ATTACHMENT C

Colliers Engineering & Design

Wetland Delineation Report

University Project

Colliers Engineering & Design Project Number: 21004202A

May 22, 2023

Prepared for:

NiSource Inc.
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Prepared by:

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Colliers Engineering & Design

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APPENDICES

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EXECUTIVE SUMMARY

On behalf of NiSource Inc., Colliers Engineering & Design (CED) conducted field delineations for the University Project within Franklin County, Ohio (hereinafter described as "Survey Corridor"). The Survey Corridor is located at latitudinal coordinates 40.010495 N and longitudinal coordinates -83.014039 W. The Survey Corridor is located approximately 5 miles north of Columbus, Ohio. Access to the Survey Corridor can be achieved from Ackerman Road, Stanhope Road, N Star Road, Kenny Road, Ridgeview Road, Brandon Road, Northwest Boulevard, and West Lane Avenue.

The Project Study Area is comprised of a 100-foot wide survey corridor centered on the proposed pipeline alignment for 3.7 miles. The Project Study Area or "Survey Corridor" includes the proposed installation of 3.7 miles of 20-inch pipeline. The Survey Corridor was investigated to identify potential jurisdictional Waters of the U.S. (WOTUS) and wetlands subject to Federal or State regulatory jurisdiction. The delineation methodologies developed by the USACE and the USEPA, as described in the *1987 Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0*) and the subsequently issued USACE regulatory guidance regarding the identification of jurisdictional stream channels through the recognition of field indicators of an ordinary high-water mark within drainage features (Environmental Laboratory, 1987; USACE 2012; USACE 2005) were utilized during our investigation. The location and size of jurisdictional areas delineated are shown on the attached Figure 5. Delineation Results (**Appendix A**).

Based on the field investigations, two (2) stream features and one (1) wetland feature were delineated within the Survey Corridor by CED on March 2nd & 3rd, 2022 and May 19th, 2023. A total of 2,552 linear feet of perennial (R3) stream, 562 linear feet of intermittent (R4), and 0.23 acres of palustrine emergent (PEM) wetland were delineated. It is CED's professional opinion that Stream Features "1" and "2", and the proximal wetland, are considered jurisdictional WOTUS since they drain into Olentangy River and Scioto River. These stream features can be considered jurisdictional WOTUS since they connect and/or are directly connected to Olentangy River and Scioto River. The location and size of jurisdictional areas delineated are shown on Figure 5. Delineation Results (**Appendix A**).

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1.0 PROJECT INFORMATION

Project Name	University Project
Project Location	Ackerman Road, Stanhope Road, N Star Road, Kenny Road, Ridgeview Road, Brandon Road, Northwest Boulevard, and West Lane Avenue
Municipality	Columbus
County	Franklin
State	Ohio
Latitude/Longitude	40.010495 N / -83.014039 W
Subject Property Size	+/- 3.7 mi/LF 100 feet wide survey corridor
U.S.G.S. Quadrangle	Northwest Columbus OH
Potential Jurisdictional Waters of the U.S. (WOTUS) and wetlands	See Aquatic Resource Area Summary Table on Page 8
River Basin (HUC) & sub-watershed	Upper Scioto Basin: 8 Digit HUC Code 05060001
Nearest Stream	Olentangy River and Scioto River
Navigable Water Nexus	Stream features delineated on the Survey Corridor would be considered jurisdictional WOTUS and wetlands since these features drain towards Olentangy River and Scioto River.
Isolated Wetlands/Waters Present (Yes/No)	No

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2.0 INTRODUCTION

On behalf of NiSource Inc., Colliers Engineering & Design (CED) conducted field delineations for the University Project located in the greater North Columbus area within Franklin County, Ohio (hereinafter described as "Survey Corridor"). The Survey Corridor is located at latitudinal coordinates 40.010495 N and longitudinal coordinates -83.014039 W. The Survey Corridor is located approximately 5 miles north of Columbus, Ohio. Access to the Survey Corridor can be achieved from Ackerman Road, Stanhope Road, N Star Road, Kenny Road, Ridgeview Road, Brandon Road, Northwest Boulevard, and West Lane Avenue. The Survey Corridor is bordered by residential homes, commercial properties, agricultural land, and forested areas. There are unnamed tributaries located within the Survey Corridor that eventually drain to Olentangy River and Scioto River.

The Survey Corridor was investigated to identify potential jurisdictional Waters of the U.S. (WOTUS) and wetlands subject to Federal or State regulatory jurisdiction. According to the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (USEPA) regulations described in Section 404 of the Clean Water Act (33 CFR Section 328.3 and 40 CFR Section 230.3) respectively, wetlands are "...areas that are inundated or saturated with surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

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3.0 PROPERTY DESCRIPTION

The Survey Corridor is located within the Upper Scioto River Basin (8 Digit HUC Code 05060001). Access to the Survey Corridor can be achieved from Ackerman Road, Stanhope Road, N Star Road, Kenny Road, Ridgeview Road, Brandon Road, Northwest Boulevard, and West Lane Avenue. The western section of the Survey Corridor drains south towards Scioto River, and the eastern section of the Survey Corridor drains east towards the Olentangy River. The Survey Corridor does not contain floodways or floodplains according to FEMA Floodplain Panel Maps 39049C0164K, 39049C0168K, and 39049C0169K (eff. 6/17/2008). The Survey Corridor contains approximately 30% forested communities and 70% residential properties and commercial properties. The forested areas are comprised of a mixture of oak, tulip poplar, red maple, pine, and sweetgum species that dominate the canopy layer. Olentangy River is located east of the Survey Corridor and Scioto River is located west of the Survey Corridor and drain north to south. Unnamed tributaries can be found in the western and eastern sections of the Survey Corridor eventually discharging into Olentangy River and Scioto River.

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4.0 BACKGROUND INFORMATION

Prior to on-site field investigations, several publicly available sources of information were reviewed to determine the likelihood of wetlands and surface waters occurring within Survey Corridor. These mapping resources generally include, but are not limited to, the United States Geological Survey (USGS) maps (Figure 1. Project Location Map, **Appendix A**), the U.S. Department of Agriculture - Natural Resource Conservation Service (NRCS) soils database (Figure 2. Soil Series Map, **Appendix A**), National Hydrography Dataset (NHD), and the U.S. Fish & Wildlife Service National Wetlands Inventory (NWI) database (Figure 3. National Wetlands Inventory Map, **Appendix A**).

4.1 U.S. Geological Survey Map

The Survey Corridor appears on the *Northwest Columbus OH* Quadrangle USGS Maps (Figure 1. Project Location Map, **Appendix A**) and is depicted as developed properties which contains approximately 30% forested areas and 70% residential and commercial properties. The USGS also depicts unnamed tributaries located within western and eastern sections. Residential and forested areas are located within the vicinity of the Survey Corridor to the north, south, east, and west. Elevations at the Survey Corridor range from 750 to 950 feet above mean sea level (MSL) based on the USGS map.

4.2 Soil Survey

The NRCS Web Soil Survey depicts the following Table Soil Series map units within the Survey Corridor and provides a description of the properties and qualities of each soil:

Table 1. Soils Section for University Project

Map Unit Symbol	Map Unit Name	Drainage Class	Runoff Class	Depth to Water Table
CfB	Celina-Urban land complex, 2 to 6 percent slopes	Moderately Well Drained	Medium	About 18 to 36 inches
CrB	Crosby silt loam, Southern Ohio Till Plain, 2 to 6 percent slopes	Somewhat Poorly Drained	Medium	About 6 to 24 inches
CsA	Crosby-Urban land complex, 0 to 2 percent slopes	Somewhat Poorly Drained	Medium	About 6 to 24 inches
CsB	Crosby-Urban land complex, 2 to 6 percent slopes	Somewhat Poorly Drained	High	About 12 to 36 inches
Ko	Kokomo silty clay loam, 0 to 2 percent slopes	Very Poorly Drained	Negligible	About 0 to 6 inches

Map Unit Symbol	Map Unit Name	Drainage Class	Runoff Class	Depth to Water Table
Ut	Udorthents-Urban land complex, gently rolling	-	-	More than 80 inches

Of the six (6) mapped soil units in the Survey Corridor, one (1) soil unit (Kokomo silty clay loam) is listed as being hydric.

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5.0 WETLAND & SURFACE WATER DELINEATION METHODOLOGY

The wetland delineation methodologies developed by the USACE and the USEPA, as described in the 1987 Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: *Midwest Region* (Version 2.0) and subsequently issued USACE regulatory guidance regarding the identification of jurisdictional stream channels through the recognition of field indicators of an ordinary high-water mark within drainage features (Environmental Laboratory, 1987; USACE 2012; USACE 2005), were utilized during our investigation. These methodologies generally involve the review of three parameters (vegetation, soils, hydrology) when making a wetland or non-wetland determination.

The Survey Corridor was walked, community types were characterized, and wetland and surface water boundaries were flagged. Sample stations were established along the boundaries to examine vegetation, soils, and hydrology. Using this data, boundaries were established based on changes in vegetation, soils, hydrology, and surface water characteristics.

6.0 WETLAND AND SURFACE WATER DELINEATION RESULTS

6.1 WETLAND AND SURFACE WATER SUMMARY

On-site field investigations of the Survey Corridor were conducted by CED on March 2nd & 3rd, 2022 and May 19, 2023. The on-site delineation did verify the presence of surface waters within Survey Corridor. A summary of the aquatic resources identified within the Survey Corridor is provided below in Table 2: Aquatic Resource Summary. The location and size of the aquatic resources delineated are shown on Figure 5. Delineation Results (**Appendix A**).

Table 2: Aquatic Resource Area Summary Table

Aquatic Resource	PFO Area (AC)	PEM Area (AC)	Aquatic Resource	PUB Area (AC)	Aquatic Resource	R3 Length (LF)	R4 Length (LF)
W-1	-	0.23	-	-	S-1	254	-
-	-	-	-	-	S-2	2298	562
Total Wetlands by Class (AC)	-	0.23	Total Pond (AC)	-	Total Stream by Class (LF)	2,552	562
Total Wetlands (AC)	0.23				Total Stream (LF)	3,114	

Note 1: Cowardin Class PEM = palustrine emergent wetland, R3 = perennial stream, R4 = intermittent stream

6.2 VEGETATION

One (1) wetland was observed within the project boundaries. Representative plant species within the wetland areas include the following: red maple (*Acer rubrum*), American elm (*Ulmas americana*), green ash (*Fraxinus pennsylvanica*), sugar maple (*Acer saccharum*), eastern cottonwood (*Populus deltoides*), amur honeysuckle (*Lonicera mackaii*), spotted touch-me-not (*Impatiens capensis*), Canadian clearweed (*Pilea pumila*), common blue violet (*Viola papilionacea*), jumpseed (*Persicaria virginiana*), yellow iris (*Iris psuedacorus*), poison ivy (*Toxicodendron radicans*), and rice cutgrass (*Leersia oryzoides*).

Representative plant species within the upland areas include the following: northern red oak (*Quercus rubra*), sugar maple, American beech (*Fagus grandifolia*), amur honeysuckle, eastern hemlock (*Tsuga canadensis*), and poison ivy.

6.3 SOILS

Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil (USDA 2003). The soils in the wetland areas were variable, but for the most part, exhibited low chroma matrices with redoximorphic features. Soils within the wetland areas on-site exhibit low chroma matrix colors and concentrations that are characteristic of reducing anaerobic conditions associated within the formation of hydric soils. Wetland soils were typically black (10YR 2/1), dark yellowish brown (10YR 4/6), and brown (10YR 5/2) within the upper 16 inches. Jurisdictional soils were generally underlain dark yellowish brown (10YR 4/6), and brown (10YR 5/2) down to 16 inches. Redox concentrations greater than 3% were observed between 0 and 16 inches below soil surface and are typically dark yellowish brown (10YR 4/6). Soils within jurisdictional areas meet the F3 Depleted Matrix hydric

soil indicator. Textures within the jurisdictional areas included loam. The upland soils were dark brown (10YR 3/3) within the upper 16 inches. Soil textures included loam.

6.4 HYDROLOGY

On-site field investigations of the Survey Corridor were conducted by CED on March 2nd & 3rd, 2022 and May 19, 2023. The USACE Antecedent Precipitation Tool (APT) was utilized for the Survey Corridor and is provided in **Appendix C**. Based the USACE APT tool, the on-site field investigations were conducted in "Wetter than Normal" precipitation conditions with a 30-day rolling total during the March 2nd & 3rd, 2022 investigations. The on-site field investigations were conducted in "Drier than Normal" precipitation conditions for the May 19th, 2023 investigation.

Indicators of wetland hydrology are largely absent in upland areas.

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7.0 WETLAND DELINEATION CONCLUSION

Two (2) stream features and one (1) wetland feature were delineated within the Survey Corridor by CED on March 2nd & 3rd, 2022 and May 19th, 2023. A total of 2,552 linear feet of perennial (R3) stream, 562 linear feet of intermittent (R4), and 0.23 acres of palustrine emergent (PEM) wetland were delineated. Field investigations were conducted in accordance with the manuals, methodologies, and regulatory guidance procedures as stated in Section 5.0 Wetland and Surface Water Delineation Methodology.

It is CED's professional opinion that Stream Features "1" and "2" are considered jurisdictional WOTUS since they drain into Olentangy River and Scioto River. The wetland can be considered jurisdictional WOTUS since it drains directly to the unnamed tributary to Olentangy River and Scioto River. The location and size of jurisdictional areas delineated are shown on Figure 5. Delineation Results (**Appendix A**).

