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) x Recovering (3) Recent or no recovery (1) Check all disturbances observed mowing grazing clearcutting selective cutting woody debris removal toxic pollutants shrub/sapling removal herbaceous/aquatic bed removal x sedimentation dredging x farming nutrient enrichment

21.0

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID: W-MRK-016

Site: Vassell-Green Chapel Rater(s): MRK, TW Date: 1/25/2024

21.0 subtotal this page

Field ID: W-MRK-016 PEM/PFO

0.0 21.0 max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-2.0 19.0 max 20pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed 1 Emergent Shrub 1 Forest Mudflats Open water Other

6b. horizontal (plan view) Interspersion.

Select only one.

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

6c. Coverage of invasive plants. Refer

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

- 0 Vegetated 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 1 vegetation and is of moderate quality, or comprises a significant part but is of low quality 2 Present and either comprises significant part of wetland's 2 vegetation and is of moderate quality or comprises a small part and is of high quality 3 Present and comprises significant part, or more, of wetland's 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

19.0 TOTAL (Max 100 pts) 1 Category

Wetland ID:	W-MRK-016
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ORAM Summary Worksheet

		Circle answer or insert score		Result
Narrative Rating	Question 1. Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
Question 10. Oak Openings	YES	*NO	If yes, Category 3	
Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	2		
	Metric 2. Buffers and surrounding land use	3		
	Metric 3. Hydrology	8		
	Metric 4. Habitat	8		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	-2		
	TOTAL SCORE	19		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	W-MRK-016
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	*YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	*NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	*Category 1	Category 2	Category 3
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End of Ohio Rapid Assessment Method for Wetlands.

Version 5.0	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization
	<div style="display: flex; justify-content: space-between;"> <div style="width: 70%;"> <p>Background Information Scoring</p> <p>Boundary Worksheet Narrative Rating</p> <p>Field Form Quantitative Rating</p> <p>ORAM Summary Worksheet</p> <p>Wetland Categorization Worksheet</p> </div> <div style="width: 25%; text-align: right; vertical-align: top;"> <p>Ohio EPA, Division of Surface Water Final: February 1, 2001</p> </div> </div>

Instructions

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

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

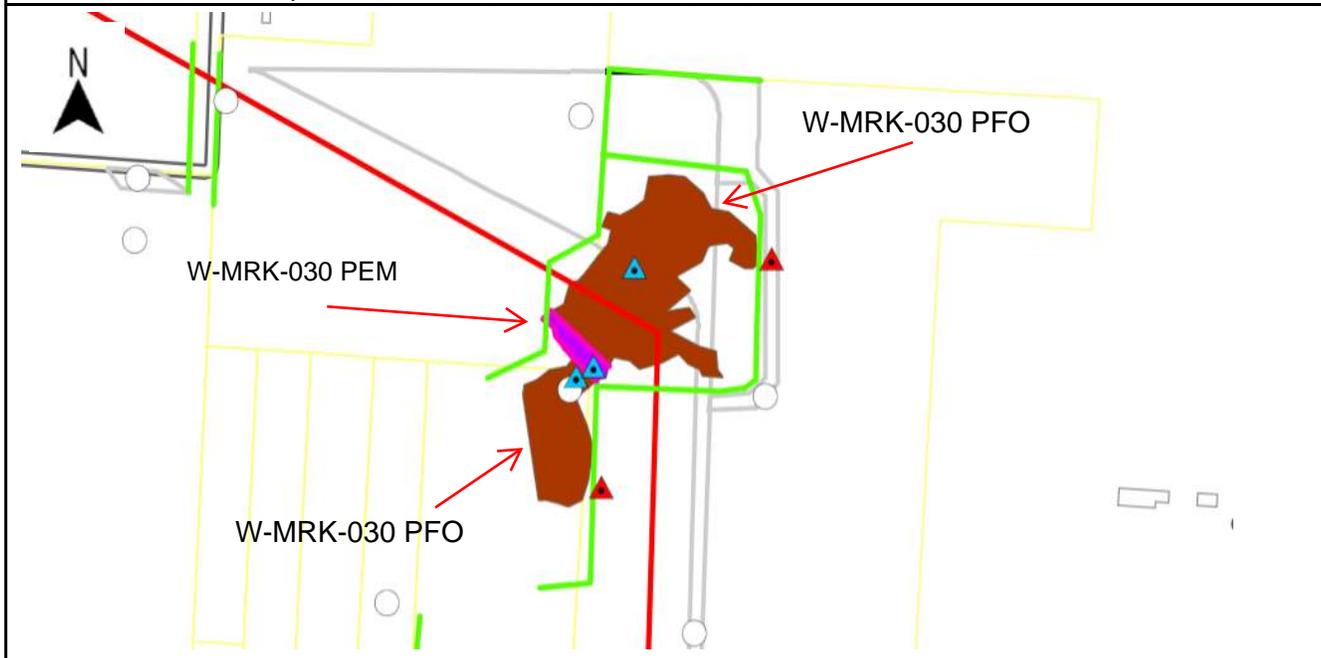
It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To properly answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual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

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

Background Information

Name:	MRK, KRS
Date:	9/13/2023
Affiliation:	AECOM
Address:	707 Grant Street, 5th Floor, Pittsburgh, PA 15219
Phone Number:	814-516-1130
e-mail address:	matthew.kline@aecom.com
Name of Wetland:	W-MRK-030
Vegetation Communit(ies):	PEM/PFO
HGM Class(es):	DEPRESSION

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



Lat/Long or UTM Coordinate:	PEM: 40.16174, -82.74871 and PFO: 40.16161, -82.74894
USGS Quad Name:	Johnstown
County:	Licking
Township:	Monroe
Section and Subsection:	S15 T3N R15W
Hydrologic Unit Code:	050600011307 - Duncan Run
Site Visit:	9/13/2023
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	See Figure 2
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-MRK-030		
Wetland Size (delineated acres):	8.92	Wetland Size (Estimated total a	<10 acres

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



Comments, Narrative Discussion, Justification of Category Changes:

This PFO section of a PEM/PFO wetland complex is located in a depression surrounding a PEM section. Surface runoff drains out of the PFO section to the south, flows into the PEM, and flows north into another PFO section.

Final score:	45	Category:	2
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Wetland ID:	W-MRK-030
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Scoring Boundary Worksheet

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

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	X	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		X

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Wetland ID: W-MRK-030

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <http://www.dnr.state.oh.us/dnap>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	*NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	*NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	*NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	*NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	*NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	*NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	*NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	*NO Go to Question 8b

Wetland ID: W-MRK-030

8b Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	*NO Go to Question 9a
9a Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	*NO Go to Question 10
9b Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
9c Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 10
9d Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10 Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	*NO Go to Question 11
11 Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	*NO Complete Quantitative Rating

Wetland ID: W-MRK-030

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 viridicarinatum</i>	<i>Eriophorum virginicum</i>		<i>Helianthus grosseserratus</i>
<i>Typha angustifolia</i>	<i>Gentianopsis</i> spp.	<i>Larix laricina</i>		<i>Liatris spicata</i>
<i>Typha xglauca</i>	<i>Lobelia kalmii</i>	<i>Nemopanthus mucronatus</i>		<i>Lysimachia quadriflora</i>
	<i>Parnassia glauca</i>	<i>Scheuchzeria palustris</i>		<i>Lythrum alatum</i>
	<i>Potentilla fruticosa</i>	<i>Sphagnum</i> spp.		<i>Pycnanthemum virginianum</i>
	<i>Rhamnus alnifolia</i>	<i>Vaccinium macrocarpon</i>		<i>Silphium terebinthinaceum</i>
	<i>Rhynchospora capillacea</i>	<i>Vaccinium corymbosum</i>		<i>Sorghastrum nutans</i>
	<i>Salix candida</i>	<i>Vaccinium oxycoccos</i>		<i>Spartina pectinata</i>
	<i>Salix myricoides</i>	<i>Woodwardia virginica</i>		<i>Solidago riddellii</i>
	<i>Salix serissima</i>	<i>Xyris difformis</i>		
	<i>Solidago ohioensis</i>			
	<i>Tofieldia glutinosa</i>			
	<i>Triglochin maritimum</i>			
	<i>Triglochin palustre</i>			

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

Wetland ID: W-MRK-030

Site: Vassell-Green Chapel **Rater(s):** MRK, KRS **Date:** 9/13/2023

3.0 **3.0**
max 6 pts subtotal

Metric 1. Wetland Area (size).

- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

Field ID:
W-MRK-030 PEM/PFO

Delineated acres:	8.92
Total acres:	<10 acres

6.0 **9.0**
max 14 pts. subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

12.0 **21.0**
max 30 pts. subtotal

Metric 3. Hydrology.

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

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

3c. Maximum water depth. Select one.

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input 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 type="checkbox"/> stormwater input | <input type="checkbox"/> Other: |

12.0 **33.0**
max 20 pts. subtotal

Metric 4. Habitat Alteration and Development.

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

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

4b. Habitat development. Select 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 checked="" type="checkbox"/> mowing | <input type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input checked="" type="checkbox"/> sedimentation |
| <input type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input type="checkbox"/> woody debris removal | <input checked="" type="checkbox"/> farming |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

33.0
subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID: W-MRK-030

Site: Vassell-Green Chapel Rater(s): MRK, KRS Date: 9/13/2023

33.0 subtotal this page

Field ID: W-MRK-030 PEM/PFO

0.0 33.0 max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

12.0 45.0 max 20pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
1 Emergent
Shrub
2 Forest
Mudflats
Open water
Other

6b. horizontal (plan view) Interspersions.

Select only one.

