

REQUEST FOR A TYPE III VARIANCE FROM THE CITY OF COLUMBUS STORMWATER DRAINAGE MANUAL

SIMPSON STRONG-TIE EXPANSION SITE

JANUARY 7, 2023

Prepared for:

**CITY OF COLUMBUS
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1.0 PROJECT OVERVIEW

Simpson Strong Tie (SST) is a manufacturer of metal hangers used in various types of construction including but not limited to joist hangers and deck hangers. The company currently has approximately 284,000 SF of building under roof serving administration, manufacturing, and warehousing needs of their Hilliard Ohio plant. Due to the increase in demand for these products, additional warehouse space is needed in order to satisfy demand.

To accomplish this, SST is proposing to add warehouse capacity and an employee training center totaling 289,600SF +/- (see Figure 1: Proposed Site Design). In order to accomplish this in the most effective way, the company purchased the parcel situated directly east of the current facility (Parcel 560-302754-00, hereafter referred to as the Site) to accommodate the proposed expansion. The Site is an old railyard, with several old rail lines and low-quality wetlands onsite. Roberts Milliken Ditch runs through the center of the Site from west to east. Seven (7) small tributaries of the ditch are also present onsite (See Figures 2a and 2b).

A wetland delineation was completed by Central Ohio Wetland Consulting, LLC in April 2021, and a supplemental delineation was completed by MAD Scientist Associates in September 2021. A total of seven (7) wetlands and eight (8) streams were delineated onsite. Based on field observations, wetlands and streams were determined to be potentially jurisdictional. A preliminary jurisdictional determination (PJD) from the USACE Huntington District confirmed the jurisdictional status of the wetlands and streams onsite.

A 404 Individual Permit application was submitted to the USACE Huntington District on November 1, 2022. A 401 Water Quality Certification (WQC) application was submitted to the Ohio EPA on November 29, 2022.

See Appendix A for delineation report and jurisdictional determination.

See Appendix B for USACE 404 Individual Permit Application and Ohio EPA 404 WQC Application.

2.0 STREAM CORRIDOR PROTECTION ZONE

Roberts Milliken Ditch runs through the center of the property, connected to 7 small tributaries that feed into it. Based on the sewershed mapping provided by the City of Columbus (the City),

the drainage area of the Ditch is 0.277 square miles. According to Streamstats, the drainage area for Roberts Milliken Ditch is 0.57 square miles. In order to provide the most conservative Stream Corridor Protection Zone (SCPZ), the larger drainage area was used to calculate an SCPZ with a width of 118.73 feet. Four wetlands (Wetlands 3, 4, 5, and 6) from the delineation report are contiguous with the SCPZ and, therefore, are considered part of the SCPZ (See Figure 3). For ease of reference, the wetlands will be referred to by their numbers within this variance request.

3.0 REASON FOR VARIANCE REQUEST

Based on capacity needs, a minimum of 230,000 square feet (sq. ft.) will be required for building construction. In addition, 115,975 sq. ft. of parking will need to be constructed to accommodate the increase in personnel employed at the facility. As per City regulations, the new building must be spaced 10 feet away from existing infrastructure, and stormwater detention with a capacity of 323,704 cubic feet (cf) is needed for the Site. Based on these requirements for proposed development, a total of 19.79 acres is needed for completing this project. Due to the configuration of wetlands onsite, there is not a section of contiguous acreage that could accommodate the proposed development without impacting onsite wetlands.

Based on building needs, Wetlands 4 and 6, which are part of the City of Columbus stream corridor protection zone (SCPZ), are expected to be impacted (Attachment A, Figure 2). Both wetlands were assessed using the ORAM (Ohio Rapid Assessment Method) and assigned scores of 25 and 26, respectively, which identifies them as Category 1 wetlands. These types of wetlands are defined as “limited quality waters” which have low functionality and limited potential for restoration (Ohio EPA, 2001) (Attachment A).

4.0 ALTERNATIVES ANALYSIS

4.1 Offsite Considerations

SST reviewed the possibility of purchasing a property that was not contiguous with the current manufacturing site, including an economic analysis of four (4) options. The economic analysis includes the proposed expansion into the Buckeye Yard property. This would have resulted in no impacts to the current Site.

Due to budgetary constraints and accessibility issues, however, this alternative was not considered economically feasible. Of the four alternatives reviewed, the expansion into the Buckeye Yard

Rail Site was the only one that would allow the current SST facility to continue operating, thus reducing costs by requiring an expansion rather than a completely new building. The remaining alternatives contained challenges and constraints to buildings based on Site configuration and Site location.

In regard to potential environmental impacts from the other alternatives, the other three alternatives required a construction footprint that met the current facility size in addition to the expansion size, therefore increasing the permeable surface within the county by closer to 622,000 sq. ft. instead of 300,000 sq. ft. Wetland and stream delineations were not conducted onsite for the alternative property options; however, based on a review of aerial imagery and other resources including the National Wetlands Inventory and web soil survey for alternative properties, it appears that wetlands and streams are present on the alternative sites as well. Therefore, it is probable that impacts to aquatic resources would have occurred in order to develop the alternative properties as well.

See Appendix C for Economic Analysis on the Non-Disturbance Alternative.

4.2 Full Compliance Alternative

In the full compliance alternative, the proposed development of the Buckeye Yard site would be greatly reduced to avoid any impacts to the SCPZ. In order to accommodate both an expansion of operations, as well as parking for the additional personnel, there would only be room for an additional 81,600 SF building. This is significantly less than the 289,600 SF footprint needed to accommodate the added warehouse capacity and an employee training center.

A parking garage was not considered in the planning for this project due to land availability and significant additional costs that would pose an undue financial burden on the project. In the project approximately \$376,000 was allotted for asphalt paving for the surface parking lot currently shown on the variance documents. The probable cost to build a 2-story parking garage on the site is an order of magnitude of approximately \$9,376,000. Considering an additional cost to the project of approximately \$9,000,000 in an environment where costs had increased significantly over the last several years, this would put an undue burden on the owner and has the potential to stop the project from moving forward.

See Appendix D for Full Compliance Alternative.

4.3 Minimal Impact Alternative

In the minimal impact alternative, the proposed development of the Buckeye Yard site is oriented to minimize disturbance to on-site aquatic resources. The required stormwater detention basin is situated within the SCPZ of Roberts Milliken Ditch, parallel to the stream. The construction of the stormwater detention pond would require 41.60 linear feet of impacts to a tributary of Roberts Milliken Ditch. To accommodate the ability for large trucks to be able to turn around in the northern portion of the proposed facility expansion, a total of 2.35 acres of the SCPZ (full wetland impact to Wetland 4 and partial wetland impact to Wetland 6) will be impacted. From a quantitative standpoint, this alternative would impact less of the SCPZ. That is why this option is considered the minimal impact alternative.

See Appendix E for the Minimal Impact Alternative Concept Plan.

4.3 Preferred Alternative

In order to accommodate the proposed expansion of the manufacturing facility, SST will need to impact the southern portion of the SCPZ, particularly within Wetlands 4 and 6. A portion of Wetland 4 will be filled to accommodate building construction, and Wetland 6 will be converted into a detention basin for stormwater, therefore removing its ability to naturally regulate stormwater. Because of this, the impacts to Wetland 6 are being treated as impacts to the SCPZ. In this design, 2.75 acres of wetland will be impacted. The design does not impact Roberts Milliken Ditch or any of its tributaries onsite.

See Appendix F for Preferred Alternative Concept Design.

4.4 Alternatives Analysis Results

Based on the alternatives analysis, SST is proposing moving forward with the preferred alternative. An analysis of each of the alternatives is provided below.

4.4.1 Offsite v. Preferred

In comparison to an offsite option, the economic benefit to expanding Simpson Strong-Tie into the Buckeye Yard location is much greater as the expansion would be adjacent to the current building and allow a buildout instead of a brand-new facility on undisturbed land.

4.4.2 Full Compliance v. Preferred

The full compliance alternative would only allow for the addition of an 81,600 SF building onsite, which would not accommodate the needs of the client. As described in the full compliance section above, reducing the parking footprint via a parking garage construction would not be economically feasible. In comparison, the preferred alternative would allow the client to successfully expand operations and provide parking to accommodate the additional personnel. With successful mitigation to the impacted SCPZ, the preferred alternative would increase the quality of the SCPZ, which would be preferred to the full compliance alternative.

4.4.3 Minimal Impact v. Preferred

This alternative would quantitatively impact more SCPZ acreage in comparison to the minimal impact alternative; however, it would qualitatively be better for the streams onsite. Within the SCPZ impact, both Wetlands 4 and 6 are classified as Category 1 wetlands, and therefore, their contribution to wildlife habitat and ecosystem function is relatively low. In comparison, the stream impacted in the minimal impact alternative scored a 54 based on an HHEI analysis, which classifies it as Modified Class II Primary Headwater (PHW) Stream. While not directly comparable to the ORAM categories, the Ohio EPA HHEI manual describes Class II PHW streams as: “Streams found to have a moderately diverse community of warm-water adapted native fauna either present seasonally or on an annual basis.” (Ohio EPA, 2018). In comparison to Category 1 wetlands, which are defined as those wetlands that “...support minimal wildlife habitat, or hydrological or recreational functions,” and as wetlands which “...do not provide critical habitat for threatened or endangered species or contain rare, threatened or endangered species” (Ohio EPA, 2001), it is our recommendation that the increased impacts to the SCPZ would have less of an impact to the stream functions onsite than decreased SCPZ impact, but direct stream impact.

The preferred alternative is the most cost-effective and economically viable while also impacting the least water resources onsite. A mitigation plan has been created to address the 2.75 acres of proposed wetland impacts.

5.0 PROPOSED MITIGATION

The USACE requires a total of 4.2 acres of wetland mitigation credits to account for the 2.75 acres of impact to these Category 1 jurisdictional wetlands (a 1.5:1 ratio). The City requires that wetlands within the SCPZ be mitigated onsite at a ratio of 1:1 (City of Columbus, 2021). In order to satisfy

all mitigation requirements, SST intends to create 2.75 acres of emergent wetland onsite and purchase the additional 1.5 acres through the Stream + Wetlands Foundation in-lieu fee (ILF) program.

5.1 HUC12

Based on historic elevations, the **Site** is mapped into two separate HUC12 units (Hayden Run-Scioto River HUC12 050600011204 and Dry Run-Scioto River HUC12 050600011205), with the divide between the two running east to west. Nonetheless, based on historic aerials, it appears that the onsite drainage has been so heavily modified that this is no longer an accurate representation of the Site. Prior to the 1970s, the site was farmed, with no apparent wetland signatures appearing on historic aerials (See Appendix G). Roberts Milliken Ditch is visible, as well as Scioto Darby Creek to the north of the Site, into which the northern portion of the Site presumably drained originally. However, the construction of the railyard in the 1970s created artificial berms within the watershed, retaining most of the water onsite or conveying it to Roberts Milliken Ditch to the south. In particular, Wetland 3, which crosses the two **HUCs**, does not connect to Scioto Darby Creek because of the impediment of the surrounding railroad tracks. No culverts were observed that provide a hydrologic connection to Scioto Darby Creek. Instead, this wetland connects to Roberts Milliken Ditch (See Figure 4).

Other current-day observations that support the onsite drainage as a functionally single HUC are the presence of Scioto Darby Creek Road to the north that creates a large barrier from Scioto Darby Creek preventing onsite water from flowing north. Topographic overlays developed from recent LiDAR data indicate that most of the northern wetlands are depressions with no distinct outlet other than overland flow. A culvert was observed flowing into Wetland 2 beneath the railroad tracks from the north. The area that flows into the wetland is a small upland triangle between two raised tracks and supports the hypothesis that onsite drainage no longer flows to the north to Scioto Darby Creek (Attachment H, Photographs 1-5).

5.2 Mitigation Plan

In order to mitigate the impact to Wetlands 4 and 6 (part of the SCPZ requiring 1:1 mitigation in the immediate HUC12 watershed), SST intends to expand and connect Wetlands 2, 3, and 7 to create a more diverse wetland complex that would provide additional stormwater storage capacity and ultimately increase wetland quality within the Roberts Milliken Stream watershed. The

expanded wetland complex between Wetlands 2 and 7 will hydrologically connect to Wetland 5 through the partial removal of the railroad spur that separates the two areas. Wetland 5 is part of the SCPZ onsite, and thus, the newly created wetland complex will be part of the SCPZ and will contribute to overall stream health onsite.

The impacted wetlands are cattail monocultures and have been categorized as Category 1 wetlands through the ORAM. In contrast, Wetland 2 is more diverse and received a higher ORAM score of 32. Expanding this wetland area would not only account for the 2.75 acres of impact, but it would increase the quality of existing wetlands and the functional capacity of the SCPZ.

The SCPZ, with the new onsite addition from the mitigation wetlands, will be placed in a conservation easement to ensure that it will not be impacted by future changes to the site.

The additional wetland mitigation acreage required by the USACE and Ohio EPA due to the 1.5:1 mitigation ratio will be obtained through the Stream + Wetland Foundation ILF program.

5.2.1 Wetland Creation Grading Plan

The wetlands identified on the Site vary in elevation and have formed (or persisted) in remnant land areas that are partitioned and defined by railroad infrastructure. Currently, Wetland 2 is situated at elevations below 886 feet AMSL (~883 – 886 ft AMSL), while the surrounding area exceeds these elevations (~887 - 890 ft AMSL). Wetland 7, located to the northwest of Wetland 2, is situated at 888 ft AMSL, directly downslope from the raised railroad bed. Wetland 5 spans elevations from 880 - 881 ft AMSL to the south but is separated from Wetland 2 by a raised railroad bed that is 12 to 13 feet higher (~893 ft AMSL).

To accomplish onsite wetland mitigation, it is proposed that excavation occur within certain areas that are currently not meeting wetland criteria. The proposed details are described below. It must be noted, however, that these plans are preliminary and have been developed for the purposes of obtaining concurrence/approval for the variance being sought in this application. A more thorough site analysis and detailed design will be completed to ensure that SST meets its mitigation requirements through successful onsite wetland creation should the variance be approved.

In order to achieve the appropriate hydrology for wetland creation, approximately 2 acres north of Wetland 2 will be excavated (presumably to elevations below 887 ft AMSL) to form a depression that is hydrologically connected – at least during peak flooding - with both Wetland 2 and Wetland

7. To the south of Wetland 2, an additional area of approximately 0.51 acres will also be excavated (to elevations of 884 ft AMSL or less).

Currently, Wetlands 7 and 2 are isolated from any stream connections due to the railroad beds that surround the area and contain a central depression. Historically, this area would have drained to the northeast, but it currently does not function as part of the watershed for the Scioto Darby Creek. The current culvert under the existing railroad track to the east allows excess water to flow into Wetland 2, but based on the culvert grade, further isolates these wetlands from the original watershed. Instead, as part of this variance, these wetlands (along with the newly constructed expansion) will connect to the Roberts Milliken Ditch watershed to the south. Based on onsite observations and topography review, there will be substantial hydrology to accommodate the additional wetland acreage to successfully create mitigation wetlands and connect them to the SCPZ.

A connection between the expanded Wetland 2 and Wetland 5 to the south will be created by removing a portion of the existing railroad spur and contouring the area to slope to the natural elevation of Wetland 5. In general, this subtle topography will accommodate the collection of stormwater within the northern basin without inundating Wetland 5. This wetland will also provide additional stream corridor protection zone area. The connectivity of the proposed wetland restoration to Wetland 5, which is contemporarily situated in the HUC12 watershed where the impacted wetlands are located, results in a 1:1 replacement of the impacted wetlands within the same watershed.

See Figure 5 for the Mitigation Concept Design.

5.2.2 Wetland Plant Community

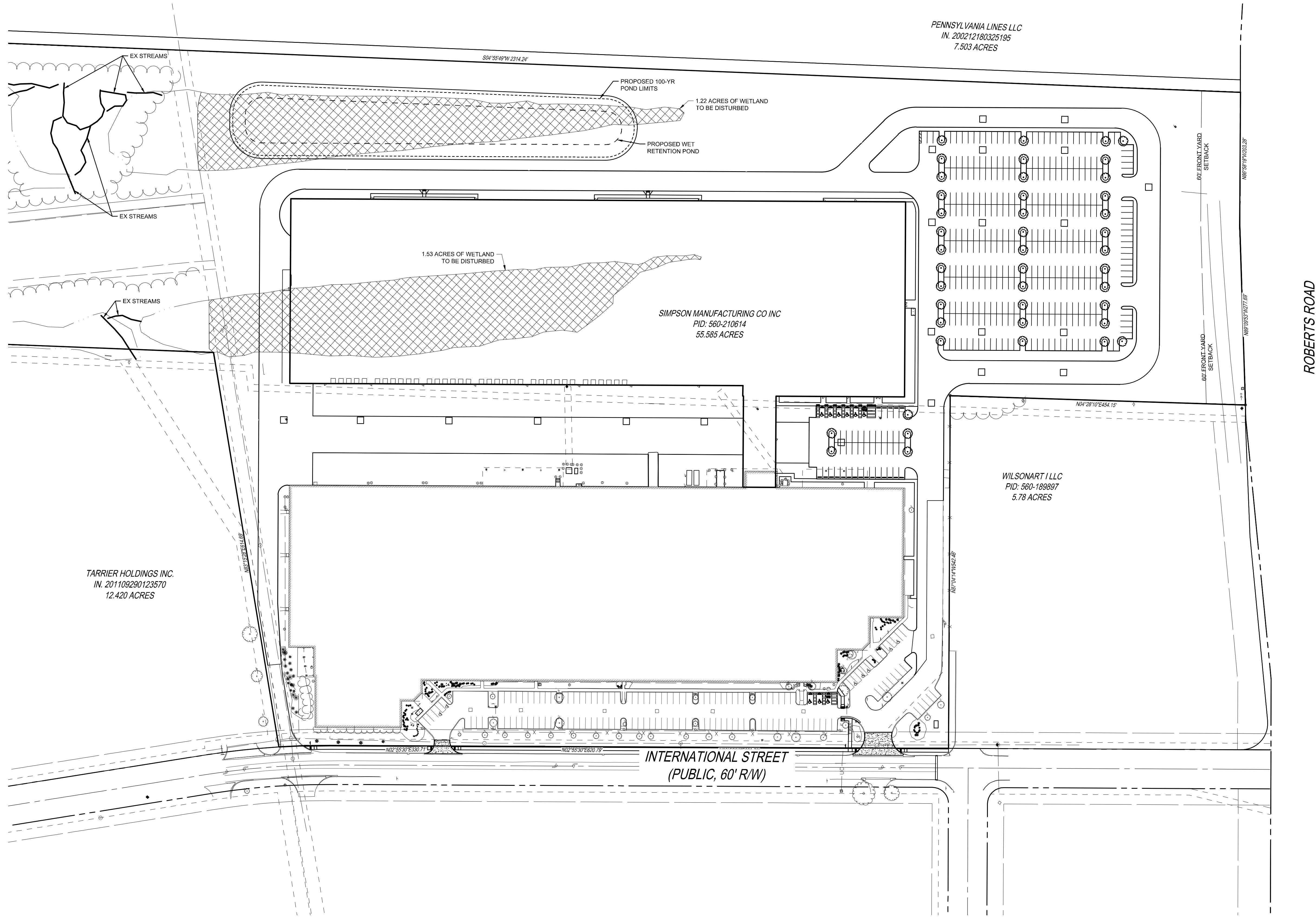
The wetlands to be impacted are cattail monocultures that score as Category 1 wetlands using the ORAM. While these areas provide some stream corridor protection, they contain minimal wildlife habitat and are considered to be of low quality. In contrast, Wetland 2 scores as a Category 2 wetland, which “...support[s] moderate wildlife habitat, or hydrological or recreational functions,” and is “...dominated by native species but generally without the presence of, or habitat for, rare, threatened and endangered (T&E) species; and wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions” (ORAM; Ohio EPA, 2001). In order to preserve the functions of the current Category 2 wetland, the newly formed wetlands will incorporate the

existing vegetation within Wetland 2, including the large cottonwood (*Populus deltoides*) trees located on the northern end. The majority of the area proposed for wetland expansion is currently dominated by Callery pear (*Pyrus calleryana*), which is considered an invasive upland species. Removal of the Callery pear and the establishment of additional emergent wetland plants will reduce invasive species coverage onsite and enhance the habitat value and ecosystem functions of these wetlands. The newly-created wetlands will be seeded with appropriate native shallow and deep emergent wetland plant species and monitored for invasives species encroachment. However, in general, it is expected that plant communities within the new wetlands will re-establish naturally due to the presence of higher quality vegetation found in Wetland 2, which may serve as a source area for wetland plant propagules.

LITERATURE CITED

- The City of Columbus Department of Public Utilities. 2021. Division of Sewerage and Drainage Stormwater Drainage Manual.
- Ohio EPA. 2001. Ohio Rapid Assessment Method for Wetlands. Version 5.0 Final. Ohio Environmental Protection Agency. Columbus, Ohio.
- Ohio EPA. 2018. Field Methods for Evaluating Primary Headwater Streams in Ohio. Version 4.0. Ohio EPA Division of Surface Water, Columbus, Ohio. 129 pp.

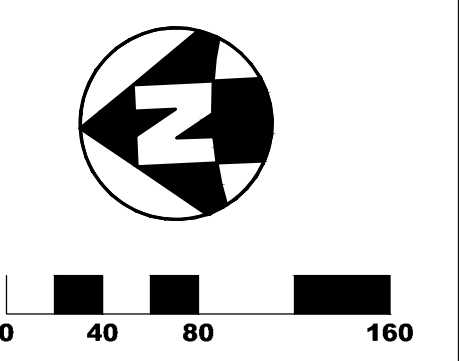
FIGURES



LEGEND

 WETLAND AREA TO BE DISTURBED

NOTES
 1. 2.75 TOTAL ACRES OF WETLAND TO BE DISTURBED



PLANS PREPARED BY:

THE KLEINGERS GROUP
 CIVIL ENGINEERING
 SURVEYING
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REV	REVISION DESCRIPTION	INITIAL	DATE

SIMPSON STRONG-TIE DEVELOPMENT
 PREFERRED ALTERNATIVE WETLAND EXHIBIT
 2600 INTERNATIONAL STREET
 CITY OF COLUMBUS
 FRANKLIN COUNTY, OHIO

DATE	01/05/2023	JOB NO.	210880.001
SCALE	1"=80'	SHEET	1/3

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Legend

 Site Boundary

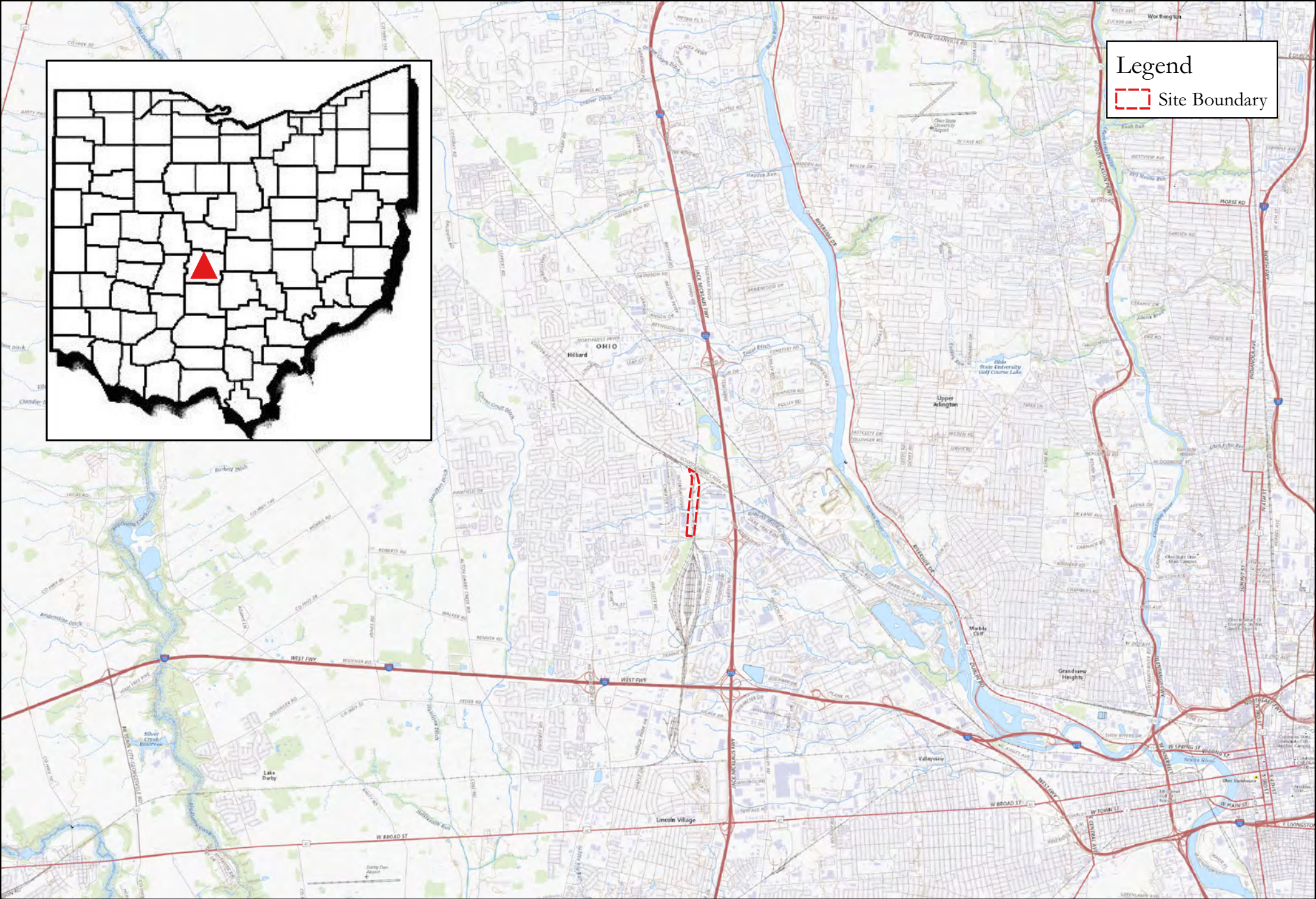
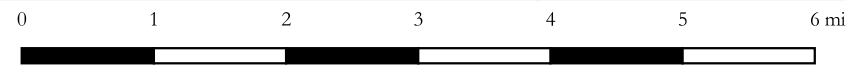


Figure 1. Site Location
 Buckeye Yard, Simpson Strong-Tie
 Columbus, Ohio

Sources: ArcGIS Topography



Date: November 4, 2021



Created By: Lindsay Hanna





Legend
[Red dashed line] Site Boundary

Figure 2. Site Aerial
Buckeye Yard, Simpson Strong-Tie
Columbus, Ohio

Sources: Google Satellite (2019)

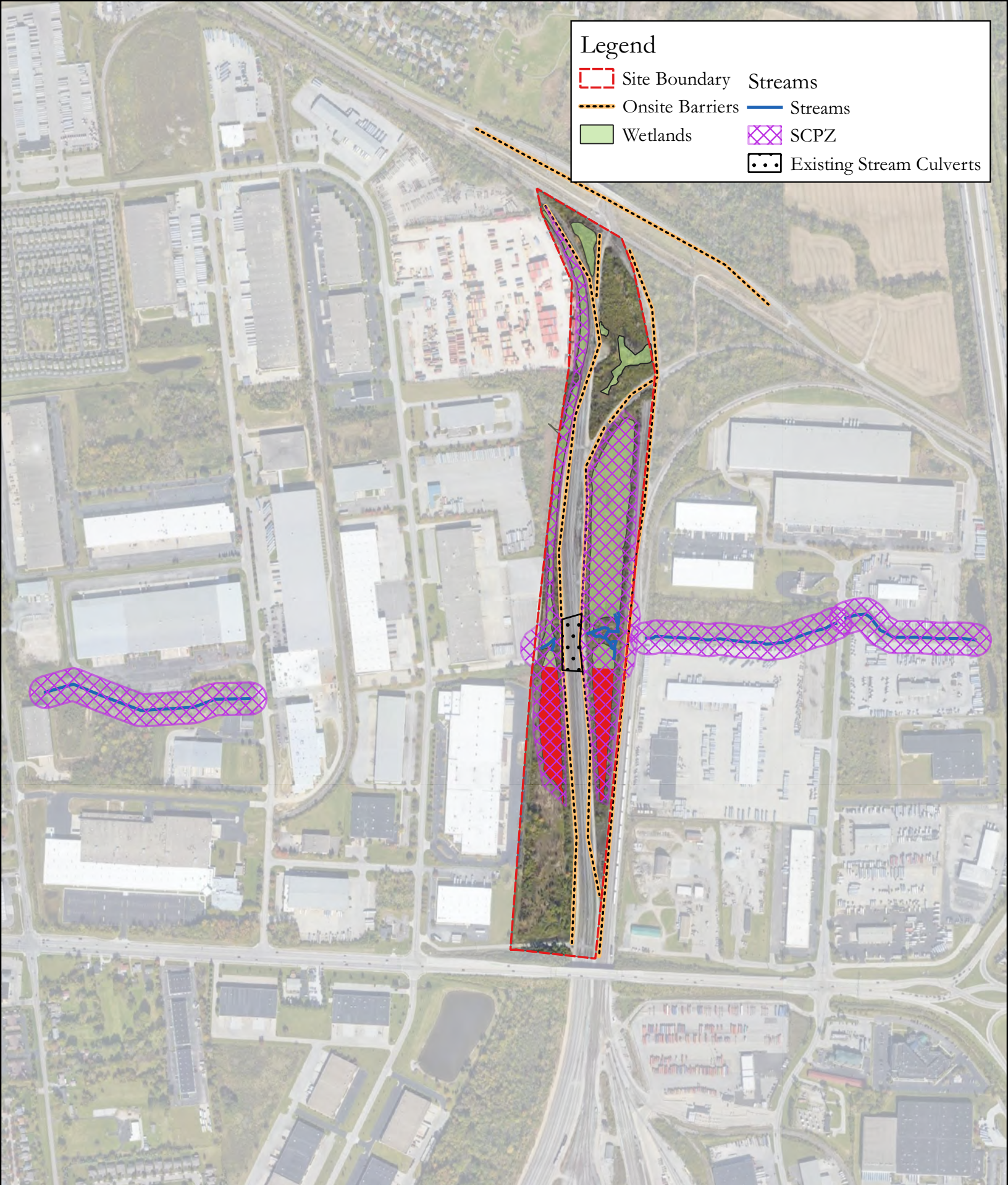


Date: November 4, 2021



Created By: Lindsay Hanna





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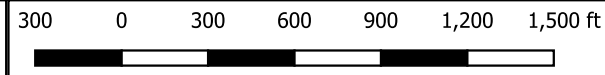
Site Boundary	Streams
Onsite Barriers	SCPZ
Wetlands	Existing Stream Culverts



Stream Corrido Protection Zone (SCPZ)
 Buckeye Yard, Simpson Strong-Tie
 Columbus, Ohio

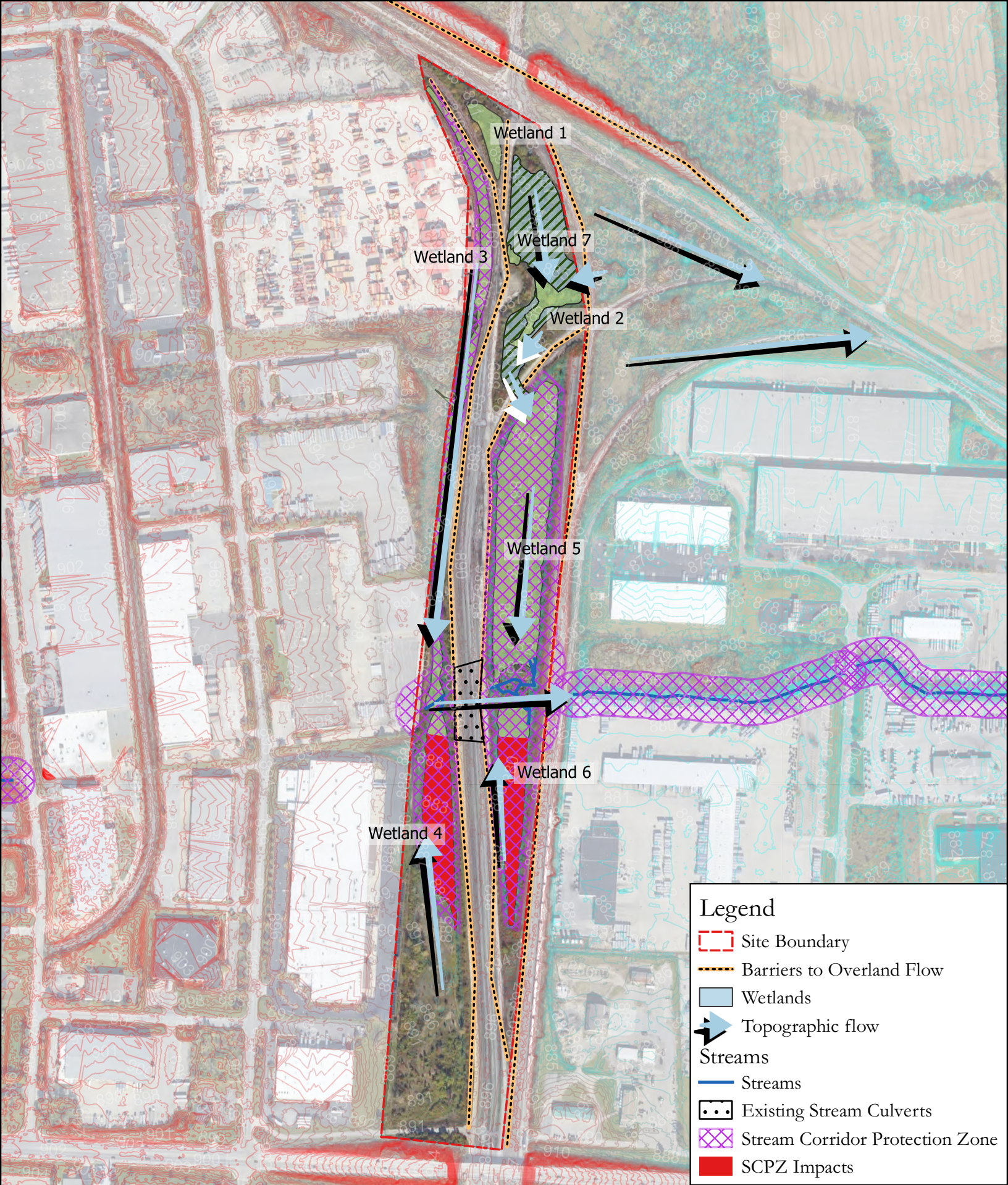
Sources: Google Satellite (2019)

Date: January 7, 2023



Created By: Lindsay Hanna





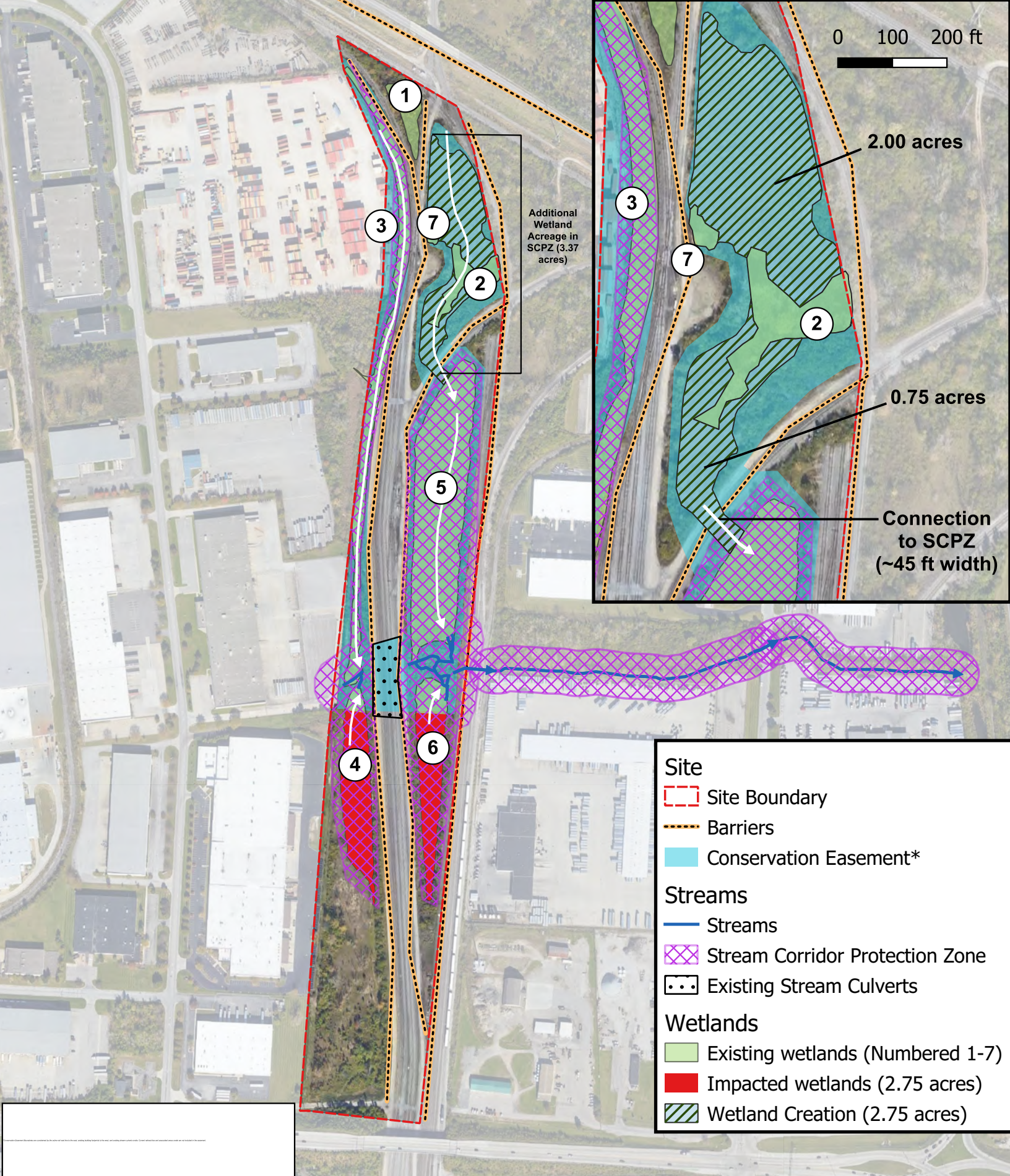
Legend

- Site Boundary
- Barriers to Overland Flow
- Wetlands
- ➔ Topographic flow
- Streams
- Existing Stream Culverts
- Stream Corridor Protection Zone
- SCPZ Impacts

Figure 4. Waterflow Onsite
 Buckeye Yard, Simpson Strong-Tie
 Columbus, Ohio

Sources: Google Satellite (2019)





Additional
Wetland
Acreage in
SCPZ (3.37
acres)

0 100 200 ft

2.00 acres

0.75 acres

Connection
to SCPZ
(~45 ft width)

- Site**
- Site Boundary
 - Barriers
 - Conservation Easement*
- Streams**
- Streams
 - Stream Corridor Protection Zone
 - Existing Stream Culverts
- Wetlands**
- Existing wetlands (Numbered 1-7)
 - Impacted wetlands (2.75 acres)
 - Wetland Creation (2.75 acres)

Wetland Mitigation Conceptual Plan
 Buckeye Yard, Simpson Strong-Tie
 Columbus, Ohio

Sources: Google Satellite (2019)

Date: January 7, 2023



Created By: Robert Keast



APPENDIX A

Delineation Report and Preliminary Jurisdictional Determination



Memorandum: Buckeye Yard Wetland Assessment

Date: May 3, 2022

RE: Assessment of water resources onsite at Buckeye Yard (north of Roberts Road) in Franklin County, Ohio

Introduction

This is a supplemental memo to be included with the delineation report completed by Central Ohio Wetland Consulting, LLC on April 20, 2021.

Simpson Strong-Tie Co., Inc. (SST) hired MAD Scientist Associates, LLC (MAD) to provide wetland assessment services as part of the company's due diligence prior to purchasing a property within Buckeye Yard north on Roberts Road in Franklin County, OH (Figures 1 and 2). Field work was completed on October 18, 2021, by Certified Wetland Delineator (CWD) Lindsay Hanna and Environmental Technician Cody Wright. Observations were recorded regarding the delineated water resources onsite as well as any additional wetlands observed. In addition, connectivity of water resources to make a potential jurisdictional determination was reviewed. Delineation datasheets were completed using methods presented in the 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Midwest Regional Supplement (Version 2.0; USACE, 2012).

Site Findings

MAD confirmed the presence of seven (7) wetlands and eight (8) streams onsite. MAD verified the wetland boundaries that were delineated by Central Ohio Wetland Consulting, LLC in a previous delineation report and completed datasheets at each wetland. In addition, MAD delineated an additional wetland and conducted an ORAM for this wetland. Based on field observations, these wetlands and streams are potentially jurisdictional, however a formal jurisdictional determination will have to be submitted to USACE before this can be verified.

Supplemental photos can be found in Appendix A of this addendum.

Wetlands 1-6

MAD confirmed the presence of Wetlands 1 through 6 that were previously delineated by Central Ohio Wetland Consulting, LLC in April 2021. The updated wetland boundaries are presented in Figure 3 of this addendum. Wetland datasheets are provided in Appendix B of this addendum.

Wetland 7

Wetland 7 is located in the northern portion in Buckeye Yard located along the edge of the railroad track. The wetland is estimated to be 0.057 acres. Dominant species include green ash (*Fraxinus pennsylvanica*-FACW), cottonwood (*Populus deltoides*-FAC), gray dogwood (*Cornus racemose*-FAC), common buckthorn (*Rhamnus cathartica*-FAC), narrow-leaf cattail (*Typha angustifolia*-OBL), barnyard grass (*Echinochloa crus-galli*-FACW), and yellow nutsedge

(*Cyperus esculentus*-FACW). Wetland hydrology indicators at the Site for Wetland 7 included saturation, geomorphic position, and passing the FAC-neutral test for plants. Hydric soil indicators included depleted matrix (F3) evidenced by a low chroma of 2, with prominent redoximorphic features present (4 to 12 percent) as concentration in the matrix.

Wetland 7 is small with a very narrow buffer of high intensity land uses. The hydrology has been impacted by the nearby railroad track and stormwater input; it appears to be recovering. Similarly, the habitat has been impacted by shrub removal and is of fair quality; it appears to be recovering. In general, there is little wildlife habitat and a sparse amount of invasive cattail. Based on these factors, Wetland 7 scored a 23 on the ORAM, categorizing it as a Category 1 wetland.

Impacts

Wetlands 4 and 6 will be impacted. In total, 2.51 acres of wetland will be impacted (1.35 acres of Wetland 4 and 1.16 acres of Wetland 6).

Literature Cited:

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report. Y-87-1. U.S. Army Engineers Waterways Experiment Station. Vicksburg, MS.

Ohio EPA. 2001. Ohio Rapid Assessment Method for Wetlands. Version 5.0 Final. Ohio Environmental Protection Agency. Columbus, Ohio.

USACE. 2012. Regional supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0). J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J.F. Berkowitz. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Figures



Legend

 Site Boundary

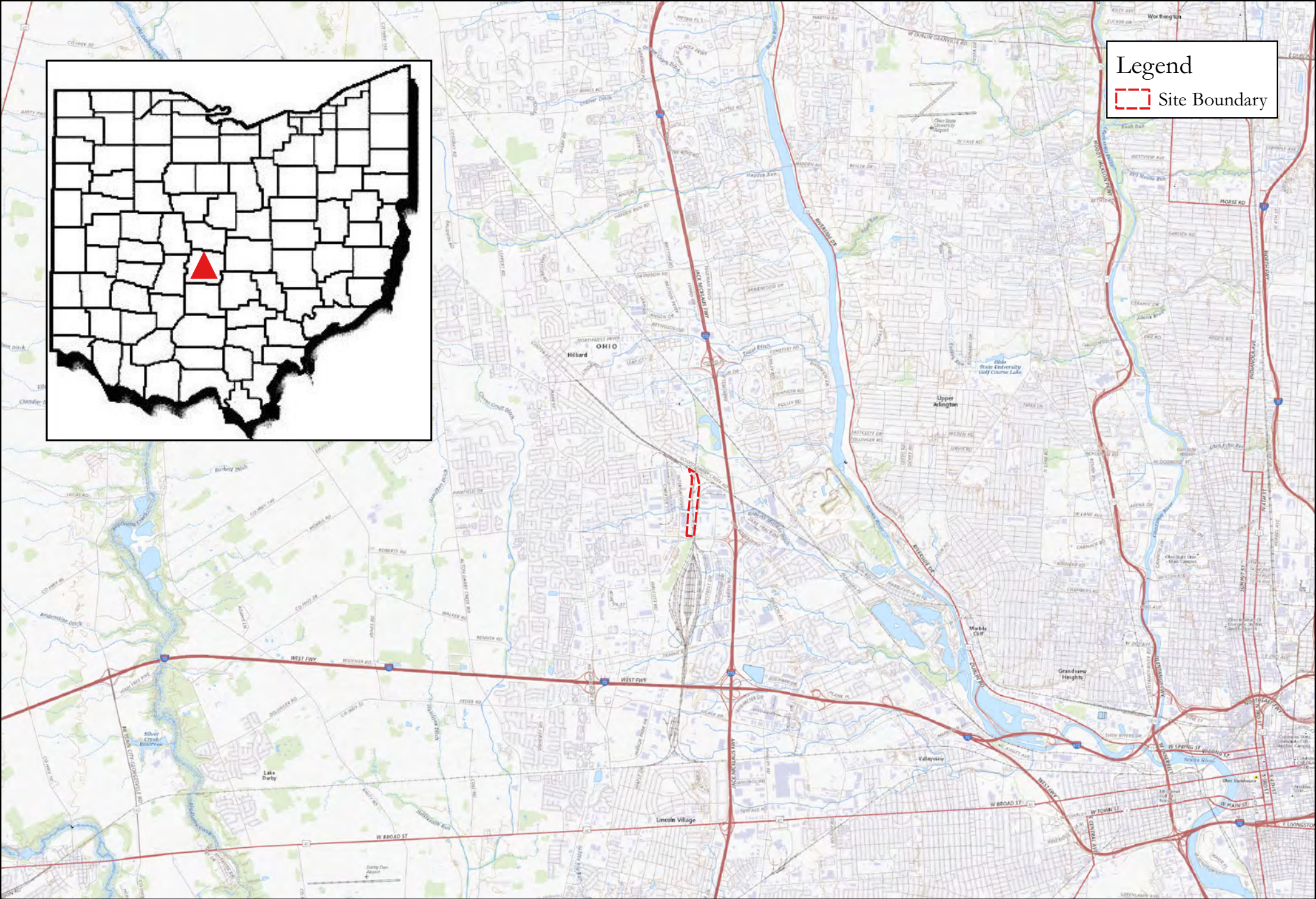
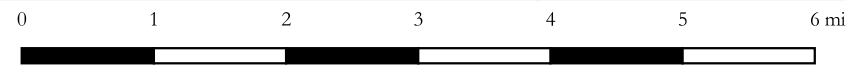


Figure 1. Site Location
 Buckeye Yard, Simpson Strong-Tie
 Columbus, Ohio

Sources: ArcGIS Topography



Date: November 4, 2021



Created By: Lindsay Hanna





Legend
[Red dashed line] Site Boundary

Figure 2. Site Aerial
Buckeye Yard, Simpson Strong-Tie
Columbus, Ohio

Sources: Google Satellite (2019)



Date: November 4, 2021



Created By: Lindsay Hanna





Legend

- Site Boundary
- Wetlands
- Streams

Figure 3. Wetlands and Streams Onsite
 Buckeye Yard, Simpson Strong-Tie
 Columbus, Ohio

Sources: Google Satellite (2019)



Attachment A

Photolog



Photograph 1 – Soil in Wetland 1.



Photograph 2 –Wetland 1 facing northeast toward wetland interior.



Photograph 3 – Upland area between Wetland 1 and Wetland 3, facing south.



Photograph 4 – Soil in Wetland 2.



Photograph 5 – Wetland 2 interior, facing north.



Photograph 6 – Wetland 2 interior, facing east.



Photograph 7 – Soil at Upland 2.



Photograph 8 – Soil in Wetland 3.



Photograph 9 – Wetland 3 interior, facing north.



Photograph 10 – Wetland 4 connectivity with stream, facing south.



Photograph 11 – Upland facing Wetland 4, facing north.



Photograph 12 – Soil in Wetland 5.



Photograph 13 – Wetland 5, facing north.



Photograph 14 – Soil in Wetland 6.



Photograph 15 – Wetland 6 facing north, toward stream area.



Photograph 16 – Wetland 6 interior, facing south.



Photograph 17 – Soil in Wetland 7.



Photograph 18 – Wetland 7 interior, facing east.

Attachment B

Datasheets

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W1-up
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.013685° Long: -83.127905° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Site appears mowed, potential soil modification. Wetland A interior mix of FAC, FACU and FACW species.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Populus deltoides</u>	<u>8</u>	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>8</u> =Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	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 = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ =Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Schizachyrium scoparium</u>	<u>10</u>	Yes	FACU	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.
2. <u>Euthamia graminifolia</u>	<u>5</u>	No	FACW	
3. <u>Juniperus virginiana</u>	<u>12</u>	Yes	FACU	
4. <u>Spiraea japonica</u>	<u>10</u>	Yes	UPL	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>37</u> =Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
_____ =Total Cover				

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

SOIL

Sampling Point: W1-up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12)</p> <p><input type="checkbox"/> Red Parent Material (F21)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (F22)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____ Rocks _____</p> <p>Depth (inches): _____ 1 _____</p>	<p>Hydric Soil Present? Yes _____ No <u>X</u></p>
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Remarks:
Along train track, uphill between Wetland 1 and Wetland 3/

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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<p>Field Observations:</p> <p>Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____</p> <p>Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____</p> <p>Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes _____ No <u>X</u></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W1-wet
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.013687° Long: -83.127801° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Site appears mowed, potential soil modification. Wetland A interior mix of FAC, FACU and FACW species.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
1. <u>Populus deltoides</u>	<u>20</u>	Yes	FAC	
2. <u>Salix nigra</u>	<u>18</u>	Yes	OBL	
3. _____				
4. _____				
5. _____				
	<u>38</u> =Total Cover			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
	_____ =Total Cover			Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>Herb Stratum</u> (Plot size: _____)				
1. <u>Salix nigra</u>	<u>5</u>	Yes	OBL	
2. <u>Cornus sericea</u>	<u>10</u>	Yes	FACW	
3. <u>Rhamnus cathartica</u>	<u>8</u>	Yes	FAC	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
	<u>23</u> =Total Cover			
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____				
2. _____				
	_____ =Total Cover			

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

SOIL

Sampling Point: W1-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	98	10YR 5/6	2	C	M	Loamy/Clayey	Prominent redox concentrations
3-13	2.5Y 4/2	98	10YR 5/4	2	C	M	Loamy/Clayey	Distinct redox concentrations
13-15	10YR 4/2	96	10YR 4/6	1	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 6/4	3	C	M		Distinct redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- ? Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

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 Depth (inches): 5
 Water Table Present? Yes No Depth (inches): 5
 Saturation Present? Yes No Depth (inches): 5
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W2-up
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.012603° Long: -83.127084° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Populus deltoides</u>	15	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
	15 =Total Cover																			
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Rhamnus cathartica</u>	35	Yes	FAC	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>2</u></td> <td>x 2 = <u>4</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>24</u></td> <td>x 5 = <u>120</u></td> </tr> <tr> <td>Column Totals: <u>76</u> (A)</td> <td><u>274</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.61</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>2</u>	x 2 = <u>4</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>24</u>	x 5 = <u>120</u>	Column Totals: <u>76</u> (A)	<u>274</u> (B)	Prevalence Index = B/A = <u>3.61</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>2</u>	x 2 = <u>4</u>																			
FAC species <u>50</u>	x 3 = <u>150</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>24</u>	x 5 = <u>120</u>																			
Column Totals: <u>76</u> (A)	<u>274</u> (B)																			
Prevalence Index = B/A = <u>3.61</u>																				
2. <u>Lonicera maackii</u>	15	Yes	UPL																	
3. _____																				
4. _____																				
5. _____																				
	50 =Total Cover																			
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Lonicera maackii</u>	9	Yes	UPL	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.																
2. <u>Fraxinus pennsylvanica</u>	2	No	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
	11 =Total Cover																			
Woody Vine Stratum (Plot size: _____)																				
1. _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
2. _____																				
	=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: W2-up

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

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
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- Sandy Redox (S5)
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- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
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- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____ roots
 Depth (inches): 8

Hydric Soil Present? Yes No

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)
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- 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 Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 3
 Saturation Present? Yes No Depth (inches): 3
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
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Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation N, Soil N, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Populus deltoides</u>	20	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>85.7%</u> (A/B)																
2. <u>Acer saccharinum</u>	15	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
	35	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Rhamnus cathartica</u>	8	Yes	FAC	Prevalence Index worksheet: <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____	
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 = _____																				
2. <u>Lonicera japonica</u>	5	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
	13	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Agrimonia parviflora</u>	18	Yes	FACW	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Euthamia graminifolia</u>	25	Yes	FACW																	
3. <u>Fraxinus pennsylvanica</u>	12	No	FACW																	
4. <u>Symphotrichum lateriflorum</u>	10	No	FACW																	
5. <u>Carex frankii</u>	18	Yes	OBL																	
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
	83	=Total Cover																		
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
2. _____																				
		=Total Cover																		

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

SOIL

Sampling Point: W2-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/2	98	10YR 3/6	2	C	M	Loamy/Clayey	Prominent redox concentrations
3-11	10YR 4/2	95	10YR 5/4	5	C	M	Loamy/Clayey	Distinct redox concentrations
11-16	10YR 3/2	95	10YR 5/4	1	C	M	Loamy/Clayey	Distinct redox concentrations
			10YR 5/6	4	C	M		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

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

Remarks:

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W3-wet
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.013665° Long: -83.128058° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes _____ No <u>0</u> Hydric Soil Present? Yes _____ No <u>0</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Site appears mowed, potential soil modification. Wetland A interior mix of FAC, FACU and FACW species.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Salix nigra</u>		25	Yes	OBL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B)																
2. _____																					
3. _____																					
4. _____																					
5. _____																					
		25 =Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				Prevalence Index worksheet: <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____	
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 = _____																					
1. <u>Cornus sericea</u>		10	Yes	FACW																	
2. <u>Lonicera maackii</u>		5	Yes	UPL																	
3. _____																					
4. _____																					
5. _____																					
		15 =Total Cover																			
Herb Stratum	(Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.																
1. <u>Phalaris arundinacea</u>		18	Yes	FACW																	
2. <u>Typha x glauca</u>		5	Yes	OBL																	
3. <u>Symphotrichum lateriflorum</u>		2	No	FACW																	
4. _____																					
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
		25 =Total Cover																			
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1. _____																					
2. _____																					
		_____ =Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)																					

SOIL

Sampling Point: W3-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/1	100					Loamy/Clayey	
3-11	10YR 4/2	97	7.5YR 5/6	3	C	M	Loamy/Clayey	Prominent redox concentrations
11-16	2.5Y 5/1	97	10YR 5/6	3	C	M	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- ? Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

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 Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 10
 Saturation Present? Yes No Depth (inches): 11
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W4-up
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.005752° Long: -83.128613° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: _____ _____ _____	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B)
2. _____					
3. _____					
4. _____					
5. _____					
			=Total Cover		
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				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 = _____
1. <u>Rhamnus cathartica</u>		2	Yes	FAC	
2. <u>Juniperus virginiana</u>		3	Yes	FACU	
3. <u>Pyrus calleryana</u>		1	No	UPL	
4. <u>Populus deltoides</u>		2	Yes	FAC	
5. _____					
			=Total Cover		
Herb Stratum	(Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Schizachyrium scoparium</u>		10	No	FACU	
2. <u>Juniperus virginiana</u>		10	No	FACU	
3. <u>Euthamia graminifolia</u>		18	Yes	FACW	
4. <u>Epilobium coloratum</u>		20	Yes	OBL	
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
			=Total Cover		
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____					
2. _____					
			=Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.) _____ _____					

SOIL

Sampling Point: W4-up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 4/2	100					Loamy/Clayey	
8-13	10YR 4/3	100					Loamy/Clayey	friable

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 Gravel in layer at 3 inches

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

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W4-wet
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.005886° Long: -83.128574° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
=Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				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 = _____
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
=Total Cover					
Herb Stratum	(Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<u>Typha X glauca</u>	<u>35</u>	<u>Yes</u>	<u>OBL</u>	
2.	<u>Juncus effusus</u>	<u>32</u>	<u>Yes</u>	<u>OBL</u>	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
=Total Cover				<u>67</u>	
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
=Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: W4-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	2.5Y 5/2	100					Loamy/Clayey	
3-4	2.5Y 5/2	98	2.5Y 5/4	2	C	M	Loamy/Clayey	Distinct redox concentrations
4-8	10YR 5/2	94	10YR 5/6	6	C	M	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Gravel in layer at 3 inches

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 Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 1
 Saturation Present? Yes No Depth (inches): 1
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 10/18/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W5&6-up
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.007998° Long: -83.127790° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Site appears mowed, potential soil modification. Wetland A interior mix of FAC, FACU and FACW species.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Catalpa speciosa</u>	20	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>42.9%</u> (A/B)
2. <u>Acer saccharinum</u>	20	Yes	FACW	
3. <u>Fraxinus pennsylvanica</u>	10	No	FACW	
4. <u>Celtis occidentalis</u>	18	Yes	FAC	
5. _____	68	=Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Lonicera maackii</u>	50	Yes	UPL	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 = _____
2. <u>Ligustrum vulgare</u>	15	Yes	FACU	
3. <u>Rhamnus cathartica</u>	10	No	FAC	
4. _____				
5. _____				
75 =Total Cover				
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Rhamnus cathartica</u>	10	Yes	FAC	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.
2. <u>Lonicera maackii</u>	8	Yes	UPL	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
18 =Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. _____				
_____ =Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: W5&6-up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/2	98	10YR 4/6	2	C	PL	Loamy/Clayey	Prominent redox concentrations
8-16	2.5Y 4/2	100					Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- ? Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____ Rocks _____
 Depth (inches): _____ 1 _____

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 X No _____ Depth (inches): 7
 Saturation Present? Yes _____ No X Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 10/18/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W5-wet
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.008253° Long: -83.127799° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>0</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Site appears mowed, potential soil modification. Wetland A interior mix of FAC, FACU and FACW species.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Catalpa speciosa</u>	35	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>62.5%</u> (A/B)
2. <u>Acer saccharinum</u>	20	Yes	FACW	
3. <u>Fraxinus pennsylvanica</u>	15	No	FACW	
4. <u>Ulmus americana</u>	15	No	FACW	
5. _____				
85 = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cornus racemosa</u>	10	Yes	FAC	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 = _____
2. <u>Fraxinus pennsylvanica</u>	12	Yes	FACW	
3. <u>Lonicera maackii</u>	8	Yes	UPL	
4. _____				
5. _____				
30 = Total Cover				
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Lysimachia nummularia</u>	10	Yes	FACW	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Symphotrichum lanceolatum</u>	8	Yes	FAC	
3. <u>Viburnum trilobum</u>	5	Yes	FAC	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
23 = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. _____				
_____ = Total Cover				

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

SOIL

Sampling Point: W5-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	2.5Y 4/2	93	10YR 5/8	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations
			2.5Y 4/1	2	RM	M		
9-16	2.5Y 5/2	91	10YR 5/6	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations
			10YR 3/6	4	C	PL/M		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- ? Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

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 Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 4
 Saturation Present? Yes No Depth (inches): 4
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W6-wet
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.007824° Long: -83.127451° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: _____	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix nigra</u>		10	Yes	OBL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. <u>Fraxinus pennsylvanica</u>		10	Yes	FACW	
3. _____					
4. _____					
5. _____					
		20 =Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				
1. <u>Salix nigra</u>		15	Yes	OBL	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 = _____
2. _____					
3. _____					
4. _____					
5. _____					
		15 =Total Cover			
Herb Stratum	(Plot size: <u>5</u>)				
1. <u>Typha X glauca</u>		10	No	OBL	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Symphotrichum lateriflorum</u>		15	Yes	FACW	
3. <u>Phalaris arundinacea</u>		35	Yes	FACW	
4. <u>Acer saccharinum</u>		5	No	FACW	
5. <u>Impatiens capensis</u>		10	No	FACW	
6. <u>Lysimachia nummularia</u>		10	No	FACW	
7. _____					
8. _____					
9. _____					
10. _____					
		85 =Total Cover			
Woody Vine Stratum	(Plot size: _____)				
1. _____					Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____					
		_____ =Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.) _____					

SOIL

Sampling Point: W6-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	100					Loamy/Clayey	
5-11	10YR 4/1	93	7.5YR 4/6	7	C	M	Loamy/Clayey	Prominent redox concentrations
11-17	10YR 5/1	80	10YR 5/4	15	C	M	Loamy/Clayey	Distinct redox concentrations
			10YR 4/4	5	C	M		Distinct redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

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 Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 2
 Saturation Present? Yes No Depth (inches): 1
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 10-18-21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W7-UP
 Investigator(s): Lindsay Hanna, Cody Wright Section, Township, Range: N/A
 Landform (hillside, terrace, etc.): base of hillslope Local relief (concave, convex, none): concave
 Slope (%): 1 Lat: 40.012823° Long: -83.127693° Datum: NAD' 83
 Soil Map Unit Name: Urban Land-Celina complex NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Along rocky edge of railroad access road	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> 0 </u> (A) Total Number of Dominant Species Across All Strata: <u> 1 </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 0.0% </u> (A/B)
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
				=Total Cover	
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				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 = _____
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
				=Total Cover	
Herb Stratum	(Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<u>Daucus carota</u>	60	Yes	UPL	
2.	<u>Cornus racemosa</u>	10	No	FAC	
3.	<u>Setaria pumila</u>	10	No	FAC	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
				80 =Total Cover	
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
				=Total Cover	
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: W7-UP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____ Rock _____
 Depth (inches): _____ 0 _____

Hydric Soil Present? Yes _____ No X

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 10-18-21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W7-WET
 Investigator(s): Lindsay Hanna, Cody Wright Section, Township, Range: N/A
 Landform (hillside, terrace, etc.): base of hillslope Local relief (concave, convex, none): concave
 Slope (%): 1 Lat: 40.012821° Long: -83.127668° Datum: NAD' 83
 Soil Map Unit Name: Urban Land-Celina complex NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Area is at the base of the slope of old rail road access road.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus pennsylvanica</u>	3	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. <u>Populus deltoides</u>	10	Yes	FAC																	
3. _____																				
4. _____																				
5. _____																				
	13	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Cornus racemosa</u>	12	Yes	FAC	Prevalence Index worksheet: <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____	
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 = _____																				
2. <u>Rhamnus cathartica</u>	5	Yes	FAC																	
3. _____																				
4. _____																				
5. _____																				
	17	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Typha angustifolia</u>	20	Yes	OBL	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Epilobium coloratum</u>	10	No	OBL																	
3. <u>Echinochloa crus-galli</u>	23	Yes	FACW																	
4. <u>Populus deltoides</u>	8	No	FAC																	
5. <u>Symphytotrichum pilosum</u>	12	No	FACU																	
6. <u>Cyperus esculentus</u>	15	Yes	FACW																	
7. _____																				
8. _____																				
9. _____																				
10. _____																				
	88	=Total Cover																		
Woody Vine Stratum (Plot size: _____)																				
1. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2. _____																				

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

SOIL

Sampling Point: W7-WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 5/2	96	10YR 6/4	4	C	M	Loamy/Clayey	Distinct redox concentrations
9-12	2.5y 5/2	91	10YR 5/6	6	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 5/1	3	D	M		
12-18	2.5y 5/2	83	10YR 5/6	12	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 4/2	5	D	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> ? Coast Prairie Redox (A16)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12)</p> <p><input type="checkbox"/> Red Parent Material (F21)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (F22)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
--	--	---

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

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

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input checked="" type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
--	---

<p>Field Observations:</p> <p>Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>17</u></p> <p>Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u></p> <p>(includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

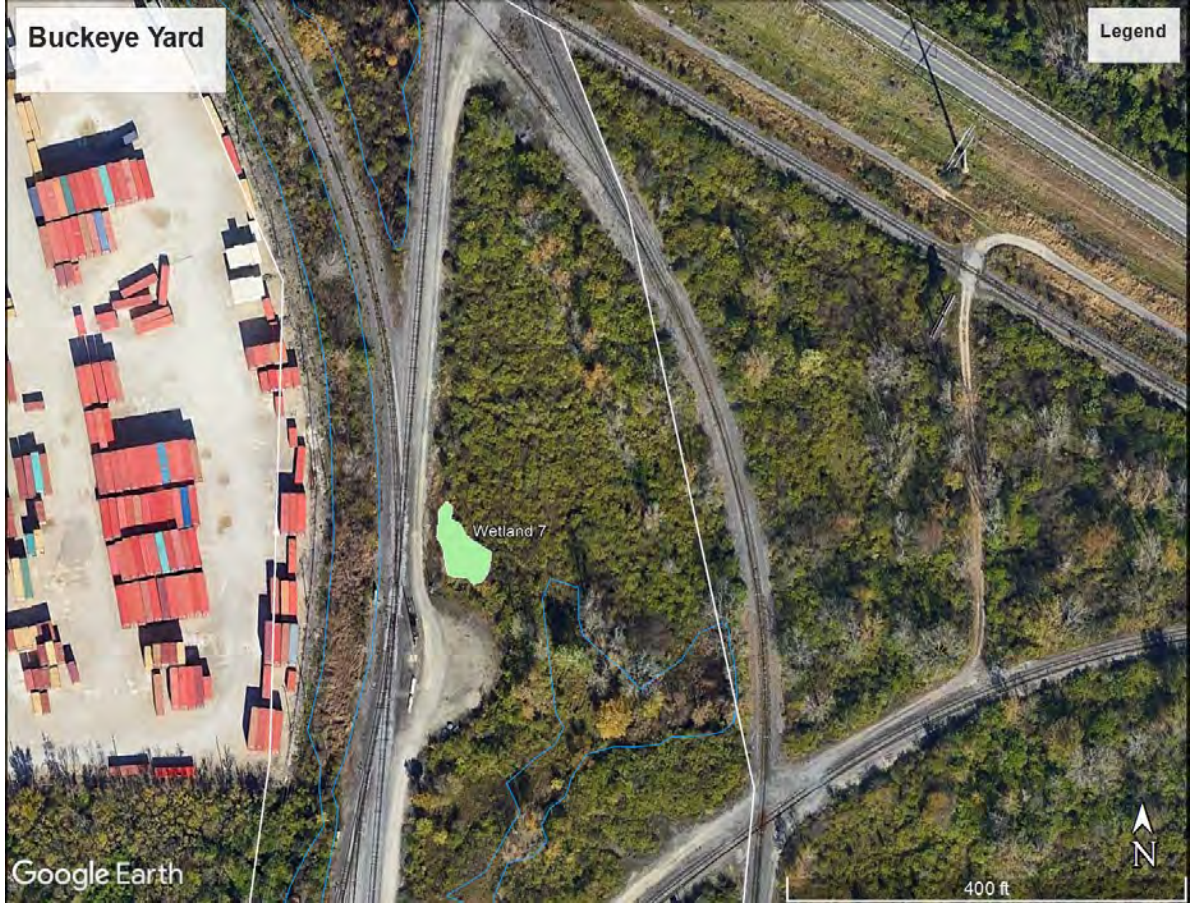
Remarks:

Attachment C

Wetland 7 ORAM

Background Information

Name: Lindsay Hanna		
Date: 4/15/2022		
Affiliation: MAD Scientist Associates		
Address: 253 North State Street, Suite 101 Westerville, Ohio 43081		
Phone Number: (614) 818-9156		
e-mail address: Lindsay@madscientistassociates.net		
Name of Wetland: Wetland 7		
Vegetation Communit(ies): Emergent		
HGM Class(es):		
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.		
		
Lat/Long or UTM Coordinate	WGS 84: 40.012762°	-83.127578°
USGS Quad Name		Dublin
County		Franklin
Township		
Section and Subsection		
Hydrologic Unit Code		050600011204
Site Visit		11/3/2022
National Wetland Inventory Map		
Ohio Wetland Inventory Map		-----
Soil Survey		Urban land-Celina complex
Delineation report/map		Yes

Name of Wetland:	Wetland 7
Wetland Size (acres, hectares):	0.057 acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
	
<p>Comments, Narrative Discussion, Justification of Category Changes:</p> <p>Wetland 7 is located in the northern portion in Buckeye Yard located along the edge of the railroad track. The wetland is estimated to be 0.057 acres. Dominant species include green ash (<i>Fraxinus pennsylvanica</i>), cottonwood (<i>Populus deltoides</i>), gray dogwood (<i>Cornus racemosa</i>), common buckthorn (<i>Rhamnus cathartica</i>), narrow-leaf cattail (<i>Typha angustifolia</i>), barnyard grass (<i>Echinochloa crus-galli</i>), and yellow nutsedge (<i>Cyperus esculentus</i>). Wetland hydrology indicators at the Site for Wetland 7 included saturation, geomorphic position, and passing the FAC-neutral test for plants. Hydric soil indicators included depleted depleted matrix (F3) evidenced by a low chroma of 2, with prominent redoximorphic features present (4 to 12 percent) as concentration in the matrix.</p>	
Final score : 23	Category: 1

Wetland 7

Scoring Boundary Worksheet

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

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

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

Wetland 7

Narrative Rating

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

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

Wetland 7

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

Table 1. Characteristic plant species.

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

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

Site: Wetland A	Rater(s): LH	Date: 4/15/2022
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0	0
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

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

Wetland 7

1	3
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

7	10
max 30 pts.	subtotal

Metric 3. Hydrology.

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

Check all disturbances observed

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

11	21
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

Check all disturbances observed

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

21
subtotal this page

Site: Wetland A	Rater(s): LH	Date: 4/15/2022
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21

subtotal first page

0	21
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Wetland 7

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)

2	23
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

23

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
Question 10. Oak Openings	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	11	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	2	
	TOTAL SCORE	23	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one **Category 1** Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

SITE NAME/LOCATION 9th St - Buckeye Yard Expansion
 SITE NUMBER Stream 6 RIVER BASIN _____ RIVER CODE _____ DRAINAGE AREA (mi²) _____
 LENGTH OF STREAM REACH (ft) 18 LAT 40.002826 LONG -83.122326 RIVER MILE _____
 DATE 10-14-21 SCORER LH COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

<p>1. SUBSTRATE (Estimate percent of every type present). Check <i>ONLY two</i> predominant substrate <i>TYPE</i> boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">TYPE</th> <th style="width: 35%;">PERCENT</th> <th style="width: 15%;">TYPE</th> <th style="width: 35%;">PERCENT</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> BLDR SLABS [16 pts]</td> <td>_____</td> <td><input checked="" type="checkbox"/> SILT [3 pt]</td> <td style="text-align: right;">45</td> </tr> <tr> <td><input type="checkbox"/> BOULDER (>256 mm) [16 pts]</td> <td>_____</td> <td><input type="checkbox"/> LEAF PACKWOODY DEBRIS [3 pts]</td> <td style="text-align: right;">2</td> </tr> <tr> <td><input type="checkbox"/> BEDROCK [16 pts]</td> <td>_____</td> <td><input type="checkbox"/> FINE DETRITUS [3 pts]</td> <td style="text-align: right;">10</td> </tr> <tr> <td><input type="checkbox"/> COBBLE (65-256 mm) [12 pts]</td> <td>_____</td> <td><input checked="" type="checkbox"/> CLAY or HARDPAN [0 pt]</td> <td style="text-align: right;">30</td> </tr> <tr> <td><input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]</td> <td style="text-align: right;">5</td> <td><input type="checkbox"/> MUCK [0 pts]</td> <td style="text-align: right;">8</td> </tr> <tr> <td><input type="checkbox"/> SAND (<2 mm) [6 pts]</td> <td>_____</td> <td><input type="checkbox"/> ARTIFICIAL [3 pts]</td> <td>_____</td> </tr> </tbody> </table> <p>Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock _____ (A) 3 TOTAL NUMBER OF SUBSTRATE TYPES: (B) 6</p> <p>SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 6</p>	TYPE	PERCENT	TYPE	PERCENT	<input type="checkbox"/> BLDR SLABS [16 pts]	_____	<input checked="" type="checkbox"/> SILT [3 pt]	45	<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	_____	<input type="checkbox"/> LEAF PACKWOODY DEBRIS [3 pts]	2	<input type="checkbox"/> BEDROCK [16 pts]	_____	<input type="checkbox"/> FINE DETRITUS [3 pts]	10	<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	_____	<input checked="" type="checkbox"/> CLAY or HARDPAN [0 pt]	30	<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	5	<input type="checkbox"/> MUCK [0 pts]	8	<input type="checkbox"/> SAND (<2 mm) [6 pts]	_____	<input type="checkbox"/> ARTIFICIAL [3 pts]	_____	<p>HHEI Metric Points</p> <p>Substrate Max = 40</p> <div style="border: 1px solid black; padding: 5px; text-align: center; font-size: 24px;">9</div> <p>A + B</p>
TYPE	PERCENT	TYPE	PERCENT																										
<input type="checkbox"/> BLDR SLABS [16 pts]	_____	<input checked="" type="checkbox"/> SILT [3 pt]	45																										
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<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	5	<input type="checkbox"/> MUCK [0 pts]	8																										
<input type="checkbox"/> SAND (<2 mm) [6 pts]	_____	<input type="checkbox"/> ARTIFICIAL [3 pts]	_____																										
<p>2. Maximum Pool Depth (Measure the <i>maximum</i> pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check <i>ONLY</i> one box):</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> > 30 centimeters [20 pts]</td> <td><input type="checkbox"/> 5 cm - 10 cm [15 pts]</td> </tr> <tr> <td><input checked="" type="checkbox"/> > 22.5 - 30 cm [30 pts]</td> <td><input type="checkbox"/> < 5 cm [5pts]</td> </tr> <tr> <td><input type="checkbox"/> > 10 - 22.5 cm [25 pts]</td> <td><input type="checkbox"/> NO WATER OR MOIST CHANNEL [0pts]</td> </tr> </table> <p>COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 30</p>	<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> 5 cm - 10 cm [15 pts]	<input checked="" type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5pts]	<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0pts]	<p>Pool Depth Max = 30</p> <div style="border: 1px solid black; padding: 5px; text-align: center; font-size: 24px;">30</div>																						
<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> 5 cm - 10 cm [15 pts]																												
<input checked="" type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5pts]																												
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0pts]																												
<p>3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check <i>ONLY</i> one box):</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> > 4.0 meters (> 13') [30 pts]</td> <td><input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]</td> </tr> <tr> <td><input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]</td> <td><input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]</td> </tr> <tr> <td><input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]</td> <td></td> </tr> </table> <p>COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 1.47</p>	<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]	<input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]		<p>Bankfull Width Max=30</p> <div style="border: 1px solid black; padding: 5px; text-align: center; font-size: 24px;">15</div>																						
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<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]																												
<input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]																													

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★

RIPARIAN WIDTH (Per Bank)		FLOODPLAIN QUALITY (Most Predominant per Bank)	
L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check *ONLY* one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (interstitial)	<input type="checkbox"/> Dry channel, no water (ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

<input type="checkbox"/> None	<input checked="" type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? Yes No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

- WWH Name: _____ Distance from Evaluated Stream _____
- CWH Name: _____ Distance from Evaluated Stream _____
- EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: _____ NRCS Soil Map Page: _____ NRCS Soil Map Stream Order: _____

County: _____ Township/City: _____

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: _____ Quantity: _____

Photo-documentation Notes: _____

Elevated Turbidity? (Y/N): _____ Canopy (% open): _____

Were samples collected for water chemistry? (Y/N): _____ Lab Sample # or ID (attach results): _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (umhos/cm) _____

Is the sampling reach representative of the stream (Y/N) _____ If not, explain: _____

Additional comments/description of pollution impacts: _____

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) Y Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) _____ Species observed (if known): _____

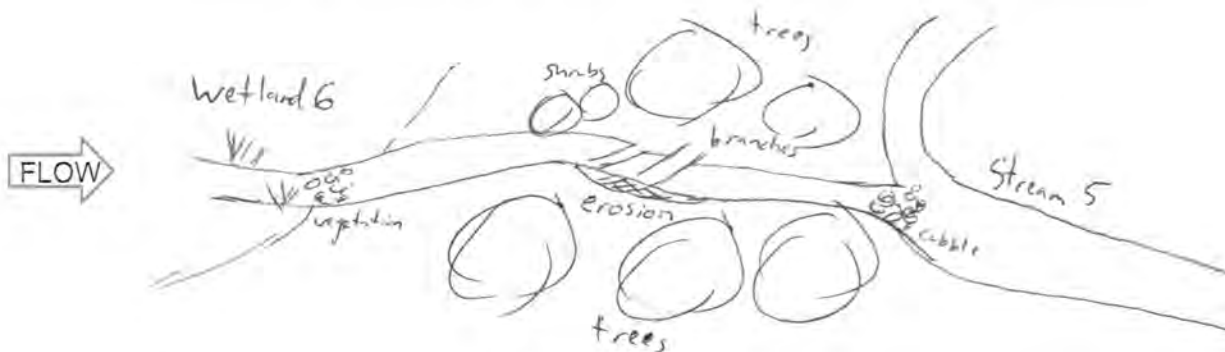
Salamanders Observed? (Y/N) _____ Species observed (if known): _____

Aquatic Macroinvertebrates Observed? (Y/N) _____ Species observed (if known): _____

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





CENTRAL OHIO WETLAND CONSULTING, LLC

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Blacklick, Ohio 43004
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JURISDICTIONAL WATERS DELINEATION REPORT

BUCKEYE YARD TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS COLUMBUS, FRANKLIN COUNTY, OHIO

Prepared by:

CENTRAL OHIO WETLAND CONSULTING, LLC

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REPORT ISSUED APRIL 20, 2021
COWC PROJECT #120120007

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APPENDIX 1 – MAPS AND EVALUATION AREA INFORMATION

General Location Map of Evaluation Area

Location Maps of Evaluation Area

Franklin County Auditor GIS Maps

1954/1955, 1966, 1973, 1980/1981, and 2019 USGS Topographic Maps

USDA Web Soil Survey Maps

National Wetlands Inventory (NWI) Maps

APPENDIX 2 – AERIAL PHOTOGRAPHS

1956 Aerial Photographs

1960 Aerial Photographs

1964 Aerial Photographs

1979 Aerial Photographs

1989 Aerial Photographs

1994 Aerial Photographs

2002 Aerial Photographs

2009 Aerial Photographs

2019 Aerial Photographs

APPENDIX 3 – DELINEATION MAP

Wetland and Stream Delineation Maps

ORAM Scoresheets (24 pages)

APPENDIX 4 – EVALUATION AREA PHOTOGRAPHS

Photo Keys

Field Reconnaissance Photos (Photo 1 through Photo 61)

1.0 INTRODUCTION AND PURPOSE

Central Ohio Wetland Consulting, LLC (COWC) has been contracted by Kimley-Horn and Associates, Inc. (Client) to perform a Jurisdictional Waters Delineation Report for the Buckeye Yard property located in the City of Columbus, Franklin County, Ohio. The "evaluation area" for this Jurisdictional Waters Delineation Report consists of former Norfolk-Southern railroad acreage, including former rail lines and ballast material, ancillary structures, open areas, waste land, and wooded land. For descriptive purposes, the evaluation area has been divided into three separate areas, all of which are part of Franklin County parcels 570-146296, 241-000038, and 560-154558:

- North Section: 41± acres located north of Roberts Road and south of Scioto Darby Creek Road,
- Central Section: 287± acres located north of Trabue Road and south of Roberts Road, and,
- South Section: 77± acres located north of the existing Norfolk Southern CJ Line and south of Trabue Road.

The purpose of COWC's services is to document the size/length, location, and quality of all potentially jurisdictional waters of the United States and/or isolated waters of the State of Ohio within the evaluation area. COWC performed this delineation for specific application to the evaluation area described herein, in accordance with the United States Army Corps of Engineers (USACE) Wetlands Delineation Manual (1987) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. The conclusions made within this Jurisdictional Waters Delineation Report are to be considered "preliminary" until verified by the USACE Huntington, WV District Office. This delineation report can be submitted to the USACE as part of a preliminary jurisdictional determination (PJD), approved jurisdictional determination (AJD), or pre-construction notification (PCN). The Ohio Environmental Protection Agency (Ohio EPA) will require a copy of the delineation report and an AJD letter issued by the USACE for all isolated wetland impacts, and ephemeral stream impacts greater than 300 linear feet.

The delineation includes three principal components: 1) research and review of published information, 2) field reconnaissance and delineation of jurisdictional waters (i.e. wetlands, ponds, and streams), and 3) data compilation/report preparation.

1.1 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

This Jurisdictional Waters Delineation Report has been prepared based upon field observations and COWC's professional interpretation of the USACE Wetlands Delineation Manual (1987) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region at the time of our field reconnaissance. The conclusions presented in this report are professional opinions based on data collected between the commencement date and the

report date. The information in this report is true to the best of our knowledge. COWC obtained some of the information presented in this report from other agencies and sources. COWC assumes no responsibility for the accuracy or completeness of information provided by others. No warranty, expressed or implied, is made.

1.2 SPECIAL TERMS AND CONDITIONS

This report has been prepared by COWC as a professional service for the exclusive use of Kimley-Horn and Associates, Inc. and other parties that may be jointly affiliated by Kimley-Horn and Associates, Inc. and COWC. Any other entity that wishes to use or rely upon this report, or that wishes to duplicate, reproduce, copy, extract, or quote from this report must request permission from COWC to do so. Any unauthorized use of, or reliance upon, this report shall release COWC from any liability resulting from such use or reliance. Any unauthorized duplication, reproduction, copying, excerption, or quotation of this report shall expose the violator to all legal remedies available to COWC.

2.0 EVALUATION AREA AND SURROUNDING AREA CHARACTERISTICS

The evaluation area consists of former Norfolk-Southern railroad acreage, including former rail lines and ballast material, ancillary structures, open areas, waste land, and wooded land. The North Section of the evaluation area consists of 41± acres located north of Roberts Road and south of Scioto Darby Creek Road. The Central Section of the evaluation area consists of 287± acres located north of Trabue Road and south of Roberts Road. The South Section of the evaluation area consists of 77± acres located north of the existing Norfolk Southern CJ Line and south of Trabue Road. Areas surrounding the evaluation area are developed for railroad, industrial, and commercial purposes.

Approximate latitude / longitude coordinates for the central part of each section of the evaluation area are:

- North Section - 40.008475 / -83.127839,
- Central Section - 39.992969 / -83.129678, and
- South Section - 39.974661 / -83.130694.

Appendix 1 includes location maps, Franklin County Auditor Geographic Information System (GIS) Maps, United States Geological Survey (USGS) topographic maps (Hilliard, Ohio and Galloway, Ohio), United States Department of Agriculture (USDA) soil survey maps, and United States Fish & Wildlife Service (USFWS) National Wetland Inventory (NWI) maps. Appendix 2 includes aerial photographs showing the evaluation area. Photographs depicting representative vegetation, property features, and views from several locations around the evaluation are provided in Appendix 4.

3.0 RESEARCH AND REVIEW OF PUBLISHED INFORMATION

COWC's research and review of published information includes: USGS topographic maps, the USDA soil survey map, USFWS NWI map, and aerial photographs from various local governmental agencies. COWC uses this information to determine historical uses of the evaluation area, the geo-morphological setting at the evaluation area, soil types present, whether the evaluation area has been significantly disturbed within the past few years, and for visual evidence of ponds, streams, or saturation or inundation on land surfaces, and the potential for wetlands. Copies of the reviewed information is appended.

3.1 USGS TOPOGRAPHIC MAPS

COWC reviewed 1954/1955, 1966, 1973, 1980/1981, and 2019 Hilliard, Ohio and Galloway, Ohio, USGS 7.5-minute series topographic maps for the evaluation area. COWC uses USGS topographic maps as an indicator of watershed characteristics in and around the evaluation area, and to identify small depressional areas, streams, and wetland mapping symbols. The appendix of this report includes portions of these USGS maps showing the evaluation area.