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8.0 REFERENCES

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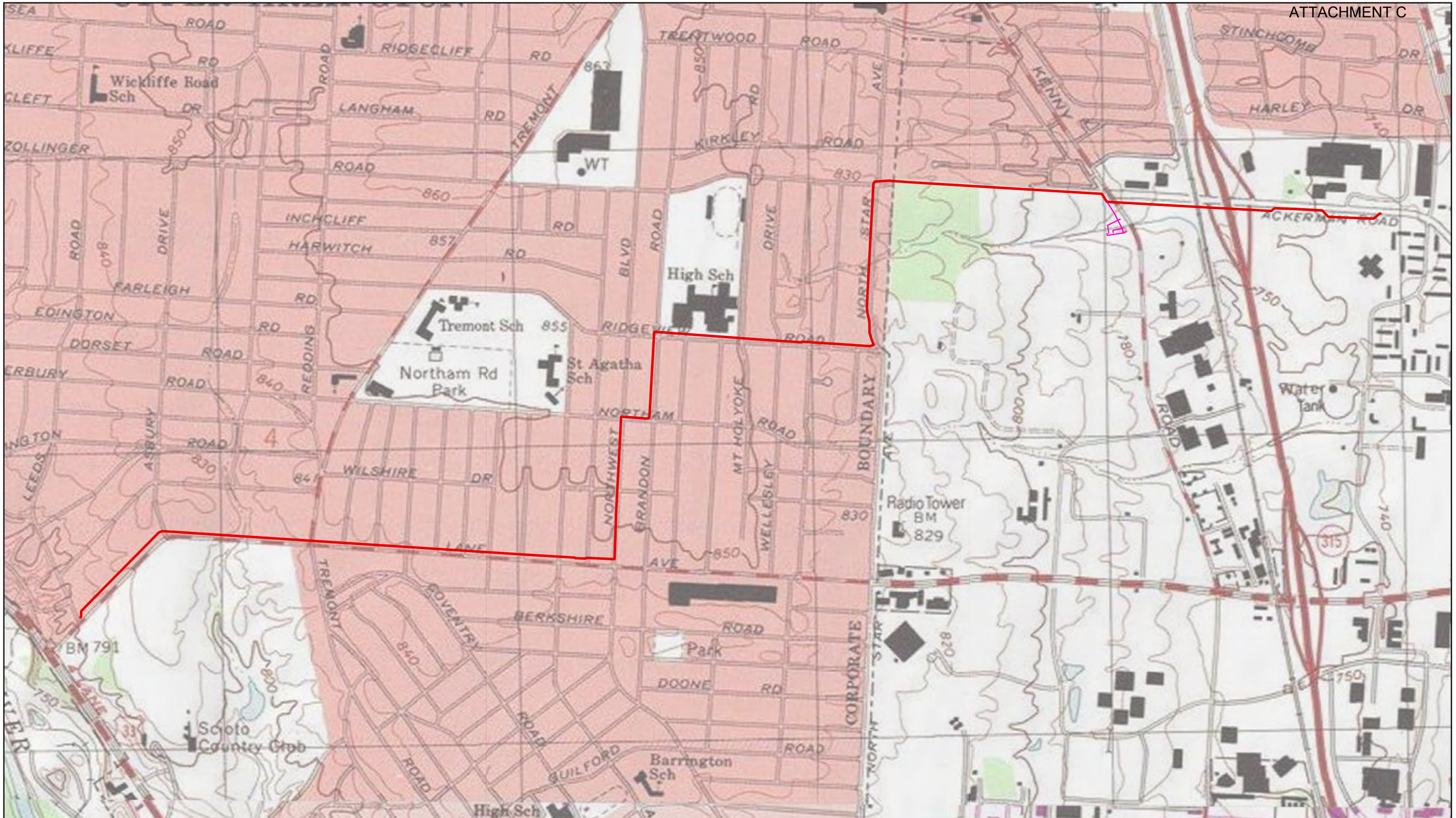
Appendix
Appendix A | Figures

ATTACHMENT C



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0 600 1,200 Feet

1" = 1,000 feet

N W E S

Source: USGS 24k Quadrangle: Northwest Columbus, OH

Figure 1 - Project Location Map

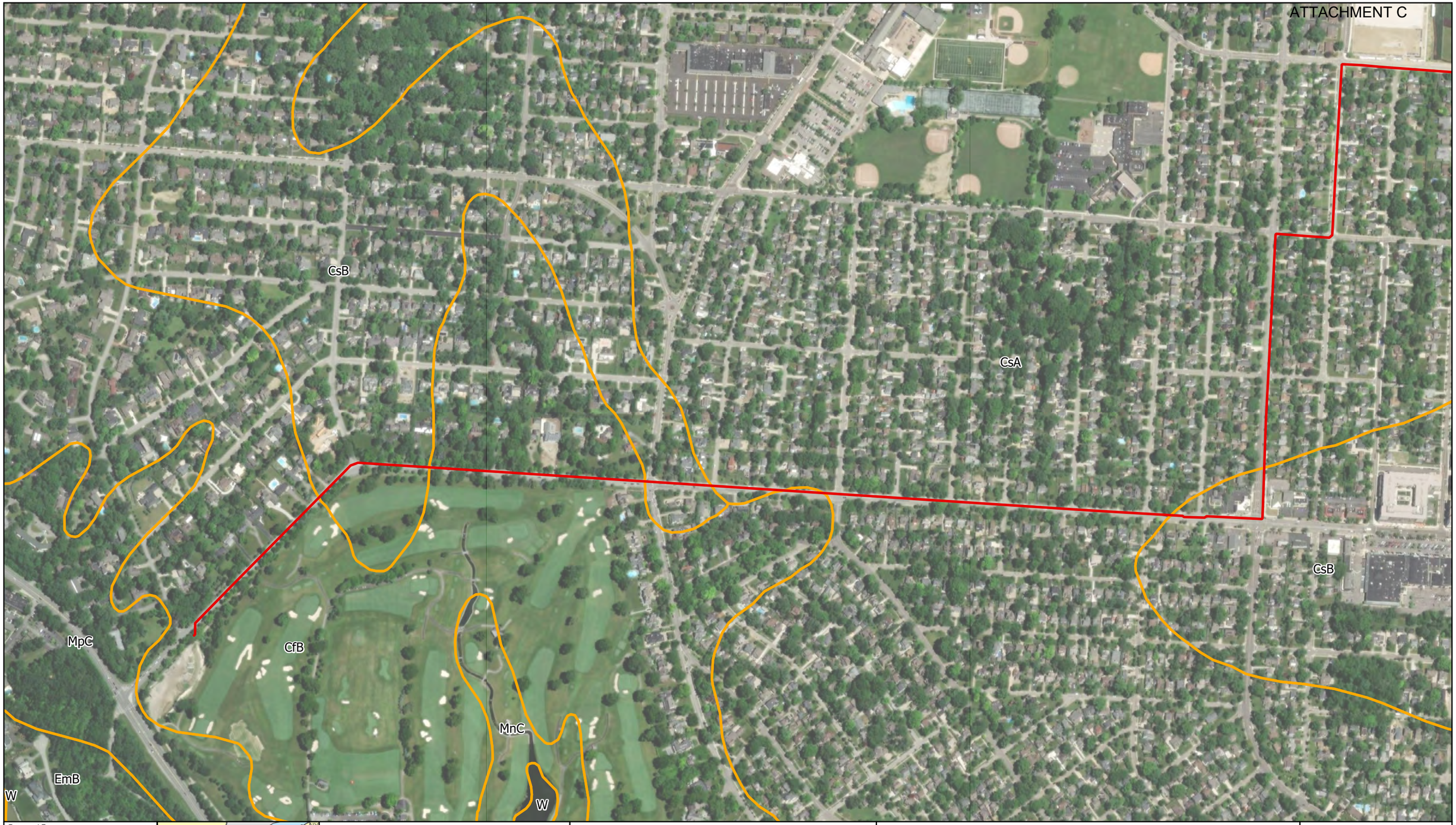
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line

Sheet 1 of 1



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0 250 500 Feet

1" = 500 feet

N W E S

Source: USDA NRCS SSURGO

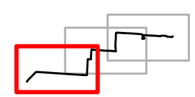
Figure 2 - Soil Series Map

University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

- Lateral
- Main Line
- Soil Map Unit (SSURGO)



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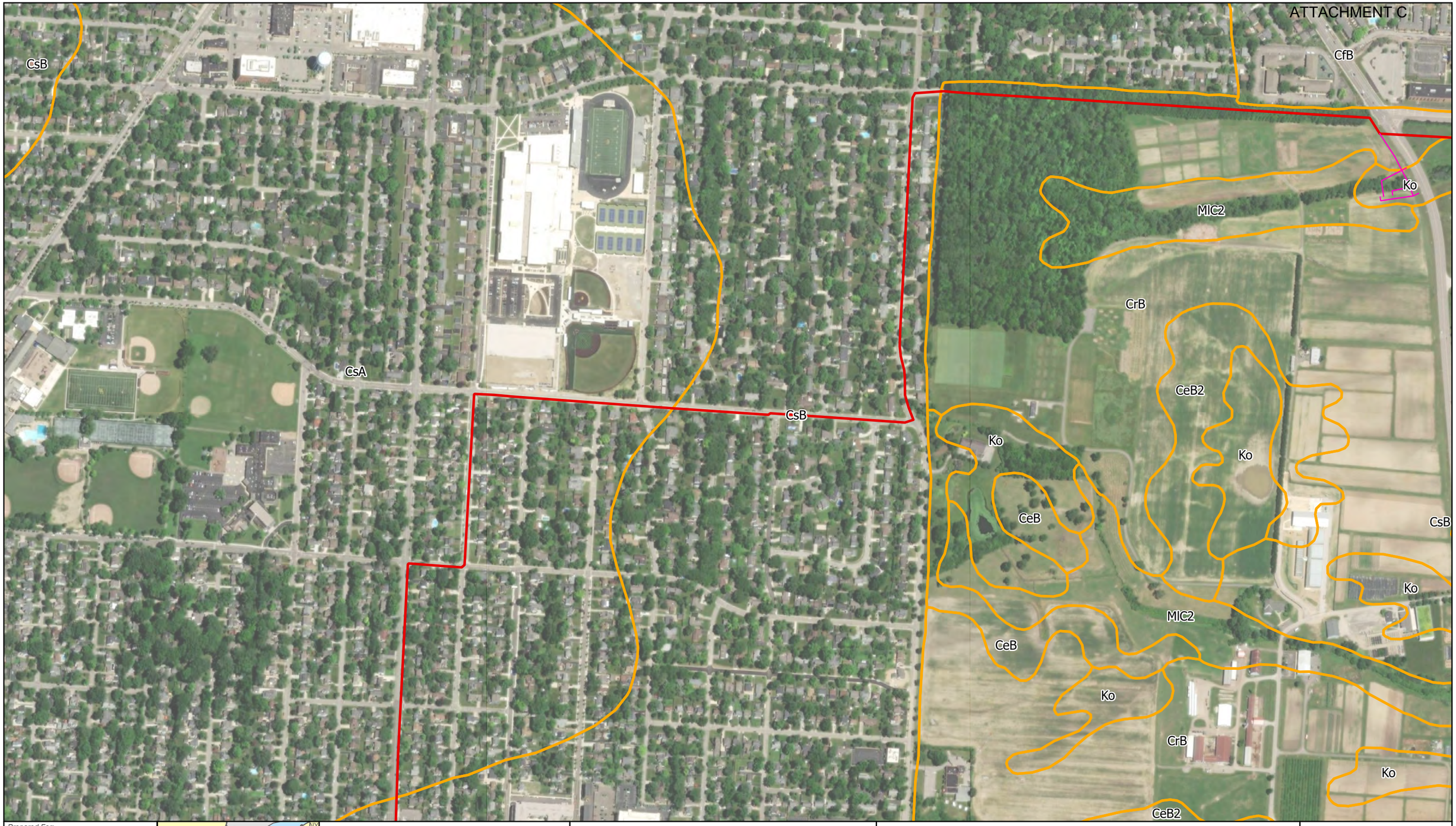

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0 250 500 Feet

1" = 500 feet

N W E S

Source: USDA NRCS SSURGO

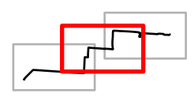
Figure 2 - Soil Series Map

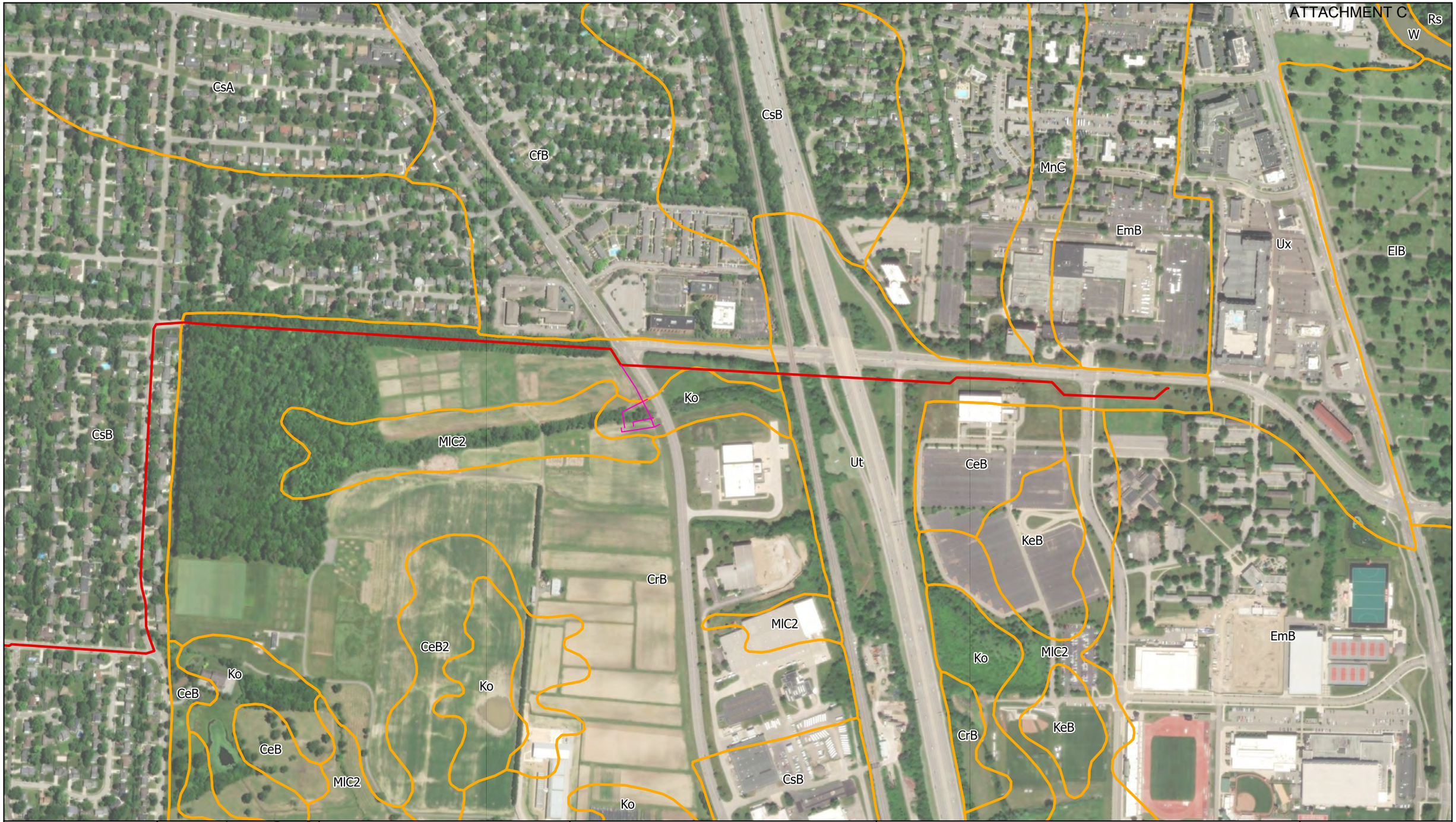
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