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

6c. Coverage of invasive plants. Refer

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

- Extensive >75% cover (-5)
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
2 Coarse woody debris >15cm (6in)
1 Standing dead >25cm (10in) dbh
2 Amphibian breeding pools

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

45.0 TOTAL (Max 100 pts)
2 Category

Wetland ID: W-MRK-030

ORAM Summary Worksheet

		Circle answer or insert score		Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
Question 10. Oak Openings	YES	*NO	If yes, Category 3	
Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	3		
	Metric 2. Buffers and surrounding land use	6		
	Metric 3. Hydrology	12		
	Metric 4. Habitat	12		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	12		
	TOTAL SCORE	45		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	W-MRK-030
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	*YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall within the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	*NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	Category 1	*Category 2	Category 3
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End of Ohio Rapid Assessment Method for Wetlands.

Client Name: AEP	Site Location: Vassell – Green Chapel North Project (Addendum #1)	Project No.: 60702685
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W-MRK-030	
Date: January 30, 2024	
Description: Wetland Data Point PFO Facing North	

W-MRK-030	
Date: January 30, 2024	
Description: Wetland Data Point PFO Facing East	

Client Name: AEP	Site Location: Vassell – Green Chapel North Project (Addendum #1)	Project No.: 60702685
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W-MRK-030	
Date: January 30, 2024	
Description: Wetland Data Point PFO Facing South	

W-MRK-030	
Date: January 30, 2024	
Description: Wetland Data Point PFO Facing West	

Client Name: AEP	Site Location: Vassell – Green Chapel North Project (Addendum #1)	Project No.: 60702685
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W-MRK-030
Date: January 30, 2024
Description: Wetland Data Point PFO Facing Soil



W-MRK-016
Date: September 14, 2023
Description: Wetland Data Point PFO Facing North (Photograph from Original Report – Extended on 1/25/2024)



Client Name: AEP	Site Location: Vassell – Green Chapel North Project (Addendum #1)	Project No. 60702685
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W-MRK-016

Date:
September 14, 2023

Description:
Wetland Data Point
PFO
Facing East

(Photograph from
Original Report –
Extended on 1/25/2024)



W-MRK-016

Date:
September 14, 2023

Description:
Wetland Data Point
PFO
Facing South

(Photograph from
Original Report –
Extended on 1/25/2024)



Client Name: AEP	Site Location: Vassell – Green Chapel North Project (Addendum #1)	Project No.: 60702685
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W-MRK-016

Date:
September 14, 2023

Description:
Wetland Data Point
PFO
Facing West

(Photograph from
Original Report –
Extended on 1/25/2024)



W-MRK-016

Date:
September 14, 2023

Description:
Wetland Data Point
PFO
Facing Soil

(Photograph from
Original Report –
Extended on 1/25/2024)



APPENDIX B
HABITAT PHOTOGRAPHIC RECORD

Client Name: AEP	Site Location: Vassell - Green Chapel North Project – Addendum #1	Project No. 60702685
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PH-69
Date: January 25, 2024
Description: Agricultural Row Crop Facing North



PH-70
Date: January 30, 2024
Description: Agricultural Row Crop Facing East



Client Name: AEP	Site Location: Vassell - Green Chapel North Project – Addendum #1	Project No. 60702685
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PH-71

Date:
January 30, 2024

Description:
Agricultural Row Crop
Facing West



PH-72

Date:
September 26, 2023

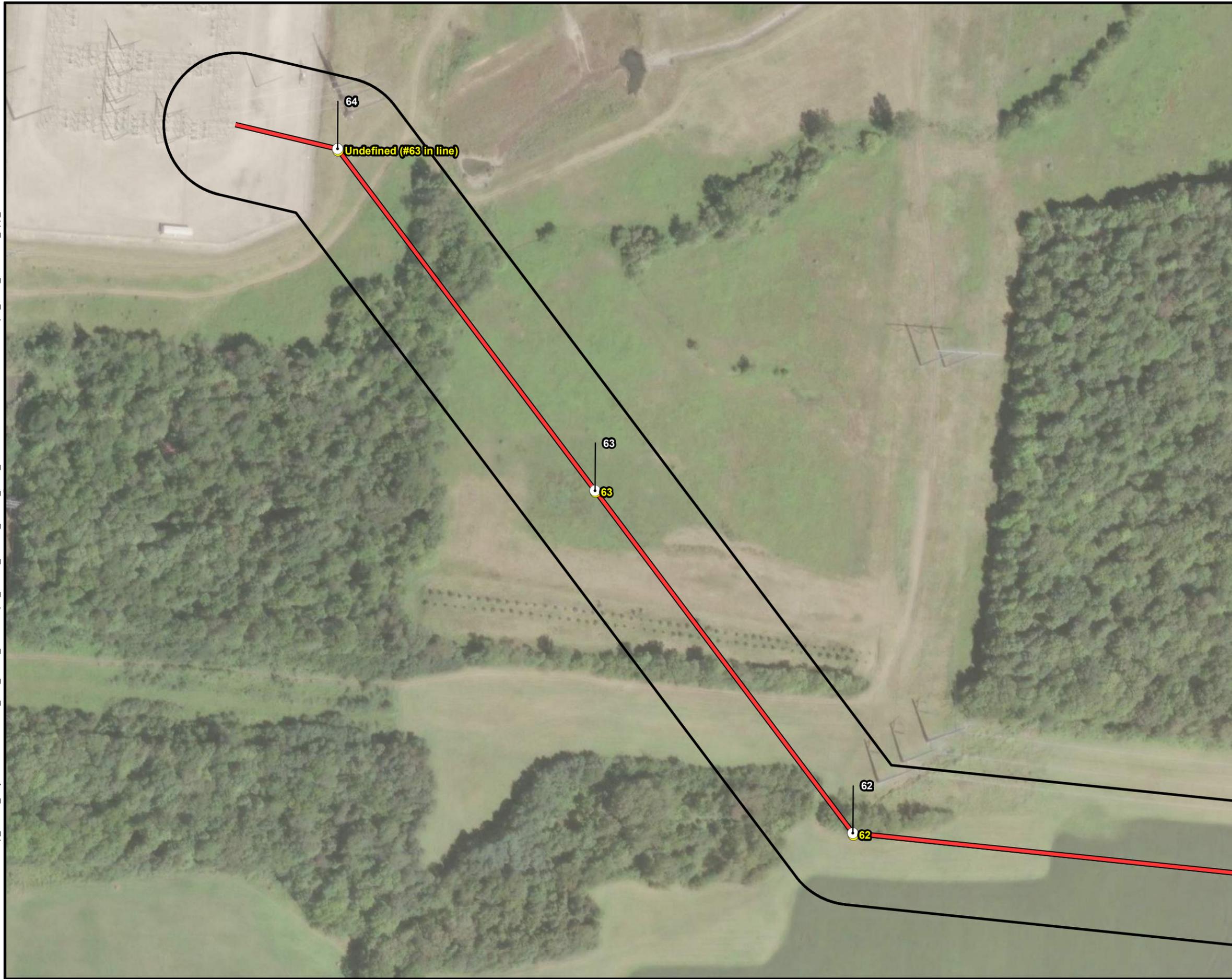
Description:
Agricultural Row Crop
Facing South



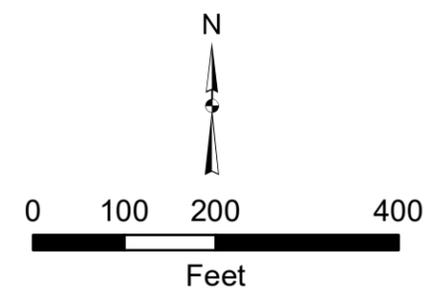
APPENDIX C

DECEMBER 2023 – ORIGINAL REPORT AND ADDENDUM #1 COMPARISON MAP

Date Saved: 2/18/2024
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- Legend**
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - ▭ December 2023 Report - Project Survey Area (Completed)



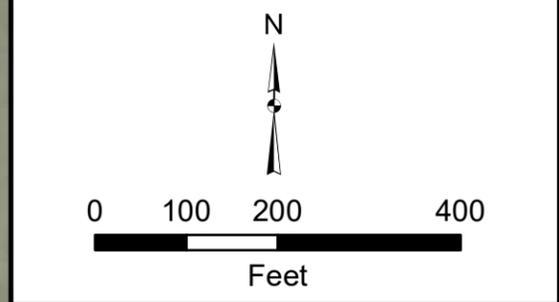
 Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 1 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM

Date Saved: 2/18/2024
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- ### Legend
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - ▭ December 2023 Report - Project Survey Area (Completed)



 Vassell - Green Chapel North Project Addendum 1

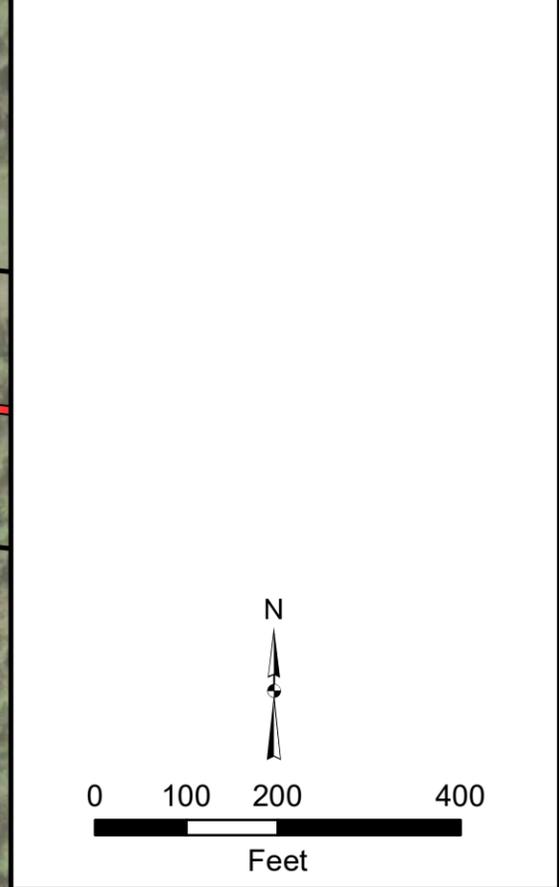
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SHEET 2 OF 29
DECEMBER 2023 - ORIGINAL REPORT AND
ADDENDUM #1 ECOLOGICAL REPORT