The maps reviewed indicate several drainages crossing the North, Central, and South Sections of the evaluation area.

North Section

Rail lines are shown within the North Section on the 1973 through 2019 maps. Prior to 1973, the North Section is depicted as vacant land. Roberts Millikin Ditch is shown crossing the central part of the North Section in a general west to east direction. An unnamed tributary to Roberts Millikin Ditch is shown on the southern part of the North Section. This unnamed tributary is shown in a general southwest/northeast orientation on the 1954 through 1980 maps. The 2019 map indicates this unnamed tributary has been reoriented in a general north/south direction, west of existing rail lines. No other potential streams, wetlands, or ponds are depicted on the North Section. Lower surface elevations are generally indicated between railroad lines on the central and northern parts of the North Section.

Central Section

The Central Section is predominately developed with rail lines on the 1973 through 2019 maps. Prior to 1973, the Central Section is depicted as vacant land. The topographic maps show green tint, indicating wooded areas, on the northwest part of the Central Section. One (1) wetland mapping symbol is also depicted within the green tint area on the northwest part of the Central Section. Four (4) unnamed tributary streams are shown crossing the Central Section in a general west to east direction on the 1954/1955 and 1966 maps. These tributary streams are not shown or have be redirected through or around rail lines on the 1973 through 2019 maps.

South Section

Rail lines are shown within the South Section on the 1973 through 2019 maps. Prior to 1973, the North Section is generally depicted as vacant land.

Approximately five (5) unnamed tributaries are shown crossing the South Section of the evaluation area on the 1955 and 1966 maps. Only three (3) tributaries are shown crossing the South Section on the 2019 map. One (1) pond is also depicted on the southern part of the South Section on the 2019 map. No other potential streams, wetlands, or ponds are depicted on the South Section.

3.2 SOIL REVIEW

COWC reviewed information from the USDA Natural Resources Conservation Service (NRCS), the USDA Web Soil Survey website¹, and the list of Hydric Soils of the United States (published by NRCS in cooperation with the National Technical Committee for Hydric Soils). These sources indicate soils underlying the evaluation area consist of the following:

TABLE 1
EVALUATION AREA SOIL DESIGNATIONS

Map Unit ID	Map Unit Name	% Slope	Hydric Classification	% Hydric Component	Component Landform
CeB	Celina silt loam	2-6	Non-hydric with hydric components	Kokomo 5%	Depressions
CrA	Crosby silt loam	0-2	Non-hydric with hydric components	Kokomo 8%	Depressions
CrB	Crosby silt loam	2-6	Non-hydric with hydric components	Kokomo 8%	Depressions
Ko	Kokomo silty clay loam	0-2	Hydric	Kokomo 90%	Depressions
Us	Udorthents, loamy, steep	18-25	Non-hydric	-	-
Uv	Urban land-Celina complex, occasionally flooded	2-12	Non-hydric with hydric components	Kokomo 5%	Depressions

Celina silt loam (CeB) is generally described as a gently sloping, moderately well-drained soil on uplands. These soils are typically found on convex ridgetops, on side slopes above steeper areas, and along well-defined waterways.

Crosby silt loam (CrA and CrB) is generally described as a nearly level to gently sloping, somewhat poorly drained soil on narrow and broad upland areas. This mapping unit also contains areas of Kokomo soils located in depressions and Celina soils on low knolls.

Kokomo silty clay loam (Ko) is described as a nearly level, very poorly drained soil located in depressions and at the heads of drainageways on uplands. Runoff from adjacent higher elevations can cause ponding in Kokomo soils. Kokomo silty clay loam is considered a hydric soil.

¹ <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>

Udorthents, loamy, steep (Us) is generally described as soils in borrow areas that have been subject to surface mining, particularly for use as fill material used under highways and buildings.

Urban land-Celina complex (Uv) is generally described as areas of urban land covered by streets, parking lots, buildings, railroad yards, and other structures. Soils in these areas have been altered to the extent specific soil identification is not feasible. Undeveloped portions of this soil unit are dominated by Celina soil.

The evaluation area is predominately comprised of Urban land-Celina complex soils. Wooded areas adjacent to the west of the existing railroad lines on the Central Section are mapped with Crosby, Celina, and Kokomo soil units.

According to mapping available from the USDA NRCS, and the list of Hydric Soils of the United States published by the NRCS in cooperation with the National Technical Committee for Hydric Soils, the evaluation area contains hydric soil. Thin bands of mapped hydric Kokomo soils are located on the western portions of the Central Section of the evaluation area. The USGS topographic maps indicate these areas are likely drained by tributary streams.

3.3 NATIONAL WETLANDS INVENTORY (NWI) MAP

COWC reviewed the USFWS NWI website² for wetland mapping symbols depicted within the evaluation area. The USFWS produced NWI maps in an attempt to document wetlands throughout the United States. The USFWS generated NWI maps using high-altitude infrared aerial photography to identify areas of saturation or inundation on land surfaces. Areas that are saturated or inundated typically have lower infrared heat signatures than dry areas. The USFWS mapped these cooler infrared heat signature areas as wetlands without field verification. NWI maps may not reflect actual field conditions due to meteorological or seasonal conditions that may have existed at the time of data collection. COWC typically uses NWI maps to plan field reconnaissance, and as an indicator of areas that may support wetlands.

The NWI map shows three (3) wetland mapping symbols within the evaluation area:

- One (1) PEM1C symbol located on the northern part of the North Section,
- One (1) PFO1A symbol located within the wooded northwest part of the Central Section, and
- One (1) PEM1A symbol located on the southern part of the South Section.

The PEM1C designation indicates an area that is palustrine (non-tidal wetlands dominated by trees, shrubs, persistent emergent vegetation), emergent

² <https://www.fws.gov/wetlands/Data/Mapper.html>

(herbaceous, erect and rooted hydrophytes), persistent (dominated by species that normally remain standing through to the next growing season), and seasonally flooded (surface water is present for extended periods, especially early in the growing season, but absent by the end of the growing season in most years). This area was delineated as Wetland 5.

The PFO1A designation indicates an area that is palustrine, forested (containing woody vegetation 20 feet in height and taller), broad-leaved deciduous (trees and shrubs with relatively wide, flat leaves that are shed during the cold and seasonally dry conditions), and temporary flooded (areas where surface water is present for brief (days/weeks) periods during the growing season). This area was delineated as Wetland 7.

The PEM1A designation indicates an area that is palustrine, emergent, persistent, and temporary flooded. This area was delineated as Pond 2.

The NWI map shows streams/drainages in similar locations as depicted on the USGS maps. Drainage features within the evaluation area are depicted with R5UBH and R4SBC designations. The R5UBH designation indicates a permanently flooded (water covers the substrate throughout the year in all years), riverine habitat contained within a channel (open conduit either naturally or artificially created which may periodically or continuously contain moving water) that has an unconsolidated bottom (at least 25% cover of particles less than 6-7 centimeters and vegetative cover less than 30%). The unknown perennial modifier indicates the drainage cannot be distinguished from lower perennial and upper perennial. The R4SBC designation indicates a seasonally flooded, riverine habitat contained within a channel that has intermittent flow (water may flow only part of the year).

3.4 AERIAL PHOTOGRAPHS

COWC reviewed aerial photographs of the evaluation area dated 1956, 1960, 1964, 1979, and 1989 available from the Ohio Department of Transportation Office of CADD & Mapping website³; and 1994, 2002, 2009, and 2019 from Google Earth Pro⁴. Copies of the aerial photographs showing the evaluation area are provided in Appendix 2.

The 1956 through 1964 aerial photographs generally depict the evaluation area as vacant land with numerous streams crossing from west to east.

The 1979 through 2019 aerial photographs generally depict the evaluation area as developed for use as a rail yard. Undeveloped wooded land is located on the western part of the Central Section. Streams previously apparent crossing the

³ <http://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/Pages/default.aspx>

⁴ [Earth Versions – Google Earth](#)

evaluation from west to east have been manipulated, channelized, and relocated as part of development for rail use.

The 2019 aerial photograph indicates the evaluation area is similar in appearance to what was observed during our field reconnaissance on April 9, April 12, and April 13, 2021.

3.4.1 PUBLISHED INFORMATION REVIEW CONCLUSIONS

Information obtained from USGS topographic maps, NWI maps, and aerial photographs indicate the potential for numerous streams, wetlands, and ponds within the evaluation area.

The potential for wetlands and streams within an area cannot be determined solely from review of published information; therefore, an on-site investigation is required to verify current property conditions.

4.0 FIELD RECONNAISSANCE/DELINEATION OF JURISDICTIONAL WATERS

Matthew R. Kaminski, owner of Central Ohio Wetland Consulting, LLC, performed the field reconnaissance for the jurisdictional waters delineation during the morning and afternoon hours on Friday April 9, 2021, Monday April 12, 2021, and Tuesday April 13, 2021. Research and review of published information indicates physical property conditions were generally unchanged for several years prior to this delineation, such that the evaluation area was considered undisturbed for data collection. Therefore, the routine method was used in this assessment. Photographic documentation from the field reconnaissance and general landscape photographs are provided in Appendix 4.

COWC performs its field reconnaissance for jurisdictional waters delineations using criteria and guidance in the Corps of Engineers' Wetland Delineation Manual (USACE, 1987) and the 2010 Midwest Regional Supplement to the 1987 Wetland Delineation Manual. In this method, vegetation, hydrology, and soil criteria are used to identify jurisdictional/isolated wetlands. The delineation method and vegetation sampling methodology uses the procedures for Routine Determinations found in the 1987 and 2010 manuals.

To establish the presence of jurisdictional/isolated wetlands, three characteristics are required to be present. These wetland characteristics consist of hydric soils, a dominance of hydrophytic (i.e. wetland) vegetation, and wetland hydrology. All three criteria must be present for an area to be identified as wetland. These three criteria are defined and explained in detail in the Corps of Engineers' Wetland Delineation Manual (USACE, 1987) and the 2010 Midwest Regional Supplement to the 1987 Wetland Delineation Manual. The Wetlands Research Program of the USACE Waterways Experiment Station developed the manual in 1987. COWC followed the methods described in these manuals in performing the delineation.

Wetland and waterbody delineation of field-verified water features are made using COWC's professional judgment and interpretation of the USACE Jurisdictional Determination Form Instructional Guidebook (USACE, 2007). For the purposes of this report, "non-jurisdictional" or "excluded" is defined as aquatic features that are not regulated by the USACE under the provisions of Section 404 of the Clean Water Act (CWA). Isolated wetlands that do not have a surface water connection to waters of the U.S. and ephemeral streams are non-jurisdictional from the perspective of the USACE; however, are regulated by the Ohio EPA under the provisions of Section 401 of the CWA.

4.1 METHODOLOGY

After collecting pertinent information through the review of published information, COWC uses the routine method to determine if wetland areas exist within the evaluation area. The approach used for the routine determination is the plant community assessment procedure. This approach requires initial identification of representative plant community types in the subject area followed by characterization of vegetation, soils, and hydrology for each community type.

The evaluation area is assessed in accordance with guidelines from the USACE pertaining to potential jurisdictional waters of the United States and/or isolated waters of the State of Ohio. All potential wetlands, streams, and drainage ditches are followed to determine the flow regime and whether such features have a surface water connection to waters of the U.S.

The field investigation is conducted by walking and visually surveying the evaluation area, and in the vicinity, to collect wetland and stream data, as necessary. Upon identification of hydrophytic (wetland) and non-wetland communities, the wetland boundary is surveyed with a Spectra SP20 handheld Global Navigation Satellite System (GNSS) receiver with sub-meter accuracy. Field notes are taken at points where the dominant vegetation species change from wetland to upland or hydrologic or soil indicators become transitional. Areas saturated or inundated by surface water at the time of our field reconnaissance are presumed to contain hydric soil characteristics. COWC records observations concerning hydrology and vegetation on the appropriate Wetland Determination Data Form.

4.1.1 HYDRIC SOIL CRITERIA

COWC performs shovel test pits to characterize soil conditions and to evaluate the presence or absence of hydric soil features. A drain spade is used to collect soil samples from a maximum depth of approximately 20 inches below ground surface. COWC determines the presence or absence of hydric soils by comparing soil samples to a Munsell soil color chart, as soil colors often reveal whether a soil is hydric or non-hydric. The standardized Munsell soil colors consist of three components: hue, value, and chroma. Soil in hydric soil areas typically show yellow-red hues, varying gray color values,

and chromas of one or two. Chromas of two or less are considered low, and are often diagnostic of hydric soils. Hydric mineral soils saturated for long periods of the growing season, but unsaturated for some time, often develop mottles and/or a low chroma matrix. Soils are considered hydric if at least one primary indicator, or at least one problematic hydric soil indicator is present, as defined by the USACE.

Mineral based soils (as opposed to carbon- or organic-based soils) generally contain significant amounts of iron and manganese. As the iron component of the soil matrix comes into contact with the atmosphere, the iron tends to oxidize giving soils a high "chroma" or rust-like color. This characteristic is typically observed in upland (i.e., non-wetlands) areas where oxygen is abundant. On the contrary, mineral soils that are saturated for extended periods (e.g., hydric soils) tend to have oxygen ions stripped, chemically reducing iron and giving these soils bluish-grayish coloring or low chroma. This reduced condition in mineral soils is known as "gleying" and is typically observed in wetlands, where soil oxygen contents are generally lower relative to upland soils. Low oxygen levels in reduced soils also tend to slow decomposition, leading to increased organic content.

The evaluation area is predominately comprised of Urban land-Celina complex soils. Wooded areas adjacent to the west of the existing railroad lines on the Central Section are mapped with Crosby, Celina, and Kokomo soil units. Areas saturated or inundated by surface water at the time of our field reconnaissance were presumed to contain hydric soil characteristics. COWC observed hydric soil characteristics within the areas delineated as Wetland 1 through Wetland 12.

4.1.2 WETLAND HYDROLOGY CRITERIA

Wetland hydrology is determined present in areas that are periodically inundated or have soils saturated to the surface sometime during the growing season. This is a dynamic characteristic and is usually not present during drier periods of the year. Primary wetland hydrology indicators include, but are not limited to, surface water, high water table, inundation, soil saturation in the upper 12 inches of the soil, water marks, sediment deposits, drift deposits, and water-stained leaves. Secondary wetland hydrology indicators include surface soil cracks, drainage patterns, dry-season water table, crayfish burrows, saturation visible on aerial imagery, stunted or stressed plants, geomorphic position, and FAC-Neutral Test of vegetation. One primary indicator or two or more secondary indicators are required to establish a positive indication of wetland hydrology.

COWC observed primary and secondary hydrology indicators for wetlands within the areas delineated as Wetland 1 through Wetland 12.

4.1.3 HYDROPHYTIC VEGETATION CRITERIA

Hydrophytic vegetation is determined present if more than 50 percent of plant species within a plant community have an indicator status of obligate wetland (OBL), facultative wetland (FACW), and/or facultative (FAC). The indicator status of plant species found in wetlands is listed in the 2018 National Wetland Plant List - Midwest Region published by the USACE⁵.

COWC used this data and determined hydrophytic vegetation dominance was present within the areas delineated as Wetland 1 through Wetland 12.

4.2 JURISDICTIONAL WATERS DELINEATION FINDINGS

COWC's field reconnaissance identified twelve (12) wetlands (Wetland 1 through Wetland 12) totaling 13.53± acres, thirteen (13) streams (Stream 1 through Stream 13) totaling 10,377± linear feet, and two (2) ponds (Pond 1 and Pond 2) totaling 1.18± acre within the evaluation area. The centerline of the streams and the boundary of the ponds and wetlands were surveyed with a Spectra SP20 handheld GNSS receiver with sub-meter accuracy. Appendix 3 provides maps showing the location of the delineated wetlands, ponds, and streams. Multi-directional photographs of each stream and wetland, and general landscape photographs are provided in Appendix 4.

Several streams delineated within the evaluation area are depicted on USGS maps as unnamed tributaries to the Scioto River, prior to development of the evaluation area as a railroad yard. Streams within the evaluation area have been placed in culverts, channelized, and relocated as part of development of the evaluation area for railroad use in the mid to late 1960s.

Wetlands within the evaluation area are generally located in low-lying areas between existing railroad lines, and appear to be attributed to poor surface water drainage. Manipulation of on-site drainage features by beavers (*Castor canadensis*) has resulted in the establishment of several of the delineated wetlands.

4.2.1 STREAMS

COWC identified thirteen (13) streams (Stream 1 through Stream 13) totaling 10,377± linear feet within the evaluation area. These streams were delineated as Stream 1 (260± LF), Stream 2 (59± LF), Stream 3 (97± LF), Stream 4 (119± LF), Stream 5 (50± LF), Stream 6 (158± LF), Stream 7 (114± LF), Stream 8 (61± LF), Stream 9 (320± LF), Stream 10 (2,552± LF), Stream 11 (3,921± LF), Stream 12 (369± LF), and Stream 13 (2,297± LF). These streams are further described below.

⁵ [NWPL Home v3.4-f9c \(army.mil\)](http://nwpl.home.v3.4-f9c.army.mil)

TABLE 2
STREAM INFORMATION

Stream ID	Length (On-Site)	Classification	Start Location	End Location
Stream 1 (Roberts Millikin Ditch)	260± LF	Perennial	40.007903 -83.128758	40.008136 -83.127289
Stream 2	59± LF	Ephemeral	40.00785 -83.128597	40.008003 -83.128575
Stream 3	97± LF	Intermittent	40.008131 -83.127797	40.008025 -83.127517
Stream 4	119± LF	Intermittent	40.008147 -83.127458	40.007983 -83.127319
Stream 5	50± LF	Intermittent	40.007975 -83.127436	40.007878 -83.127350
Stream 6	158± LF	Intermittent	40.007728 -83.127353	40.008128 -83.127278
Stream 7	114± LF	Ephemeral	40.008425 -83.127272	40.008136 -83.127278
Stream 8	61± LF	Ephemeral	40.008403 -83.127339	40.008244 -83.127281
Stream 9	320± LF	Intermittent	40.002356 -83.129508	40.002489 -83.128431
Stream 10	2,552± LF	Perennial	39.997258 -83.132658	40.002511 -83.128356
Stream 11	3,921± LF	Perennial	39.993333 -83.134142	39.983883 -83.130006
Stream 12	369± LF	Perennial	39.989911 -83.134697	39.990389 -83.133558
Stream 13	2,297± LF	Perennial	39.969858 -83.138011	39.966231 -83.132869
Total	10,377± LF			

Stream 1 – Roberts Millikin Ditch (260± linear feet North Section)

Stream 1 is an east/west oriented portion of Roberts Millikin Ditch crossing the central part of the North Section of the evaluation area. Roberts Millikin Ditch flows through residential and industrial areas to the west prior to entering the evaluation area. This stream is littered with trash and debris and has perennial flow characteristics. Surface water was flowing within Stream 1 during our field reconnaissance on April 9, 2021.

Stream 1 originates at a round concrete culvert near the western boundary of the North Section of the evaluation area. Stream 1 flows unobstructed for approximately 73 LF before entering double round culverts beneath elevated railroad lines. Upon exiting these culverts, Stream 1 flows for an additional 187 LF before entering a second set of double round culverts beneath elevated railroad lines and exiting the evaluation area to the east.

Stream 1 is located within a wooded corridor on the central part of the North Section. This area appears frequently flooded with numerous deposits of sand and gravel. Stream 1 is highly braided within this frequently flooded area, and overflow drainage from Stream 1 has created several other smaller order streams (Streams 3, 4, and 5). Substrate material within Stream 1 consists of cobble, silt, sand, and gravel.

Stream 2 (59± linear feet North Section)

Stream 2 is an ephemeral stream that drains Wetland 4 on the central part of the North Section of the evaluation area. Excess surface water retained within Wetland 4 follows a natural gradient to the north, where it has cut a channel. Substrate material within Stream 2 consists of silt and hardpan. Surface water was flowing within Stream 2 during our field reconnaissance on April 9, 2021. Stream 2 has a direct surface water connection with Stream 1 (Roberts Millikin Ditch).

Stream 3 (97± linear feet North Section)

Stream 3 appears to have intermittent flow characteristics, and is a braided sub-channel resulting from overflow drainage of Stream 1 (Roberts Millikin Ditch) within a frequently flooded wooded corridor on the central part of the North Section of the evaluation area. Surface water was flowing within Stream 3 during our field reconnaissance on April 9, 2021. Substrate material within Stream 3 consists of silt, sand, and gravel.

Stream 4 (119± linear feet North Section)

Stream 4 appears to have intermittent flow characteristics, and is a braided sub-channel resulting from overflow drainage of Stream 1 (Roberts Millikin Ditch) within a frequently flooded wooded corridor on the central part of the North Section of the evaluation area. Surface water was flowing within Stream 4 during our field reconnaissance on April 9, 2021. Substrate material within Stream 4 consists of silt, sand, and gravel.

Stream 5 (50± linear feet North Section)

Stream 5 appears to have intermittent flow characteristics, and is a braided sub-channel resulting from overflow drainage of Stream 1 (Roberts Millikin Ditch) within a frequently flooded wooded corridor on the central part of the North Section of the evaluation area. Surface water was flowing within Stream 5 during our field reconnaissance on April 9, 2021. Substrate material within Stream 5 consists of silt, sand, and gravel.

Stream 6 (158± linear feet North Section)

Stream 6 is an intermittent stream that drains Wetland 6 on the central part of the North Section of the evaluation area. Excess surface water retained within Wetland 6 follows a natural gradient to the north, where it has cut a

channel. This channel transitions to intermittent flow characteristics at the confluence with Streams 4 and 5. Substrate material within Stream 6 consists of silt, sand, and gravel. Surface water was flowing within Stream 6 during our field reconnaissance on April 9, 2021. Stream 6 has a direct surface water connection with Stream 1 (Roberts Millikin Ditch).

Stream 7 (114± linear feet North Section)

Stream 7 is an ephemeral stream that drains Wetland 5 on the central part of the North Section of the evaluation area. Excess surface water retained within Wetland 5 follows a natural gradient to the south, where it has cut a channel. Substrate material within Stream 7 consists of silt and hardpan. Surface water was flowing within Stream 7 during our field reconnaissance on April 9, 2021. Stream 7 has a direct surface water connection with Stream 1 (Roberts Millikin Ditch).

Stream 8 (61± linear feet North Section)

Stream 8 is an ephemeral stream that drains Wetland 5 on the central part of the North Section of the evaluation area. Excess surface water retained within Wetland 5 follows a natural gradient to the south, where it has cut a channel. Substrate material within Stream 8 consists of silt and hardpan. Surface water was flowing within Stream 8 during our field reconnaissance on April 9, 2021. Stream 8 has a direct surface water connection with Stream 1 (Roberts Millikin Ditch).

Stream 9 (320± linear feet Central Section)

Stream 9 is a west to east flowing intermittent stream on the north part of the Central Section of the evaluation area. Stream 9 originates at the outfall of a round concrete culvert pipe which discharges surface water from a west adjoining stormwater management pond. This stream is littered with trash and debris. Stream 9 has a direct surface water connection with Stream 10 on the northwest part of the Central Section of the evaluation area. Surface water was flowing within Stream 9 during our field reconnaissance on April 13, 2021. Substrate material within Stream 9 consists of silt, sand, and gravel.

Stream 10 (2,552± linear feet Central Section)

Stream 10 is a general southwest to northeast flowing perennial stream on the northwest part of the Central Section of the evaluation area. Stream 10 originates at the outfall of an oval-shaped concrete culvert pipe near the western boundary of the Central Section of the evaluation area. This culvert discharges surface water from the west. Surface water was flowing within Stream 10 during our field reconnaissance on April 13, 2021. Substrate material within Stream 10 consists of cobble, silt, sand, and gravel. Stream 10 is partially impounded by Pond 1.

Stream 11 (3,921± linear feet Central Section)

Stream 11 is a north to south flowing perennial stream contained within a ditch on the southwest part of the Central Section of the evaluation area. Surface water was flowing within Stream 11 during our field reconnaissance on April 13, 2021.

Stream 12 (369± linear feet Central Section)

Stream 12 is a west to east flowing perennial stream contained within a ditch on the southwest part of the Central Section of the evaluation area. Surface water was flowing within Stream 12 during our field reconnaissance on April 13, 2021. Stream 12 has a direct surface water connection to Stream 11.

Stream 13 (2,297± linear feet South Section)

Stream 13 is a west to southeast flowing perennial stream contained within a ditch on the South Section of the evaluation area. Stream 13 enters the South Section of the evaluation area from a culvert beneath Manor Park Drive. Portions of Stream 13 have been impounded by beavers in numerous locations, resulting in the creation of Wetland 11. Surface water was flowing within Stream 13 during our field reconnaissance on April 12, 2021.

4.2.1 WETLANDS

COWC identified twelve (12) wetlands (Wetland 1 through Wetland 12) totaling 13.53± acres within the evaluation area. These areas exhibit a dominance of hydrophytic species, primary and secondary wetland hydrology indicators, and hydric soil characteristics. These wetlands were delineated as Wetland 1 (0.40± acre), Wetland 2 (0.31± acre), Wetland 3 (1.53± acre), Wetland 4 (1.67± acre), Wetland 5 (4.72± acre), Wetland 6 (1.45± acre), Wetland 7 (0.49± acre), Wetland 8 (0.29± acre), Wetland 9 (1.10± acre), Wetland 10 (0.22± acre), Wetland 11 (0.92± acre), and Wetland 12 (0.43± acre). These wetlands are further described below.

TABLE 3
WETLAND INFORMATION

Wetland ID	Acreage (On-Site)	Cowardin Classification	ORAM Score	Status	Location
Wetland 1	0.40±	Palustrine Emergent (PEM)	29 (Cat. 1)	Jurisdictional	40.014106 -83.127944
Wetland 2	0.31±	Palustrine Forested (PFO)	32 (Cat. 2)	Jurisdictional	40.012344 -83.126881
Wetland 3	1.53±	Palustrine Emergent (PEM)	42 (Cat. 2)	Jurisdictional	40.011019 -83.128378

Wetland 4	1.67±	Palustrine Emergent (PEM)	25 (Cat. 1)	Jurisdictional	40.006775 -83.128611
Wetland 5	4.72±	Palustrine Emergent (PEM)	27 (Cat. 1)	Jurisdictional	40.009728 -83.127467
Wetland 6	1.45±	Palustrine Emergent (PEM)	26 (Cat. 1)	Jurisdictional	40.006722 -83.127569
Wetland 7	0.49±	Palustrine Forested (PFO)	49 (Cat. 2)	Jurisdictional	39.998444 -83.130556
Wetland 8	0.29±	Palustrine Emergent (PEM)	38 (Cat. 2)	Jurisdictional	39.997300 -83.131078
Wetland 9	1.10±	Palustrine Emergent (PEM)	34 (Cat. 2)	Jurisdictional	39.970158 -83.133319
Wetland 10	0.22±	Palustrine Emergent (PEM)	24 (Cat. 1)	Jurisdictional	39.969094 -83.133639
Wetland 11	0.92±	Palustrine Forested (PFO)	52 (Cat. 2)	Jurisdictional	39.968056 -83.133531
Wetland 12	0.43±	Palustrine Emergent (PEM)	35 (Cat. 2)	Jurisdictional	39.963508 -83.131206
Total	13.53±				

COWC completed Ohio Rapid Assessment Method (ORAM) score sheets for the wetland areas delineated within the evaluation area. Wetland areas identified within the evaluation area scored within Category 1 and Category 2, according to Ohio EPA standards. The ORAM forms are appended.

Using the USACE OMBIL Regulatory Module (ORM) Project Upload Template, COWC determined the Cowardin classification of wetlands within the evaluation area as palustrine emergent (PEM) and palustrine forested (PFO).

Wetland 1 (0.40± acre North Section)

Wetland 1 is a flooded depression on the north part of the North Section of the evaluation area. Elevated railroad tracks surround the wetland. Establishment of Wetland 1 appears to be attributed to poor surface water drainage in low-lying areas between rail lines. Based on visual observation, Wetland 1 appears to be regularly inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands. Wetland 1 is generally dominated by various Dogwood species (*Cornus species*), Green Ash (*Fraxinus pennsylvanica*), Black Willow (*Salix nigra*), Narrow-Leaf Cattail (*Typha angustifolia*), and Marsh Primrose (*Ludwigia palustris*).

Wetland 2 (0.31± acre North Section)

Wetland 2 is a flooded, forested depression on the north part of the North Section of the evaluation area. Wetland 2 is located within a low-lying area surrounded by elevated railroad tracks. Establishment of Wetland 2

appears to be attributed to poor surface water drainage in low-lying areas between rail lines. Dense brushy areas dominated by European Privet (*Ligustrum vulgare*) and Morrow's Honeysuckle (*Lonicera morrowii*) provide a buffer between Wetland 2 and the surrounding railroad tracks. A culvert pipe is located along the eastern boundary of Wetland 2, partially draining this wetland with surface water flow to the east, beneath elevated railroad tracks. Based on visual observation, Wetland 2 appears to be semi to permanently inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands. Wetland 2 is generally dominated by Eastern Cottonwood (*Populus deltoides*), Green Ash (*Fraxinus pennsylvanica*), Black Willow (*Salix nigra*), and Narrow-Leaf Cattail (*Typha angustifolia*).

Wetland 3 (1.53± acre North Section)

Wetland 3 is located along the western boundary of the North Section of the evaluation area. This wetland is part of a larger wetland complex that extends off-site to the west. Portions of Wetland 3 are located within a channelized ditch that has been impounded by beavers in numerous locations. These beaver impoundments of an apparently perennial ditch have also facilitated the establishment of additional wetlands to the west of the evaluation area. Wetland 3 appears to be permanently inundated by surface water, with flowing water observed at beaver dam locations. Wetland 3 appears to receive hydrology from precipitation and stormwater drainage from areas to the west of the evaluation area. Wetland 3 is generally dominated by Narrow-leaf Cattail (*Typha angustifolia*), Black Willow (*Salix nigra*), and various Dogwood species (*Cornus species*). Dense brushy areas dominated by European Privet (*Ligustrum vulgare*) and Morrow's Honeysuckle (*Lonicera morrowii*) generally surround Wetland 3.

Wetland 4 (1.67± acre North Section)

Wetland 4 is located within a low-lying area on the central part of the North Section of the evaluation area. Railroad tracks abut the wetland to the east with higher surface elevations to the west. Wetland 4 is dominated by Narrow-leaf Cattail (*Typha angustifolia*) and Common Reed (*Phragmites australis*). This wetland has a direct surface water connection to Stream 1 (Roberts Millikin Ditch) via Stream 2. Based on visual observation, Wetland 4 appears to be semi to permanently inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands.

Wetland 5 (4.72± acre North Section)

Wetland 5 is located within a low-lying area on the central part of the North Section of the evaluation area. Elevated railroad tracks surround the wetland. Establishment of Wetland 5 appears to be attributed to poor surface water drainage in low-lying areas between rail lines. Wetland 5 is

dominated by Narrow-leaf Cattail (*Typha angustifolia*). This wetland has a direct surface water connection to Stream 1 (Roberts Millikin Ditch) via Stream 7 and 8. Based on visual observation, Wetland 5 appears to be semi to permanently inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands. Wetland 5 is mapped with a PEM1C designation on the NWI map.

Wetland 6 (1.45± acre North Section)

Wetland 6 is located within a low-lying area on the central part of the North Section of the evaluation area. Elevated railroad tracks surround the wetland. Establishment of Wetland 6 appears to be attributed to poor surface water drainage in low-lying areas between rail lines. Wetland 6 is dominated by Narrow-leaf Cattail (*Typha angustifolia*). This wetland has a direct surface water connection to Stream 1 (Roberts Millikin Ditch) via Stream 6. Based on visual observation, Wetland 6 appears to be semi to permanently inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands.

Wetland 7 (0.49± acre Central Section)

Wetland 7 is located within the wooded northwest part of the Central Section of the evaluation area. According to the USDA web soil survey map, this wetland is located within hydric Kokomo silty clay loam soils. Wetland 7 is mapped with a PFO1A designation on the NWI map. The wetland appears to receive hydrology from precipitation, overland flow from adjacent uplands, and flood waters from Stream 10. Stream 10 abuts the east side of the wetland and appears to provide surface water to Wetland 7 during prolonged precipitation events. Based on visual observation, Wetland 7 appears to be regularly inundated/saturated. Wetland 7 is generally dominated by American Elm (*Ulmus americana*), Swamp White Oak (*Quercus bicolor*), and Green Ash (*Fraxinus pennsylvanica*).

Wetland 8 (0.29± acre Central Section)

Wetland 8 is located within the wooded northwest part of the Central Section of the evaluation area. According to the USDA web soil survey map, this wetland is located within hydric Kokomo silty clay loam soils. The wetland appears to receive hydrology from precipitation, overland flow from adjacent uplands, and flood waters from Stream 10. Stream 10 abuts the north side of the wetland and appears to provide surface water to Wetland 8 during prolonged precipitation events. Based on visual observation, Wetland 8 appears to be seasonally saturated. Wetland 8 is generally dominated by Reed Canary Grass (*Phalaris arundinacea*) and Black Willow (*Salix nigra*).

Wetland 9 (1.10± acre South Section)

Wetland 9 is located within a channelized ditch along the western boundary of the South Section of the evaluation area. Based on visual observation, Wetland 9 appears to be semi to permanently inundated/saturated. Wetland 9 is generally dominated by Narrow-leaf Cattail (*Typha angustifolia*) and Black Willow (*Salix nigra*).

Wetland 10 (0.22± acre South Section)

Wetland 10 is a flooded depression on the western part of the South Section of the evaluation area. Railroad tracks abut the wetland to the south, east, and west with higher surface elevations to the north. Establishment of Wetland 10 appears to be attributed to poor surface water drainage in low-lying areas between rail lines. Based on visual observation, Wetland 10 appears to be semi to permanently inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands. Wetland 10 is generally dominated by various Dogwood species (*Cornus species*), Black Willow (*Salix nigra*), and Narrow-Leaf Cattail (*Typha angustifolia*).

Wetland 11 (0.92± acre South Section)

Wetland 11 is located along the western part of the South Section of the evaluation area. This wetland is part of a wetland complex established due to numerous beaver impoundments within Stream 13. Several of these beaver dam structures are elaborate, flooding areas west of Stream 13. Wetland 11 appears to be permanently inundated by surface water, with flowing water observed at beaver dam locations. Wetland 11 appears to receive hydrology from precipitation and perennial surface water from Stream 13. Wetland 11 is generally dominated by Narrow-leaf Cattail (*Typha angustifolia*), Black Willow (*Salix nigra*), American Elm (*Ulmus americana*), Green Ash (*Fraxinus pennsylvanica*), Eastern Cottonwood (*Populus deltoides*), and various Dogwood (*Cornus species*) and Carex (*Carex species*) species. Dense brushy areas dominated by European Privet (*Ligustrum vulgare*) and Morrow's Honeysuckle (*Lonicera morrowii*) generally surround Wetland 11.

Wetland 12 (0.43± acre South Section)

Wetland 12 is located on the southern part of the South Section of the evaluation area. This wetland is located within a channelized ditch that has been impounded by beavers in numerous locations. These beaver impoundments of an apparently perennial ditch have facilitated the establishment of wetlands within the ditch limits. Wetland 12 appears to be permanently inundated by surface water, with flowing water observed at beaver dam locations. Wetland 12 appears to receive hydrology from precipitation and stormwater flow from areas to the west of the evaluation area. Wetland 12 is generally dominated by Narrow-leaf Cattail (*Typha*

angustifolia), Black Willow (*Salix nigra*), and various Dogwood species (*Cornus species*). Dense brushy areas dominated by European Privet (*Ligustrum vulgare*) and Morrow's Honeysuckle (*Lonicera morrowii*) generally surround Wetland 12.

4.2.2 PONDS

COWC identified two (2) ponds (Pond 1 and Pond 2) totaling 1.18± acre within the evaluation area. These ponds were delineated as Pond 1 (0.23± acre) and Pond 2 (0.95± acre), and further described below.

Pond 1 (0.23± acre)

Pond 1 is located on the western part of the Central Section of the evaluation area. Pond 1 appears to be a heavily silted excavation that partially impounds Stream 10, which flows through the central part of Pond 1. Pond 1 may provide a limited amount of stormwater retention from areas to the west of the evaluation area, and may help reduce the flow volume of Stream 10. This pond contains no rooted or emergent vegetation. Pond 1 is mapped with a PUBG designation on the NWI map.

Pond 2 (0.95± acre)

Pond 2 is located on the southern part of the South Section of the evaluation area. This pond appears to have been created by excavation, and does not impound a stream or apparent surface water feature. Two (2) round culvert outlet structures are located in the northeast part of the pond. Pond 2 is mapped with a PEM1A designation on the NWI map.

TABLE 4
POND INFORMATION

Pond ID	Acreage	Description	Location
Pond 1	0.23±	Impoundment	39.997153 -83.131842
Pond 2	0.95±	Stormwater Management	39.964861 -83.131814
Total	1.18±		

5.0 FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

COWC identified twelve (12) wetlands (Wetland 1 through Wetland 12) totaling 13.53± acres, thirteen (13) streams (Stream 1 through Stream 13) totaling 10,377± linear feet, and two (2) ponds (Pond 1 and Pond 2) totaling 1.18± acre within the evaluation area.

COWC followed the Navigable Waters Protection Rule (effective June 22, 2020) to determine the potential regulatory status of surface water features identified with the evaluation area. Per Title 33 (Navigation and Navigable Waters) of the Code of Federal

Regulations (CFR), Chapter 2 (Corps of Engineers, Department of the Army, Department of Defense), Part 328 (Definition of Waters of the United States), Section 328.3 (Definitions), COWC has come to the following conclusions:

- Wetland 1 through Wetland 12 are likely considered waters of the U.S. per 33 CFR 328.3(a)(4), as they appear to meet the definition "adjacent wetlands" per 33 CFR 328.3(c)(1)(i)-(iv).
- Stream 1, Stream 3, Stream 4, Stream 5, Stream 6, Stream 9, Stream 10, Stream 11, Stream 12, and Stream 13 are likely considered waters of the U.S. per 33 CFR 328.3(a)(2), as they appear to meet the definition of "tributaries" per 33 CFR 328.3(c)(12).
- Stream 2, Stream 7, and Stream 8 are likely considered "non-jurisdictional waters" or "excluded features" because they appear to be ephemeral. Ephemeral features are considered "non-jurisdictional waters" per 33 CFR 328.3(b)(3). "Ephemeral" is defined in 33 CFR 328.3(c)(3) as "surface water flowing or pooling only in direct response to precipitation (e.g. rain or snow fall).
- Pond 1 is likely considered waters of the U.S. per 33 CFR 328.3(a)(3), as Pond 1 appears to meet the definition of "lakes and ponds, and impoundments of jurisdictional waters" per 33 CFR 328.3(c)(6).
- Pond 2 may be considered "non-jurisdictional" or "excluded" per 33 CFR 328.3(b)(10), as Pond 2 appears to meet the definition of a "stormwater control feature constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off".

Except for Stream 2, Stream 7, Stream 8, and Pond 2, surface water features identified within the evaluation area are likely to be regulated by the USACE. Section 404 of the CWA requires pre-construction notification (PCN) to the USACE and a Department of the Army (DA) permit prior to discharging dredged or fill material into waters of the U.S.

Stream 2, Stream 7, and Stream 8 appear to have ephemeral characteristics; therefore, may fall under the jurisdiction of the Ohio EPA. Ephemeral streams in the State of Ohio are regulated by the Ohio EPA. Certain situations may require a pre-activity notice (PAN) to the Ohio EPA for ephemeral stream impacts.

Pond 2 may be a non-regulated feature, as it appears to have been constructed for stormwater control use.

The USACE has authority to determine the jurisdictional status of surface water features identified within the evaluation area. Therefore, findings in this report are preliminary until verified by the USACE. COWC recommends obtaining an Approved Jurisdictional Determination (AJD) from the USACE Huntington, WV District Office for written verification of the findings documented within this report. With your authorization, COWC will supply the required information to process this request. With this reported

information and/or a site visit, the USACE will make the official determination on jurisdiction. The findings and conclusions of this delineation report are subject to change, pending USACE verification. This report will become public information upon submittal to the USACE.

6.0 SIGNATURE OF PROFESSIONAL PERSONNEL

To the best of our professional knowledge and belief, COWC personnel responsible for this report declare we have the specific qualifications based on education, training, and experience to assess the evaluation area for waters of the U.S. and isolated waters of the State of Ohio. The jurisdictional waters delineation has been conducted in a manner consistent with the criteria contained in the USACE Wetlands Delineation Manual (1987) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region, and with the level of care and skill ordinarily used by similar professionals performing similar services under similar conditions in the vicinity of the evaluation area.

COWC appreciates the opportunity to serve you on this project. Please contact COWC owner Matt Kaminski at mkaminski434@gmail.com with any questions or concerns regarding this report.

Respectfully submitted,

Central Ohio Wetland Consulting, LLC

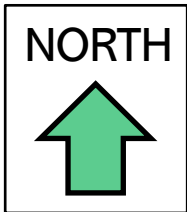
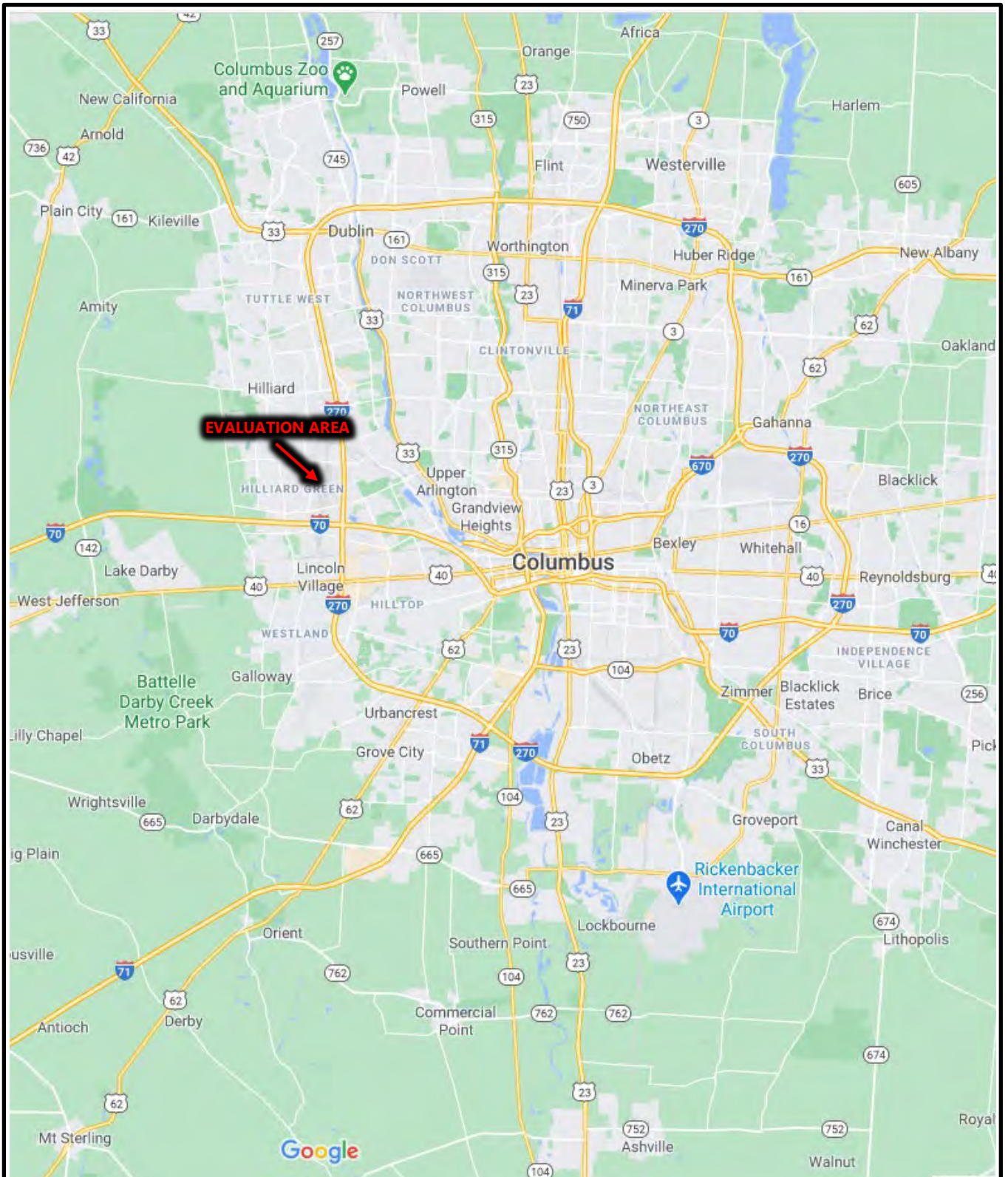
Prepared by: 

Matthew R. Kaminski, Owner
Wetland Scientist, 401/404 Specialist

Matthew R. Kaminski holds a Bachelor of Science Degree in Environmental Geography from Ohio University with 16 years of experience as an environmental consultant. Mr. Kaminski has completed hundreds of jurisdictional waters delineations throughout the State of Ohio upon completion of the 38 Hour Army Corps of Engineers Wetland Delineation & Management Training Program in 2006. Mr. Kaminski's experience includes wetland/stream delineation, plant identification, stream evaluations, 404/401 permitting, Ohio Rapid Assessment Method v. 5.0, Clean Water Act (CWA) regulations, Sections 7 & 9 of the Endangered Species Act (ESA), and Ohio Historic Preservation Office (OHPO) Section 106. Throughout his career, Mr. Kaminski has successfully facilitated regulatory approval of numerous residential, commercial, and institutional projects. Since September 2020, Mr. Kaminski has been sole proprietor of Central Ohio Wetland Consulting, LLC, offering comprehensive wetland and stream consultation and guidance for commercial and residential developers, architects, civil design professionals, and private individuals. Professional wetland and stream consulting services include preliminary jurisdictional waters assessments, wetland/stream delineation, approved and preliminary jurisdictional determination requests, and 404/401 permitting services.

APPENDIX 1

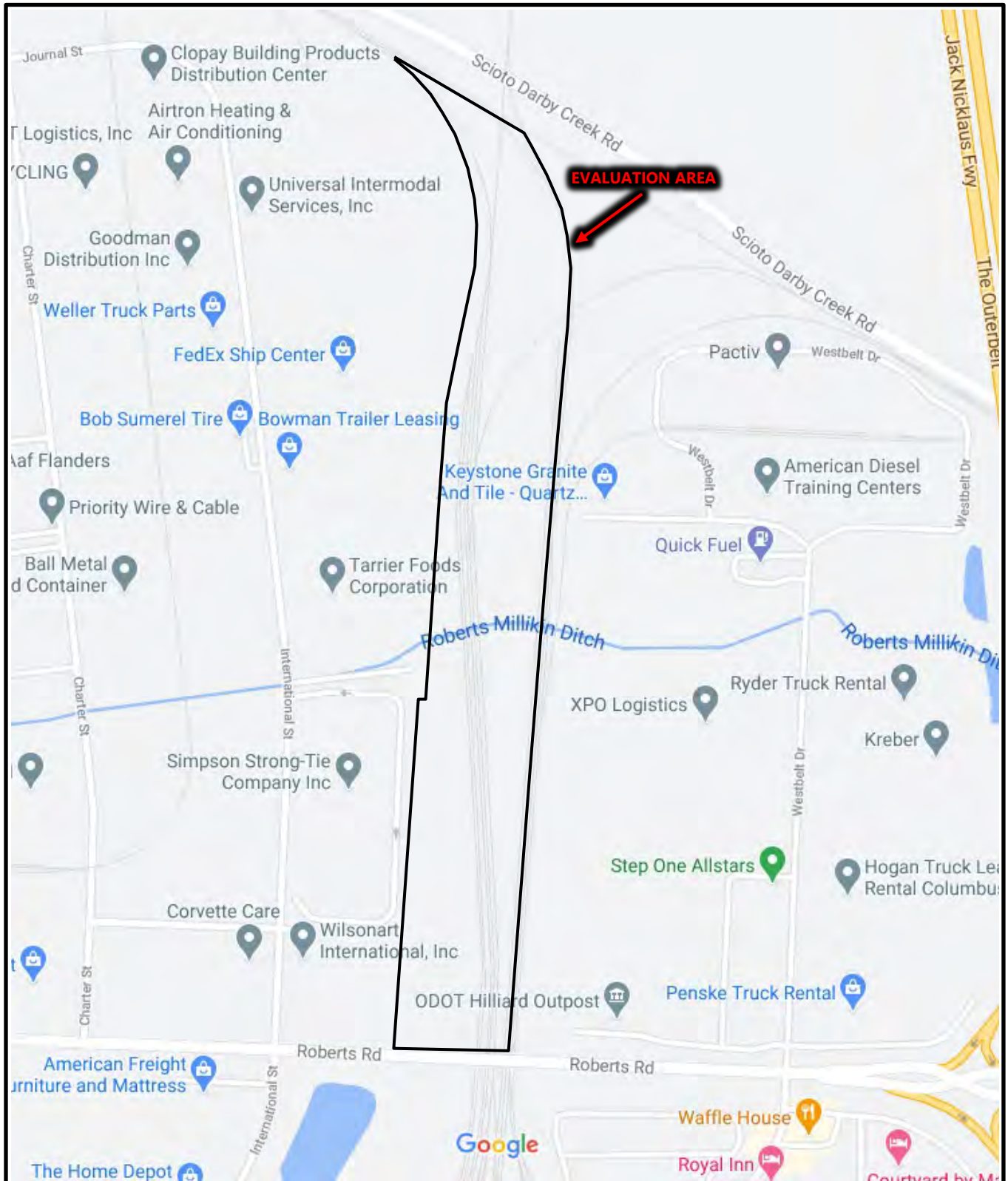
GENERAL LOCATION MAP OF EVALUATION AREA



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



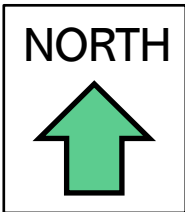
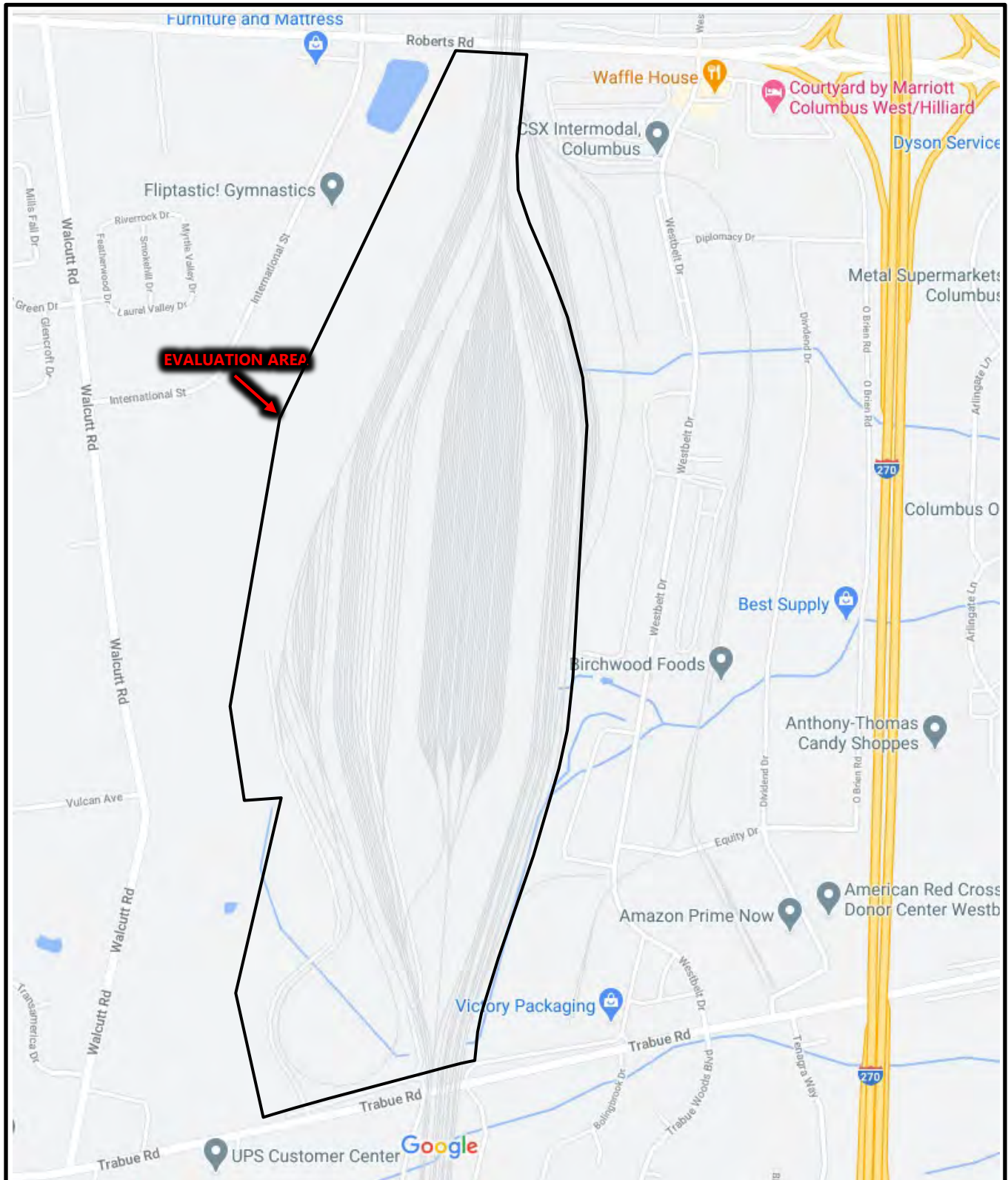
LOCATION MAP OF EVALUATION AREA (NORTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



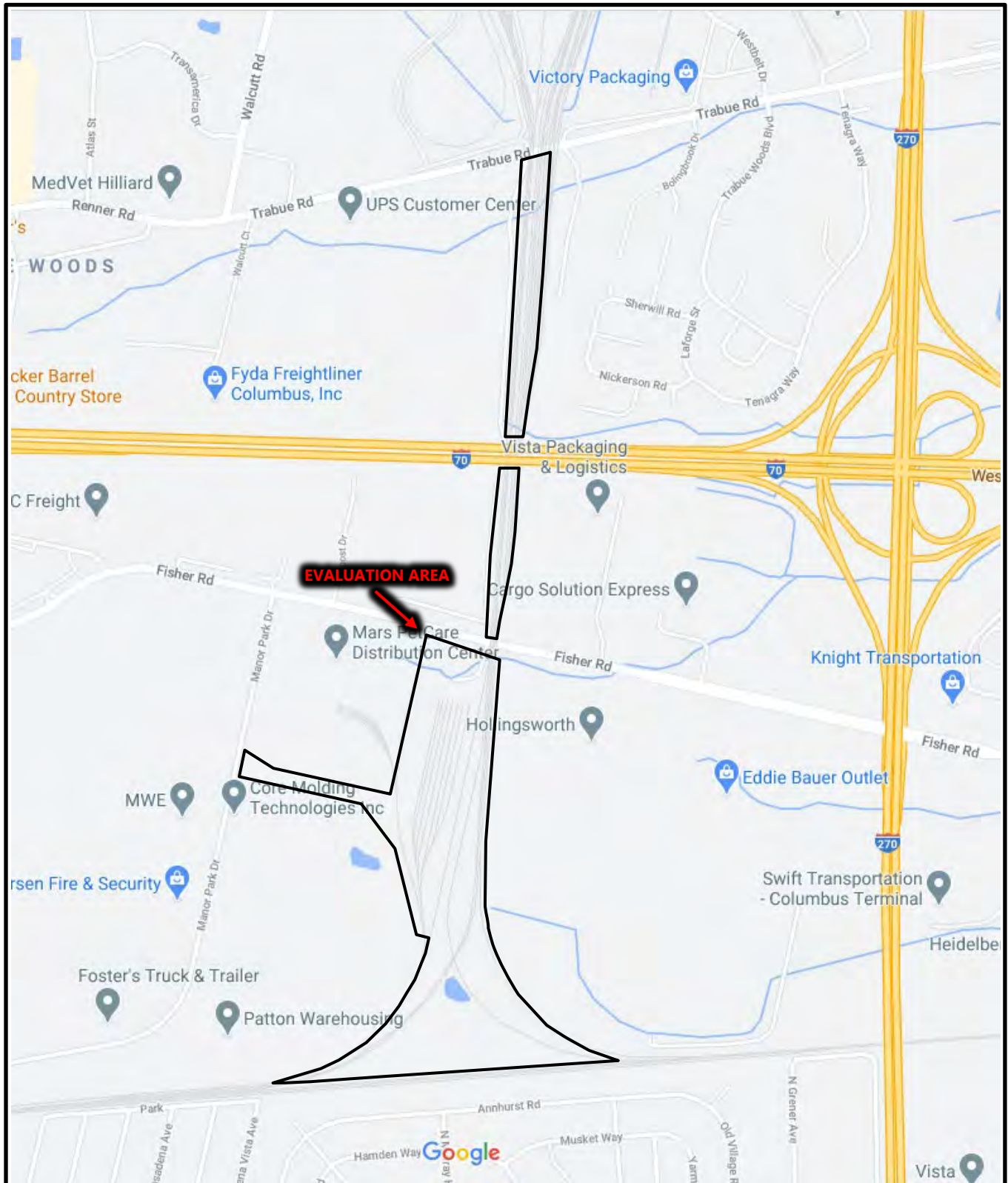
LOCATION MAP OF EVALUATION AREA (CENTRAL SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



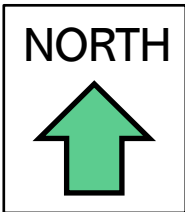
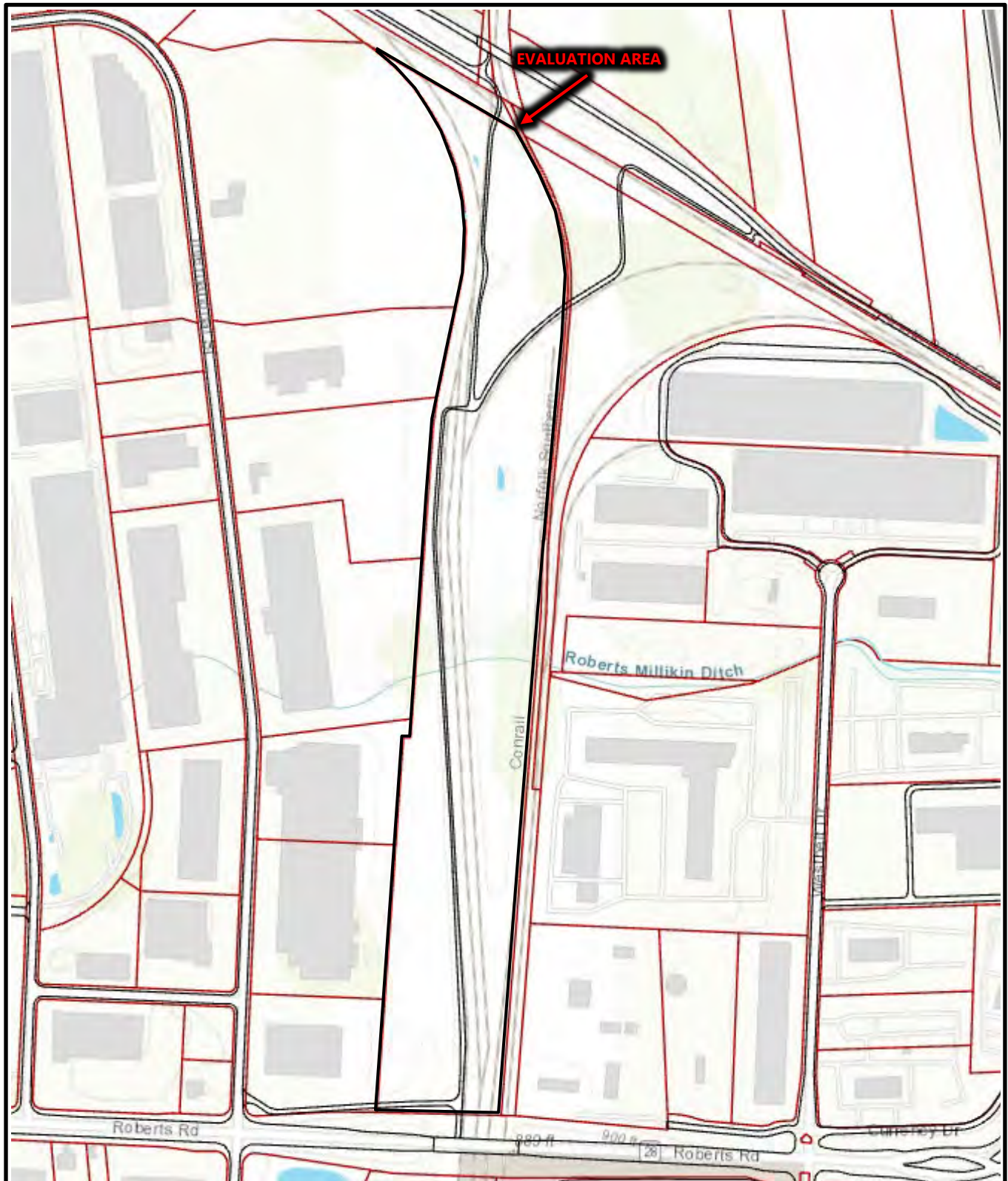
LOCATION MAP OF EVALUATION AREA (SOUTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



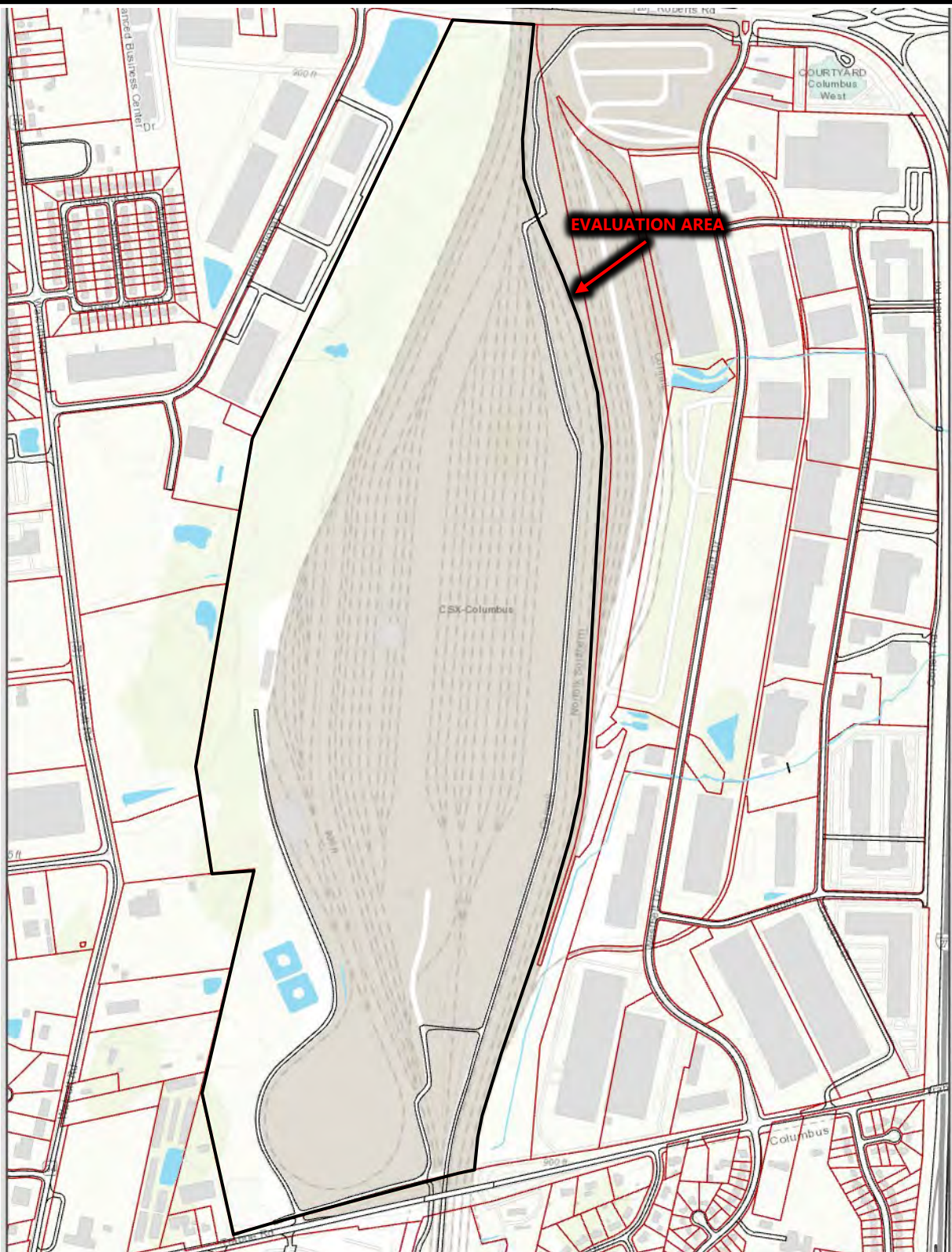
FRANKLIN COUNTY AUDITOR GIS MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



FRANKLIN COUNTY AUDITOR GIS MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



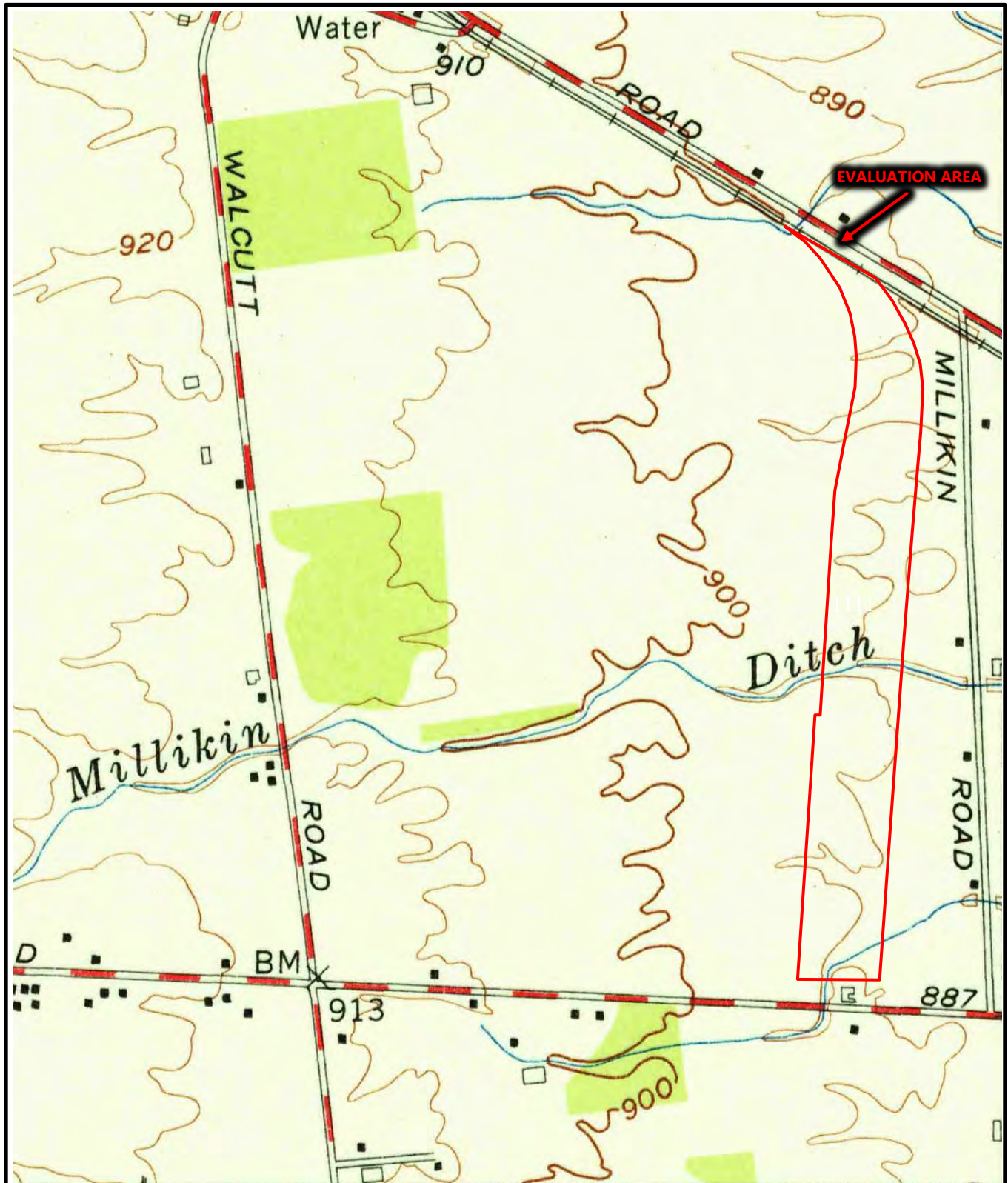
FRANKLIN COUNTY AUDITOR GIS MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



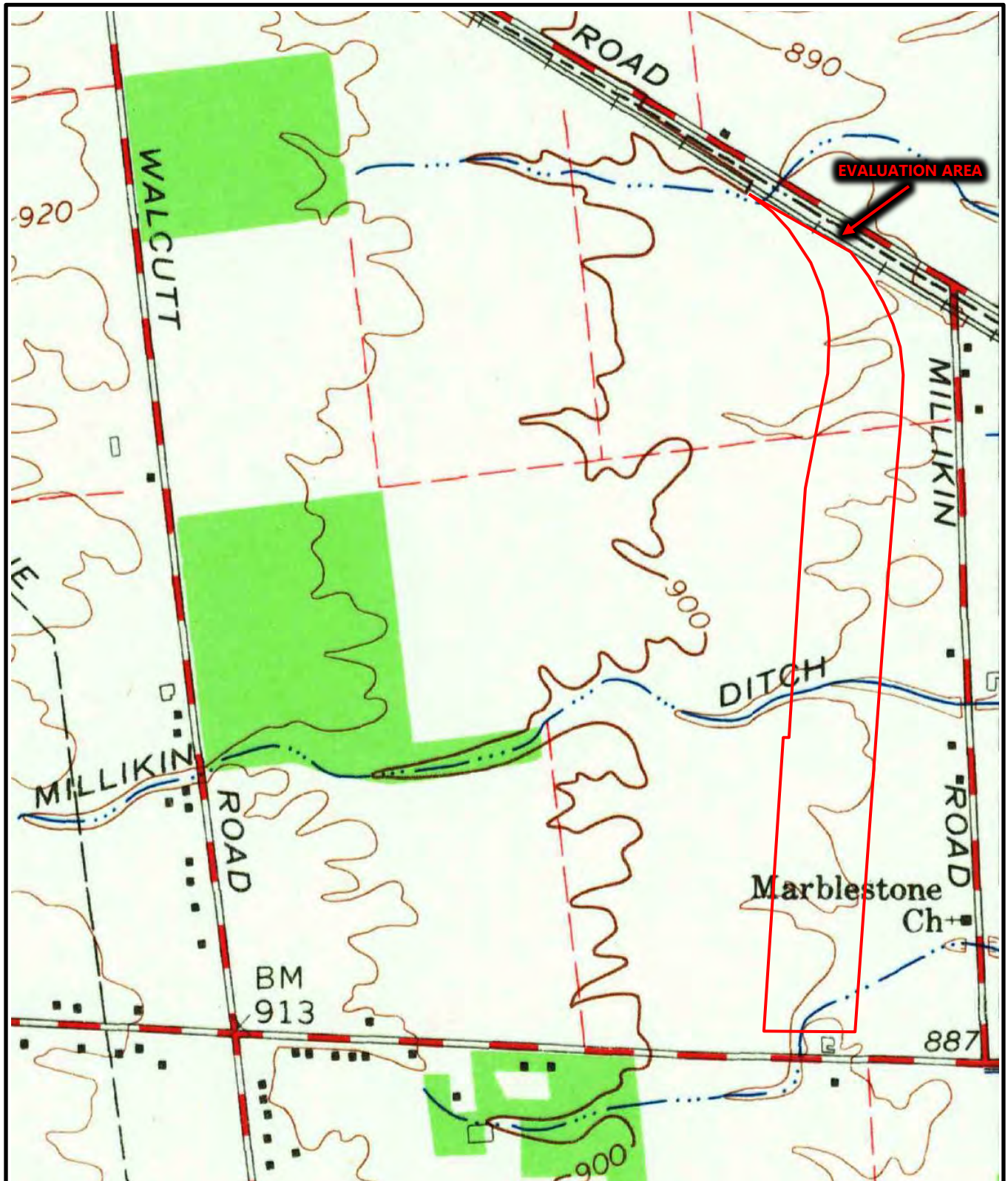
1954 USGS (HILLIARD) TOPOGRAPHIC MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



1966 USGS (HILLIARD) TOPOGRAPHIC MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



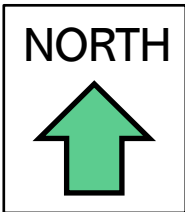
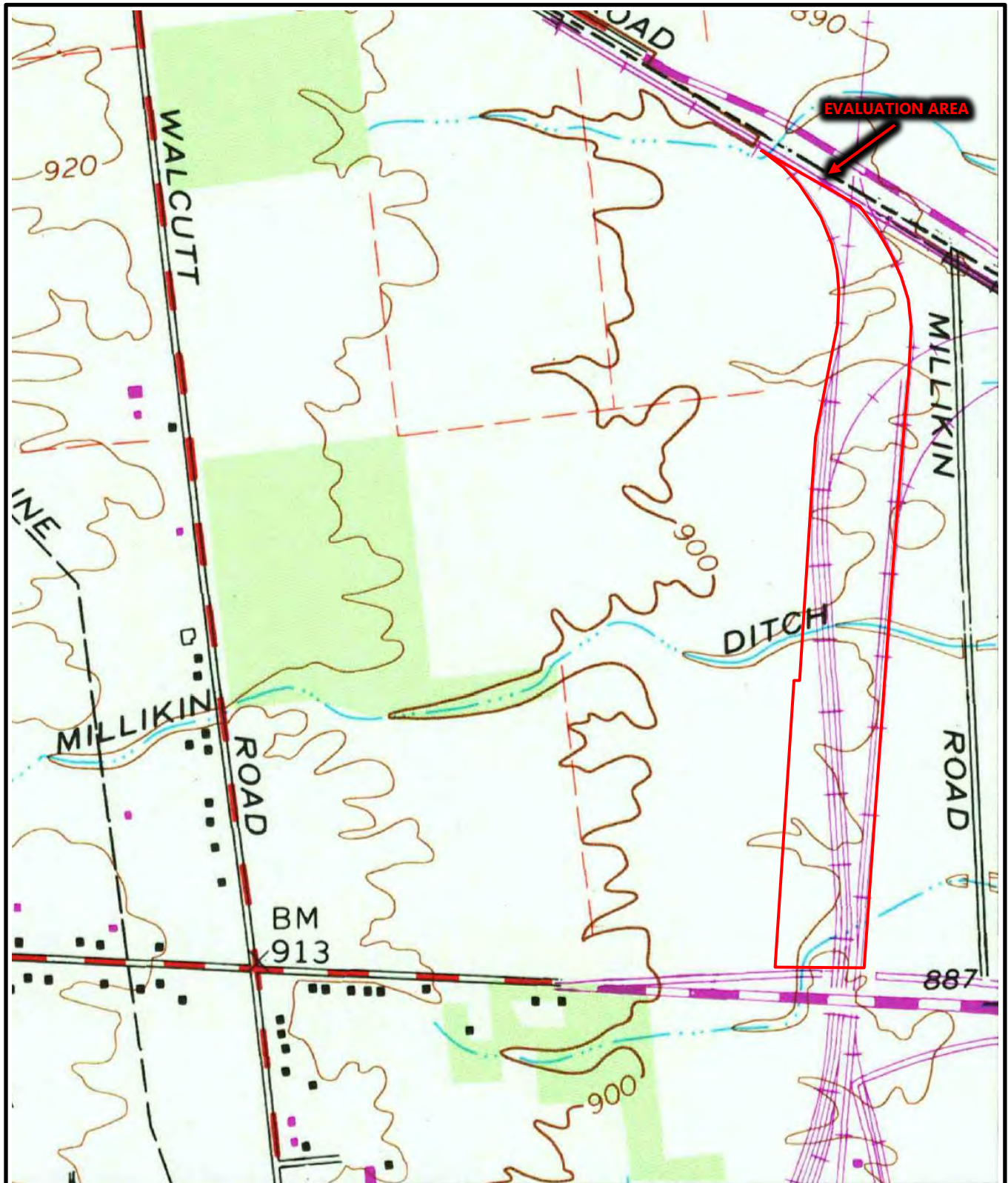
1973 USGS (HILLIARD) TOPOGRAPHIC MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



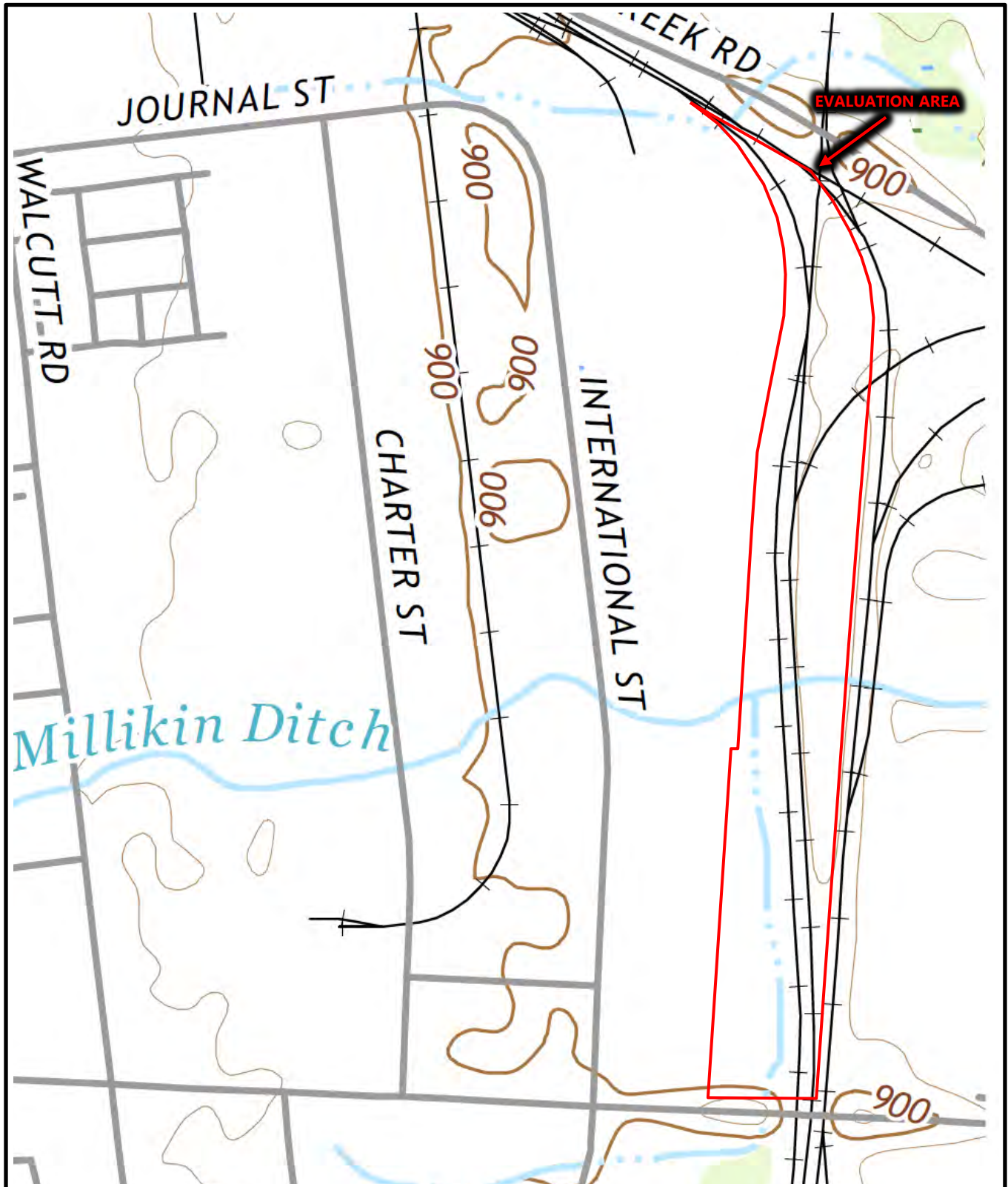
1980 USGS (HILLIARD) TOPOGRAPHIC MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



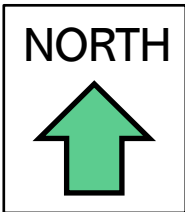
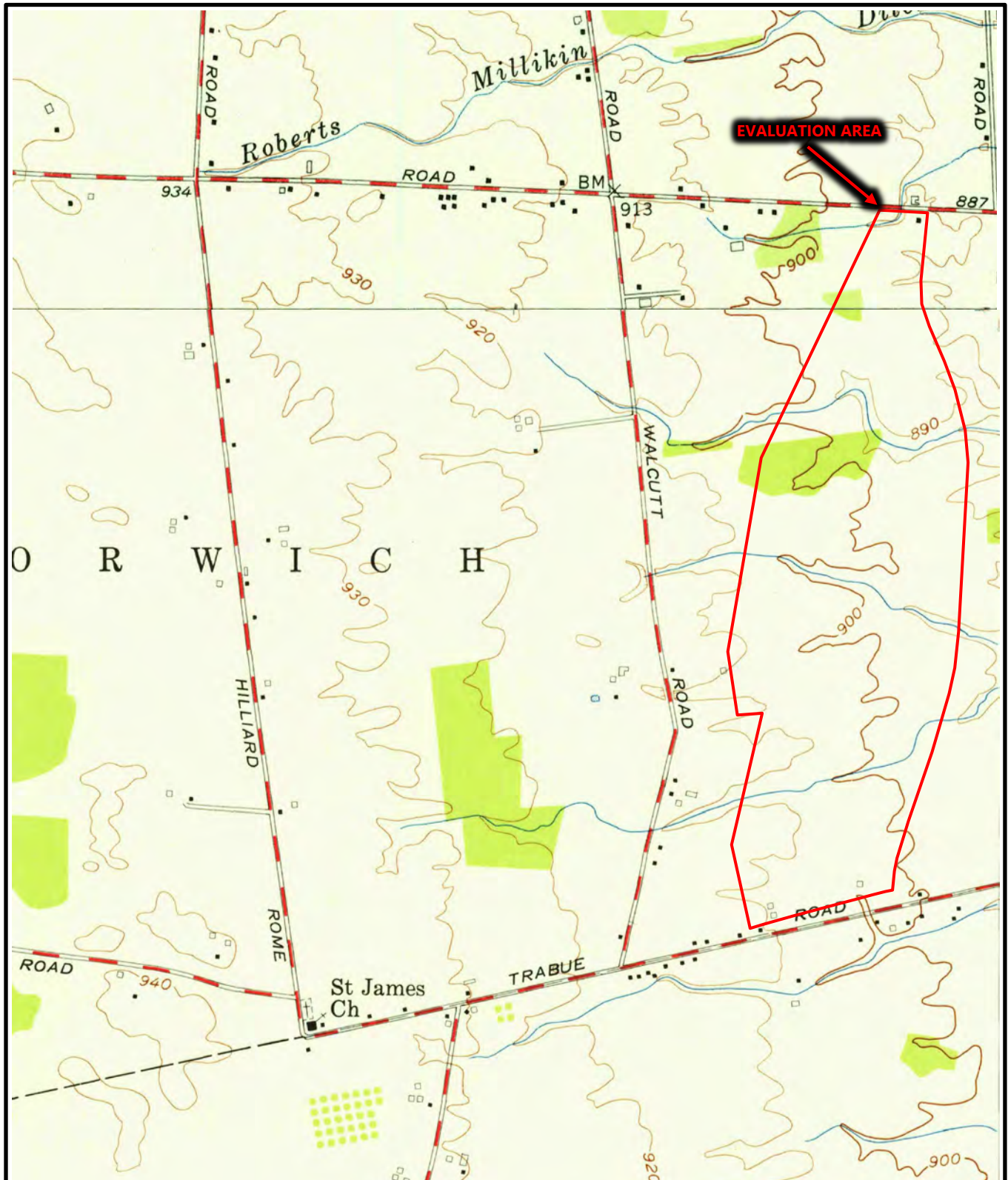
2019 USGS (HILLIARD) TOPOGRAPHIC MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