- Lateral
- Main Line
- Soil Map Unit (SSURGO)





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0 250 500 Feet

1" = 500 feet

Source: USDA NRCS SSURGO

Figure 2 - Soil Series Map

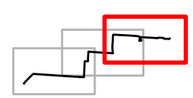
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line
Soil Map Unit (SSURGO)

Sheet 3 of 3



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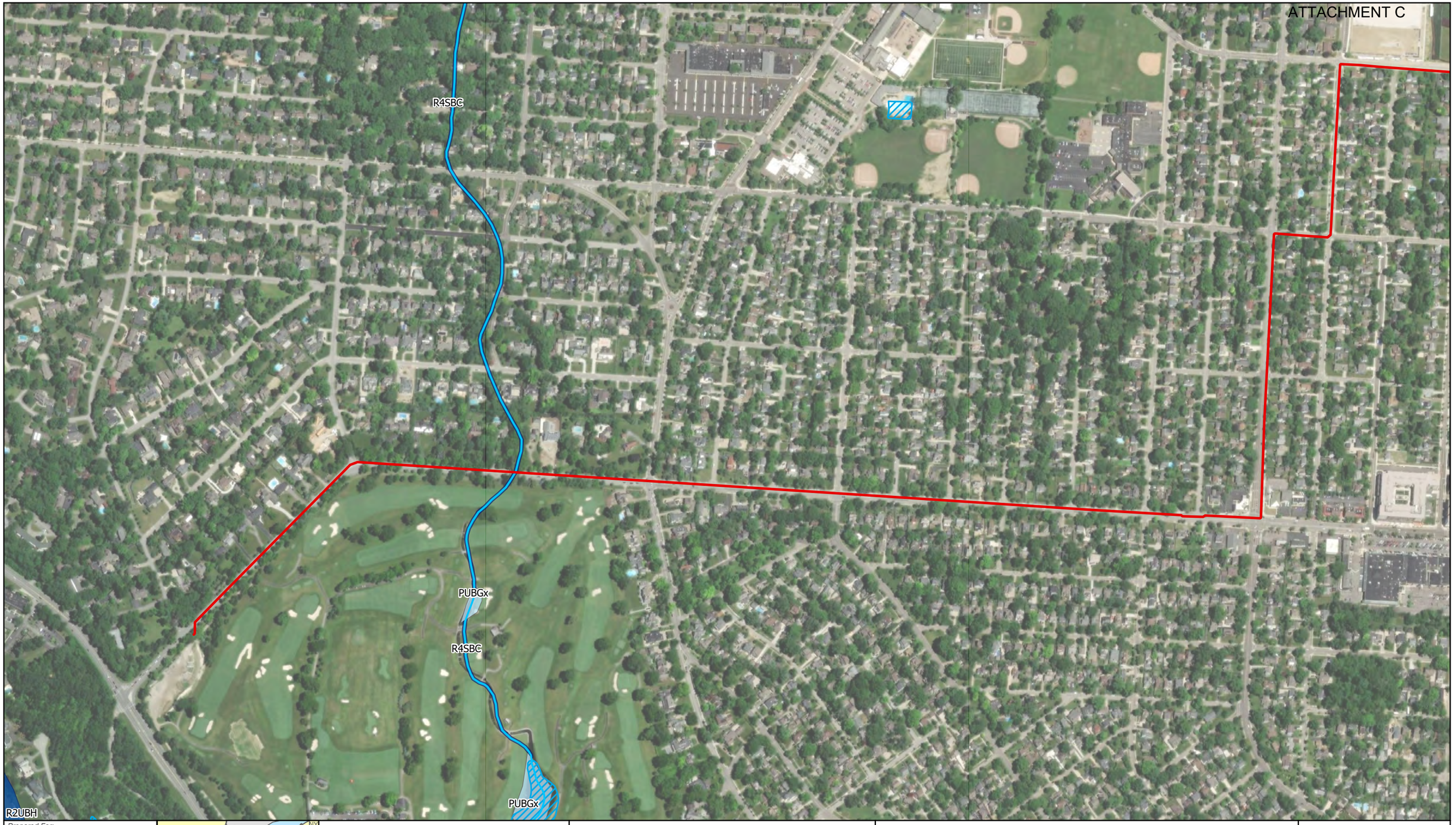

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0 250 500 Feet

1" = 500 feet

Source: USFWS NWI, USGS NHD

Figure 3 - NWI Series Map

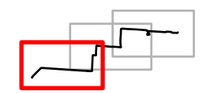
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line
Stream (NHD)

Waterbody (NHD)
Wetland Type
Freshwater Pond
Riverine



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0 250 500 Feet

1" = 500 feet

N W E S

Source: USFWS NWI, USGS NHD

Figure 3 - NWI Series Map

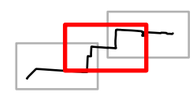
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line
Stream (NHD)

Waterbody (NHD)
Wetland Type
Freshwater Pond
Riverine



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0 250 500 Feet

1" = 500 feet

Source: USFWS NWI, USGS NHD

Figure 3 - NWI Series Map

University

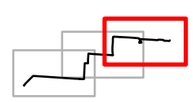
Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

- Lateral
- Main Line
- Stream (NHD)

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Freshwater Pond
- Riverine



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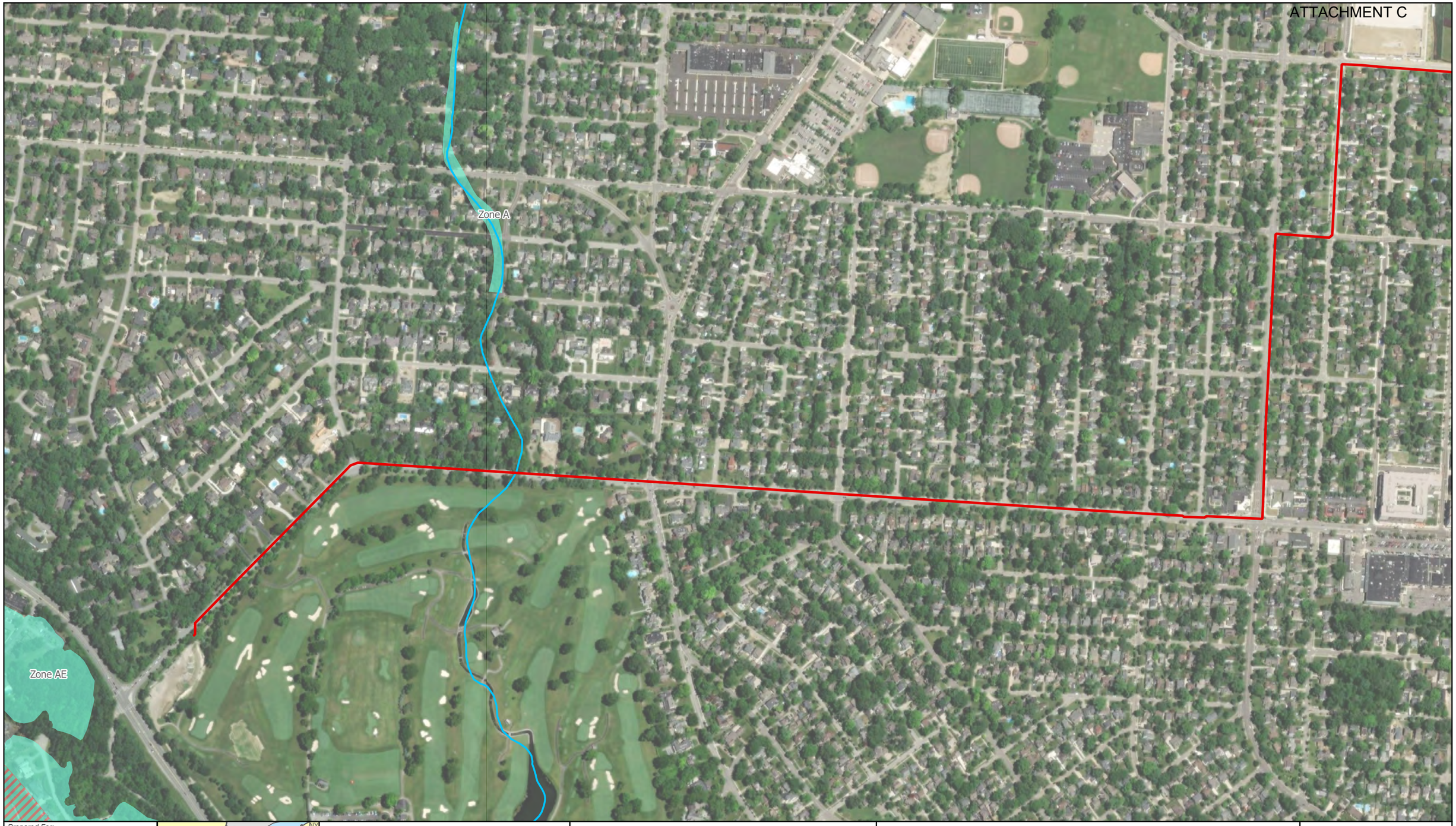

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0 250 500 Feet

1" = 500 feet

Source: FEMA, USGS NHD

Figure 4 - Floodplain Series Map

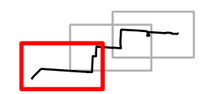
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line
Stream (NHD)

FEMA Flood Hazard Zone
1% Annual Chance Flood Hazard
Regulatory Floodway



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0 250 500 Feet

1" = 500 feet

Source: FEMA, USGS NHD

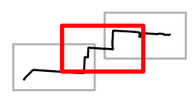
Figure 4 - Floodplain Series Map

University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

- Lateral
- Main Line
- Stream (NHD)



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Zone AE

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0 250 500 Feet

1" = 500 feet

Source: FEMA, USGS NHD

Figure 4 - Floodplain Series Map

University

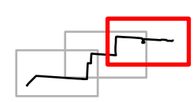
Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line
Stream (NHD)

FEMA Flood Hazard Zone
1% Annual Chance Flood Hazard
Regulatory Floodway

Sheet 3 of 3



ATTACHMENT C

Prepared For:

NiSource Inc.
801 E. 86th Avenue
Merrillville, IN 46410

Prepared By:

Raleigh Office
2000 Regency Parkway Ste 295
Cary, NC 27518
T: 919.439.8461
www.colliersengineering.com

Colliers Engineering & Design

0 100 200 Feet

1" = 200 feet

N W E S

Source: Colliers Engineering & Design

Figure 5 - Delineation Results

University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

- Lateral
- Main Line
- Study Corridor
- Culvert

Stream Type

- Perennial Stream
- Stormwater Erosions
- PEM Wetland

Sheet 1 of 7

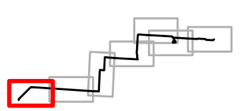


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Figure 5 - Delineation Results

University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line

Study Corridor
Stormwater Erosions
PEM Wetland

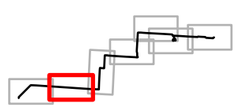

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Figure 5 - Delineation Results

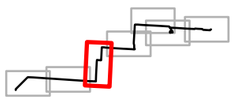
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line

Study Corridor
Stormwater Erosions
PEM Wetland



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0 100 200 Feet

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N W E S

Source: Colliers Engineering & Design

Figure 5 - Delineation Results

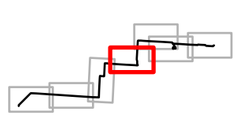
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

- Lateral
- Main Line
- Study Corridor

Stream Type
- Perennial Stream
- Intermittent Stream
- Stormwater Erosions
- PEM Wetland