DATE: 2/18/2024	1 INCH = 200 FEET
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JOB NO.: 60702685	AECOM

Date Saved: 2/18/2024
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- Legend**
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 - Vassell - Green Chapel North Route (Addendum 1)
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 Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 3 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
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JOB NO.: 60702685	AECOM

Date Saved: 2/18/2024
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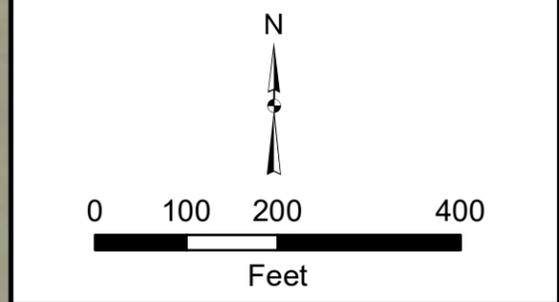


Legend

- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)

AECOM_Wetlands
Cowardin, Report

- Previously Delineated PFO Wetland



Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 4 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
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JOB NO.: 60702685	AECOM

Date Saved: 2/18/2024
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- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)
- Addendum 1 Project Survey Area

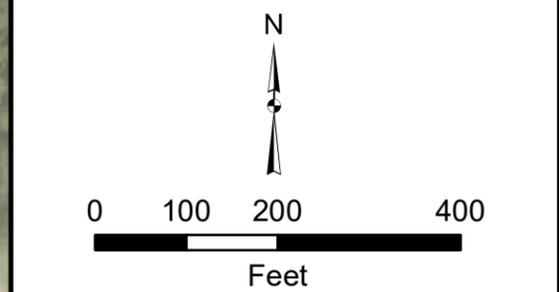
AECOM_DataPoints

- ▲ Previous Wetland Data Point

AECOM_Wetlands

Cowardin, Report

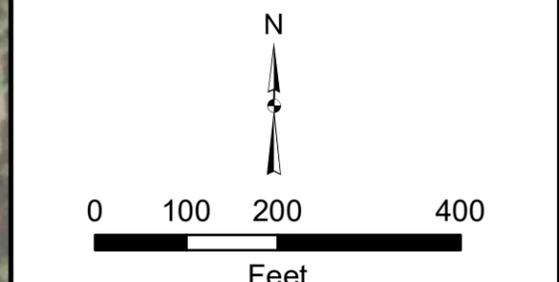
- Previously Delineated PFO Wetland
- Previously Delineated PSS Wetland



Vassell - Green Chapel North Project Addendum 1	
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DATE: 2/18/2024	1 INCH = 200 FEET
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JOB NO.: 60702685	AECOM



- Legend**
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - December 2023 Report - Project Survey Area (Completed)
 - Addendum 1 Project Survey Area
- AECOM_DataPoints**
- Cowardin Classification, Report**
- ▲ Previous Wetland Data Point
 - ▲ Previous Upland Data Point
- AECOM_Wetlands**
- Cowardin, Report**
- Previously Delineated PFO Wetland



Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 6 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
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JOB NO.: 60702685	AECOM



Legend

- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)
- Addendum 1 Project Survey Area

AECOM_DataPoints

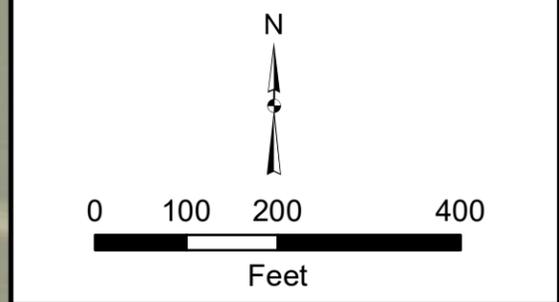
Cowardin Classification, Report

- ▲ Previous Wetland Data Point
- ▲ Previous Upland Data Point

AECOM_Wetlands

Cowardin, Report

- Previously Delineated PFO Wetland

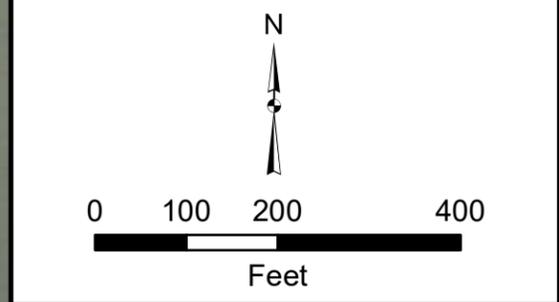


Vassell - Green Chapel North Project Addendum 1

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JOB NO.: 60702685	AECOM



- Legend**
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - December 2023 Report - Project Survey Area (Completed)



Vassell - Green Chapel
 North Project
 Addendum 1

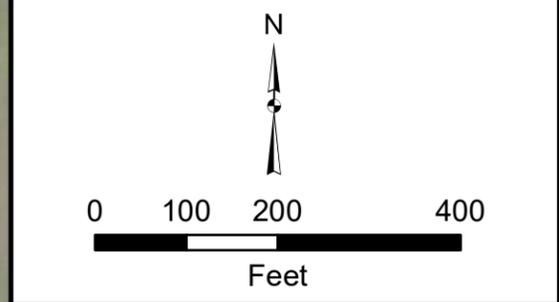
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JOB NO.: 60702685	AECOM

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Legend

- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- ▭ December 2023 Report - Project Survey Area (Completed)



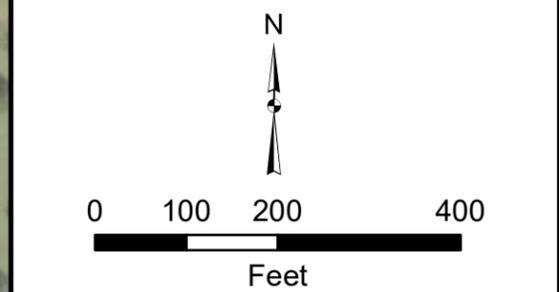
 Vassell - Green Chapel North Project Addendum 1

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Legend

- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)
- Culvert



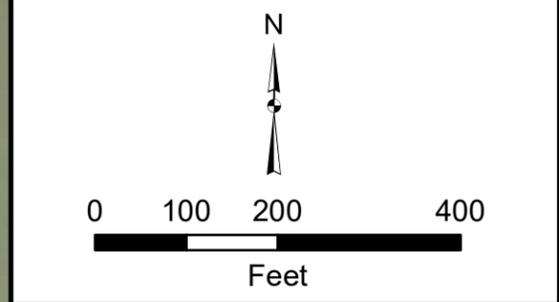
Vassell - Green Chapel North Project Addendum 1

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JOB NO.: 60702685	AECOM



Legend

- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)
- Addendum 1 Project Survey Area




 Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 11 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
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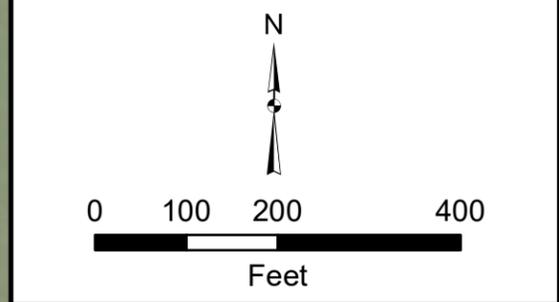
- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)
- Addendum 1 Project Survey Area
- Culvert