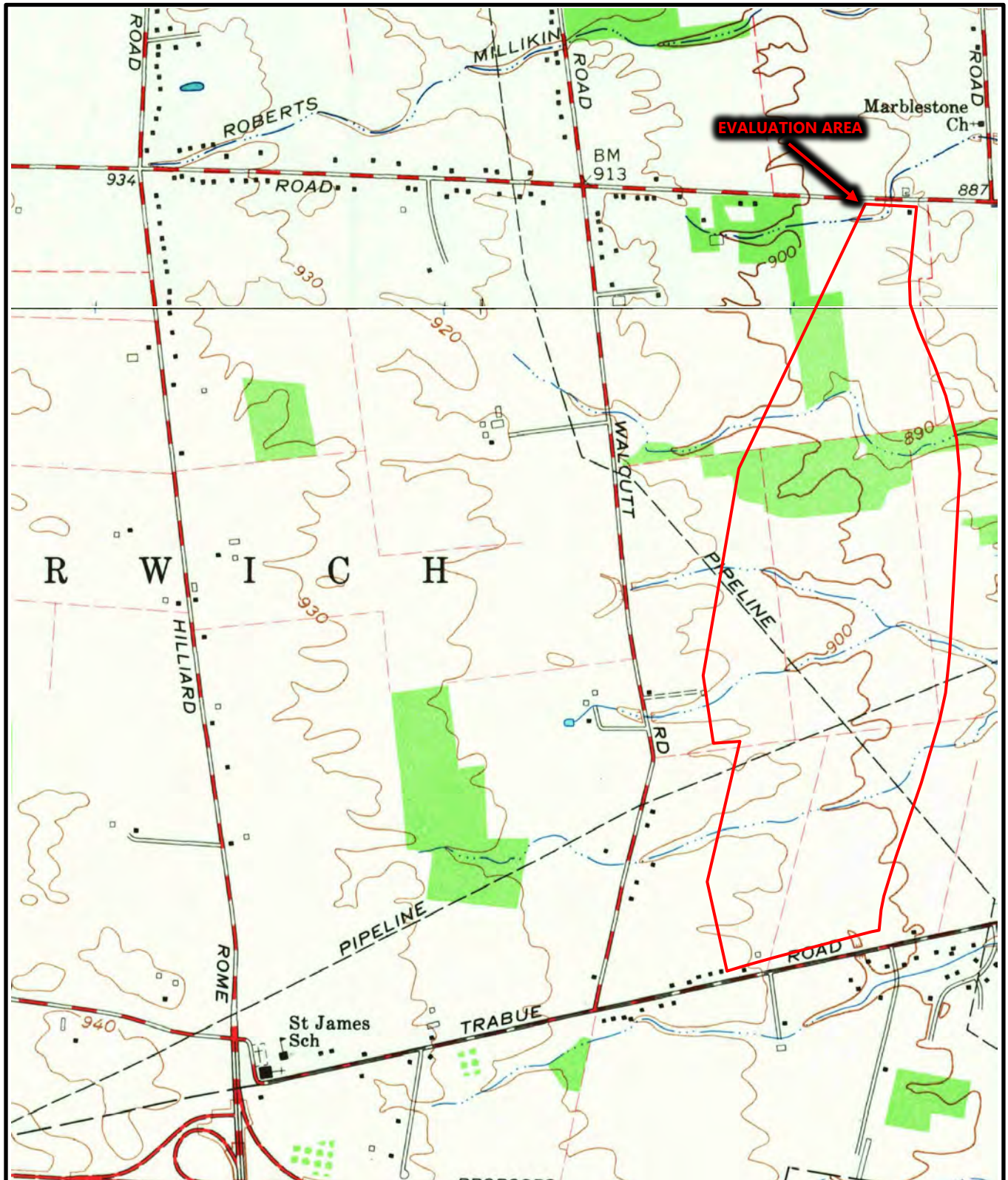
1954/1955 USGS (HILLIARD/GALLOWAY) TOPOGRAPHIC MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



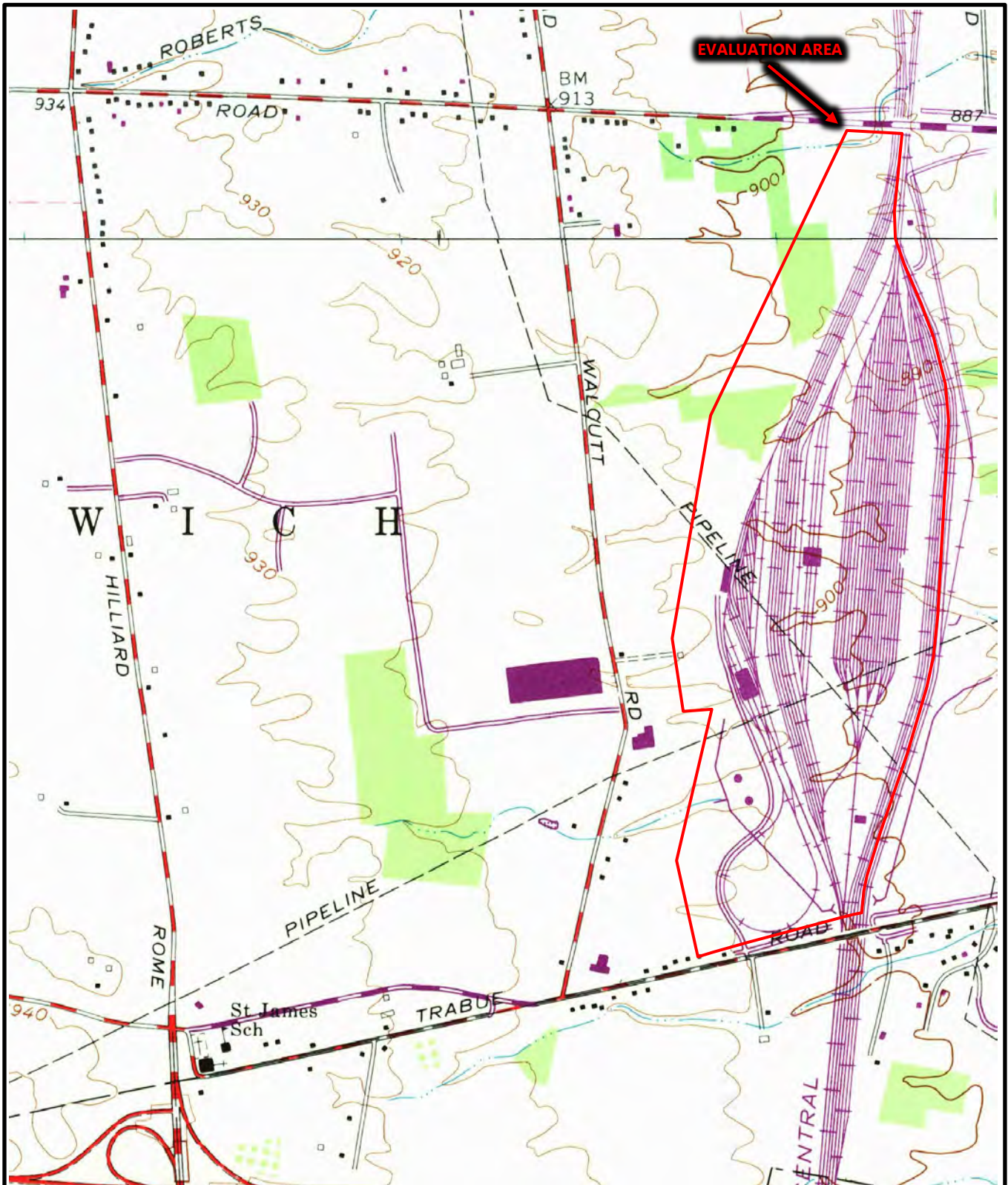
1966 USGS (HILLIARD/GALLOWAY) TOPOGRAPHIC MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



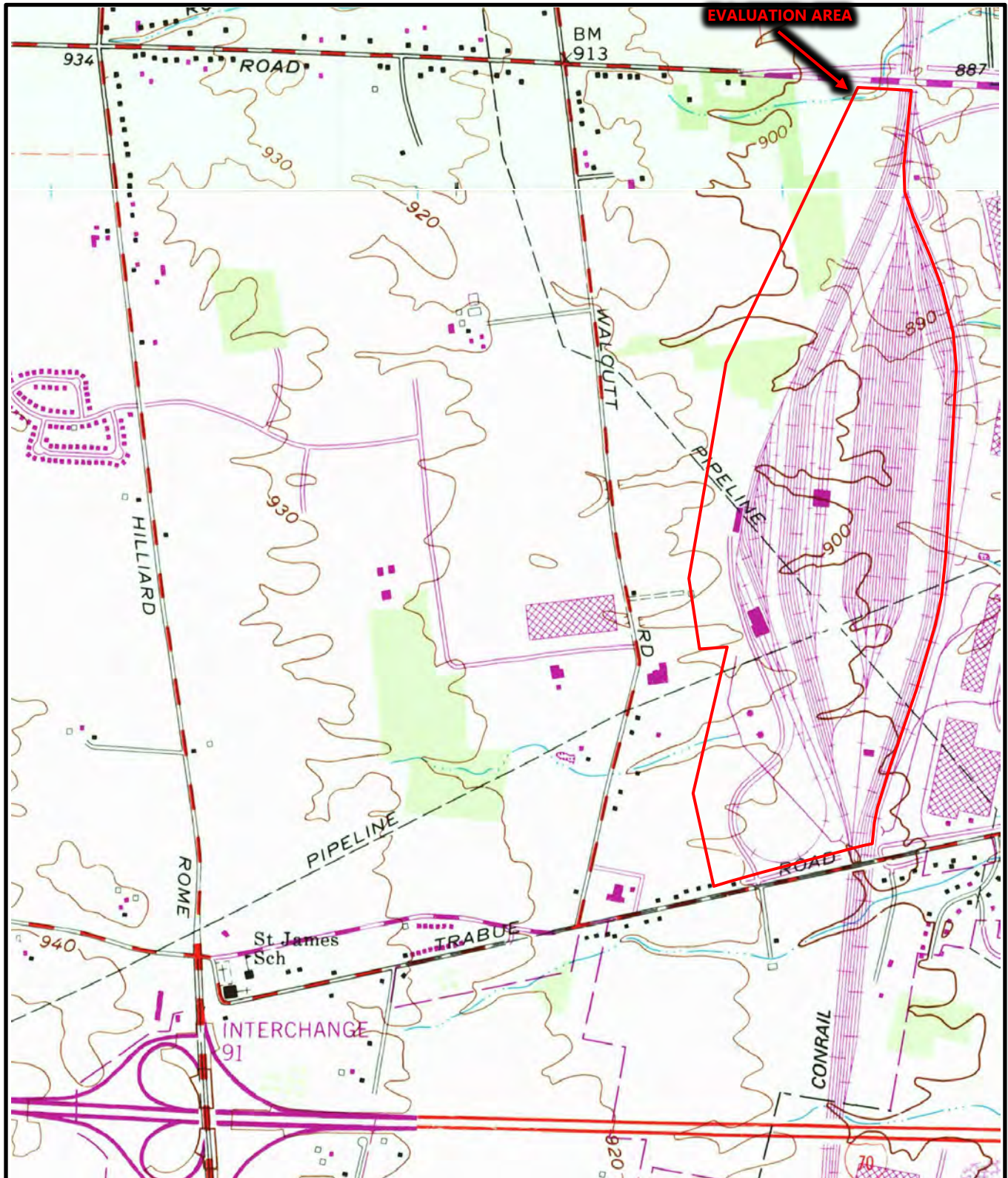
1973 USGS (HILLIARD/GALLOWAY) TOPOGRAPHIC MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



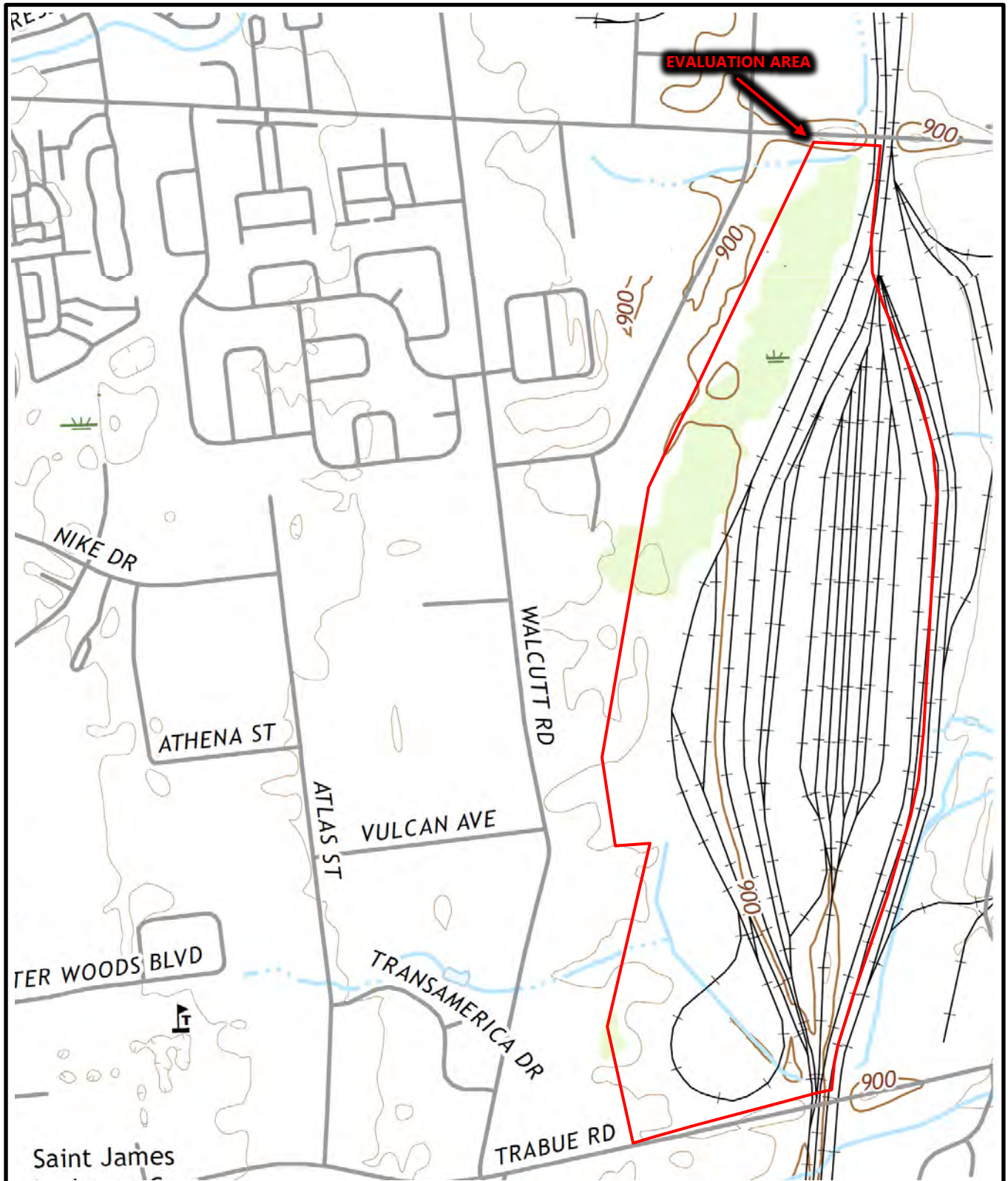
1980/1981 USGS (HILLIARD/GALLOWAY) TOPOGRAPHIC MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



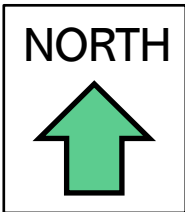
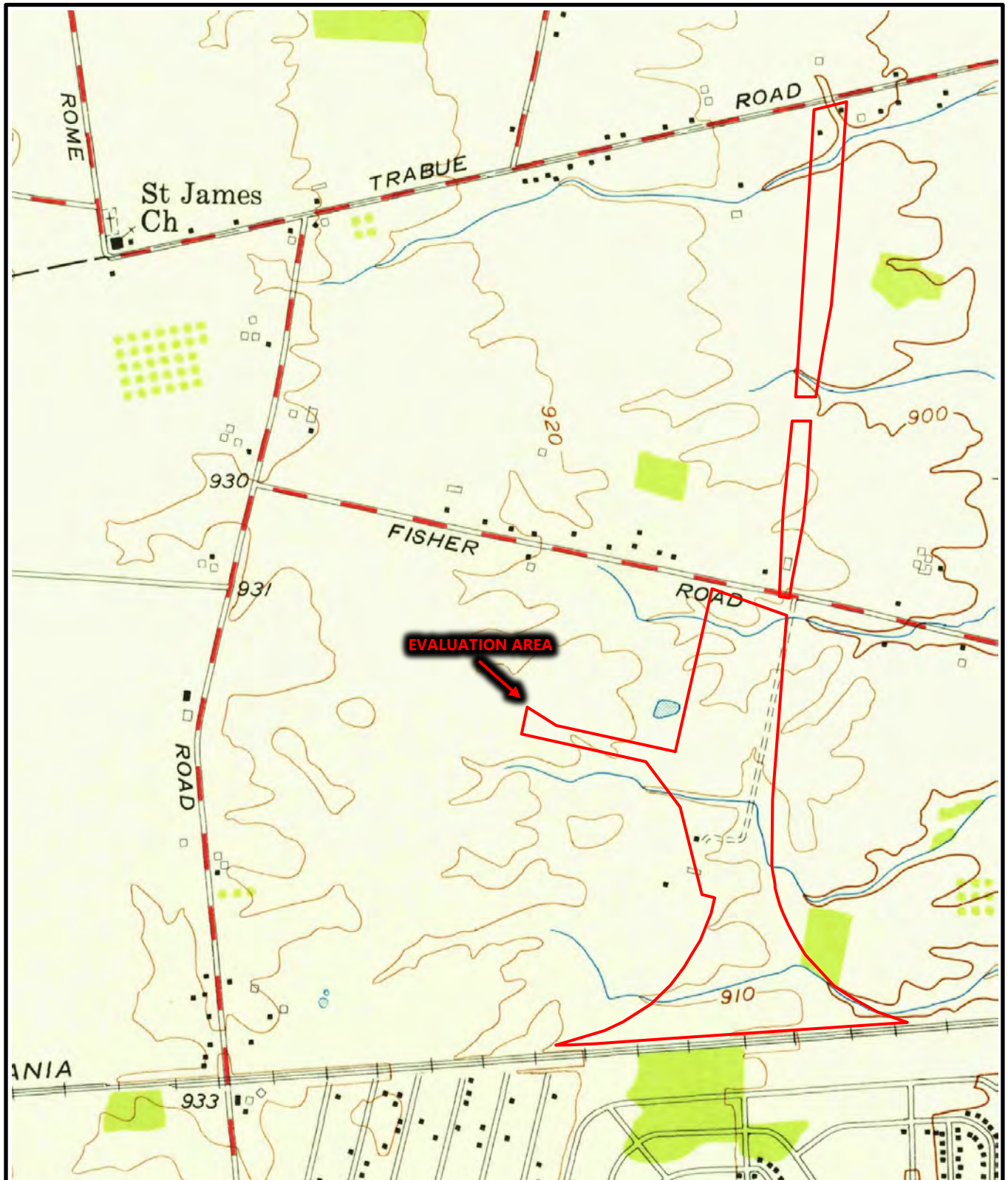
2019 USGS (HILLIARD/GALLOWAY) TOPOGRAPHIC MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



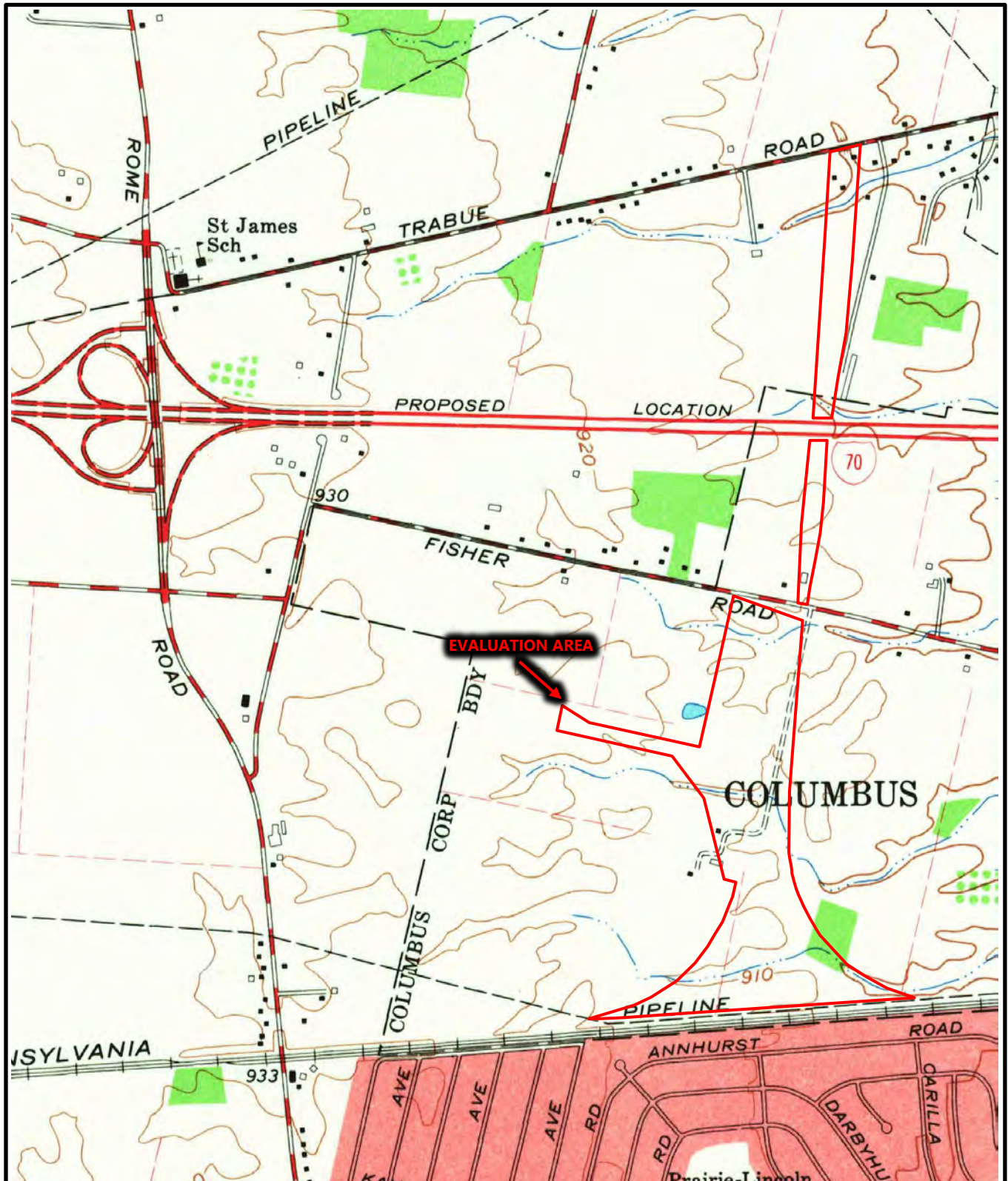
1955 USGS (GALLOWAY) TOPOGRAPHIC MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



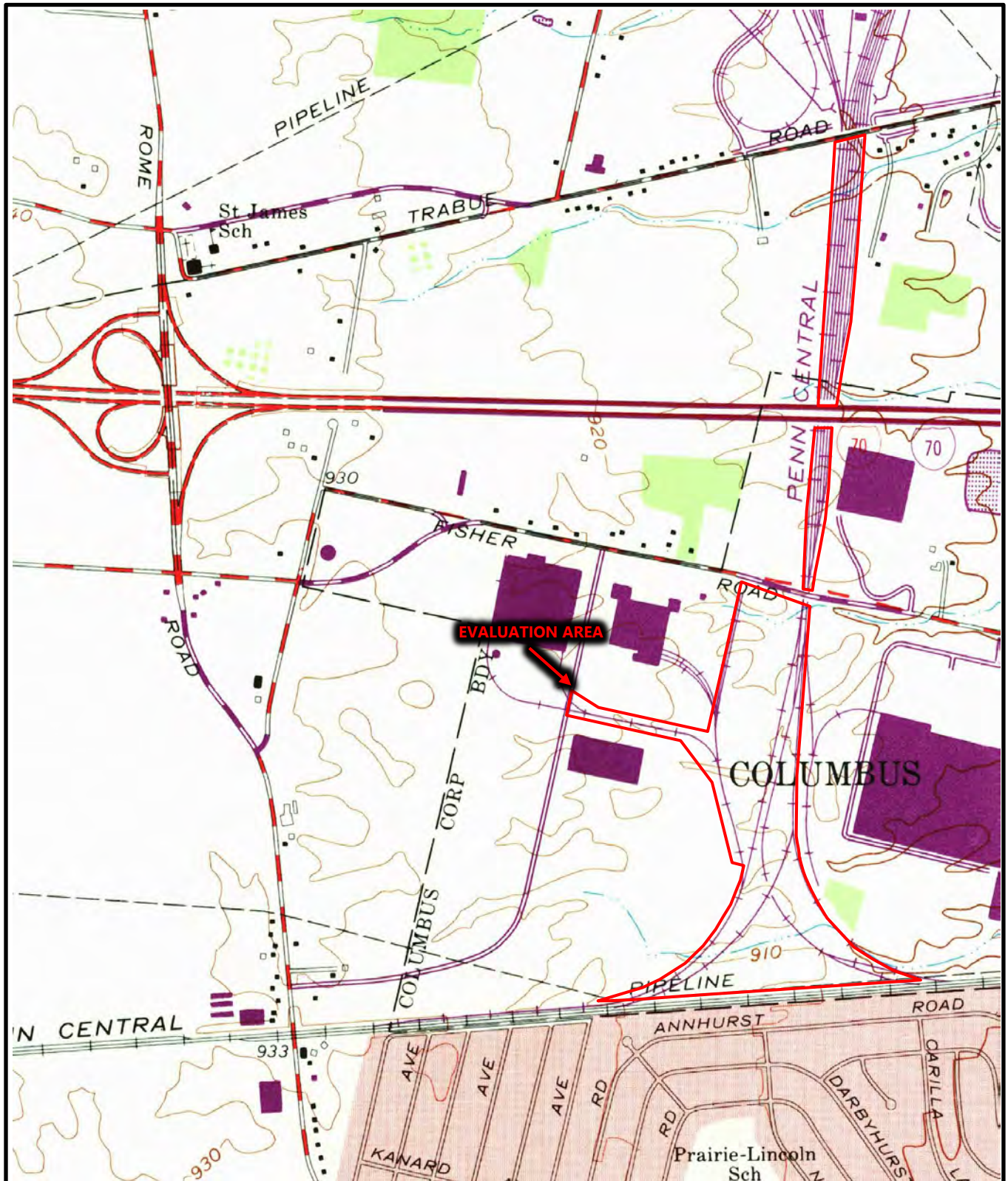
1966 USGS (GALLOWAY) TOPOGRAPHIC MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



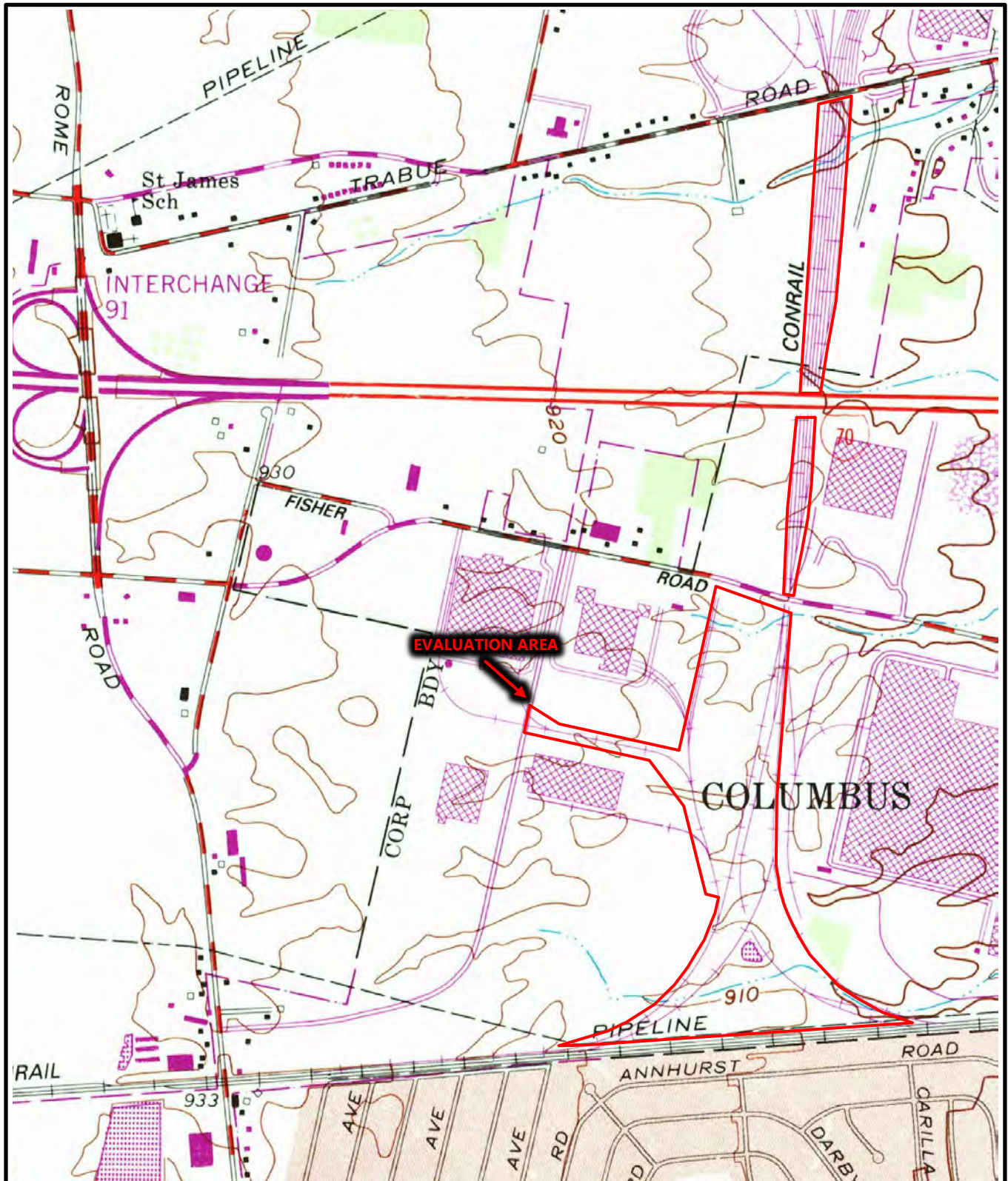
1973 USGS (GALLOWAY) TOPOGRAPHIC MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



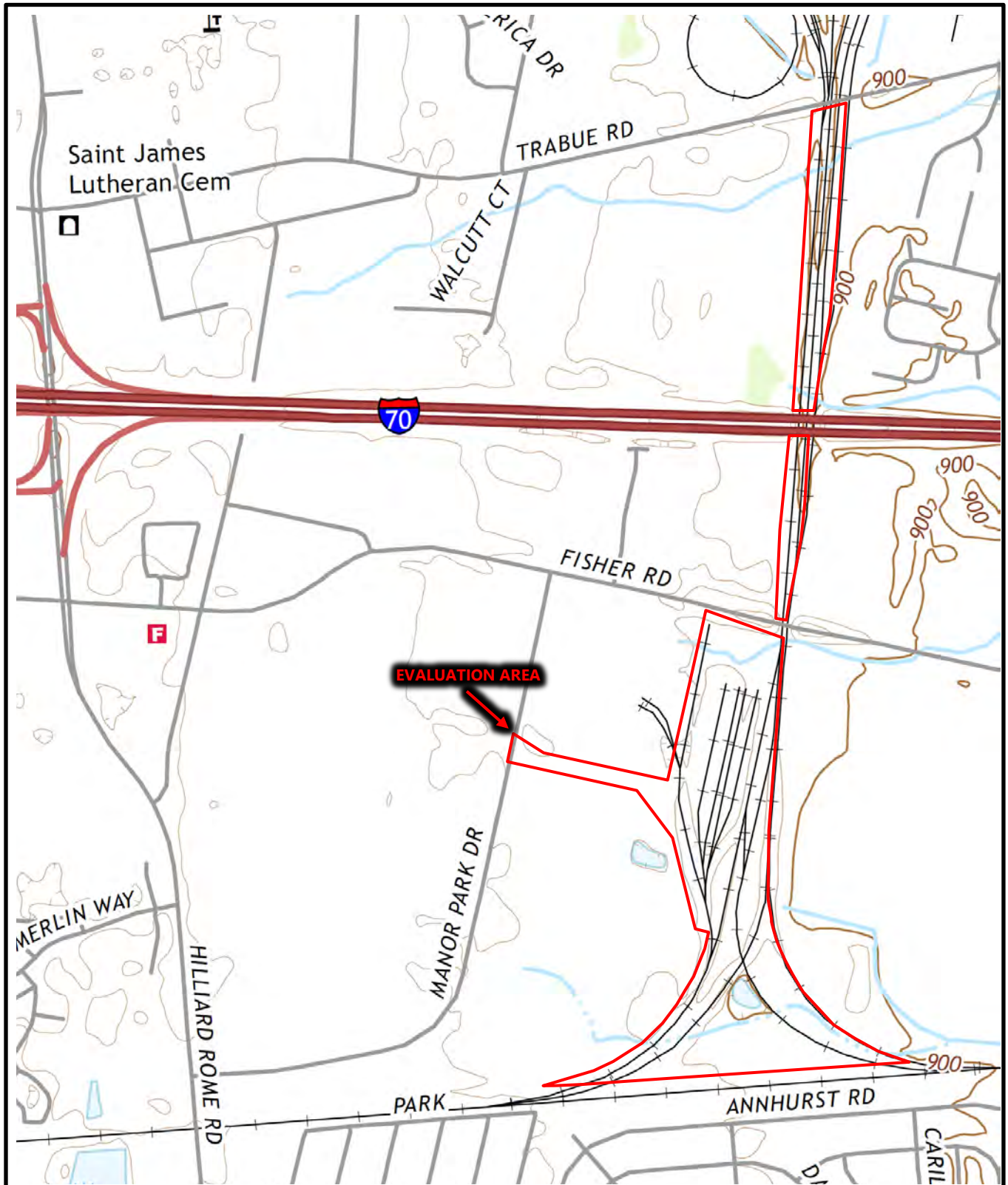
1981 USGS (GALLOWAY) TOPOGRAPHIC MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



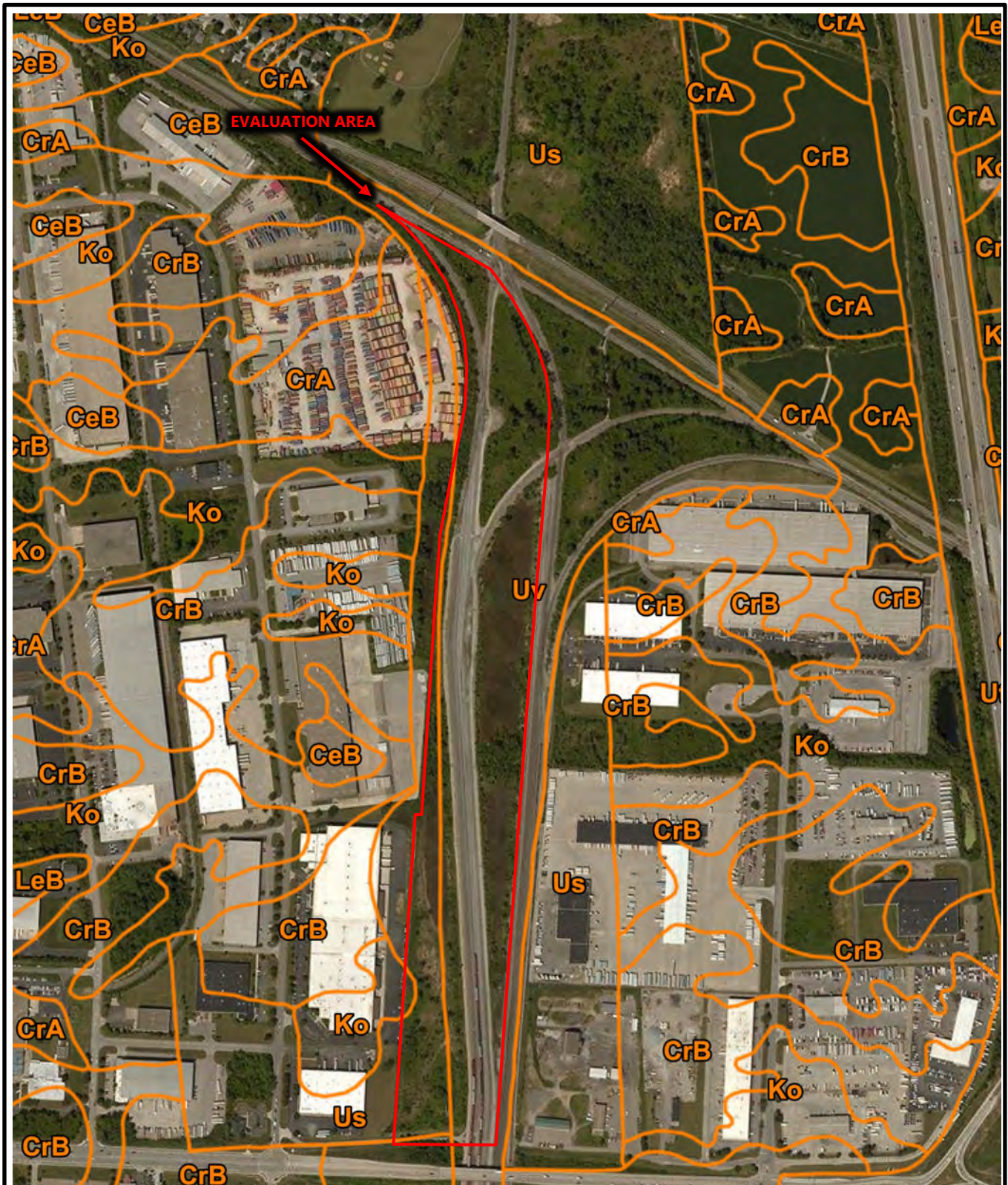
2019 USGS (GALLOWAY) TOPOGRAPHIC MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



USDA WEB SOIL SURVEY MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



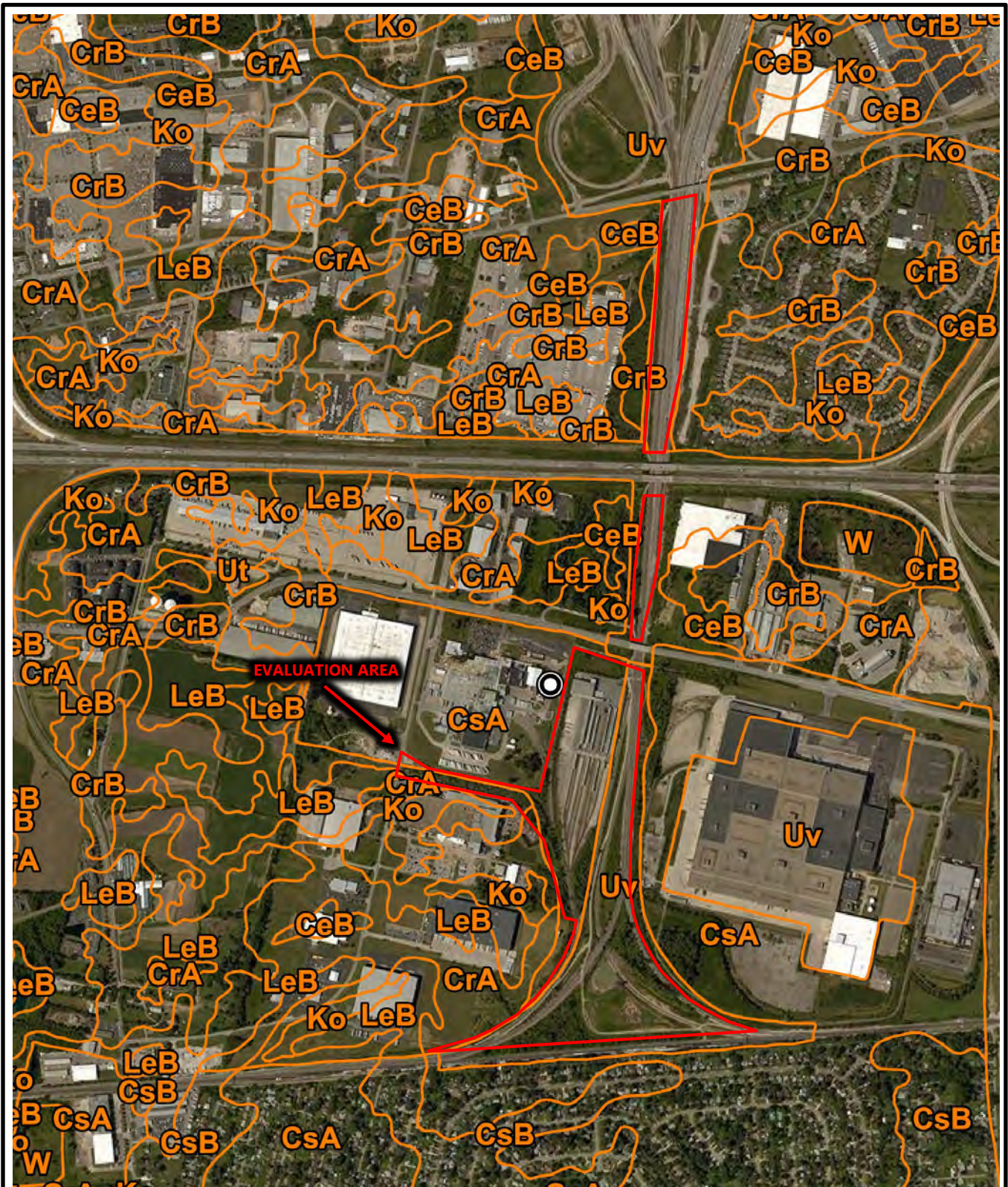
USDA WEB SOIL SURVEY MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



USDA WEB SOIL SURVEY MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007

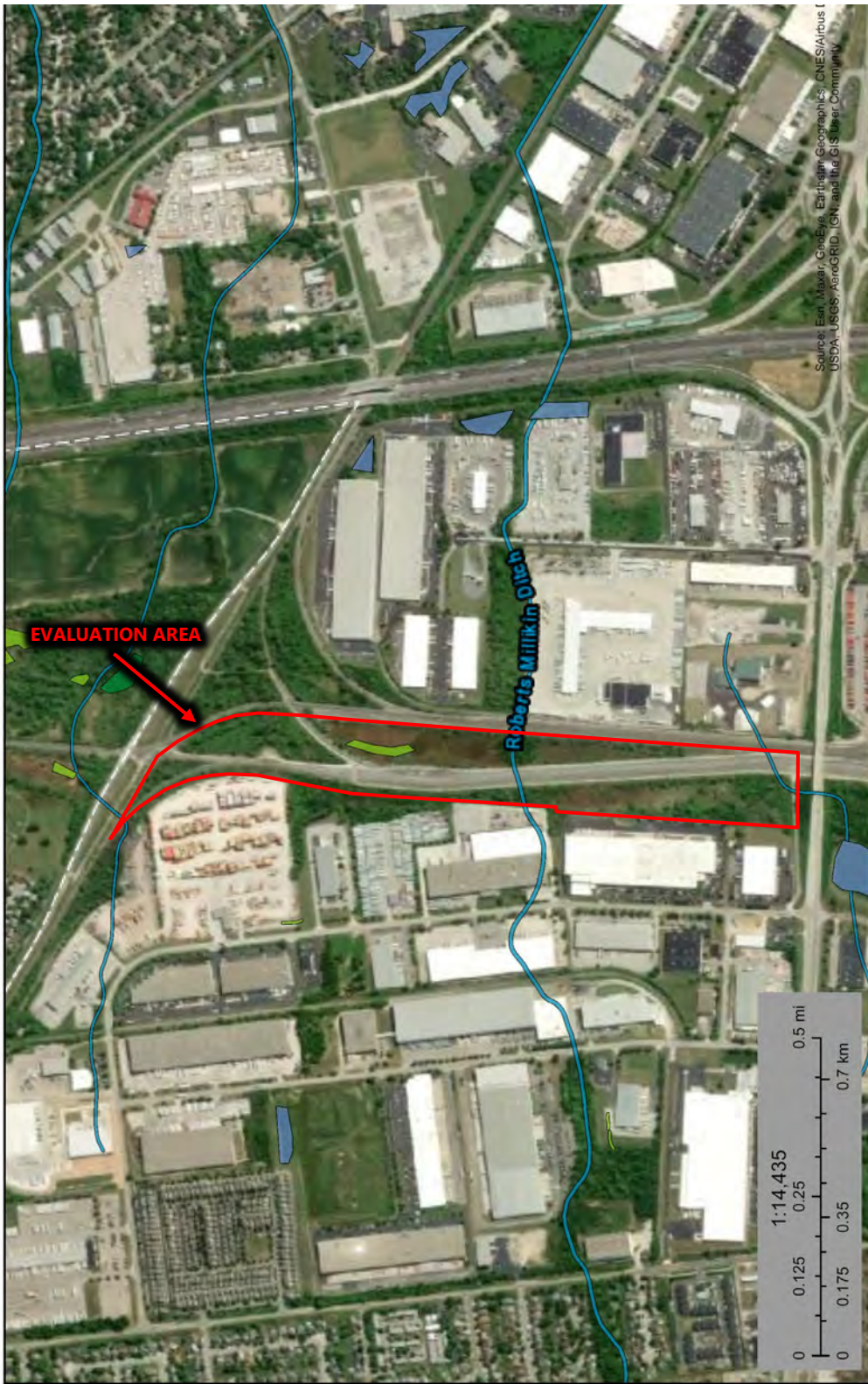


NATIONAL WETLANDS INVENTORY (NWI) MAP (NORTH SECTION)





Wetlands

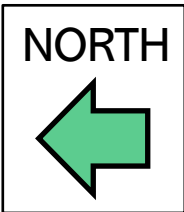


U.S. Fish and Wildlife Service
National Wetlands Inventory



This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or current base data shown on this map. All wetlands related data be used in accordance with the layer metadata found on Wetlands Mapper web site.

- November 20, 2020
- Wetlands**
-  Estuarine and Marine Deepwater
 -  Estuarine and Marine Wetland
 -  Freshwater Emergent Wetland
 -  Freshwater Forested/Shrub Wetland
 -  Freshwater Pond
 -  Lake
 -  Other
 -  Riverine



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



NATIONAL WETLANDS INVENTORY (NWI) MAP (CENTRAL SECTION)

Wetlands












U.S. Fish and Wildlife Service
National Wetlands Inventory

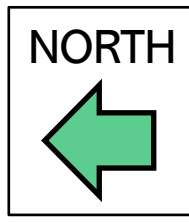


This map is for general reference only. The US Fish & Wildlife Service is not responsible for the accuracy or current base data shown on this map. All wetlands related data be used in accordance with the layer metadata found Wetlands Mapper web site.

November 20, 2020

Wetlands

	Estuarine and Marine Deepwater		Freshwater Emergent Wetland		Lake
	Estuarine and Marine Wetland		Freshwater Forested/Shrub Wetland		Other
	Freshwater Pond		Riverine		Riverine



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007

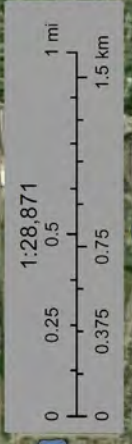


NATIONAL WETLANDS INVENTORY (NWI) MAP (SOUTH SECTION)



U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands



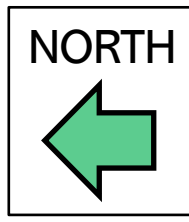
November 20, 2020

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or current base data shown on this map. All wetlands related data be used in accordance with the layer metadata found in the Wetlands Mapper web site.

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus, USDA, USGS, AeroGRID, IGN, and the GIS User Community

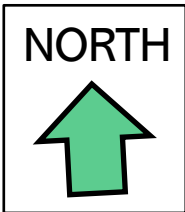
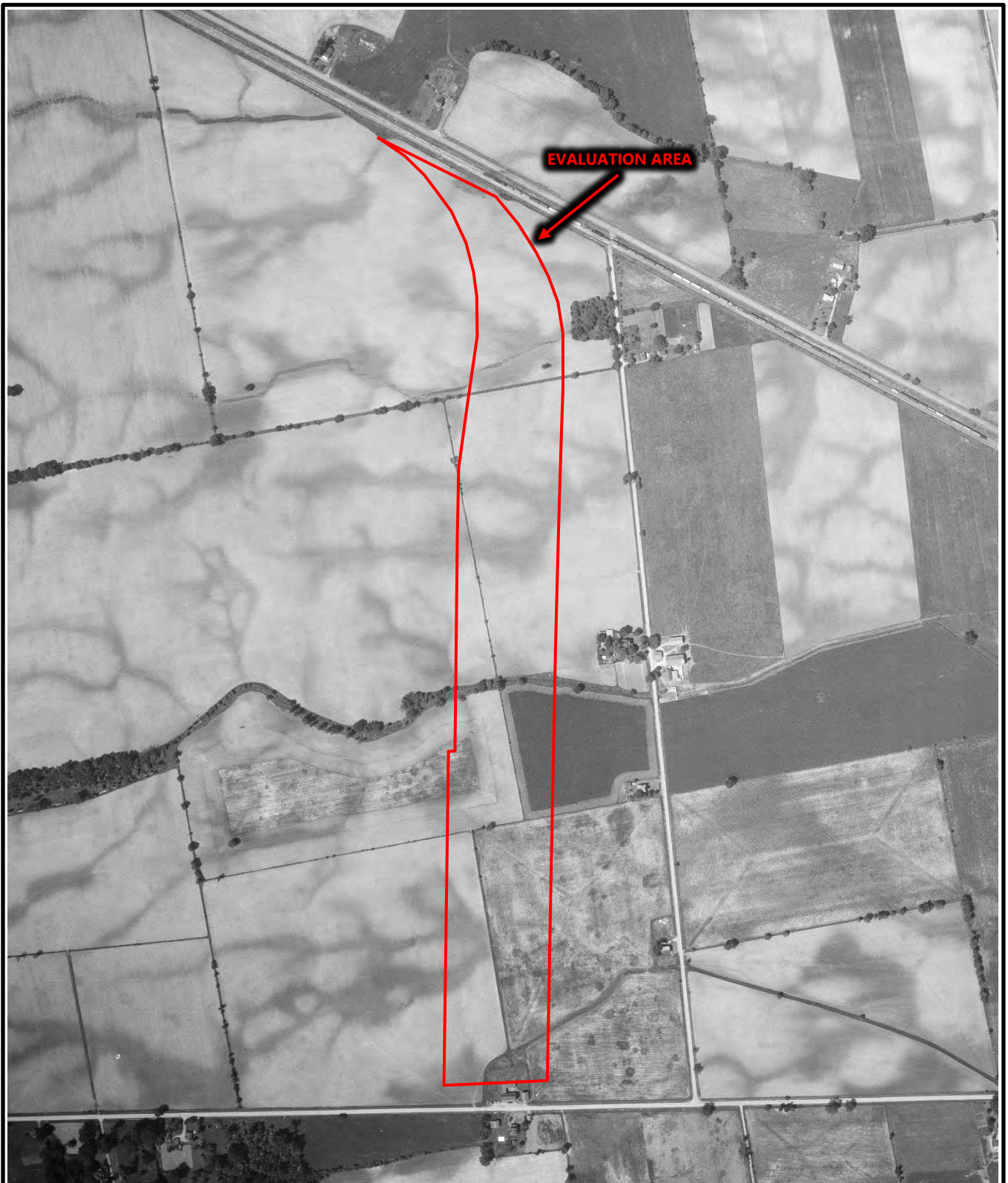


BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



APPENDIX 2

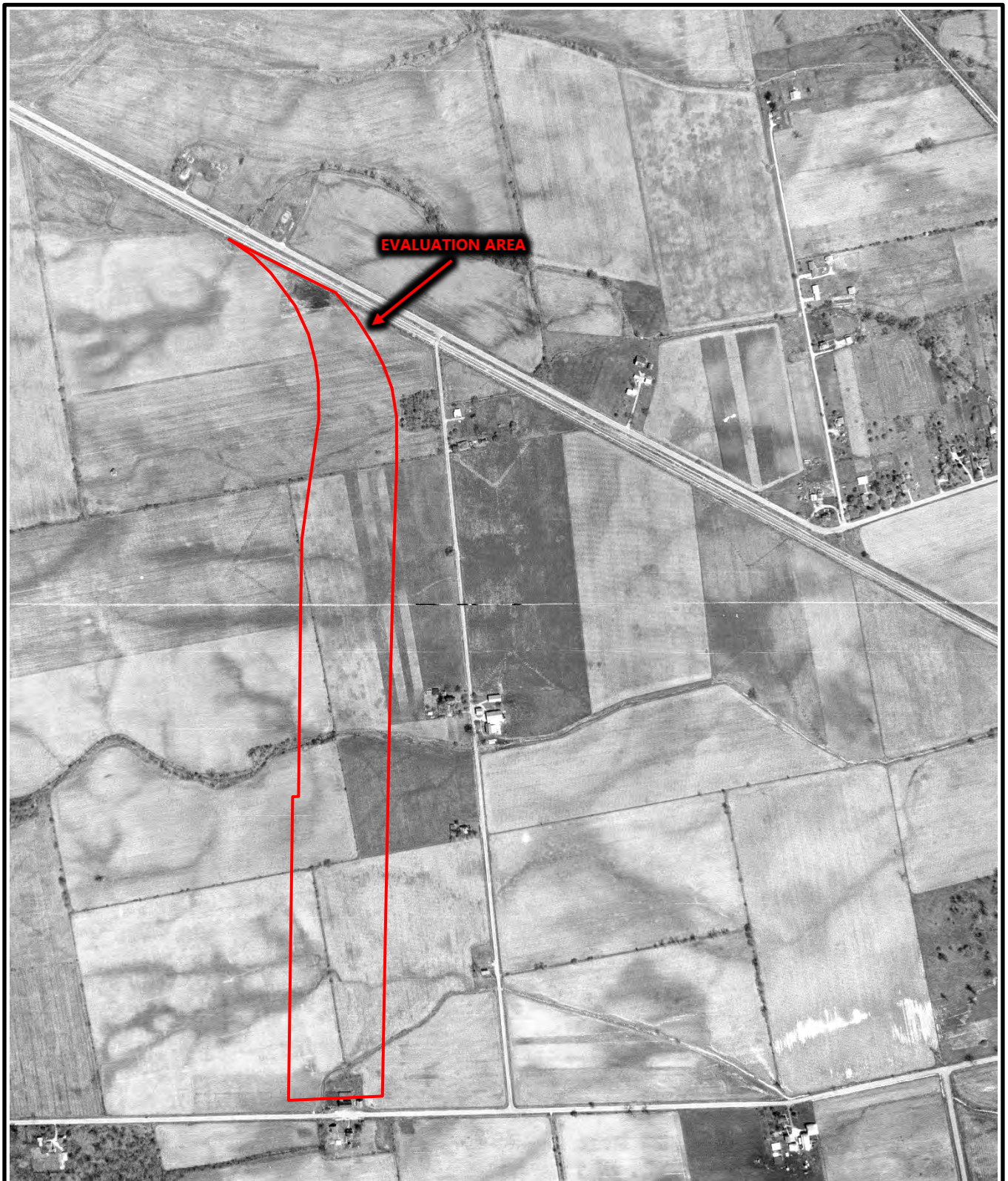
1956 AERIAL PHOTOGRAPH (NORTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



1964 AERIAL PHOTOGRAPH (NORTH SECTION)



NORTH

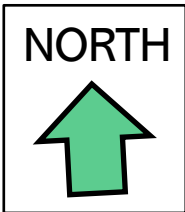
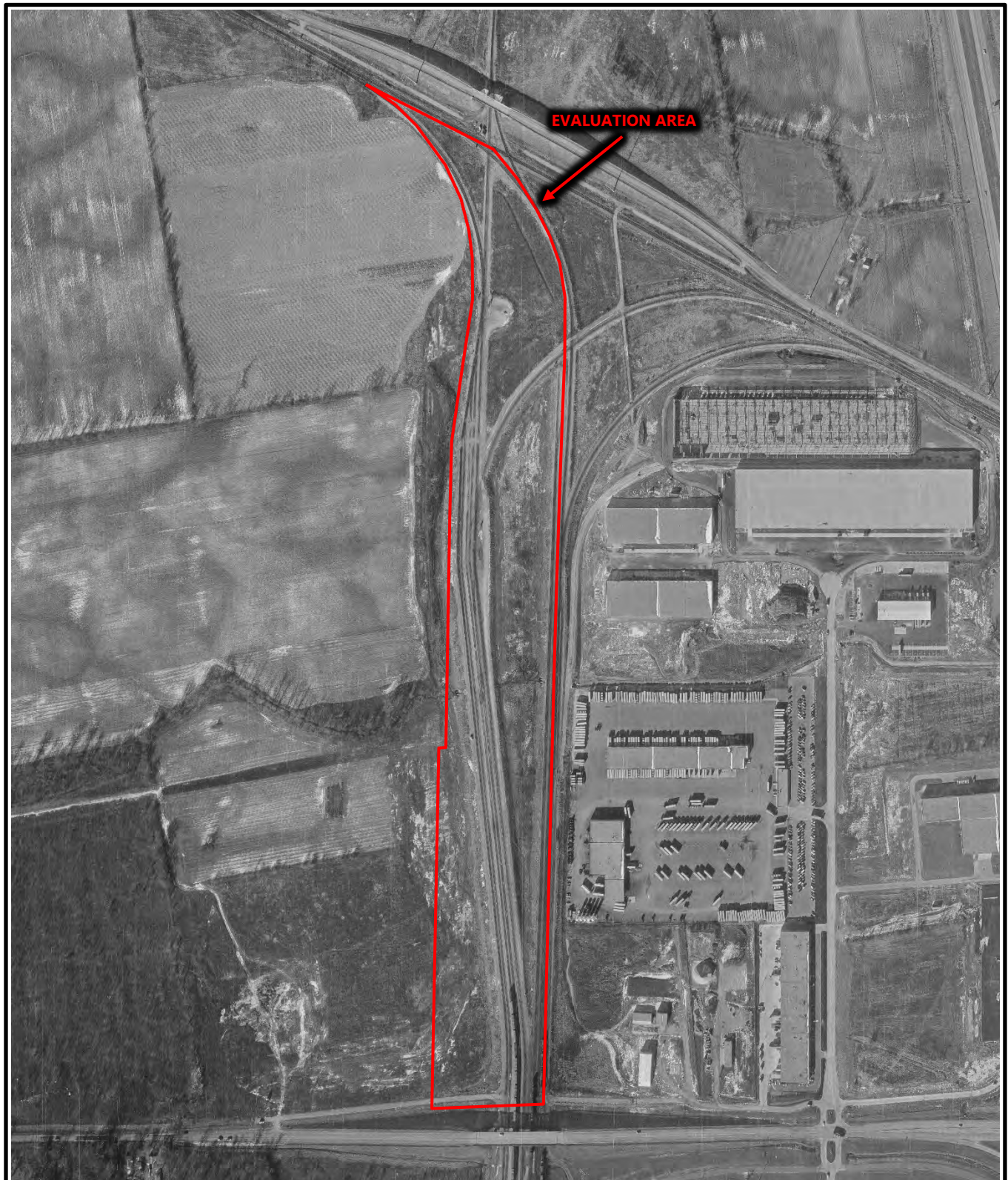


BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



CENTRAL OHIO WETLAND CONSULTING, LLC

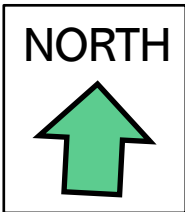
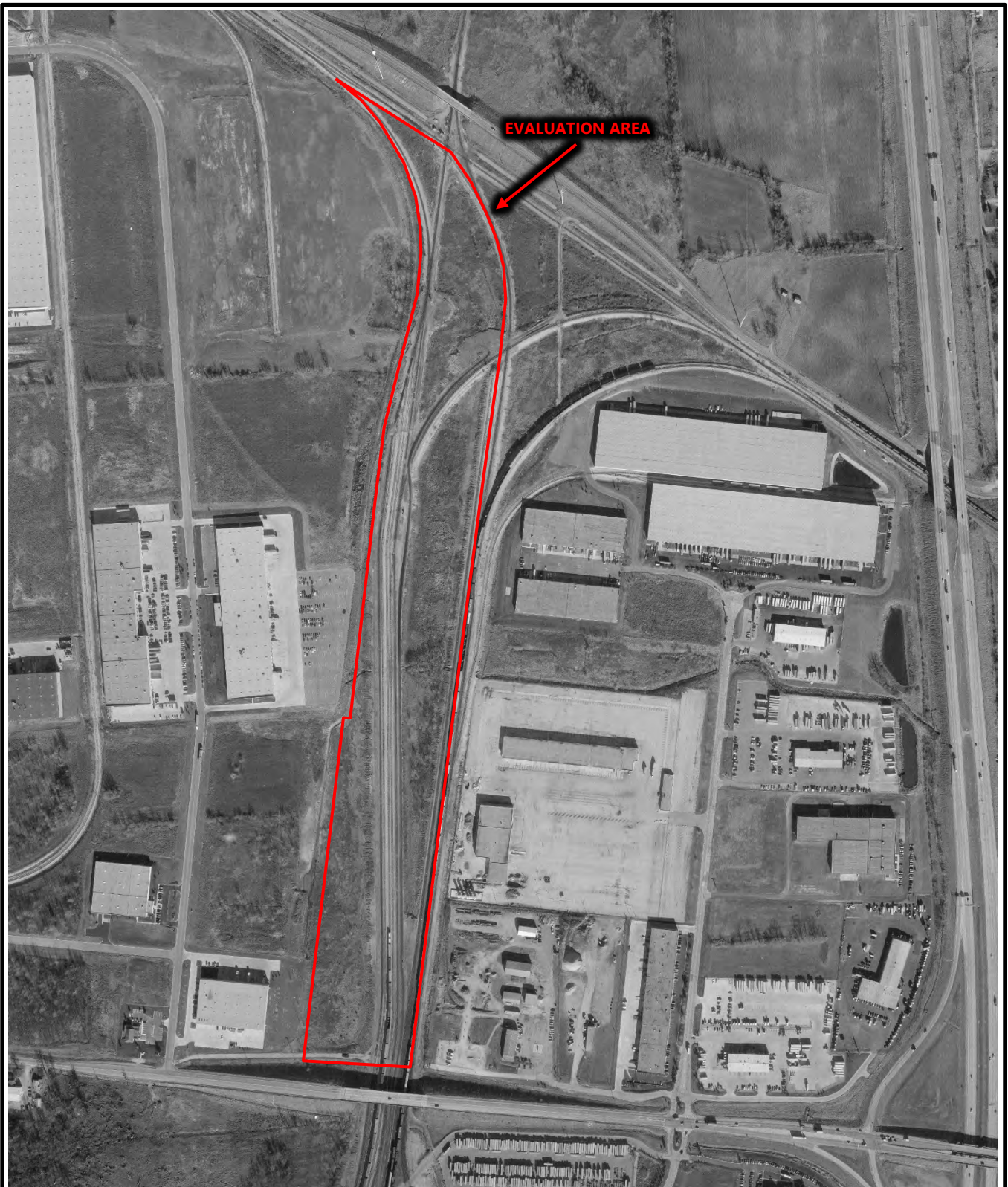
1979 AERIAL PHOTOGRAPH (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



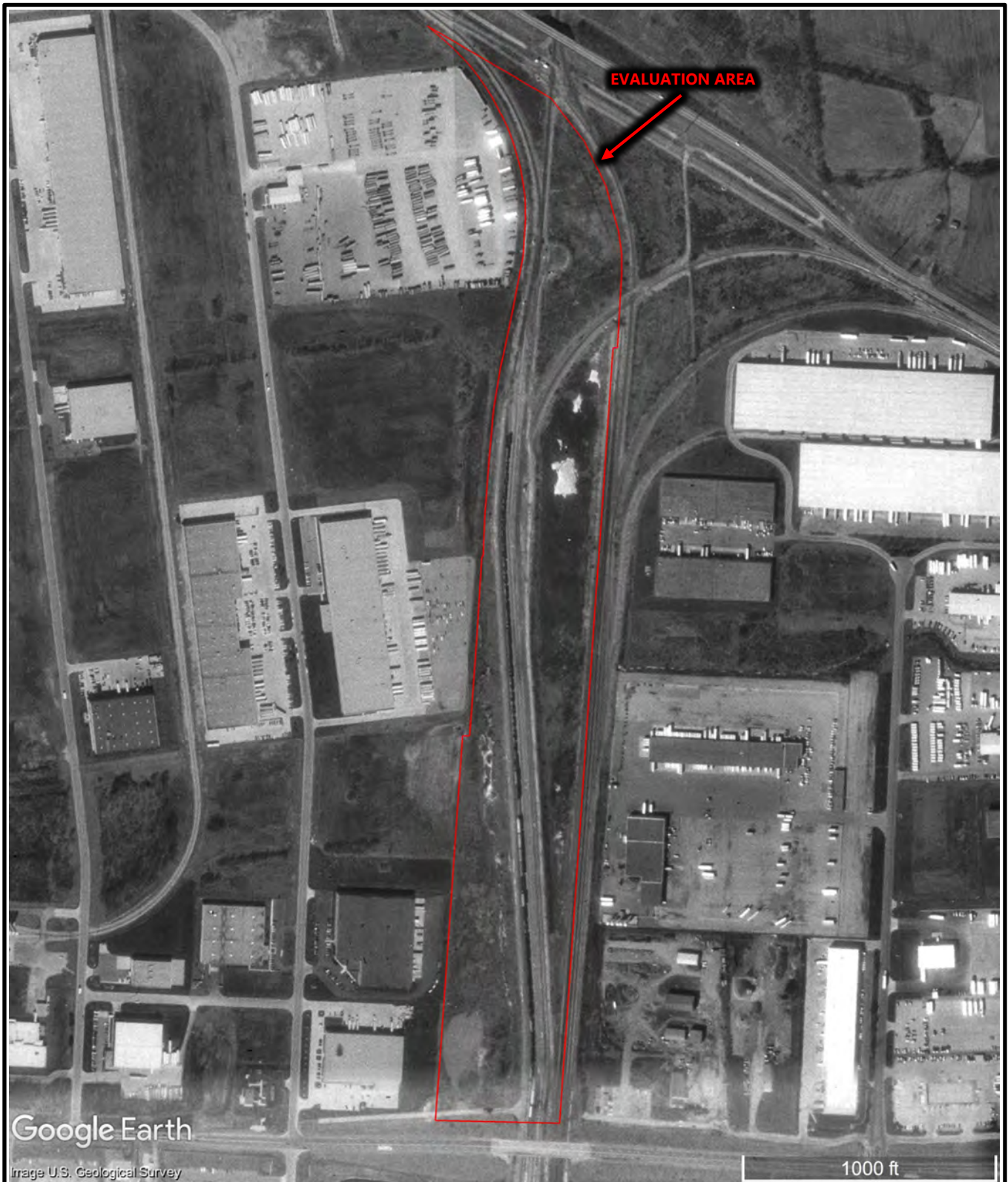
1989 AERIAL PHOTOGRAPH (NORTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



1994 AERIAL PHOTOGRAPH (NORTH SECTION)

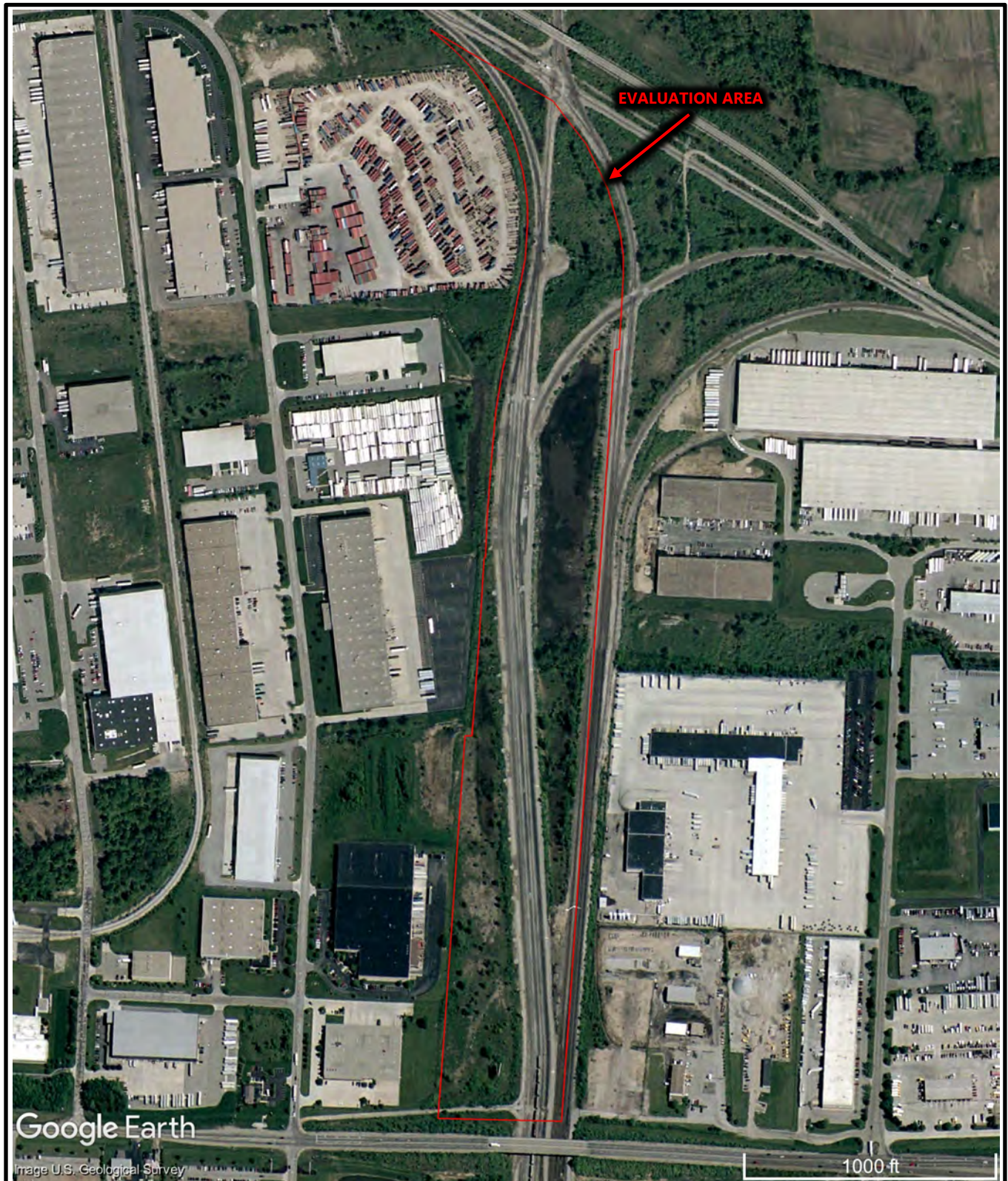


*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



CENTRAL OHIO WETLAND CONSULTING, LLC

2002 AERIAL PHOTOGRAPH (NORTH SECTION)

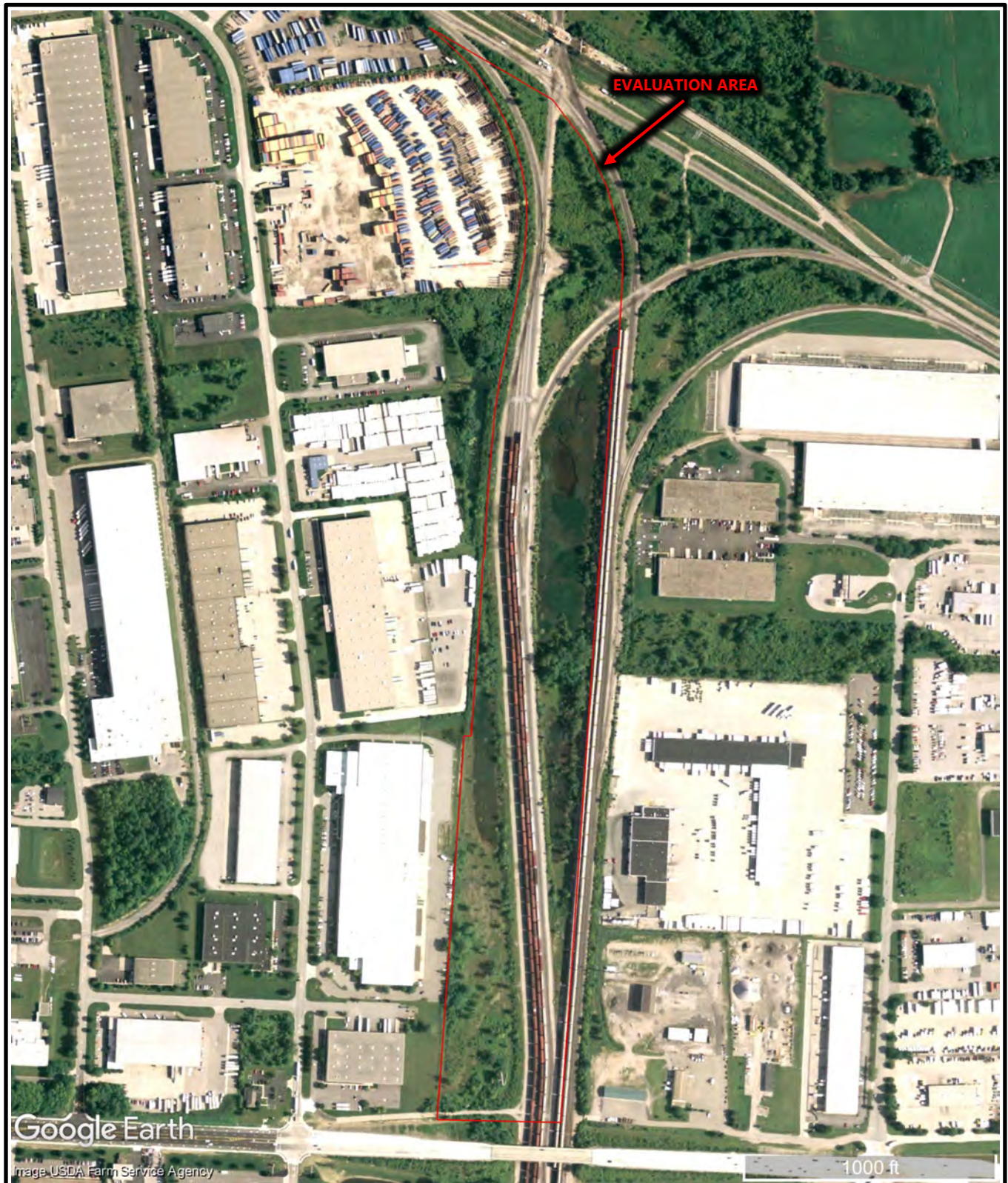


BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



CENTRAL OHIO WETLAND CONSULTING, LLC

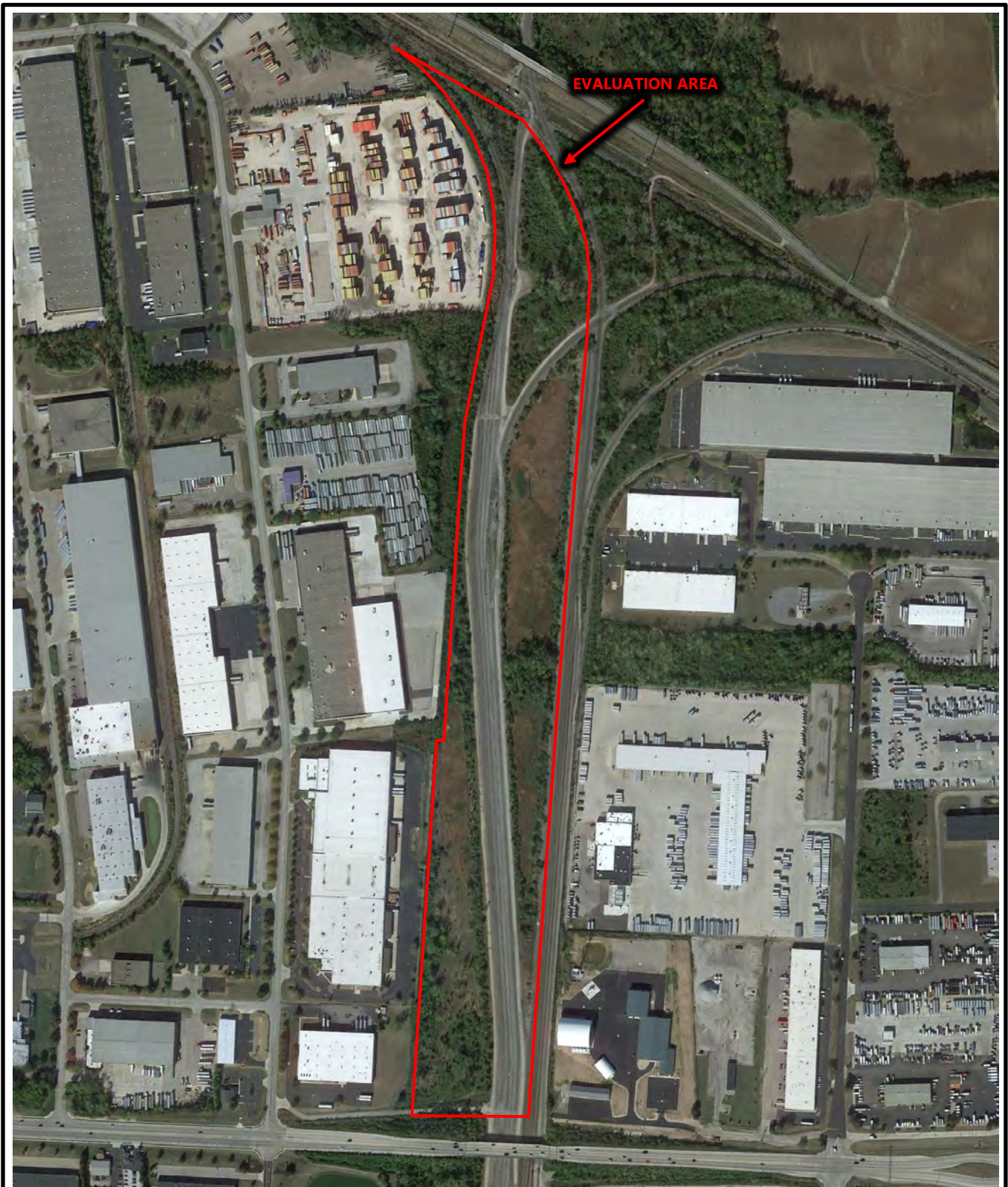
2009 AERIAL PHOTOGRAPH (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



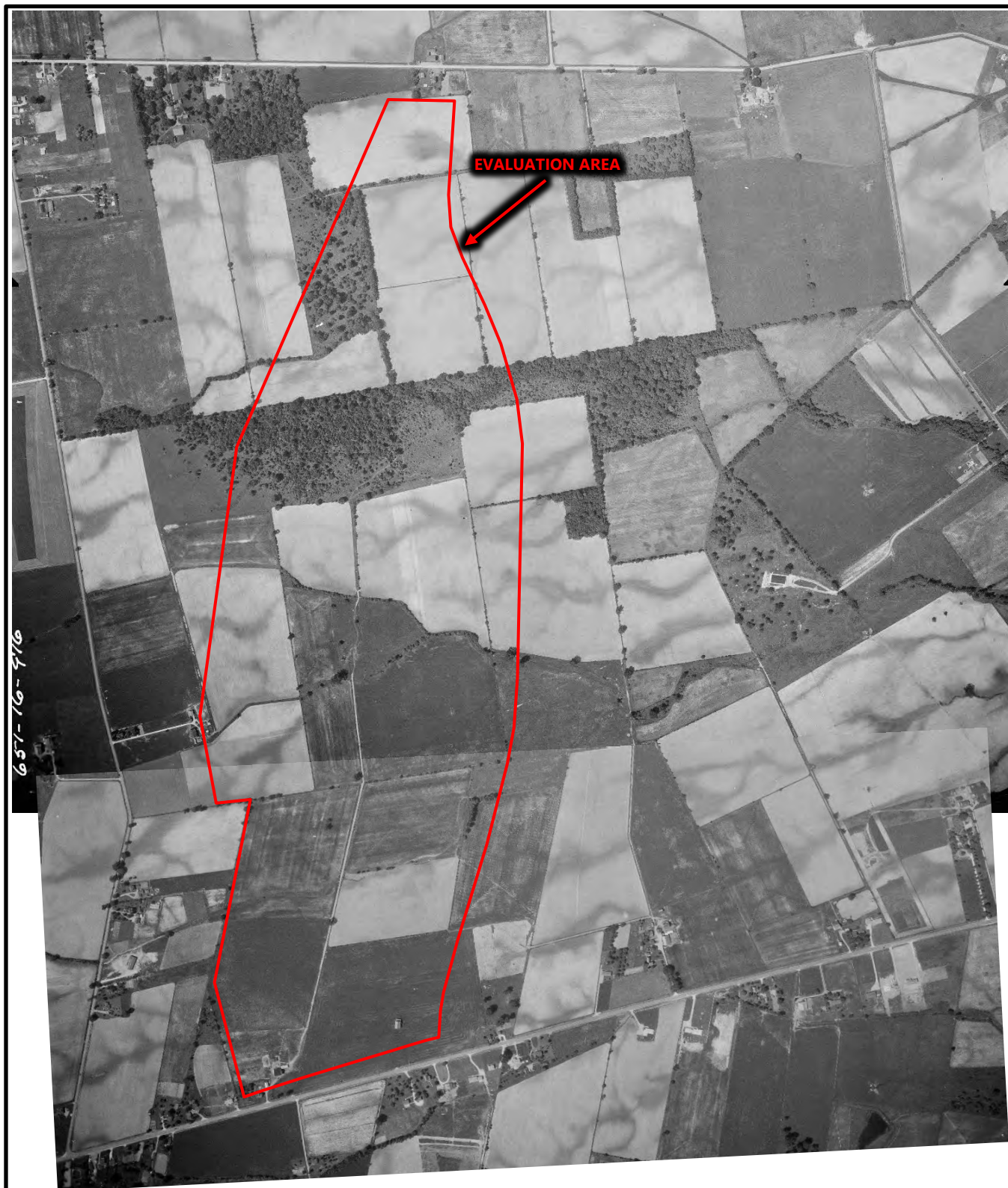
2019 AERIAL PHOTOGRAPH (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