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0 100 200 Feet

1" = 200 feet

N
W E
S

Source: Colliers Engineering & Design

Figure 5 - Delineation Results

University

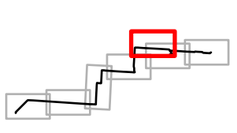
Franklin County, Ohio

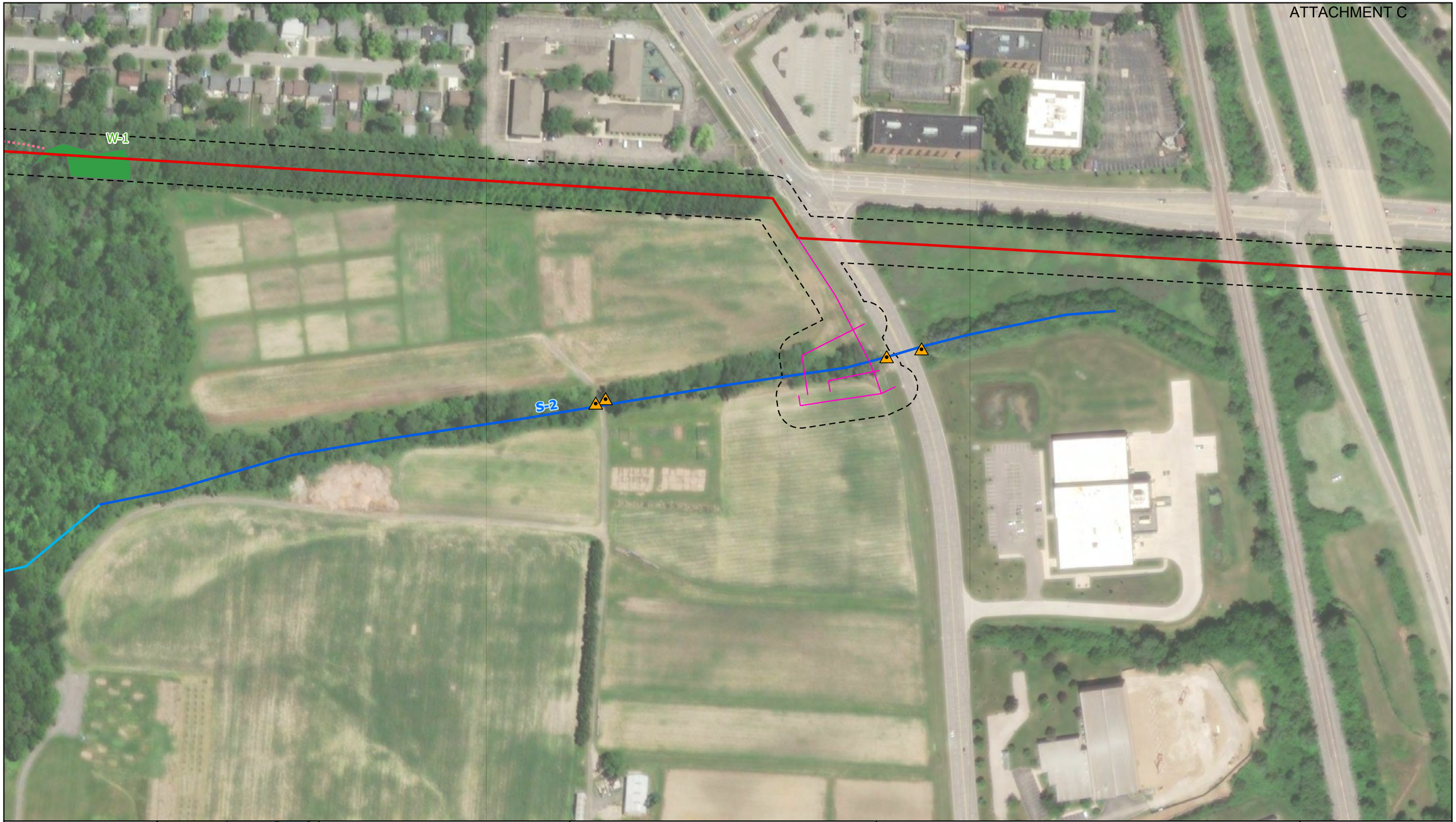
Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

- Lateral
- Main Line
- Study Corridor
- Culvert

Stream Type

- Perennial Stream
- Stormwater Erosions
- PEM Wetland





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0 100 200 Feet

1" = 200 feet

Source: Colliers Engineering & Design

N
W E
S

Figure 5 - Delineation Results

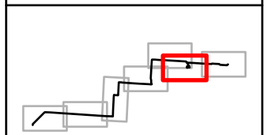
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

- Lateral
- Main Line
- Study Corridor
- Culvert

Stream Type
- Perennial Stream
- Intermittent Stream
- Stormwater Erosions
- PEM Wetland



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0 100 200 Feet

1" = 200 feet

N W E S

Source: Colliers Engineering & Design

Figure 5 - Delineation Results

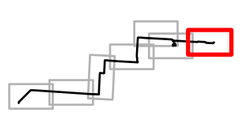
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line

Study Corridor
Stormwater Erosions
PEM Wetland



Colliers Engineering & Design

Appendix B | Data Forms

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: NCHP City/County: Columbus / Franklin Sampling Date: 5/19/23

Applicant/Owner: NiSource/Campos State: OH Sampling Point: W001-PEM

Investigator(s): REK Section, Township, Range: T1N R18W

Landform (hillslope, terrace, etc.): Slight depression Local relief (concave, convex, none): Concave

Slope (%): 5 Lat: 40.018808 Long: -83.044274 Datum: NAD 83

Soil Map Unit Name: Crosby silt loam, Southern Ohio Till Plain, 2-6% 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 X No _____

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

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

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:
PEM rep to W001. Taken in forested area, wet understory with upland canopy coverage

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	15	N	FAC
2. Ulmus americana	20	Y	FACW
3. Fraxinus pennsylvanica	10	N	FACW
4. Acer saccharum	15	N	FACU
5. Populus deltoides	20	Y	FAC
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15x15)			
1. Lonicera mackaii*	(15)	-	NL*
2. Franxinus pennsylvanica	10	Y	FACW
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5x5)			
1. Impatiens capensis	35	Y	FACW
2. Pilea pumila	60	Y	FACW
3. Viola papilionacea	(5)	-	NL*
4. Persicaria virginiana	2	N	FAC
5. Iris pseudacorus	3	N	OBL
6. Toxicodendron radicans	10	N	FAC
7. Leersia oryzoides	15	N	OBL
8.			
9.			
10.			
	125	= Total Cover	
Woody Vine Stratum (Plot size: 30x30)			
1. Absent			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)
*Not listed in Midwest plant list, not included in hydric veg calcs

Upland trees in canopy layer, outside of wetland boundaries.

SOIL

Sampling Point: W001-P

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0.8	10 YR 2/1	100					Loam	
8-16	10 YR 2/1	90	10 YR 4/6	8	C	M/PL	Loam	
			10 YR 5/2	2	D	M		

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[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 X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 8"

Wetland Hydrology Present? Yes X No _____

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

Remarks:

linear drainge feature inlet to wetland

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: NCHP City/County: Columbus / Franklin Sampling Date: 5/19/23

Applicant/Owner: NiSource/Campos State: OH Sampling Point: W001-UPL

Investigator(s): REK Section, Township, Range: T1N R18W

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40.018832 Long: -83.044912 Datum: NAD 83

Soil Map Unit Name: Crosby silt loam, Southern Ohio Till Plain, 2-6% Slopes NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	
Hydric Soil Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Wetland Hydrology Present?	Yes _____	No X	

Remarks:
Upland rep to W001. Taken upslope of wetland, in woodlot

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus rubra	30	Y	FACU
2. Acer saccharum	35	Y	FACU
3. Fagus grandifolia	15	N	FACU
4.			
5.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15x15)			
1. Lonicera mackaii	80	-	NL*
2. Tsuga canadensis	5	Y	FACU
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5x5)			
1. Lonicera mackaii	15	-	NL*
2. Toxicodendron radicans	20	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30x30)			
1. Absent			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	-	x 1 =	-
FACW species	-	x 2 =	-
FAC species	20	x 3 =	60
FACU species	85	x 4 =	340
UPL species	-	x 5 =	-
Column Totals:	105 (A)		400 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
*Not listed in Midwest plant list, not included in hydric veg calcs

SOIL

Sampling Point: W001UP

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10 YR 3/3	100					Loam	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[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 X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

N/A

Remarks:

No primary or secondary indicators observed

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: NCHP City/County: Columbus / Franklin Sampling Date: 5/19/23

Applicant/Owner: NiSource/Campos State: OH Sampling Point: STP001

Investigator(s): REK Section, Township, Range: T1N R18W

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40.018755 Long: -83.041464 Datum: NAD 83

Soil Map Unit Name: Crosby silt loam, Southern Ohio Till Plain, 2-6% 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 X No _____

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	
Hydric Soil Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Wetland Hydrology Present?	Yes _____	No X	

Remarks:
Reprsentative upland habitat - taken in woodlot between residential and agriculture uses

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus rubra	60	Y	FACU
2. Ulmus rubra	25	Y	FAC
3. Fagus grandifolia	10	N	FAC
4. Acer saccharum	5	N	FACU
5.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15x15)			
1. Lonicera mackaii	90	-	NL*
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5x5)			
1. Absent			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	_____	= Total Cover	
Woody Vine Stratum (Plot size: 30x30)			
1. Absent			
2.			
	_____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	-	x 1 =	-
FACW species	-	x 2 =	-
FAC species	35	x 3 =	105
FACU species	65	x 4 =	260
UPL species	-	x 5 =	-
Column Totals:	100 (A)		365 (B)

Prevalence Index = B/A = 3.65

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
*Not listed in Midwest plant list, not included in hydric veg calcs

SOIL

Sampling Point: STP001

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/3	100					Loam	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[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 X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

N/A

Remarks:

No primary or secondary indicators observed

ATTACHMENT C

Site: NISOURCE -NCHP	Rater(s): REK	Date: 5/19/23

W001 (PEM)

Metric 1. Wetland Area (size).

max 6 pts. | subtotal: 1 | 1

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)
- [x] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

max 14 pts. | subtotal: 7 | 8

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)
- [x] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

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

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

Metric 3. Hydrology.

max 30 pts. | subtotal: 7 | 5

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)

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

- [x] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

max 20 pts. | subtotal: 9 | 24

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)
- [x] 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)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] mowing
- [ ] grazing
- [ ] clearcutting
- [x] selective cutting
- [x] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

24

subtotal this page

last revised 1 February 2001 jjm

ORAM v. 5.0 Field Form Quantitative Rating

Site: N. Source - NCHP	Rater(s): REK	Date: 5/19/23

24 subtotal first page

WOOI (PEM)

Metric 5. Special Wetlands.

0 max 10 pts. | 24 subtotal

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

7 max 20 pts. | 31 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [0] Aquatic bed
- [2] Emergent
- [1] Shrub
- 4 [1] Forest
- [3] Mudflats
- [0] Open water
- [0] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

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

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

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

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

31

cat 1/2 grey zone

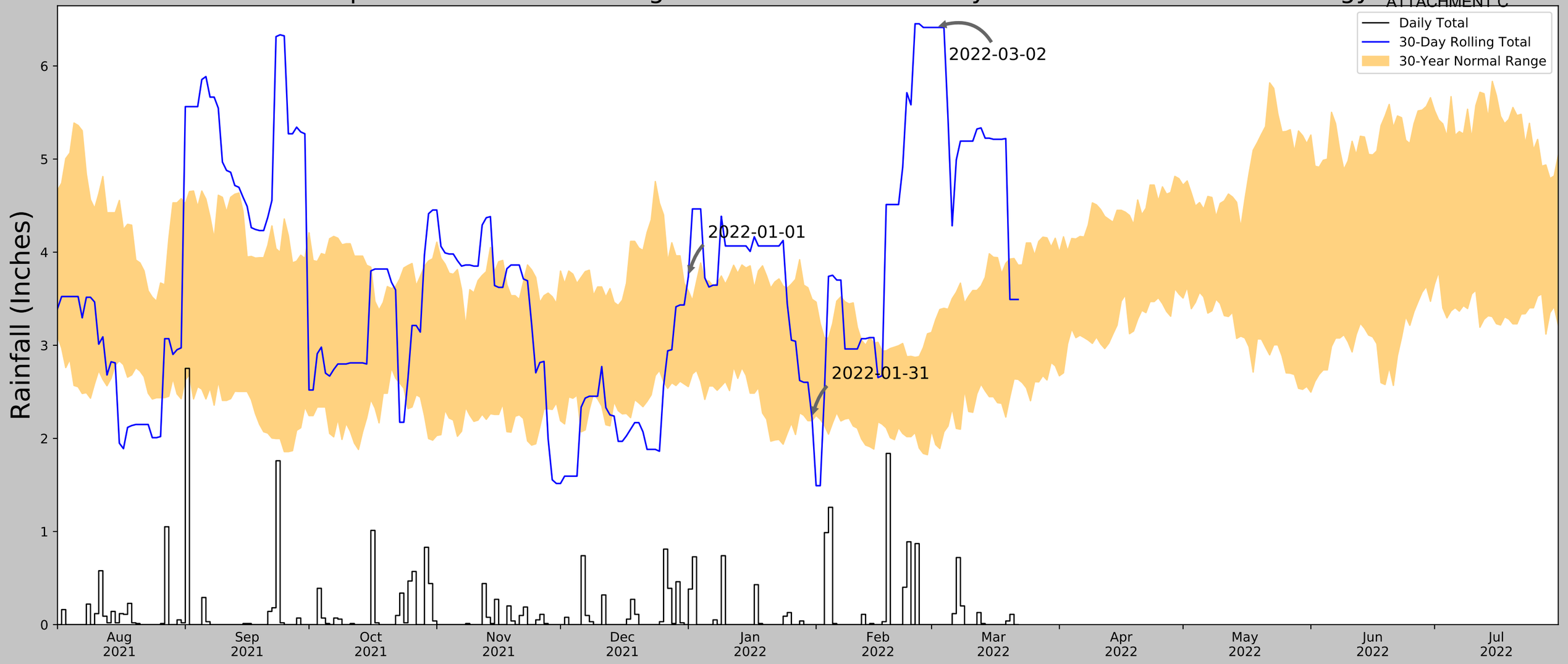
End of Quantitative Rating. Complete Categorization Worksheets.