Delineated Upland Drainage Feature Report

- Previously Delineated Upland Drainage Feature

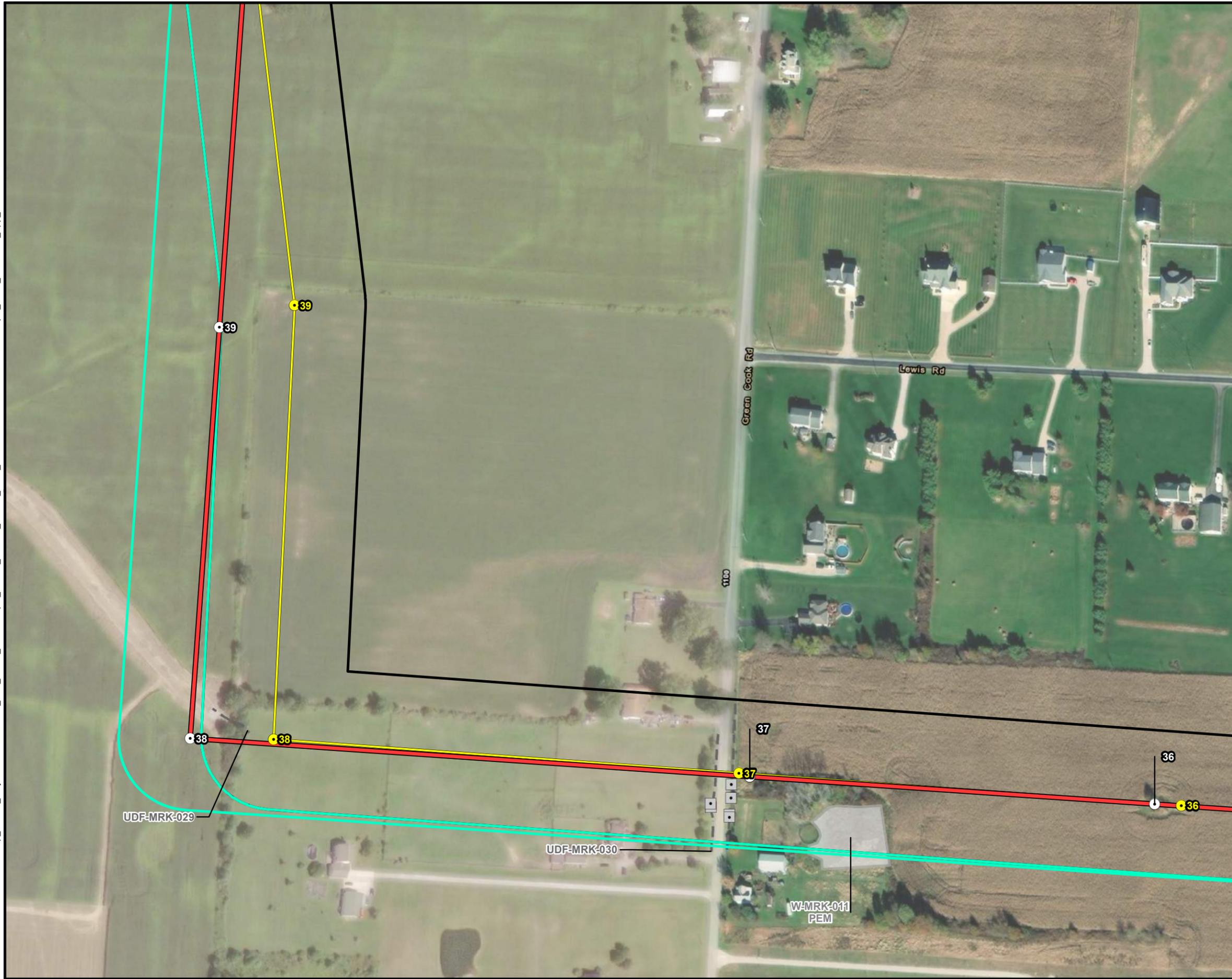
AECOM_Wetlands Cowardin, Report

- Previously Delineated PFO Wetland



Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 12 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



Legend

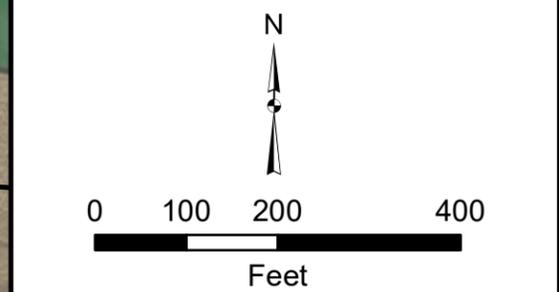
- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)
- Addendum 1 Project Survey Area
- Culvert

Delineated Upland Drainage Feature Report

- Upland Drainage Feature
- Previously Delineated Upland Drainage Feature

AECOM Wetlands Cowardin, Report

- Previously Delineated PEM Wetland



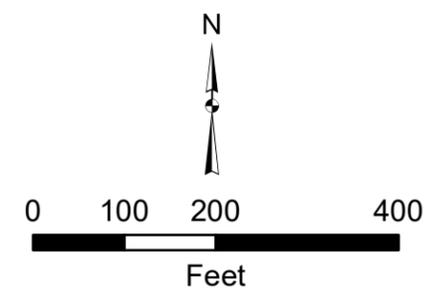
Vassell - Green Chapel North Project Addendum 1	
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JOB NO.: 60702685	AECOM

Date Saved: 2/18/2024
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Legend

- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- ▭ December 2023 Report - Project Survey Area (Completed)
- ▭ Addendum 1 Project Survey Area



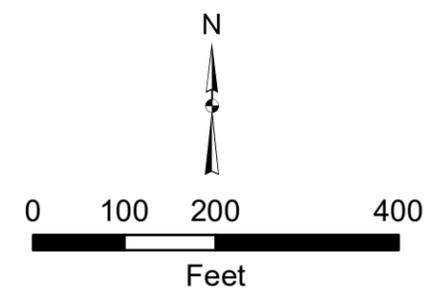
 Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 14 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
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JOB NO.: 60702685	AECOM



Legend

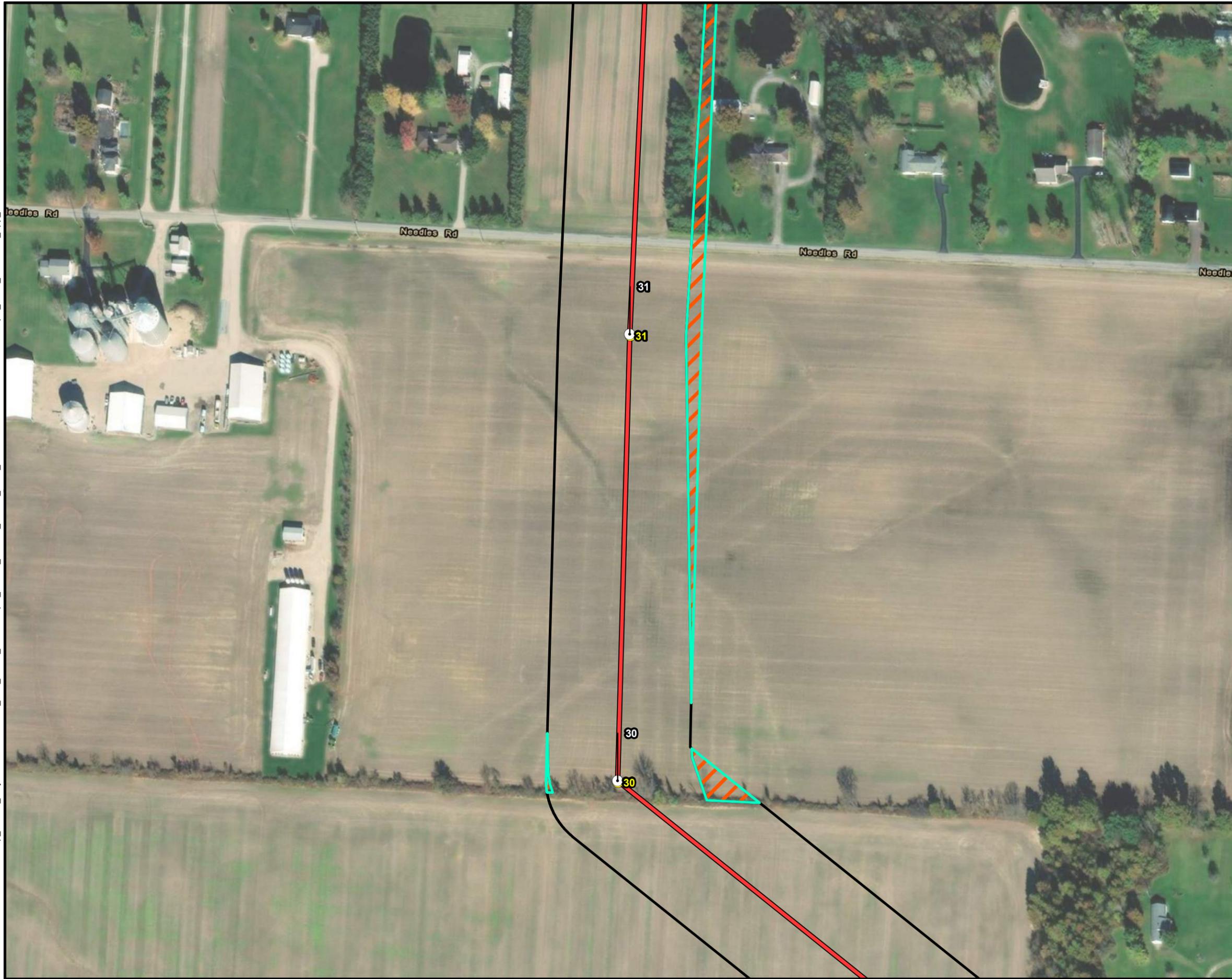
- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)
- Addendum 1 Project Survey Area
- December 2023 Report - Area Not Surveyed due to Landowner Permissions



Vassell - Green Chapel North Project Addendum 1

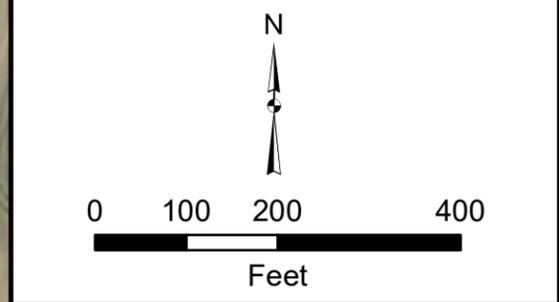
APPENDIX C SHEET 15 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM

Date Saved: 2/18/2024
Document Path: X:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\60702685_AEP_Vassel_GreenChapel_North12_MXD\12_MXD\12_North_Route\Addendum 1\VassellGreenChapel_North_WDRAdd1_App_C.mxd



Legend

- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- ▭ December 2023 Report - Project Survey Area (Completed)
- ▭ Addendum 1 Project Survey Area
- ▨ December 2023 Report - Area Not Surveyed due to Landowner Permissions

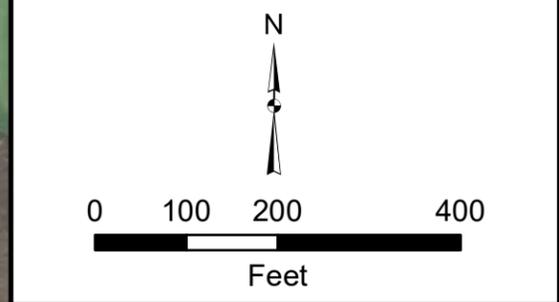


 Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 16 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



- Legend**
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - December 2023 Report - Project Survey Area (Completed)
 - Culvert



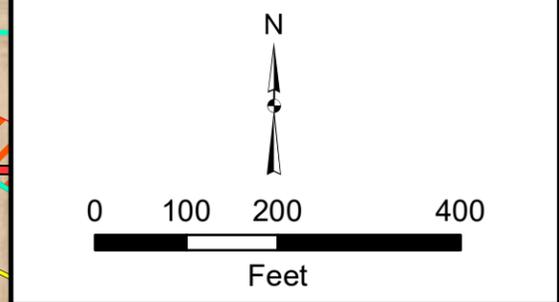

 Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 17 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM