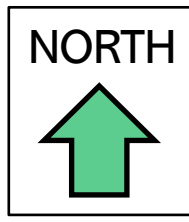
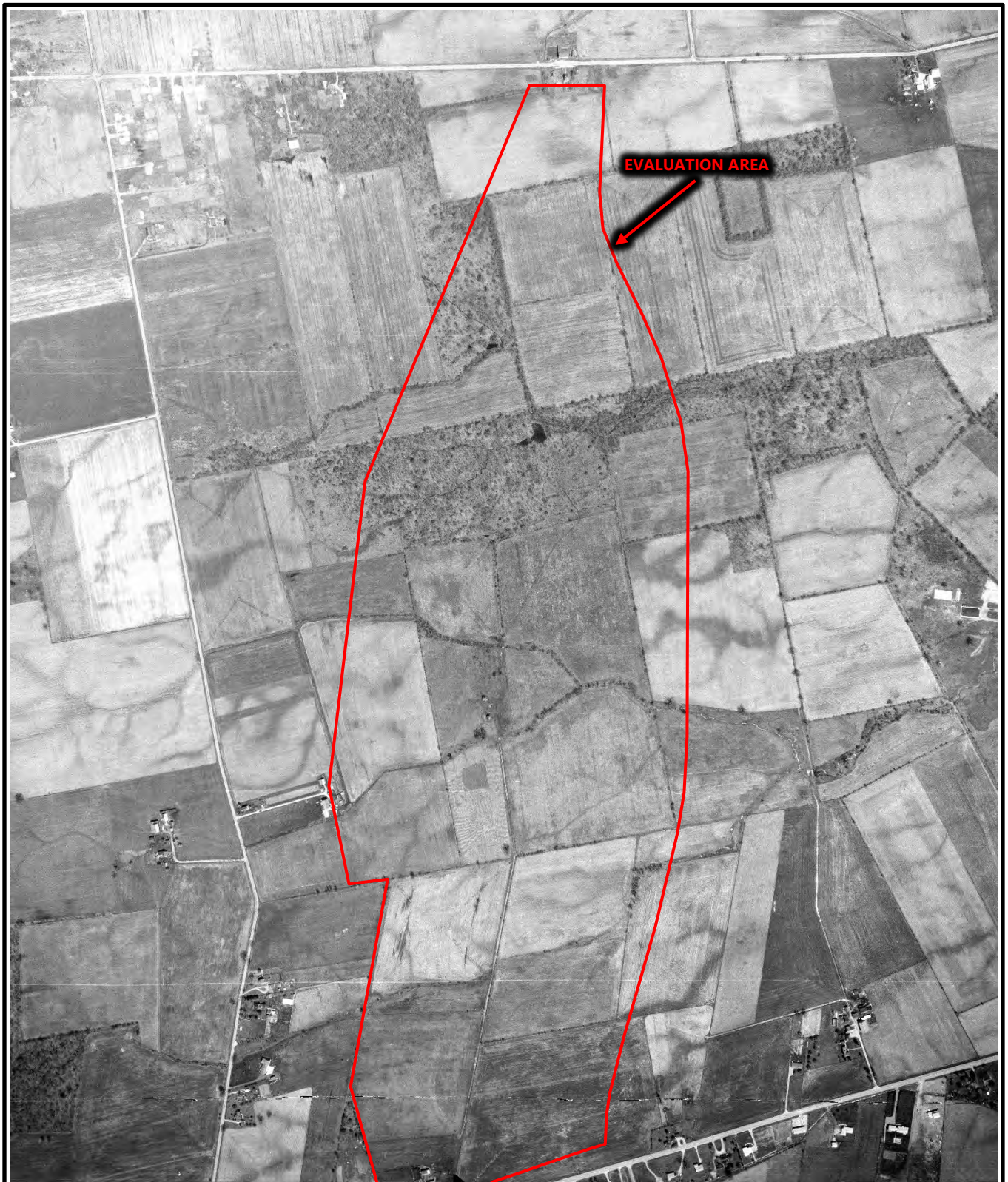
1956 AERIAL PHOTOGRAPH (CENTRAL SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
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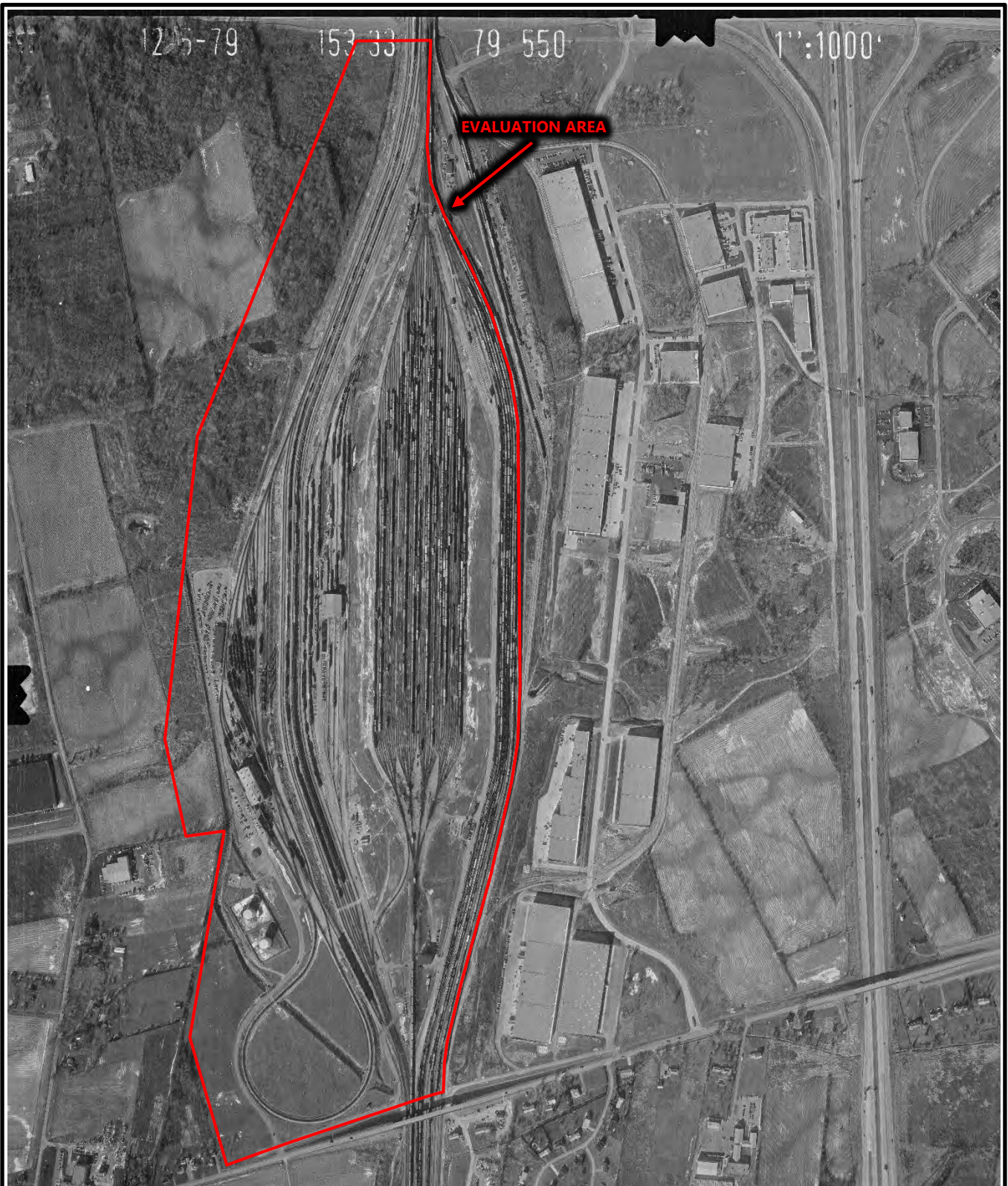
1964 AERIAL PHOTOGRAPH (CENTRAL SECTION)



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COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



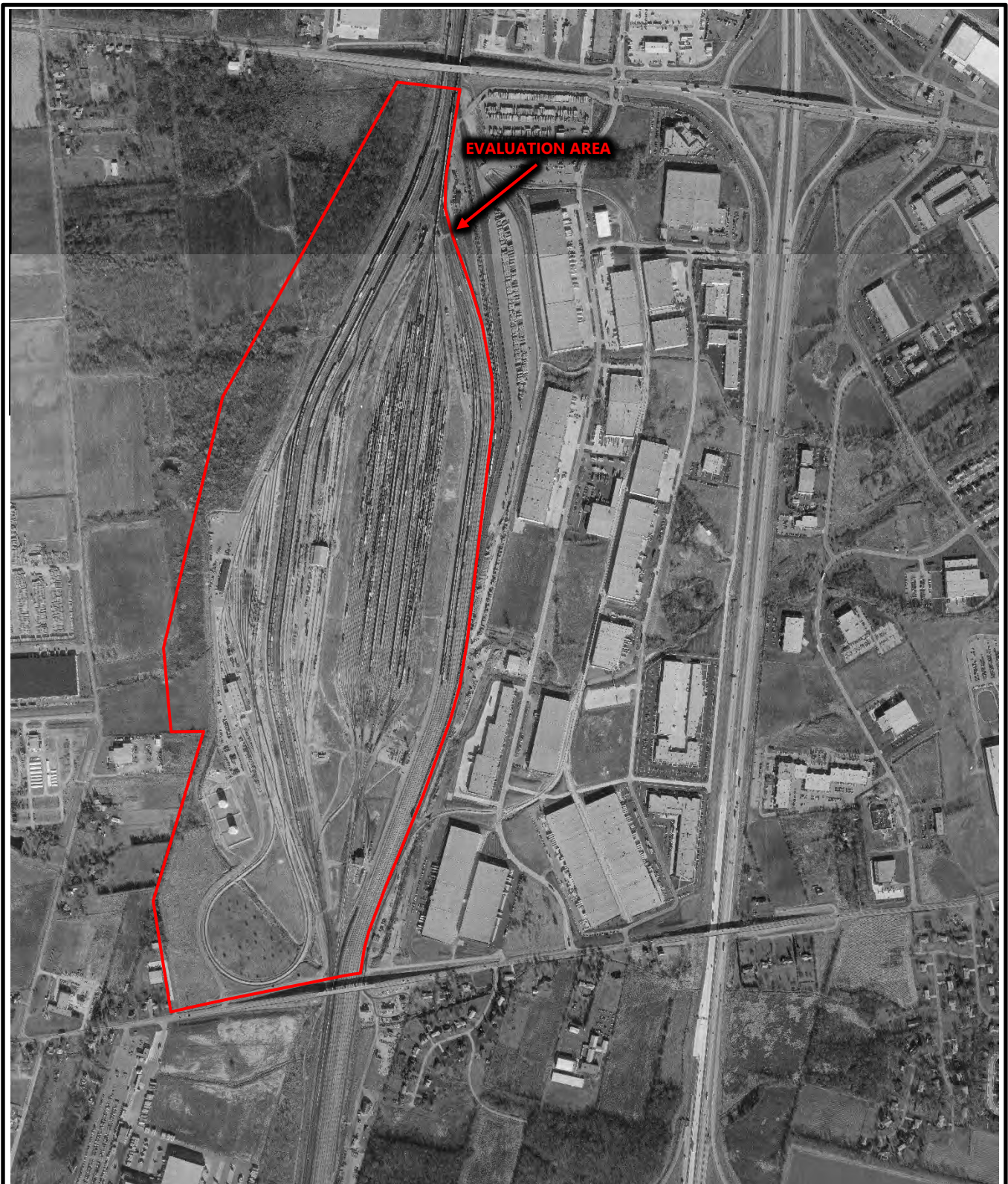
1979 AERIAL PHOTOGRAPH (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



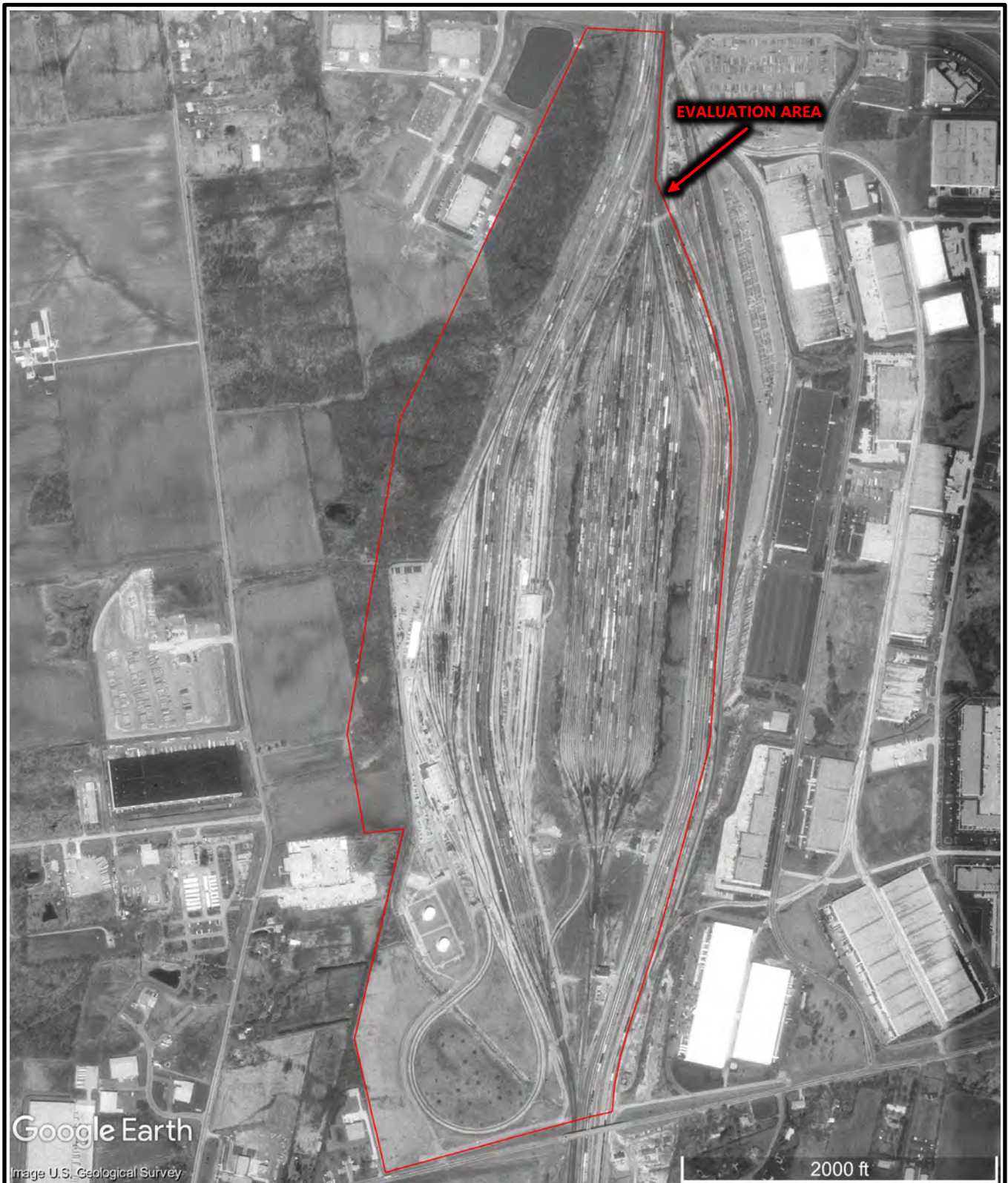
1989 AERIAL PHOTOGRAPH (CENTRAL SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



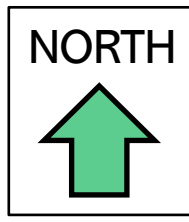
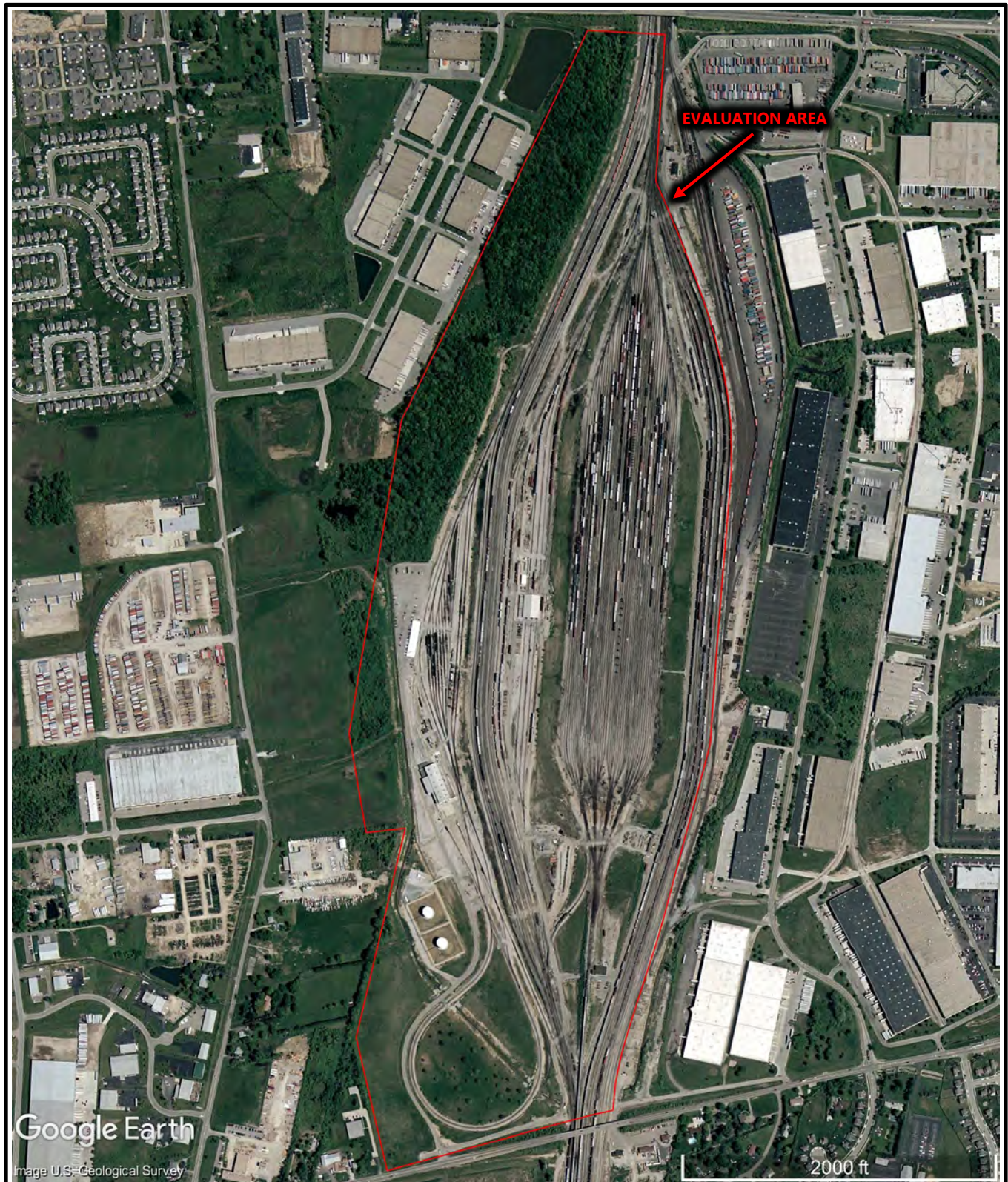
1994 AERIAL PHOTOGRAPH (CENTRAL SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



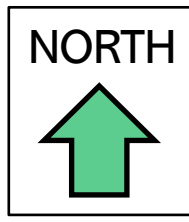
2002 AERIAL PHOTOGRAPH (CENTRAL SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



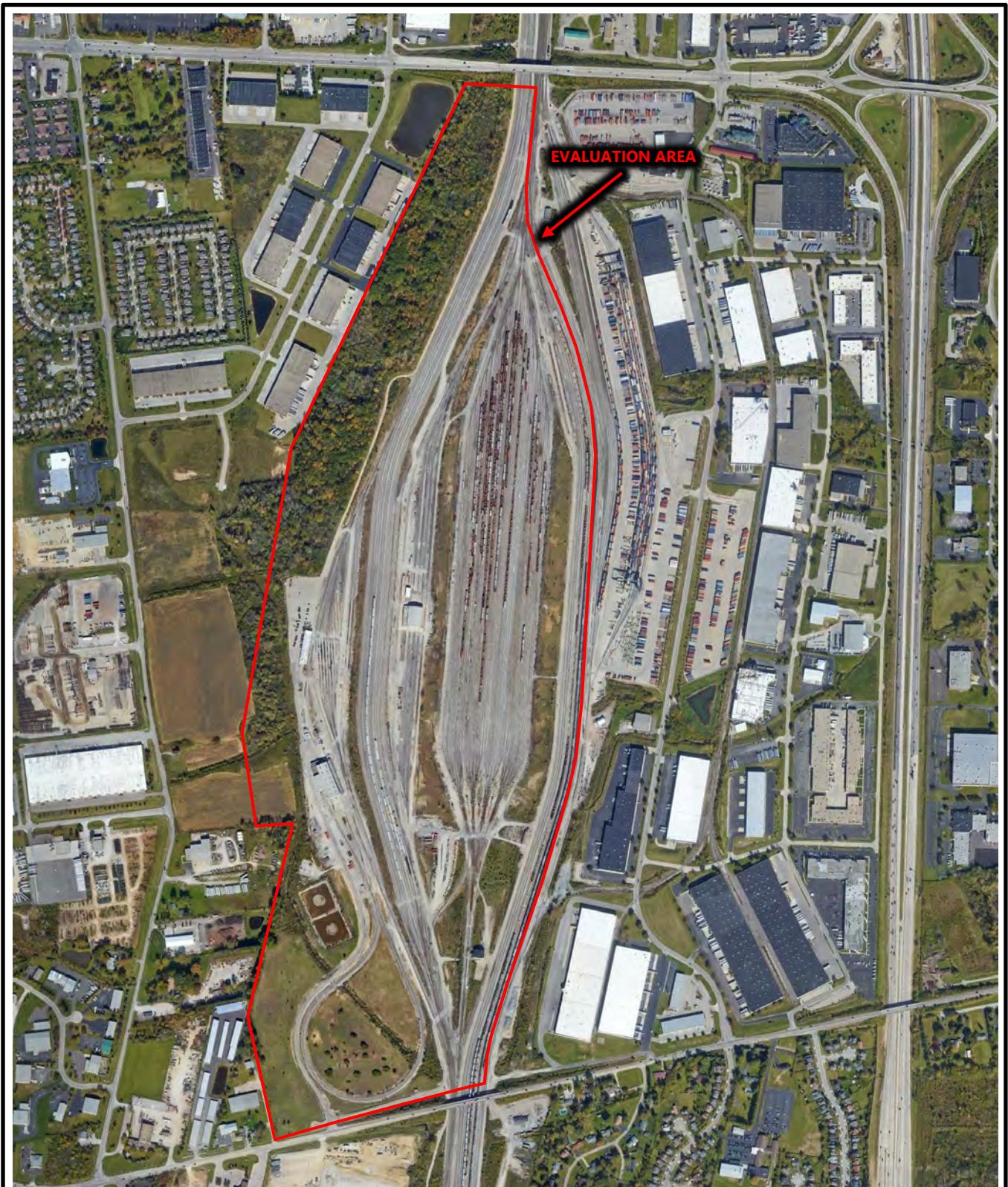
2009 AERIAL PHOTOGRAPH (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



2019 AERIAL PHOTOGRAPH (CENTRAL SECTION)

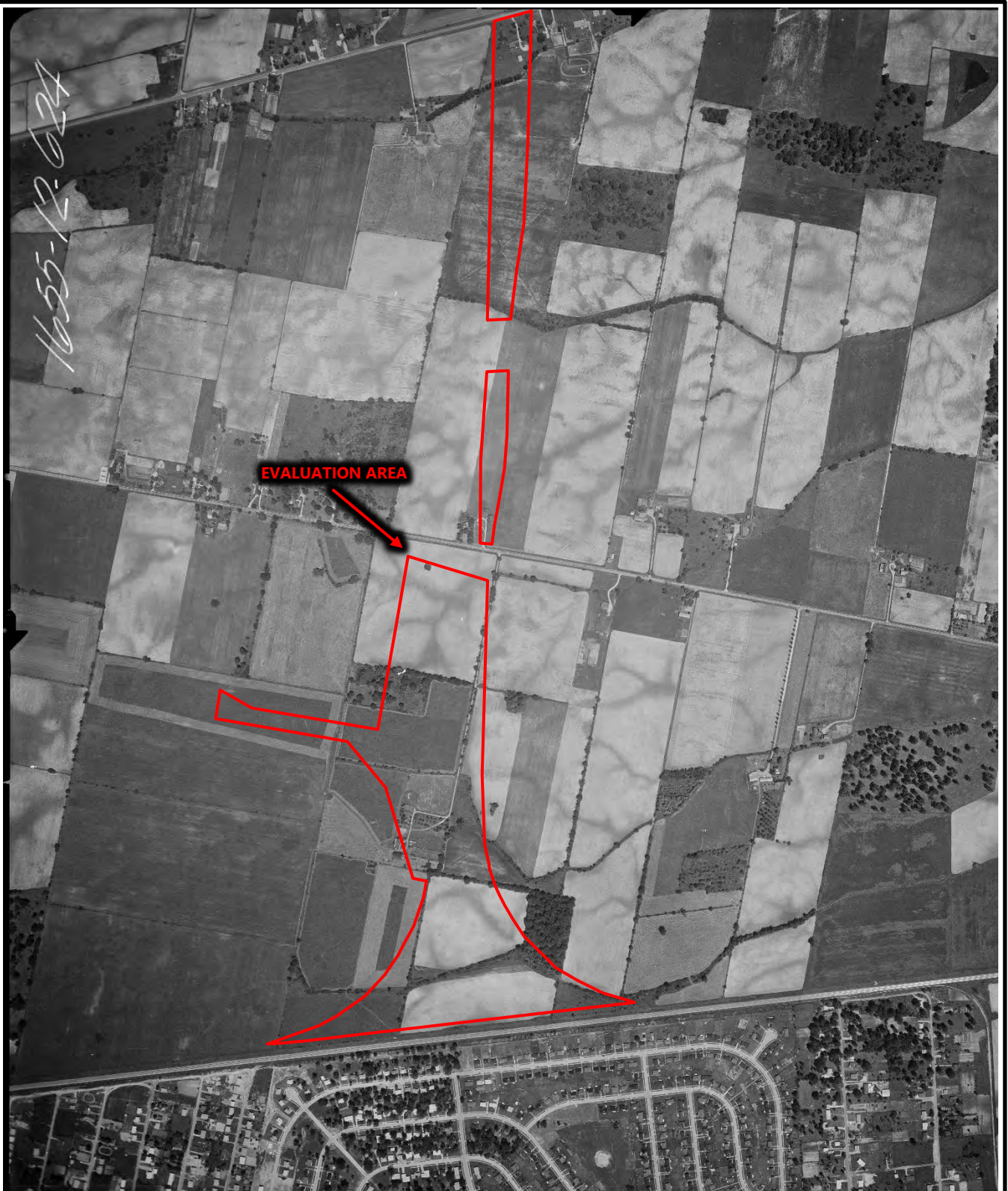


BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007

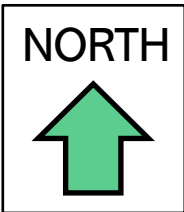


1960 AERIAL PHOTOGRAPH (SOUTH SECTION)

1655-12-024



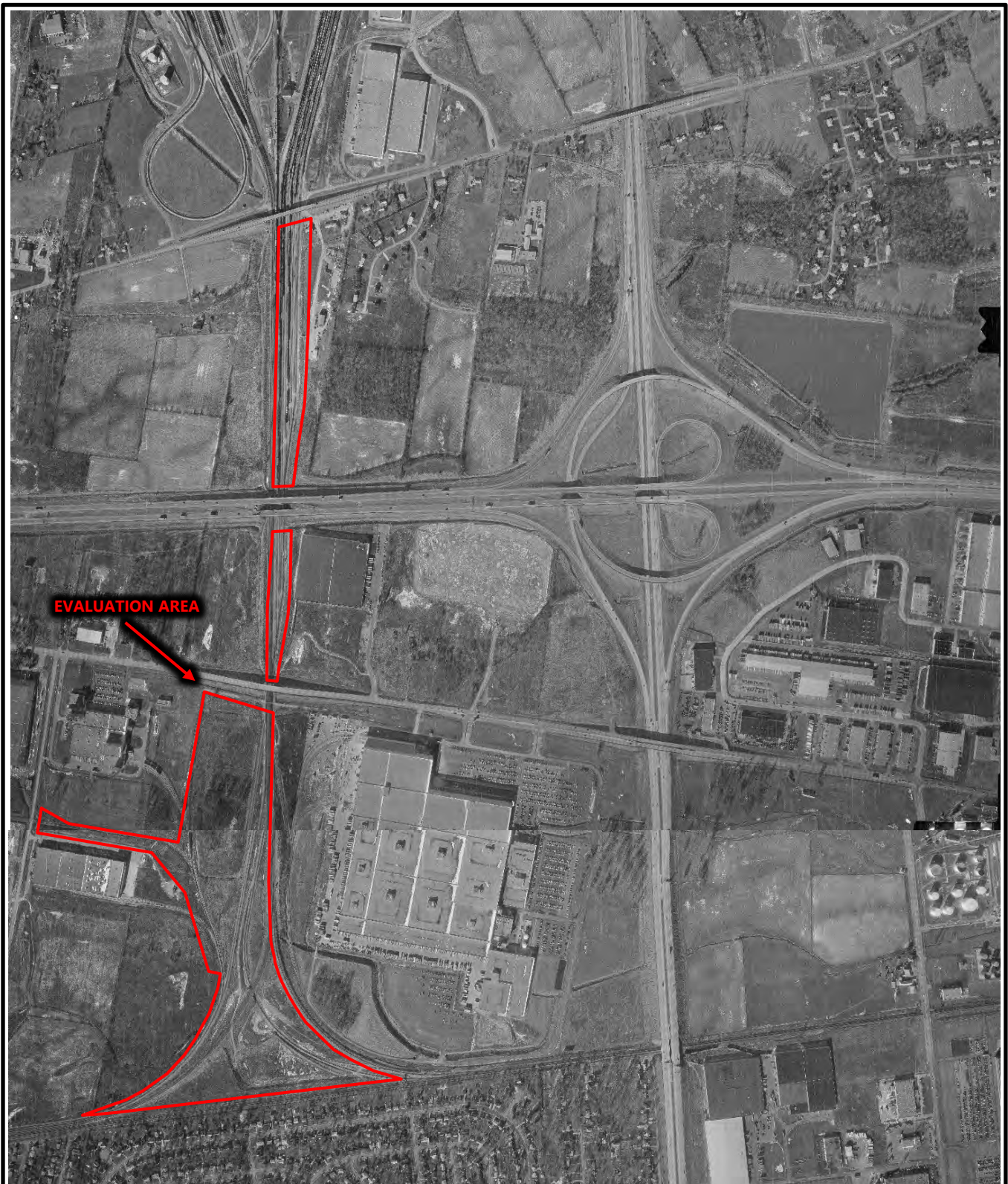
EVALUATION AREA



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



1979 AERIAL PHOTOGRAPH (SOUTH SECTION)



EVALUATION AREA

NORTH

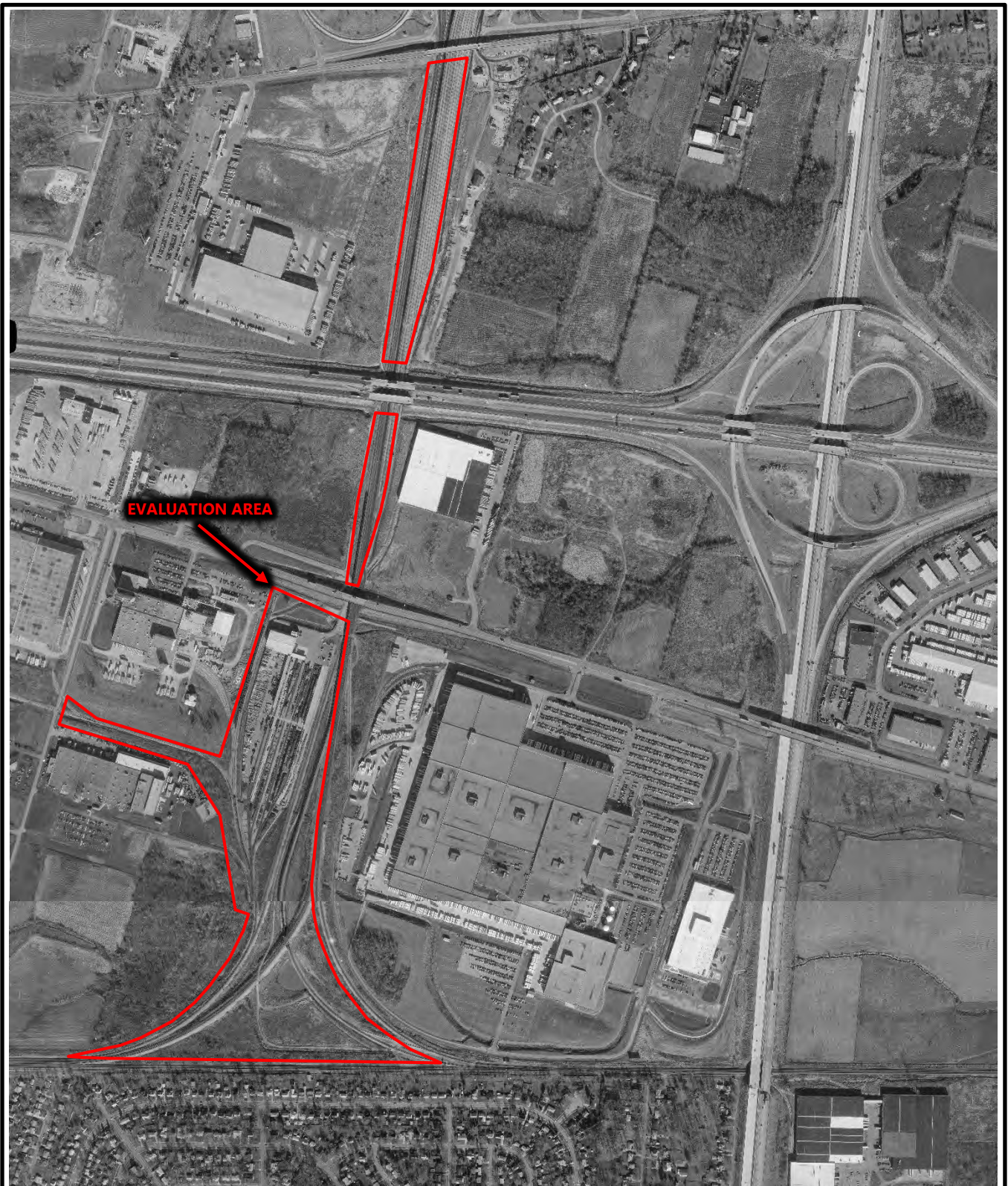


BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



CENTRAL OHIO WETLAND CONSULTING, LLC

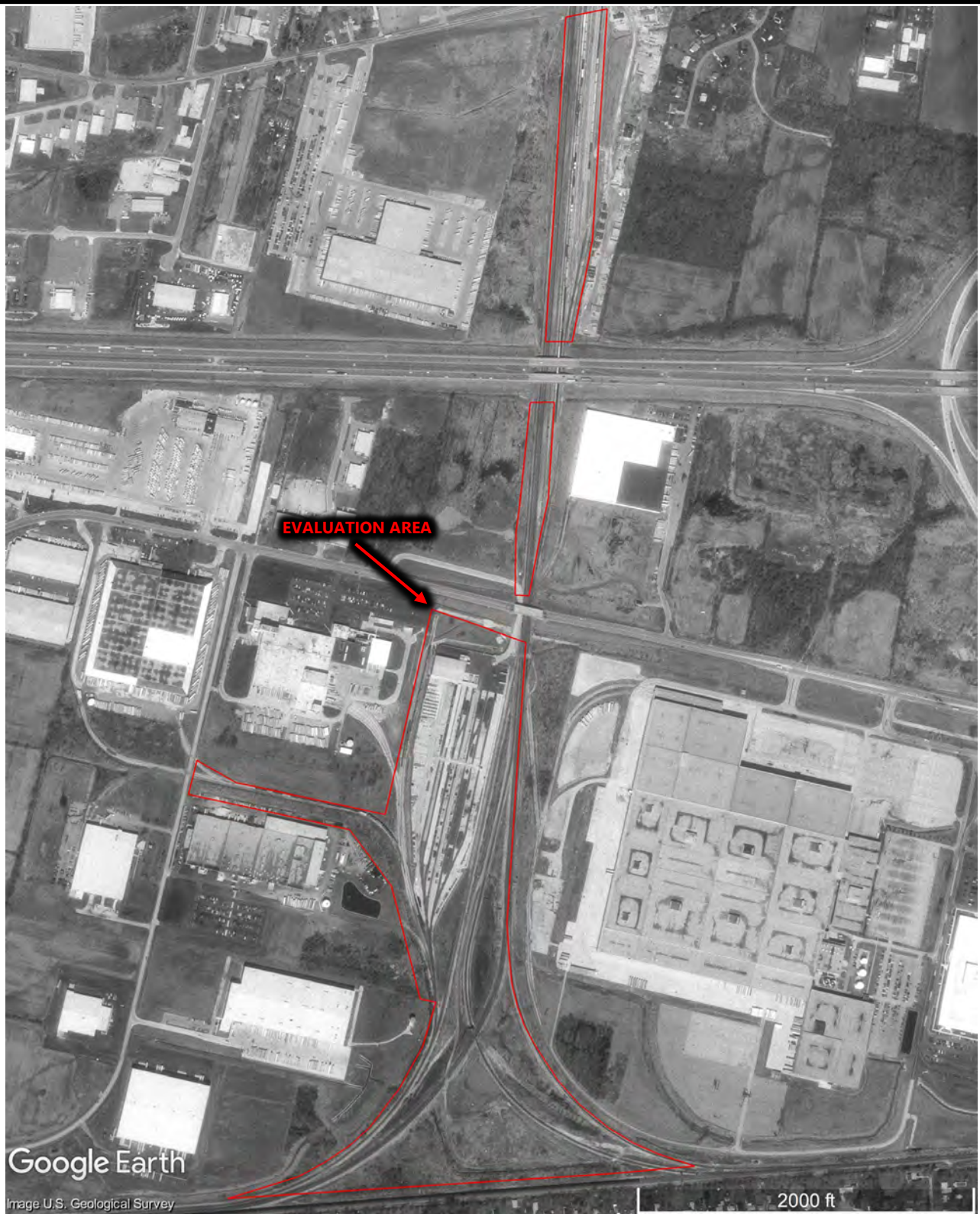
1989 AERIAL PHOTOGRAPH (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



1994 AERIAL PHOTOGRAPH (SOUTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



2002 AERIAL PHOTOGRAPH (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



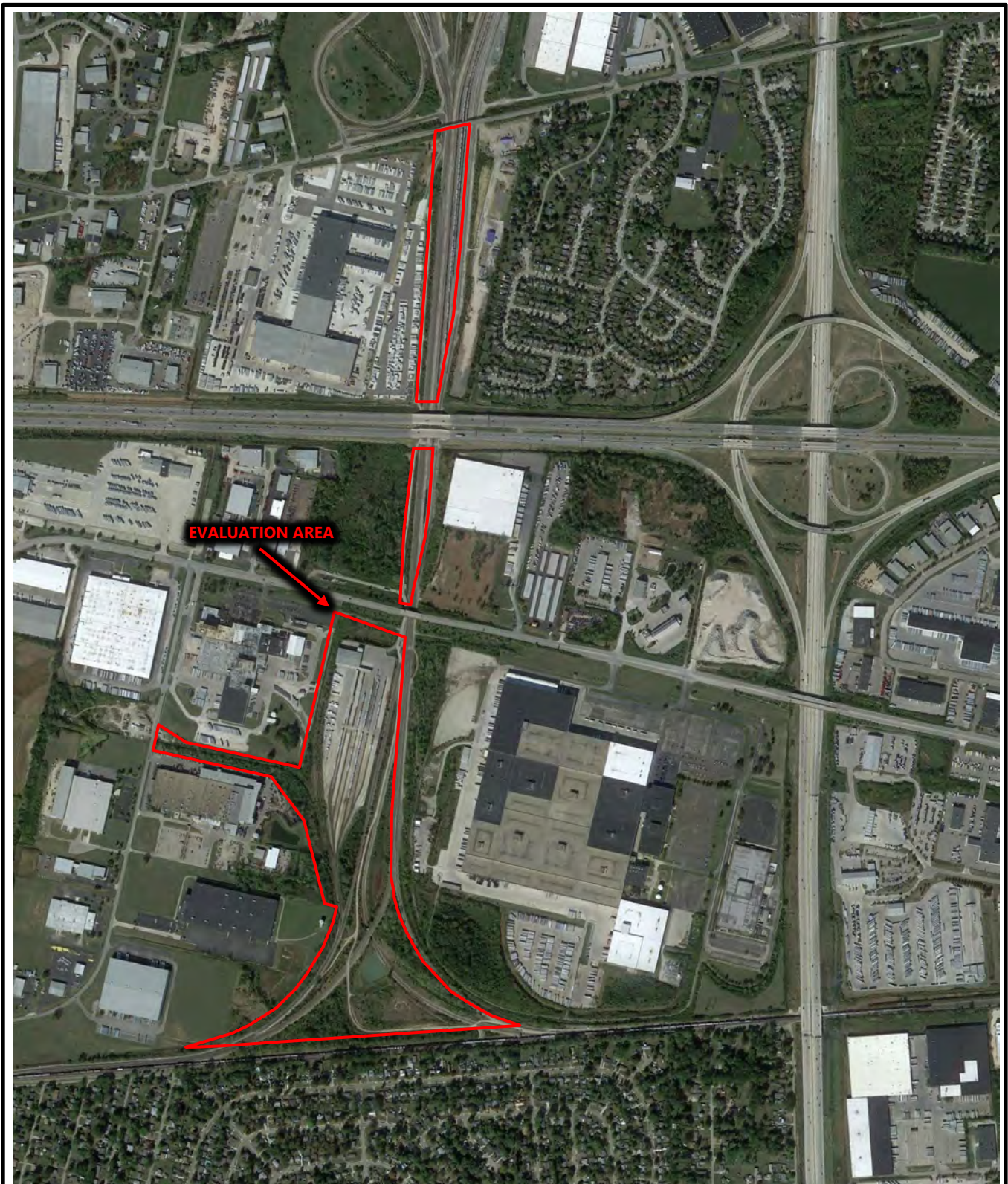
2009 AERIAL PHOTOGRAPH (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



2019 AERIAL PHOTOGRAPH (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



APPENDIX 3

WETLAND DELINEATION MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



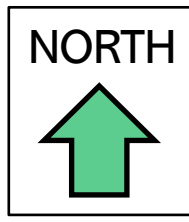
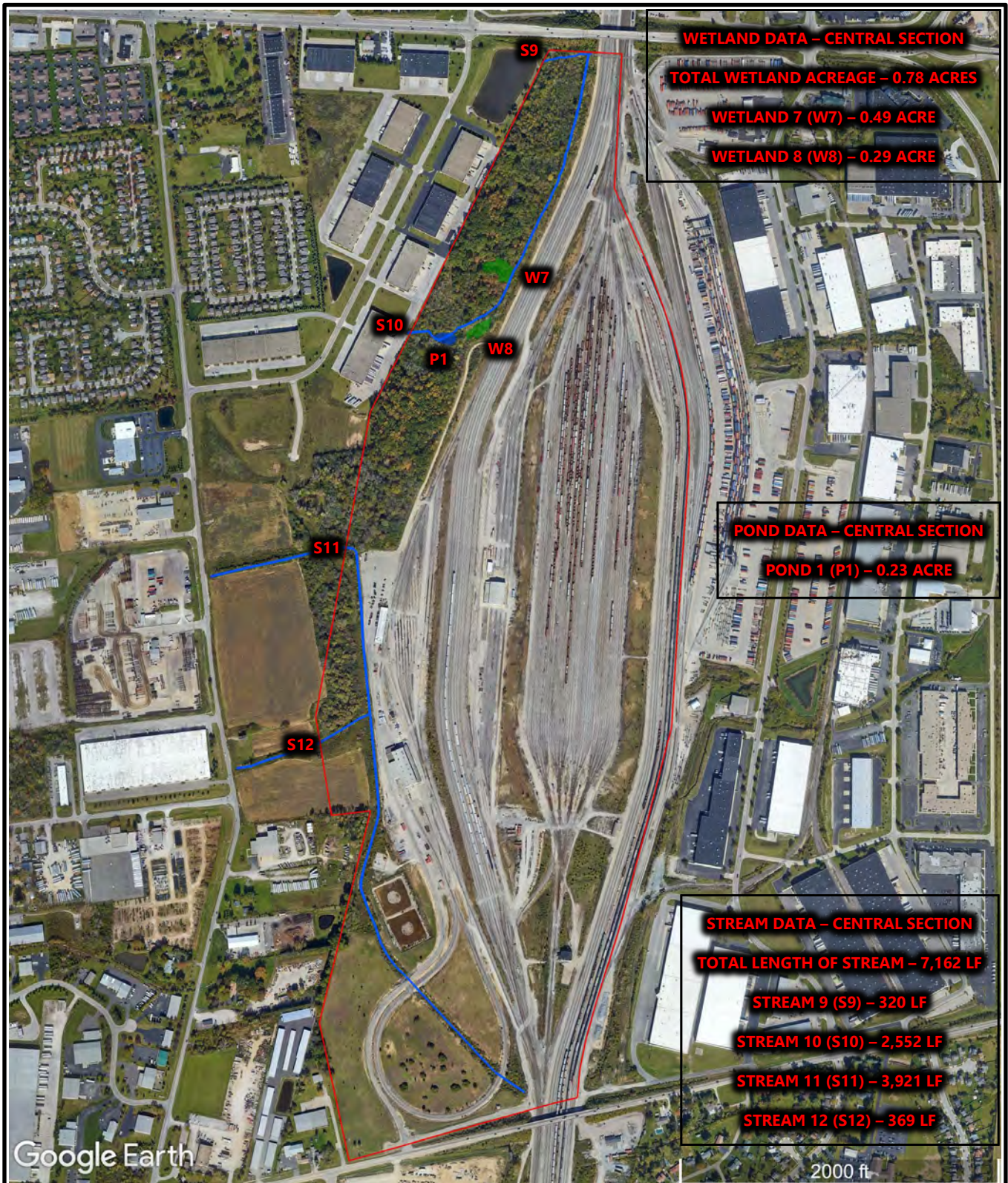
STREAM DELINEATION MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



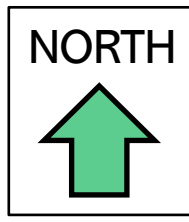
WETLAND AND STREAM DELINEATION MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



WETLAND AND STREAM DELINEATION MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	3
---	---

Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

10	13
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

14	27
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

27

subtotal this page

Wetland 1

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
---------------------------	--------------------------------	-----------------------

27

subtotal first page

0	27
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

2	29
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

29

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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2	2
---	---

Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	3
---	---

Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

11	14
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

14	28
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

28

subtotal this page

Wetland 2

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
---------------------------	--------------------------------	-----------------------

28

subtotal first page

0	28
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

4	32
---	----

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

32

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
---------------------------	--------------------------------	-----------------------

2	2
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	3
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

22	25
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

Check all disturbances observed

<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading
<input type="checkbox"/> dike	<input checked="" type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input checked="" type="checkbox"/> stormwater input	<input checked="" type="checkbox"/> other culvert, beaver dams

15	40
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

Check all disturbances observed

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

40
subtotal this page

Wetland 3

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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40

subtotal first page

0	40
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

2	42
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

42

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	3
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

11	14
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

Check all disturbances observed

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

13	27
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

Check all disturbances observed

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

27

subtotal this page

Wetland 4

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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27

subtotal first page

0	27
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-2	25
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

25

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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3	3
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	4
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

12	16
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

Check all disturbances observed

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

13	29
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

Check all disturbances observed

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

29

subtotal this page

Wetland 5

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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29

subtotal first page

0	29
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-2	27
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

27

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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2	2
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

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

1	3
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

12	15
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

13	28
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

28
subtotal this page

Wetland 6

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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28

subtotal first page

0	28
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-2	26
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

26

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/13/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

7	9
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

17	26
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

17	43
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

43

subtotal this page

Wetland 7

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/13/2021
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43

subtotal first page

0	43
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

6	49
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

- 0 Vegetated hummocks/tussucks
- 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

49

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/13/2021
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1	1
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

7	8
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

15	23
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

15	38
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

38
subtotal this page

Wetland 8

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/13/2021
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38

subtotal first page

0	38
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

0	38
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

38

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	3
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

22	25
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

8	33
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

33

subtotal this page

Wetland 9

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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33

subtotal first page

0	33
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

1	34
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

34

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard

Rater(s): Matt Kaminski

Date: 4/12/2021

1	1
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

2	3
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

12	15
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

7	22
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

22
subtotal this page

Wetland 10

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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22

subtotal first page

0	22
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

2	24
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

24

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

2	4
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

22	26
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

17	43
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

43

subtotal this page

Wetland 11

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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43

subtotal first page

0	43
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

9	52
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

52

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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2	2
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

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

2	6
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

18	24
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

9	33
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

33
subtotal this page

Wetland 12

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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33

subtotal first page

0	33
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

2	35
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

35

End of Quantitative Rating. Complete Categorization Worksheets.

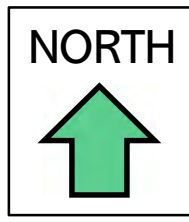
APPENDIX 4

PHOTO KEY (NORTH SECTION)



Google Earth

1000 ft

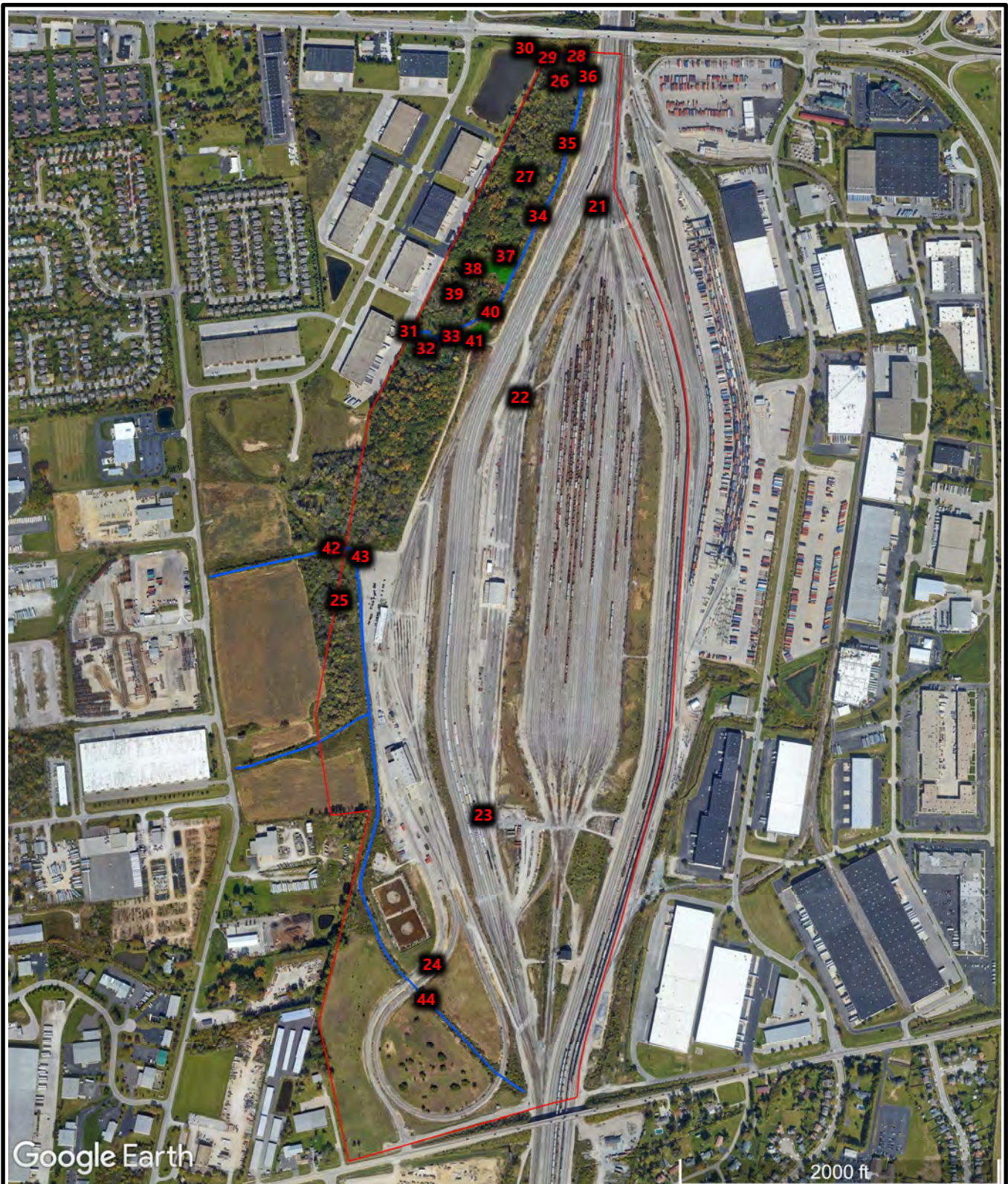


BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



CENTRAL OHIO WETLAND CONSULTING, LLC

PHOTO KEY (CENTRAL SECTION)



Google Earth

2000 ft



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



PHOTO KEY (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



Field Reconnaissance Photos



Photo 1 – Southerly view of former rail lines on the North Section of the evaluation area.



Photo 2 – Typical view of former rail lines and adjacent brushy areas on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 3 – Southerly view across waste land areas on the southwest part of the North Section of the evaluation area.



Photo 4 – Northerly view of dense brushy areas on the northeast part of the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 5 – Southerly view of Wetland 1 on the North Section of the evaluation area.



Photo 6 – Southwesterly view of Wetland 2 on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 7 – Northwesterly view across Wetland 3 on the North Section of the evaluation area. This wetland appears to have established due to beaver impoundments within a drainage ditch.



Photo 8 – Northerly view along Wetland 3 on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 9 – Northerly view of Wetland 4 on the North Section of the evaluation area.



Photo 10 – Southerly view of Wetland 4 on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 11 – Easterly view across Wetland 5 on the North Section of the evaluation area.



Photo 12 – Westerly view across the southern part of Wetland 5 on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 13 – Northerly view of Stream 7 and Stream 8 on the North Section of the evaluation area. These ephemeral streams appear to partially drain Wetland 5.



Photo 14 – Southerly view across Wetland 5 on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 15 – Northerly view across Wetland 6 on the North Section of the evaluation area.



Photo 16 – Easterly view along Stream 1 (Roberts Millikin Ditch) on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 17 – Northeasterly view of two existing culvert pipes directing surface water from Stream 1 (Roberts Millikin Ditch) beneath elevated railroad lines.



Photo 18 – Westerly view at the continuation of Stream 1 (Roberts Millikin Ditch) upon exiting the culvert pipes depicted in Photo 17.

Field Reconnaissance Photos



Photo 19 – Westerly view of Stream 1 (Roberts Millikin Ditch) on the North Section of the evaluation area.



Photo 20 – Westerly view of Stream 1 (Roberts Millikin Ditch) on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 21 – Southerly view of former railroad lines on the Central Section of the evaluation area.



Photo 22 – Northeasterly view of former railroad lines and waste areas between tracks on the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 23 – Northerly view of former railroad lines on the Central Section of the evaluation area.



Photo 24 – Southerly view of former railroad lines and brushy land on the southern part of the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 25 – Southerly view along a cleared utility corridor on the west central part of the Central Section of the evaluation area.



Photo 26 – Typical view of dense vegetation comprising the wooded western portions of the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 27 – Typical view of dense vegetation comprising the wooded western portions of the Central Section of the evaluation area.



Photo 28 – Westerly view along Stream 9 on the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 29 – Westerly view at the origination of Stream 9. This culvert pipe discharges surface water from a west adjoining storm water management pond.



Photo 30 – Southwesterly view at the west adjoining storm water management pond directing surface water to Stream 9.

Field Reconnaissance Photos



Photo 31 – Westerly view at the beginning of Stream 10 on the Central Section of the evaluation area.



Photo 32 – Northeasterly view across Pond 1 on Central Section of the evaluation area. This pond impounds Stream 10.

Field Reconnaissance Photos



Photo 33 – Southwesterly view across Pond 1 on Central Section of the evaluation area. This pond impounds Stream 10.



Photo 34 – Southerly (upstream) view along Stream 10 on Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 35 – Northerly (downstream) view along Stream 10 on Central Section of the evaluation area.



Photo 36 – Northeasterly view of the confluence of Stream 9 with Stream 10 on the northwest part of the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 37 – Southerly view of Wetland 7 on the Central Section of the evaluation area.



Photo 38 – Easterly view of Wetland 7 on the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 39 – Typical view of wooded areas to the north, south, and west of Wetland 7 on the Central Section of the evaluation area.



Photo 40 – Southwesterly view of Wetland 8 on the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 41 – Northeasterly view of Wetland 8 on the Central Section of the evaluation area.



Photo 42 – Easterly view of Stream 11 as it enters the Central Section of the evaluation area from the west.

Field Reconnaissance Photos



Photo 43 – Northwesterly view of Stream 11 on the Central Section of the evaluation area.



Photo 44 – Southeasterly view of Stream 11 as it crosses the southwest part of the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 45 – Southerly view along former rail lines comprising the north part of the South Section of the evaluation area.



Photo 46 – Easterly view along Stream 13 as it enters the South Section of the evaluation from the west, beneath Manor Park Drive.

Field Reconnaissance Photos



Photo 47 – Westerly view along Stream 13 on the South Section of the evaluation area.



Photo 48 – Southeasterly view along Stream 13 on the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 49 – Southwesterly view of Wetland 11 on the South Section of the evaluation area. This wetland appears to have established due to beaver impoundments within Stream 13.



Photo 50 – Northwesterly view of Wetland 11 on the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 51 – Westerly view of Wetland 11 on the South Section of the evaluation area.



Photo 52 – Northerly view of Wetland 10 on the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 53 – Northerly view of Wetland 9 on the South Section of the evaluation area



Photo 54 – Northerly view across vacant waste land on the southern part of the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 55 – Typical view of densely vegetated areas on the southwest part of the South Section of the evaluation area.



Photo 56 – Easterly view of Pond 2 on the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 57 – Northwesterly view of Wetland 12 on the South Section of the evaluation area. This wetland appears to have established due to beaver impoundments within a drainage ditch.



Photo 58 – Easterly view of Wetland 12 on the South Section of the evaluation area. This wetland appears to have established due to beaver impoundments within a drainage ditch.

Field Reconnaissance Photos



Photo 59 – Westerly view of eastern part of Wetland 12 on the South Section of the evaluation area.



Photo 60 – Easterly view at the termination point of Wetland 12 on the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 61 – Northerly view of vacant waste land on the South Section of the evaluation area.

APPENDIX B

USACE 404 Individual Permit Application and Ohio EPA 404 WQC
Application



November 1, 2022

U.S. Army Corps of Engineers, Huntington District
502 Eighth Street
Huntington, West Virginia 25701

Subject: Application for Individual 404 Permit for the Simpson Strong-Tie Expansion in Columbus, Franklin County, Ohio

To Whom It May Concern:

Enclosed as Attachment A, please find an Application for Department of the Army Permit Form 4345 for a 404 Individual Permit for the Simpson Strong-Tie Expansion Project in Columbus, Franklin County, Ohio (henceforth referred to as "the Site"). This application is submitted on behalf of Simpson Strong-Tie (Applicant).

Simpson Strong Tie (SST) is a manufacturer of metal hangers used in various types of construction including but not limited to joist hangers and deck hangers. The company currently has approximately 284,000 SF facility serving administration, manufacturing, and warehousing needs of their Hilliard, Ohio plant. Due to the increase in demand for these products, additional warehouse space is needed in order to satisfy demand.

To accomplish this, SST is proposing to add warehouse capacity and an employee training center totaling 289,600 SF. In order to accomplish this in the most effective way, the company purchased the parcel situated directly east of the current facility (Parcel 560-302754-00) to accommodate the proposed expansion. The Site is an old railyard, with several old rail lines and low-quality wetlands onsite. Roberts Milliken Ditch runs through the center of the Site from west to east.

Wetland Delineation

A wetland and stream delineation was completed in April 2021 by Central Ohio Wetland Consulting, LLC. A subsequent delineation was completed by MAD Scientist Associates on October 19, 2021, to confirm findings and map wetlands and streams onsite. A total of seven (7) wetlands and eight (8) streams were delineated onsite. For the purposes of this request, A total of 2.75 acres of Wetland 4 and Wetland 6 will be impacted under the proposed development plan. Both of these wetlands are low quality, Category 1 emergent wetlands dominated by hybrid cattail (*Typha x glauca*). The delineation report is included in Attachment B.

Preferred Alternative

An Alternatives Analysis was completed as part of this application and the preferred alternative would impact 2.75 acres of Category 1 emergent wetlands. Currently, the Applicant has reserved 4.2 acres of wetland credits with the Stream + Wetlands Foundation's in-lieu fee program to mitigate this impact at a 1.5:1 ratio. However, due to the requirement from the City of Columbus for a Type II Variance based on the impact to a stream corridor protection zone (SCPZ), the Applicant is submitting a request for variance to mitigate a portion of this onsite, as required by the City of Columbus regulations. Should the variance get approved, the Applicant will submit an amendment to this permit with a mitigation plan to create 2.75 acres of Category 2 emergent wetland onsite (1:1 ratio), with the remaining 1.5 acres of credit to be held within the in-lieu fee of Stream + Wetlands Foundation. A copy of the mitigation credits can be found in Attachment C.

Correspondence has been received from the Ohio Department of Natural Resources and U.S. Fish & Wildlife Service regarding Threatened & Endangered Species (Attachment D). No impacts are anticipated to any listed species or habitats.

Feel free to contact me with any questions. I can be reached at 614-818-9156 or via email at lindsay@madscientistassociates.net.

Best Regards,



Lindsay Hanna, CWD
Project Scientist
MAD Scientist Associates

cc: Spencer Brown, Lincoln Construction
Burak Gursal, Simpson Strong-Tie

ATTACHMENT A
404 PCN APPLICATION FORM

17. DIRECTIONS TO THE SITE

From 270-N/270-W, take exit 10 for Roberts Road. Continue for approximately 0.8 miles and turn right onto International Street. Take the first driveway on the right to continue to the Buckeye Yard Site (See Figures 1 and 2).

18. Nature of Activity (Description of project, include all features)

Based on capacity needs, a minimum of 230,000 square feet will be required for building construction. In addition, 115,975 sf of parking will need to be constructed to accommodate the increase in personnel employed at the facility. As per City regulations, the new building must be spaced 10 feet away from existing infrastructure, and stormwater retention with a capacity of 323,704 cf is needed for the Site. Based on these requirements for proposed development, a total of 19.79 acres is needed for completing this project. For this, 2.75 acres of wetland (1.53 acres of Wetland 4 and 1.22 acres of Wetland 6) will be impacted to accommodate the construction needs. See attached design plan.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

See attached.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

1.53 acres of Wetland 4 will be filled in order to construct the new building. 1.22 acres of Wetland 6 will be modified to serve as a retention pond that is up to code with the City of Columbus for stormwater capture-this design is based on the Ohio EPA Rainwater and Land Development Manual. See attached design plan.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type	Type	Type
Amount in Cubic Yards	Amount in Cubic Yards	Amount in Cubic Yards
Fill: 27,813.57 cubic yards		

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 2.75 acre
or
Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

See attached for Alternatives Analysis and Mitigation Credit purchase.

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- 2500 International St

City - Columbus State - OH Zip - 43228

b. Address- 2700 International St

City - Columbus State - OH Zip - 43228

c. Address- 2625 Westbelt Dr

City - Columbus State - OH Zip - 43228

d. Address- 2559 Westbelt Dr

City - Columbus State - OH Zip - 43228

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
City of Columbus	Stormwater		Pending Variance		

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.



SIGNATURE OF APPLICANT

2022-11-08

DATE



SIGNATURE OF AGENT

2022-11-09

DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

BOX 19

Simpson Strong Tie (SST) is a manufacturer of metal hangers used in various types of construction including but not limited to joist hangers and deck hangers. The company currently has approximately 284,000 SF of building under roof serving administration, manufacturing and warehousing needs of their Hilliard Ohio plant. Due to the increase in demand for these products, additional warehouse space is needed in order to satisfy demand.

Based on capacity needs, a minimum of 230,000 square feet (sq. ft.) will be required for building construction. In addition, 115,975 sq. ft. of parking will need to be constructed to accommodate the increase in personnel employed at the facility. As per City regulations, the new building must be spaced 10 feet away from existing infrastructure, and stormwater retention with a capacity of 323,704 cubic feet (cf) is needed for the Site. Based on these requirements for proposed development, a total of 19.79 acres is needed for completing this project. Due to the configuration of wetlands onsite, there is not a section of contiguous acreage that could accommodate the proposed development without impacting onsite wetlands.

Based on building needs, Wetlands 4 and 6 are expected to be impacted. Both wetlands were assessed using the ORAM (Ohio Rapid Assessment Method) and assigned scores of 25 and 26, respectively, which identifies them as Category 1 wetlands. These types of wetlands are defined as “limited quality waters” which have low functionality and limited potential for restoration (Ohio EPA, 2001) (See Delineation Report).

The expected construction timeline for this is mid-2023 to 2025.

BOX 23

1.0 ALTERNATIVES ANALYSIS

1.1 Non-Disturbance Alternative

SST reviewed the possibility of purchasing a property that was not contiguous with the current manufacturing site, including an economic analysis of four (4) options. The economic analysis includes the proposed expansion into the Buckeye Yard property. This would have resulted in no impacts to the current Site.

However, due to budgetary constraints and accessibility issues, this alternative was not considered economically feasible. Of the four alternatives reviewed, the expansion into the Buckeye Yard Rail Site was the only one that would allow the current SST facility to continue operating, thus reducing costs by requiring an expansion rather than a completely new building. The remaining alternatives contained challenges and constraints to buildings based on Site configuration and Site location.

In regard to potential environmental impacts from the other alternatives, the other three alternatives required a construction footprint that met the current facility size in addition to the expansion size, therefore increasing the permeable surface within the county by closer to 622,000 sq. ft. instead of 300,000 sq. ft. Wetland and stream delineations were not conducted onsite for the alternative property options; however based on a review of aerial imagery and other resources including the National Wetlands Inventory and web soil survey for alternative properties, it appears that wetlands and streams are present on the alternative sites as well. Therefore, it is probable that impacts to aquatic resources would have occurred in order to develop the alternative properties as well.

See Attachment A for Economic Analysis on the Non-Disturbance Alternative.

1.2 Minimal Disturbance Alternative

In the minimal disturbance alternative, the proposed development of the Buckeye Yard site is oriented to minimize disturbance to on-site aquatic resources. The required stormwater retention basin is situated within the stream corridor of Roberts Milliken Ditch, parallel to the stream. The construction of the stormwater detention pond would require 41.60 linear feet of impacts to Roberts Milliken Ditch (?). To accommodate the ability for large trucks to be able to turn around

in the northern portion of the proposed facility expansion, a total of 2.35 acres between Wetlands 4 (full wetland area) and 6 (partial wetland area) will be impacted. While this alternative results in less potential impacts to aquatic resources, it requires impacts to both streams and wetlands.

See Attachment B for the Minimal Disturbance Alternative Concept Plan.

1.3 Preferred Alternative

In order to accommodate the proposed expansion of the manufacturing facility, SST will need to impact Wetlands 4 and 6. A portion of Wetland 4 will be filled to accommodate facility construction, and Wetland 6 will be converted into a stormwater retention basin. In this design, a total of 2.75 acres of wetland will be impacted. The design does not impact Robert Milliken Ditch or any of its tributaries onsite and includes stormwater bioswales associated with the southern parking lots to accommodate additional stormwater retention.

See Attachment C for Preferred Alternative Concept Plan.

1.4 Alternatives Analysis Results

Based on the alternatives analysis, SST is proposing moving forward with the preferred alternative. This alternative would impact more wetland acreage in comparison to the minimal impact alternative, however, it would eliminate any direct stream impacts. Both Wetlands 4 and 6 are classified as Category 1 wetlands, and therefore their contribution to wildlife habitat and ecosystem function is relatively low. In comparison to the non-disturbance alternative, the economic benefit is much greater as the expansion would be adjacent to the current building and allow a buildout instead of a brand new facility on undisturbed land. The preferred alternative is the most cost-effective and economically viable while also impacting the least water resources onsite. A mitigation plan has been created to address the 2.75 acres of proposed wetland impacts. The proposed mitigation plan is detailed in section 2.0.

2.0 PROPOSED MITIGATION

The USACE requires a total of 4.2 acres of wetland mitigation credits to account for the 2.75 acres of impact to these Category 1 jurisdictional wetlands (a 1.5:1 ratio). Currently Simpson Strong-Tie has purchased these credits through the in-lieu program from Stream + Wetlands Foundation.

Due to City of Columbus stormwater requirements, Simpson Strong-Tie is currently requesting a variance with the City to mitigate 2.75 acres onsite, as required by the City of Columbus Stormwater Drainage manual. Once this variance is approved, Simpson Strong-Tie intends to submit an amendment to this permit with a full mitigation plan describing the onsite mitigation plan and design. In addition, Simpson Strong-Tie will work with the Stream + Wetland Foundation for a reimbursement for 2.7 acres of credit, while maintaining 1.5 acres through the Stream + Wetlands Foundation in-lieu fee (ILF) program to satisfy the USACE requirement.

See Attachment D for current mitigation credit receipt from Stream + Wetland Foundation.

ATTACHMENT A

Economic Analysis on the Non-Disturbance Alternative

ADVISORY & TRANSACTION SERVICES | INDUSTRIAL & LOGISTICS



M A Y 1 2 , 2 0 2 1

MARKET OPTIONS



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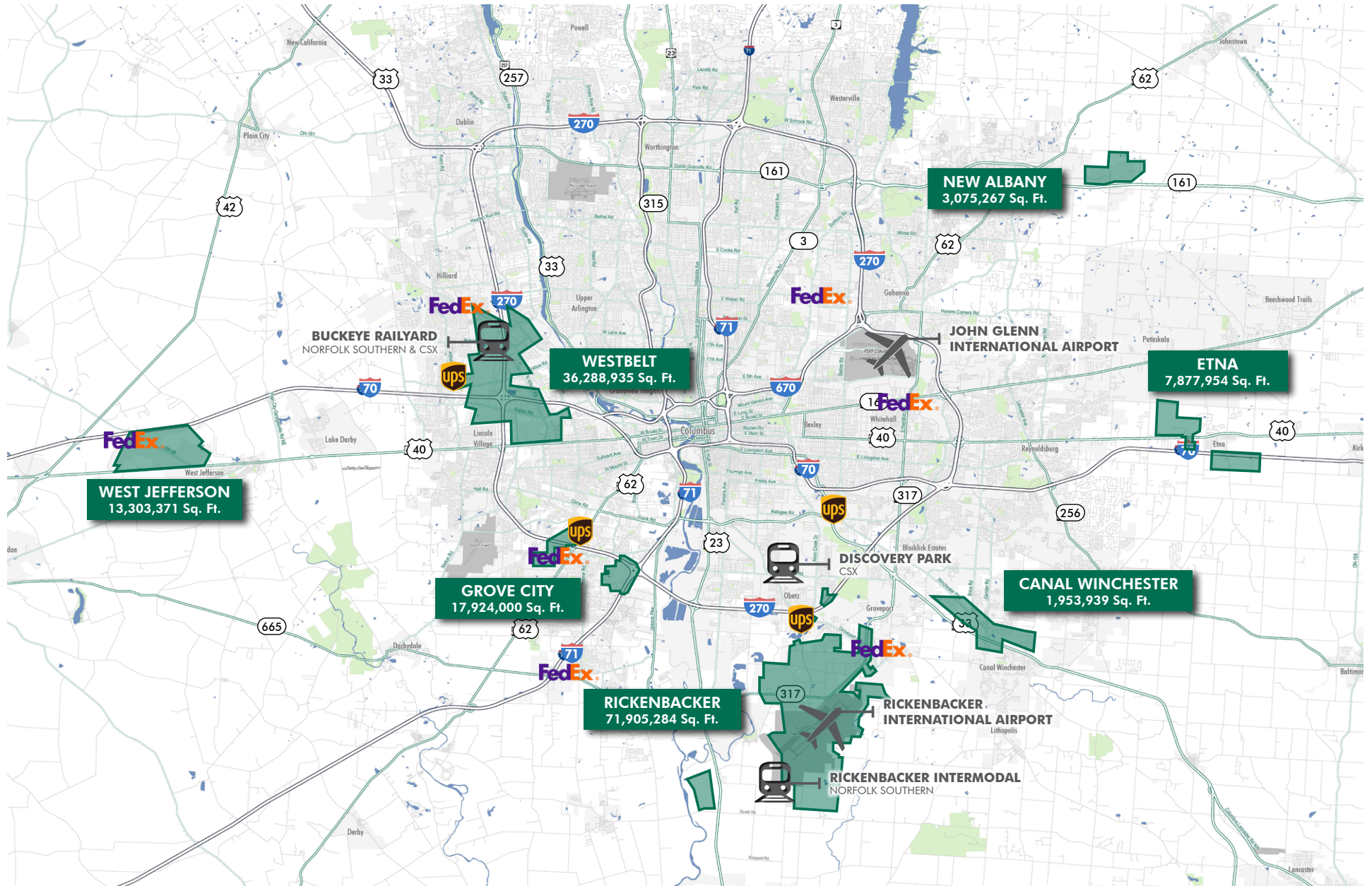
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INDUSTRIAL MARKET OVERVIEW

276,015,075 SQ. FT.
MARKET RENTABLE AREA



COLUMBUS INDUSTRIAL LABOR CONCENTRATION

4.90%

COLUMBUS UNEMPLOYMENT RATE

~18.59%

EMPLOYMENT GROWTH SINCE 2010

51.00%

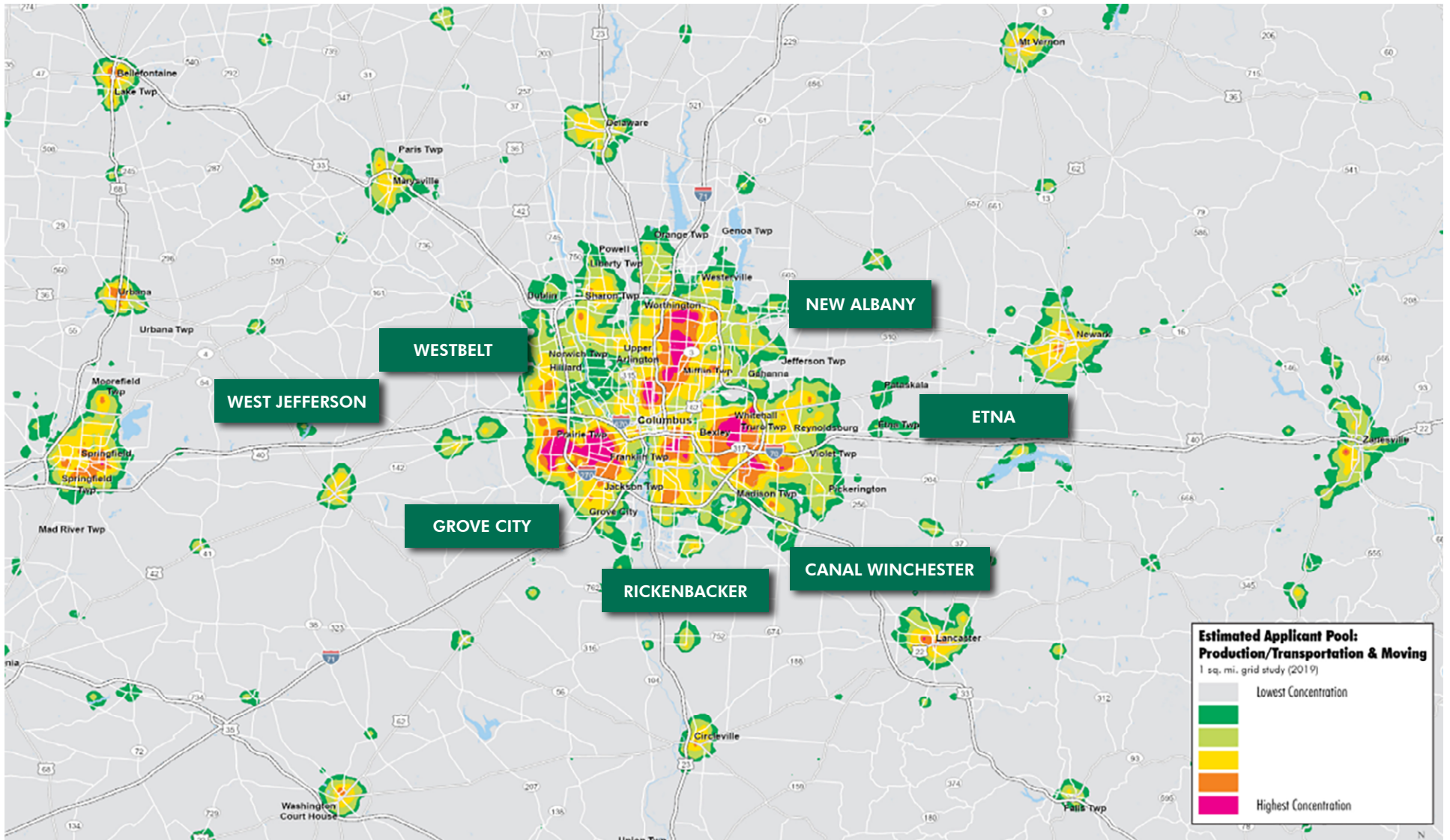
LABOR PARTICIPATION RATE

\$18.11/HR

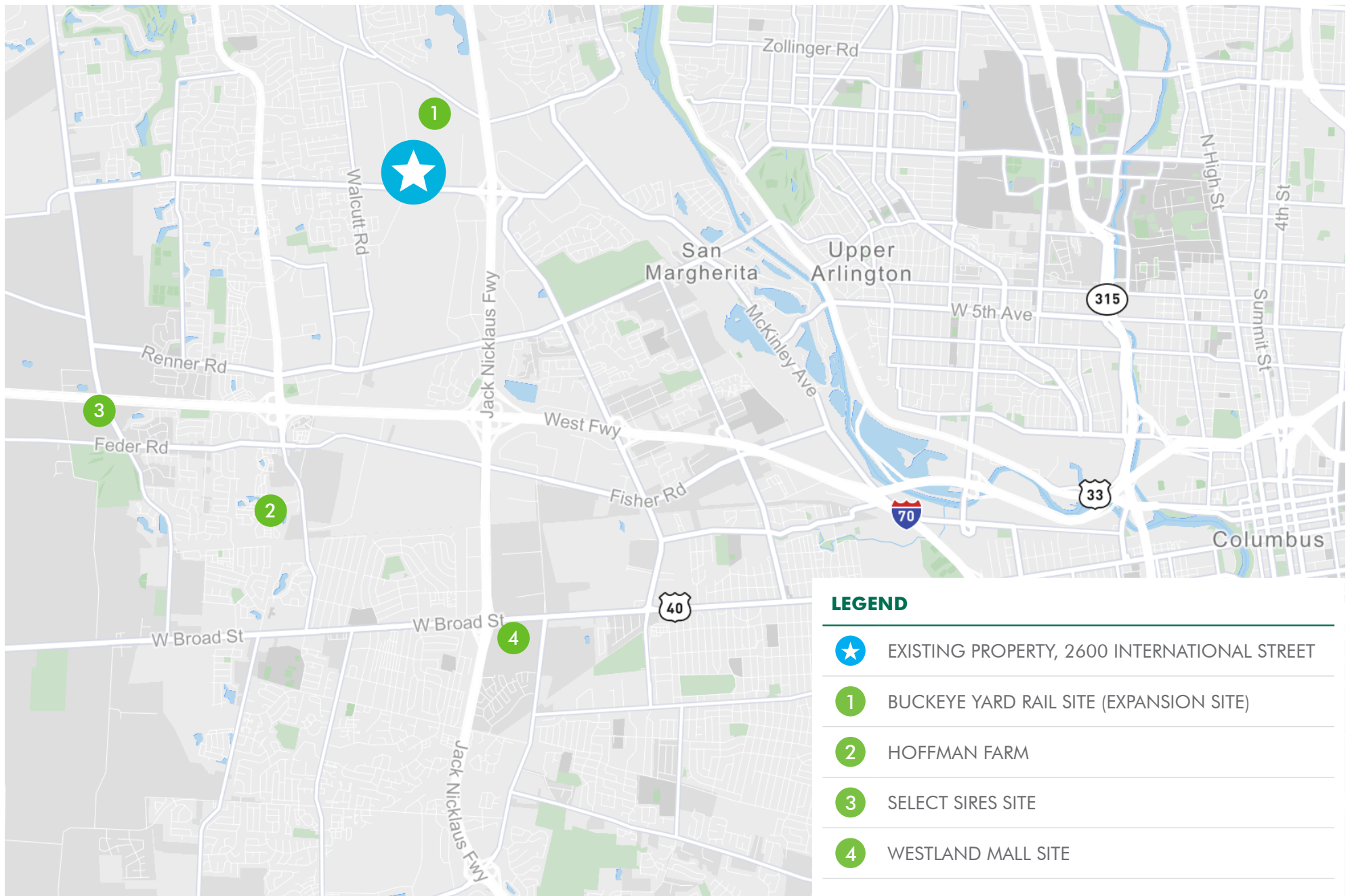
AVERAGE MANUFACTURING WAGES

\$16.55/HR

AVERAGE LOGISTICS WAGES



LAND AVAILABILITIES



COMPARISON OF PROPOSED ECONOMIC TERMS

		1	2	3	4
		BUCKEYE YARD RAIL SITE (EXPANSION SITE)	HOFFMAN FARM COLUMBUS, OH	SELECT SIREES DEVELOPMENT	WESTLAND MALL
SITE INFORMATION	SUBMARKET	Westbelt (Current Facility)	WEST COLUMBUS	West Side	West Side
	DEVELOPER	Land Owned by Xebec	TPA Group	VanTrust	Trident Capital
	CURRENT SITE STATUS	Industrial use land Contiguous with the Existing Manufacturing facility Parcel	Greenfield development site. In the process of due diligence to purchase, annexation, zoning, incentives negotiations, and entitlement	This is a Greenfield Land Site currently listed for Sale and Development. We have engaged a development partner, Van Trust to investigate the development potential of this site on Simpson's behalf with the ultimate goal of receiving a formal proposal on the site for a new facility.	This is the former Westland Mall location which is now slated for redevelopment. Trident is currently in contract to purchase this site from the current owners.
	PROPOSED BUILDING SIZE (SQ. FT.)	Simpson could construct a 200,000 Sq. Ft. addition	622,500 Sq. Ft.	570,000 Sq. Ft.	500,000 Sq. Ft.
	EXPANSION CAPABILITY	TBD. A 200,000 Sq. Ft. Expansion appears to be feasible subject to proper due diligence of the site.	This Building will not have expansion capabilities due to the site constraints	Expandable by 313,500 Sq. Ft.	Expandable by + 300,000 Sq. Ft.
	LARGEST SIZE ACHIEVABLE (SQ. FT.)	TBD	622,500 Sq. Ft. (we recommend maximizing the initial footprint)	883,500 Sq. Ft.	+/- 800,000
	SITE SIZE WITHOUT EXPANSION (ACRES)	40 Acres	+/- 27 Acres	70 Acres	+/- 50 Acres
	SITE SIZE WITH EXPANSION (ACRES)	40 Acres	+/- 27 Acres	70 Acres	+/- 50 Acres
DEAL STRUCTURE	PROPOSED DEAL TYPE	The Land behind the Existing Factory is approximately 40 Acres and includes inactive rail lines. The strategy would be to Purchase the Land Site for expansion of the existing Building. This site will need to be fully vetted as to its suitability for future Industrial development during the Acquisition/Due Diligence phase of the purchase. Items to vet would be wetland impact and environmental contamination issues. Simpson as owner of the Ground would be able to self perform an expansion of its existing facility. The additional ground could be suitable for vehicle/trailer parking, or could be potentially disposed through sale to other interested neighbors who have not yet been contacted.	The ownership is proposing a merchant build with Simpson purchasing the shell property upon completion	A proposal on this site has not yet been received. The developer Van Trust is currently investigating the Site for Suitability to Develop. Due to its location at the edge of Columbus, infrastructure may be challenging.	A proposal on this site has not yet been received. However, based on previous proposals from this developer, this site could be developed as a merchant building with a closing of the property upon the substantial completion of the base building shell.
	LEASE OF THE PROPERTY				
	PROPOSED LEASE PAYMENT START DATE	N/A - this would be a Simpson-owned land site for expansion of the existing manufacturing facility.	Not Proposed	Still Researching this site - No Proposal Yet	A lease of the Property is likely not needed.
	FIRST YEAR LEASE RATE (\$/SQ. FT. NNN)				
	FIRST YEAR LEASE PAYMENTS TOTAL NNN				
PURCHASE OF THE PROPERTY	PROPOSED CLOSING DATE TO PURCHASE THE PROPERTY	The Property is Currently in Contract with Xebec for purchase from Norfolk Southern Railroad. The closing is expected to occur in 2021. The property could be acquired in 60 to 90 Days from Contract Execution	Timing to purchase is To Be Determined, TPA is currently acquiring the property. Closing in 2021		
	PROPOSED PURCHASE PRICE		\$76.00/Sq. Ft. or \$47,310,000	Still Researching this site - No Proposal Yet	The date of the Seller's closing is yet to be determined. Upon closing of the Trident Purchase,
	PROPOSED PURCHASE PRICE WITH MAX EXPANSION CAPABILITY	The 40 Acre Site would be Acquired for \$275,000 to \$300,000 Per Acre = \$11M to \$12M	The 40 Acre Site would be Acquired for \$275,000 to \$300,000 Per Acre = \$11M to \$12M	\$76.00/Sq. Ft.	
	PROPOSED PURCHASE PRICE \$/SQ. FT.				
TI INCLUDED IN THE PROPOSED PRICING	TI ALLOWANCE INCLUDED (\$/SQ. FT.)	Not Applicable	Scope of Shell Delivery to be Negotiated	Still Researching this site - No Proposal Yet	Still Researching this site - No Proposal Yet
	TI ALLOWANCE INCLUDED (TOTAL)				
SIMPSON'S CONSTRUCTION	PROPOSED SIMPSON CONSTRUCTION START DATE	Upon Simpson's Closing on the Land.	Upon Closing, the building shell will be constructed by TPA to Simpson's specifications	Unknown	Unknown
SIMPSON'S EXISTING PROPERTY	NOTES REGARDING THE EXISTING PROPERTY: 2600 INTERNATIONAL STREET	This Scenario would allow the continued use of the Existing Facility on International Street	Not proposed		This Developer has expressed an interest in purchasing the Existing Simpson building as a component of this transaction
	NOTES:	We would anticipate that a 200,000 Sq. Ft. Addition could be accomplished at \$70.00 to \$80.00/Sq. Ft. \$14M to \$16M	Although no TI was Proposed, we would expect to have room to negotiate a greater scope within the offered pricing. This property is currently under contract to purchase by the national developer - TPA Group.	The Site presents challenges to development.	This is a newly available site on the market and the Developer is currently in contract to purchase the site