Colliers Engineering & Design

Appendix C | USACE Antecedent Precipitation Tool

ATTACHMENT C

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



Coordinates	40.011997, -82.572119
Observation Date	2022-03-02
Elevation (ft)	1094.88
Drought Index (PDSI)	Severe wetness (2022-02)
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-03-02	1.933071	3.275197	6.413386	Wet	3	3	9
2022-01-31	2.189764	3.494882	2.220473	Normal	2	2	4
2022-01-01	2.555906	3.585433	3.736221	Wet	3	1	3
Result							Wetter than Normal - 16

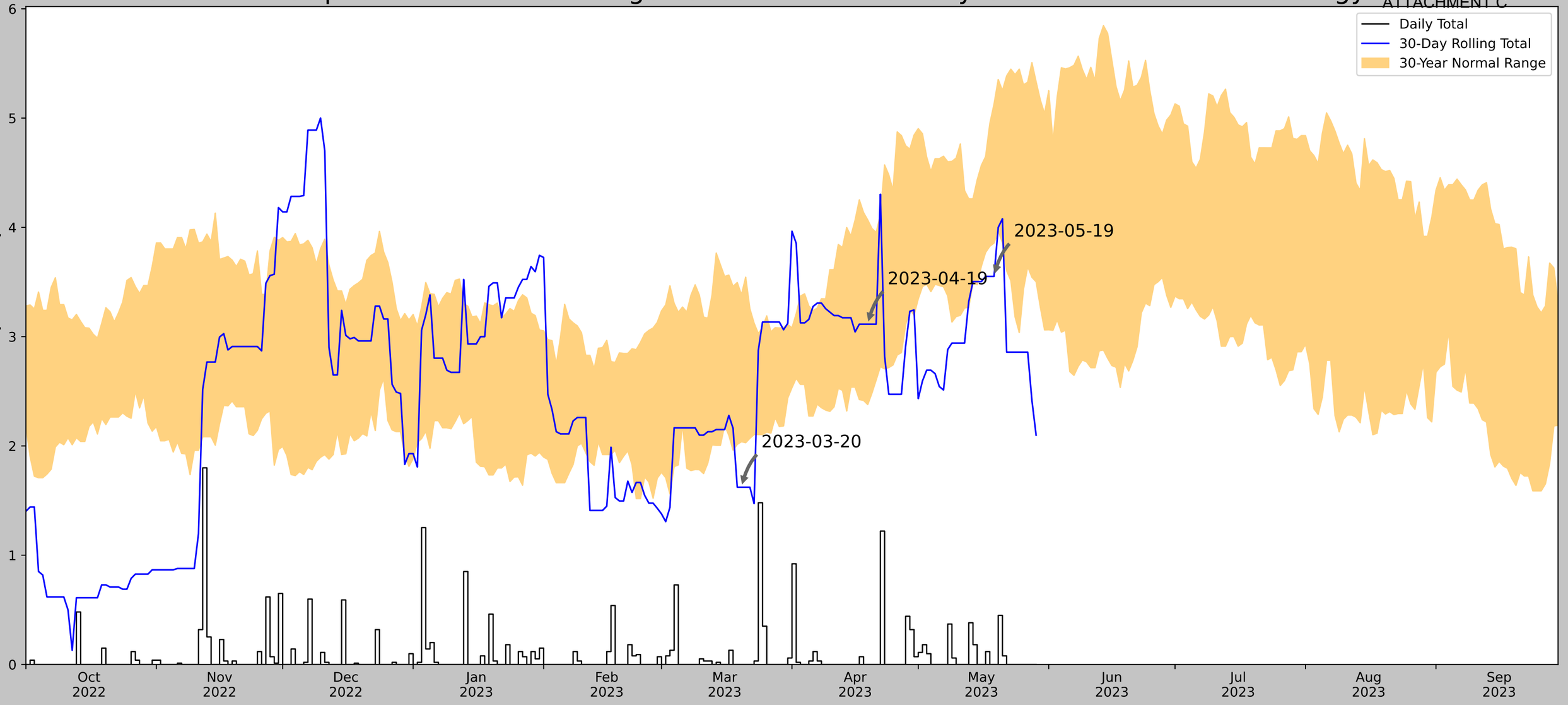
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
BUCKEYE LAKE 1 N	39.9522, -82.4819	888.123	6.315	206.757	4.148	11082	90
KIRKERSVILLE 3.3 N	39.998, -82.5986	1075.131	1.703	19.749	0.8	8	0
PATASKALA 3.2 E	39.998, -82.6136	1074.147	2.399	20.733	1.129	7	0
GRANVILLE 2.6 WSW	40.0527, -82.5445	1064.961	3.169	29.919	1.521	10	0
PATASKALA 2.1 ENE	40.013, -82.6381	1171.916	3.492	77.036	1.841	1	0
PATASKALA 2.0 NE	40.024, -82.6511	1216.864	4.261	121.984	2.437	36	0
ALEXANDRIA 2.1 NNW	40.1182, -82.6265	1080.053	7.881	14.827	3.663	32	0
NEWARK HEATH AP	40.0228, -82.4625	883.858	5.848	211.022	3.866	3	0
UTICA 4 WSW	40.2061, -82.52	1134.843	13.691	39.963	6.708	1	0
NEWARK WTR WKS	40.0875, -82.4128	834.974	9.911	259.906	7.036	173	0

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

ATTACHMENT C

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



Coordinates	40.021777, -82.950994
Observation Date	2023-05-19
Elevation (ft)	834.369
Drought Index (PDSI)	Mild wetness (2023-04)
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-05-19	3.856299	5.127953	3.551181	Dry	1	3	3
2023-04-19	2.378347	4.067717	3.114173	Normal	2	2	4
2023-03-20	2.038583	3.383858	1.622047	Dry	1	1	1
Result							Drier than Normal - 8

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
LAURELVILLE	39.4706, -82.7344	759.843	39.783	74.526	20.867	11080	90
LANCASTER 4.2 SSE	39.668, -82.5636	800.853	16.394	41.01	8.05	15	0
CIRCLEVILLE	39.6103, -82.9556	674.869	15.234	84.974	8.15	227	0
LANCASTER	39.7156, -82.6072	827.1	18.232	67.257	9.431	29	0
LANCASTER FAIRFIELD CO AP	39.7572, -82.6633	849.081	20.161	89.238	10.872	2	0

Colliers Engineering & Design

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1 877 627 3772

Civil/Site • Traffic/Transportation • Governmental • Survey/Geospatial
Infrastructure • Geotechnical/Environmental • Telecommunications • Utilities/Energy

ATTACHMENT D

PARCELID	Site Address	Site City	Site Zip Code	Owner Name 1	Owner Name 2	Owner Address 1	Owner Address 2
010-204047	806 - 920 NETTLE DR	COLUMBUS	43210	STATE OF OHIO		1534 N HIGH ST	COLUMBUS OH 43201

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

June 28, 2023

Jacqueline McCort
Colliers Engineering & Design
5275 Parkway Plaza Boulevard, Suite 100
Charlotte, North Carolina 28217

Re: 23-0629; University Project

Project: The proposed project involves the installation of 20-inch-high pressure steel pipelines.

Location: The proposed project is located in Clinton Township, Franklin County, Ohio.

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

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

Lark Sparrow (*Chondestes grammacus*), E
Yellow-crowned Night-heron (*Nyctanassa violacea*), SI
Elktoe (*Alasmidonta marginata*), SC
Purple Wartyback (*Cyclonaias tuberculata*), SC
Wavy-rayed Lampmussel (*Lampsilis fasciola*), SC
Black Sandshell (*Ligumia recta*), SC
Round Pigtoe (*Pleurobema sintoxia*), SC
Kidneyshell (*Ptychobranchus fasciolaris*), SC
Rayed Bean (*Villosa fabalis*), E, FE
Waterfall

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened. The species and features listed above are not recorded within the specified project area boundaries.

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

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

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

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

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally 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. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible.

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

The project is within the range of the following listed mussel species.
Federally Endangered
clubshell (*Pleurobema clava*)
rayed bean (*Villosa fabalis*)
northern rifffleshell (*Epioblasma torulosa rangiana*)
snuffbox (*Epioblasma triquetra*)
purple cat's paw (*Epioblasma o. obliquata*)

Federally Threatened
rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Endangered
elephant-ear (*Elliptio crassidens crassidens*)
pocketbook (*Lampsilis ovata*)
long solid (*Fusconaia maculata maculate*)
washboard (*Megalonaias nervosa*)
Ohio pigtoe (*Pleurobema cordatum*)

State Threatened
pondhorn (*Uniomerus tetralasmus*)
Salamander Mussel (*Simpsonaias ambigua*)

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

The project is within the range of the following listed fish species.
State Endangered
goldeye (*Hiodon alosoides*)
shortnose gar (*Lepisosteus platostomus*)
Iowa darter (*Etheostoma exile*)
spotted darter (*Etheostoma maculatum*)
northern brook lamprey (*Ichthyomyzon fossor*)
tonguetied minnow (*Exoglossum laurae*)
popeye shiner (*Notropis ariommus*)

State Threatened
lake chubsucker (*Erimyzon sucetta*)
paddlefish (*Polyodon spathula*)

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

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

1501 Reedsdale Street
Suite 302
Pittsburgh, Pennsylvania 15233
Main: 412 618 5390

http://colliersengineering.com/

Colliers
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& Design

December 18, 2023

John Navarro
Ohio Department of Natural Resources
Division of Wildlife
2045 Morse Road, G-3
Columbus, OH 43229

North Columbus High Pressure (NCHP) Pipeline Project – University /2023-0084418
Colliers Engineering & Design Project No.: 21004202A

Dear John Navarro,

Colliers Engineering & Design (CED) has conducted a threatened and endangered species assessment on a proposed NiSource, Inc. pipeline installation (NCHP Pipeline Project - University /2023-0084418) within Franklin County, Ohio. At this time, CED is anticipating *no effects* to federally listed species, their habitats, or designated critical habitat as a result of the Project. Additionally, there will be no anticipated impacts to state-listed species. Although initial informal consultation with the USFWS was initiated on 21 July 2023, the scope of the Project activities has since been altered. As such, we are providing this correspondence to detail the Project alterations and to request concurrence for our determinations.

Details associated with our initial 21 July 2023 correspondence and project design are provided in **Attachment A**. As previously planned, all waterbodies and wetlands would be subject to horizontal directionally drilling (HDD) to avoid disturbance to aquatic habitats. However, NiSource is now proposing the trenching of one (1) ephemeral drainage located at 40.017659 N, -83.038120 W. This drainage is adjacent to two (2) agricultural fields, is not a tributary to any named waterbody, and is not within the floodplain of any named waterbody. Moreover, through desktop and literature review, this drainage is not likely to be considered habitat for the federally endangered Rayed Bean (*Villosa fabalis*). All other state-listed species within correspondence with ODNR on 28 July 2023 (**Attachment B**) are also unlikely to inhabit the aforementioned stream.

All other wetlands and waterbodies associated with the Project will be subject to HDD. NiSource has developed an inadvertent release (IR) plan in accordance with USFWS and ODNR guidelines to minimize potential impacts to freshwater mussel habitats.

Colliers Engineering & Design

Based on the above analysis, we conclude that the proposed Project activities will have no effects on State listed species, their habitats, or designated critical habitat. Appropriate best management practices (BMPs) to minimize construction phase erosion and sedimentation impacts will be incorporated into the Project activities.

Should you have any questions or concerns, please do not hesitate to contact me via email or my mobile number below.

Sincerely,

Jacqueline M. McCort
Geographic Discipline Leader, Natural Resources

R:\Projects\2021\21004202A\Reports\Ecological\T&E\University Phase 2\231218_jmm_ODNR No Effect Letter.docx

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ATTACHMENT A

1501 Reedsdale Street
Suite 302
Pittsburgh, Pennsylvania 15233
Main: 412 618 5390
http://colliersengineering.com/

Colliers Engineering & Design

July 21, 2023

U.S. Fish and Wildlife Service
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355

Re: **Project Name/Code:** North Columbus High Pressure (NCHP) Pipeline Project – University /2023-0084418
Franklin County, OH
Colliers Engineering & Design Project No.: 21004202A

To Whom It May Concern:

The intent of this letter is to initiate informal consultation with the United States Fish and Wildlife Service (USFWS) in regard to the potential impacts the above-mentioned project may have on Federally Listed Threatened and Endangered Species, and fulfill the requirements set forth under 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

NiSource Inc., owns and operates a natural gas distribution system that serves both the city and surrounding Franklin County. The Project Study Area includes the installation of 20-inch-high pressure steel pipelines within a 100-foot-wide survey corridor centered on the proposed pipeline alignment for a combined total of 3.7 miles. The Project Study Area or "Survey Corridor" is located at latitudinal coordinates 40.010514 N and longitudinal coordinates -83.014027 W. The majority of the pipeline will be installed by trenching. It is anticipated that waterbodies and wetlands will be horizontally directionally drilled (HDD) and have no disturbance. It is presently presumed that the Project will meet the requirements for a Nationwide Permit No. 12, but that a Pre-Construction Notification (PCN) is not required. A Project Location Map is (Figure 1) and a detailed Project Wetland Delineation Map (Figure 5) are enclosed for your reference to depict the location of the proposed project activities more clearly.

On May 22, 2023, an Information for Planning and Consultation (IPaC) Project Review was conducted to initiate the informal consultation process. The IPaC identified potential threatened, endangered, and candidate species that may occur within the boundary of the proposed project and/or may be affected by the proposed project. A copy of the IPaC review is enclosed for your reference.

Following are descriptions of the habitat of the species listed in the IPaC review:

Tricolored Bat (Perim*yotis subflavus*): This bat species is often found in caves and abandoned mines in winter, although in the southern United States, where caves are sparse, tricolored bats are often found roosting in roadside culverts where they exhibit shorter torpor periods and forage during warm nights. During the spring, summer, and fall, tricolored bats are found in forested

habitats where they roost in trees, primarily among leaves of live or recently dead deciduous hardwood trees, but may also be found in Spanish moss, pine trees, and occasionally human structures.

Indiana Bat (*Myotis sodalis*): During winter, Indiana bats are restricted to suitable underground hibernacula. Most of these sites are caves located in karst areas of the east-central United States; however, Indiana bats also hibernate in other cave-like locations, especially abandoned mines. In summer, most reproductive females occupy roost sites in forested areas under the exfoliating bark of dead or dying trees that retain large, thick slabs of peeling bark. Primary roosts usually receive direct sunlight for more than half the day. Roost trees are often within canopy gaps in a forest, in a fenceline, or along a wooded edge. Habitats in which maternity roosts occur include riparian zones, bottomland and floodplain habitats, wooded wetlands and upland communities.

Northern Long-eared Bat (*Myotis septentrionalis*): Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They use areas in various sized caves or mines with constant temperatures, high humidity and no air currents. During the summer and portions of the fall and spring, northern long-eared bats may be found roosting singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags, or dead trees. Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. The species has also been found, although less commonly, roosting in structures, such as barns and sheds. Northern long-eared bats use forested areas not only for roosting, but also for foraging and commuting between summer and winter habitat.

The project location has a combination forests, stream crossings, and residential and commercial development. As it pertains to listed bat species and wooded habitat, the proposed 20-inch-high pressure distribution main is proposed to be constructed entirely within the roadway right-of-way where possible, and more specifically, most of this main will be constructed within the limits of the paved road. Near the eastern end of the project limits, the pipeline is proposed to cross the northern edge of a patch of forest on Ohio State University property, where trees will have to be cleared to install and maintain the pipeline. Within city road rights-of-way, no trees are to be taken down unless it is necessary to do so. For all tree clearing, NiSource Inc. will adhere to the seasonal tree clearing restrictions recommended by federal and state agencies (October 1 to March 31).