Date Saved: 2/18/2024
Document Path: X:\DCS\GIS\ArctMap_GeoDB_Projects\ENV\60702685_AEP_Vassel_GreenChapel_North12_MXD\1_WDR\0_North_Route\Addendum 1\VassellGreenChapel_North_WDRAdd1_App_C.mxd

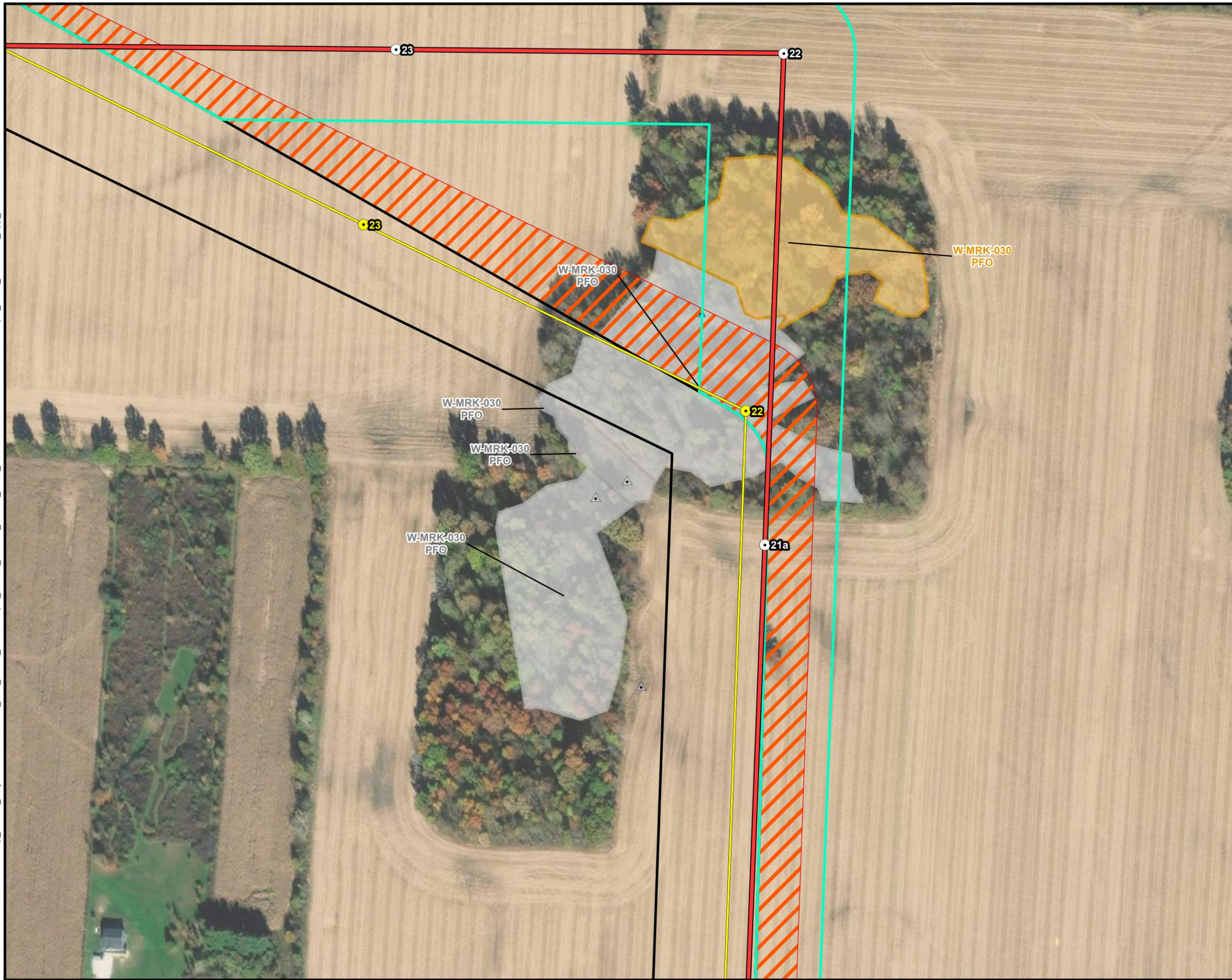


- ### Legend
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - ▭ December 2023 Report - Project Survey Area (Completed)
 - ▭ Addendum 1 Project Survey Area
 - ▨ December 2023 Report - Area Not Surveyed due to Landowner Permissions
 - Culvert



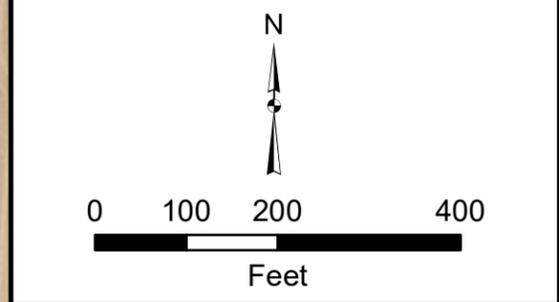
 Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 18 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



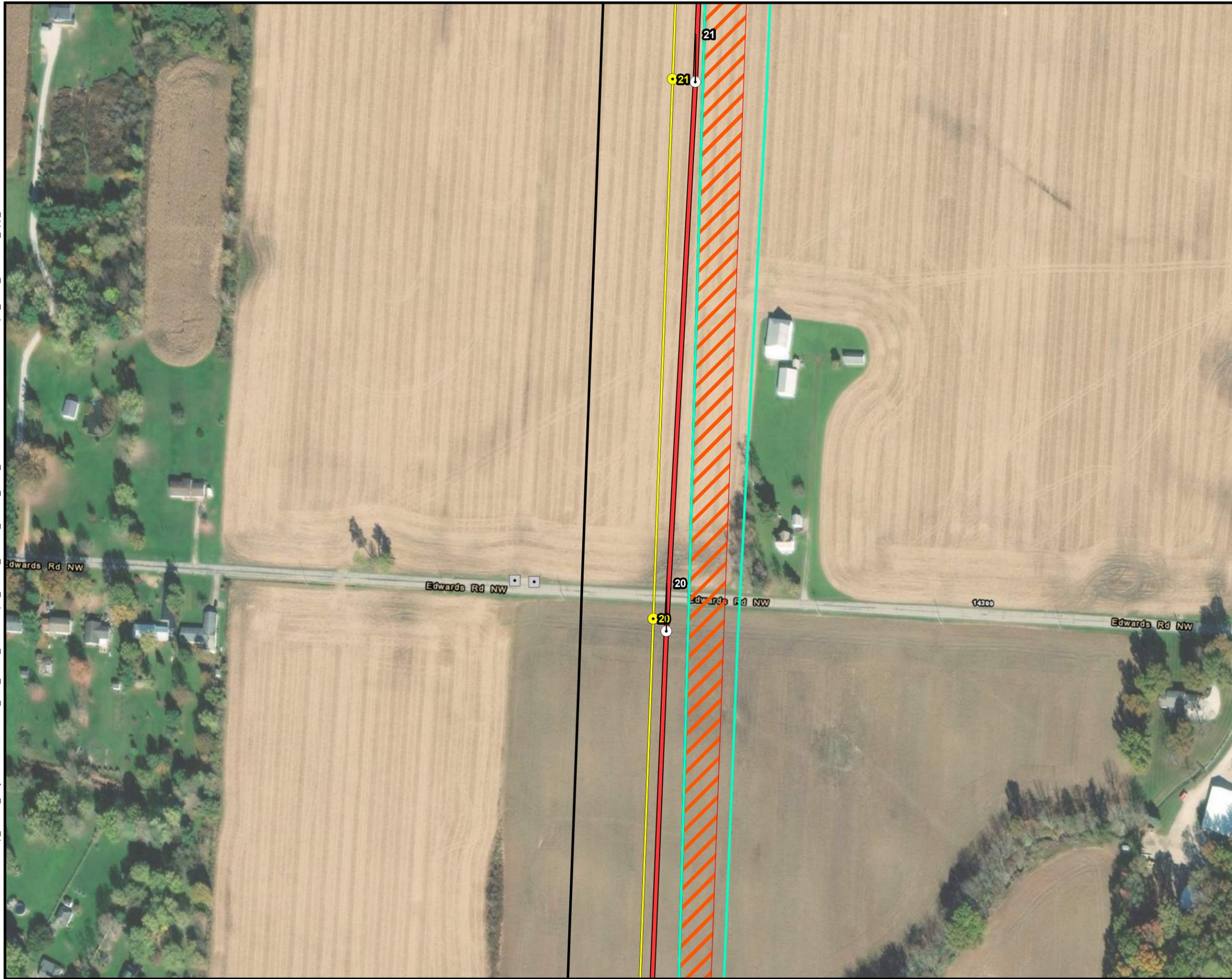
- Legend**
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - December 2023 Report - Project Survey Area (Completed)
 - Addendum 1 Project Survey Area
 - December 2023 Report - Area Not Surveyed due to Landowner Permissions

- AECOM_DataPoints**
- Cowardin Classification, Report**
- ▲ Previous Wetland Data Point
 - ▲ Wetland Data Point
 - ▲ Previous Upland Data Point
- AECOM_Wetlands**
- Cowardin, Report**
- Delineated PFO Wetland
 - Previously Delineated PEM Wetland
 - Previously Delineated PFO Wetland