1 BUCKEYE YARD RAIL SITE

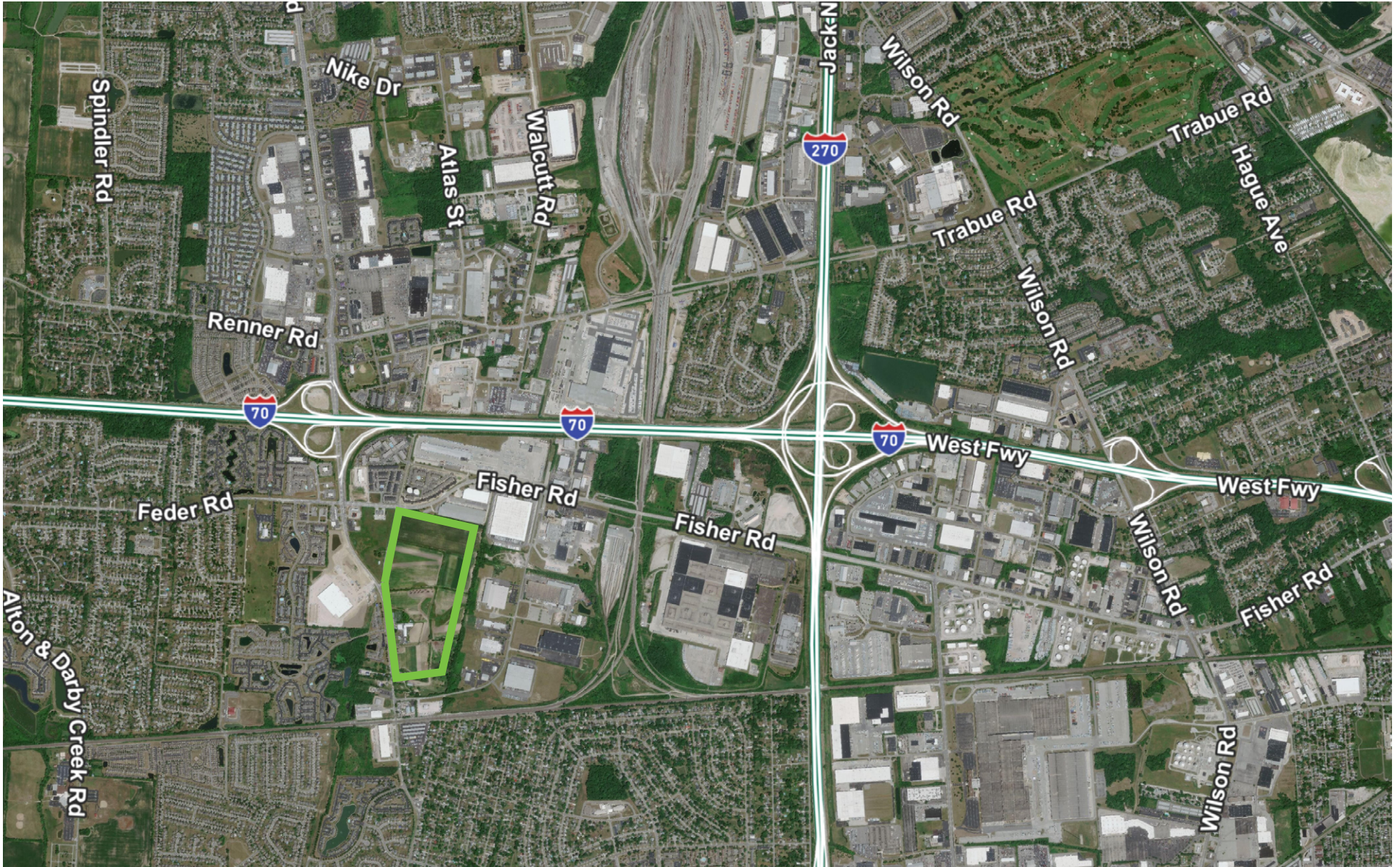


1 BUCKEYE YARD RAIL SITE

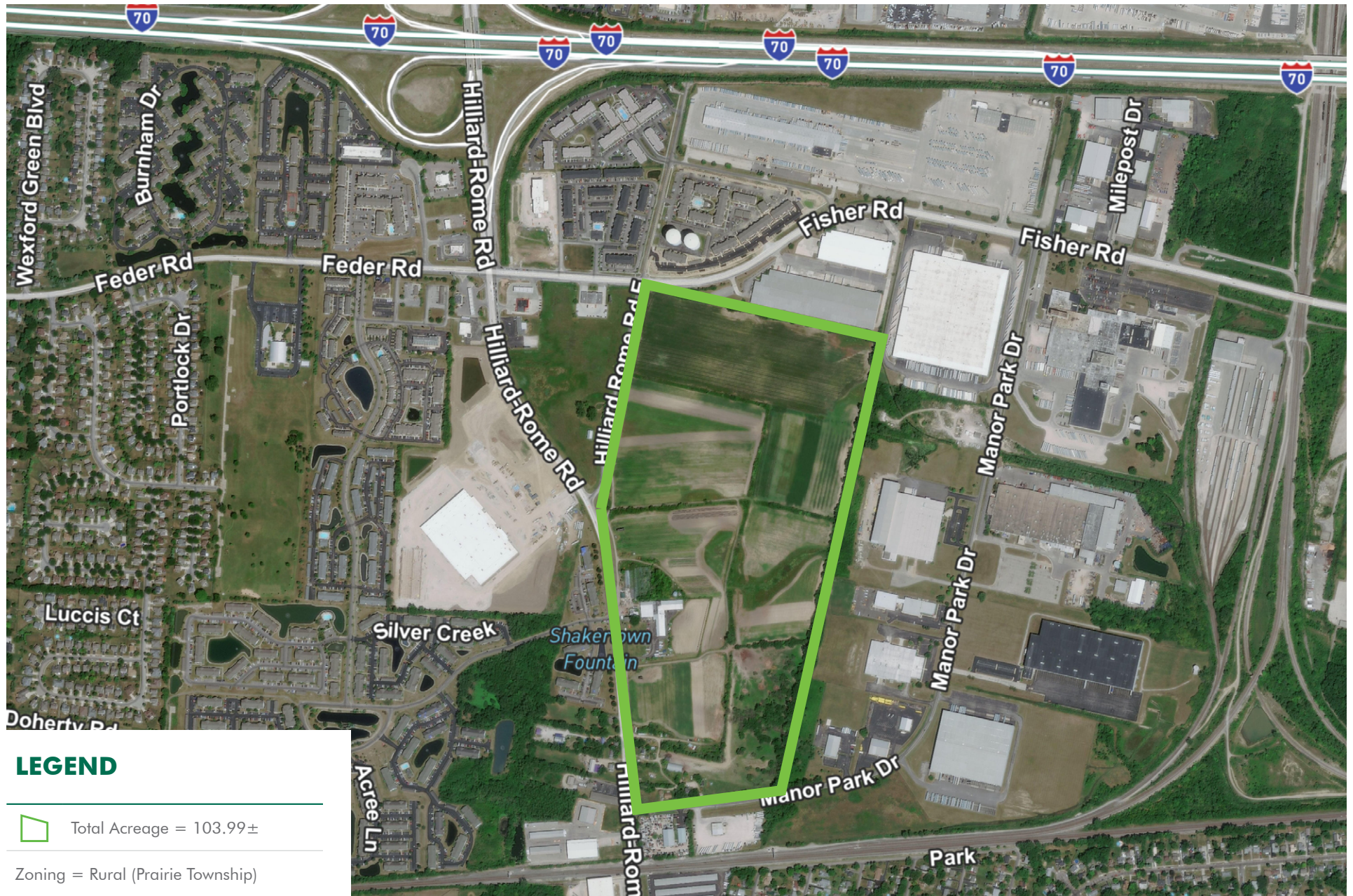
- PROPOSED LAND SALE (ROBERTS RD TO KM LINE): ± 41.01 ACRES
- NORFOLK SOUTHERN RIGHT OF WAY
- APPROX. TRACK SALE (ROBERTS RD TO KM LINE): $\pm 23,000$ FT
- EXISTING TRACKS



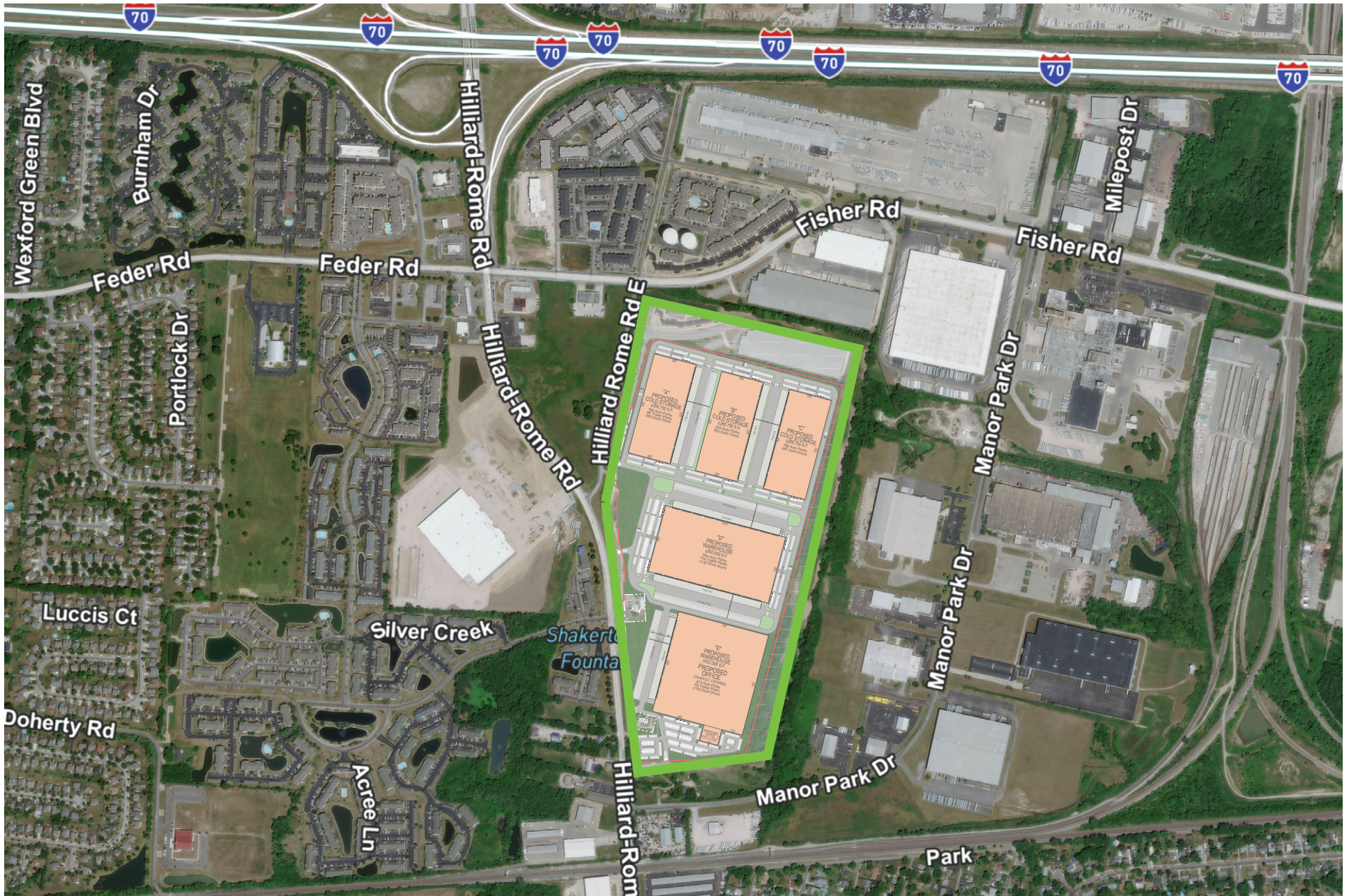
2 HOFFMAN FARM, 800 HILLIARD ROME ROAD



2 HOFFMAN FARM, 800 HILLIARD ROME ROAD



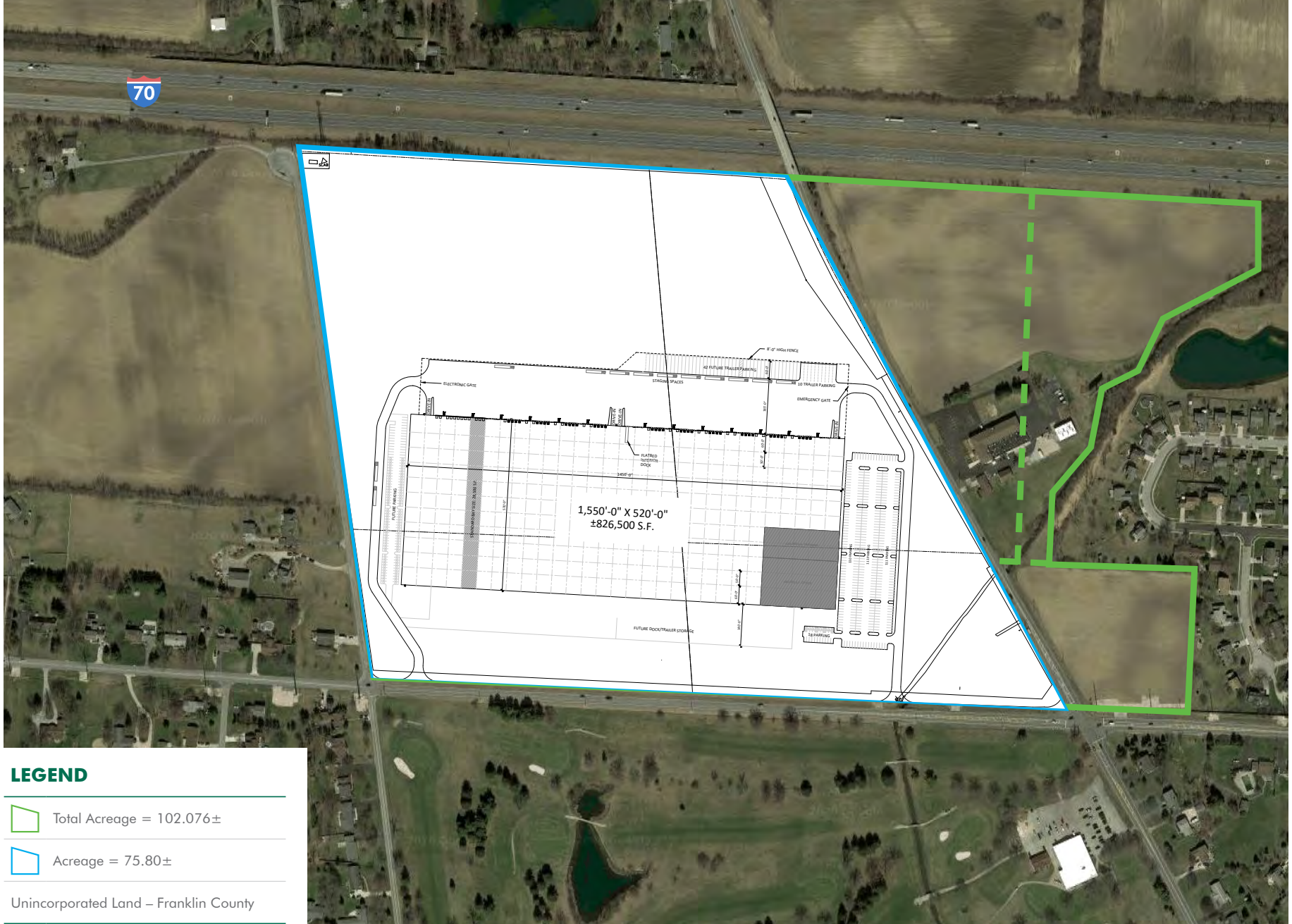
2 HOFFMAN FARM, 800 HILLIARD ROME ROAD



3 SELECT SIRES SITE



3 SELECT SIRES SITE



LEGEND

 Total Acreage = 102.076±

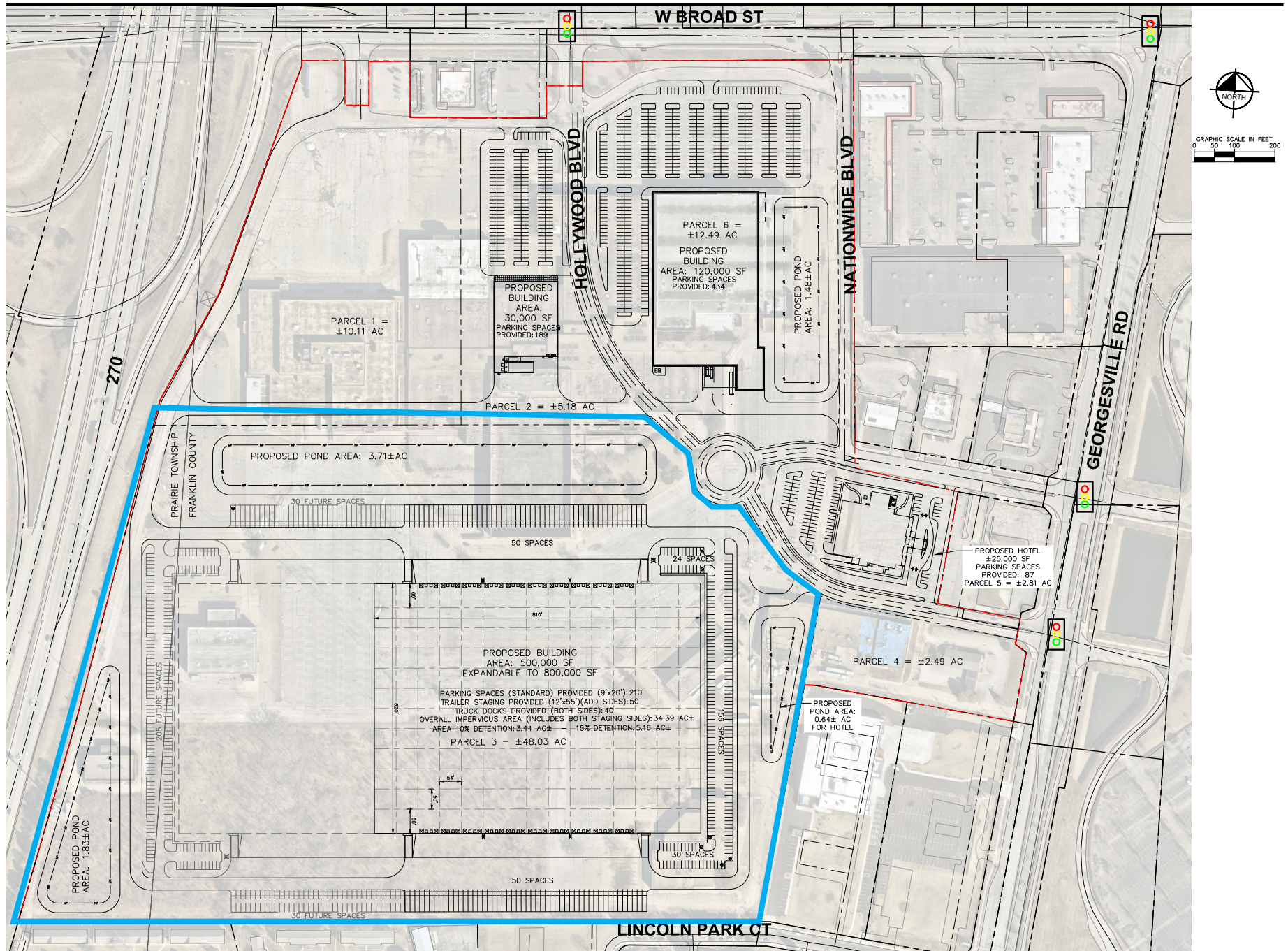
 Acreage = 75.80±

Unincorporated Land – Franklin County

4 WESTLAND MALL SITE



4 WESTLAND MALL SITE





PREPARED BY

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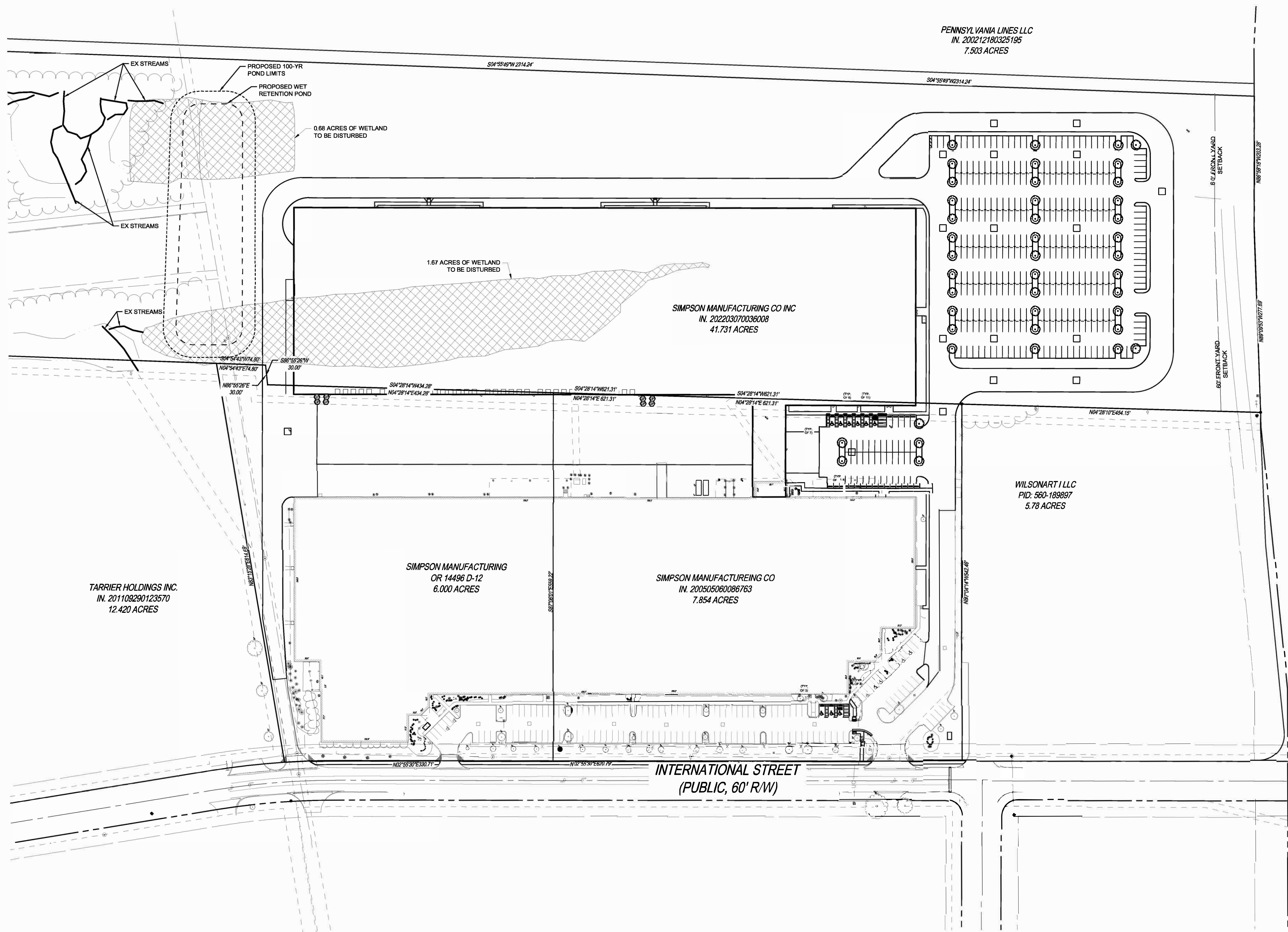
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ATTACHMENT B

Minimal Disturbance Alternative Concept Plan



PENNSYLVANIA LINES LLC
IN. 200212180325195
7.503 ACRES

LEGEND
 WETLAND AREA TO BE DISTURBED

NOTES
 1. 2.35 TOTAL ACRES OF WETLAND TO BE DISTURBED
 2. 41.80 LINEAR FEET OF STREAM TO BE DISTURBED

ROBERTS ROAD
(R/W VARIES)

INTERNATIONAL STREET
(PUBLIC, 60' R/W)

TARRIER HOLDINGS INC.
IN. 201109290123570
12.420 ACRES

SIMPSON MANUFACTURING
OR 14496 D-12
6.000 ACRES

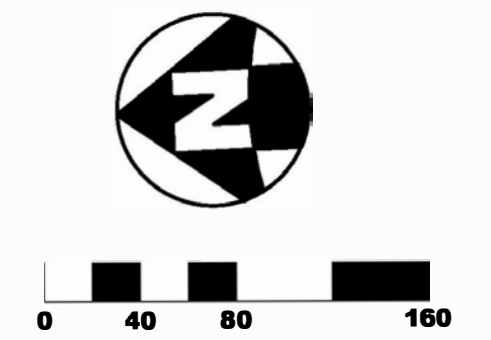
SIMPSON MANUFACTURING CO
IN. 200505060086763
7.854 ACRES

WILSONART / LLC
PID: 560-189897
5.78 ACRES

SIMPSON MANUFACTURING CO INC
IN. 202203070036008
41.731 ACRES

0.68 ACRES OF WETLAND
TO BE DISTURBED

1.67 ACRES OF WETLAND
TO BE DISTURBED



PLANS PREPARED BY:

THE KLEINGERS GROUP

CIVIL ENGINEERING
SURVEYING
LANDSCAPE
ARCHITECTURE
www.kleingers.com
350 Worthington Rd
Suite B
Westerville, OH 43082
614.882.4311

REVISION	DESCRIPTION	INITIAL	DATE

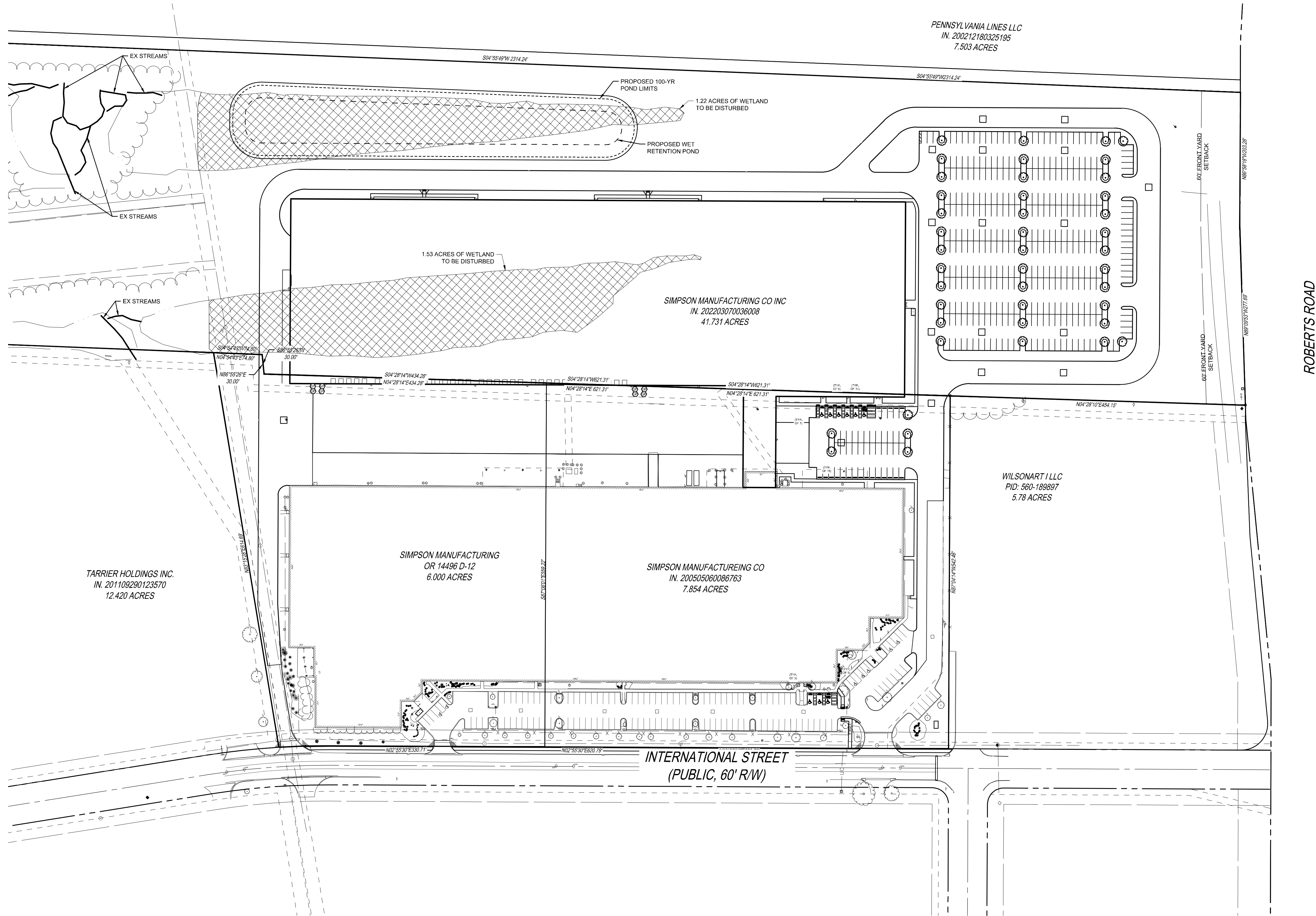
SIMPSON STRONG-TIE DEVELOPMENT
MINIMAL IMPACT WETLAND EXHIBIT
2600 INTERNATIONAL STREET
CITY OF COLUMBUS
FRANKLIN COUNTY, OHIO

DATE	10/28/2022	JOB NO.	210880.001
SCALE	1"=80'	SHEET	2/2

H:\Columbus\210880\001_L\DWG_Misc\etad\etad\2022-10-28\11\etad\11\pac\w\etad\etad.dwg, 10/28/2022, 12:28:49 PM, mcooner

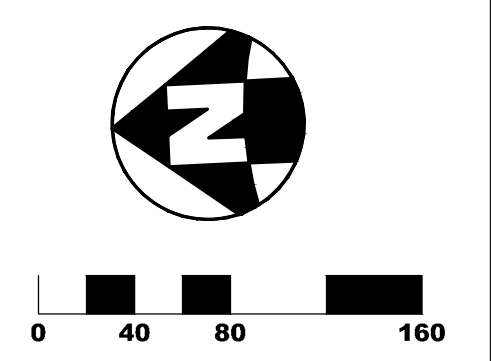
ATTACHMENT C

Preferred Alternative Concept Plan



LEGEND
 WETLAND AREA TO BE DISTURBED

NOTES
 1. 2.75 TOTAL ACRES OF WETLAND TO BE DISTURBED



PLANS PREPARED BY:

THE KLEINGERS GROUP

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 SURVEYING
 LANDSCAPE ARCHITECTURE
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 Suite B
 Westerville, OH 43082
 614.882.4311

REV	REVISION DESCRIPTION	INITIAL	DATE

SIMPSON STRONG-TIE DEVELOPMENT
 PREFERRED ALTERNATIVE WETLAND EXHIBIT
 2600 INTERNATIONAL STREET
 CITY OF COLUMBUS
 FRANKLIN COUNTY, OHIO

DATE: 10/28/2022
 SCALE: 1"=80'

JOB NO.: 210880.001
 SHEET: 1/2

H:\Columbus\210880\01_DWG_01es Wetland Exhibit 2022-10-28 Preferred Alternative Wetland Exhibit.dwg, 10/28/2022, 1:28:00 PM, mcoover

ATTACHMENT D

Current Mitigation Credit Receipt from Stream + Wetland Foundation



123 South Broad Street, Suite 238
P.O. Box 369
Lancaster, Ohio 43130
T: (740) 654-4016
F: (740) 689-0890

November 4, 2022

Mr. Burak Gursel
Simson Strong-Tie Co., Inc.
5956 W. Positas Blvd.
Pleasanton, CA 94588

RE: Wetlands Mitigation for the Buckeye Yard Expansion site located at 2600 International Street, Columbus Ohio 43228
ACCT NO. SCIO-179

Dear Mr. Gursel:

The Stream + Wetlands Foundation received on November 4, 2022, an amended purchase agreement for the Buckeye Yard Expansion site. As per the terms of the updated purchase agreement, the previously paid deposit payment of \$32,175 (Check #749648) reserves 4.2 acres of non-forested wetland mitigation credits, from our Huntington In-Lieu Fee Program.

The remaining balance of \$198,825 is due within 30 days of the permit issuance date. If you do not receive your permit within the 6-month reservation period, an additional deposit payment will be required as per the terms of our agreement.

Thank you very much for allowing Stream + Wetlands Foundation to assist you with the wetlands mitigation needs of this project. Should you need further assistance, please feel free to call anytime.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Vincent E. Messerly'.

Vincent E. Messerly, P.E.
President

Cc: Lindsay Hanna, MAD Scientist & Associates, via email

ATTACHMENT B
WETLAND DELINEATION REPORT



Memorandum: Buckeye Yard Wetland Assessment

Date: May 3, 2022

RE: Assessment of water resources onsite at Buckeye Yard (north of Roberts Road) in Franklin County, Ohio

Introduction

This is a supplemental memo to be included with the delineation report completed by Central Ohio Wetland Consulting, LLC on April 20, 2021.

Simpson Strong-Tie Co., Inc. (SST) hired MAD Scientist Associates, LLC (MAD) to provide wetland assessment services as part of the company's due diligence prior to purchasing a property within Buckeye Yard north on Roberts Road in Franklin County, OH (Figures 1 and 2). Field work was completed on October 18, 2021, by Certified Wetland Delineator (CWD) Lindsay Hanna and Environmental Technician Cody Wright. Observations were recorded regarding the delineated water resources onsite as well as any additional wetlands observed. In addition, connectivity of water resources to make a potential jurisdictional determination was reviewed. Delineation datasheets were completed using methods presented in the 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Midwest Regional Supplement (Version 2.0; USACE, 2012).

Site Findings

MAD confirmed the presence of seven (7) wetlands and eight (8) streams onsite. MAD verified the wetland boundaries that were delineated by Central Ohio Wetland Consulting, LLC in a previous delineation report and completed datasheets at each wetland. In addition, MAD delineated an additional wetland and conducted an ORAM for this wetland. Based on field observations, these wetlands and streams are potentially jurisdictional, however a formal jurisdictional determination will have to be submitted to USACE before this can be verified.

Supplemental photos can be found in Appendix A of this addendum.

Wetlands 1-6

MAD confirmed the presence of Wetlands 1 through 6 that were previously delineated by Central Ohio Wetland Consulting, LLC in April 2021. The updated wetland boundaries are presented in Figure 3 of this addendum. Wetland datasheets are provided in Appendix B of this addendum.

Wetland 7

Wetland 7 is located in the northern portion in Buckeye Yard located along the edge of the railroad track. The wetland is estimated to be 0.057 acres. Dominant species include green ash (*Fraxinus pennsylvanica*-FACW), cottonwood (*Populus deltoides*-FAC), gray dogwood (*Cornus racemose*-FAC), common buckthorn (*Rhamnus cathartica*-FAC), narrow-leaf cattail (*Typha angustifolia*-OBL), barnyard grass (*Echinochloa crus-galli*-FACW), and yellow nutsedge

(*Cyperus esculentus*-FACW). Wetland hydrology indicators at the Site for Wetland 7 included saturation, geomorphic position, and passing the FAC-neutral test for plants. Hydric soil indicators included depleted matrix (F3) evidenced by a low chroma of 2, with prominent redoximorphic features present (4 to 12 percent) as concentration in the matrix.

Wetland 7 is small with a very narrow buffer of high intensity land uses. The hydrology has been impacted by the nearby railroad track and stormwater input; it appears to be recovering. Similarly, the habitat has been impacted by shrub removal and is of fair quality; it appears to be recovering. In general, there is little wildlife habitat and a sparse amount of invasive cattail. Based on these factors, Wetland 7 scored a 23 on the ORAM, categorizing it as a Category 1 wetland.

Impacts

Wetlands 4 and 6 will be impacted. In total, 2.51 acres of wetland will be impacted (1.35 acres of Wetland 4 and 1.16 acres of Wetland 6).

Literature Cited:

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report. Y-87-1. U.S. Army Engineers Waterways Experiment Station. Vicksburg, MS.

Ohio EPA. 2001. Ohio Rapid Assessment Method for Wetlands. Version 5.0 Final. Ohio Environmental Protection Agency. Columbus, Ohio.

USACE. 2012. Regional supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0). J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J.F. Berkowitz. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Figures



Legend

Site Boundary

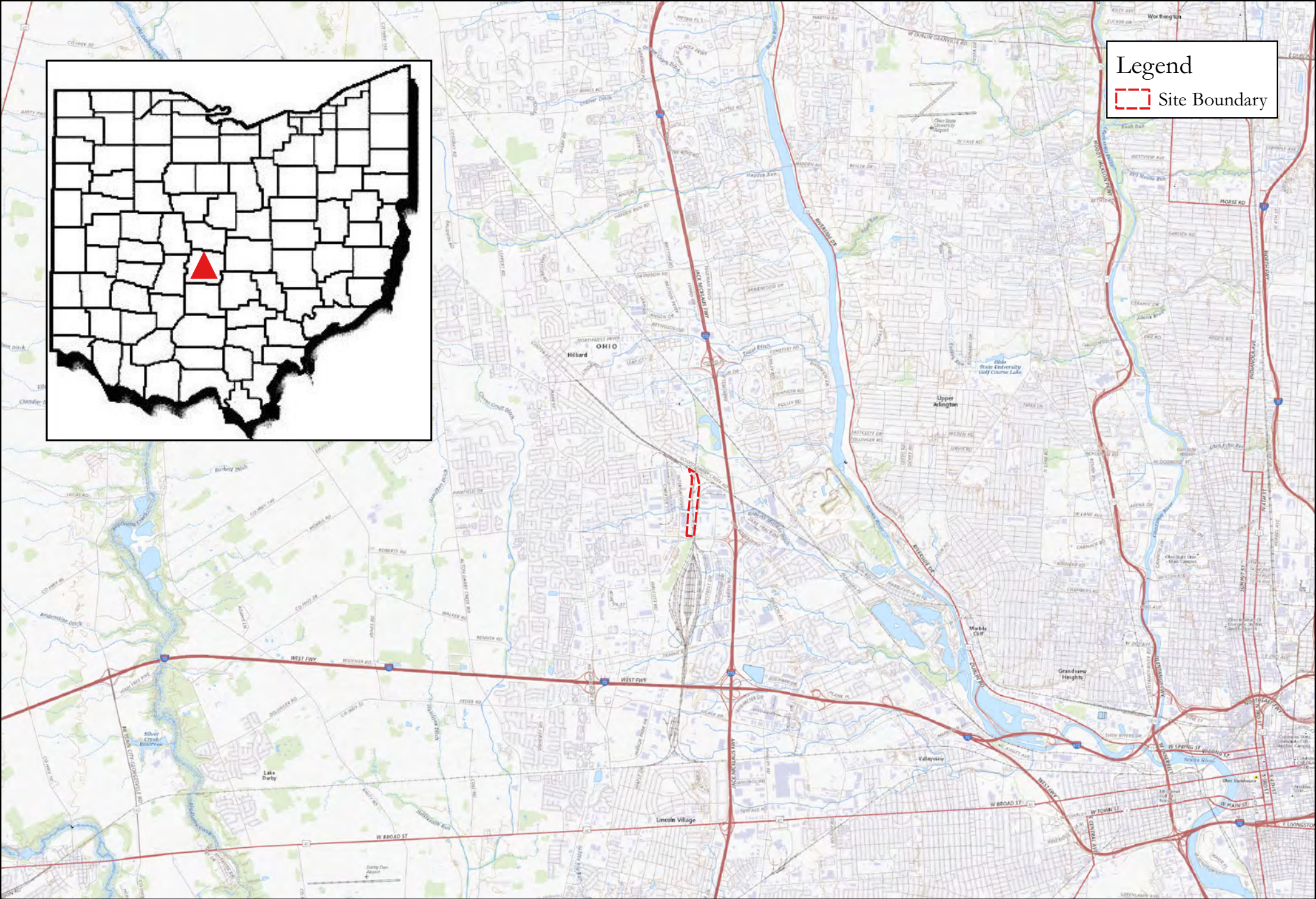
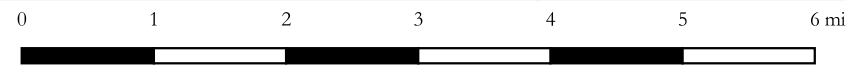


Figure 1. Site Location
 Buckeye Yard, Simpson Strong-Tie
 Columbus, Ohio

Sources: ArcGIS Topography



Date: November 4, 2021



Created By: Lindsay Hanna





Legend
 Site Boundary

Figure 2. Site Aerial
 Buckeye Yard, Simpson Strong-Tie
 Columbus, Ohio

Sources: Google Satellite (2019)



Date: November 4, 2021



Created By: Lindsay Hanna





Legend

- Site Boundary
- Wetlands
- Streams

Figure 3. Wetlands and Streams Onsite
 Buckeye Yard, Simpson Strong-Tie
 Columbus, Ohio

Sources: Google Satellite (2019)



Date: November 4, 2021



Created By: Lindsay Hanna



Attachment A

Photolog



Photograph 1 – Soil in Wetland 1.



Photograph 2 –Wetland 1 facing northeast toward wetland interior.



Photograph 3 – Upland area between Wetland 1 and Wetland 3, facing south.



Photograph 4 – Soil in Wetland 2.



Photograph 5 – Wetland 2 interior, facing north.



Photograph 6 – Wetland 2 interior, facing east.



Photograph 7 – Soil at Upland 2.



Photograph 8 – Soil in Wetland 3.



Photograph 9 – Wetland 3 interior, facing north.



Photograph 10 – Wetland 4 connectivity with stream, facing south.



Photograph 11 – Upland facing Wetland 4, facing north.



Photograph 12 – Soil in Wetland 5.



Photograph 13 – Wetland 5, facing north.



Photograph 14 – Soil in Wetland 6.



Photograph 15 – Wetland 6 facing north, toward stream area.



Photograph 16 – Wetland 6 interior, facing south.



Photograph 17 – Soil in Wetland 7.



Photograph 18 – Wetland 7 interior, facing east.

Attachment B

Datasheets

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W1-up
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.013685° Long: -83.127905° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Site appears mowed, potential soil modification. Wetland A interior mix of FAC, FACU and FACW species.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Populus deltoides</u>	<u>8</u>	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>8</u> =Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	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 = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ =Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Schizachyrium scoparium</u>	<u>10</u>	Yes	FACU	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.
2. <u>Euthamia graminifolia</u>	<u>5</u>	No	FACW	
3. <u>Juniperus virginiana</u>	<u>12</u>	Yes	FACU	
4. <u>Spiraea japonica</u>	<u>10</u>	Yes	UPL	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>37</u> =Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
_____ =Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: W1-up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12)</p> <p><input type="checkbox"/> Red Parent Material (F21)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (F22)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
--	---	---

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

<p>Restrictive Layer (if observed):</p> <p>Type: _____ Rocks _____</p> <p>Depth (inches): _____ 1 _____</p>	<p>Hydric Soil Present? Yes _____ No <u>X</u></p>
--	---

Remarks:
Along train track, uphill between Wetland 1 and Wetland 3/

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
---	---

<p>Field Observations:</p> <p>Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____</p> <p>Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____</p> <p>Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____</p> <p>(includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes _____ No <u>X</u></p>
--	--

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W1-wet
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.013687° Long: -83.127801° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Site appears mowed, potential soil modification. Wetland A interior mix of FAC, FACU and FACW species.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Populus deltoides</u>		20	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. <u>Salix nigra</u>		18	Yes	OBL	
3. _____					
4. _____					
5. _____					
		38 =Total Cover			
Sapling/Shrub Stratum	(Plot size: _____)				
1. _____					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 = _____
2. _____					
3. _____					
4. _____					
5. _____					
		=Total Cover			
Herb Stratum	(Plot size: _____)				
1. <u>Salix nigra</u>		5	Yes	OBL	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Cornus sericea</u>		10	Yes	FACW	
3. <u>Rhamnus cathartica</u>		8	Yes	FAC	
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
		23 =Total Cover			
Woody Vine Stratum	(Plot size: _____)				
1. _____					Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____					
		=Total Cover			

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

SOIL

Sampling Point: W1-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	98	10YR 5/6	2	C	M	Loamy/Clayey	Prominent redox concentrations
3-13	2.5Y 4/2	98	10YR 5/4	2	C	M	Loamy/Clayey	Distinct redox concentrations
13-15	10YR 4/2	96	10YR 4/6	1	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 6/4	3	C	M		Distinct redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- ? Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

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 Depth (inches): 5
 Water Table Present? Yes No Depth (inches): 5
 Saturation Present? Yes No Depth (inches): 5
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W2-up
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.012603° Long: -83.127084° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Populus deltoides</u>	15	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
	15 =Total Cover																			
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Rhamnus cathartica</u>	35	Yes	FAC	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>2</u></td> <td>x 2 = <u>4</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>24</u></td> <td>x 5 = <u>120</u></td> </tr> <tr> <td>Column Totals: <u>76</u> (A)</td> <td><u>274</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.61</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>2</u>	x 2 = <u>4</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>24</u>	x 5 = <u>120</u>	Column Totals: <u>76</u> (A)	<u>274</u> (B)	Prevalence Index = B/A = <u>3.61</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>2</u>	x 2 = <u>4</u>																			
FAC species <u>50</u>	x 3 = <u>150</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>24</u>	x 5 = <u>120</u>																			
Column Totals: <u>76</u> (A)	<u>274</u> (B)																			
Prevalence Index = B/A = <u>3.61</u>																				
2. <u>Lonicera maackii</u>	15	Yes	UPL																	
3. _____																				
4. _____																				
5. _____																				
	50 =Total Cover																			
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Lonicera maackii</u>	9	Yes	UPL	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.																
2. <u>Fraxinus pennsylvanica</u>	2	No	FACW																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
	11 =Total Cover																			
Woody Vine Stratum (Plot size: _____)																				
1. _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																
2. _____																				
	=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: W2-up

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

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____ roots
 Depth (inches): 8

Hydric Soil Present? Yes No

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 Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 3
 Saturation Present? Yes No Depth (inches): 3
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W2-wet
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.012542° Long: -83.127187° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: _____	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Populus deltoides</u>	20	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>85.7%</u> (A/B)																
2. <u>Acer saccharinum</u>	15	Yes	FACW																	
3. _____																				
4. _____																				
5. _____																				
	35	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Rhamnus cathartica</u>	8	Yes	FAC	Prevalence Index worksheet: <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____	
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 = _____																				
2. <u>Lonicera japonica</u>	5	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
	13	=Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Agrimonia parviflora</u>	18	Yes	FACW	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Euthamia graminifolia</u>	25	Yes	FACW																	
3. <u>Fraxinus pennsylvanica</u>	12	No	FACW																	
4. <u>Symphotrichum lateriflorum</u>	10	No	FACW																	
5. <u>Carex frankii</u>	18	Yes	OBL																	
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
	83	=Total Cover																		
Woody Vine Stratum (Plot size: _____)																				
1. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
2. _____																				
		=Total Cover																		

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

SOIL

Sampling Point: W2-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/2	98	10YR 3/6	2	C	M	Loamy/Clayey	Prominent redox concentrations
3-11	10YR 4/2	95	10YR 5/4	5	C	M	Loamy/Clayey	Distinct redox concentrations
11-16	10YR 3/2	95	10YR 5/4	1	C	M	Loamy/Clayey	Distinct redox concentrations
			10YR 5/6	4	C	M		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- 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)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

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 Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 8
 Saturation Present? Yes No Depth (inches): 1
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W3-wet
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.013665° Long: -83.128058° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes _____ No <u>0</u> Hydric Soil Present? Yes _____ No <u>0</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Site appears mowed, potential soil modification. Wetland A interior mix of FAC, FACU and FACW species.	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix nigra</u>	<u>25</u>	Yes	OBL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>25</u> =Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				
1. <u>Cornus sericea</u>	<u>10</u>	Yes	FACW	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 = _____
2. <u>Lonicera maackii</u>	<u>5</u>	Yes	UPL	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>15</u> =Total Cover			
<u>Herb Stratum</u> (Plot size: <u>5</u>)				
1. <u>Phalaris arundinacea</u>	<u>18</u>	Yes	FACW	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Typha x glauca</u>	<u>5</u>	Yes	OBL	
3. <u>Symphytotrichum lateriflorum</u>	<u>2</u>	No	FACW	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
	<u>25</u> =Total Cover			
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
	_____ =Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: W3-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/1	100					Loamy/Clayey	
3-11	10YR 4/2	97	7.5YR 5/6	3	C	M	Loamy/Clayey	Prominent redox concentrations
11-16	2.5Y 5/1	97	10YR 5/6	3	C	M	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 10 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 11 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W4-up
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.005752° Long: -83.128613° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: _____ _____ _____	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B)
2. _____					
3. _____					
4. _____					
5. _____					
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				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 = _____
1. <u>Rhamnus cathartica</u>		<u>2</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Juniperus virginiana</u>		<u>3</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Pyrus calleryana</u>		<u>1</u>	<u>No</u>	<u>UPL</u>	
4. <u>Populus deltoides</u>		<u>2</u>	<u>Yes</u>	<u>FAC</u>	
5. _____					
		=Total Cover			
Herb Stratum	(Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - 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.
1. <u>Schizachyrium scoparium</u>		<u>10</u>	<u>No</u>	<u>FACU</u>	
2. <u>Juniperus virginiana</u>		<u>10</u>	<u>No</u>	<u>FACU</u>	
3. <u>Euthamia graminifolia</u>		<u>18</u>	<u>Yes</u>	<u>FACW</u>	
4. <u>Epilobium coloratum</u>		<u>20</u>	<u>Yes</u>	<u>OBL</u>	
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
		=Total Cover			
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____					
2. _____					
		=Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.) _____ _____					

SOIL

Sampling Point: W4-up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 4/2	100					Loamy/Clayey	
8-13	10YR 4/3	100					Loamy/Clayey	friable

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
---	---

Remarks:
Gravel in layer at 3 inches

HYDROLOGY

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W4-wet
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.005886° Long: -83.128574° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
				=Total Cover	Prevalence Index worksheet: <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____	
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 = _____																					
				=Total Cover																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																					
1.	_____	_____	_____	_____	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
				=Total Cover																	
Herb Stratum (Plot size: <u>5</u>)																					
1.	<u>Typha X glauca</u>	<u>35</u>	<u>Yes</u>	<u>OBL</u>																	
2.	<u>Juncus effusus</u>	<u>32</u>	<u>Yes</u>	<u>OBL</u>																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
				<u>67</u> =Total Cover																	
Woody Vine Stratum (Plot size: _____)																					
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
				=Total Cover																	
Remarks: (Include photo numbers here or on a separate sheet.)																					

SOIL

Sampling Point: W4-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	2.5Y 5/2	100					Loamy/Clayey	
3-4	2.5Y 5/2	98	2.5Y 5/4	2	C	M	Loamy/Clayey	Distinct redox concentrations
4-8	10YR 5/2	94	10YR 5/6	6	C	M	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Gravel in layer at 3 inches

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 Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 1
 Saturation Present? Yes No Depth (inches): 1
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 10/18/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W5&6-up
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.007998° Long: -83.127790° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Site appears mowed, potential soil modification. Wetland A interior mix of FAC, FACU and FACW species.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Catalpa speciosa</u>	20	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>42.9%</u> (A/B)
2. <u>Acer saccharinum</u>	20	Yes	FACW	
3. <u>Fraxinus pennsylvanica</u>	10	No	FACW	
4. <u>Celtis occidentalis</u>	18	Yes	FAC	
5. _____	68	=Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Lonicera maackii</u>	50	Yes	UPL	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 = _____
2. <u>Ligustrum vulgare</u>	15	Yes	FACU	
3. <u>Rhamnus cathartica</u>	10	No	FAC	
4. _____				
5. _____				
75 =Total Cover				
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Rhamnus cathartica</u>	10	Yes	FAC	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.
2. <u>Lonicera maackii</u>	8	Yes	UPL	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
18 =Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. _____				
_____ =Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: W5&6-up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/2	98	10YR 4/6	2	C	PL	Loamy/Clayey	Prominent redox concentrations
8-16	2.5Y 4/2	100					Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- ? Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____ Rocks _____
 Depth (inches): _____ 1 _____

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 X No _____ Depth (inches): 7
 Saturation Present? Yes _____ No X Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 10/18/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W5-wet
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.008253° Long: -83.127799° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>0</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Site appears mowed, potential soil modification. Wetland A interior mix of FAC, FACU and FACW species.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Catalpa speciosa</u>	35	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>62.5%</u> (A/B)
2. <u>Acer saccharinum</u>	20	Yes	FACW	
3. <u>Fraxinus pennsylvanica</u>	15	No	FACW	
4. <u>Ulmus americana</u>	15	No	FACW	
5. _____				
85 = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Cornus racemosa</u>	10	Yes	FAC	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 = _____
2. <u>Fraxinus pennsylvanica</u>	12	Yes	FACW	
3. <u>Lonicera maackii</u>	8	Yes	UPL	
4. _____				
5. _____				
30 = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Lysimachia nummularia</u>	10	Yes	FACW	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Symphotrichum lanceolatum</u>	8	Yes	FAC	
3. <u>Viburnum trilobum</u>	5	Yes	FAC	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
23 = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. _____				
_____ = Total Cover				

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

SOIL

Sampling Point: W5-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	2.5Y 4/2	93	10YR 5/8	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations
			2.5Y 4/1	2	RM	M		
9-16	2.5Y 5/2	91	10YR 5/6	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations
			10YR 3/6	4	C	PL/M		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- ? Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

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 Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 4
 Saturation Present? Yes No Depth (inches): 4
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 11/3/21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W6-wet
 Investigator(s): Lindsay Hanna Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): Concave
 Slope (%): 2 Lat: 40.007824° Long: -83.127451° Datum: NAD '83
 Soil Map Unit Name: Urban land-Celina complex, 2 to 12 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: _____	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix nigra</u>		10	Yes	OBL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. <u>Fraxinus pennsylvanica</u>		10	Yes	FACW	
3. _____					
4. _____					
5. _____					
		20 =Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				
1. <u>Salix nigra</u>		15	Yes	OBL	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 = _____
2. _____					
3. _____					
4. _____					
5. _____					
		15 =Total Cover			
Herb Stratum	(Plot size: <u>5</u>)				
1. <u>Typha X glauca</u>		10	No	OBL	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Symphotrichum lateriflorum</u>		15	Yes	FACW	
3. <u>Phalaris arundinacea</u>		35	Yes	FACW	
4. <u>Acer saccharinum</u>		5	No	FACW	
5. <u>Impatiens capensis</u>		10	No	FACW	
6. <u>Lysimachia nummularia</u>		10	No	FACW	
7. _____					
8. _____					
9. _____					
10. _____					
		85 =Total Cover			
Woody Vine Stratum	(Plot size: _____)				
1. _____					Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____					
		_____ =Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.) _____					

SOIL

Sampling Point: W6-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	100					Loamy/Clayey	
5-11	10YR 4/1	93	7.5YR 4/6	7	C	M	Loamy/Clayey	Prominent redox concentrations
11-17	10YR 5/1	80	10YR 5/4	15	C	M	Loamy/Clayey	Distinct redox concentrations
			10YR 4/4	5	C	M		Distinct redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

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 Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 2
 Saturation Present? Yes No Depth (inches): 1
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 10-18-21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W7-UP
 Investigator(s): Lindsay Hanna, Cody Wright Section, Township, Range: N/A
 Landform (hillside, terrace, etc.): base of hillslope Local relief (concave, convex, none): concave
 Slope (%): 1 Lat: 40.012823° Long: -83.127693° Datum: NAD' 83
 Soil Map Unit Name: Urban Land-Celina complex NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Along rocky edge of railroad access road	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> 0 </u> (A) Total Number of Dominant Species Across All Strata: <u> 1 </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 0.0% </u> (A/B)
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
				=Total Cover	
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				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 = _____
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
				=Total Cover	
Herb Stratum	(Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<u>Daucus carota</u>	60	Yes	UPL	
2.	<u>Cornus racemosa</u>	10	No	FAC	
3.	<u>Setaria pumila</u>	10	No	FAC	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
				80 =Total Cover	
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
				=Total Cover	
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: W7-UP

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____ Rock _____
 Depth (inches): _____ 0 _____

Hydric Soil Present? Yes _____ No X

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Buckeye Yard City/County: Columbus/Franklin Sampling Date: 10-18-21
 Applicant/Owner: Simpson Strong-Tie State: OH Sampling Point: W7-WET
 Investigator(s): Lindsay Hanna, Cody Wright Section, Township, Range: N/A
 Landform (hillside, terrace, etc.): base of hillslope Local relief (concave, convex, none): concave
 Slope (%): 1 Lat: 40.012821° Long: -83.127668° Datum: NAD' 83
 Soil Map Unit Name: Urban Land-Celina complex NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Area is at the base of the slope of old rail road access road.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus pennsylvanica</u>	3	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. <u>Populus deltoides</u>	10	Yes	FAC	
3. _____				
4. _____				
5. _____				
	13	=Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cornus racemosa</u>	12	Yes	FAC	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 = _____
2. <u>Rhamnus cathartica</u>	5	Yes	FAC	
3. _____				
4. _____				
5. _____				
	17	=Total Cover		
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Typha angustifolia</u>	20	Yes	OBL	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Epilobium coloratum</u>	10	No	OBL	
3. <u>Echinochloa crus-galli</u>	23	Yes	FACW	
4. <u>Populus deltoides</u>	8	No	FAC	
5. <u>Symphytotrichum pilosum</u>	12	No	FACU	
6. <u>Cyperus esculentus</u>	15	Yes	FACW	
7. _____				
8. _____				
9. _____				
10. _____				
	88	=Total Cover		
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2. _____				

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

SOIL

Sampling Point: W7-WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 5/2	96	10YR 6/4	4	C	M	Loamy/Clayey	Distinct redox concentrations
9-12	2.5y 5/2	91	10YR 5/6	6	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 5/1	3	D	M		
12-18	2.5y 5/2	83	10YR 5/6	12	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 4/2	5	D	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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)
- Dark Surface (S7)
- 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 Soils³:

- ? Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

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 Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 17
 Saturation Present? Yes No Depth (inches): 0
 (includes capillary fringe)

Wetland Hydrology Present? Yes No


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


Remarks:

Attachment C

Wetland 7 ORAM

Background Information

Name: Lindsay Hanna		
Date: 4/15/2022		
Affiliation: MAD Scientist Associates		
Address: 253 North State Street, Suite 101 Westerville, Ohio 43081		
Phone Number: (614) 818-9156		
e-mail address: Lindsay@madscientistassociates.net		
Name of Wetland: Wetland 7		
Vegetation Communit(ies): Emergent		
HGM Class(es):		
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.		
		
Lat/Long or UTM Coordinate	WGS 84: 40.012762°	-83.127578°
USGS Quad Name		Dublin
County		Franklin
Township		
Section and Subsection		
Hydrologic Unit Code		050600011204
Site Visit		11/3/2022
National Wetland Inventory Map		
Ohio Wetland Inventory Map		-----
Soil Survey		Urban land-Celina complex
Delineation report/map		Yes

Name of Wetland:	Wetland 7
Wetland Size (acres, hectares):	0.057 acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
	
Comments, Narrative Discussion, Justification of Category Changes:	
<p>Wetland 7 is located in the northern portion in Buckeye Yard located along the edge of the railroad track. The wetland is estimated to be 0.057 acres. Dominant species include green ash (<i>Fraxinus pennsylvanica</i>), cottonwood (<i>Populus deltoides</i>), gray dogwood (<i>Cornus racemosa</i>), common buckthorn (<i>Rhamnus cathartica</i>), narrow-leaf cattail (<i>Typha angustifolia</i>), barnyard grass (<i>Echinochloa crus-galli</i>), and yellow nutsedge (<i>Cyperus esculentus</i>). Wetland hydrology indicators at the Site for Wetland 7 included saturation, geomorphic position, and passing the FAC-neutral test for plants. Hydric soil indicators included depleted depleted matrix (F3) evidenced by a low chroma of 2, with prominent redoximorphic features present (4 to 12 percent) as concentration in the matrix.</p>	
Final score : 23	Category: 1

Wetland 7

Scoring Boundary Worksheet

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

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

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

Wetland 7

Narrative Rating

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

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

Wetland 7

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

Table 1. Characteristic plant species.

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

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

Site: Wetland A	Rater(s): LH	Date: 4/15/2022
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0	0
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

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

Wetland 7

1	3
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

7	10
max 30 pts.	subtotal

Metric 3. Hydrology.

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

Check all disturbances observed

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

11	21
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

Check all disturbances observed

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

21
subtotal this page

Site: Wetland A	Rater(s): LH	Date: 4/15/2022
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21

subtotal first page

0	21
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Wetland 7

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)

2	23
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

23

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
Question 10. Oak Openings	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	11	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	2	
	TOTAL SCORE	23	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one **Category 1** **Category 2** **Category 3**

End of Ohio Rapid Assessment Method for Wetlands.



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JURISDICTIONAL WATERS DELINEATION REPORT

BUCKEYE YARD TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS COLUMBUS, FRANKLIN COUNTY, OHIO

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COWC PROJECT #120120007

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APPENDIX 1 – MAPS AND EVALUATION AREA INFORMATION

General Location Map of Evaluation Area

Location Maps of Evaluation Area

Franklin County Auditor GIS Maps

1954/1955, 1966, 1973, 1980/1981, and 2019 USGS Topographic Maps

USDA Web Soil Survey Maps

National Wetlands Inventory (NWI) Maps

APPENDIX 2 – AERIAL PHOTOGRAPHS

1956 Aerial Photographs

1960 Aerial Photographs

1964 Aerial Photographs

1979 Aerial Photographs

1989 Aerial Photographs

1994 Aerial Photographs

2002 Aerial Photographs

2009 Aerial Photographs

2019 Aerial Photographs

APPENDIX 3 – DELINEATION MAP

Wetland and Stream Delineation Maps

ORAM Scoresheets (24 pages)

APPENDIX 4 – EVALUATION AREA PHOTOGRAPHS

Photo Keys

Field Reconnaissance Photos (Photo 1 through Photo 61)

1.0 INTRODUCTION AND PURPOSE

Central Ohio Wetland Consulting, LLC (COWC) has been contracted by Kimley-Horn and Associates, Inc. (Client) to perform a Jurisdictional Waters Delineation Report for the Buckeye Yard property located in the City of Columbus, Franklin County, Ohio. The "evaluation area" for this Jurisdictional Waters Delineation Report consists of former Norfolk-Southern railroad acreage, including former rail lines and ballast material, ancillary structures, open areas, waste land, and wooded land. For descriptive purposes, the evaluation area has been divided into three separate areas, all of which are part of Franklin County parcels 570-146296, 241-000038, and 560-154558:

- North Section: 41± acres located north of Roberts Road and south of Scioto Darby Creek Road,
- Central Section: 287± acres located north of Trabue Road and south of Roberts Road, and,
- South Section: 77± acres located north of the existing Norfolk Southern CJ Line and south of Trabue Road.

The purpose of COWC's services is to document the size/length, location, and quality of all potentially jurisdictional waters of the United States and/or isolated waters of the State of Ohio within the evaluation area. COWC performed this delineation for specific application to the evaluation area described herein, in accordance with the United States Army Corps of Engineers (USACE) Wetlands Delineation Manual (1987) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. The conclusions made within this Jurisdictional Waters Delineation Report are to be considered "preliminary" until verified by the USACE Huntington, WV District Office. This delineation report can be submitted to the USACE as part of a preliminary jurisdictional determination (PJD), approved jurisdictional determination (AJD), or pre-construction notification (PCN). The Ohio Environmental Protection Agency (Ohio EPA) will require a copy of the delineation report and an AJD letter issued by the USACE for all isolated wetland impacts, and ephemeral stream impacts greater than 300 linear feet.

The delineation includes three principal components: 1) research and review of published information, 2) field reconnaissance and delineation of jurisdictional waters (i.e. wetlands, ponds, and streams), and 3) data compilation/report preparation.

1.1 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

This Jurisdictional Waters Delineation Report has been prepared based upon field observations and COWC's professional interpretation of the USACE Wetlands Delineation Manual (1987) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region at the time of our field reconnaissance. The conclusions presented in this report are professional opinions based on data collected between the commencement date and the

report date. The information in this report is true to the best of our knowledge. COWC obtained some of the information presented in this report from other agencies and sources. COWC assumes no responsibility for the accuracy or completeness of information provided by others. No warranty, expressed or implied, is made.

1.2 SPECIAL TERMS AND CONDITIONS

This report has been prepared by COWC as a professional service for the exclusive use of Kimley-Horn and Associates, Inc. and other parties that may be jointly affiliated by Kimley-Horn and Associates, Inc. and COWC. Any other entity that wishes to use or rely upon this report, or that wishes to duplicate, reproduce, copy, extract, or quote from this report must request permission from COWC to do so. Any unauthorized use of, or reliance upon, this report shall release COWC from any liability resulting from such use or reliance. Any unauthorized duplication, reproduction, copying, excerption, or quotation of this report shall expose the violator to all legal remedies available to COWC.

2.0 EVALUATION AREA AND SURROUNDING AREA CHARACTERISTICS

The evaluation area consists of former Norfolk-Southern railroad acreage, including former rail lines and ballast material, ancillary structures, open areas, waste land, and wooded land. The North Section of the evaluation area consists of 41± acres located north of Roberts Road and south of Scioto Darby Creek Road. The Central Section of the evaluation area consists of 287± acres located north of Trabue Road and south of Roberts Road. The South Section of the evaluation area consists of 77± acres located north of the existing Norfolk Southern CJ Line and south of Trabue Road. Areas surrounding the evaluation area are developed for railroad, industrial, and commercial purposes.

Approximate latitude / longitude coordinates for the central part of each section of the evaluation area are:

- North Section - 40.008475 / -83.127839,
- Central Section - 39.992969 / -83.129678, and
- South Section - 39.974661 / -83.130694.

Appendix 1 includes location maps, Franklin County Auditor Geographic Information System (GIS) Maps, United States Geological Survey (USGS) topographic maps (Hilliard, Ohio and Galloway, Ohio), United States Department of Agriculture (USDA) soil survey maps, and United States Fish & Wildlife Service (USFWS) National Wetland Inventory (NWI) maps. Appendix 2 includes aerial photographs showing the evaluation area. Photographs depicting representative vegetation, property features, and views from several locations around the evaluation are provided in Appendix 4.

3.0 RESEARCH AND REVIEW OF PUBLISHED INFORMATION

COWC's research and review of published information includes: USGS topographic maps, the USDA soil survey map, USFWS NWI map, and aerial photographs from various local governmental agencies. COWC uses this information to determine historical uses of the evaluation area, the geo-morphological setting at the evaluation area, soil types present, whether the evaluation area has been significantly disturbed within the past few years, and for visual evidence of ponds, streams, or saturation or inundation on land surfaces, and the potential for wetlands. Copies of the reviewed information is appended.

3.1 USGS TOPOGRAPHIC MAPS

COWC reviewed 1954/1955, 1966, 1973, 1980/1981, and 2019 Hilliard, Ohio and Galloway, Ohio, USGS 7.5-minute series topographic maps for the evaluation area. COWC uses USGS topographic maps as an indicator of watershed characteristics in and around the evaluation area, and to identify small depressional areas, streams, and wetland mapping symbols. The appendix of this report includes portions of these USGS maps showing the evaluation area.

The maps reviewed indicate several drainages crossing the North, Central, and South Sections of the evaluation area.

North Section

Rail lines are shown within the North Section on the 1973 through 2019 maps. Prior to 1973, the North Section is depicted as vacant land. Roberts Millikin Ditch is shown crossing the central part of the North Section in a general west to east direction. An unnamed tributary to Roberts Millikin Ditch is shown on the southern part of the North Section. This unnamed tributary is shown in a general southwest/northeast orientation on the 1954 through 1980 maps. The 2019 map indicates this unnamed tributary has been reoriented in a general north/south direction, west of existing rail lines. No other potential streams, wetlands, or ponds are depicted on the North Section. Lower surface elevations are generally indicated between railroad lines on the central and northern parts of the North Section.

Central Section

The Central Section is predominately developed with rail lines on the 1973 through 2019 maps. Prior to 1973, the Central Section is depicted as vacant land. The topographic maps show green tint, indicating wooded areas, on the northwest part of the Central Section. One (1) wetland mapping symbol is also depicted within the green tint area on the northwest part of the Central Section. Four (4) unnamed tributary streams are shown crossing the Central Section in a general west to east direction on the 1954/1955 and 1966 maps. These tributary streams are not shown or have be redirected through or around rail lines on the 1973 through 2019 maps.

South Section

Rail lines are shown within the South Section on the 1973 through 2019 maps. Prior to 1973, the North Section is generally depicted as vacant land.

Approximately five (5) unnamed tributaries are shown crossing the South Section of the evaluation area on the 1955 and 1966 maps. Only three (3) tributaries are shown crossing the South Section on the 2019 map. One (1) pond is also depicted on the southern part of the South Section on the 2019 map. No other potential streams, wetlands, or ponds are depicted on the South Section.

3.2 SOIL REVIEW

COWC reviewed information from the USDA Natural Resources Conservation Service (NRCS), the USDA Web Soil Survey website¹, and the list of Hydric Soils of the United States (published by NRCS in cooperation with the National Technical Committee for Hydric Soils). These sources indicate soils underlying the evaluation area consist of the following:

TABLE 1
EVALUATION AREA SOIL DESIGNATIONS

Map Unit ID	Map Unit Name	% Slope	Hydric Classification	% Hydric Component	Component Landform
CeB	Celina silt loam	2-6	Non-hydric with hydric components	Kokomo 5%	Depressions
CrA	Crosby silt loam	0-2	Non-hydric with hydric components	Kokomo 8%	Depressions
CrB	Crosby silt loam	2-6	Non-hydric with hydric components	Kokomo 8%	Depressions
Ko	Kokomo silty clay loam	0-2	Hydric	Kokomo 90%	Depressions
Us	Udorthents, loamy, steep	18-25	Non-hydric	-	-
Uv	Urban land-Celina complex, occasionally flooded	2-12	Non-hydric with hydric components	Kokomo 5%	Depressions

Celina silt loam (CeB) is generally described as a gently sloping, moderately well-drained soil on uplands. These soils are typically found on convex ridgetops, on side slopes above steeper areas, and along well-defined waterways.

Crosby silt loam (CrA and CrB) is generally described as a nearly level to gently sloping, somewhat poorly drained soil on narrow and broad upland areas. This mapping unit also contains areas of Kokomo soils located in depressions and Celina soils on low knolls.

Kokomo silty clay loam (Ko) is described as a nearly level, very poorly drained soil located in depressions and at the heads of drainageways on uplands. Runoff from adjacent higher elevations can cause ponding in Kokomo soils. Kokomo silty clay loam is considered a hydric soil.

¹ <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>

Udorthents, loamy, steep (Us) is generally described as soils in borrow areas that have been subject to surface mining, particularly for use as fill material used under highways and buildings.

Urban land-Celina complex (Uv) is generally described as areas of urban land covered by streets, parking lots, buildings, railroad yards, and other structures. Soils in these areas have been altered to the extent specific soil identification is not feasible. Undeveloped portions of this soil unit are dominated by Celina soil.

The evaluation area is predominately comprised of Urban land-Celina complex soils. Wooded areas adjacent to the west of the existing railroad lines on the Central Section are mapped with Crosby, Celina, and Kokomo soil units.

According to mapping available from the USDA NRCS, and the list of Hydric Soils of the United States published by the NRCS in cooperation with the National Technical Committee for Hydric Soils, the evaluation area contains hydric soil. Thin bands of mapped hydric Kokomo soils are located on the western portions of the Central Section of the evaluation area. The USGS topographic maps indicate these areas are likely drained by tributary streams.

3.3 NATIONAL WETLANDS INVENTORY (NWI) MAP

COWC reviewed the USFWS NWI website² for wetland mapping symbols depicted within the evaluation area. The USFWS produced NWI maps in an attempt to document wetlands throughout the United States. The USFWS generated NWI maps using high-altitude infrared aerial photography to identify areas of saturation or inundation on land surfaces. Areas that are saturated or inundated typically have lower infrared heat signatures than dry areas. The USFWS mapped these cooler infrared heat signature areas as wetlands without field verification. NWI maps may not reflect actual field conditions due to meteorological or seasonal conditions that may have existed at the time of data collection. COWC typically uses NWI maps to plan field reconnaissance, and as an indicator of areas that may support wetlands.

The NWI map shows three (3) wetland mapping symbols within the evaluation area:

- One (1) PEM1C symbol located on the northern part of the North Section,
- One (1) PFO1A symbol located within the wooded northwest part of the Central Section, and
- One (1) PEM1A symbol located on the southern part of the South Section.

The PEM1C designation indicates an area that is palustrine (non-tidal wetlands dominated by trees, shrubs, persistent emergent vegetation), emergent

² <https://www.fws.gov/wetlands/Data/Mapper.html>

(herbaceous, erect and rooted hydrophytes), persistent (dominated by species that normally remain standing through to the next growing season), and seasonally flooded (surface water is present for extended periods, especially early in the growing season, but absent by the end of the growing season in most years). This area was delineated as Wetland 5.

The PFO1A designation indicates an area that is palustrine, forested (containing woody vegetation 20 feet in height and taller), broad-leaved deciduous (trees and shrubs with relatively wide, flat leaves that are shed during the cold and seasonally dry conditions), and temporary flooded (areas where surface water is present for brief (days/weeks) periods during the growing season). This area was delineated as Wetland 7.

The PEM1A designation indicates an area that is palustrine, emergent, persistent, and temporary flooded. This area was delineated as Pond 2.

The NWI map shows streams/drainages in similar locations as depicted on the USGS maps. Drainage features within the evaluation area are depicted with R5UBH and R4SBC designations. The R5UBH designation indicates a permanently flooded (water covers the substrate throughout the year in all years), riverine habitat contained within a channel (open conduit either naturally or artificially created which may periodically or continuously contain moving water) that has an unconsolidated bottom (at least 25% cover of particles less than 6-7 centimeters and vegetative cover less than 30%). The unknown perennial modifier indicates the drainage cannot be distinguished from lower perennial and upper perennial. The R4SBC designation indicates a seasonally flooded, riverine habitat contained within a channel that has intermittent flow (water may flow only part of the year).

3.4 AERIAL PHOTOGRAPHS

COWC reviewed aerial photographs of the evaluation area dated 1956, 1960, 1964, 1979, and 1989 available from the Ohio Department of Transportation Office of CADD & Mapping website³; and 1994, 2002, 2009, and 2019 from Google Earth Pro⁴. Copies of the aerial photographs showing the evaluation area are provided in Appendix 2.

The 1956 through 1964 aerial photographs generally depict the evaluation area as vacant land with numerous streams crossing from west to east.

The 1979 through 2019 aerial photographs generally depict the evaluation area as developed for use as a rail yard. Undeveloped wooded land is located on the western part of the Central Section. Streams previously apparent crossing the

³ <http://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/Pages/default.aspx>

⁴ [Earth Versions – Google Earth](#)

evaluation from west to east have been manipulated, channelized, and relocated as part of development for rail use.

The 2019 aerial photograph indicates the evaluation area is similar in appearance to what was observed during our field reconnaissance on April 9, April 12, and April 13, 2021.

3.4.1 PUBLISHED INFORMATION REVIEW CONCLUSIONS

Information obtained from USGS topographic maps, NWI maps, and aerial photographs indicate the potential for numerous streams, wetlands, and ponds within the evaluation area.

The potential for wetlands and streams within an area cannot be determined solely from review of published information; therefore, an on-site investigation is required to verify current property conditions.

4.0 FIELD RECONNAISSANCE/DELINEATION OF JURISDICTIONAL WATERS

Matthew R. Kaminski, owner of Central Ohio Wetland Consulting, LLC, performed the field reconnaissance for the jurisdictional waters delineation during the morning and afternoon hours on Friday April 9, 2021, Monday April 12, 2021, and Tuesday April 13, 2021. Research and review of published information indicates physical property conditions were generally unchanged for several years prior to this delineation, such that the evaluation area was considered undisturbed for data collection. Therefore, the routine method was used in this assessment. Photographic documentation from the field reconnaissance and general landscape photographs are provided in Appendix 4.

COWC performs its field reconnaissance for jurisdictional waters delineations using criteria and guidance in the Corps of Engineers' Wetland Delineation Manual (USACE, 1987) and the 2010 Midwest Regional Supplement to the 1987 Wetland Delineation Manual. In this method, vegetation, hydrology, and soil criteria are used to identify jurisdictional/isolated wetlands. The delineation method and vegetation sampling methodology uses the procedures for Routine Determinations found in the 1987 and 2010 manuals.

To establish the presence of jurisdictional/isolated wetlands, three characteristics are required to be present. These wetland characteristics consist of hydric soils, a dominance of hydrophytic (i.e. wetland) vegetation, and wetland hydrology. All three criteria must be present for an area to be identified as wetland. These three criteria are defined and explained in detail in the Corps of Engineers' Wetland Delineation Manual (USACE, 1987) and the 2010 Midwest Regional Supplement to the 1987 Wetland Delineation Manual. The Wetlands Research Program of the USACE Waterways Experiment Station developed the manual in 1987. COWC followed the methods described in these manuals in performing the delineation.

Wetland and waterbody delineation of field-verified water features are made using COWC's professional judgment and interpretation of the USACE Jurisdictional Determination Form Instructional Guidebook (USACE, 2007). For the purposes of this report, "non-jurisdictional" or "excluded" is defined as aquatic features that are not regulated by the USACE under the provisions of Section 404 of the Clean Water Act (CWA). Isolated wetlands that do not have a surface water connection to waters of the U.S. and ephemeral streams are non-jurisdictional from the perspective of the USACE; however, are regulated by the Ohio EPA under the provisions of Section 401 of the CWA.

4.1 METHODOLOGY

After collecting pertinent information through the review of published information, COWC uses the routine method to determine if wetland areas exist within the evaluation area. The approach used for the routine determination is the plant community assessment procedure. This approach requires initial identification of representative plant community types in the subject area followed by characterization of vegetation, soils, and hydrology for each community type.

The evaluation area is assessed in accordance with guidelines from the USACE pertaining to potential jurisdictional waters of the United States and/or isolated waters of the State of Ohio. All potential wetlands, streams, and drainage ditches are followed to determine the flow regime and whether such features have a surface water connection to waters of the U.S.

The field investigation is conducted by walking and visually surveying the evaluation area, and in the vicinity, to collect wetland and stream data, as necessary. Upon identification of hydrophytic (wetland) and non-wetland communities, the wetland boundary is surveyed with a Spectra SP20 handheld Global Navigation Satellite System (GNSS) receiver with sub-meter accuracy. Field notes are taken at points where the dominant vegetation species change from wetland to upland or hydrologic or soil indicators become transitional. Areas saturated or inundated by surface water at the time of our field reconnaissance are presumed to contain hydric soil characteristics. COWC records observations concerning hydrology and vegetation on the appropriate Wetland Determination Data Form.

4.1.1 HYDRIC SOIL CRITERIA

COWC performs shovel test pits to characterize soil conditions and to evaluate the presence or absence of hydric soil features. A drain spade is used to collect soil samples from a maximum depth of approximately 20 inches below ground surface. COWC determines the presence or absence of hydric soils by comparing soil samples to a Munsell soil color chart, as soil colors often reveal whether a soil is hydric or non-hydric. The standardized Munsell soil colors consist of three components: hue, value, and chroma. Soil in hydric soil areas typically show yellow-red hues, varying gray color values,

and chromas of one or two. Chromas of two or less are considered low, and are often diagnostic of hydric soils. Hydric mineral soils saturated for long periods of the growing season, but unsaturated for some time, often develop mottles and/or a low chroma matrix. Soils are considered hydric if at least one primary indicator, or at least one problematic hydric soil indicator is present, as defined by the USACE.

Mineral based soils (as opposed to carbon- or organic-based soils) generally contain significant amounts of iron and manganese. As the iron component of the soil matrix comes into contact with the atmosphere, the iron tends to oxidize giving soils a high "chroma" or rust-like color. This characteristic is typically observed in upland (i.e., non-wetlands) areas where oxygen is abundant. On the contrary, mineral soils that are saturated for extended periods (e.g., hydric soils) tend to have oxygen ions stripped, chemically reducing iron and giving these soils bluish-grayish coloring or low chroma. This reduced condition in mineral soils is known as "gleying" and is typically observed in wetlands, where soil oxygen contents are generally lower relative to upland soils. Low oxygen levels in reduced soils also tend to slow decomposition, leading to increased organic content.

The evaluation area is predominately comprised of Urban land-Celina complex soils. Wooded areas adjacent to the west of the existing railroad lines on the Central Section are mapped with Crosby, Celina, and Kokomo soil units. Areas saturated or inundated by surface water at the time of our field reconnaissance were presumed to contain hydric soil characteristics. COWC observed hydric soil characteristics within the areas delineated as Wetland 1 through Wetland 12.