Monarch Butterfly (*Danaus plexippus*): In the spring and summer, the monarch butterfly's habitat is open fields and meadows with milkweed. In winter it can be found on the coast of southern California and at high altitudes in central Mexico. Adult monarchs feed on the nectar of many flowers during breeding and migration, but they can only lay eggs on milkweed plants.

Regarding Monarch Butterfly, we understand that since the Monarch butterfly is a candidate species, this species is not subject to section 7 consultation, and an effects determination is not necessary.

Rayed Bean (*Villosa fabalis*): The rayed bean generally lives in smaller, headwater creeks, but it is sometimes found in large rivers and wave-washed areas of glacial lakes. It prefers gravel or sand substrates, and is often found in and around roots of aquatic vegetation.

The project location has a combination forests, stream crossings, and residential and commercial development. All stream wetland crossings will be made via HDD.

If there are any questions or should you require further information, please feel free to contact me at (609) 618-2042 or via email at jacqueline.mccort@collierseng.com.

Sincerely,

Colliers Engineering & Design, Inc.
(DBA Maser Consulting)

Jacqueline M. McCort
Geographic Discipline Leader, Natural Resources

JMM/td

R:\Projects\2021\21004202A\Reports\Ecological\T&E\Phase 2\Consult Letter\230626_jmm_USFWS_Consult Ltr_University.docx

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
Phone: (614) 416-8993 Fax: (614) 416-8994

In Reply Refer To:
Project Code: 2023-0084418
Project Name: NCHP Phase 2 - University Project

May 22, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
(614) 416-8993

PROJECT SUMMARY

Project Code: 2023-0084418
Project Name: NCHP Phase 2 - University Project
Project Type: Natural Gas Distribution
Project Description: Installation of new utility gas line
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.01450135,-83.05226748890951,14z

Counties: Franklin County, Ohio

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

CLAMS

NAME	STATUS
Rayed Bean *Villosa fabalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5862	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

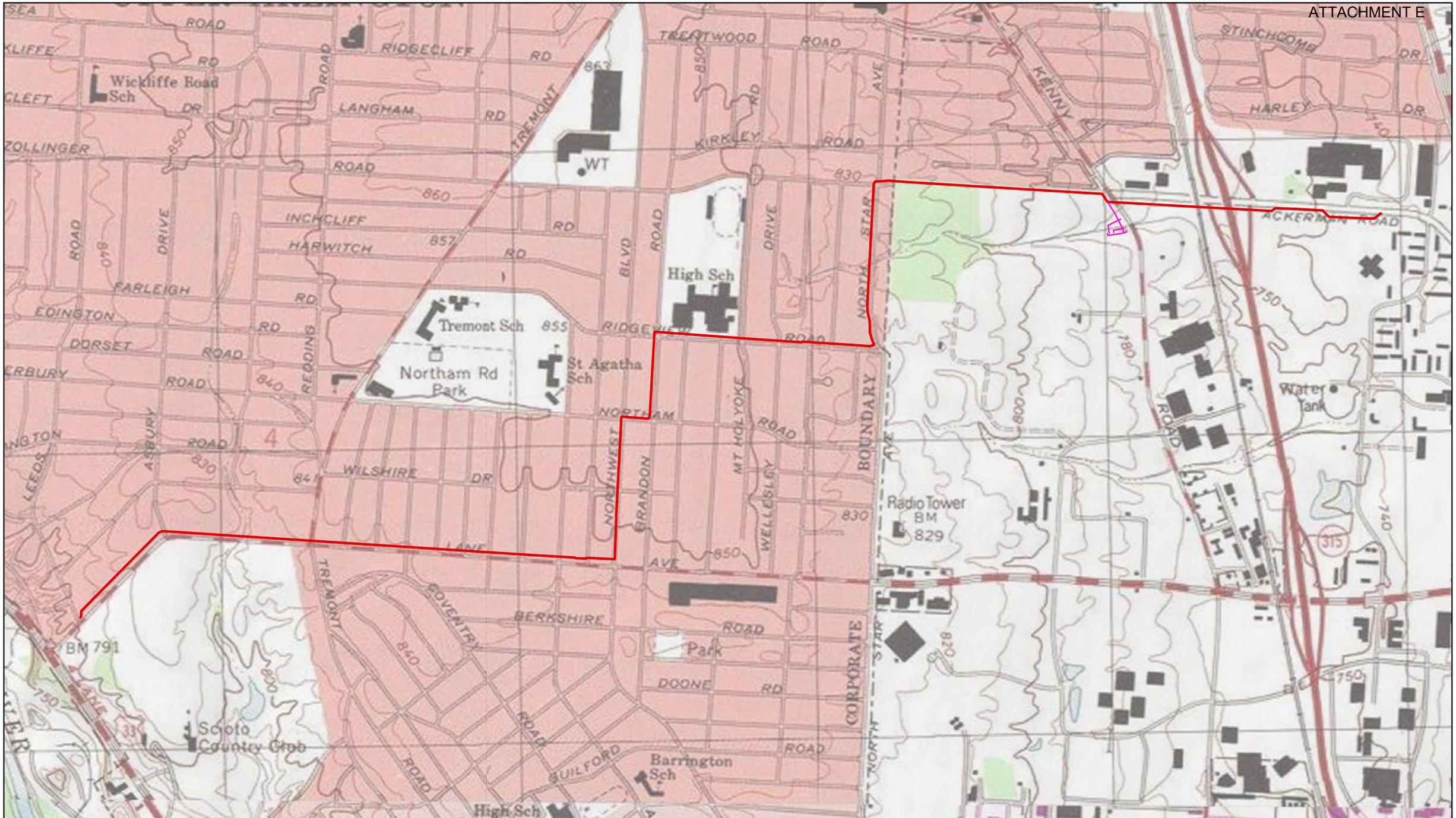
THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Colliers Engineering & Design
Name: Tanner Dickson
Address: 5275 Parway Plaza Blvd, Suite 100
City: Charlotte
State: NC
Zip: 28217
Email tanner.dickson@colliersengineering.com
Phone: 8909803033

ATTACHMENT E



Prepared For:

NiSource Inc.
801 E. 86th Avenue
Merrillville, IN 46410

Prepared By:

Raleigh Office
2000 Regency Parkway Ste 295
Cary, NC 27518
T: 919.439.8461
www.colliersengineering.com

Colliers Engineering & Design

0 600 1,200 Feet

1" = 1,000 feet

N W E S

Source: USGS 24k Quadrangle: Northwest Columbus, OH

Figure 1 - Project Location Map

University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line

Sheet 1 of 1

ATTACHMENT E

Prepared For:

NiSource Inc.
801 E. 86th Avenue
Merrillville, IN 46410

Prepared By:

Raleigh Office
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Cary, NC 27518
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www.colliersengineering.com

Colliers Engineering & Design

0 100 200 Feet

1" = 200 feet

N W E S

Source: Colliers Engineering & Design

Figure 5 - Delineation Results

University

Franklin County, Ohio

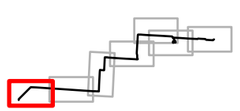
Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

- Lateral
- Main Line
- Study Corridor
- Culvert

Stream Type

- Perennial Stream
- Stormwater Erosions
- PEM Wetland

Sheet 1 of 7



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Source: Colliers Engineering & Design

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Figure 5 - Delineation Results

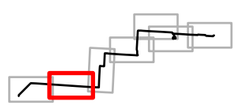
University

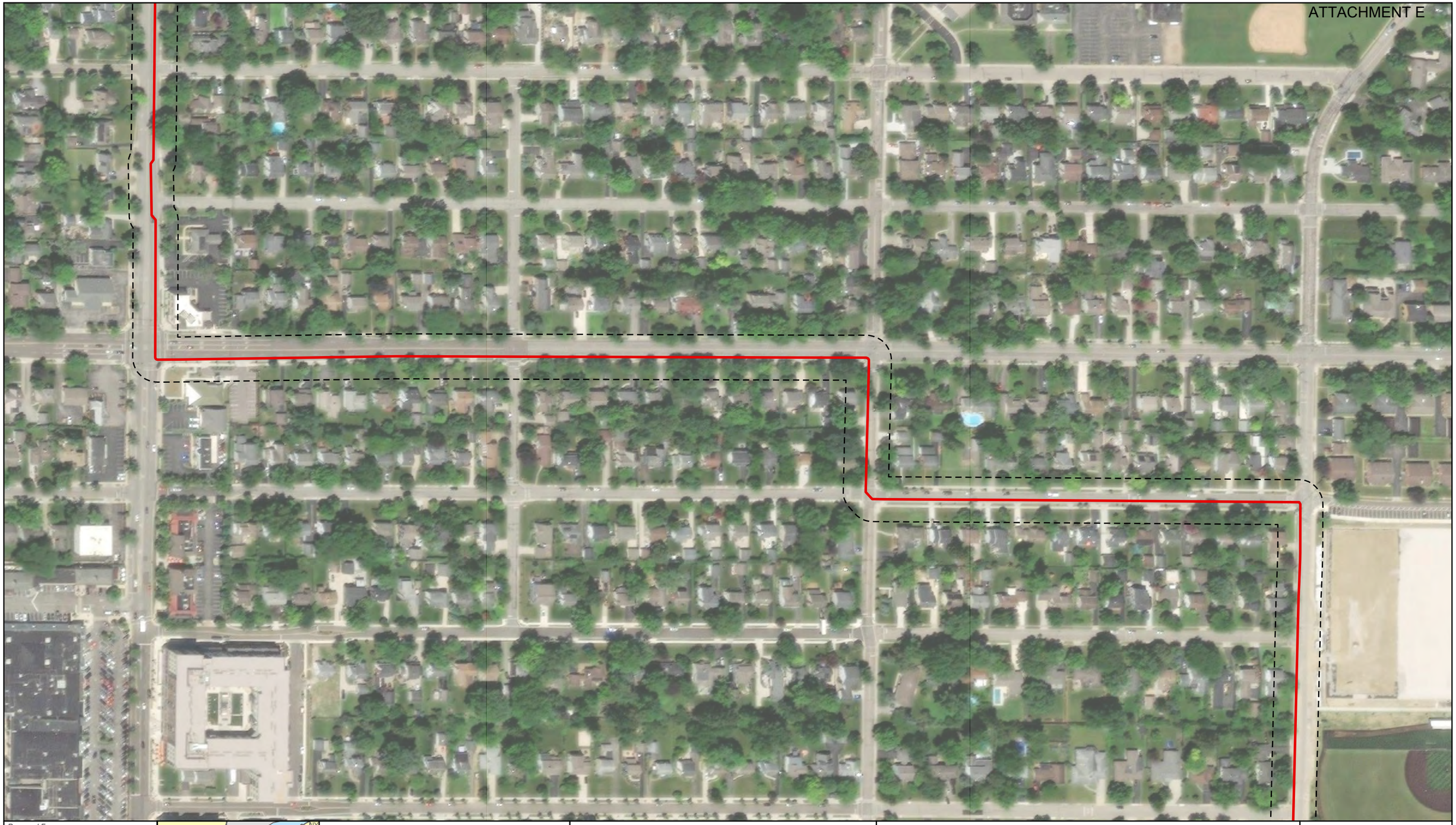
Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line

Study Corridor
Stormwater Erosions
PEM Wetland





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0 100 200 Feet

1" = 200 feet

Source: Colliers Engineering & Design

Figure 5 - Delineation Results

University

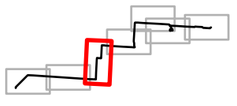
Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line

Study Corridor
Stormwater Erosions
PEM Wetland

Sheet 3 of 7



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Source: Colliers Engineering & Design

Figure 5 - Delineation Results

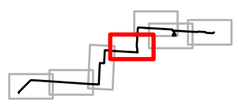
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line
Study Corridor

Stream Type
Perennial Stream
Intermittent Stream
Stormwater Erosions
PEM Wetland



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Source: Colliers Engineering & Design

Figure 5 - Delineation Results

University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

- Lateral
- Main Line
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- Culvert

Stream Type

- Perennial Stream
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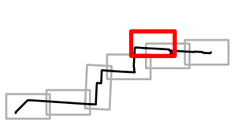
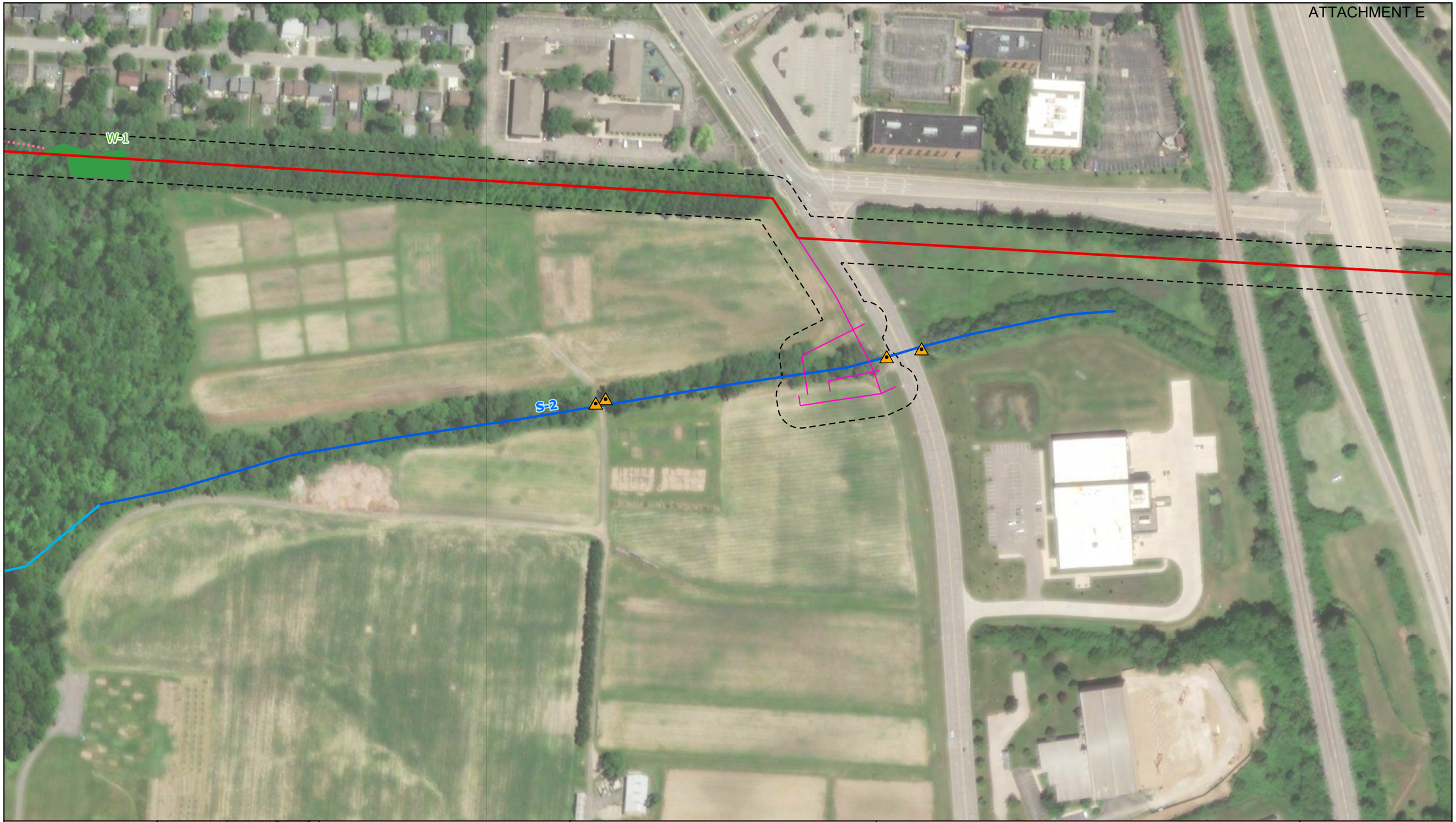
- PEM Wetland