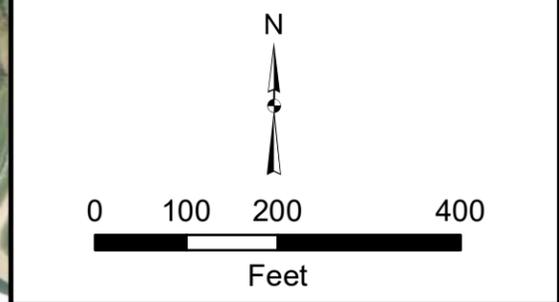


Vassel - Green Chapel North Project Addendum 1

APPENDIX C SHEET 19 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



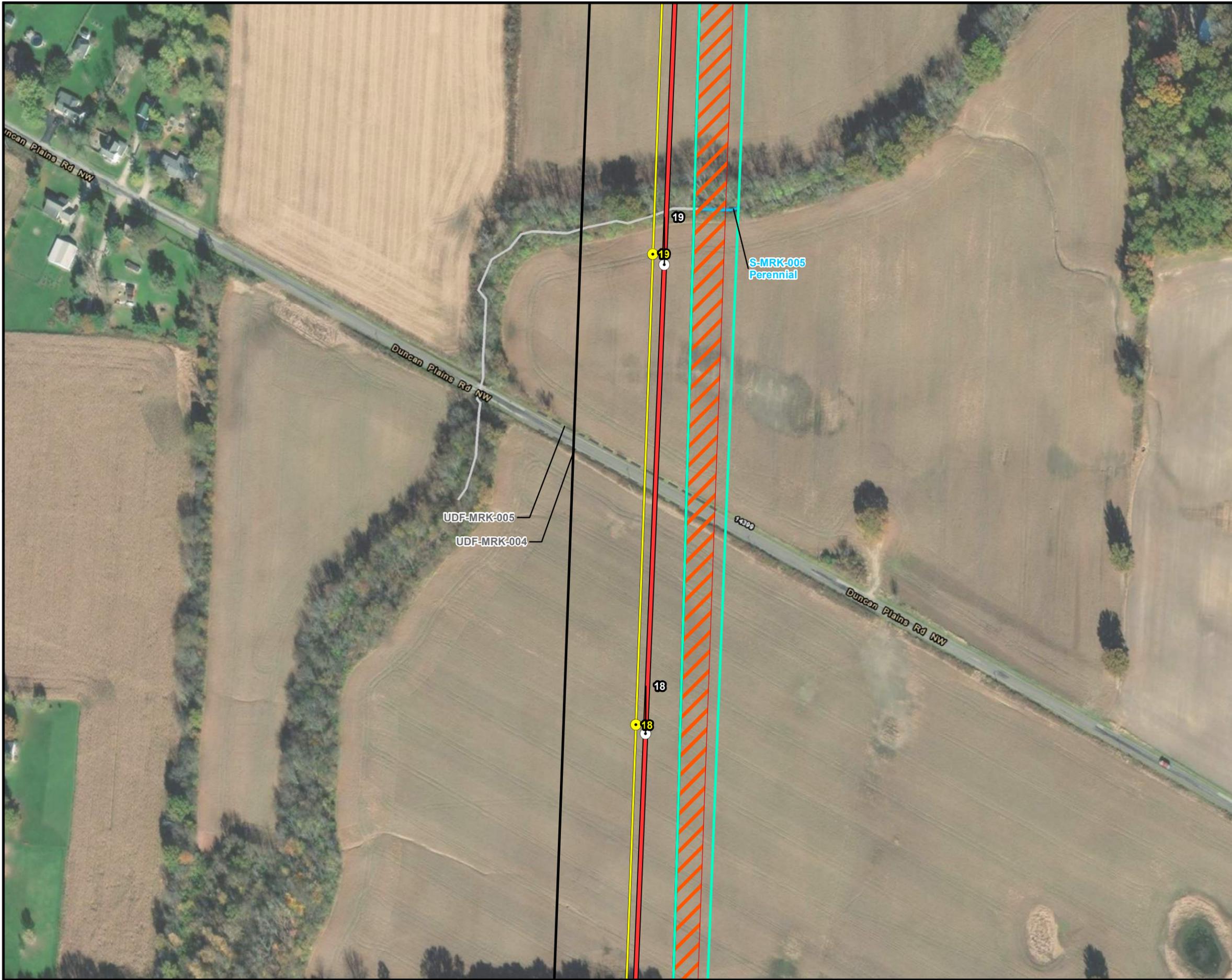
- Legend**
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - December 2023 Report - Project Survey Area (Completed)
 - Addendum 1 Project Survey Area
 - December 2023 Report - Area Not Surveyed due to Landowner Permissions
 - Culvert



Vassel - Green Chapel North Project Addendum 1

APPENDIX C
 SHEET 20 OF 29
 DECEMBER 2023 - ORIGINAL REPORT AND
 ADDENDUM #1 ECOLOGICAL REPORT

DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



Legend

- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)
- Addendum 1 Project Survey Area
- December 2023 Report - Area Not Surveyed due to Landowner Permissions

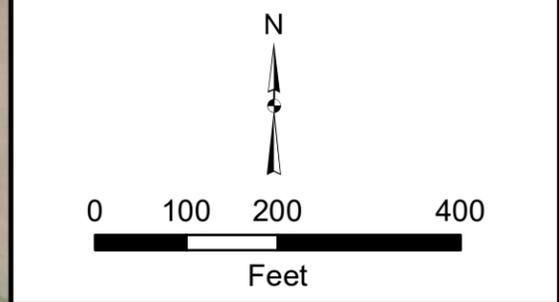
Delineated Upland Drainage Feature Report

- Previously Delineated Upland Drainage Feature

AECOM Streams

Flow Type, Report

- Delineated Perennial Stream
- Previously Delineated Perennial Stream

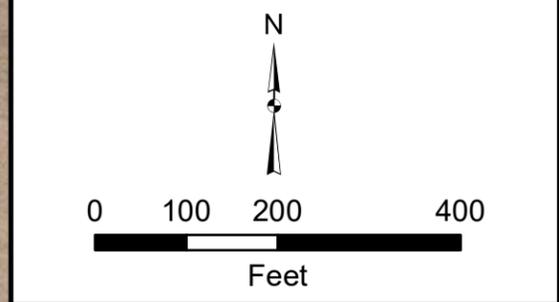


Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 21 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM

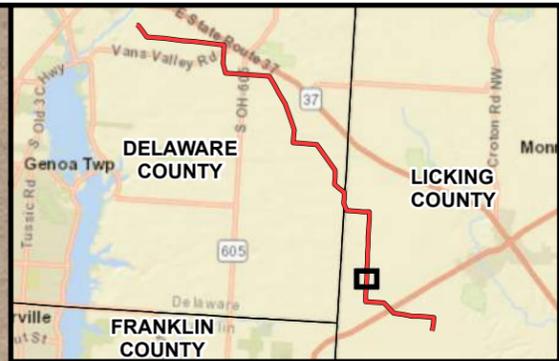


- Legend**
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - December 2023 Report - Project Survey Area (Completed)
 - Addendum 1 Project Survey Area
 - December 2023 Report - Area Not Surveyed due to Landowner Permissions
- AECOM_DataPoints**
- Cowardin Classification, Report**
- ▲ Previous Wetland Data Point
 - ▲ Previous Upland Data Point
- AECOM_Wetlands**
- Cowardin, Report**
- Previously Delineated PFO Wetland



Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 22 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



Legend

- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)
- Addendum 1 Project Survey Area
- December 2023 Report - Area Not Surveyed due to Landowner Permissions