4.1.2 WETLAND HYDROLOGY CRITERIA

Wetland hydrology is determined present in areas that are periodically inundated or have soils saturated to the surface sometime during the growing season. This is a dynamic characteristic and is usually not present during drier periods of the year. Primary wetland hydrology indicators include, but are not limited to, surface water, high water table, inundation, soil saturation in the upper 12 inches of the soil, water marks, sediment deposits, drift deposits, and water-stained leaves. Secondary wetland hydrology indicators include surface soil cracks, drainage patterns, dry-season water table, crayfish burrows, saturation visible on aerial imagery, stunted or stressed plants, geomorphic position, and FAC-Neutral Test of vegetation. One primary indicator or two or more secondary indicators are required to establish a positive indication of wetland hydrology.

COWC observed primary and secondary hydrology indicators for wetlands within the areas delineated as Wetland 1 through Wetland 12.

4.1.3 HYDROPHYTIC VEGETATION CRITERIA

Hydrophytic vegetation is determined present if more than 50 percent of plant species within a plant community have an indicator status of obligate wetland (OBL), facultative wetland (FACW), and/or facultative (FAC). The indicator status of plant species found in wetlands is listed in the 2018 National Wetland Plant List - Midwest Region published by the USACE⁵.

COWC used this data and determined hydrophytic vegetation dominance was present within the areas delineated as Wetland 1 through Wetland 12.

4.2 JURISDICTIONAL WATERS DELINEATION FINDINGS

COWC's field reconnaissance identified twelve (12) wetlands (Wetland 1 through Wetland 12) totaling 13.53± acres, thirteen (13) streams (Stream 1 through Stream 13) totaling 10,377± linear feet, and two (2) ponds (Pond 1 and Pond 2) totaling 1.18± acre within the evaluation area. The centerline of the streams and the boundary of the ponds and wetlands were surveyed with a Spectra SP20 handheld GNSS receiver with sub-meter accuracy. Appendix 3 provides maps showing the location of the delineated wetlands, ponds, and streams. Multi-directional photographs of each stream and wetland, and general landscape photographs are provided in Appendix 4.

Several streams delineated within the evaluation area are depicted on USGS maps as unnamed tributaries to the Scioto River, prior to development of the evaluation area as a railroad yard. Streams within the evaluation area have been placed in culverts, channelized, and relocated as part of development of the evaluation area for railroad use in the mid to late 1960s.

Wetlands within the evaluation area are generally located in low-lying areas between existing railroad lines, and appear to be attributed to poor surface water drainage. Manipulation of on-site drainage features by beavers (*Castor canadensis*) has resulted in the establishment of several of the delineated wetlands.

4.2.1 STREAMS

COWC identified thirteen (13) streams (Stream 1 through Stream 13) totaling 10,377± linear feet within the evaluation area. These streams were delineated as Stream 1 (260± LF), Stream 2 (59± LF), Stream 3 (97± LF), Stream 4 (119± LF), Stream 5 (50± LF), Stream 6 (158± LF), Stream 7 (114± LF), Stream 8 (61± LF), Stream 9 (320± LF), Stream 10 (2,552± LF), Stream 11 (3,921± LF), Stream 12 (369± LF), and Stream 13 (2,297± LF). These streams are further described below.

⁵ [NWPL Home v3.4-f9c \(army.mil\)](http://nwpl.home.v3.4-f9c.army.mil)

TABLE 2
STREAM INFORMATION

Stream ID	Length (On-Site)	Classification	Start Location	End Location
Stream 1 (Roberts Millikin Ditch)	260± LF	Perennial	40.007903 -83.128758	40.008136 -83.127289
Stream 2	59± LF	Ephemeral	40.00785 -83.128597	40.008003 -83.128575
Stream 3	97± LF	Intermittent	40.008131 -83.127797	40.008025 -83.127517
Stream 4	119± LF	Intermittent	40.008147 -83.127458	40.007983 -83.127319
Stream 5	50± LF	Intermittent	40.007975 -83.127436	40.007878 -83.127350
Stream 6	158± LF	Intermittent	40.007728 -83.127353	40.008128 -83.127278
Stream 7	114± LF	Ephemeral	40.008425 -83.127272	40.008136 -83.127278
Stream 8	61± LF	Ephemeral	40.008403 -83.127339	40.008244 -83.127281
Stream 9	320± LF	Intermittent	40.002356 -83.129508	40.002489 -83.128431
Stream 10	2,552± LF	Perennial	39.997258 -83.132658	40.002511 -83.128356
Stream 11	3,921± LF	Perennial	39.993333 -83.134142	39.983883 -83.130006
Stream 12	369± LF	Perennial	39.989911 -83.134697	39.990389 -83.133558
Stream 13	2,297± LF	Perennial	39.969858 -83.138011	39.966231 -83.132869
Total	10,377± LF			

Stream 1 – Roberts Millikin Ditch (260± linear feet North Section)

Stream 1 is an east/west oriented portion of Roberts Millikin Ditch crossing the central part of the North Section of the evaluation area. Roberts Millikin Ditch flows through residential and industrial areas to the west prior to entering the evaluation area. This stream is littered with trash and debris and has perennial flow characteristics. Surface water was flowing within Stream 1 during our field reconnaissance on April 9, 2021.

Stream 1 originates at a round concrete culvert near the western boundary of the North Section of the evaluation area. Stream 1 flows unobstructed for approximately 73 LF before entering double round culverts beneath elevated railroad lines. Upon exiting these culverts, Stream 1 flows for an additional 187 LF before entering a second set of double round culverts beneath elevated railroad lines and exiting the evaluation area to the east.

Stream 1 is located within a wooded corridor on the central part of the North Section. This area appears frequently flooded with numerous deposits of sand and gravel. Stream 1 is highly braided within this frequently flooded area, and overflow drainage from Stream 1 has created several other smaller order streams (Streams 3, 4, and 5). Substrate material within Stream 1 consists of cobble, silt, sand, and gravel.

Stream 2 (59± linear feet North Section)

Stream 2 is an ephemeral stream that drains Wetland 4 on the central part of the North Section of the evaluation area. Excess surface water retained within Wetland 4 follows a natural gradient to the north, where it has cut a channel. Substrate material within Stream 2 consists of silt and hardpan. Surface water was flowing within Stream 2 during our field reconnaissance on April 9, 2021. Stream 2 has a direct surface water connection with Stream 1 (Roberts Millikin Ditch).

Stream 3 (97± linear feet North Section)

Stream 3 appears to have intermittent flow characteristics, and is a braided sub-channel resulting from overflow drainage of Stream 1 (Roberts Millikin Ditch) within a frequently flooded wooded corridor on the central part of the North Section of the evaluation area. Surface water was flowing within Stream 3 during our field reconnaissance on April 9, 2021. Substrate material within Stream 3 consists of silt, sand, and gravel.

Stream 4 (119± linear feet North Section)

Stream 4 appears to have intermittent flow characteristics, and is a braided sub-channel resulting from overflow drainage of Stream 1 (Roberts Millikin Ditch) within a frequently flooded wooded corridor on the central part of the North Section of the evaluation area. Surface water was flowing within Stream 4 during our field reconnaissance on April 9, 2021. Substrate material within Stream 4 consists of silt, sand, and gravel.

Stream 5 (50± linear feet North Section)

Stream 5 appears to have intermittent flow characteristics, and is a braided sub-channel resulting from overflow drainage of Stream 1 (Roberts Millikin Ditch) within a frequently flooded wooded corridor on the central part of the North Section of the evaluation area. Surface water was flowing within Stream 5 during our field reconnaissance on April 9, 2021. Substrate material within Stream 5 consists of silt, sand, and gravel.

Stream 6 (158± linear feet North Section)

Stream 6 is an intermittent stream that drains Wetland 6 on the central part of the North Section of the evaluation area. Excess surface water retained within Wetland 6 follows a natural gradient to the north, where it has cut a

channel. This channel transitions to intermittent flow characteristics at the confluence with Streams 4 and 5. Substrate material within Stream 6 consists of silt, sand, and gravel. Surface water was flowing within Stream 6 during our field reconnaissance on April 9, 2021. Stream 6 has a direct surface water connection with Stream 1 (Roberts Millikin Ditch).

Stream 7 (114± linear feet North Section)

Stream 7 is an ephemeral stream that drains Wetland 5 on the central part of the North Section of the evaluation area. Excess surface water retained within Wetland 5 follows a natural gradient to the south, where it has cut a channel. Substrate material within Stream 7 consists of silt and hardpan. Surface water was flowing within Stream 7 during our field reconnaissance on April 9, 2021. Stream 7 has a direct surface water connection with Stream 1 (Roberts Millikin Ditch).

Stream 8 (61± linear feet North Section)

Stream 8 is an ephemeral stream that drains Wetland 5 on the central part of the North Section of the evaluation area. Excess surface water retained within Wetland 5 follows a natural gradient to the south, where it has cut a channel. Substrate material within Stream 8 consists of silt and hardpan. Surface water was flowing within Stream 8 during our field reconnaissance on April 9, 2021. Stream 8 has a direct surface water connection with Stream 1 (Roberts Millikin Ditch).

Stream 9 (320± linear feet Central Section)

Stream 9 is a west to east flowing intermittent stream on the north part of the Central Section of the evaluation area. Stream 9 originates at the outfall of a round concrete culvert pipe which discharges surface water from a west adjoining stormwater management pond. This stream is littered with trash and debris. Stream 9 has a direct surface water connection with Stream 10 on the northwest part of the Central Section of the evaluation area. Surface water was flowing within Stream 9 during our field reconnaissance on April 13, 2021. Substrate material within Stream 9 consists of silt, sand, and gravel.

Stream 10 (2,552± linear feet Central Section)

Stream 10 is a general southwest to northeast flowing perennial stream on the northwest part of the Central Section of the evaluation area. Stream 10 originates at the outfall of an oval-shaped concrete culvert pipe near the western boundary of the Central Section of the evaluation area. This culvert discharges surface water from the west. Surface water was flowing within Stream 10 during our field reconnaissance on April 13, 2021. Substrate material within Stream 10 consists of cobble, silt, sand, and gravel. Stream 10 is partially impounded by Pond 1.

Stream 11 (3,921± linear feet Central Section)

Stream 11 is a north to south flowing perennial stream contained within a ditch on the southwest part of the Central Section of the evaluation area. Surface water was flowing within Stream 11 during our field reconnaissance on April 13, 2021.

Stream 12 (369± linear feet Central Section)

Stream 12 is a west to east flowing perennial stream contained within a ditch on the southwest part of the Central Section of the evaluation area. Surface water was flowing within Stream 12 during our field reconnaissance on April 13, 2021. Stream 12 has a direct surface water connection to Stream 11.

Stream 13 (2,297± linear feet South Section)

Stream 13 is a west to southeast flowing perennial stream contained within a ditch on the South Section of the evaluation area. Stream 13 enters the South Section of the evaluation area from a culvert beneath Manor Park Drive. Portions of Stream 13 have been impounded by beavers in numerous locations, resulting in the creation of Wetland 11. Surface water was flowing within Stream 13 during our field reconnaissance on April 12, 2021.

4.2.1 WETLANDS

COWC identified twelve (12) wetlands (Wetland 1 through Wetland 12) totaling 13.53± acres within the evaluation area. These areas exhibit a dominance of hydrophytic species, primary and secondary wetland hydrology indicators, and hydric soil characteristics. These wetlands were delineated as Wetland 1 (0.40± acre), Wetland 2 (0.31± acre), Wetland 3 (1.53± acre), Wetland 4 (1.67± acre), Wetland 5 (4.72± acre), Wetland 6 (1.45± acre), Wetland 7 (0.49± acre), Wetland 8 (0.29± acre), Wetland 9 (1.10± acre), Wetland 10 (0.22± acre), Wetland 11 (0.92± acre), and Wetland 12 (0.43± acre). These wetlands are further described below.

TABLE 3
WETLAND INFORMATION

Wetland ID	Acreage (On-Site)	Cowardin Classification	ORAM Score	Status	Location
Wetland 1	0.40±	Palustrine Emergent (PEM)	29 (Cat. 1)	Jurisdictional	40.014106 -83.127944
Wetland 2	0.31±	Palustrine Forested (PFO)	32 (Cat. 2)	Jurisdictional	40.012344 -83.126881
Wetland 3	1.53±	Palustrine Emergent (PEM)	42 (Cat. 2)	Jurisdictional	40.011019 -83.128378

Wetland 4	1.67±	Palustrine Emergent (PEM)	25 (Cat. 1)	Jurisdictional	40.006775 -83.128611
Wetland 5	4.72±	Palustrine Emergent (PEM)	27 (Cat. 1)	Jurisdictional	40.009728 -83.127467
Wetland 6	1.45±	Palustrine Emergent (PEM)	26 (Cat. 1)	Jurisdictional	40.006722 -83.127569
Wetland 7	0.49±	Palustrine Forested (PFO)	49 (Cat. 2)	Jurisdictional	39.998444 -83.130556
Wetland 8	0.29±	Palustrine Emergent (PEM)	38 (Cat. 2)	Jurisdictional	39.997300 -83.131078
Wetland 9	1.10±	Palustrine Emergent (PEM)	34 (Cat. 2)	Jurisdictional	39.970158 -83.133319
Wetland 10	0.22±	Palustrine Emergent (PEM)	24 (Cat. 1)	Jurisdictional	39.969094 -83.133639
Wetland 11	0.92±	Palustrine Forested (PFO)	52 (Cat. 2)	Jurisdictional	39.968056 -83.133531
Wetland 12	0.43±	Palustrine Emergent (PEM)	35 (Cat. 2)	Jurisdictional	39.963508 -83.131206
Total	13.53±				

COWC completed Ohio Rapid Assessment Method (ORAM) score sheets for the wetland areas delineated within the evaluation area. Wetland areas identified within the evaluation area scored within Category 1 and Category 2, according to Ohio EPA standards. The ORAM forms are appended.

Using the USACE OMBIL Regulatory Module (ORM) Project Upload Template, COWC determined the Cowardin classification of wetlands within the evaluation area as palustrine emergent (PEM) and palustrine forested (PFO).

Wetland 1 (0.40± acre North Section)

Wetland 1 is a flooded depression on the north part of the North Section of the evaluation area. Elevated railroad tracks surround the wetland. Establishment of Wetland 1 appears to be attributed to poor surface water drainage in low-lying areas between rail lines. Based on visual observation, Wetland 1 appears to be regularly inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands. Wetland 1 is generally dominated by various Dogwood species (*Cornus species*), Green Ash (*Fraxinus pennsylvanica*), Black Willow (*Salix nigra*), Narrow-Leaf Cattail (*Typha angustifolia*), and Marsh Primrose (*Ludwigia palustris*).

Wetland 2 (0.31± acre North Section)

Wetland 2 is a flooded, forested depression on the north part of the North Section of the evaluation area. Wetland 2 is located within a low-lying area surrounded by elevated railroad tracks. Establishment of Wetland 2

appears to be attributed to poor surface water drainage in low-lying areas between rail lines. Dense brushy areas dominated by European Privet (*Ligustrum vulgare*) and Morrow's Honeysuckle (*Lonicera morrowii*) provide a buffer between Wetland 2 and the surrounding railroad tracks. A culvert pipe is located along the eastern boundary of Wetland 2, partially draining this wetland with surface water flow to the east, beneath elevated railroad tracks. Based on visual observation, Wetland 2 appears to be semi to permanently inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands. Wetland 2 is generally dominated by Eastern Cottonwood (*Populus deltoides*), Green Ash (*Fraxinus pennsylvanica*), Black Willow (*Salix nigra*), and Narrow-Leaf Cattail (*Typha angustifolia*).

Wetland 3 (1.53± acre North Section)

Wetland 3 is located along the western boundary of the North Section of the evaluation area. This wetland is part of a larger wetland complex that extends off-site to the west. Portions of Wetland 3 are located within a channelized ditch that has been impounded by beavers in numerous locations. These beaver impoundments of an apparently perennial ditch have also facilitated the establishment of additional wetlands to the west of the evaluation area. Wetland 3 appears to be permanently inundated by surface water, with flowing water observed at beaver dam locations. Wetland 3 appears to receive hydrology from precipitation and stormwater drainage from areas to the west of the evaluation area. Wetland 3 is generally dominated by Narrow-leaf Cattail (*Typha angustifolia*), Black Willow (*Salix nigra*), and various Dogwood species (*Cornus species*). Dense brushy areas dominated by European Privet (*Ligustrum vulgare*) and Morrow's Honeysuckle (*Lonicera morrowii*) generally surround Wetland 3.

Wetland 4 (1.67± acre North Section)

Wetland 4 is located within a low-lying area on the central part of the North Section of the evaluation area. Railroad tracks abut the wetland to the east with higher surface elevations to the west. Wetland 4 is dominated by Narrow-leaf Cattail (*Typha angustifolia*) and Common Reed (*Phragmites australis*). This wetland has a direct surface water connection to Stream 1 (Roberts Millikin Ditch) via Stream 2. Based on visual observation, Wetland 4 appears to be semi to permanently inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands.

Wetland 5 (4.72± acre North Section)

Wetland 5 is located within a low-lying area on the central part of the North Section of the evaluation area. Elevated railroad tracks surround the wetland. Establishment of Wetland 5 appears to be attributed to poor surface water drainage in low-lying areas between rail lines. Wetland 5 is

dominated by Narrow-leaf Cattail (*Typha angustifolia*). This wetland has a direct surface water connection to Stream 1 (Roberts Millikin Ditch) via Stream 7 and 8. Based on visual observation, Wetland 5 appears to be semi to permanently inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands. Wetland 5 is mapped with a PEM1C designation on the NWI map.

Wetland 6 (1.45± acre North Section)

Wetland 6 is located within a low-lying area on the central part of the North Section of the evaluation area. Elevated railroad tracks surround the wetland. Establishment of Wetland 6 appears to be attributed to poor surface water drainage in low-lying areas between rail lines. Wetland 6 is dominated by Narrow-leaf Cattail (*Typha angustifolia*). This wetland has a direct surface water connection to Stream 1 (Roberts Millikin Ditch) via Stream 6. Based on visual observation, Wetland 6 appears to be semi to permanently inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands.

Wetland 7 (0.49± acre Central Section)

Wetland 7 is located within the wooded northwest part of the Central Section of the evaluation area. According to the USDA web soil survey map, this wetland is located within hydric Kokomo silty clay loam soils. Wetland 7 is mapped with a PFO1A designation on the NWI map. The wetland appears to receive hydrology from precipitation, overland flow from adjacent uplands, and flood waters from Stream 10. Stream 10 abuts the east side of the wetland and appears to provide surface water to Wetland 7 during prolonged precipitation events. Based on visual observation, Wetland 7 appears to be regularly inundated/saturated. Wetland 7 is generally dominated by American Elm (*Ulmus americana*), Swamp White Oak (*Quercus bicolor*), and Green Ash (*Fraxinus pennsylvanica*).

Wetland 8 (0.29± acre Central Section)

Wetland 8 is located within the wooded northwest part of the Central Section of the evaluation area. According to the USDA web soil survey map, this wetland is located within hydric Kokomo silty clay loam soils. The wetland appears to receive hydrology from precipitation, overland flow from adjacent uplands, and flood waters from Stream 10. Stream 10 abuts the north side of the wetland and appears to provide surface water to Wetland 8 during prolonged precipitation events. Based on visual observation, Wetland 8 appears to be seasonally saturated. Wetland 8 is generally dominated by Reed Canary Grass (*Phalaris arundinacea*) and Black Willow (*Salix nigra*).

Wetland 9 (1.10± acre South Section)

Wetland 9 is located within a channelized ditch along the western boundary of the South Section of the evaluation area. Based on visual observation, Wetland 9 appears to be semi to permanently inundated/saturated. Wetland 9 is generally dominated by Narrow-leaf Cattail (*Typha angustifolia*) and Black Willow (*Salix nigra*).

Wetland 10 (0.22± acre South Section)

Wetland 10 is a flooded depression on the western part of the South Section of the evaluation area. Railroad tracks abut the wetland to the south, east, and west with higher surface elevations to the north. Establishment of Wetland 10 appears to be attributed to poor surface water drainage in low-lying areas between rail lines. Based on visual observation, Wetland 10 appears to be semi to permanently inundated/saturated. The wetland receives hydrology from precipitation and overland flow from adjacent uplands. Wetland 10 is generally dominated by various Dogwood species (*Cornus species*), Black Willow (*Salix nigra*), and Narrow-Leaf Cattail (*Typha angustifolia*).

Wetland 11 (0.92± acre South Section)

Wetland 11 is located along the western part of the South Section of the evaluation area. This wetland is part of a wetland complex established due to numerous beaver impoundments within Stream 13. Several of these beaver dam structures are elaborate, flooding areas west of Stream 13. Wetland 11 appears to be permanently inundated by surface water, with flowing water observed at beaver dam locations. Wetland 11 appears to receive hydrology from precipitation and perennial surface water from Stream 13. Wetland 11 is generally dominated by Narrow-leaf Cattail (*Typha angustifolia*), Black Willow (*Salix nigra*), American Elm (*Ulmus americana*), Green Ash (*Fraxinus pennsylvanica*), Eastern Cottonwood (*Populus deltoides*), and various Dogwood (*Cornus species*) and Carex (*Carex species*) species. Dense brushy areas dominated by European Privet (*Ligustrum vulgare*) and Morrow's Honeysuckle (*Lonicera morrowii*) generally surround Wetland 11.

Wetland 12 (0.43± acre South Section)

Wetland 12 is located on the southern part of the South Section of the evaluation area. This wetland is located within a channelized ditch that has been impounded by beavers in numerous locations. These beaver impoundments of an apparently perennial ditch have facilitated the establishment of wetlands within the ditch limits. Wetland 12 appears to be permanently inundated by surface water, with flowing water observed at beaver dam locations. Wetland 12 appears to receive hydrology from precipitation and stormwater flow from areas to the west of the evaluation area. Wetland 12 is generally dominated by Narrow-leaf Cattail (*Typha*

angustifolia), Black Willow (*Salix nigra*), and various Dogwood species (*Cornus species*). Dense brushy areas dominated by European Privet (*Ligustrum vulgare*) and Morrow's Honeysuckle (*Lonicera morrowii*) generally surround Wetland 12.

4.2.2 PONDS

COWC identified two (2) ponds (Pond 1 and Pond 2) totaling 1.18± acre within the evaluation area. These ponds were delineated as Pond 1 (0.23± acre) and Pond 2 (0.95± acre), and further described below.

Pond 1 (0.23± acre)

Pond 1 is located on the western part of the Central Section of the evaluation area. Pond 1 appears to be a heavily silted excavation that partially impounds Stream 10, which flows through the central part of Pond 1. Pond 1 may provide a limited amount of stormwater retention from areas to the west of the evaluation area, and may help reduce the flow volume of Stream 10. This pond contains no rooted or emergent vegetation. Pond 1 is mapped with a PUBG designation on the NWI map.

Pond 2 (0.95± acre)

Pond 2 is located on the southern part of the South Section of the evaluation area. This pond appears to have been created by excavation, and does not impound a stream or apparent surface water feature. Two (2) round culvert outlet structures are located in the northeast part of the pond. Pond 2 is mapped with a PEM1A designation on the NWI map.

TABLE 4
POND INFORMATION

Pond ID	Acreage	Description	Location
Pond 1	0.23±	Impoundment	39.997153 -83.131842
Pond 2	0.95±	Stormwater Management	39.964861 -83.131814
Total	1.18±		

5.0 FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

COWC identified twelve (12) wetlands (Wetland 1 through Wetland 12) totaling 13.53± acres, thirteen (13) streams (Stream 1 through Stream 13) totaling 10,377± linear feet, and two (2) ponds (Pond 1 and Pond 2) totaling 1.18± acre within the evaluation area.

COWC followed the Navigable Waters Protection Rule (effective June 22, 2020) to determine the potential regulatory status of surface water features identified with the evaluation area. Per Title 33 (Navigation and Navigable Waters) of the Code of Federal

Regulations (CFR), Chapter 2 (Corps of Engineers, Department of the Army, Department of Defense), Part 328 (Definition of Waters of the United States), Section 328.3 (Definitions), COWC has come to the following conclusions:

- Wetland 1 through Wetland 12 are likely considered waters of the U.S. per 33 CFR 328.3(a)(4), as they appear to meet the definition "adjacent wetlands" per 33 CFR 328.3(c)(1)(i)-(iv).
- Stream 1, Stream 3, Stream 4, Stream 5, Stream 6, Stream 9, Stream 10, Stream 11, Stream 12, and Stream 13 are likely considered waters of the U.S. per 33 CFR 328.3(a)(2), as they appear to meet the definition of "tributaries" per 33 CFR 328.3(c)(12).
- Stream 2, Stream 7, and Stream 8 are likely considered "non-jurisdictional waters" or "excluded features" because they appear to be ephemeral. Ephemeral features are considered "non-jurisdictional waters" per 33 CFR 328.3(b)(3). "Ephemeral" is defined in 33 CFR 328.3(c)(3) as "surface water flowing or pooling only in direct response to precipitation (e.g. rain or snow fall).
- Pond 1 is likely considered waters of the U.S. per 33 CFR 328.3(a)(3), as Pond 1 appears to meet the definition of "lakes and ponds, and impoundments of jurisdictional waters" per 33 CFR 328.3(c)(6).
- Pond 2 may be considered "non-jurisdictional" or "excluded" per 33 CFR 328.3(b)(10), as Pond 2 appears to meet the definition of a "stormwater control feature constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off".

Except for Stream 2, Stream 7, Stream 8, and Pond 2, surface water features identified within the evaluation area are likely to be regulated by the USACE. Section 404 of the CWA requires pre-construction notification (PCN) to the USACE and a Department of the Army (DA) permit prior to discharging dredged or fill material into waters of the U.S.

Stream 2, Stream 7, and Stream 8 appear to have ephemeral characteristics; therefore, may fall under the jurisdiction of the Ohio EPA. Ephemeral streams in the State of Ohio are regulated by the Ohio EPA. Certain situations may require a pre-activity notice (PAN) to the Ohio EPA for ephemeral stream impacts.

Pond 2 may be a non-regulated feature, as it appears to have been constructed for stormwater control use.

The USACE has authority to determine the jurisdictional status of surface water features identified within the evaluation area. Therefore, findings in this report are preliminary until verified by the USACE. COWC recommends obtaining an Approved Jurisdictional Determination (AJD) from the USACE Huntington, WV District Office for written verification of the findings documented within this report. With your authorization, COWC will supply the required information to process this request. With this reported

information and/or a site visit, the USACE will make the official determination on jurisdiction. The findings and conclusions of this delineation report are subject to change, pending USACE verification. This report will become public information upon submittal to the USACE.

6.0 SIGNATURE OF PROFESSIONAL PERSONNEL

To the best of our professional knowledge and belief, COWC personnel responsible for this report declare we have the specific qualifications based on education, training, and experience to assess the evaluation area for waters of the U.S. and isolated waters of the State of Ohio. The jurisdictional waters delineation has been conducted in a manner consistent with the criteria contained in the USACE Wetlands Delineation Manual (1987) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region, and with the level of care and skill ordinarily used by similar professionals performing similar services under similar conditions in the vicinity of the evaluation area.

COWC appreciates the opportunity to serve you on this project. Please contact COWC owner Matt Kaminski at mkaminski434@gmail.com with any questions or concerns regarding this report.

Respectfully submitted,

Central Ohio Wetland Consulting, LLC

Prepared by:

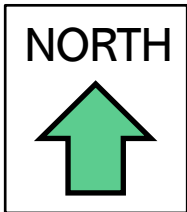
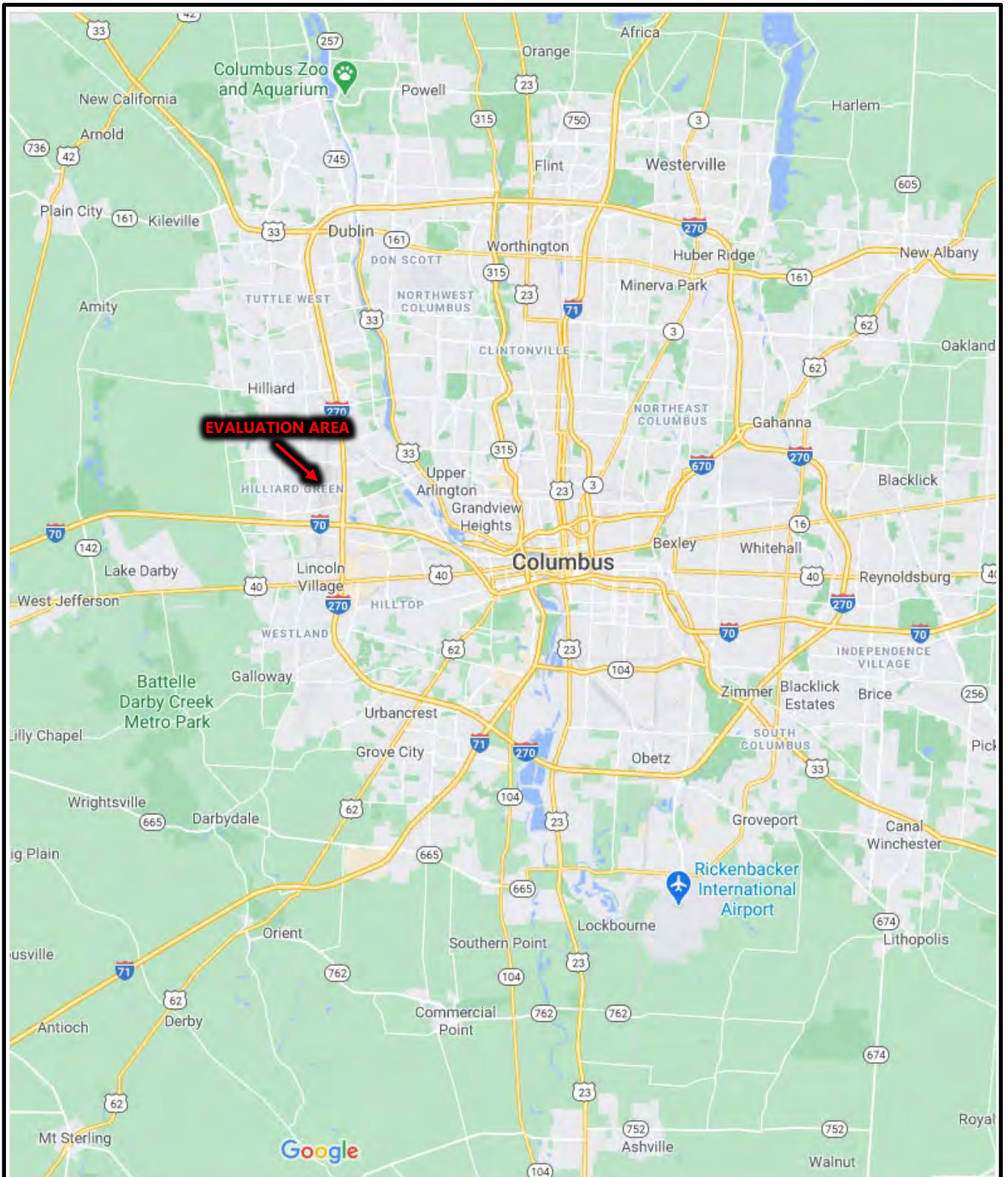


Matthew R. Kaminski, Owner
Wetland Scientist, 401/404 Specialist

Matthew R. Kaminski holds a Bachelor of Science Degree in Environmental Geography from Ohio University with 16 years of experience as an environmental consultant. Mr. Kaminski has completed hundreds of jurisdictional waters delineations throughout the State of Ohio upon completion of the 38 Hour Army Corps of Engineers Wetland Delineation & Management Training Program in 2006. Mr. Kaminski's experience includes wetland/stream delineation, plant identification, stream evaluations, 404/401 permitting, Ohio Rapid Assessment Method v. 5.0, Clean Water Act (CWA) regulations, Sections 7 & 9 of the Endangered Species Act (ESA), and Ohio Historic Preservation Office (OHPO) Section 106. Throughout his career, Mr. Kaminski has successfully facilitated regulatory approval of numerous residential, commercial, and institutional projects. Since September 2020, Mr. Kaminski has been sole proprietor of Central Ohio Wetland Consulting, LLC, offering comprehensive wetland and stream consultation and guidance for commercial and residential developers, architects, civil design professionals, and private individuals. Professional wetland and stream consulting services include preliminary jurisdictional waters assessments, wetland/stream delineation, approved and preliminary jurisdictional determination requests, and 404/401 permitting services.

APPENDIX 1

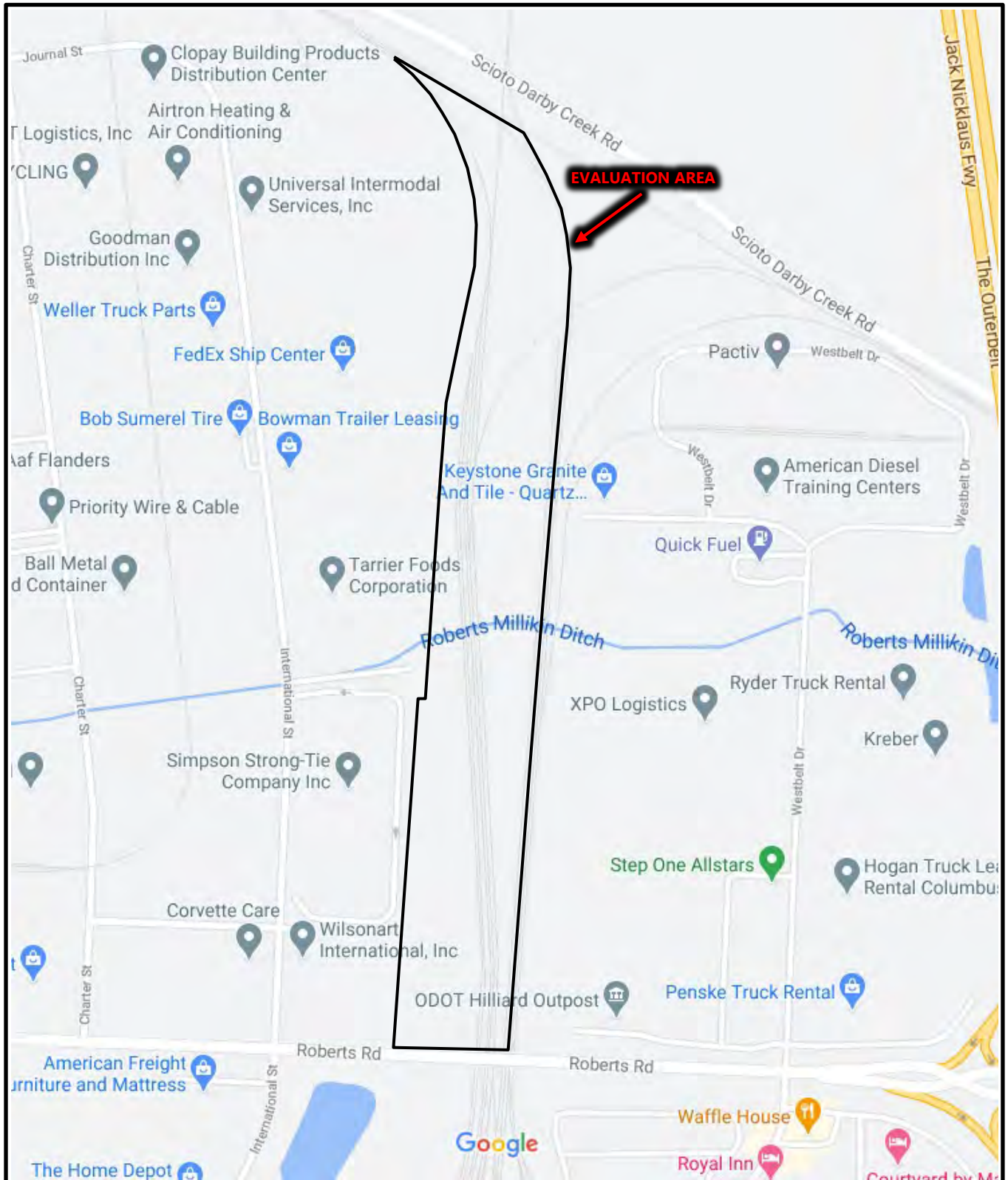
GENERAL LOCATION MAP OF EVALUATION AREA



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



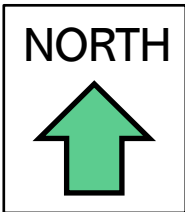
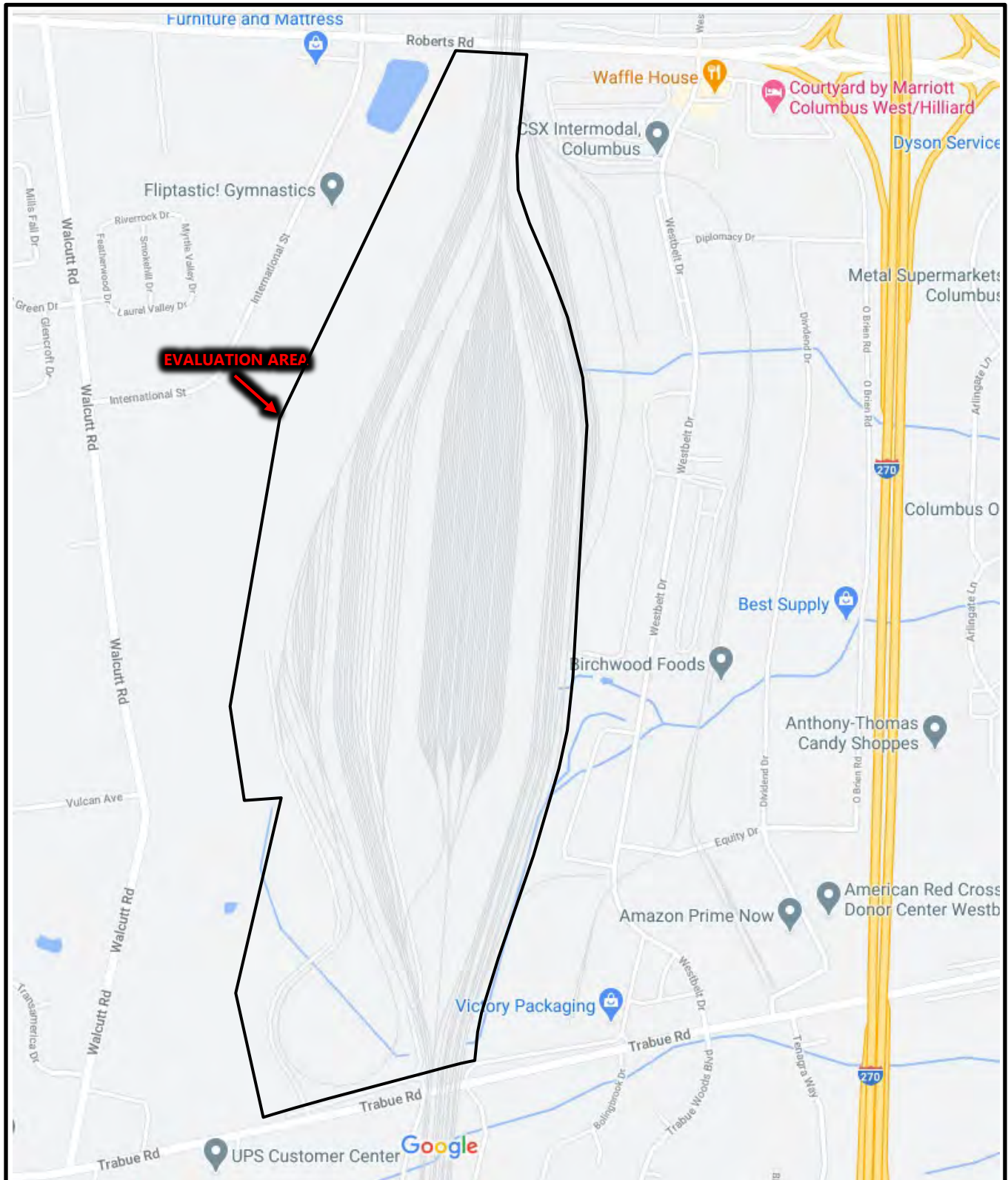
LOCATION MAP OF EVALUATION AREA (NORTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



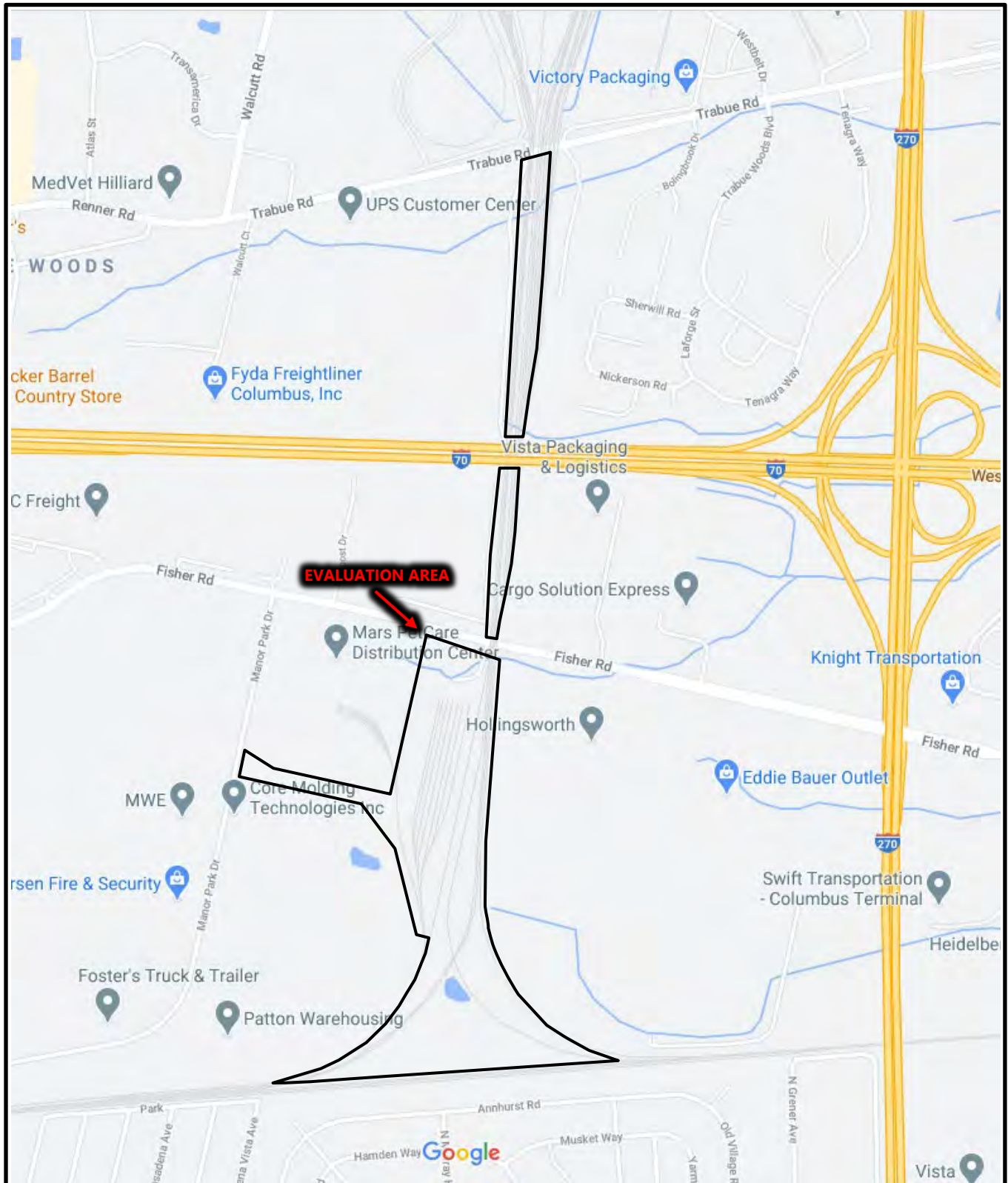
LOCATION MAP OF EVALUATION AREA (CENTRAL SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



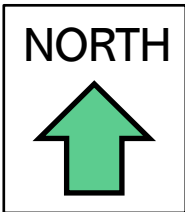
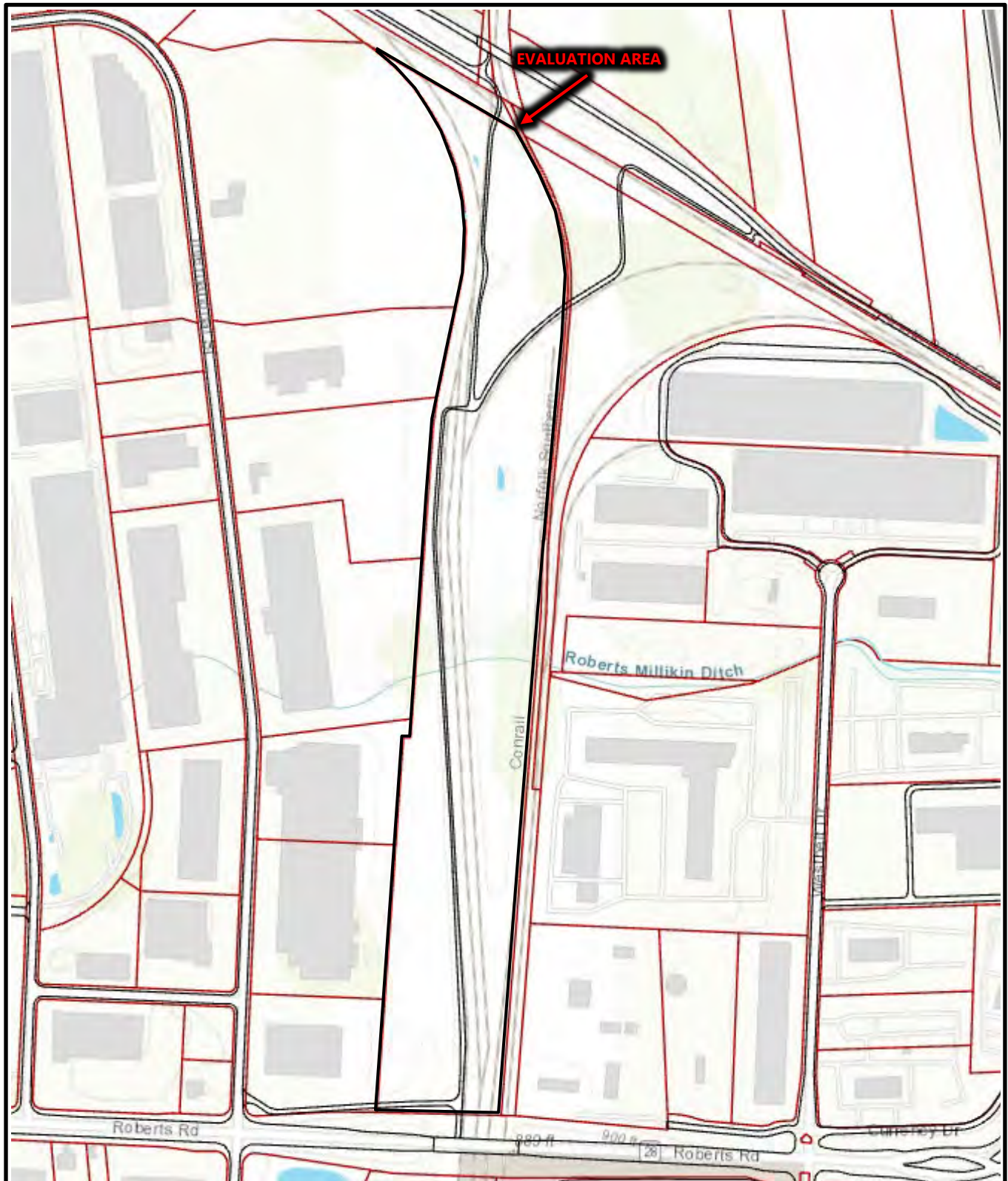
LOCATION MAP OF EVALUATION AREA (SOUTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



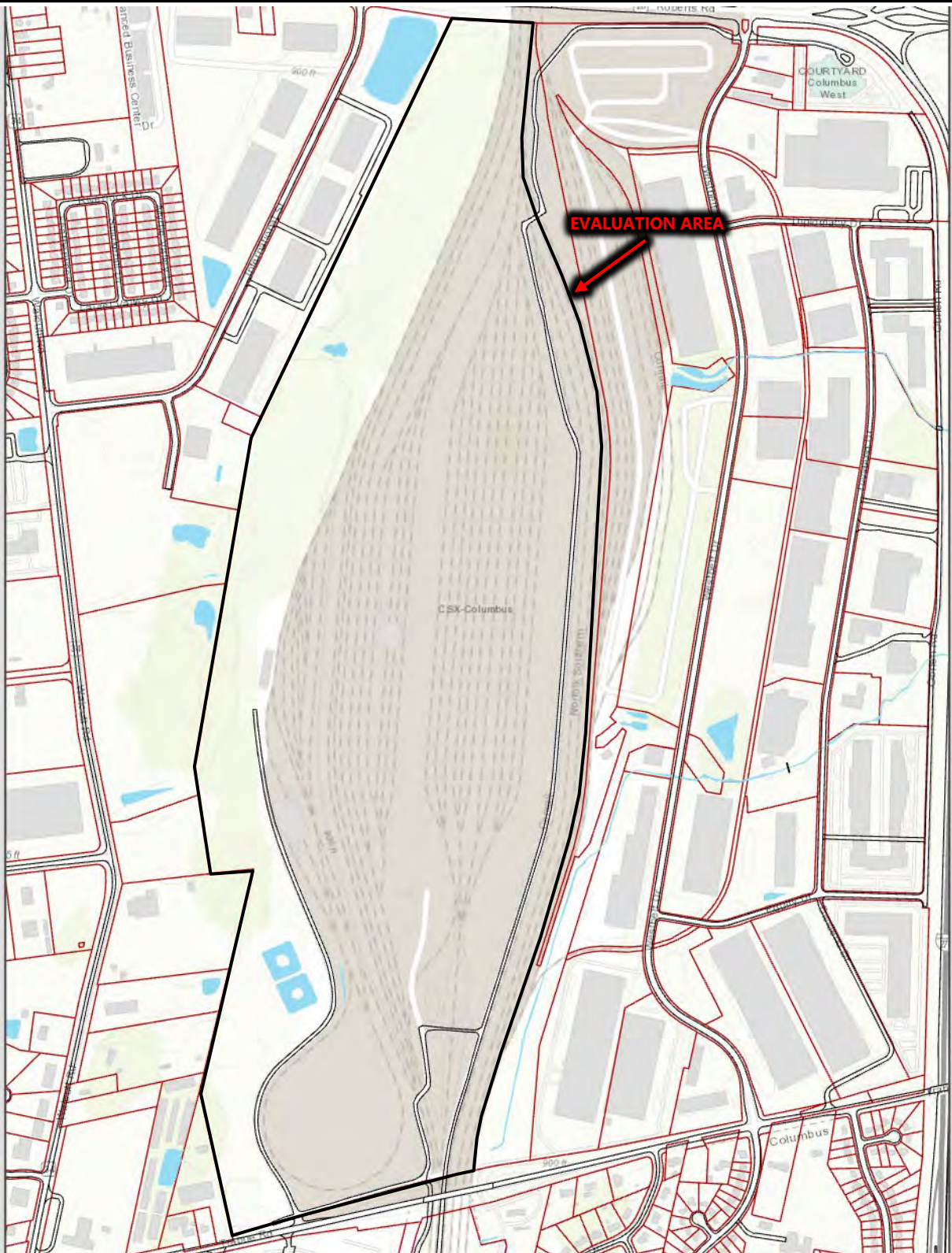
FRANKLIN COUNTY AUDITOR GIS MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



FRANKLIN COUNTY AUDITOR GIS MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



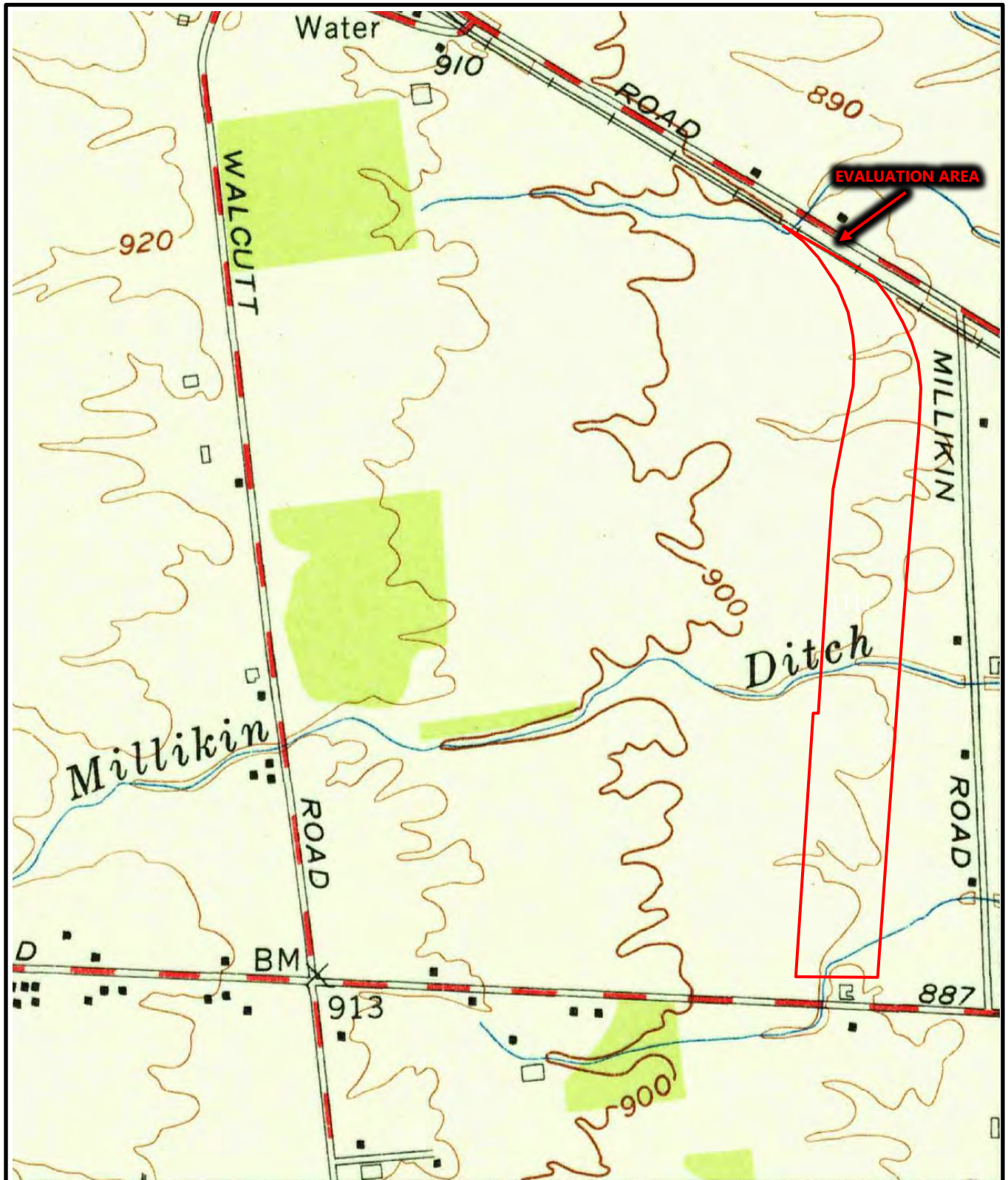
FRANKLIN COUNTY AUDITOR GIS MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



1954 USGS (HILLIARD) TOPOGRAPHIC MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



1966 USGS (HILLIARD) TOPOGRAPHIC MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



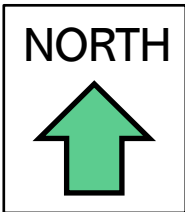
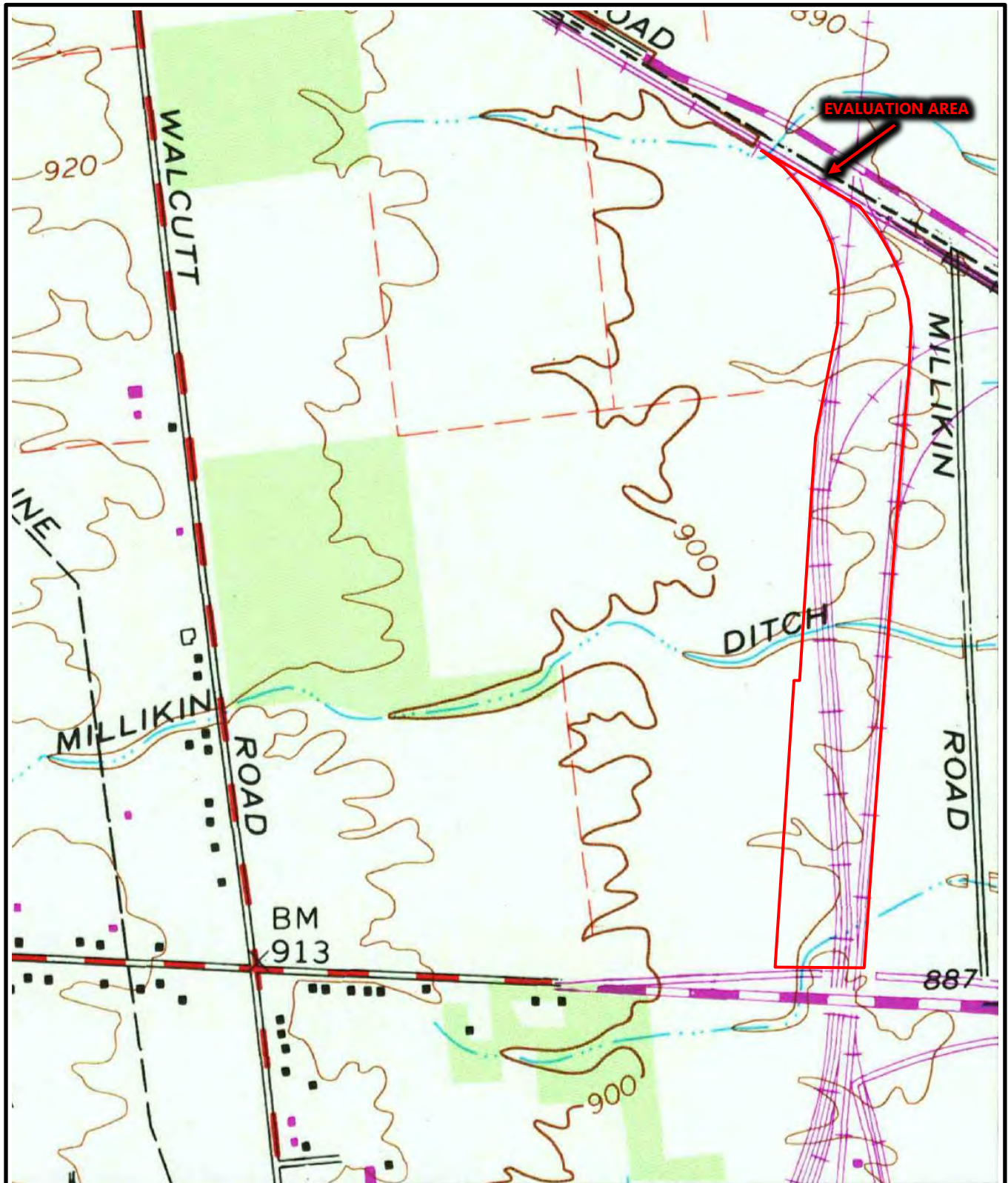
1973 USGS (HILLIARD) TOPOGRAPHIC MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



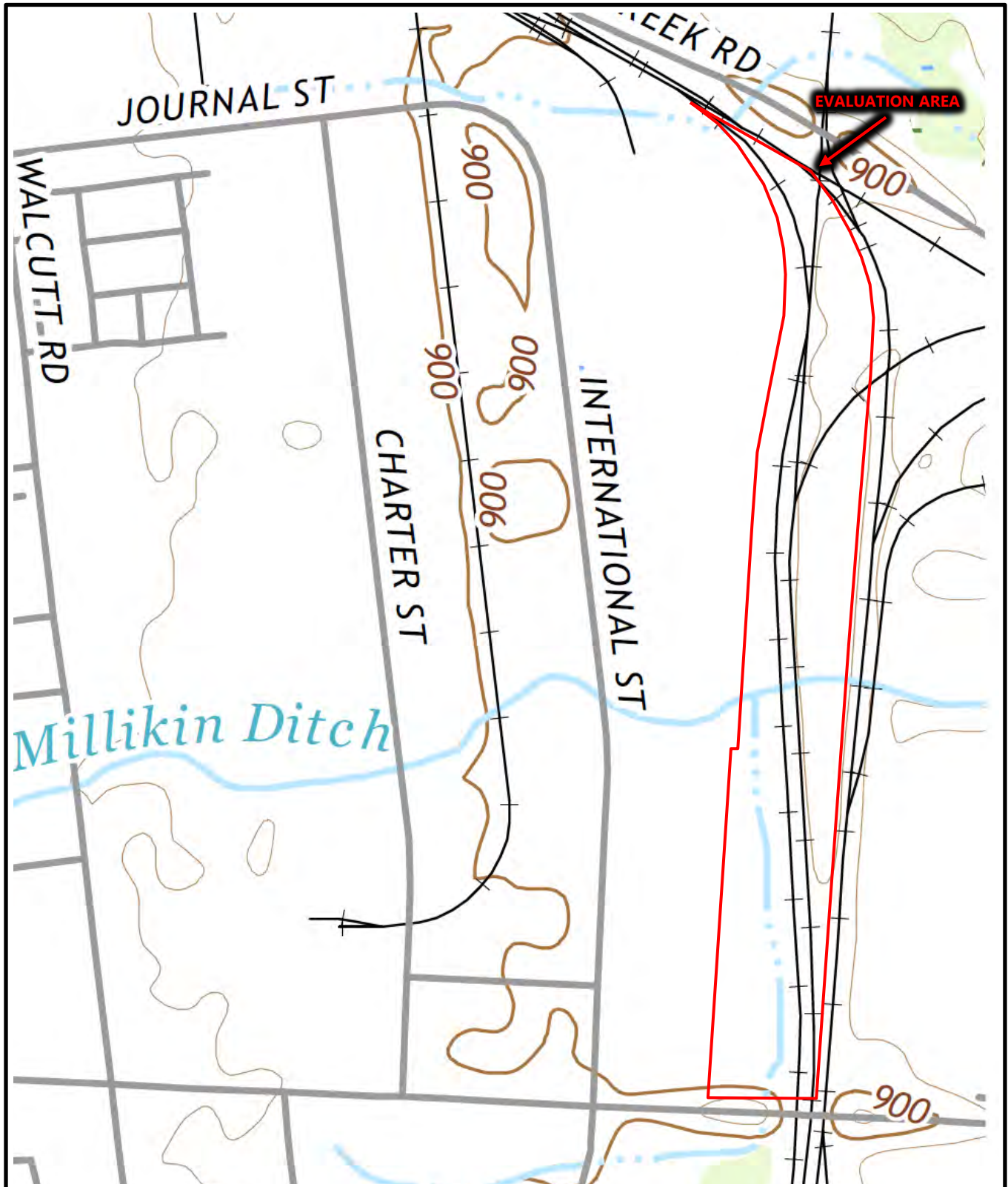
1980 USGS (HILLIARD) TOPOGRAPHIC MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



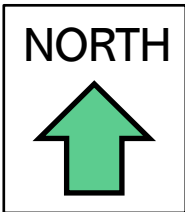
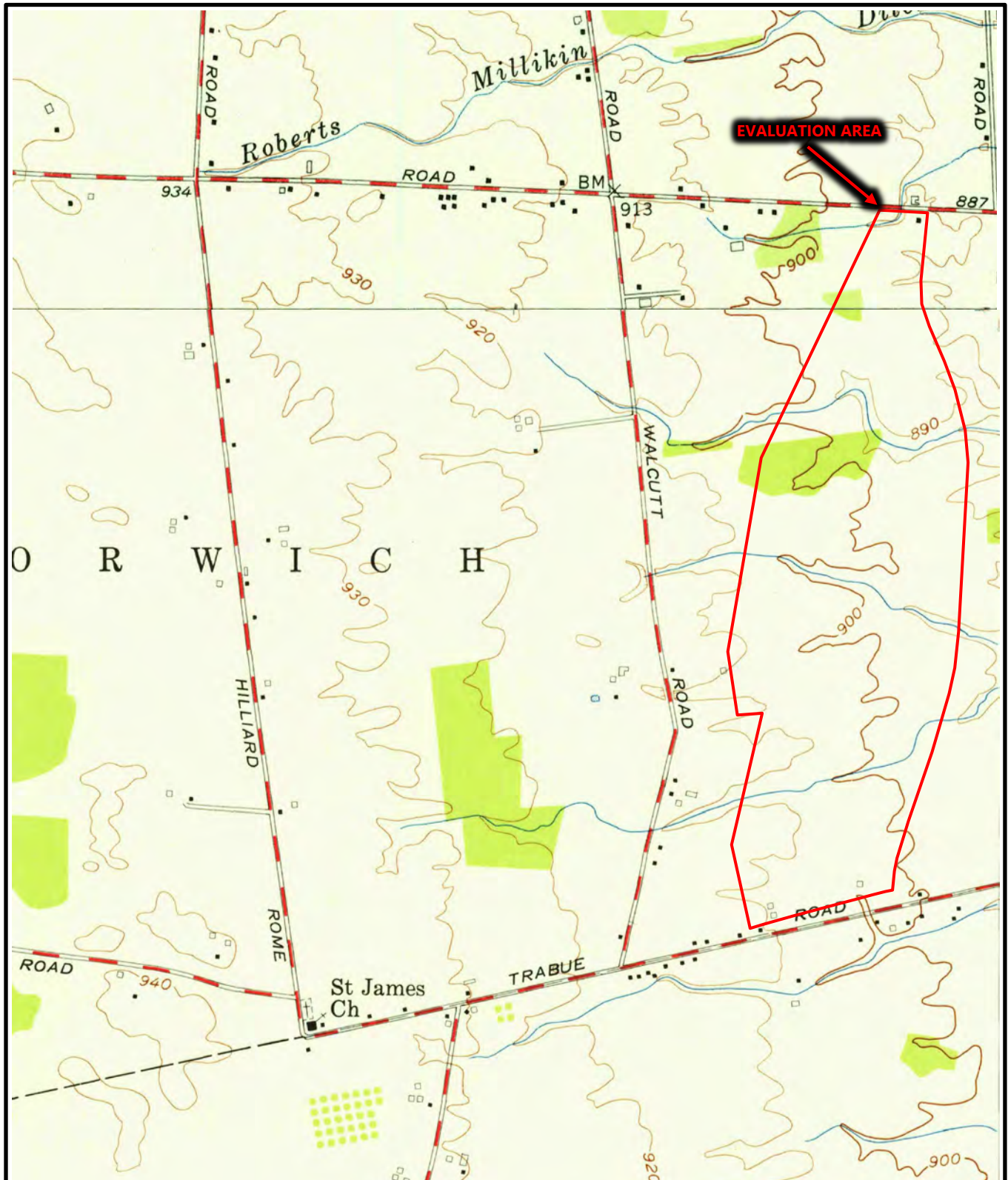
2019 USGS (HILLIARD) TOPOGRAPHIC MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



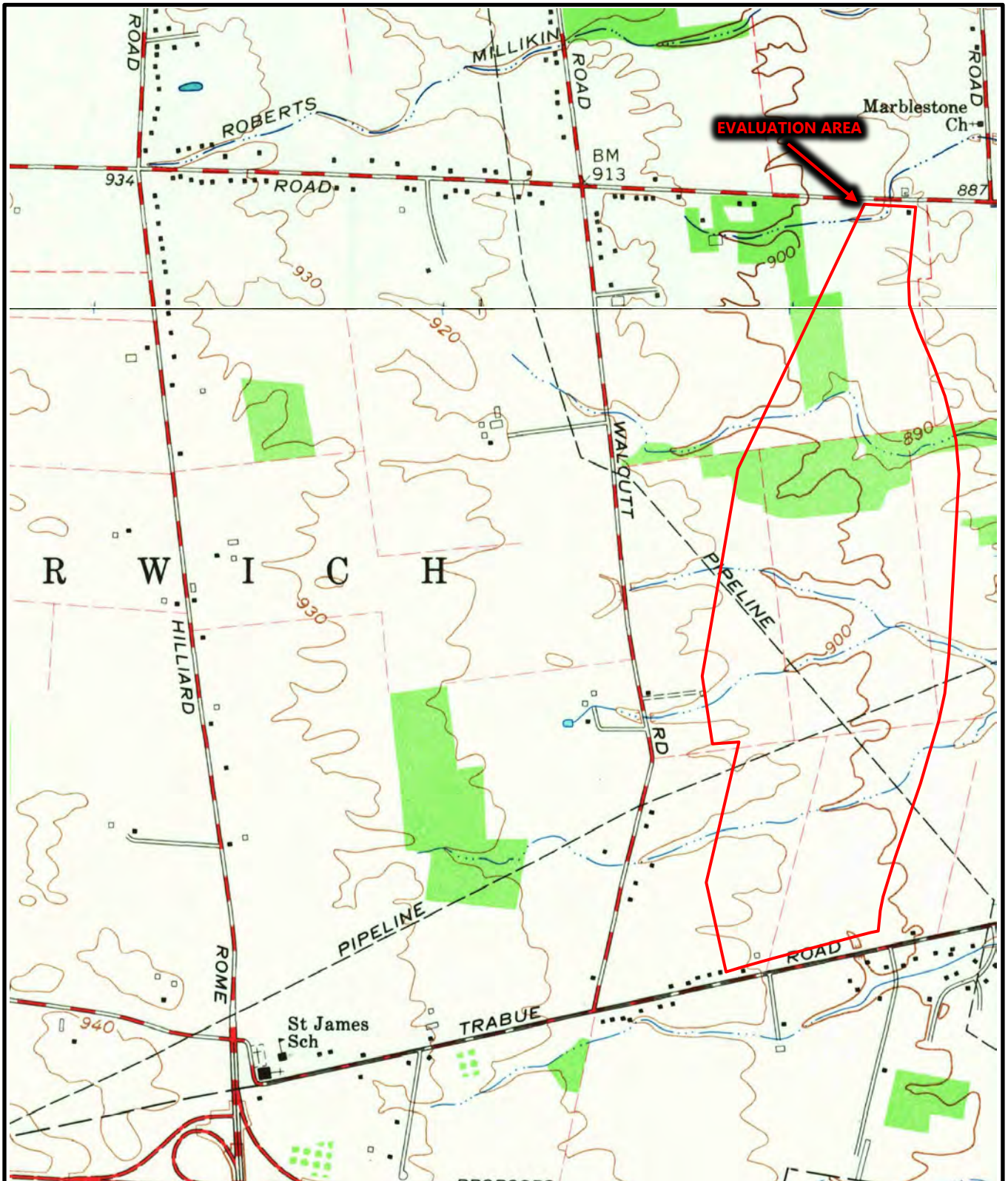
1954/1955 USGS (HILLIARD/GALLOWAY) TOPOGRAPHIC MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



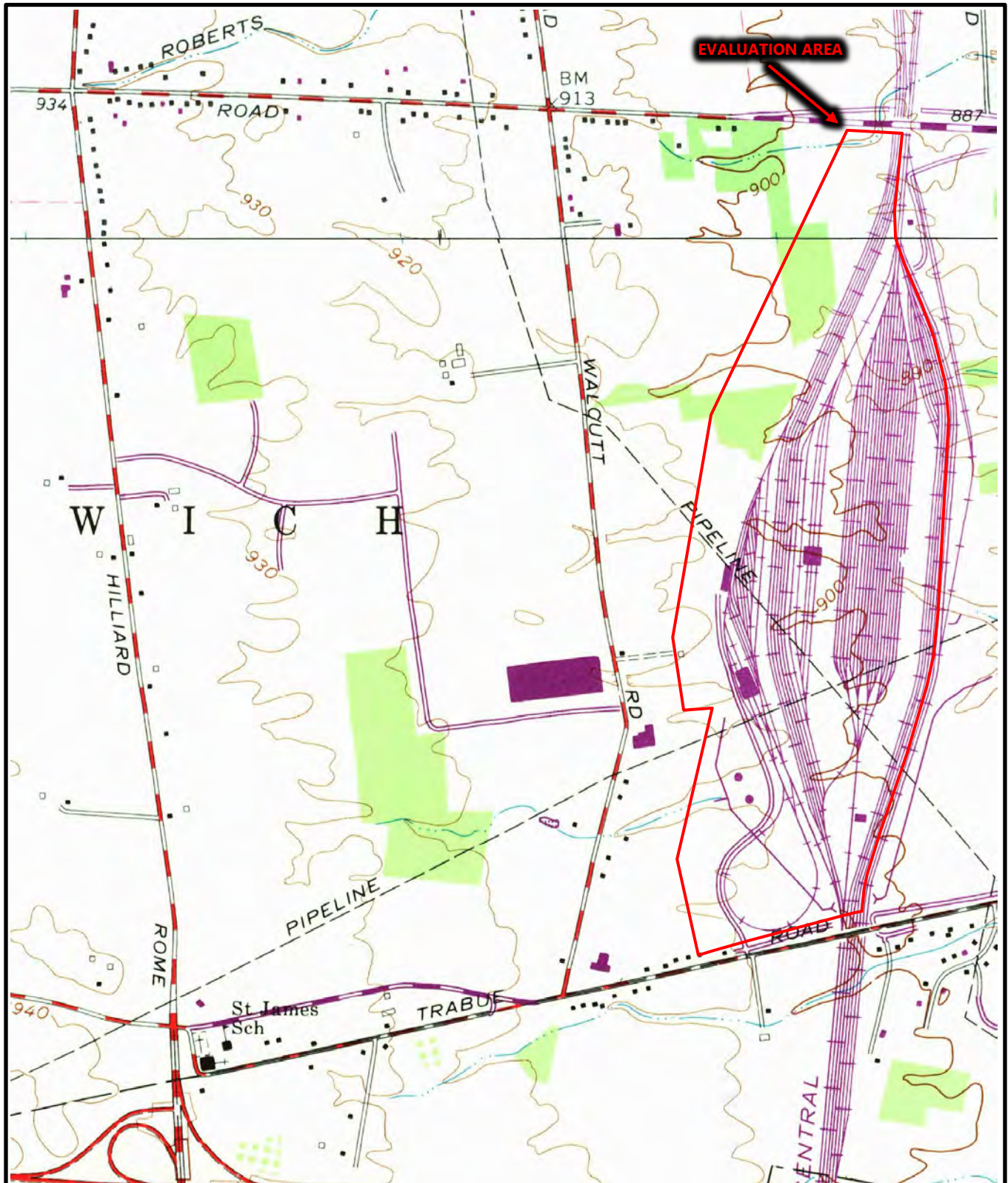
1966 USGS (HILLIARD/GALLOWAY) TOPOGRAPHIC MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



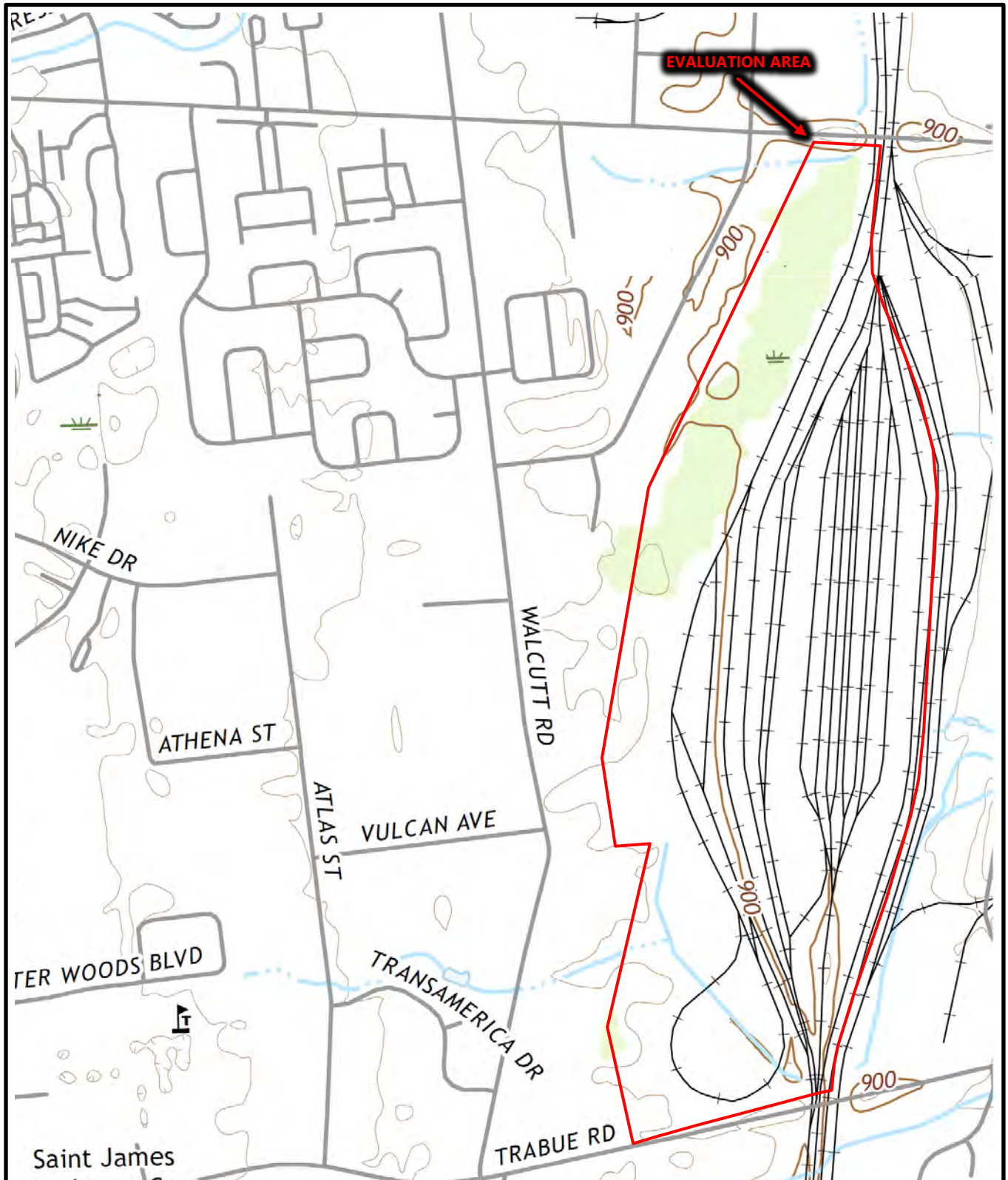
1973 USGS (HILLIARD/GALLOWAY) TOPOGRAPHIC MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



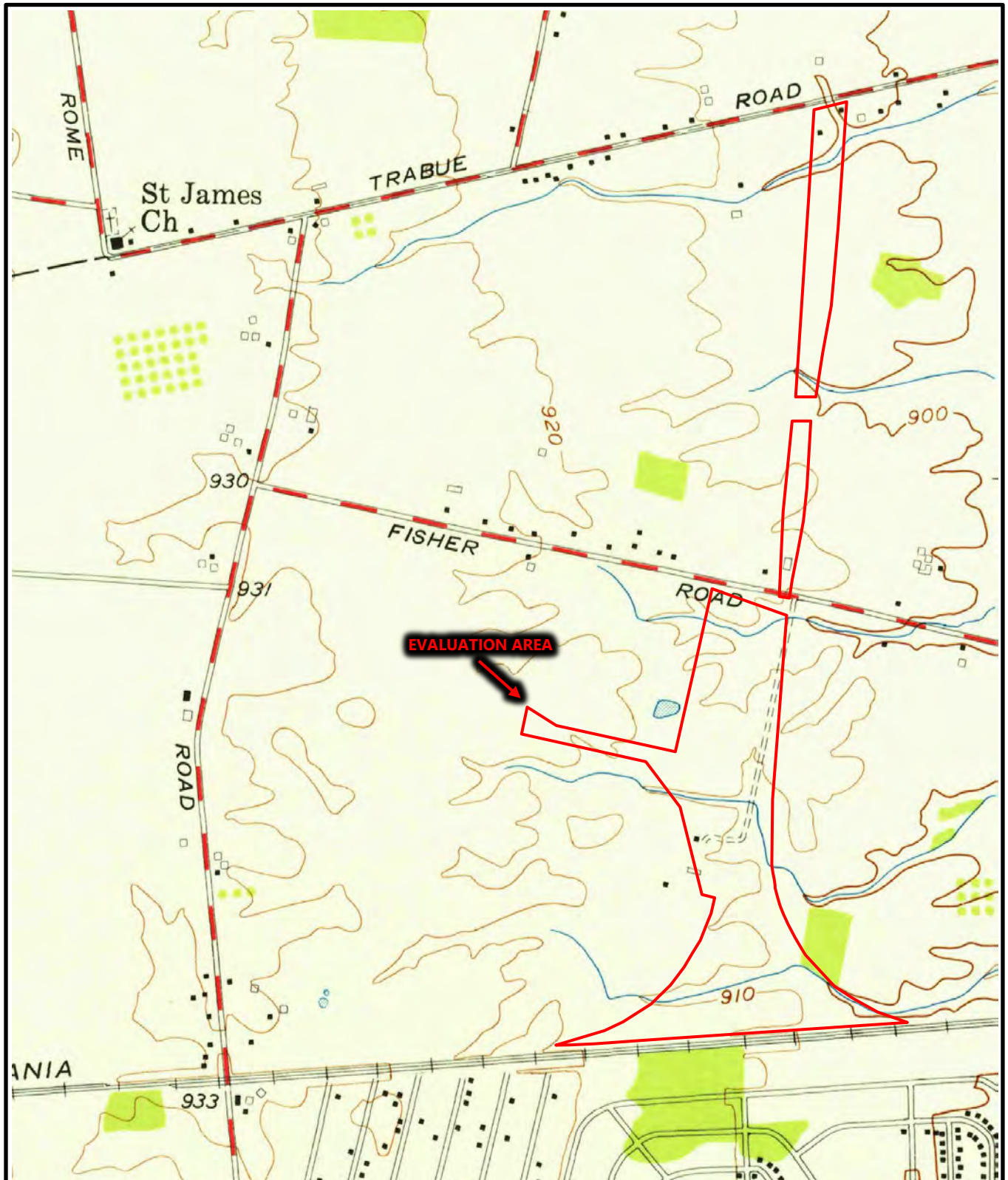
2019 USGS (HILLIARD/GALLOWAY) TOPOGRAPHIC MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