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Source: Colliers Engineering & Design

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Figure 5 - Delineation Results

University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

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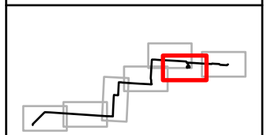

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Figure 5 - Delineation Results

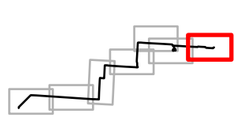
University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/25/2023	21004202A	KHY

Lateral
Main Line

Study Corridor
Stormwater Erosions
PEM Wetland



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

August 15, 2023

Project Code: 2023-0084418

Dear Tanner Dickson:

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

Federally Threatened and Endangered Species: Due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) to avoid impacts to the endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*), and the proposed endangered tri-colored bat (*Perimyotis subflavus*) 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.

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.

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,

Keith Lott
Acting Field Office Supervisor

Colliers
Engineering
& Design

ATTACHMENT B

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

June 28, 2023

Jacqueline McCort
Colliers Engineering & Design
5275 Parkway Plaza Boulevard, Suite 100
Charlotte, North Carolina 28217

Re: 23-0629; University Project

Project: The proposed project involves the installation of 20-inch-high pressure steel pipelines.

Location: The proposed project is located in Clinton Township, Franklin County, Ohio.

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

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

Lark Sparrow (*Chondestes grammacus*), E
Yellow-crowned Night-heron (*Nyctanassa violacea*), SI
Elktoe (*Alasmidonta marginata*), SC
Purple Wartyback (*Cyclonaias tuberculata*), SC
Wavy-rayed Lampmussel (*Lampsilis fasciola*), SC
Black Sandshell (*Ligumia recta*), SC
Round Pigtoe (*Pleurobema sintoxia*), SC
Kidneyshell (*Ptychobranchus fasciolaris*), SC
Rayed Bean (*Villosa fabalis*), E, FE
Waterfall

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened. The species and features listed above are not recorded within the specified project area boundaries.

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

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

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

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

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally 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. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible.

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

The project is within the range of the following listed mussel species.
Federally Endangered
clubshell (*Pleurobema clava*)
rayed bean (*Villosa fabalis*)
northern rifffleshell (*Epioblasma torulosa rangiana*)
snuffbox (*Epioblasma triquetra*)
purple cat's paw (*Epioblasma o. obliquata*)

Federally Threatened
rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Endangered
elephant-ear (*Elliptio crassidens crassidens*)
pocketbook (*Lampsilis ovata*)
long solid (*Fusconaia maculata maculate*)
washboard (*Megalonaias nervosa*)
Ohio pigtoe (*Pleurobema cordatum*)

State Threatened
pondhorn (*Uniomerus tetralasmus*)
Salamander Mussel (*Simpsonaias ambigua*)

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

The project is within the range of the following listed fish species.
State Endangered
goldeye (*Hiodon alosoides*)
shortnose gar (*Lepisosteus platostomus*)
Iowa darter (*Etheostoma exile*)
spotted darter (*Etheostoma maculatum*)
northern brook lamprey (*Ichthyomyzon fossor*)
tonguetied minnow (*Exoglossum laurae*)
popeye shiner (*Notropis ariommus*)

State Threatened
lake chubsucker (*Erimyzon sucetta*)
paddlefish (*Polyodon spathula*)

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

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

ATTACHMENT F

Colliers Engineering & Design

Cultural Resource Desktop Review

University Project

Colliers Engineering & Design Project Number: 21004202A

May 31, 2023

Prepared for:

NiSource Inc.
801 E. 86th Avenue
Merrillville, IN 46410

Prepared by:

Colliers Engineering & Design, Inc. (DBA Maser Consulting)
1501 Reedsdale St Suite 302, Pittsburgh, PA 15233
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Colliers Engineering & Design

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APPENDICES

List of Tables

Colliers Engineering & Design

1.0 PURPOSE OF DOCUMENT

Colliers Engineering & Design (CED) was contracted by NiSource Inc. (NiSource) to perform a cultural resource background review for the University Project (Project) in Columbus, Franklin County, Ohio. This background review and desktop assessment has been prepared in accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966. This regulation requires project proponents to consider a project's effects on historic properties depending on potential permitting requirements and/or funding sources. The purpose of the document is to outline any previously recorded cultural resources that may be impacted by the proposed Project in support of NiSource's compliance with Section 106 of the NHPA. The goal is also to provide information for project planning and development, as well as estimates on possible future work that may be required for regulatory compliance. A cultural resources survey was not conducted as an element of this research.

2.0 INTRODUCTION

2.1 PROJECT DESCRIPTION

The University Project (Project) proposes to install a 3.7-mile (5.95-kilometer [km]) 20-inch high pressure steel main line pipeline.

2.2 PROJECT LOCATION

The Project area originates approximately 0.10 miles (0.16 km) west of the intersection of Ackerman Rd and Defiance Dr and terminates at the intersection of W Lane Ave and Leeds Rd in Columbus, Franklin County, Ohio. The Project is depicted on the *Northwest Columbus, Ohio* US Geological Survey (USGS) 7.5-minute topographic map quadrangle.

2.3 EXISTING CONDITIONS AND VICINITY CHARACTERISTICS

The Project area consists mostly of suburban neighborhoods with a few commercial buildings, a large golf course on the westernmost side, and open fields on the easternmost side. The Project area has been subjected to heavy disturbance from residential and commercial construction activities for many years. The Project area is bordered on all sides by further residential and commercial development.

3.0 ENVIRONMENTAL BACKGROUND

3.1 PHYSIOGRAPHY AND GEOLOGY

The Project area is in the Loamy, High Lime Till Plains ecoregion of the Eastern Corn Belt Plains physiographic province of Ohio. The Loamy, High Lime Till Plains ecoregion covers most of southwestern Ohio all the way through central Indiana. This ecoregion is flat to rolling and has outwash plains and terminal moraines glacial features. Soils are loamy on lime-rich glacial till. The Project area is underlain by Wisconsinan glacial deposits consisting of mostly loam. Most of the forests have been cleared for agriculture and now the area is utilized mostly for soybean, corn, and livestock production (Woods, et al. 1998).

The Project is underlain by the Columbus limestone geological formation. The Columbus limestone geological formation consists of limestone and dolomite that ranges from dark grey to brown. The far eastern portion of the project area is bordered by the Ohio Shale geological formation. There are also sand filled burrows two to five meters thick bordering the formation. Shale and sandstone also make up a majority of the valley's lowlands and ridges. Dolostone layers underline the main formation of the region (Slucher et. al 2006).

3.2 TOPOGRAPHY AND SOILS

The Natural Resources Conservation Service (NRCS) Soil Survey for Franklin County, Ohio available on the Web Soil Survey, identifies six (6) soil types underlying the Project area (**Table 1**). Soils range from very poorly drained to moderately well drained (NRCS 2022).

Table 1. Soil Types in the Project Area

Soil Symbol	Soil Name	Slope %	Drainage	Landform
CfB	Cardington-Urban land complex	6-12	Moderately well drained	Ground moraines, end moraines
CrB	Crosby silt loam	2-6	Somewhat poorly drained	Recessionial moraines, ground moraines, water-lain moraines
CsA	Crosby-Urban land complex	0-2	Somewhat Poorly Drained	Recessionial moraines, ground moraines, water-lain moraines
CsB	Crosby-Urban land complex	2-6	Somewhat Poorly Drained	Till plains
Ko	Kokomo silty clay loam	0-2	Very Poorly Drained	Depressions on till plains
Ut	Udorthents-Urban land complex	2-12	--	--

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4.0 CULTURAL RESOURCE DESKTOP REVIEW

The following information was gathered as part of the desktop review to identify previously recorded cultural resources within a 0.5-mile (0.80-km) radius of the Project area. The background review consisted of a cultural resources and literature review of the Project area. A CED archaeologist reviewed the online database hosted by the Ohio History Connection (OHC), the State Historic Preservation Office (SHPO) of Ohio, for any previously recorded surveys, historic or prehistoric sites, and cemeteries located in or near the Project. Site files, relevant maps, and National Register of Historic Places (NRHP) locations were also examined. Aerial photographs, topographic maps, and the NRCS Web Soil Survey were also examined for historical and environmental information related to the Project area.

4.1 PREVIOUSLY CONDUCTED CULTURAL RESOURCE SURVEYS

The background review revealed that two (2) previous archaeological surveys have been conducted along portions of the Project area. One was a "Phase I Cultural Resources Survey of the American Electric Power's Roberts-OSU Transmission Line Project in Columbus Township, Franklin County, Ohio" conducted in 2010, and the second one was a "Phase I Cultural Resources Survey of NiSource's Proposed Ackerman Road 20-inch Natural Gas Pipeline Project in the City of Columbus, Franklin County, Ohio" conducted in 2012. One additional survey has been conducted within a 0.5-mile (0.80-km) radius of the Project area which was an "Archaeological Survey of Proposed Interstate 315 - (Columbus & Worthington) Franklin County, Ohio" conducted in 1976 (OHC 2023).

4.2 PREVIOUSLY RECORDED CULTURAL RESOURCES

Based on the review, there are no archaeological sites documented within the Project area; however, there is one historic district that intersects the Project area, which is the Upper Arlington Historic District. There are also multiple cultural resources documented within a 0.5-mile (0.8-km) radius of the Project area (OHC 2023) (**Table 2**).

Table 2. Previously Recorded Cultural Resources Within 0.5 mile (0.8 km) of the Project Area

OHI/OAI Number	Name of Resource	Date of Significance/ Temporal	Address
FR0408	Archaeological Site	Prehistoric	N/A
FR0409	Archaeological Site	Prehistoric	N/A
FR0410	Archaeological Site	Prehistoric	N/A
FR2892	Archaeological Site	Prehistoric	N/A
FR2891	Archaeological Site	Prehistoric	N/A
FR0407	Archaeological Site	Prehistoric	N/A
FR0406	Archaeological Site	Prehistoric	N/A
FR0094	Archaeological Site	Prehistoric	N/A
FR0404	Archaeological Site	Prehistoric	N/A
FR0403	Archaeological Site	Prehistoric	N/A
FR0405	Archaeological Site	Prehistoric	N/A
FR0205	Archaeological Site	Prehistoric	N/A
FR0204	Archaeological Site	Prehistoric	N/A

OHI/OAI Number	Name of Resource	Date of Significance/ Temporal	Address
FRA0168109	William Greives House	1925	2489 Tremont Rd Upper Arlington, OH
FRA0161709	Scioto Country Club	1916	2196 Riverside Dr Upper Arlington, OH
FRA0162609	Charles Harrop House	1928	2459 Tremont Rd Upper Arlington, OH
FRA0161809	Chennell House	1931	2427 Tremont Rd Columbus, OH
FRA0409009	Bricker House	1930	2407 Tremont Rd Upper Arlington, OH
FRA0162509	Hugh Newbitt House	1928	2321 Yorkshire Rd Upper Arlington, OH
FRA0346309	Marion Devos House	1928	2270 Arlington Ave Upper Arlington, OH
FRA0347509	Historic Structure	1928	1928 Beverly Rd Upper Arlington, OH
FRA0711509	Jones House	1927	1942-1948 Guilford Rd Upper Arlington, OH
FRA0346409	Maidens House	1925	2194 Coventry Rd Upper Arlington, OH
FRA0162309	Barrington Road School	1939	1780 Barrington Rd Upper Arlington, OH
FRA0348709	Historic Structure	1950	1923 Tewksbury Rd Upper Arlington, OH
FRA0347209	De Margan House	1935	1963 Wickford Rd Upper Arlington, OH
FRA0346609	Daly House	1930	1987 Chatfield Rd Columbus, OH
FRA0347309	Historic Structure	1935	2376 Andover Rd Upper Arlington, OH
FRA0346509	Fullen House	1931	1991 Berkshire Rd Upper Arlington, OH
FRA0347409	Historic Structure	1936	1904 Berkshire Rd Upper Arlington, OH
FRA0346909	De Long House	1931	1967 Collingswood Rd Upper Arlington, OH
FRA0346809	Hansel House	1929	1964 Collingswood Rd Upper Arlington, OH

OHI/OAI Number	Name of Resource	Date of Significance/ Temporal	Address
FRA0347109	Helen Huntington House	1920	2500 Henthorn Rd Upper Arlington, OH
FRA0346709	Baird House	1936	1874 Collingswood Rd Upper Arlington, OH
FRA0982809	St Mark's Episcopal Church	1958	2151 Dorset Rd Upper Arlington, OH
NR - 12000392	Kilgour, Frederick G, House	1967-1980	1415 Kirkley Rd Upper Arlington, OH 43221
FRA0209109	Industrial Nucleonics Corp.	N/A	650 Ackerman Rd Columbus, OH
FRA0209609	Clinton Predestinarian Baptist	1870	2781 Olentangy River Rd Columbus, OH
FRA0208409	Amaranth Abbey	1925	316 W Dodridge Ave Columbus, OH
FRA1010609	Union Cemetery Dam	1971-1972	Olentangy River Clinton (Township of), OH
FRA0167110	Nogle Prop	1939	129-131 W Weber Rd Columbus, OH
FRA0167210	Historic Structure	1910	91 W Longview Ave Columbus, OH
N/A	Litchford Cemetery	1835	0.3 mile east of Tremont. 595 feet north of Ridgeview
N/A	Amrath/Amrath Abby Cemetery	1925	In UNION. Northeast of Ackerman and Olentangy. Building erected (1827)
N/A	White-Britton Cemetery	1811	0.9 mile North Trabue Road and west Scioto River. On quarry site
N/A	Old Union-Union Cemetery	1806	East of Ackerman and Olentangy River Road

4.3 Historic Topographic Maps and Aerial Imagery

Historical topographic maps and aerial photography revealed existing suburban housing near the Project area since approximately the mid-twentieth century (USGS 1954, 1955, 1964, 1965a, 1965b, 1995a, 1995b, 2010a, 2010b; Nationwide Environmental Title Research [NETR] 2022a, b, c, and d). The vicinity has remained mainly developed land with large areas of gridded residential structures that gradually increased over time from the 1960s to the present (NETR 2022a-d).