AECOM_DataPoints

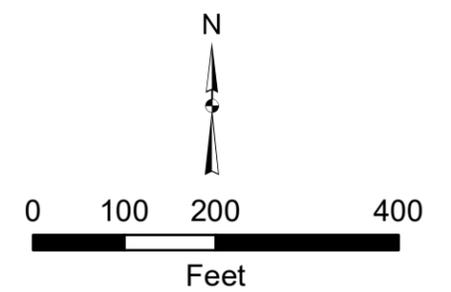
Cowardin Classification, Report

- ▲ Previous Wetland Data Point
- ▲ Previous Upland Data Point

AECOM_Wetlands

Cowardin, Report

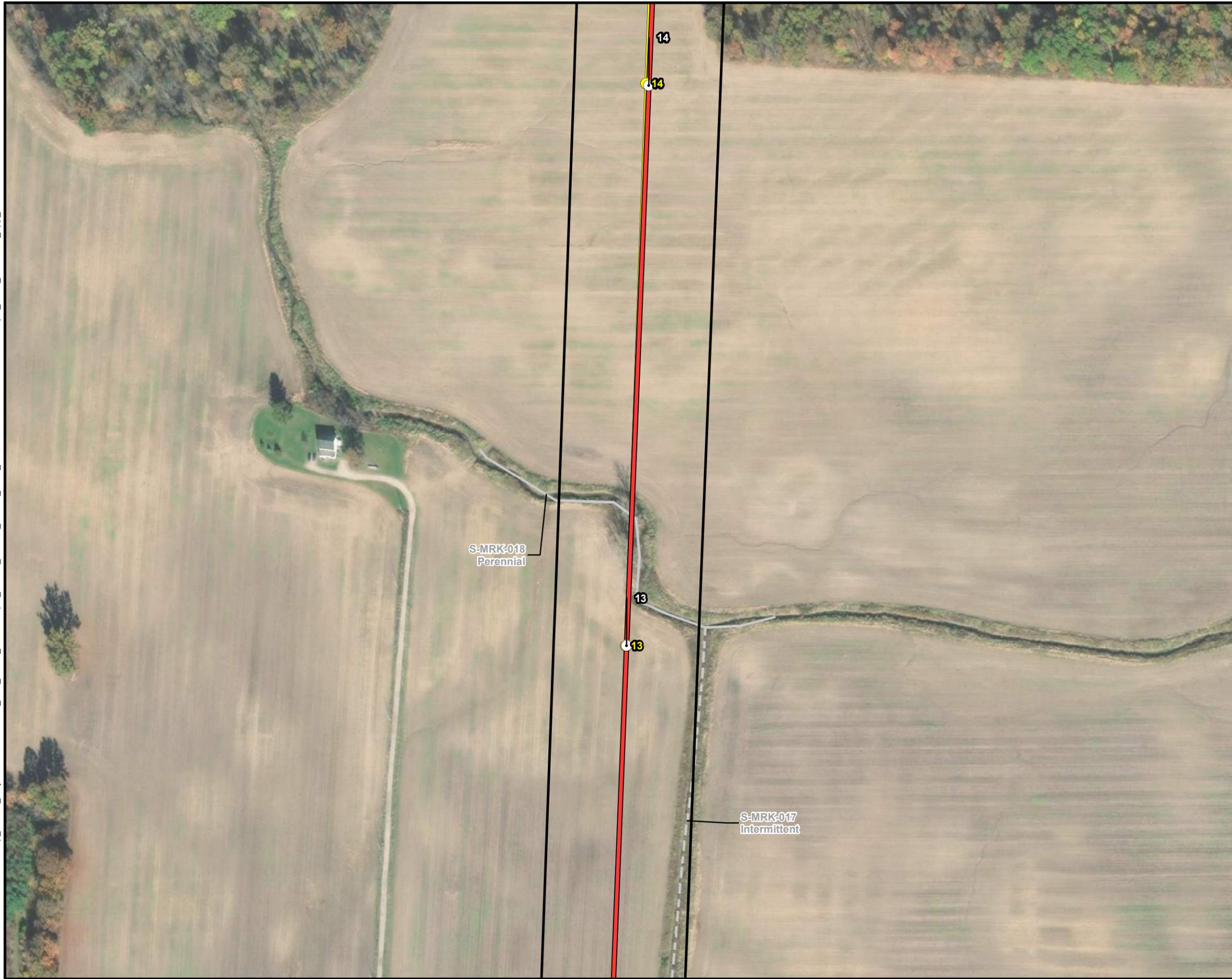
- Previously Delineated PFO Wetland



Vassell - Green Chapel North Project Addendum 1

APPENDIX C
 SHEET 23 OF 29
 DECEMBER 2023 - ORIGINAL REPORT AND
 ADDENDUM #1 ECOLOGICAL REPORT

DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



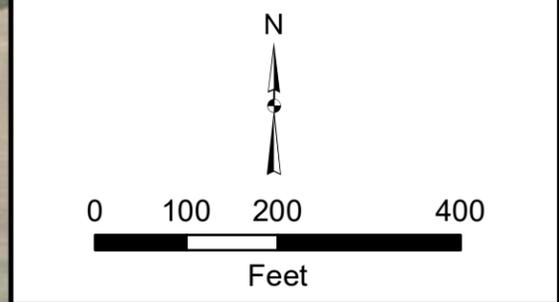
Legend

- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)

AECOM_Streams

Flow Type, Report

- Previously Delineated Intermittent Stream
- Previously Delineated Perennial Stream



Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 24 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM

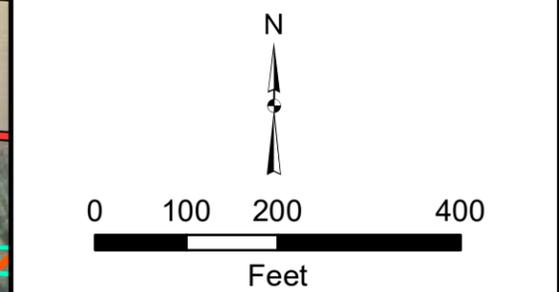


- Legend**
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - December 2023 Report - Project Survey Area (Completed)
 - Addendum 1 Project Survey Area
 - December 2023 Report - Area Not Surveyed due to Landowner Permissions

- AECOM_DataPoints**
- Cowardin Classification, Report**
- ▲ Previous Wetland Data Point
 - ▲ Previous Upland Data Point

- AECOM_Streams**
- Flow Type, Report**
- Previously Delineated Intermittent Stream
 - Previously Delineated Perennial Stream

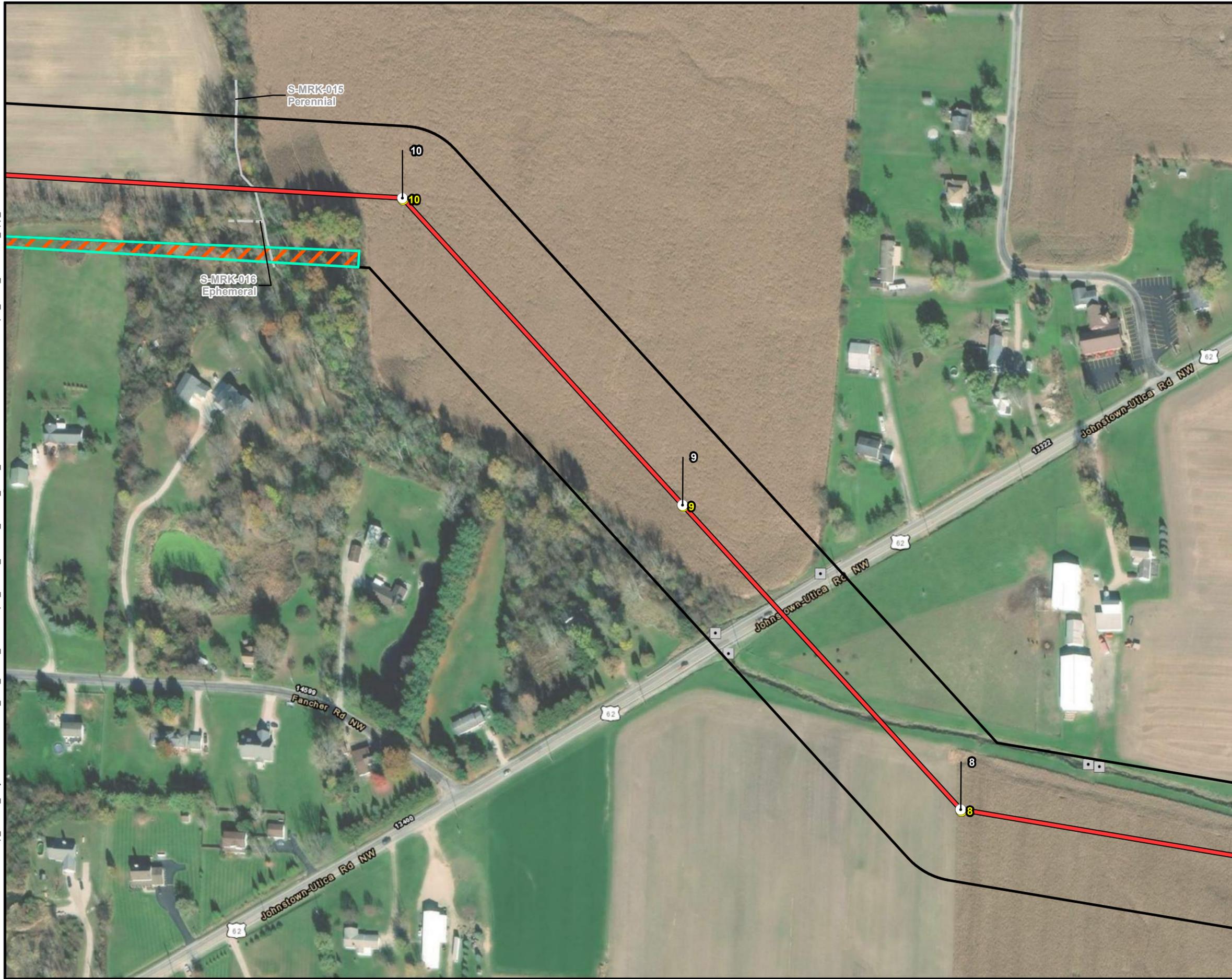
- AECOM_Wetlands**
- Cowardin, Report**
- Delineated PFO Wetland
 - Previously Delineated PEM Wetland
 - Previously Delineated PFO Wetland



Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 25 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM

Date Saved: 2/18/2024
 Document Path: X:\DCS\GIS\ArctMap_GeoDB_Projects\ENVI\60702685_AEP_Vassel_GreenChapel_North\WDR\Addendum 1\VassellGreenChapel_North_WDRAdd1_App_C.mxd



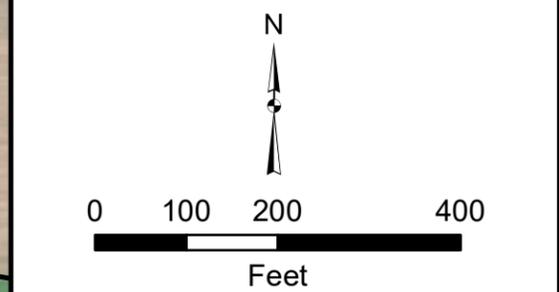
Legend

- Structure (December 2023 Report)
- Structure (Addendum 1)
- Vassell - Green Chapel North Route (December 2023 - Report)
- Vassell - Green Chapel North Route (Addendum 1)
- December 2023 Report - Project Survey Area (Completed)
- Addendum 1 Project Survey Area
- December 2023 Report - Area Not Surveyed due to Landowner Permissions
- Culvert

AECOM_Streams

Flow Type, Report

- Previously Delineated Ephemeral Stream
- Previously Delineated Perennial Stream