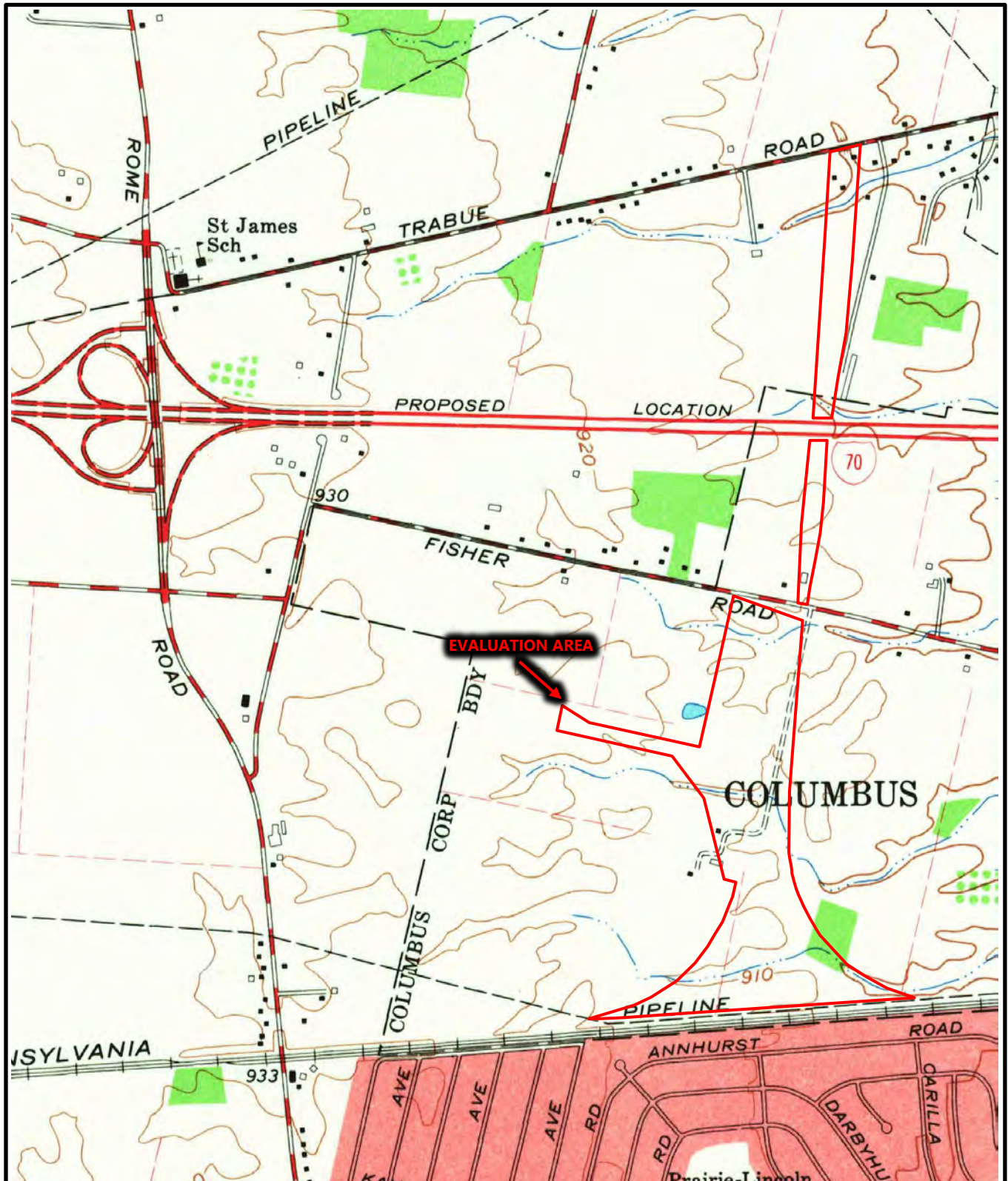
1955 USGS (GALLOWAY) TOPOGRAPHIC MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



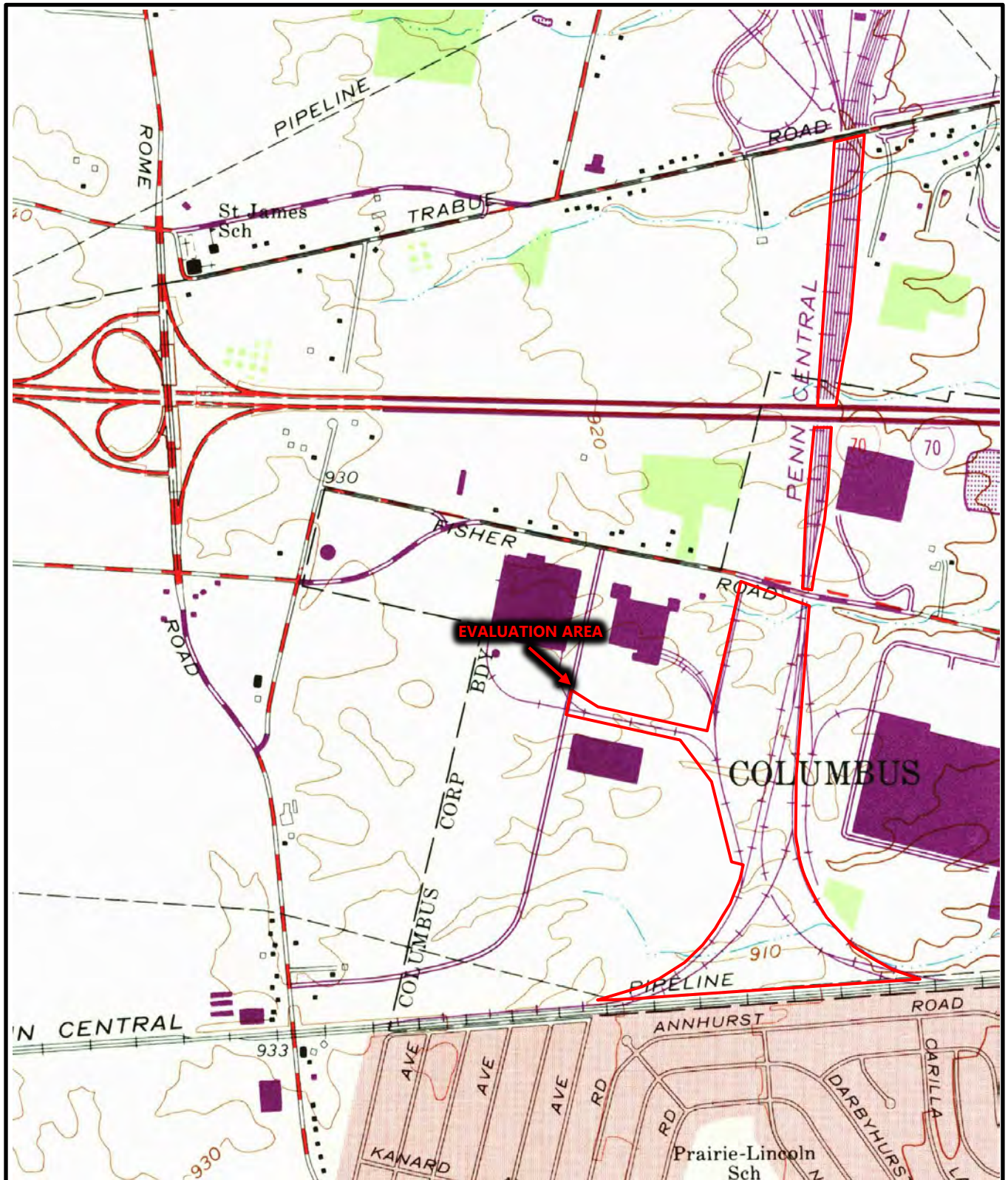
1966 USGS (GALLOWAY) TOPOGRAPHIC MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



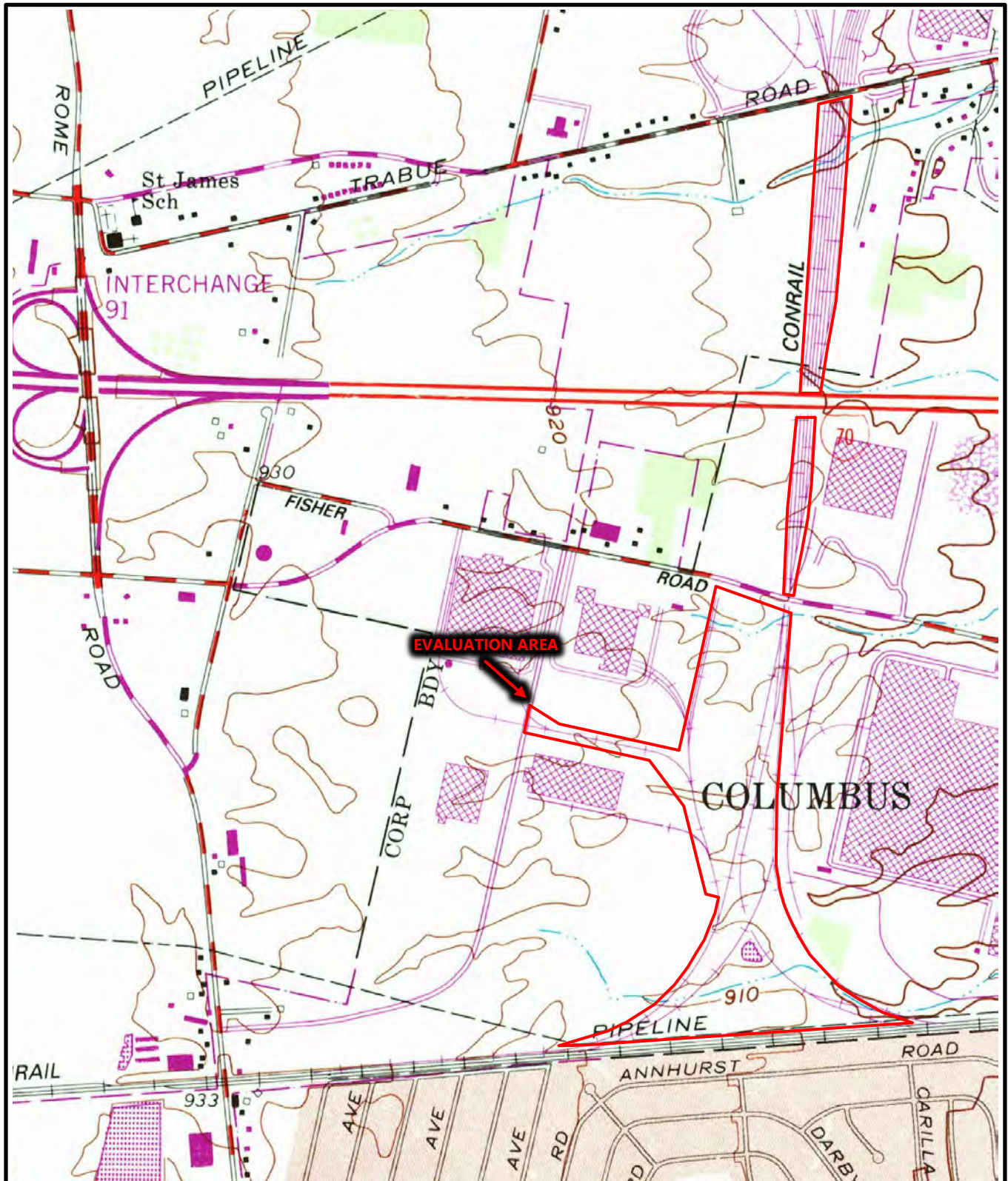
1973 USGS (GALLOWAY) TOPOGRAPHIC MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



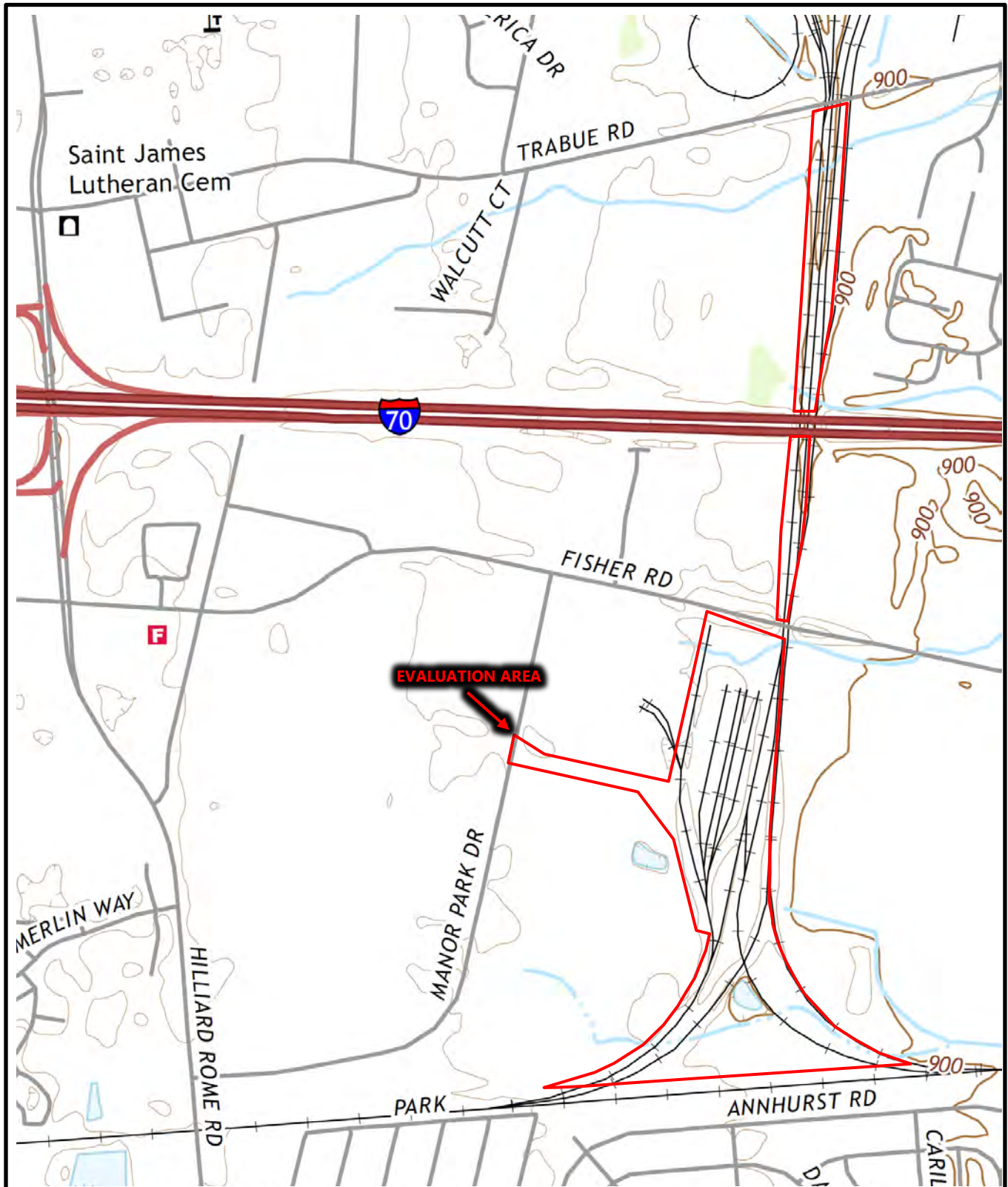
1981 USGS (GALLOWAY) TOPOGRAPHIC MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



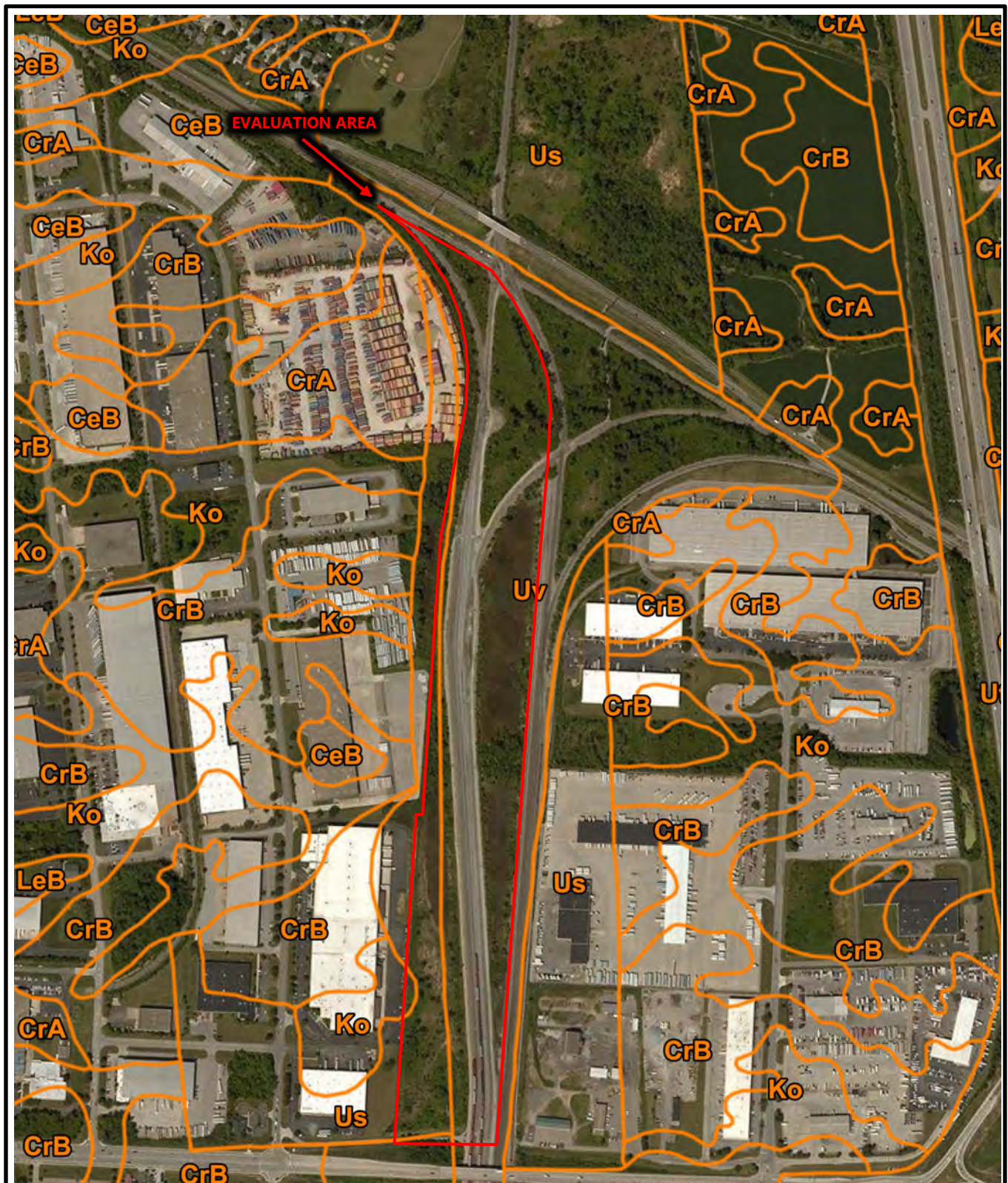
2019 USGS (GALLOWAY) TOPOGRAPHIC MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



USDA WEB SOIL SURVEY MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



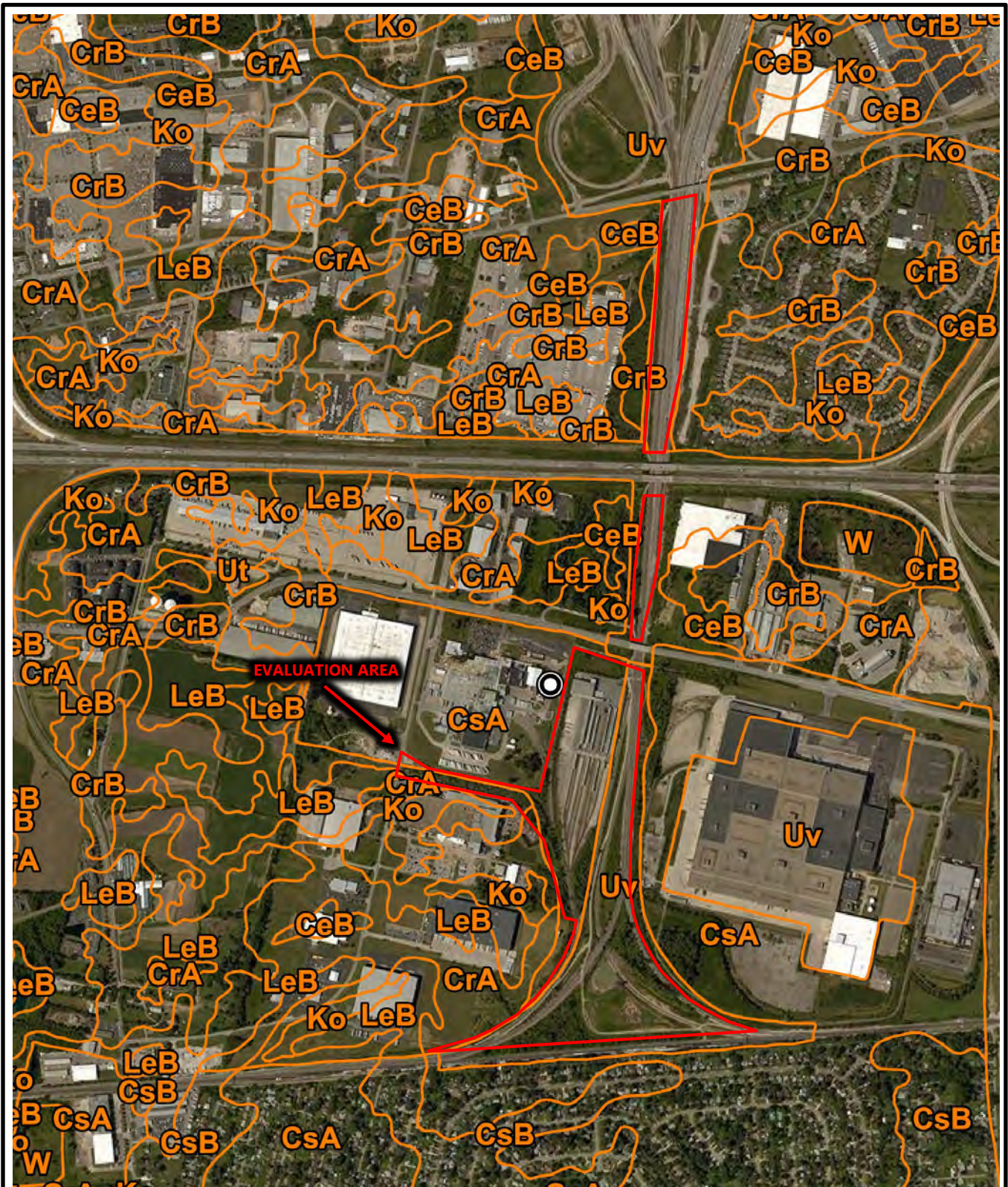
USDA WEB SOIL SURVEY MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



USDA WEB SOIL SURVEY MAP (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007

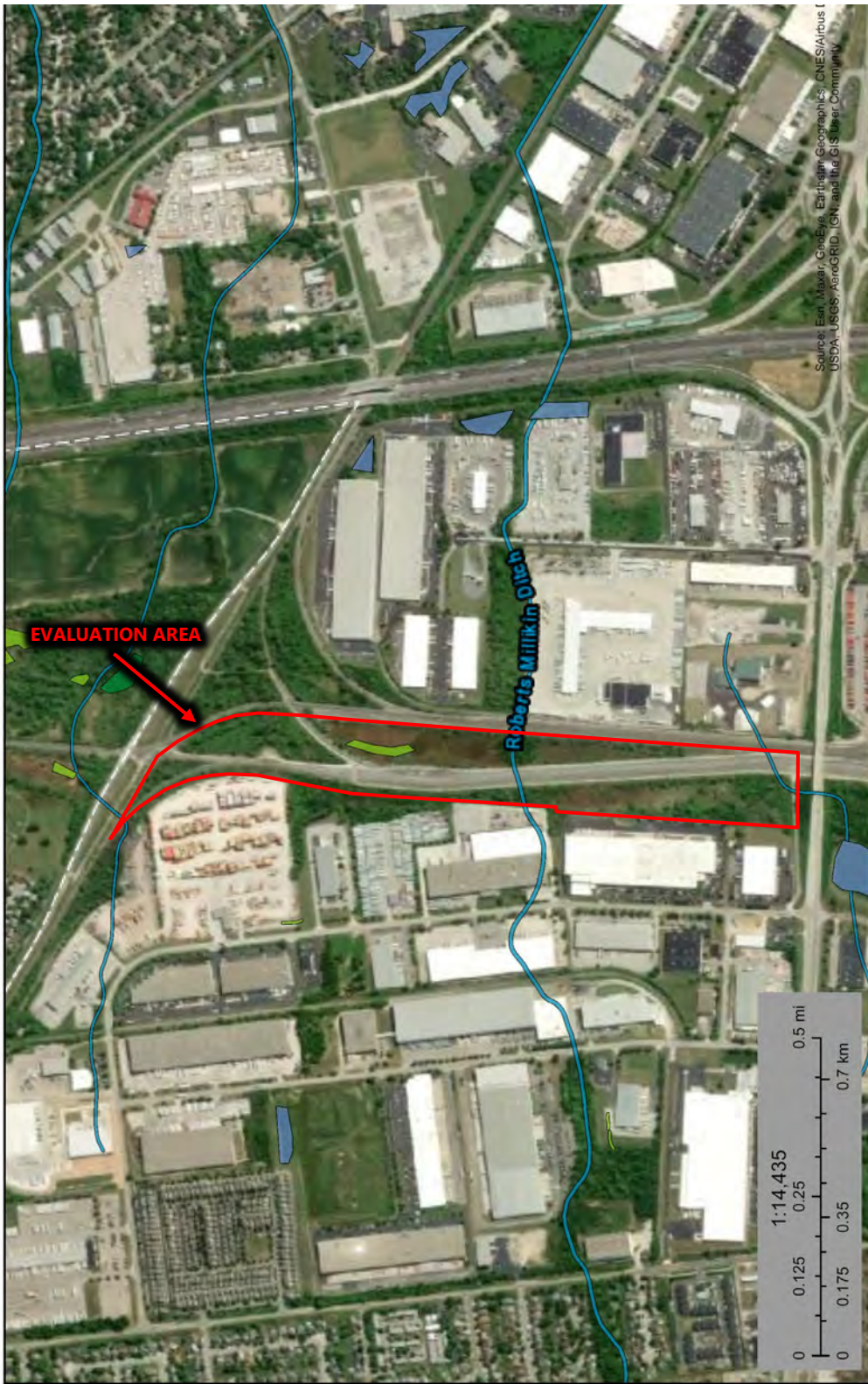


NATIONAL WETLANDS INVENTORY (NWI) MAP (NORTH SECTION)

Wetlands











U.S. Fish and Wildlife Service
National Wetlands Inventory

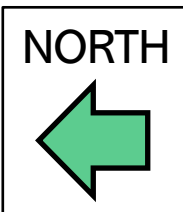


This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or current base data shown on this map. All wetlands related data will be used in accordance with the layer metadata found on the Wetlands Mapper web site.

November 20, 2020

Wetlands

	Estuarine and Marine Deepwater		Lake
	Estuarine and Marine Wetland		Other
	Freshwater Emergent Wetland		Riverine
	Freshwater Forested/Shrub Wetland		
	Freshwater Pond		



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



NATIONAL WETLANDS INVENTORY (NWI) MAP (CENTRAL SECTION)

Wetlands












U.S. Fish and Wildlife Service
National Wetlands Inventory

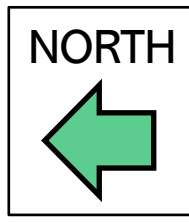


This map is for general reference only. The US Fish & Wildlife Service is not responsible for the accuracy or current base data shown on this map. All wetlands related data be used in accordance with the layer metadata found Wetlands Mapper web site.

November 20, 2020

Wetlands

	Estuarine and Marine Deepwater		Freshwater Emergent Wetland		Lake
	Estuarine and Marine Wetland		Freshwater Forested/Shrub Wetland		Other
	Freshwater Pond		Riverine		Riverine



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



NATIONAL WETLANDS INVENTORY (NWI) MAP (SOUTH SECTION)



U.S. Fish and Wildlife Service
National Wetlands Inventory

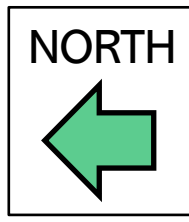
Wetlands



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus, USDA, USGS, AeroGRID, IGN, and the GIS User Community

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or current base data shown on this map. All wetlands related data be used in accordance with the layer metadata found in the Wetlands Mapper web site.

- November 20, 2020
- Wetlands**
- Estuarine and Marine Deepwater
 - Estuarine and Marine Wetland
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Freshwater Pond
 - Lake
 - Other
 - Riverine

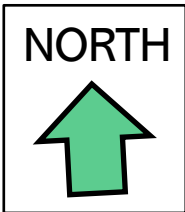
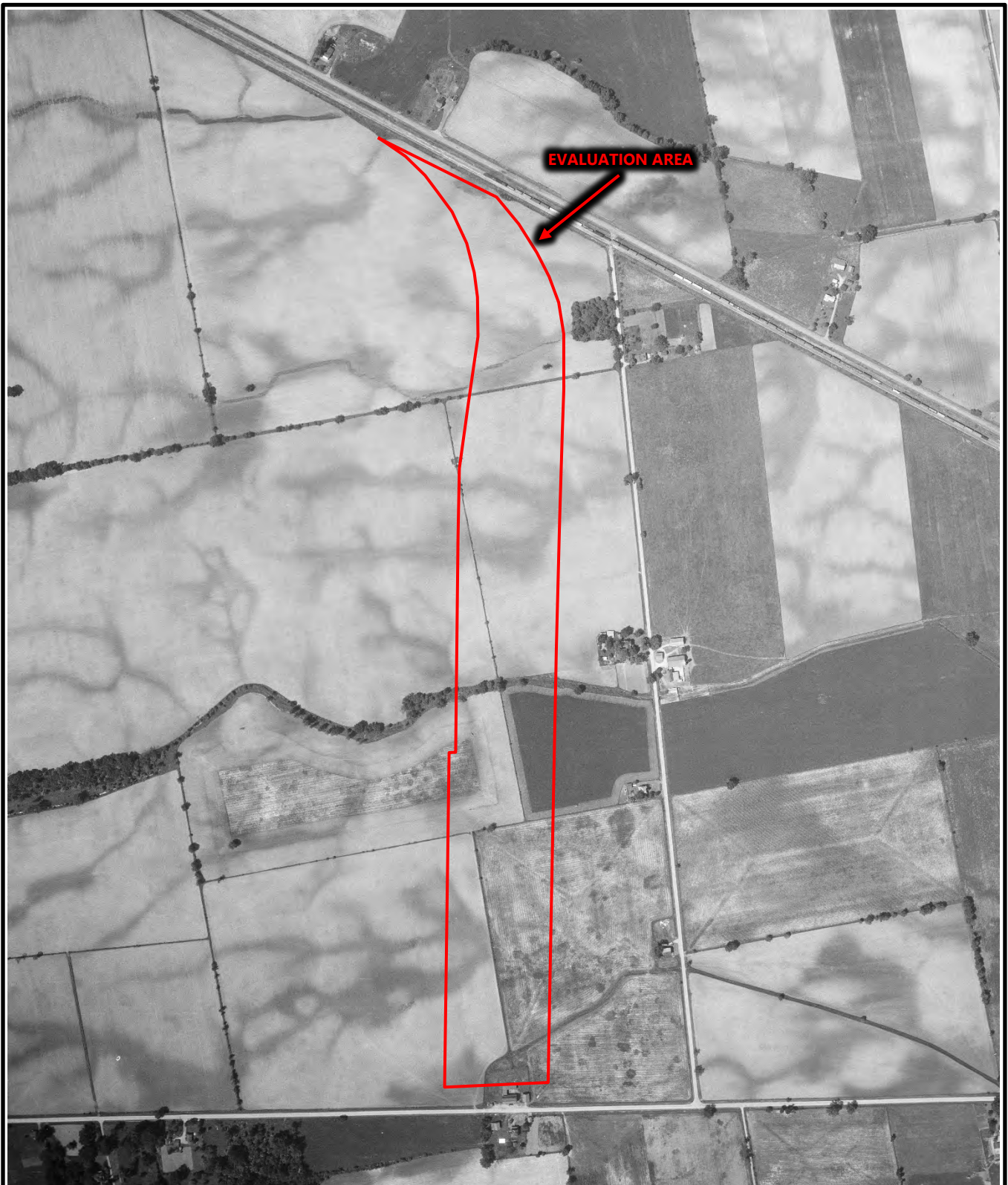


BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



APPENDIX 2

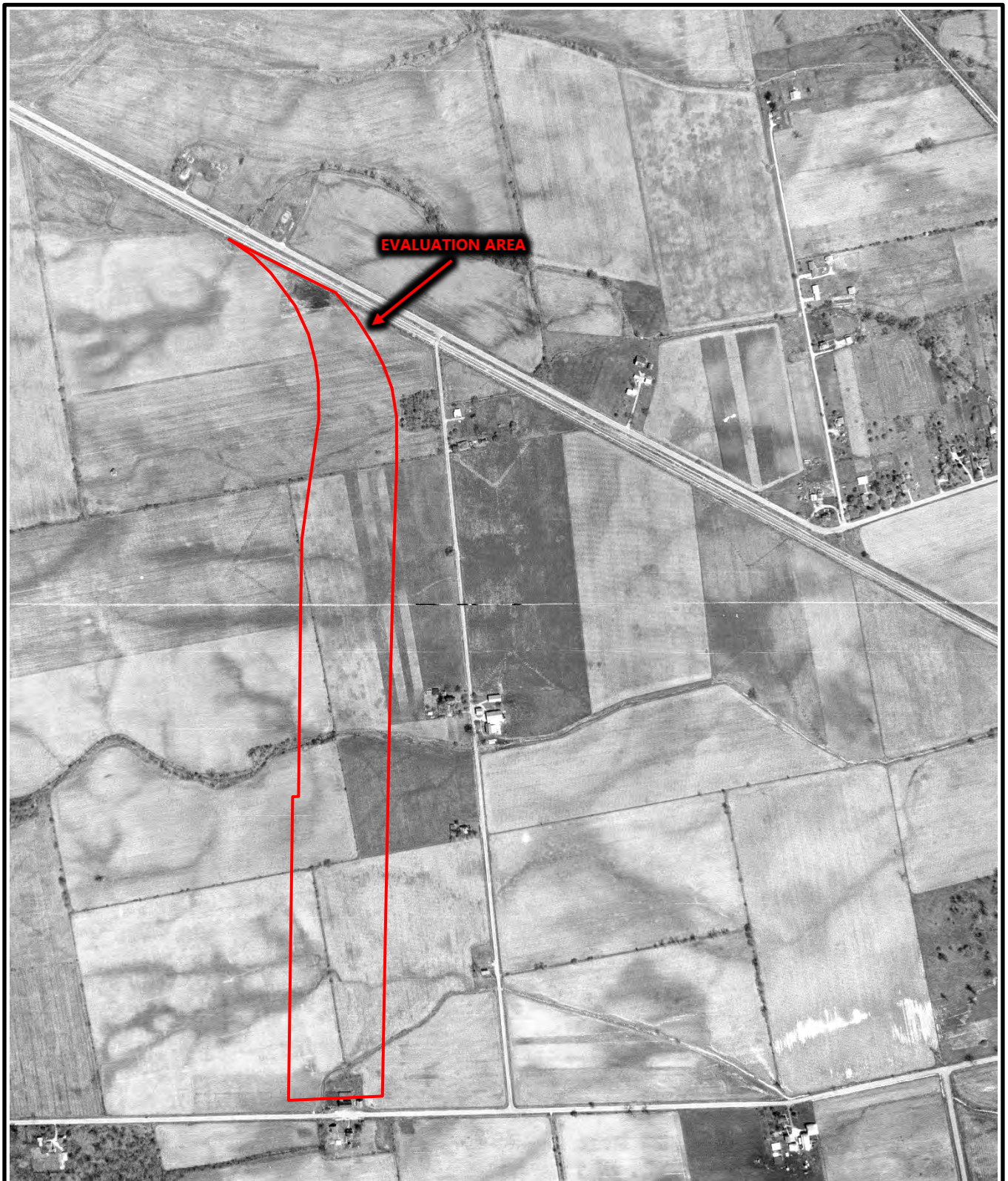
1956 AERIAL PHOTOGRAPH (NORTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



1964 AERIAL PHOTOGRAPH (NORTH SECTION)



NORTH

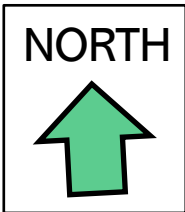
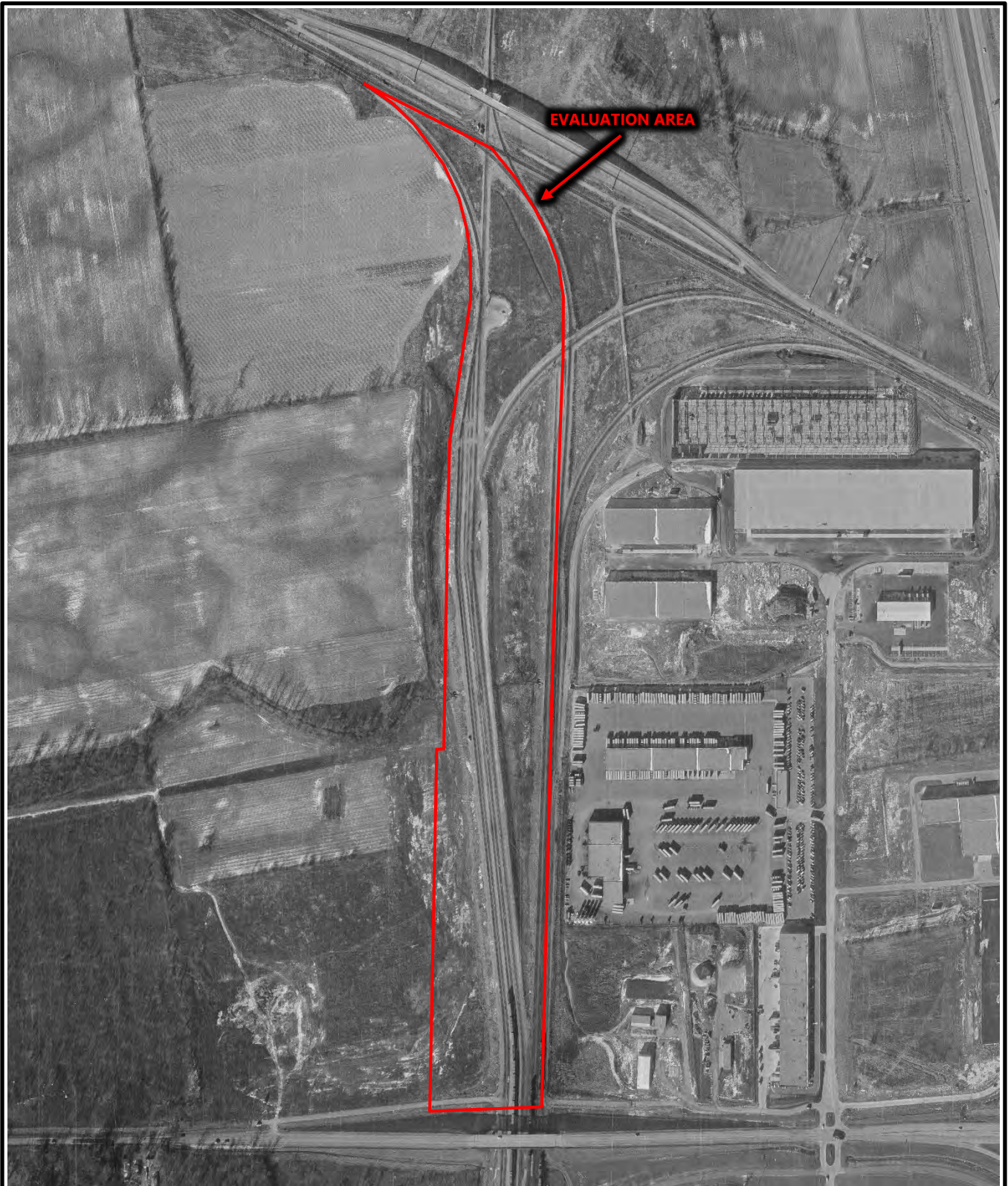


BUCKEYE YARD
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COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



CENTRAL OHIO WETLAND CONSULTING, LLC

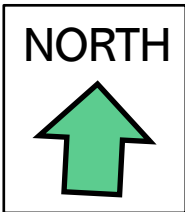
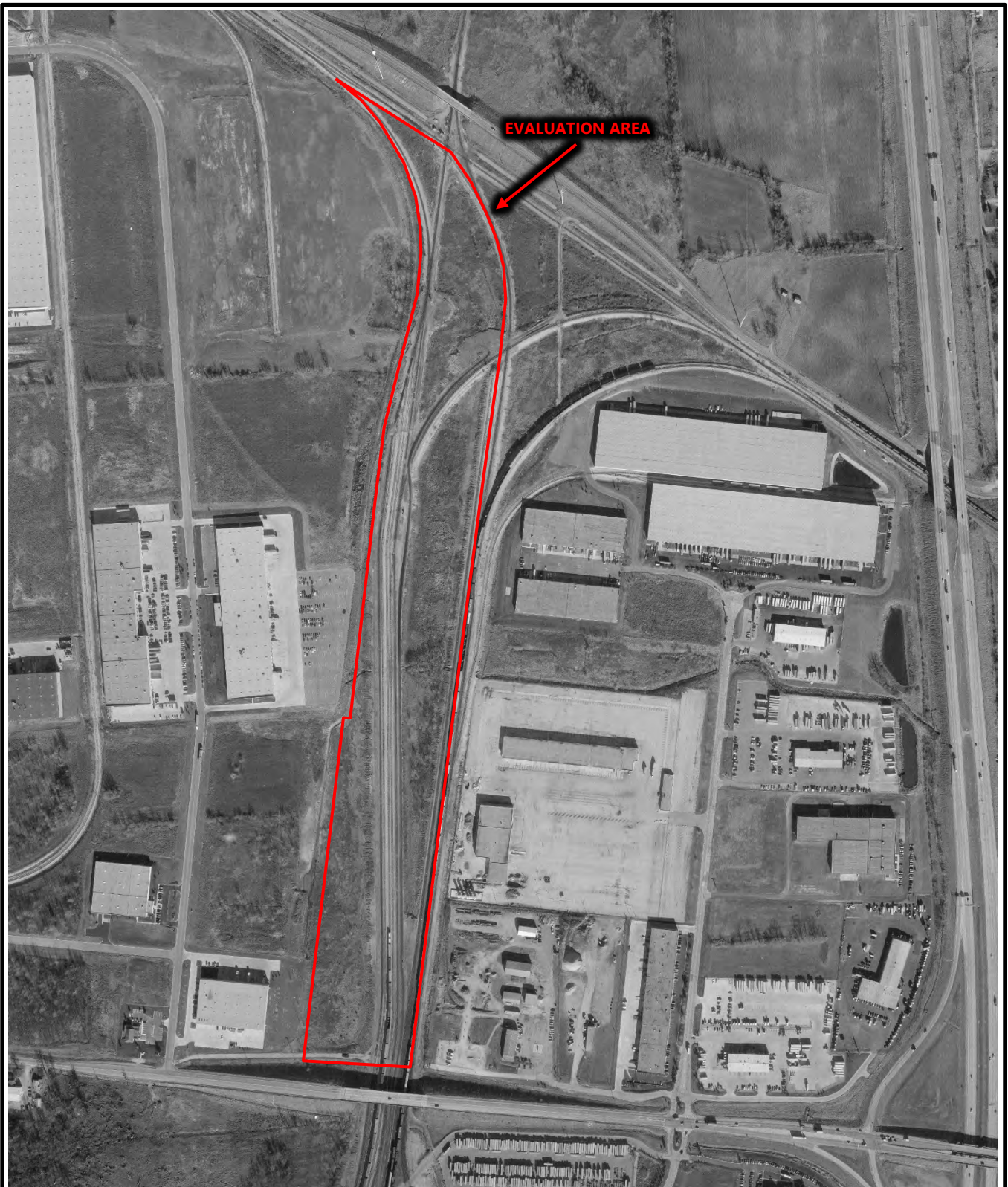
1979 AERIAL PHOTOGRAPH (NORTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



1989 AERIAL PHOTOGRAPH (NORTH SECTION)

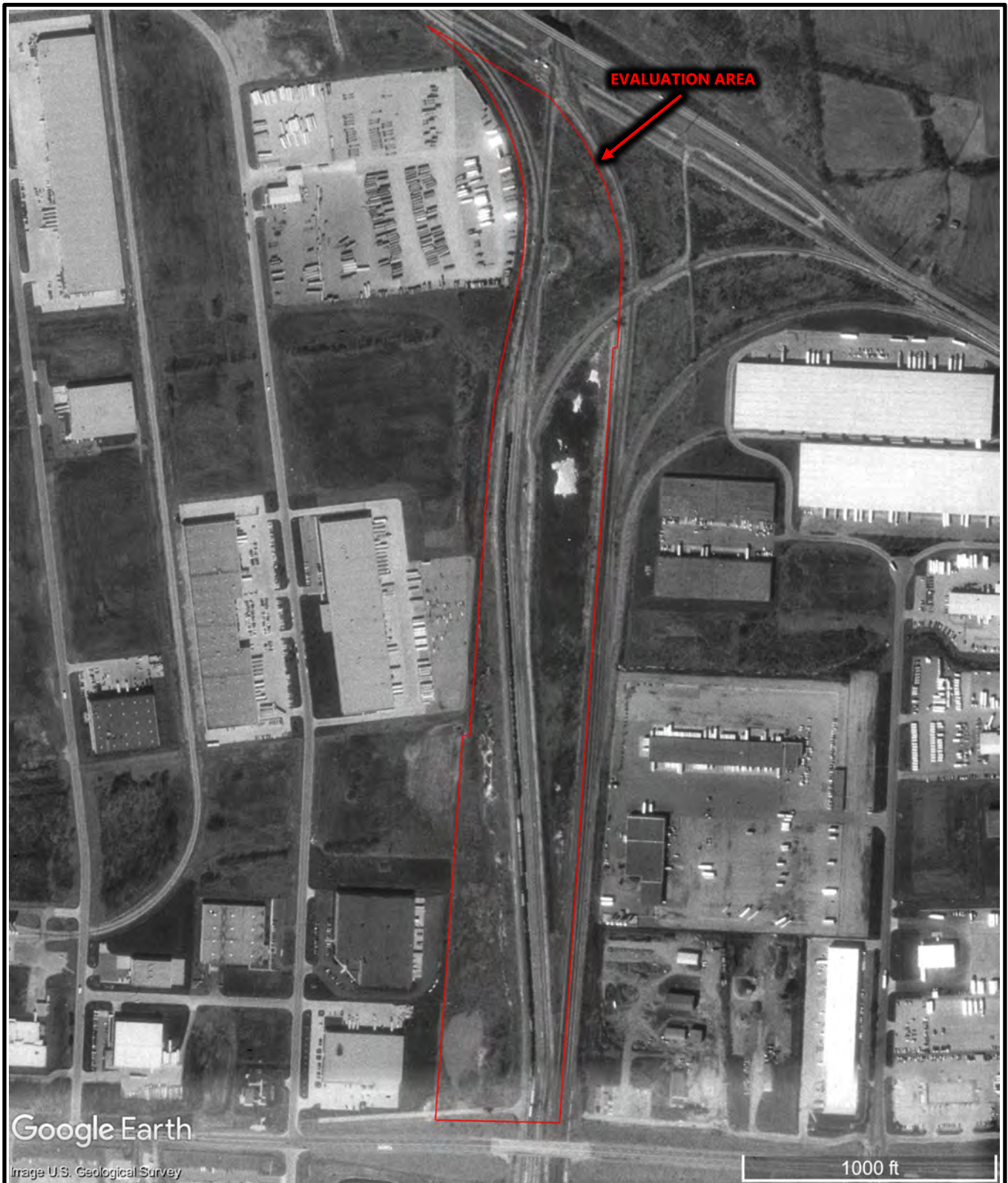


*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



CENTRAL OHIO WETLAND CONSULTING, LLC

1994 AERIAL PHOTOGRAPH (NORTH SECTION)

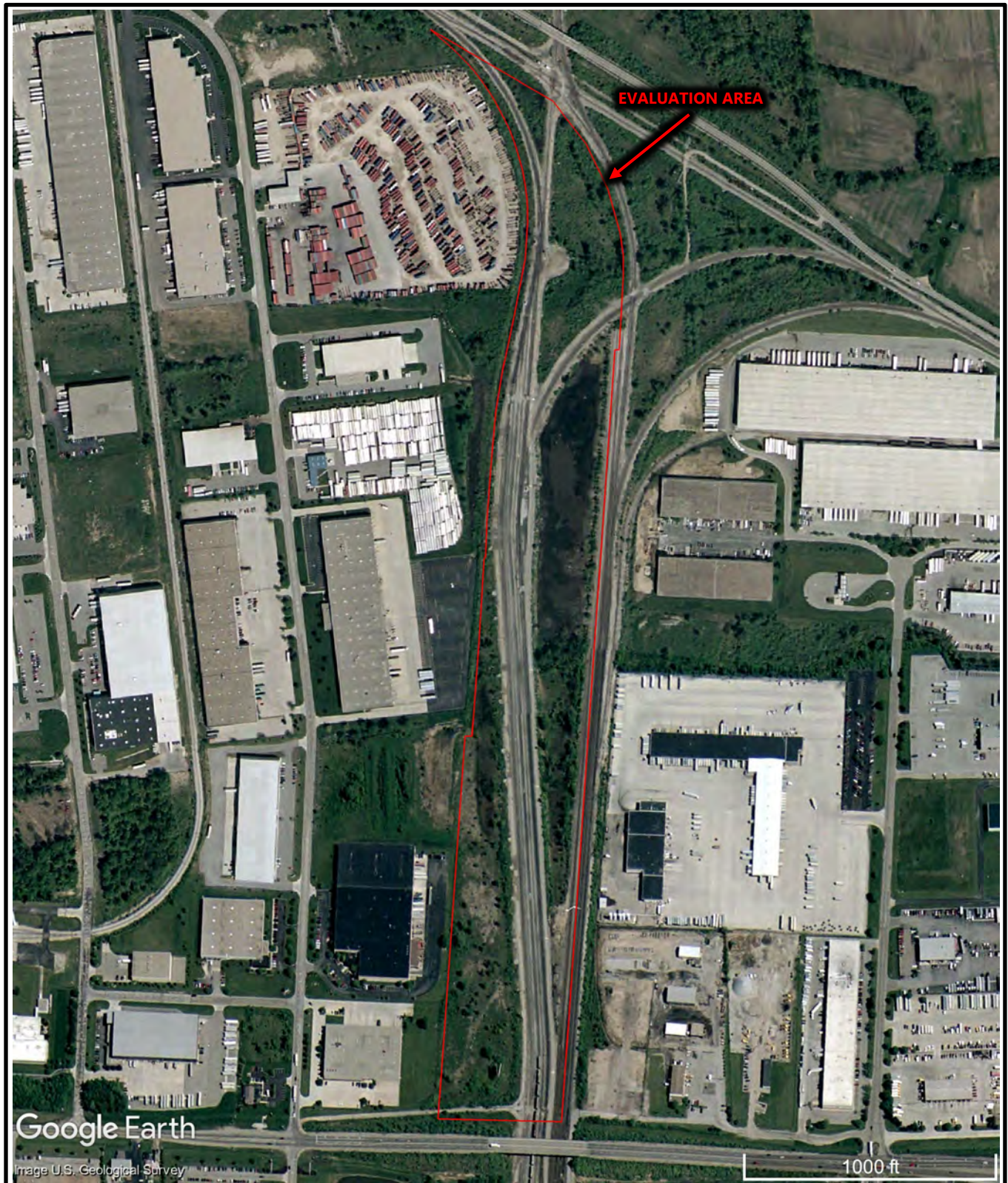


*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



CENTRAL OHIO WETLAND CONSULTING, LLC

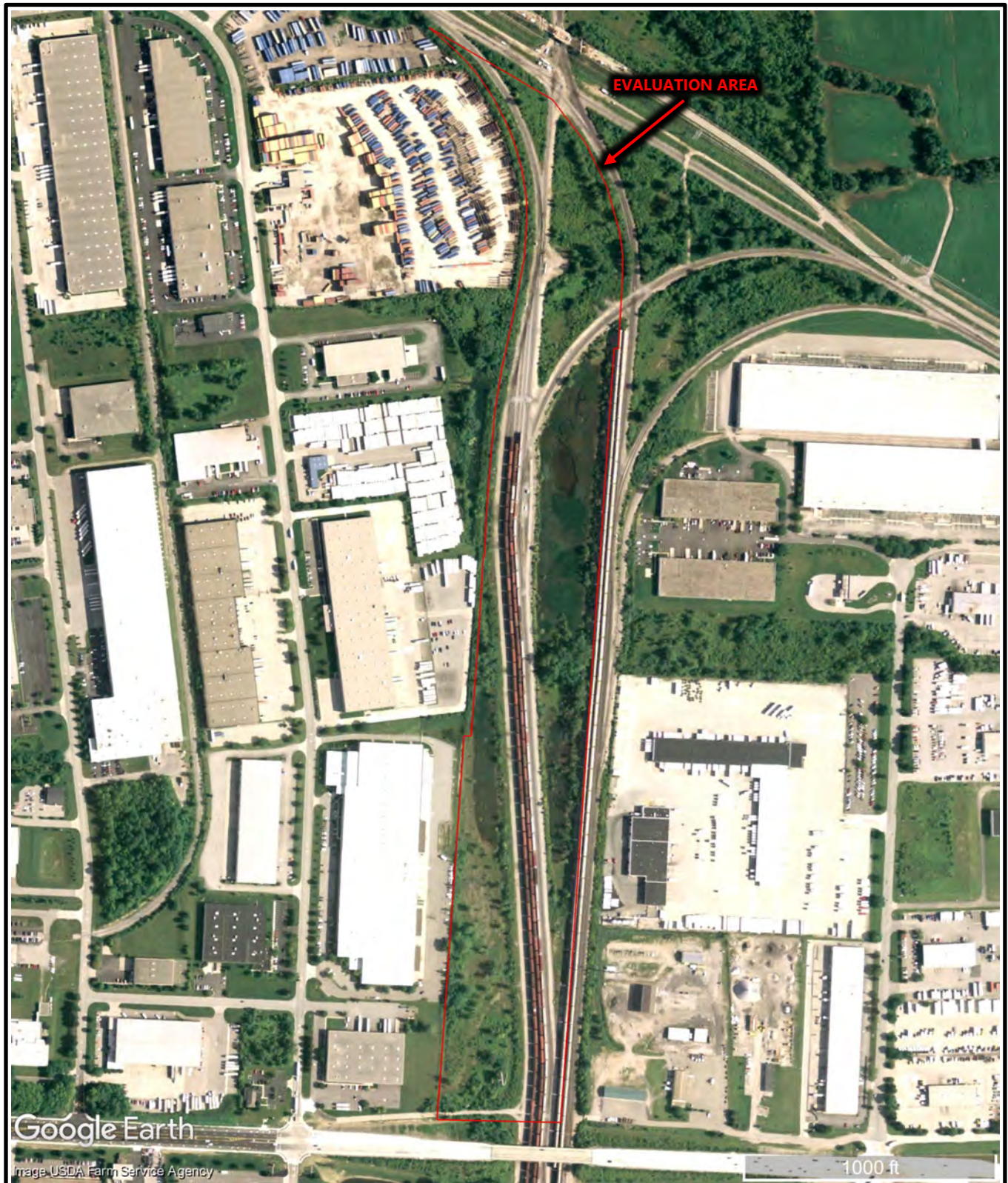
2002 AERIAL PHOTOGRAPH (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



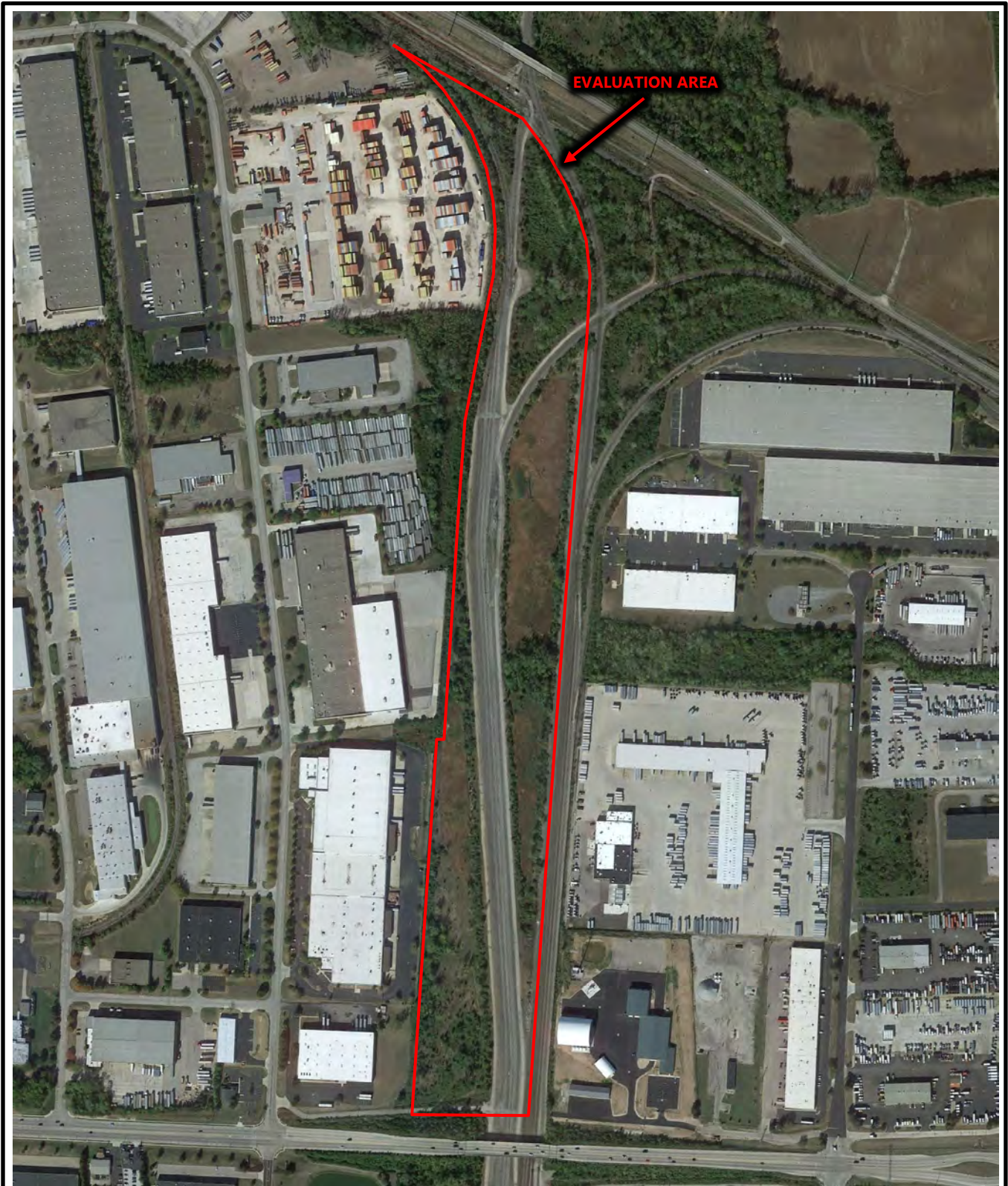
2009 AERIAL PHOTOGRAPH (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



2019 AERIAL PHOTOGRAPH (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



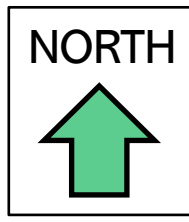
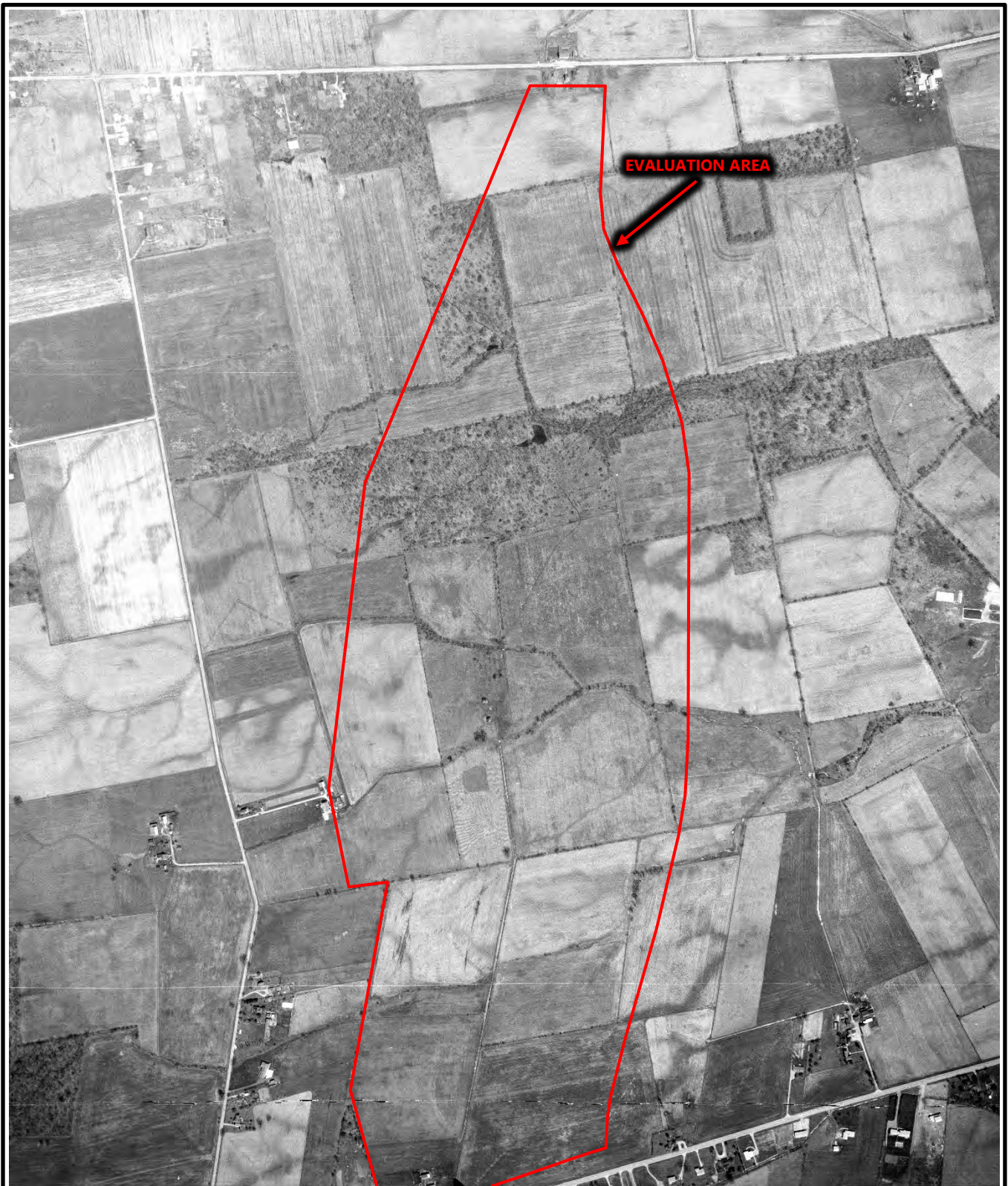
1956 AERIAL PHOTOGRAPH (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



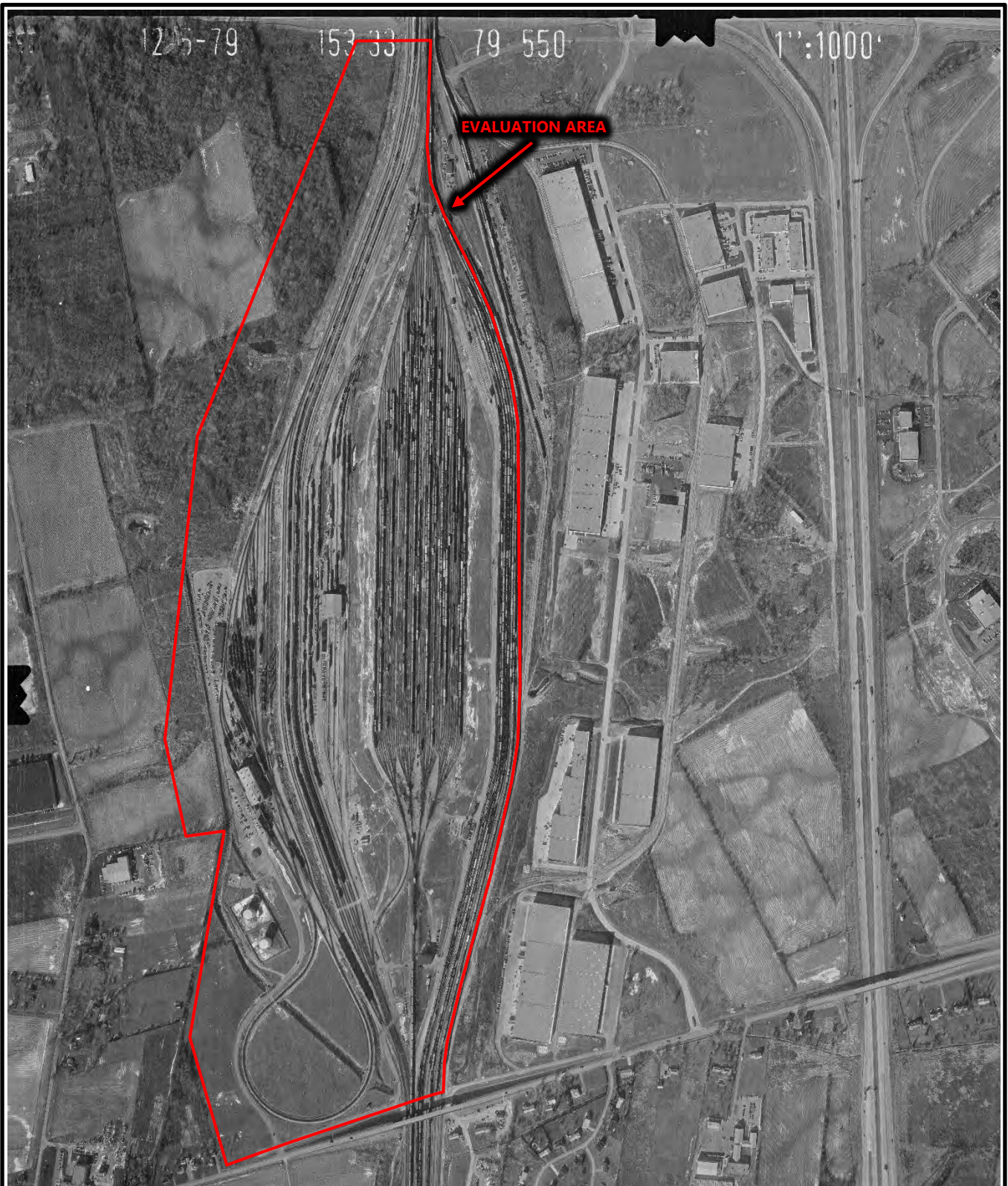
1964 AERIAL PHOTOGRAPH (CENTRAL SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



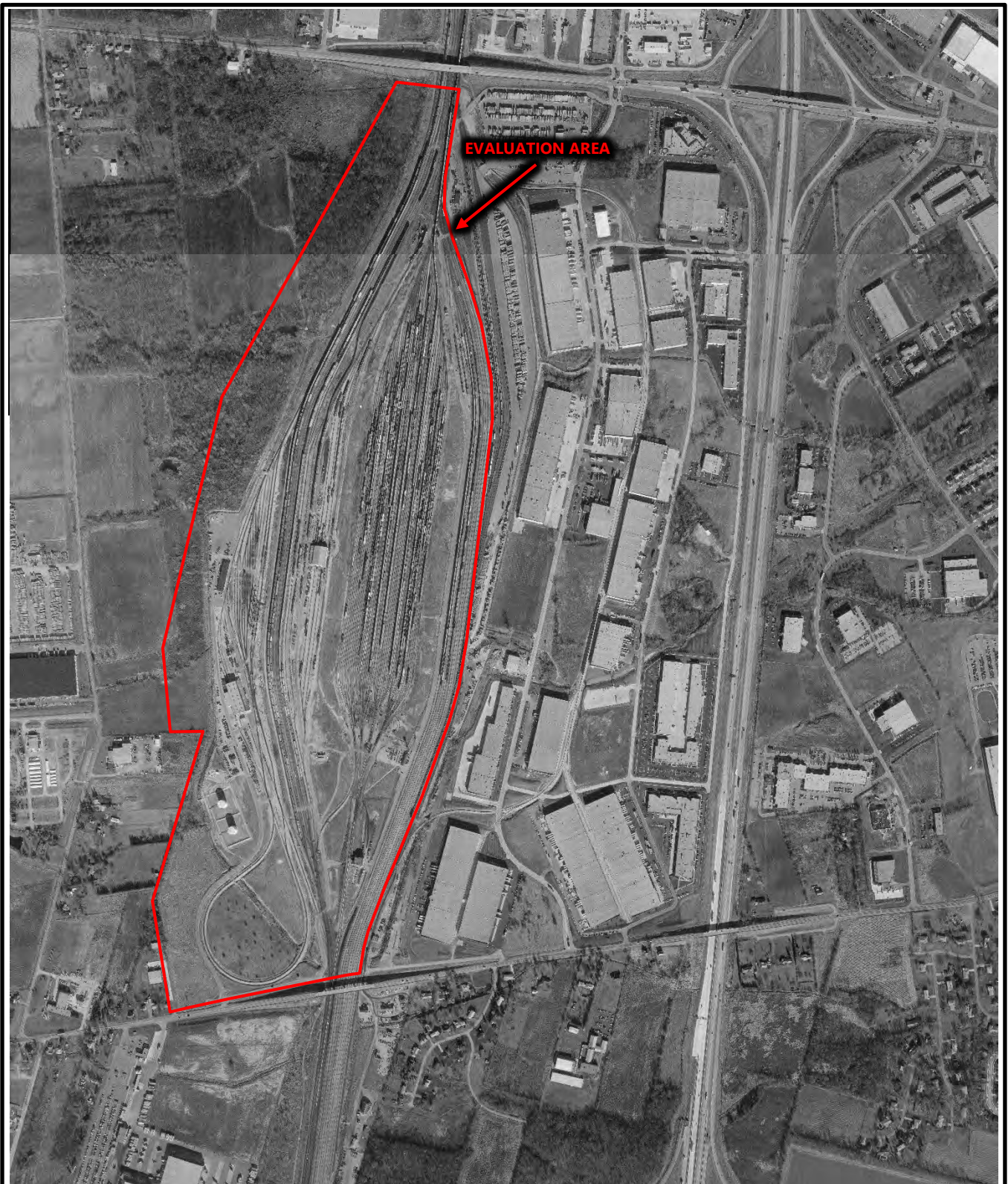
1979 AERIAL PHOTOGRAPH (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



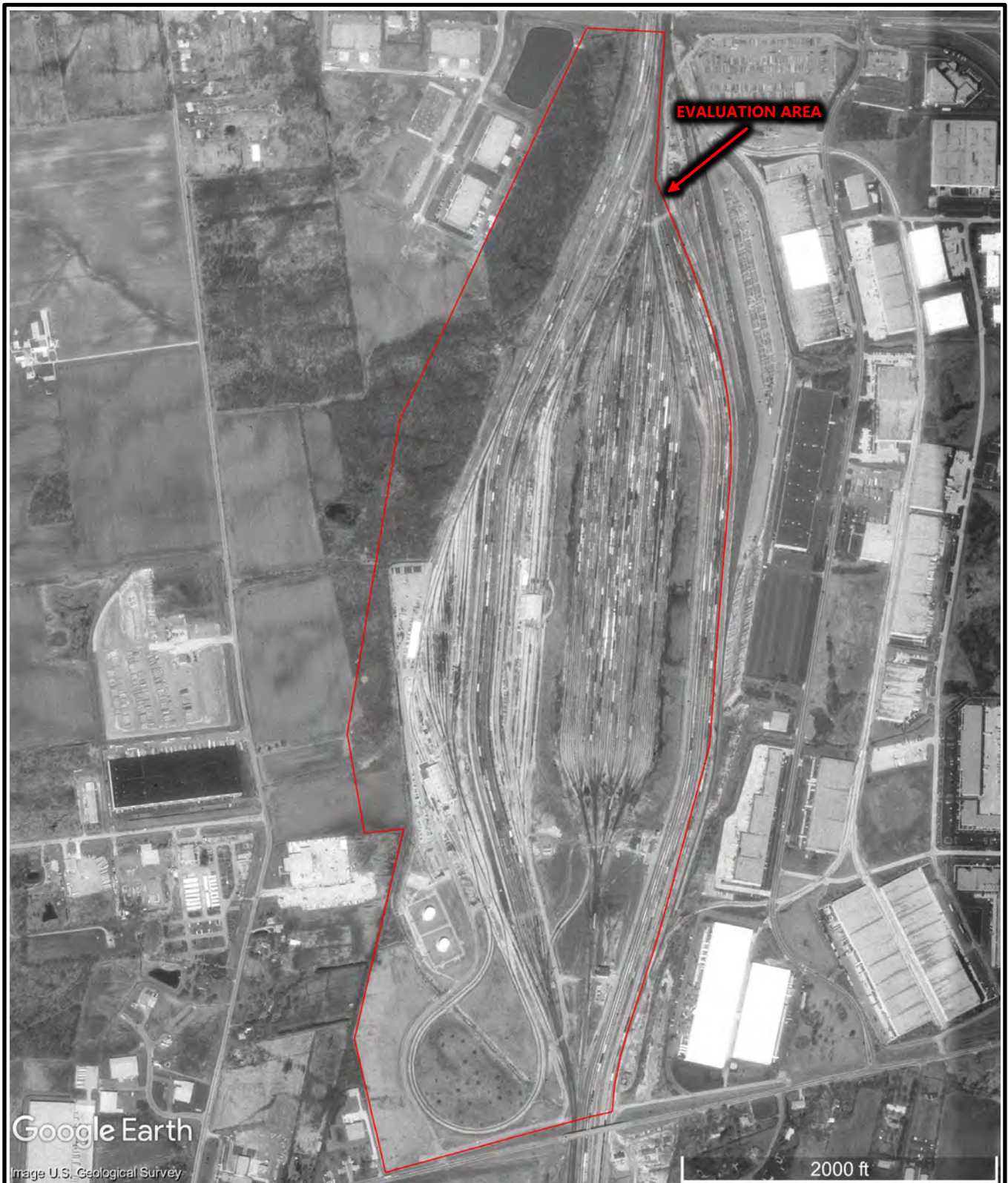
1989 AERIAL PHOTOGRAPH (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



1994 AERIAL PHOTOGRAPH (CENTRAL SECTION)

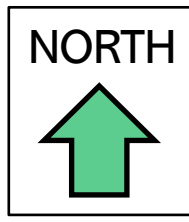
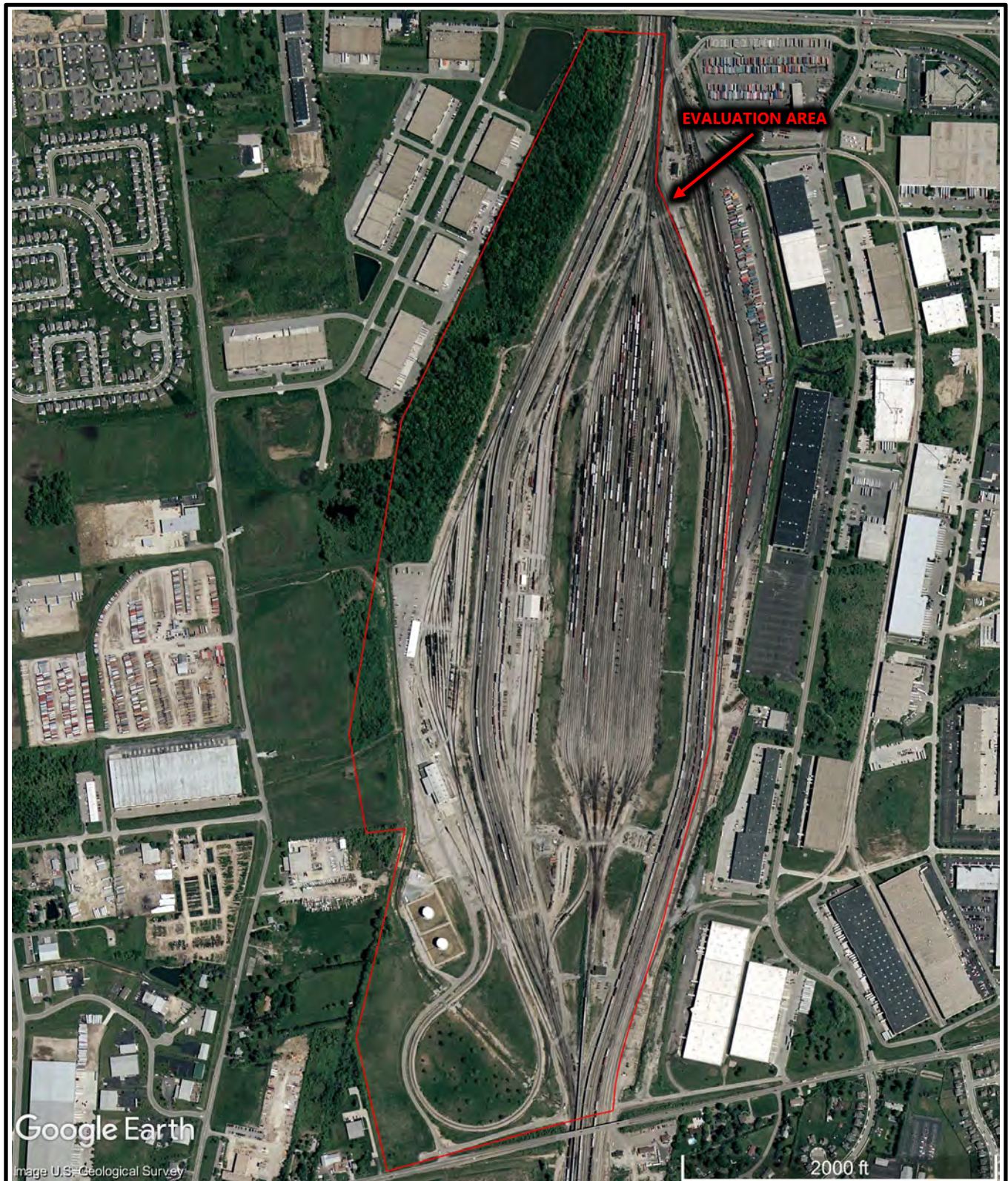


*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



CENTRAL OHIO WETLAND CONSULTING, LLC

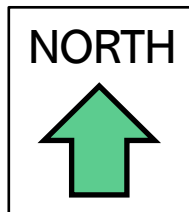
2002 AERIAL PHOTOGRAPH (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



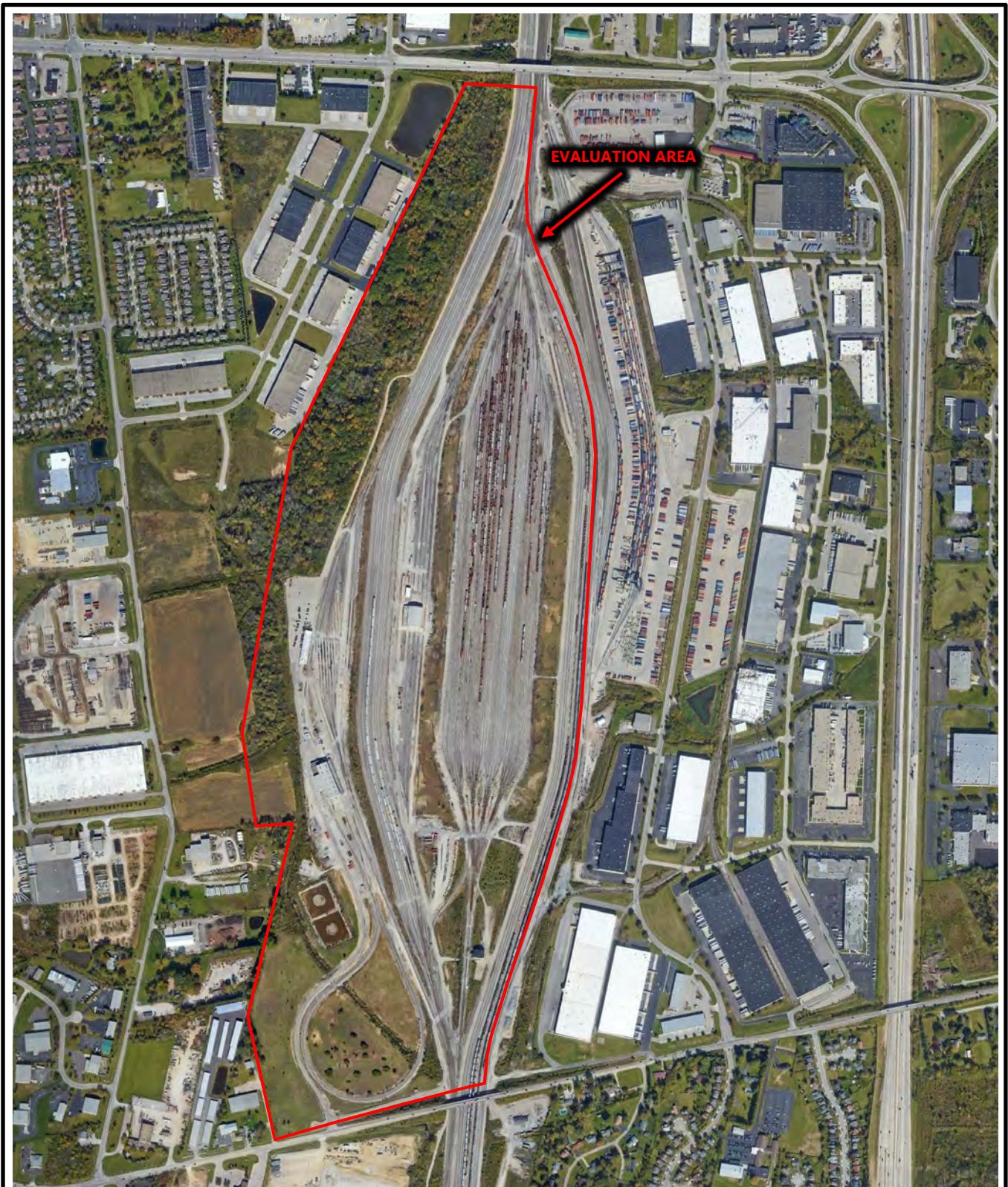
2009 AERIAL PHOTOGRAPH (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



2019 AERIAL PHOTOGRAPH (CENTRAL SECTION)

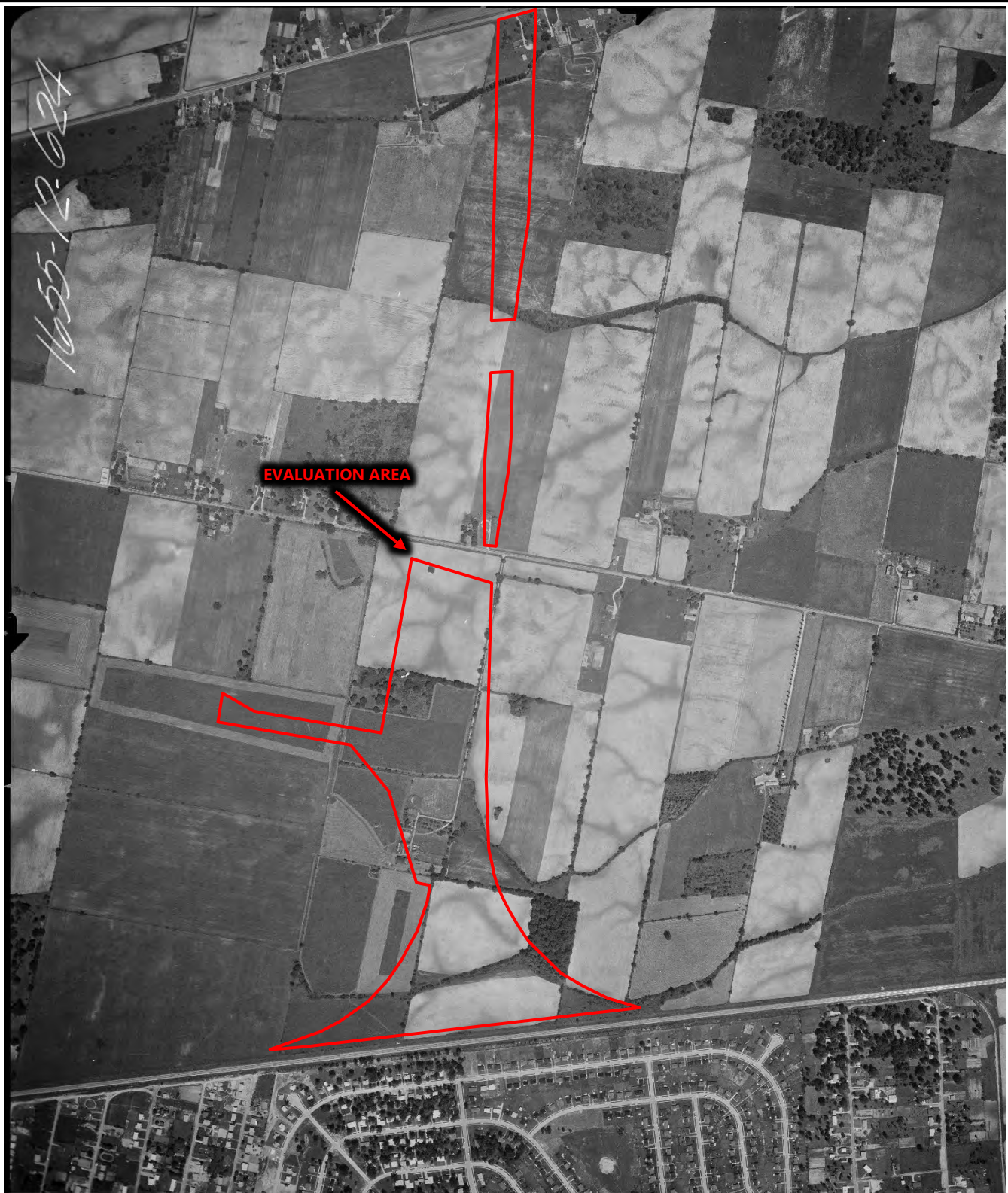


BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007

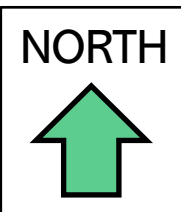
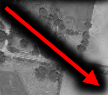