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5.0 SUMMARY AND RECOMMENDATIONS

The Project proposes to install a 3.7-mile (5.95-km) 20-inch high pressure steel main line pipeline. The Project area originates approximately 0.10 mile (0.16 km) west of the intersection of Ackerman Rd and Defiance Dr and terminates at the intersection of W Lane Ave and Leeds Rd in Columbus, Franklin County, Ohio. The Project is depicted on the Northwest Columbus, Ohio US Geological Survey (USGS) 7.5-minute topographic map quadrangle.

A Cultural Resource desktop review was conducted for the Project, consisting of a compilation of known above-ground historic resources, archaeological sites, and previously conducted cultural resources surveys. There are no above-ground historic resources or subsurface archaeological sites within the Project area; however, there are numerous recorded cultural resources within a 0.5-mile (0.8-km) radius. These results are depicted in **Appendix B**.

Based on the information provided and the results of this desktop assessment, CED would recommend a cultural resources survey should the Project proceed. Previously documented resources in the immediate vicinity indicate a moderate to high probability for encountering archaeological sites within or adjacent to the Project area. This background review and assessment was conducted in support of NiSource's compliance with Section 106 of the NHPA.

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6.0 REFERENCES

Nationwide Environmental Title Research (NETR)

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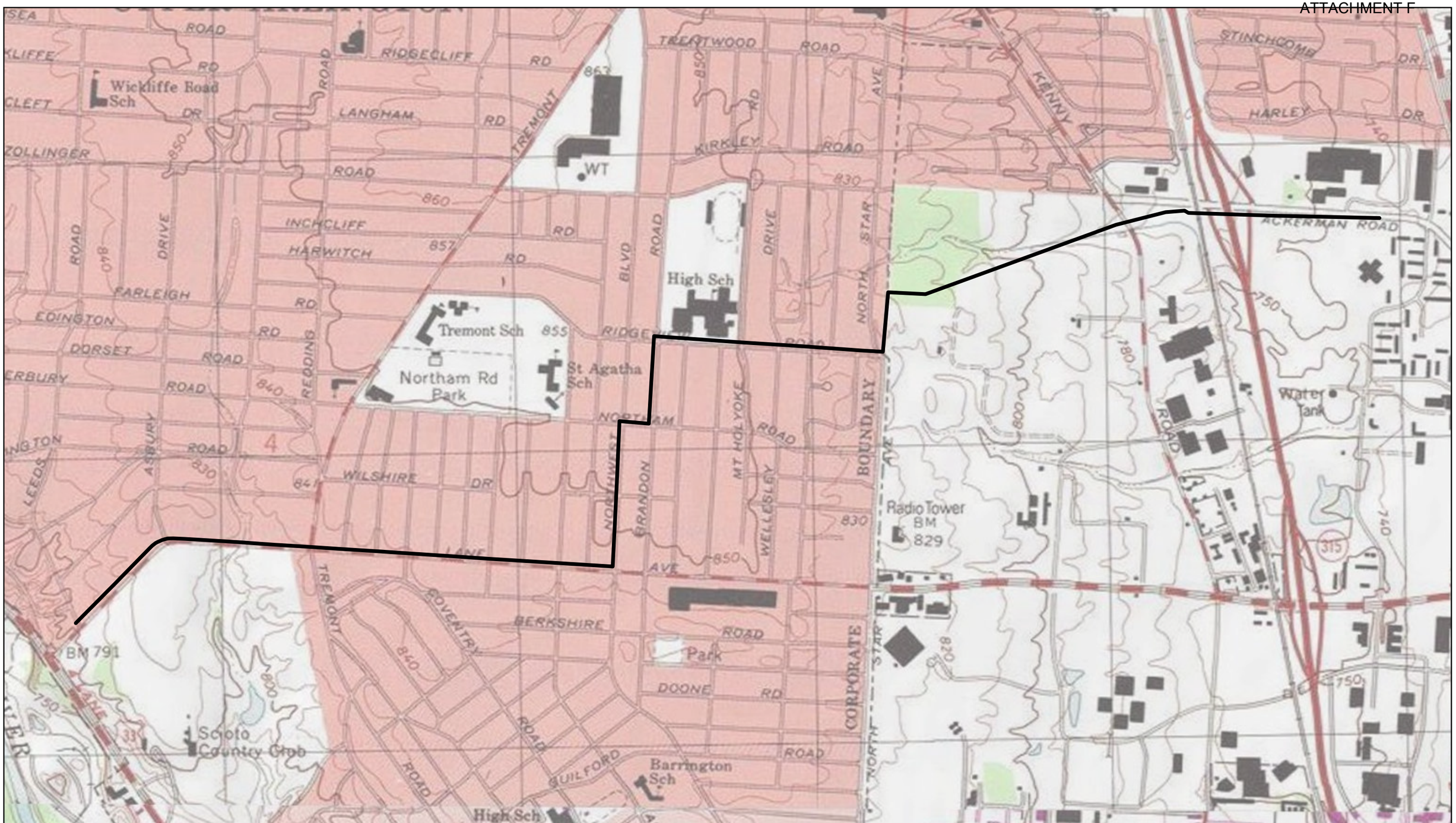
Appendix

Appendix A | Project Location Map



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2000 Regency Parkway Ste 295
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Colliers Engineering & Design

0 600 1,200 Feet

1" = 1,000 feet

N W E S

Source: USGS 24k Quadrangle: Northwest Columbus, OH

Figure 1 - Project Location Map

University

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
9/7/2022	21004202A	KHY

Phase 2 Main Line

Sheet 1 of 1

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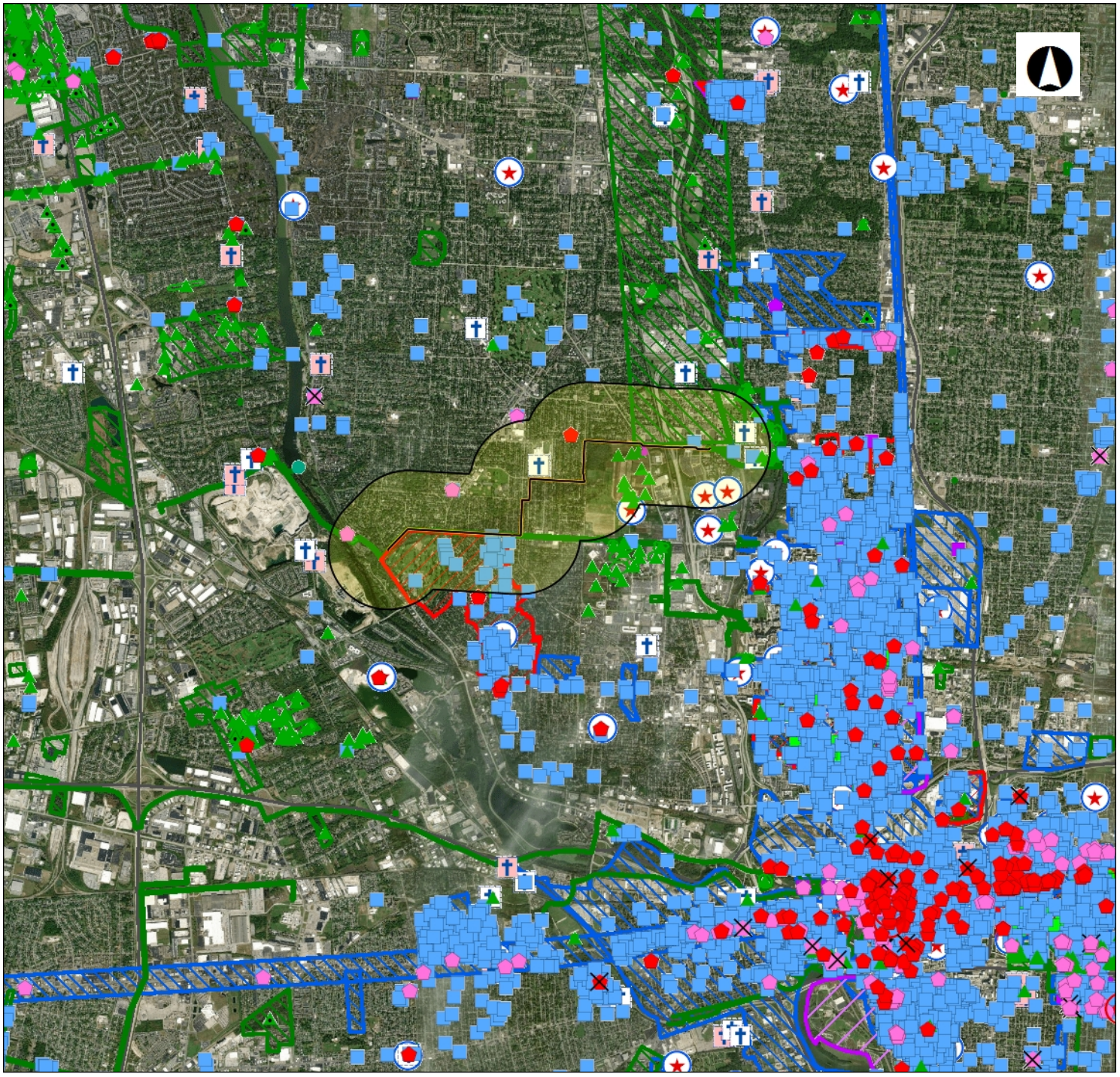
Appendix B | Cultural Resources Background Map



OHIO HISTORY CONNECTION

State Historic Preservation Office

Legend

NR Listings
- Listed
- National Historic Landmark
- Delisted

Determinations of Eligibility
- DOE
- Demolished

Archaeological Sites
- Site
- Isolated Find

- Historic Structures
- Historic Bridges
- Historic Tax Credit Projects
- Local Designations

OGS Cemeteries
- Confident
- Not Confident

- Historic Markers

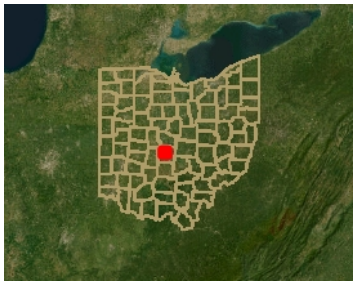
0 1.28 2.56 Miles

1: 101,310

Copyright/Disclaimer

Datum: [Datum]

Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere



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In replies, please use
2024-FRA-61640

July 11, 2024

Jacob Spuck
Principal Investigator
Colliers Engineering and Design
1501 Reedsdale Street Suite 302,
Pittsburgh, PA 15233

RE: Section 106—North Columbus High Pressure University Phase II Project, Columbus, Franklin County, Ohio

Dear Mr. Spuck:

This is in response to the receipt, on June 18, 2024, of the submissions related to the **North Columbus High Pressure University Phase II Project.** We appreciate the opportunity to comment on this project. The comments of Ohio's State Historic Preservation Office (SHPO) are made pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and the associated regulations at 36 CFR Part 800 and Ohio Revised Code 149.53.

The proposed undertaking is for the new construction of approximately 2.2 miles (3.5 kilometers [km]) of 20-inch below ground high pressure natural gas pipeline.

The report, North Columbus High Pressure University Phase II Project Columbus, Franklin County, Ohio (Intensive Phase I Cultural Resources Investigation Columbus, Franklin County, Ohio) [Colliers Engineering & Design*;* Spuck and Thomas 2024] was submitted to the SHPO office for review. The APE for the undertaking includes approximately 15.2 acres (6.2 hectares).

The survey documented a heavily disturbed setting dominated by agricultural activity and urban construction fill. Based on the results of the survey and the extent of the proposed Project activities, no intact, significant cultural resources will be affected by construction within the Project APE. In accordance with Section 106 of the NHPA, and the guidelines set forth by OHC, CED recommends a finding of NO HISTORIC PROPERTIES AFFECTED within the Project APE.

Based on the information submitted, it is the opinion of SHPO that the proposed undertaking will have no effect on historic properties listed in or eligible for listing in the National Register of Historic Places. No further coordination is necessary unless the project changes or new or additional historic properties are discovered during the implementation of the project. In such a situation, the SHPO should be contacted as per 36 CFR 800.13. Please be advised that this is a Section 106 decision. This review decision may not extend to other SHPO programs.

800 E. 17th Ave., Columbus, OH 43211-2474 • 614.297.2300 • ohiohistory.org

If you have any questions, please contact me by email at dgagliano@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Dawn Walter Gagliano, Project Reviews Manager
Resource Protection and Review
State Historic Preservation Department

Ser. No. 1103679

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