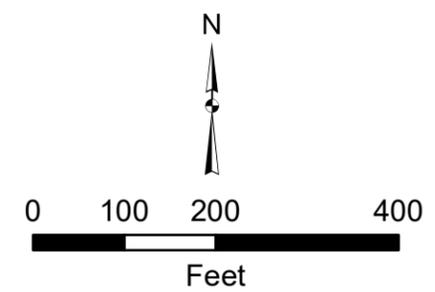


Vassell - Green Chapel
 North Project
 Addendum 1

APPENDIX C SHEET 26 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM

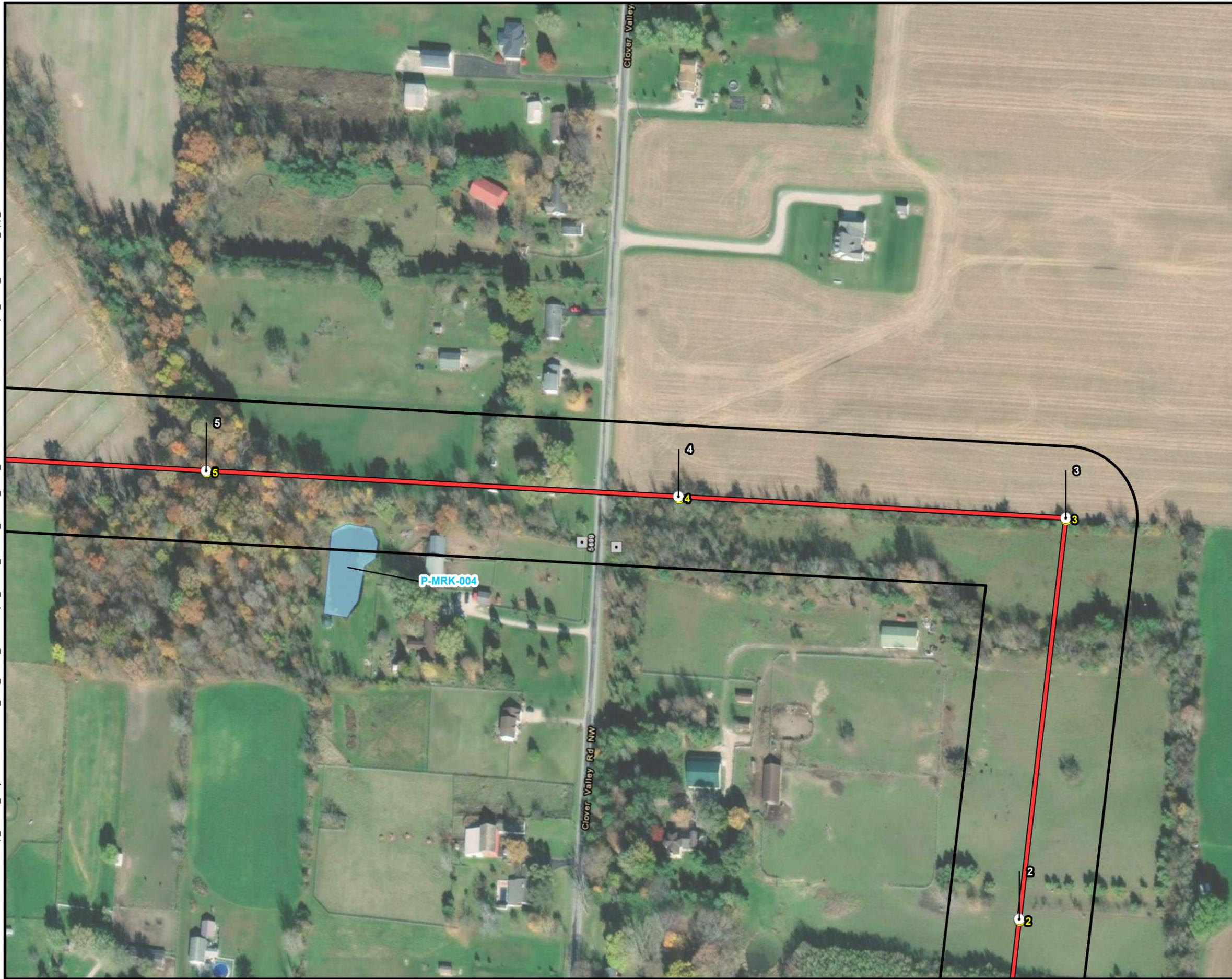


- Legend**
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - December 2023 Report - Project Survey Area (Completed)

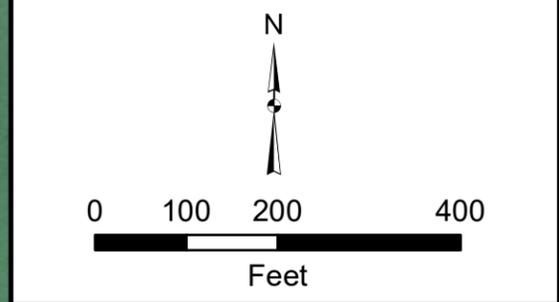


 Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 27 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



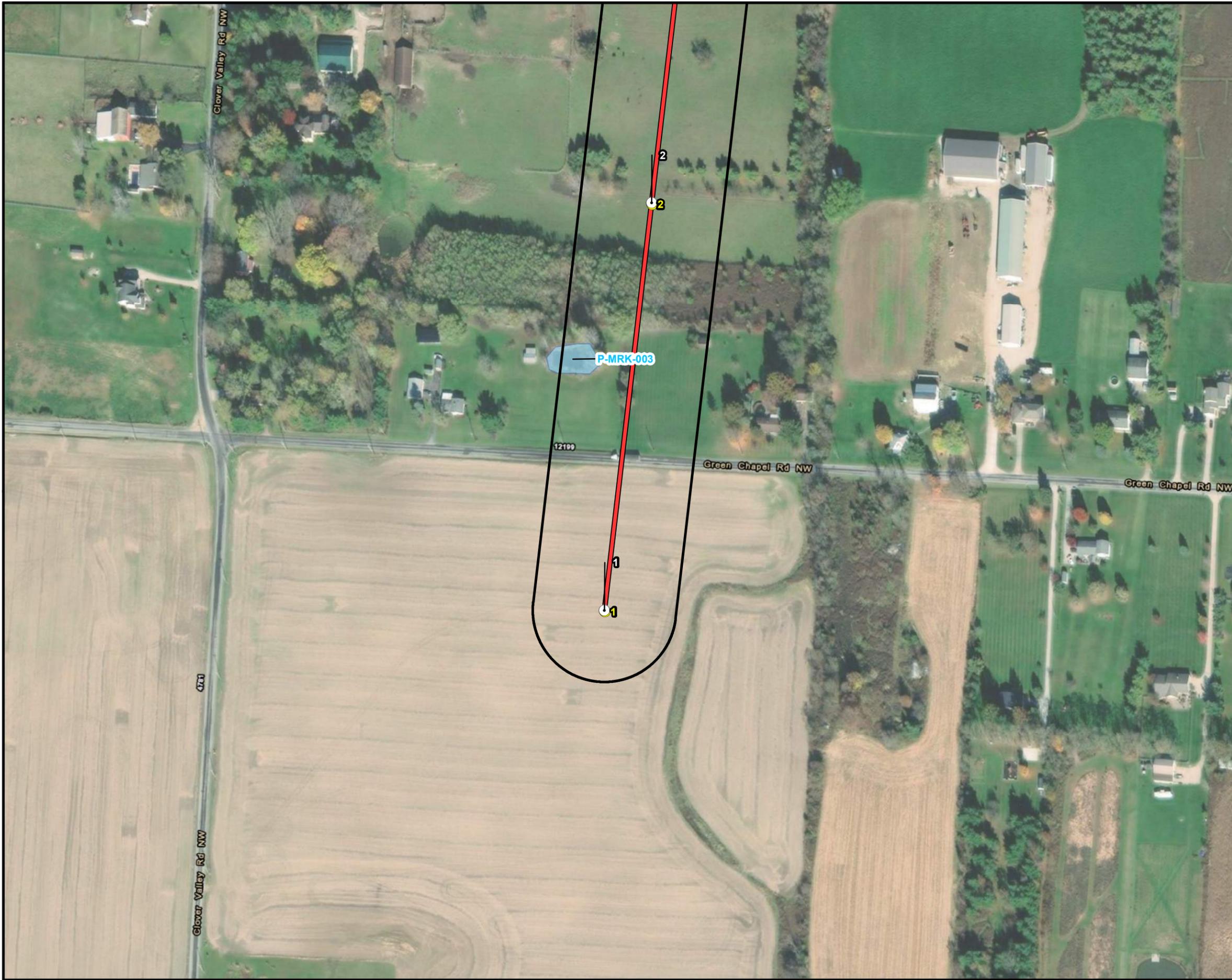
- Legend**
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - December 2023 Report - Project Survey Area (Completed)
 - Culvert
 - Delineated Pond



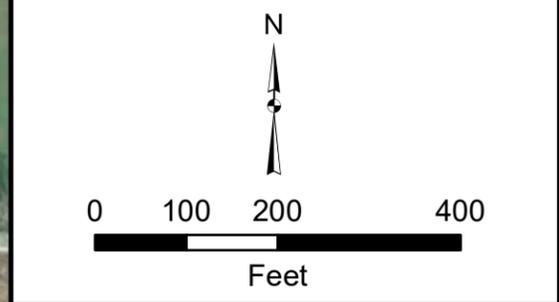
Vassell - Green Chapel
 North Project
 Addendum 1

APPENDIX C
 SHEET 28 OF 29
 DECEMBER 2023 - ORIGINAL REPORT AND
 ADDENDUM #1 ECOLOGICAL REPORT

DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM



- Legend**
- Structure (December 2023 Report)
 - Structure (Addendum 1)
 - Vassell - Green Chapel North Route (December 2023 - Report)
 - Vassell - Green Chapel North Route (Addendum 1)
 - December 2023 Report - Project Survey Area (Completed)
 - Delineated Pond



Vassell - Green Chapel North Project Addendum 1

APPENDIX C SHEET 29 OF 29 DECEMBER 2023 - ORIGINAL REPORT AND ADDENDUM #1 ECOLOGICAL REPORT	
DATE: 2/18/2024	1 INCH = 200 FEET
CREATED BY: NB	CHECKED BY: BG
JOB NO.: 60702685	AECOM