1960 AERIAL PHOTOGRAPH (SOUTH SECTION)

1655-12-024



EVALUATION AREA

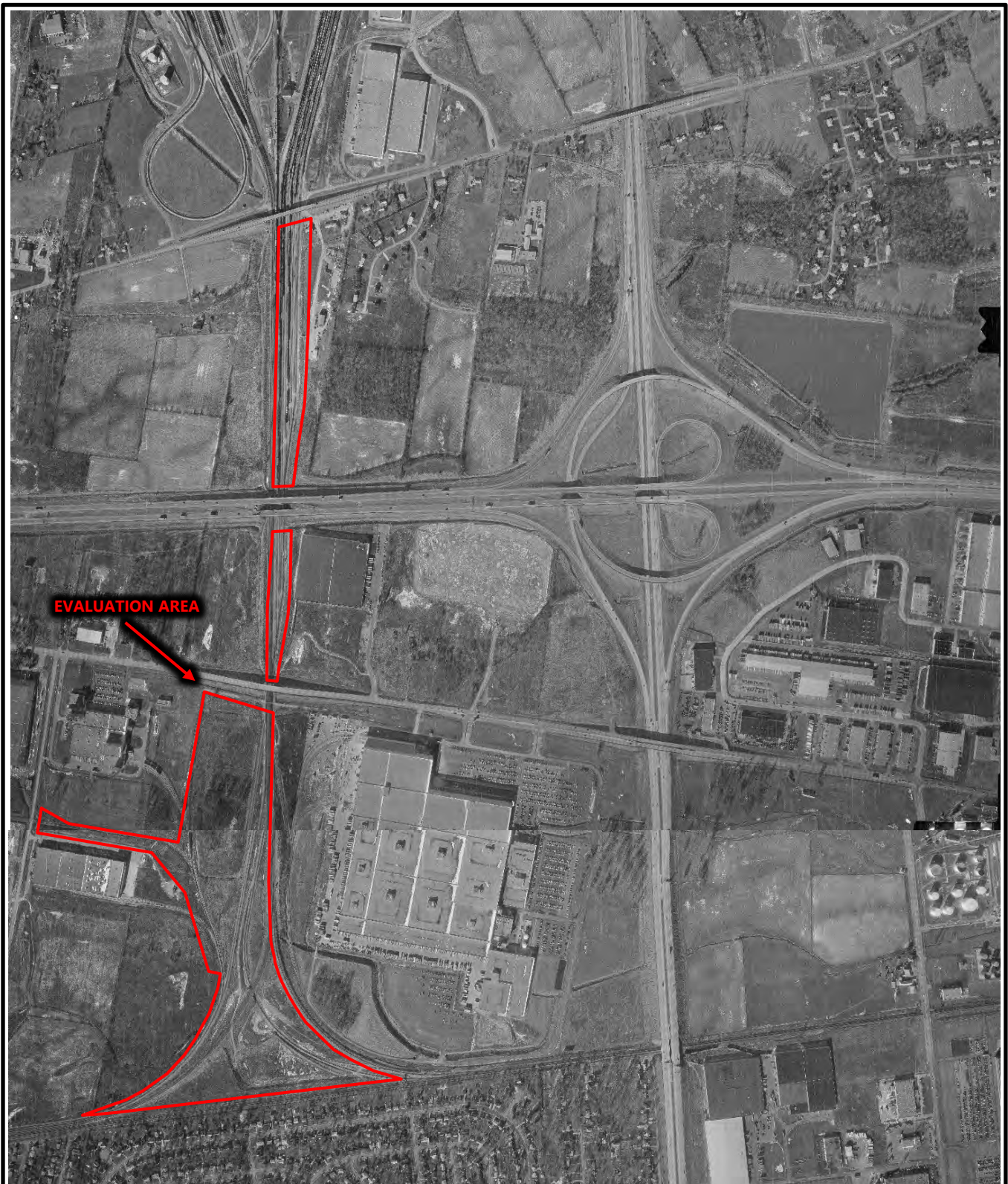


BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



CENTRAL OHIO WETLAND CONSULTING, LLC

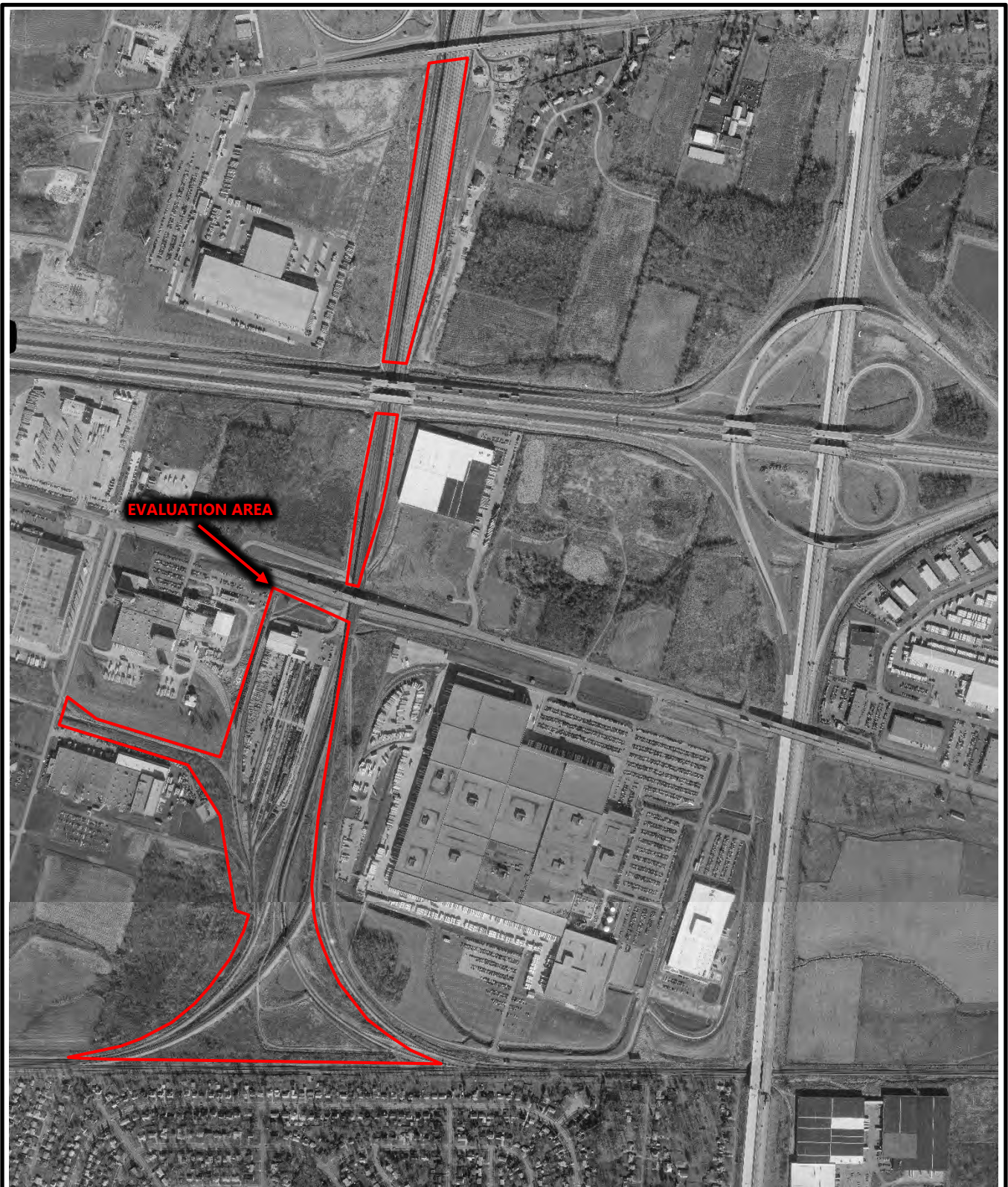
1979 AERIAL PHOTOGRAPH (SOUTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



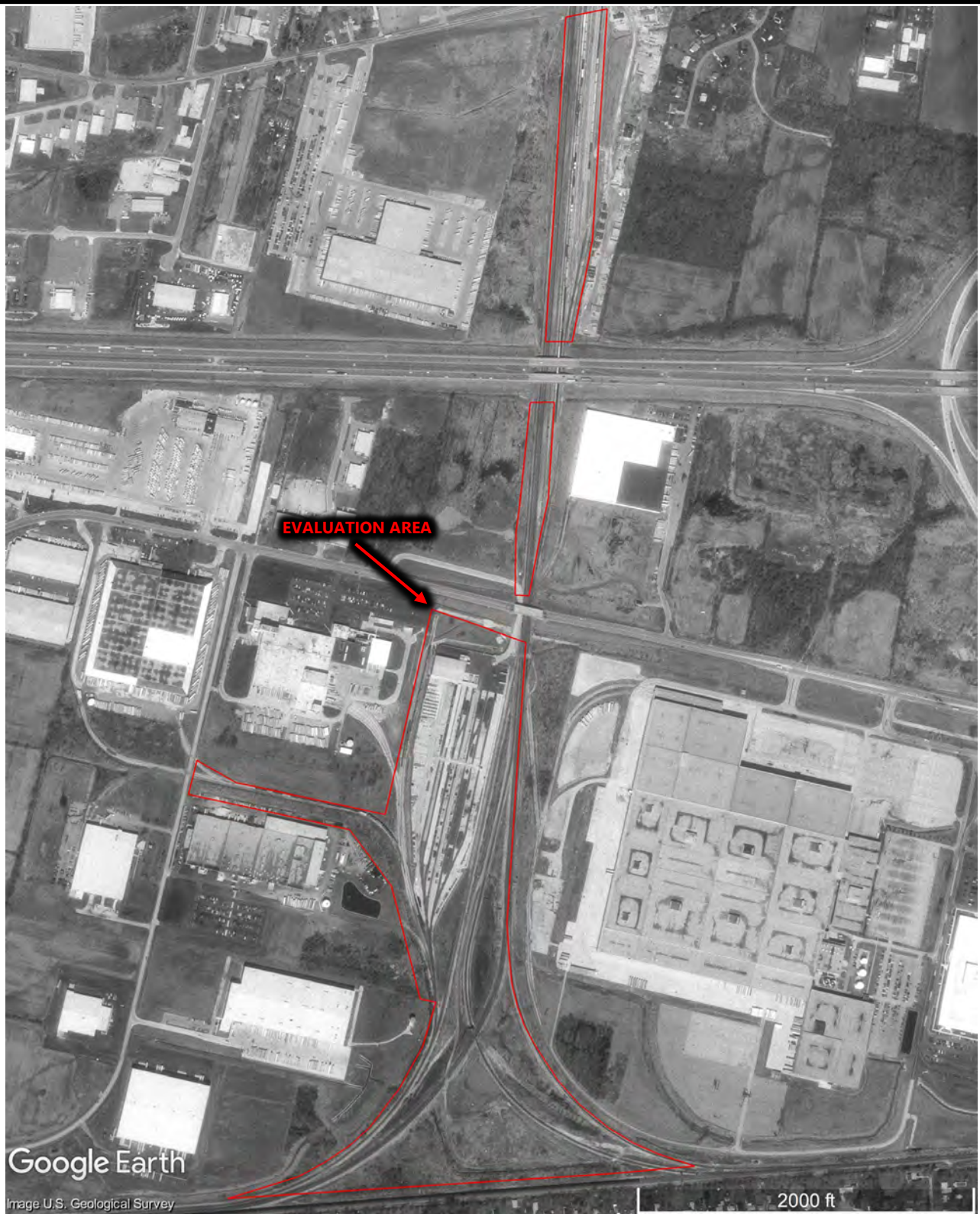
1989 AERIAL PHOTOGRAPH (SOUTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



1994 AERIAL PHOTOGRAPH (SOUTH SECTION)



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



2002 AERIAL PHOTOGRAPH (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



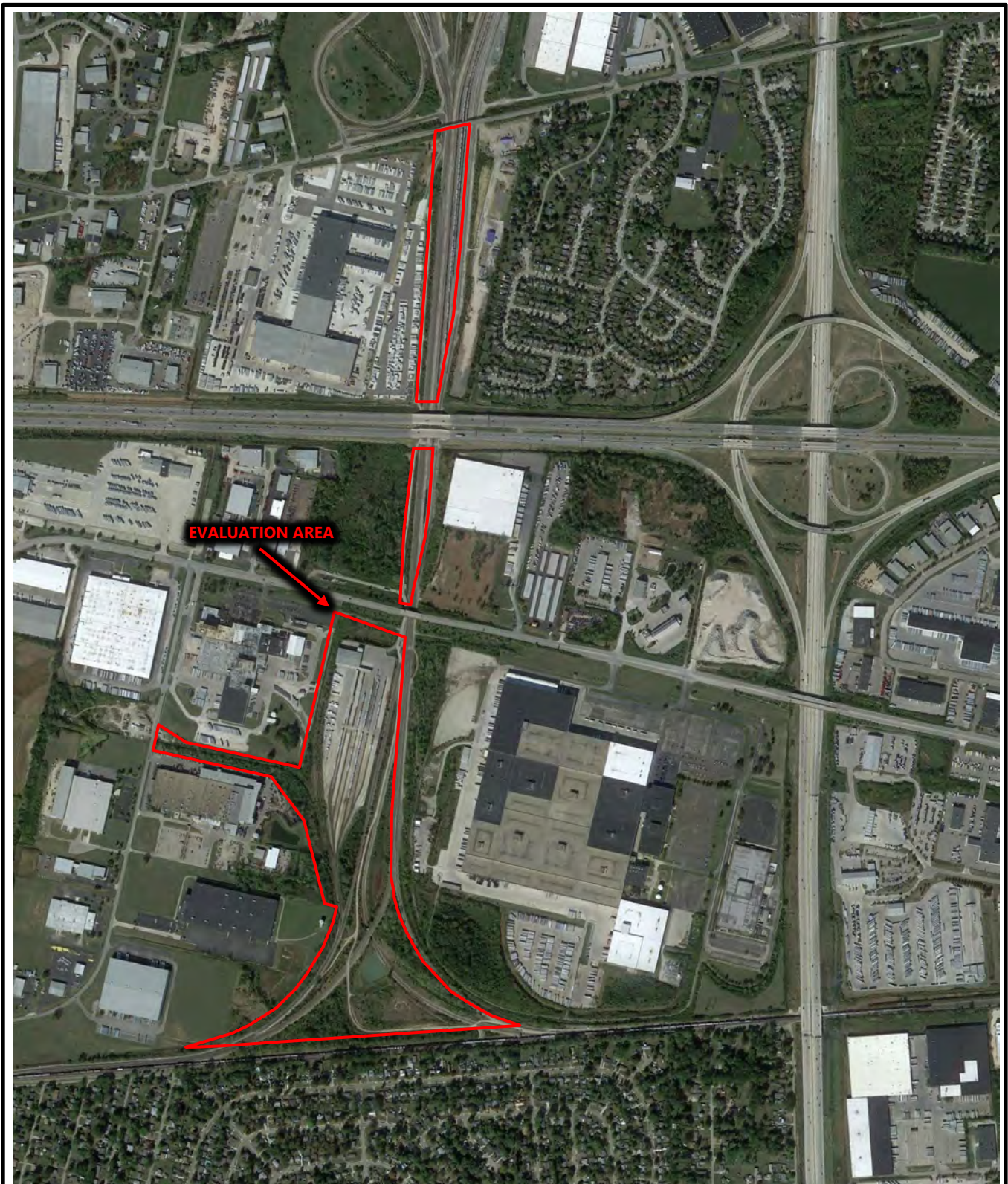
2009 AERIAL PHOTOGRAPH (SOUTH SECTION)



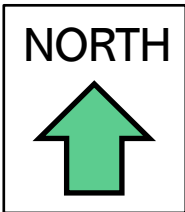
BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



2019 AERIAL PHOTOGRAPH (SOUTH SECTION)



EVALUATION AREA



*BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007*



CENTRAL OHIO WETLAND CONSULTING, LLC

APPENDIX 3

WETLAND DELINEATION MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



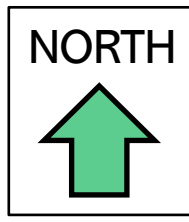
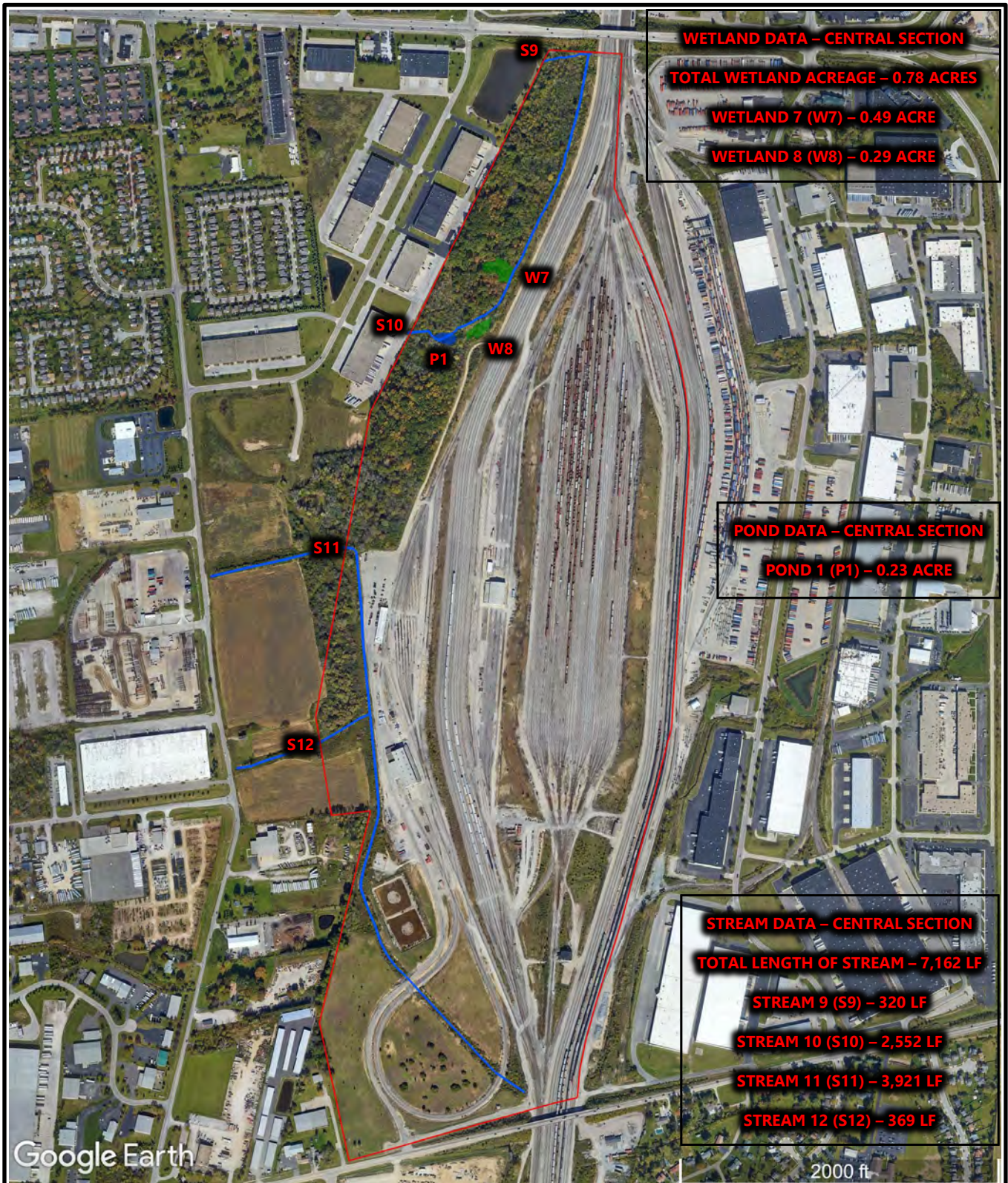
STREAM DELINEATION MAP (NORTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



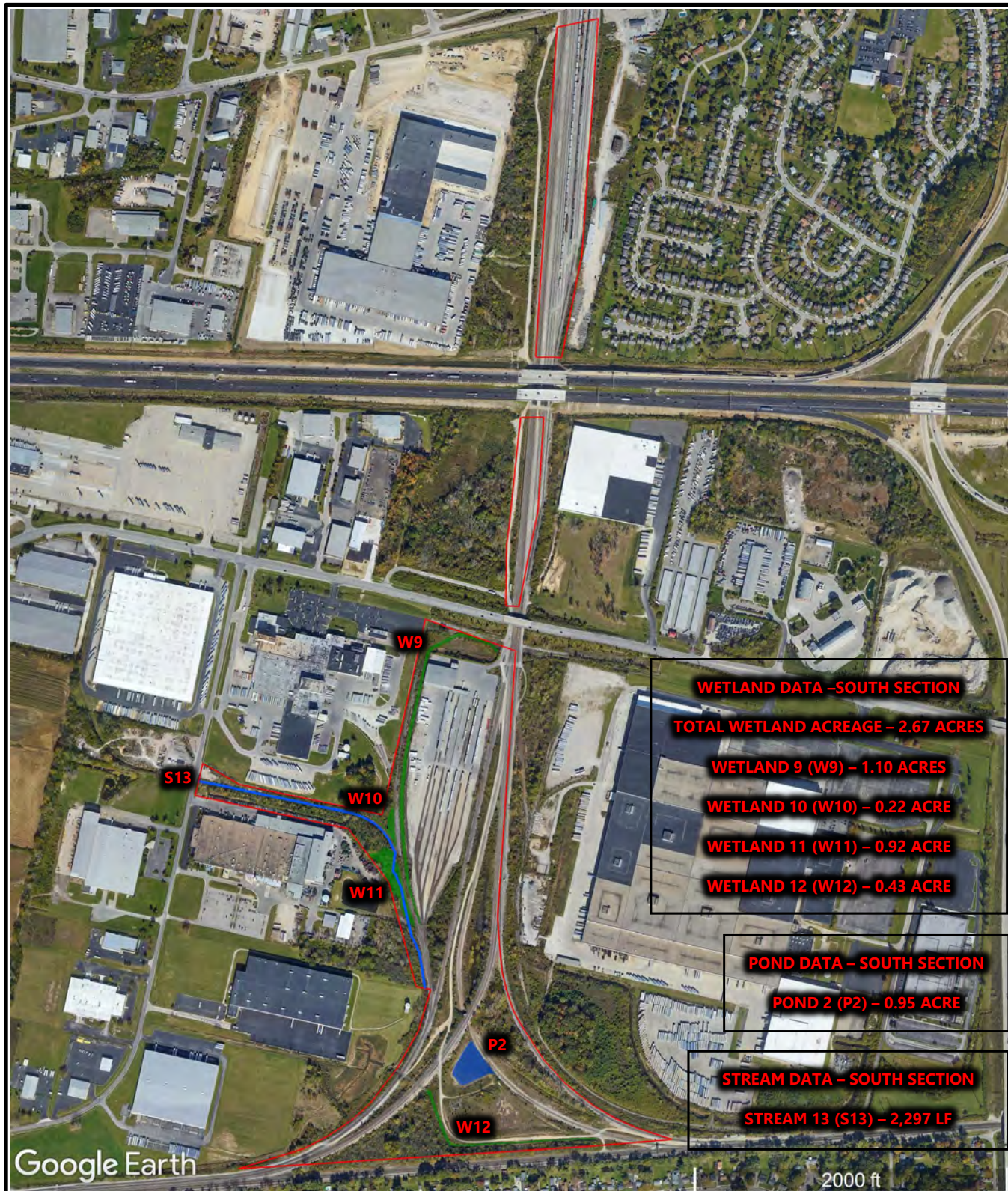
WETLAND AND STREAM DELINEATION MAP (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007

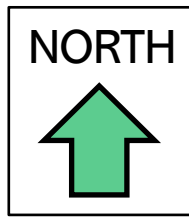


WETLAND AND STREAM DELINEATION MAP (SOUTH SECTION)



Google Earth

2000 ft



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



CENTRAL OHIO WETLAND CONSULTING, LLC

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	3
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

10	13
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

14	27
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

27

subtotal this page

Wetland 1

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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27

subtotal first page

0	27
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

2	29
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

29

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	3
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

11	14
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

14	28
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

28

subtotal this page

Wetland 2

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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28

subtotal first page

0	28
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

4	32
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

32

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	3
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

22	25
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

Check all disturbances observed

<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading
<input type="checkbox"/> dike	<input checked="" type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input checked="" type="checkbox"/> stormwater input	<input checked="" type="checkbox"/> other culvert, beaver dams

15	40
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

Check all disturbances observed

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

40

subtotal this page

Wetland 3

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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40

subtotal first page

0	40
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

2	42
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

42

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	3
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

11	14
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

13	27
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

27

subtotal this page

Wetland 4

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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27

subtotal first page

0	27
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-2	25
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

25

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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3	3
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	4
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

12	16
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

13	29
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

29

subtotal this page

Wetland 5

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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29

subtotal first page

0	29
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-2	27
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

27

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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2	2
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	3
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

12	15
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

Check all disturbances observed

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

13	28
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

Check all disturbances observed

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

28
subtotal this page

Wetland 6

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/9/2021
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28

subtotal first page

0	28
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-2	26
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

26

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/13/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

7	9
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

17	26
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

17	43
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

43

subtotal this page

Wetland 7

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/13/2021
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43

subtotal first page

0	43
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

6	49
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

- 0 Vegetated hummocks/tussucks
- 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

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End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/13/2021
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1	1
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

7	8
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

15	23
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

15	38
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

38

subtotal this page

Wetland 8

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/13/2021
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38

subtotal first page

0	38
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

0	38
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

38

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

1	3
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

22	25
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

8	33
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

33

subtotal this page

Wetland 9

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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33

subtotal first page

0	33
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

1	34
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

34

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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1	1
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

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

2	3
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

12	15
max 30 pts.	subtotal

Metric 3. Hydrology.

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

Check all disturbances observed	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input checked="" type="checkbox"/> stormwater input 	<ul style="list-style-type: none"> <input type="checkbox"/> point source (nonstormwater) <input type="checkbox"/> filling/grading <input checked="" type="checkbox"/> road bed/RR track <input type="checkbox"/> dredging <input type="checkbox"/> other _____

7	22
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

Check all disturbances observed	
<ul style="list-style-type: none"> <input type="checkbox"/> mowing <input type="checkbox"/> grazing <input type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants 	<ul style="list-style-type: none"> <input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment

22
subtotal this page

Wetland 10

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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22

subtotal first page

0	22
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

2	24
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

24

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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2	2
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Metric 1. Wetland Area (size).

max 6 pts. subtotal

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

2	4
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Metric 2. Upland buffers and surrounding land use.

max 14 pts. subtotal

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

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

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

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

22	26
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Metric 3. Hydrology.

max 30 pts. subtotal

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

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

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

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

17	43
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Metric 4. Habitat Alteration and Development.

max 20 pts. subtotal

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

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

4b. Habitat development. Select only one and assign score.

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

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

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

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

43

subtotal this page

Wetland 11

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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43

subtotal first page

0	43
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

9	52
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

52

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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2	2
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

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

2	6
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

18	24
max 30 pts.	subtotal

Metric 3. Hydrology.

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

Check all disturbances observed	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input checked="" type="checkbox"/> stormwater input 	<ul style="list-style-type: none"> <input type="checkbox"/> point source (nonstormwater) <input type="checkbox"/> filling/grading <input checked="" type="checkbox"/> road bed/RR track <input type="checkbox"/> dredging <input checked="" type="checkbox"/> other beaver dams

9	33
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

Check all disturbances observed	
<ul style="list-style-type: none"> <input type="checkbox"/> mowing <input type="checkbox"/> grazing <input type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants 	<ul style="list-style-type: none"> <input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment

33
subtotal this page

Wetland 12

Site: Buckeye Yard	Rater(s): Matt Kaminski	Date: 4/12/2021
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33

subtotal first page

0	33
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

2	35
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

35

End of Quantitative Rating. Complete Categorization Worksheets.

APPENDIX 4

PHOTO KEY (NORTH SECTION)



Google Earth

1000 ft

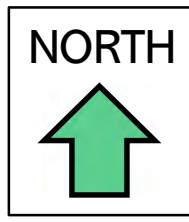


BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



CENTRAL OHIO WETLAND CONSULTING, LLC

PHOTO KEY (CENTRAL SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



PHOTO KEY (SOUTH SECTION)



BUCKEYE YARD
TRABUE, ROBERTS, AND SCIOTO-DARBY CREEK ROADS
COLUMBUS, FRANKLIN COUNTY, OHIO
COWC PROJECT #120120007



Field Reconnaissance Photos



Photo 1 – Southerly view of former rail lines on the North Section of the evaluation area.



Photo 2 – Typical view of former rail lines and adjacent brushy areas on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 3 – Southerly view across waste land areas on the southwest part of the North Section of the evaluation area.



Photo 4 – Northerly view of dense brushy areas on the northeast part of the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 5 – Southerly view of Wetland 1 on the North Section of the evaluation area.



Photo 6 – Southwesterly view of Wetland 2 on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 7 – Northwesterly view across Wetland 3 on the North Section of the evaluation area. This wetland appears to have established due to beaver impoundments within a drainage ditch.



Photo 8 – Northerly view along Wetland 3 on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 9 – Northerly view of Wetland 4 on the North Section of the evaluation area.



Photo 10 – Southerly view of Wetland 4 on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 11 – Easterly view across Wetland 5 on the North Section of the evaluation area.



Photo 12 – Westerly view across the southern part of Wetland 5 on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 13 – Northerly view of Stream 7 and Stream 8 on the North Section of the evaluation area. These ephemeral streams appear to partially drain Wetland 5.



Photo 14 – Southerly view across Wetland 5 on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 15 – Northerly view across Wetland 6 on the North Section of the evaluation area.



Photo 16 – Easterly view along Stream 1 (Roberts Millikin Ditch) on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 17 – Northeasterly view of two existing culvert pipes directing surface water from Stream 1 (Roberts Millikin Ditch) beneath elevated railroad lines.



Photo 18 – Westerly view at the continuation of Stream 1 (Roberts Millikin Ditch) upon exiting the culvert pipes depicted in Photo 17.

Field Reconnaissance Photos



Photo 19 – Westerly view of Stream 1 (Roberts Millikin Ditch) on the North Section of the evaluation area.



Photo 20 – Westerly view of Stream 1 (Roberts Millikin Ditch) on the North Section of the evaluation area.

Field Reconnaissance Photos



Photo 21 – Southerly view of former railroad lines on the Central Section of the evaluation area.



Photo 22 – Northeasterly view of former railroad lines and waste areas between tracks on the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 23 – Northerly view of former railroad lines on the Central Section of the evaluation area.



Photo 24 – Southerly view of former railroad lines and brushy land on the southern part of the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 25 – Southerly view along a cleared utility corridor on the west central part of the Central Section of the evaluation area.



Photo 26 – Typical view of dense vegetation comprising the wooded western portions of the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 27 – Typical view of dense vegetation comprising the wooded western portions of the Central Section of the evaluation area.



Photo 28 – Westerly view along Stream 9 on the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 29 – Westerly view at the origination of Stream 9. This culvert pipe discharges surface water from a west adjoining storm water management pond.



Photo 30 – Southwesterly view at the west adjoining storm water management pond directing surface water to Stream 9.

Field Reconnaissance Photos



Photo 31 – Westerly view at the beginning of Stream 10 on the Central Section of the evaluation area.



Photo 32 – Northeasterly view across Pond 1 on Central Section of the evaluation area. This pond impounds Stream 10.

Field Reconnaissance Photos



Photo 33 – Southwesterly view across Pond 1 on Central Section of the evaluation area. This pond impounds Stream 10.



Photo 34 – Southerly (upstream) view along Stream 10 on Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 35 – Northerly (downstream) view along Stream 10 on Central Section of the evaluation area.



Photo 36 – Northeasterly view of the confluence of Stream 9 with Stream 10 on the northwest part of the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 37 – Southerly view of Wetland 7 on the Central Section of the evaluation area.



Photo 38 – Easterly view of Wetland 7 on the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 39 – Typical view of wooded areas to the north, south, and west of Wetland 7 on the Central Section of the evaluation area.



Photo 40 – Southwesterly view of Wetland 8 on the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 41 – Northeasterly view of Wetland 8 on the Central Section of the evaluation area.



Photo 42 – Easterly view of Stream 11 as it enters the Central Section of the evaluation area from the west.

Field Reconnaissance Photos



Photo 43 – Northwesterly view of Stream 11 on the Central Section of the evaluation area.



Photo 44 – Southeasterly view of Stream 11 as it crosses the southwest part of the Central Section of the evaluation area.

Field Reconnaissance Photos



Photo 45 – Southerly view along former rail lines comprising the north part of the South Section of the evaluation area.



Photo 46 – Easterly view along Stream 13 as it enters the South Section of the evaluation from the west, beneath Manor Park Drive.

Field Reconnaissance Photos



Photo 47 – Westerly view along Stream 13 on the South Section of the evaluation area.



Photo 48 – Southeasterly view along Stream 13 on the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 49 – Southwesterly view of Wetland 11 on the South Section of the evaluation area. This wetland appears to have established due to beaver impoundments within Stream 13.



Photo 50 – Northwesterly view of Wetland 11 on the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 51 – Westerly view of Wetland 11 on the South Section of the evaluation area.



Photo 52 – Northerly view of Wetland 10 on the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 53 – Northerly view of Wetland 9 on the South Section of the evaluation area



Photo 54 – Northerly view across vacant waste land on the southern part of the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 55 – Typical view of densely vegetated areas on the southwest part of the South Section of the evaluation area.



Photo 56 – Easterly view of Pond 2 on the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 57 – Northwesterly view of Wetland 12 on the South Section of the evaluation area. This wetland appears to have established due to beaver impoundments within a drainage ditch.



Photo 58 – Easterly view of Wetland 12 on the South Section of the evaluation area. This wetland appears to have established due to beaver impoundments within a drainage ditch.

Field Reconnaissance Photos



Photo 59 – Westerly view of eastern part of Wetland 12 on the South Section of the evaluation area.



Photo 60 – Easterly view at the termination point of Wetland 12 on the South Section of the evaluation area.

Field Reconnaissance Photos



Photo 61 – Northerly view of vacant waste land on the South Section of the evaluation area.

ATTACHMENT C
MITIGATION CREDITS LETTER



123 South Broad Street, Suite 238
P.O. Box 369
Lancaster, Ohio 43130
T: (740) 654-4016
F: (740) 689-0890

November 4, 2022

Mr. Burak Gursel
Simson Strong-Tie Co., Inc.
5956 W. Positas Blvd.
Pleasanton, CA 94588

RE: Wetlands Mitigation for the Buckeye Yard Expansion site located at 2600 International Street, Columbus Ohio 43228
ACCT NO. SCIO-179

Dear Mr. Gursel:

The Stream + Wetlands Foundation received on November 4, 2022, an amended purchase agreement for the Buckeye Yard Expansion site. As per the terms of the updated purchase agreement, the previously paid deposit payment of \$32,175 (Check #749648) reserves 4.2 acres of non-forested wetland mitigation credits, from our Huntington In-Lieu Fee Program.

The remaining balance of \$198,825 is due within 30 days of the permit issuance date. If you do not receive your permit within the 6-month reservation period, an additional deposit payment will be required as per the terms of our agreement.

Thank you very much for allowing Stream + Wetlands Foundation to assist you with the wetlands mitigation needs of this project. Should you need further assistance, please feel free to call anytime.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Vincent E. Messerly'.

Vincent E. Messerly, P.E.
President

Cc: Lindsay Hanna, MAD Scientist & Associates, via email

ATTACHMENT D
AGENCY LETTERS



Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate

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

June 14, 2022

Lindsay Hanna
MAD Scientist Associates, LLC
253 N. State St, Suite 101
Westerville, OH 43081-2560

Re: 22-0545; Buckeye Yard Expansion

Project: The proposed project involves permitting services for the SST facility expansion at the Buckeye Yard.

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

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

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

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

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats 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. If trees are present within the project area, and trees must be cut, the DOW recommends 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. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "[OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING](#)". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

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 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 riffleshell (*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 (*Megaloniaias nervosa*)
Ohio pigtoe (*Pleurobema cordatum*)

State Threatened

black sandshell (*Ligumia recta*)
pondhorn (*Unio merus tetralasmus*)
fawnsfoot (*Truncilla donaciformis*)
threehorn wartyback (*Obliquaria reflexa*)

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*)
Tippecanoe darter (*Etheostoma tippecanoe*)
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.

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

The project is within the range of the black-crowned night-heron (*Nycticorax nycticorax*), a state-threatened bird. Night-herons are so named because they are nocturnal, conducting most of their foraging in the evening hours or at night, and roost in trees near wetlands and waterbodies during the day. Night herons are migratory and are typically found in Ohio from April 1 through December 1 but can be found in more urbanized areas with reliable food sources year-round. Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

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

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

The project is within the range of the sandhill crane (*Grus canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through August 31. If this habitat will not be impacted, this project is not likely to have an impact on this species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

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

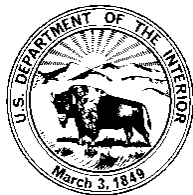
Water Resources: The Division of Water Resources has the following comment.

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

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

Mike Pettegrew
Environmental Services Administrator

United States Department of the Interior



FISH AND WILDLIFE SERVICE

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



November 4, 2022

Re: Buckeye Yard

Project Code: 2023-0001366

Dear Ms. Hanna:

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 threatened northern long-eared bat (*Myotis septentrionalis*), 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.

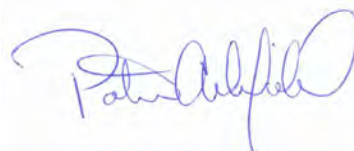
Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action 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 it is important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

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

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

Sincerely,



Patrice Ashfield
Field Office Supervisor



Application for Section 401 Water Quality Certification
Division of Surface Water
401 Water Quality Certification and Isolated Wetland Permitting Unit

Section 1: Applicant (Project Proponent) and Consultant/Agent Information

	Applicant (Project Proponent)	Consultant/Agent
Company/Agency Name:	Simpson Strong-Tie	MAD Scientist Associates
Address:	5956 W. Las Positas Blvd, Pleasanton, CA 94588	253 N. State Street Suite 101, Westerville, OH 43081
Contact Name/Title:	Burak Gursel/Acquisition Manager	Lindsay Hanna/Project Scientist
Contact Phone:	(925) 560-9000	(614) 818-9156
Alternate Phone:		
Contact FAX:		
Contact Email:	bgursel@strongtie.com	Lindsay@madscientistassociates.net
Technical Contact:	Spencer Brown	
Technical Phone:	(614) 307-4245	
Technical Email:	sbrown@lincolnconstruction.com	

Section 2: Project Information

A. Project Name: Simpson Strong-Tie Buckeye Yard Expansion

B. Has a pre-filing (pre-application) meeting request been submitted? Yes No

401 Pre-application Reviewer: Boyles **Date of pre-filing meeting request submittal:** 07/06/2022

C. Brief Project Description: Simpson Strong Tie (SST) is a manufacturer of metal hangers used in various types of construction including but not limited to joist hangers and deck hangers. The company currently has approximately 284,000 SF of building under roof serving administration, manufacturing and warehousing needs of their Hilliard Ohio plant. Due to the increase in demand for these products, additional warehouse space is needed in order to satisfy demand. Based on capacity needs, a minimum of 230,000 square feet (sq. ft.) will be required for building construction. In addition, 115,975 sq. ft. of parking will need to be constructed to accommodate the increase in personnel employed at the facility. As per City regulations, the new building must be spaced 10 feet away from existing infrastructure, and stormwater retention with a capacity of 323,704 cubic feet (cf) is needed for the Site. Based on these requirements for proposed development, a total of 19.79 acres is needed for completing this project. Due to the configuration of wetlands onsite, there is not a section of contiguous acreage that could accommodate the proposed development without impacting onsite wetlands.

Based on building needs, Wetlands 4 and 6 are expected to be impacted. Both wetlands were assessed using the ORAM (Ohio Rapid Assessment Method) and assigned scores of 25 and 26, respectively, which identifies them as Category 1 wetlands. These types of wetlands are defined as "limited quality waters" which have low functionality and limited potential for restoration (Ohio EPA, 2001).

D. Construction Start Date: 03/01/2023 **End Date:** 11/30/2024

E. Is any portion of the activity complete now? Yes No

Is this an "After-The-Fact" permit application? Yes No

Description of completed activities and its impact on the waters of the state.:

F. Coordinates LATITUDE: 40.006278 **LONGITUDE:** -83.128316

G. Project Address: 2600 International St, Columbus, OH 43228

Location Description: Old railyard behind the current Simpson Strong-Tie facility

ZIP Code(s): 43228

County(ies):	Township(s):
Franklin	

H. 8 or 12 Digit HUC Number: 050600011204

I. Watershed Name: Hayden Run-Scioto River

J. U.S. Army Corps of Engineers District: Huntington**K. Proposed impacts to "waters of the state":**

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Beach Nourishment | <input type="checkbox"/> Blasting | <input type="checkbox"/> Breakwater | <input type="checkbox"/> Bulkhead |
| <input type="checkbox"/> Bridge/Culvert | <input type="checkbox"/> Dam | <input type="checkbox"/> Dredge | <input checked="" type="checkbox"/> Fill |
| <input type="checkbox"/> Groin/Jetty | <input type="checkbox"/> Levees/Berms | <input type="checkbox"/> Mine Through | <input type="checkbox"/> Revetment |
| <input type="checkbox"/> Bank Stabilization | <input type="checkbox"/> Stream Channelization | <input type="checkbox"/> Stream Relocation | <input type="checkbox"/> Water Body Crossing |
| <input type="checkbox"/> Weirs | <input type="checkbox"/> Other | | |

L. Other water related permits issued or required include:

- Individual 404 Permit
- Nationwide Permit
- Section 9 Permit
- Section 10 Permit
- Isolated Wetland Permit
- NPDES Permit
- Permit to Install
- Regional General Permit
- ODNR Permit
- Oil & Gas Storm Water General Permit

Section 3: Fees

Are you exempt from fees? Yes No (If YES, leave fee section blank)

Are you a County, Township, or Municipal Corporation? Yes No

If YES, fee cap is \$5,000.00 instead of \$25,000.00

Application Fee = \$200.00

Review Fees

Wetland Acres Impacted 2.75 x \$500.00 = \$1,375.00

Intermittent Stream Linear Feet Impacted 0 x \$10.00 = \$0.00 (\$200 minimum fee)

Perennial Stream Linear Feet Impacted 0 x \$15.00 = \$0.00 (\$200 minimum fee)

Lake Cubic Yards Impacted 0 x \$3.00 = \$0.00

Total Review Fees = \$1,375.00

Total Fees (\$200 Application Fee + Total Review Fees) = \$1,575.00

Due with the 401 WQC Application (Application Fee + 1/2 of Review Fee) = \$887.50

Due at the 401 WQC Issuance (1/2 of Review Fee) = \$687.50

PLEASE MAKE FEE CHECK PAYABLE TO: "TREASURER, STATE OF OHIO"

Section 4: Submitted Documentation

Check all documents/items that have been submitted.

- Submitted Pre-filing Meeting Request

Upload File(s): SST-OEPA Meeting for Preliminary Application 7.6.22.pdf

- Proposed Lake Impacts Table

- Proposed Stream Impacts Table

- Proposed Wetland Impacts Table

Additional Impact Tables

Water Delineation Report

Upload File(s): Wetland Delineation Report.pdf

Site Photographs

Ohio Rapid Assessment Method (ORAM) Forms

Habitat Evaluations

Biological Sampling Information

US Army Corps of Engineers Jurisdictional Determination

Upload File(s): LTR2022-365.pdf, PJD_Summary_LRH-2022-00365-SCR.pdf

US Army Corps of Engineers Public Notice or Provisional Nationwide Permit

Ohio Department of Natural Resources - Natural Heritage Database Request

Upload File(s): Environmental Review_MAD Scientist - Buckeye Yard Expansion Comments (1).pdf

US Fish & Wildlife Service - Threatened and Endangered Species Coordination

Upload File(s): USFWS response.pdf

Proposed Project Antidegradation Analysis

Upload File(s): Box 23.pdf

Proposed Project Mapping

Proposed Mitigation Plan

Upload File(s): Proposed Mitigation.pdf, Request for a Type II Variance from the City of Columbus Stormwater drainage Manual_Simpson Strong-Tie_22Nov9_red.pdf

Section 5: Applicant and Agent Signature

I hereby designate and authorize the agent/consultant identified in Section 1 to act on my behalf in the processing of this application, and to furnish, upon request, supplemental information in support of the application:

Application is hereby made for a Section 401 Water Quality Certification. The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief. The project proponent hereby requests that the certifying authority review and take action on the CWA 401 certification request within the applicable reasonable period of time.

Applicant Name:

Lindsay Hanna

Title:

Project Scientist

Signature:

Electronically submitted by Lbhanna

Date:

Electronically submitted on 12/17/2022



Application for Section 401 Water Quality Certification - Proposed Lake Impacts
Division of Surface Water
401 Water Quality Certification and Isolated Wetland Permitting Unit

Water Body ID	Coastal Erosion Area?	Impact Type	Preferred Alternative			Placement of Dredged Material
			Cubic Yards of Fill/Dredged Material	Lakeward Extent (linear ft.)	Shoreline Impacted (linear ft.)	
No records found						



Application for Section 401 Water Quality Certification - Proposed Stream Impacts and Mitigation
Division of Surface Water
401 Water Quality Certification and Isolated Wetland Permitting Unit

Section 1: Streams Onsite and Proposed Impacts							
Stream ID	Jurisdictional?	Flow	Aquatic Life Use Designation in 3745-1	Existing Use?	Onsite (linear ft.)	Preferred Alternative	
						Impact Length (linear ft.)	Impact Type
No records found							
Section 2: Proposed Stream Mitigation (Check All That Apply) Preferred Alternative							
<input type="checkbox"/> In-Lieu Fee Program Number of Stream Credits:		ILF Sponsor: Number of Buffer Credits:					
<input type="checkbox"/> Proof of Reservation?							
<input type="checkbox"/> On-Site Permittee-Responsible Mitigation							
<input type="checkbox"/> Restoration		Aquatic Life Use:		linear feet:			
<input type="checkbox"/> Creation		Aquatic Life Use:		linear feet:			
<input type="checkbox"/> Preservation		Aquatic Life Use:		linear feet:		Buffer Width Linear Feet:	
<input type="checkbox"/> Enhancement		Aquatic Life Use:		linear feet:			
<input type="checkbox"/> Other		Existing Aquatic Life Use:		Enhancement Activity:			
Other Description:							

- Creation
- Preservation
- Enhancement
- Other

Type of Wetland:

Acres:

Type of Wetland:

Acres:

Type of Wetland:

Acres:

Other Description:

APPENDIX C

Economic Analysis for Offsite Alternative

ADVISORY & TRANSACTION SERVICES | INDUSTRIAL & LOGISTICS



M A Y 1 2 , 2 0 2 1

MARKET OPTIONS



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WESTON DEVORE

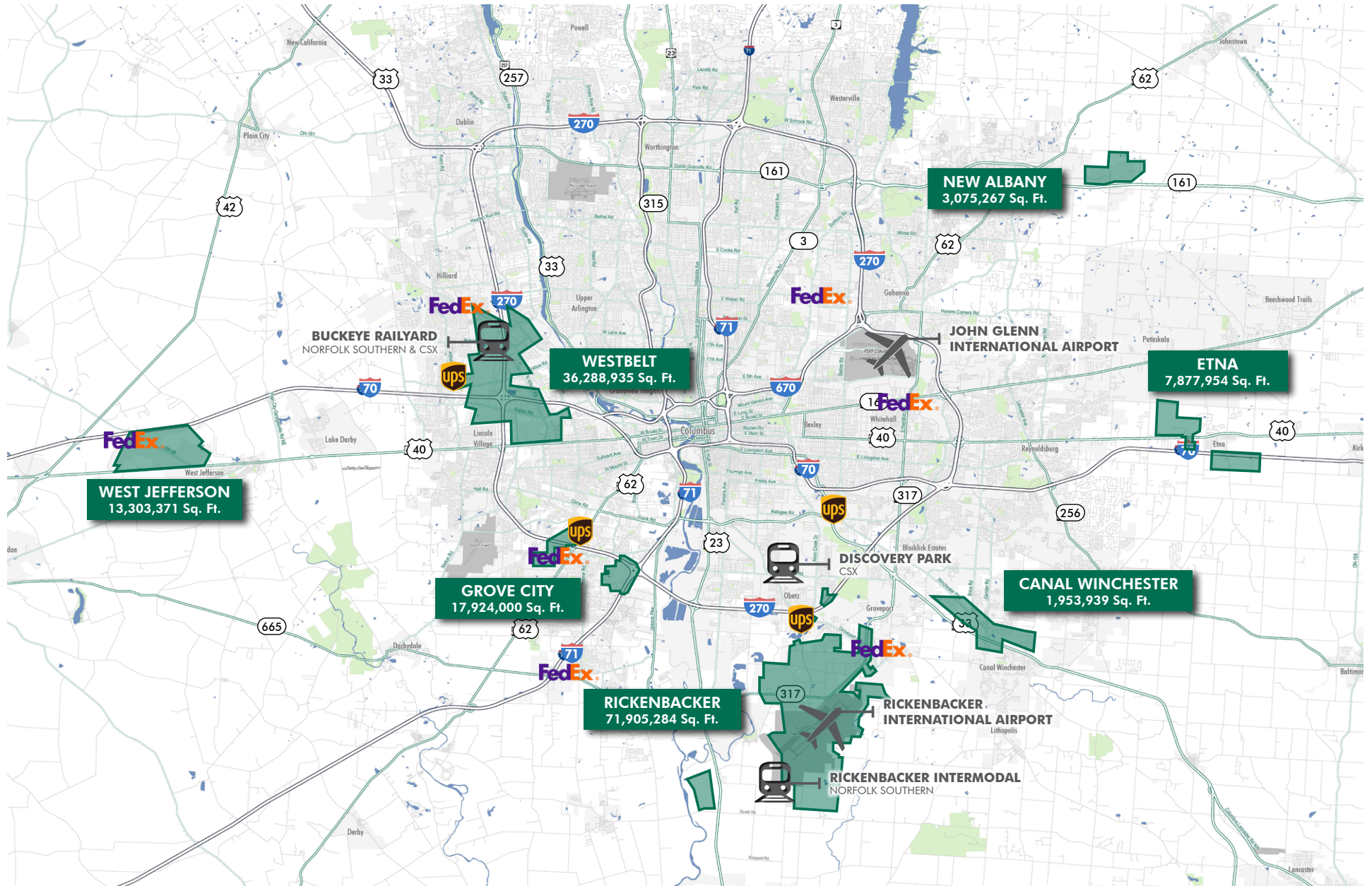
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INDUSTRIAL MARKET OVERVIEW

276,015,075 SQ. FT.
MARKET RENTABLE AREA



COLUMBUS INDUSTRIAL LABOR CONCENTRATION

4.90%

COLUMBUS UNEMPLOYMENT RATE

~18.59%

EMPLOYMENT GROWTH SINCE 2010

51.00%

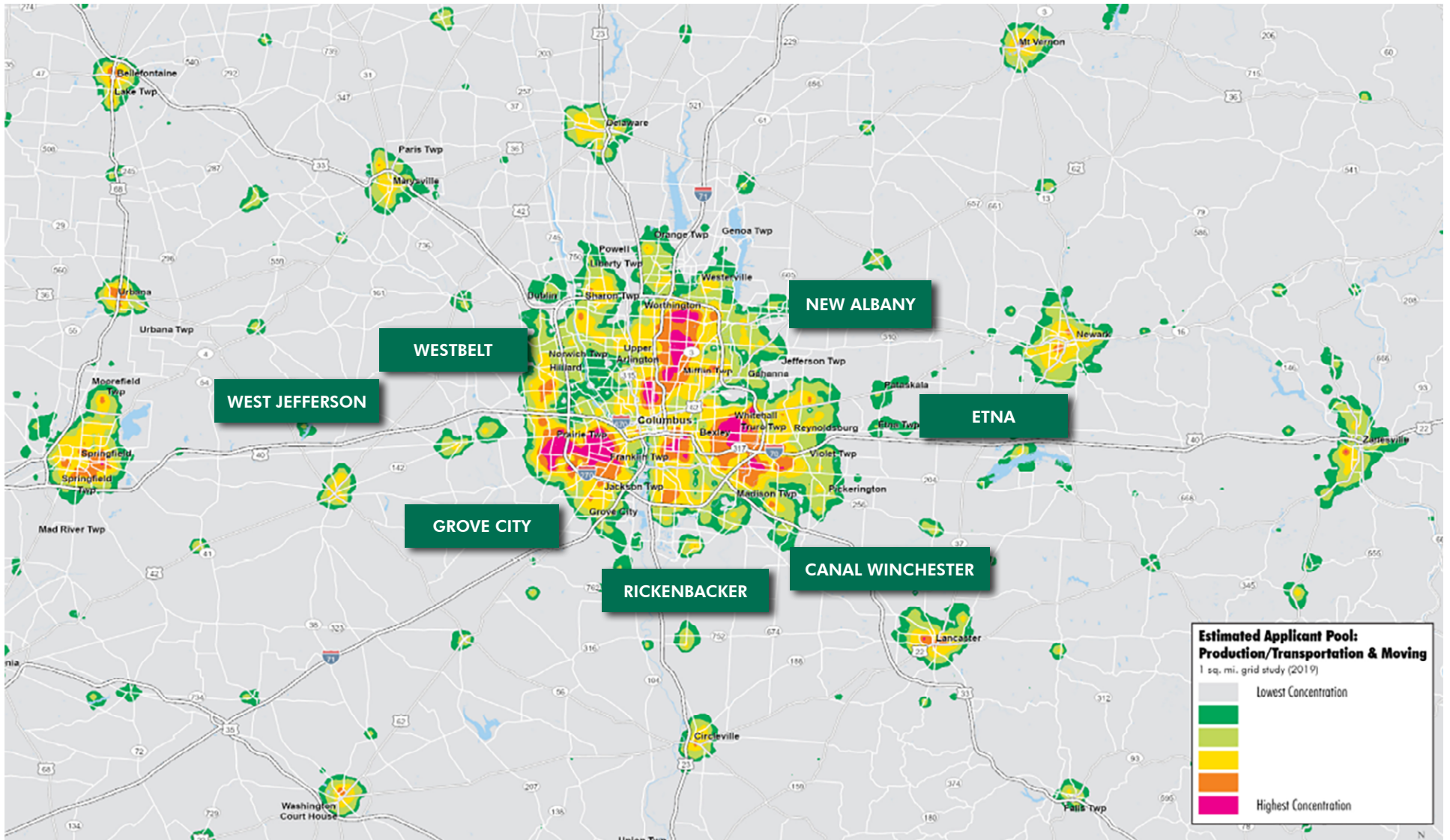
LABOR PARTICIPATION RATE

\$18.11/HR

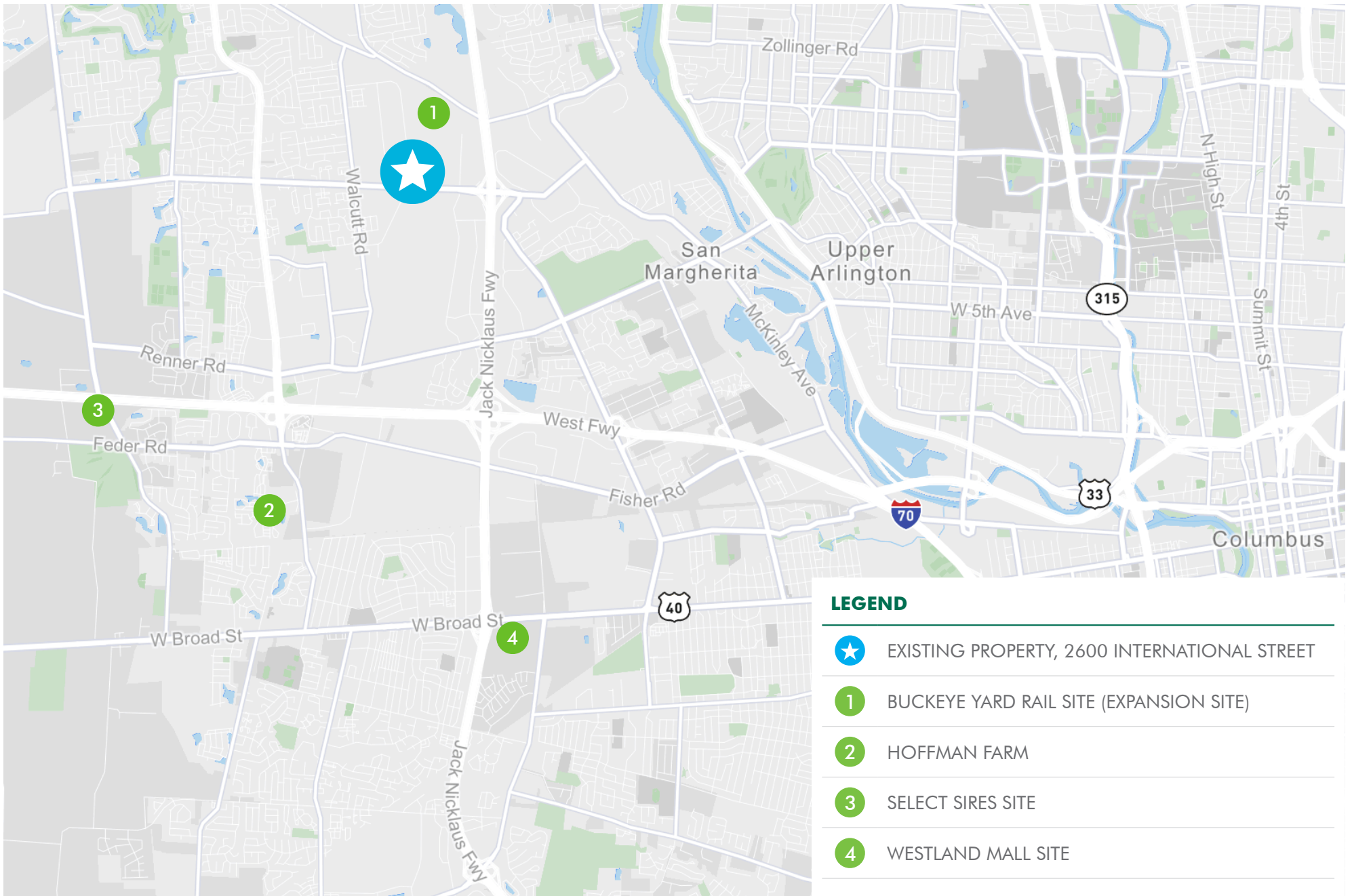
AVERAGE MANUFACTURING WAGES

\$16.55/HR

AVERAGE LOGISTICS WAGES



LAND AVAILABILITIES



COMPARISON OF PROPOSED ECONOMIC TERMS

		1	2	3	4
		BUCKEYE YARD RAIL SITE (EXPANSION SITE)	HOFFMAN FARM COLUMBUS, OH	SELECT SIRE'S DEVELOPMENT	WESTLAND MALL
SITE INFORMATION	SUBMARKET	Westbelt (Current Facility)	WEST COLUMBUS	West Side	West Side
	DEVELOPER	Land Owned by Xebec	TPA Group	VanTrust	Trident Capital
	CURRENT SITE STATUS	Industrial use land Contiguous with the Existing Manufacturing facility Parcel	Greenfield development site. In the process of due diligence to purchase, annexation, zoning, incentives negotiations, and entitlement	This is a Greenfield Land Site currently listed for Sale and Development. We have engaged a development partner, Van Trust to investigate the development potential of this site on Simpson's behalf with the ultimate goal of receiving a formal proposal on the site for a new facility.	This is the former Westland Mall location which is now slated for redevelopment. Trident is currently in contract to purchase this site from the current owners.
	PROPOSED BUILDING SIZE (SQ. FT.)	Simpson could construct a 200,000 Sq. Ft. addition	622,500 Sq. Ft.	570,000 Sq. Ft.	500,000 Sq. Ft.
	EXPANSION CAPABILITY	TBD. A 200,000 Sq. Ft. Expansion appears to be feasible subject to proper due diligence of the site.	This Building will not have expansion capabilities due to the site constraints	Expandable by 313,500 Sq. Ft.	Expandable by + 300,000 Sq. Ft.
	LARGEST SIZE ACHIEVABLE (SQ. FT.)	TBD	622,500 Sq. Ft. (we recommend maximizing the initial footprint)	883,500 Sq. Ft.	+/- 800,000
	SITE SIZE WITHOUT EXPANSION (ACRES)	40 Acres	+/- 27 Acres	70 Acres	+/- 50 Acres
	SITE SIZE WITH EXPANSION (ACRES)	40 Acres	+/- 27 Acres	70 Acres	+/- 50 Acres
DEAL STRUCTURE	PROPOSED DEAL TYPE	The Land behind the Existing Factory is approximately 40 Acres and includes inactive rail lines. The strategy would be to Purchase the Land Site for expansion of the existing Building. This site will need to be fully vetted as to its suitability for future Industrial development during the Acquisition/Due Diligence phase of the purchase. Items to vet would be wetland impact and environmental contamination issues. Simpson as owner of the Ground would be able to self perform an expansion of its existing facility. The additional ground could be suitable for vehicle/trailer parking, or could be potentially disposed through sale to other interested neighbors who have not yet been contacted.	The ownership is proposing a merchant build with Simpson purchasing the shell property upon completion	A proposal on this site has not yet been received. The developer Van Trust is currently investigating the Site for Suitability to Develop. Due to its location at the edge of Columbus, infrastructure may be challenging.	A proposal on this site has not yet been received. However, based on previous proposals from this developer, this site could be developed as a merchant building with a closing of the property upon the substantial completion of the base building shell.
	LEASE OF THE PROPERTY				
	PROPOSED LEASE PAYMENT START DATE	N/A - this would be a Simpson-owned land site for expansion of the existing manufacturing facility.	Not Proposed	Still Researching this site - No Proposal Yet	A lease of the Property is likely not needed.
	FIRST YEAR LEASE RATE (\$/SQ. FT. NNN)				
	FIRST YEAR LEASE PAYMENTS TOTAL NNN				
PURCHASE OF THE PROPERTY	PROPOSED CLOSING DATE TO PURCHASE THE PROPERTY	The Property is Currently in Contract with Xebec for purchase from Norfolk Southern Railroad. The closing is expected to occur in 2021. The property could be acquired in 60 to 90 Days from Contract Execution	Timing to purchase is To Be Determined, TPA is currently acquiring the property. Closing in 2021		
	PROPOSED PURCHASE PRICE		\$76.00/Sq. Ft. or \$47,310,000	Still Researching this site - No Proposal Yet	The date of the Seller's closing is yet to be determined. Upon closing of the Trident Purchase,
	PROPOSED PURCHASE PRICE WITH MAX EXPANSION CAPABILITY	The 40 Acre Site would be Acquired for \$275,000 to \$300,000 Per Acre = \$11M to \$12M	The 40 Acre Site would be Acquired for \$275,000 to \$300,000 Per Acre = \$11M to \$12M		
	PROPOSED PURCHASE PRICE \$/SQ. FT.		\$76.00/Sq. Ft.		
TI INCLUDED IN THE PROPOSED PRICING	TI ALLOWANCE INCLUDED (\$/SQ. FT.)		Scope of Shell Delivery to be Negotiated	Still Researching this site - No Proposal Yet	Still Researching this site - No Proposal Yet
	TI ALLOWANCE INCLUDED (TOTAL)	Not Applicable			
SIMPSON'S CONSTRUCTION	PROPOSED SIMPSON CONSTRUCTION START DATE	Upon Simpson's Closing on the Land.	Upon Closing, the building shell will be constructed by TPA to Simpson's specifications	Unknown	Unknown
SIMPSON'S EXISTING PROPERTY	NOTES REGARDING THE EXISTING PROPERTY: 2600 INTERNATIONAL STREET	This Scenario would allow the continued use of the Existing Facility on International Street	Not proposed		This Developer has expressed an interest in purchasing the Existing Simpson building as a component of this transaction
	NOTES:	We would anticipate that a 200,000 Sq. Ft. Addition could be accomplished at \$70.00 to \$80.00/Sq. Ft. \$14M to \$16M	Although no TI was Proposed, we would expect to have room to negotiate a greater scope within the offered pricing. This property is currently under contract to purchase by the national developer - TPA Group.	The Site presents challenges to development.	This is a newly available site on the market and the Developer is currently in contract to purchase the site

1 BUCKEYE YARD RAIL SITE

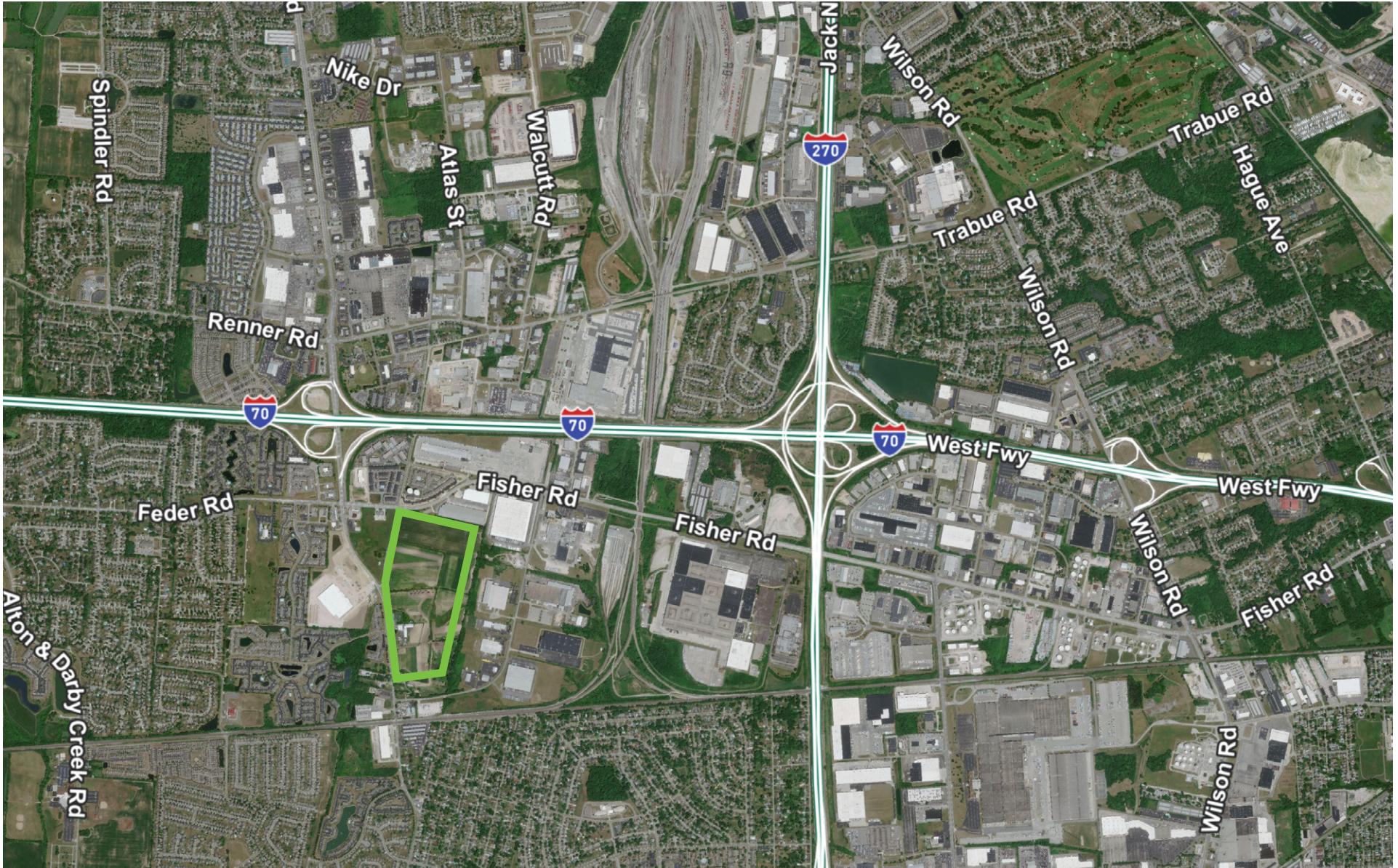


1 BUCKEYE YARD RAIL SITE

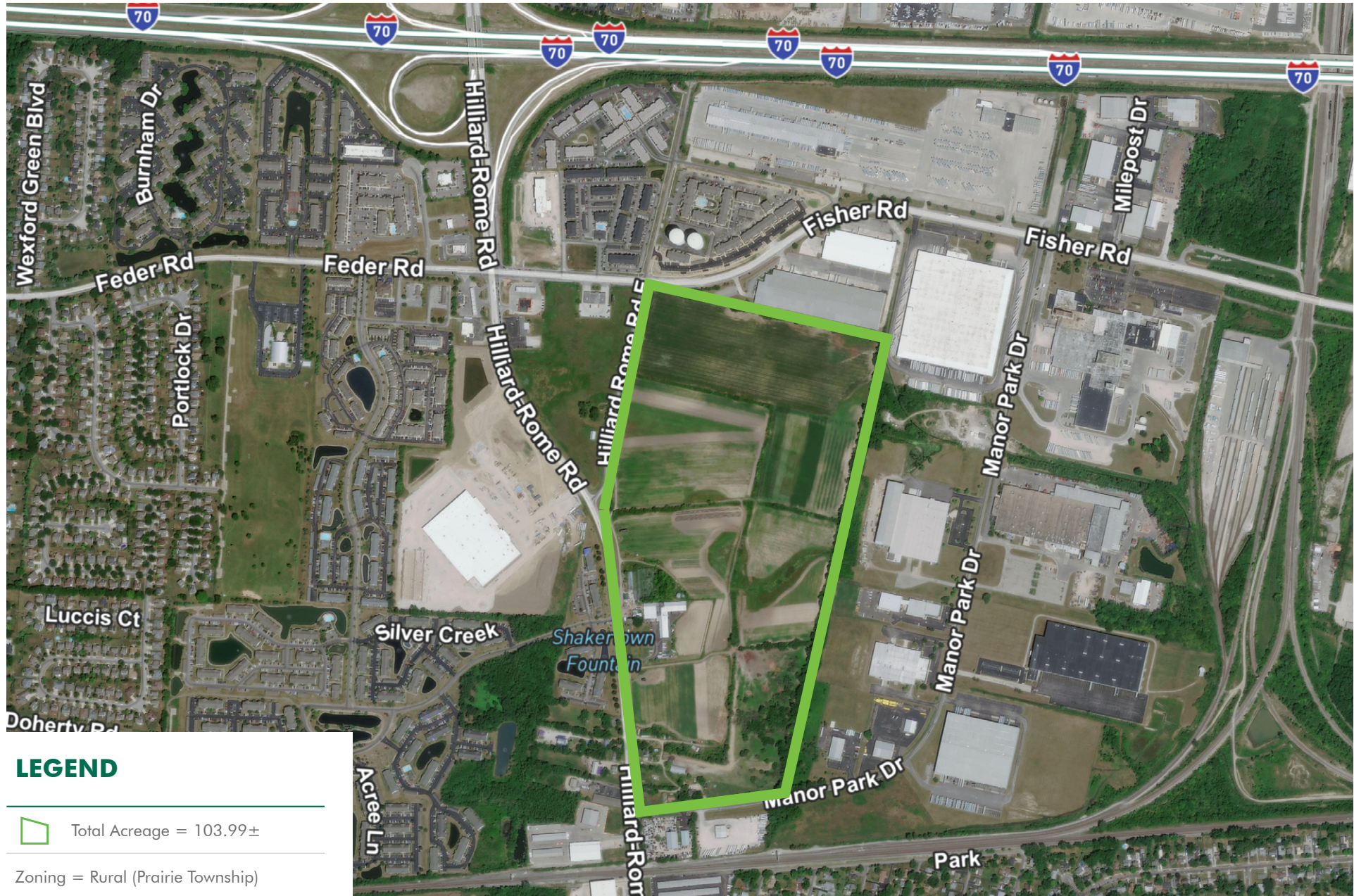
- PROPOSED LAND SALE (ROBERTS RD TO KM LINE): ± 41.01 ACRES
- NORFOLK SOUTHERN RIGHT OF WAY
- APPROX. TRACK SALE (ROBERTS RD TO KM LINE): $\pm 23,000$ FT
- EXISTING TRACKS



2 HOFFMAN FARM, 800 HILLIARD ROME ROAD



2 HOFFMAN FARM, 800 HILLIARD ROME ROAD

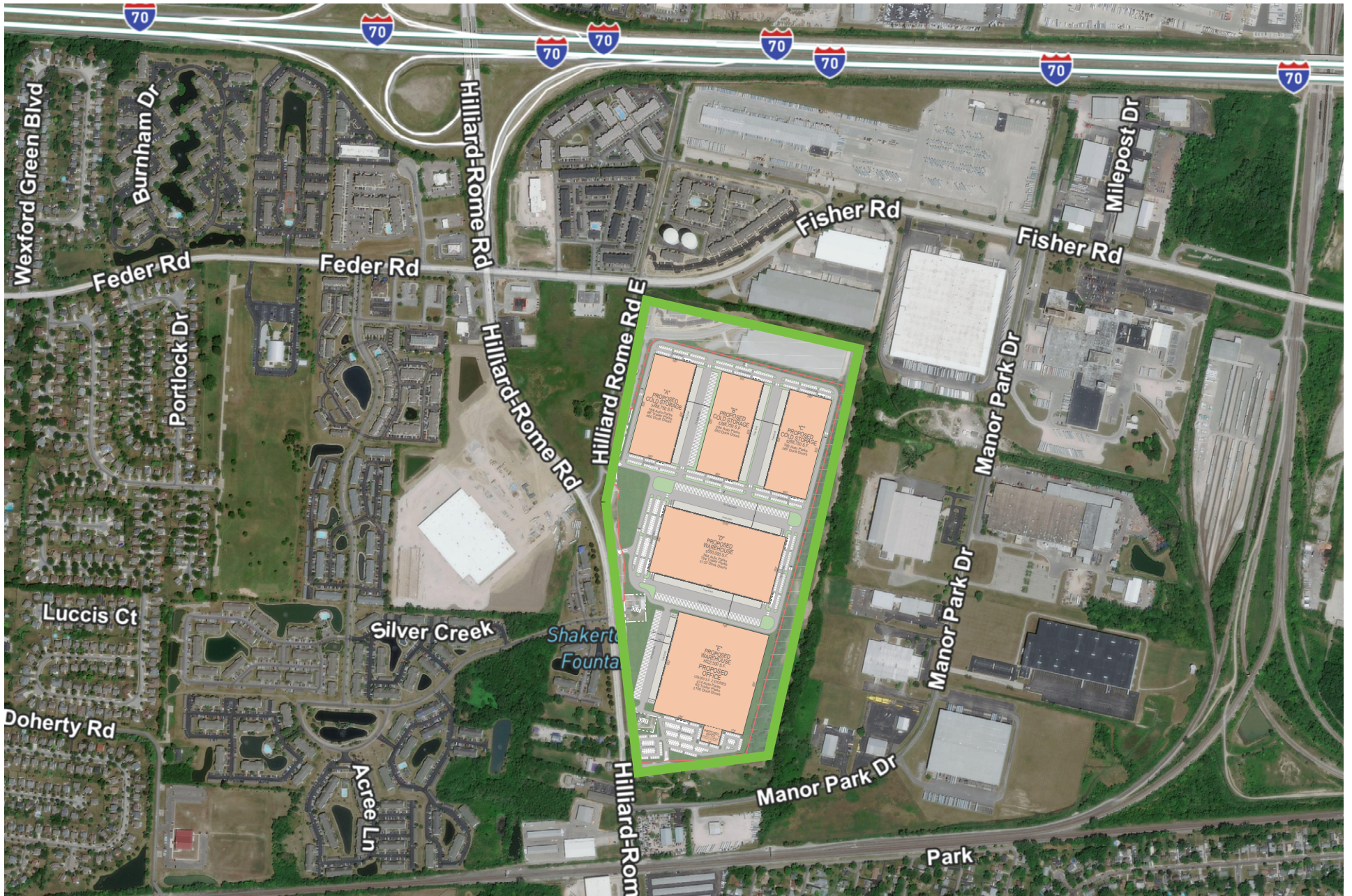


LEGEND

 Total Acreage = 103.99±

Zoning = Rural (Prairie Township)

2 HOFFMAN FARM, 800 HILLIARD ROME ROAD



3 SELECT SIRES SITE



4 WESTLAND MALL SITE





PREPARED BY

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APPENDIX D

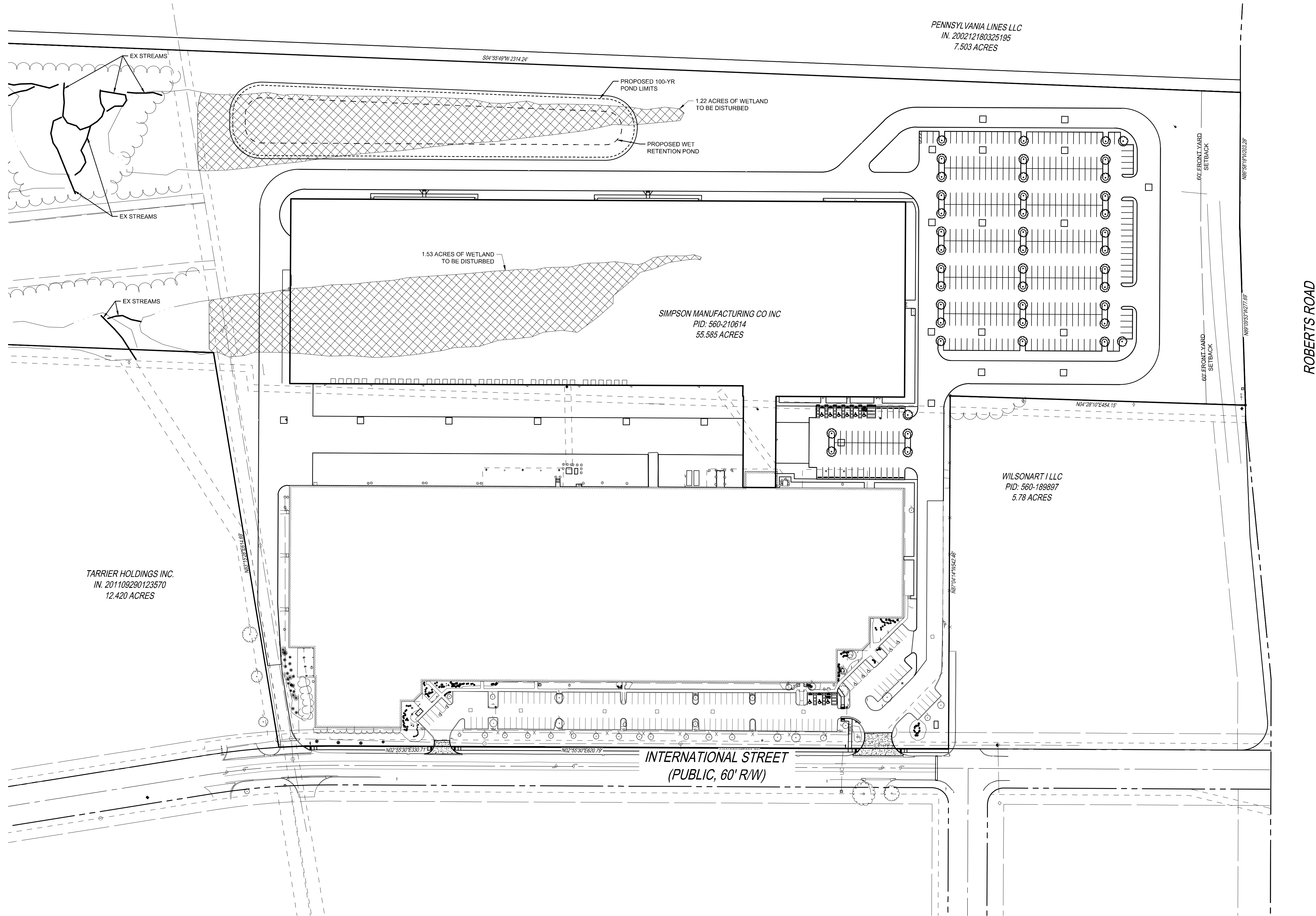
Full Compliance Alternative

APPENDIX E

Minimal Impact Alternative

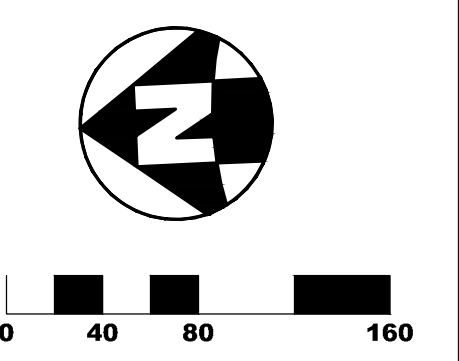
APPENDIX F

Preferred Alternative



LEGEND
 WETLAND AREA TO BE DISTURBED

NOTES
 1. 2.75 TOTAL ACRES OF WETLAND TO BE DISTURBED



PLANS PREPARED BY:
 THE KLEINGERS GROUP

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 SURVEYING
 LANDSCAPE ARCHITECTURE
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REV	REVISION DESCRIPTION	INITIAL	DATE

SIMPSON STRONG-TIE DEVELOPMENT
 PREFERRED ALTERNATIVE WETLAND EXHIBIT
 2600 INTERNATIONAL STREET
 CITY OF COLUMBUS
 FRANKLIN COUNTY, OHIO

DATE 01/05/2023
 SCALE 1"=80'
 JOB NO. 210880.001
 SHEET 1/3

H:\Columbus\210880\01_LDW\03_01es Wetland Exhibit 2022-10-28 Preferred Alternative Wetland Exhibit.dwg, 1/5/2023 9:25:53 AM, mrcovee

APPENDIX F

Historic Aerials

SST Expansion

1947 Aerial

Legend

Feature 1



Google Earth

1000 ft



SST Expansion

1956 Aerial

Legend

Feature 1



Google Earth



1000 ft

SST Expansion

1972 Aerial



WESTBELT

Roberts Millikin Ditch

Google Earth



Legend

Feature 1

01

5010036



2000 ft

SST Expansion

1984 Aerial

Legend

Feature 1



Google Earth



1000 ft

SST Expansion

1984 Aerial

Legend

Feature 1

