Appendix D:
Right-of-Way Contact List / Affected Property Owners

Franklin County	
John O'Grady	Kevin L. Boyce
Franklin County Commissioner	Franklin County Commissioner
President	373 S. High Street
373 S. High Street	Columbus, Ohio 43215
Columbus, Ohio 43215	
Erica C. Crawley	Kenneth N. Wilson
Franklin County Commissioner	Franklin County Administrator
373 S. High Street	373 S. High Street
Columbus, Ohio 43215	Columbus, Ohio 43215
Jennifer Fish	Adam W. Fowler, P.E., P.S.
Franklin County Soil and Water	Franklin County Engineer
1404 Goodale Boulevard, Suite 100	970 Dublin Road
Columbus, Ohio 43212	Columbus, Ohio 43215

City of Columbus	
Hon. Andrew Ginther	Shannon G. Hardin
City of Columbus Mayor	City of Columbus Council President
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
Nancy Day-Achauer	Nicholas Bankston
Councilmember	Councilmember
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
Lourdes Barroso de Padilla	Rob Dorans
Councilmember	President Pro Tem
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
Otto Beatty	Emmanuel V. Remy
Councilmember	Councilmember
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
Melissa Green	Christopher L. Wyche
Councilmember	Councilmember
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
Scott Messer	Kelly Scocco
City of Columbus Director	City of Columbus Director
Department of Building and Zoning Services	Department of Public Service
111 N. Front Street	111 N. Front Street
Columbus, Ohio 43215	Columbus, Ohio 43215

Affected Property Owners	
Wayne A Shingler; Mayda R Sanchez	Katharine Leach; Samual Banter
Property Owner	Property Owner
2624 Woodland Ave	2657 Temple Ave
Columbus, Ohio 43211	Columbus, Ohio 43211
Faith Ministries Inc	Bridgewalk Birdie LLC
Property Owner	Property Owner
2747 Agler Rd	52 E Gay St
Columbus, Ohio 43224	Columbus, Ohio 43215
City of Columbus	Christopher Stephen Williams
Property Owner	Property Owner
90 W Broad St RM 425	2429 Sunbury Rd
Columbus, Ohio 43215	Columbus, Ohio 43219

ATTACHMENT E

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

Colliers
Engineering
& Design

December 11, 2024

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

Re: **Project Name/Code:** NCHP Phase 3B Mainline and Access Road/2025-0030100
Franklin County, OH
Colliers Engineering & Design Project No.: 21004202A

To Whom It May Concern:

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

NiSource Inc., owns and operates a natural gas distribution system that serves both the city and surrounding Franklin County. The Project Study Area includes the installation of 24-inch high-pressure steel pipelines within a 100-foot-wide survey corridor centered on the proposed pipeline alignment for a combined total of approximately 3.75 miles. The Project Study Area or "Survey Corridor" is begins at latitudinal coordinate 40.021989 N and longitudinal coordinate -82.950258 W and ends at latitudinal coordinate 40.018147 N and longitudinal coordinate -82.882347 W. The majority of the pipeline will be installed by trenching. It is anticipated that Alum Creek and its associated wetlands will be horizontally directionally drilled (HDD) and will not be subject to direct disturbance. The other perennial and intermittent streams will likely be subject to temporary disturbance only during open-cutting of these features to install the proposed pipeline. It is presently presumed that the Project will meet the requirements for a Nationwide Permit No. 12, and that a Pre-Construction Notification (PCN) will be required due to the removal of a small number of trees as will be necessitated by construction. A Project Location Map (Figure 1) is enclosed for your reference.

On December 11, 2024, an Information for Planning and Consultation (IPaC) Project Review was conducted to initiate the informal consultation process. The IPaC identified potential threatened, endangered, and candidate species that may occur within the boundary of the proposed project and/or may be affected by the proposed project. A copy of the IPaC review is enclosed for your reference.

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

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

The project location has a combination forests, stream crossings, and residential and commercial development. As it pertains to listed bat species and wooded habitat, the proposed 24-inch high-pressure distribution main is proposed to be constructed entirely within the roadway right-of-way where possible, and more specifically, most of this main will be constructed within the limits of the paved road. Near the western end of the project limits, the pipeline is proposed to cross a patch of woods where trees will have to be cleared to install and maintain the pipeline. Within city road rights-of-way, no trees are to be taken down unless it is necessary to do so. Due to construction timeline constraints, NiSource Inc. may not be able to adhere to the seasonal tree clearing restrictions recommended by federal and state agencies (October 1 to March 31). There is the potential for tree clearing outside of the winter tree clearing window due to pending OPSB approval. If OPSB approval is obtained in or prior to March 2025, then winter tree clearing will be utilized. If OPSB is not approved by the end of March 2025, then tree clearing will need to occur outside of the suggested winter tree clearing window. NiSource Inc. has contracted a bat biologist to perform a habitat assessment of this wooded patch for Indiana bat in 2025.

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

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

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

Round Hickorynut (*Obovaria subrotunda*): The round hickorynut exhibits a preference for sand and gravel in riffle, run, and pool habitats in streams and rivers, but also may be found in sandy mud. They can be found in shallow habitats with gentle flows at less than one foot with abundant American water-willow, but in larger rivers are commonly found up to depths of 6.5 feet.

Salamander Mussel (*Simpsonaias ambigua*): The salamander mussel is a small, elliptical, thin-shelled mussel that lives in medium to large rivers and lakes with swift currents and areas of shelter. It prefers dark, stable habitats with contact to a solid surface, such as under flat rocks,

ledges, or bedrock crevices. These rock structures often have small amounts of sediment and silt but are usually free of excessive fine sediments.

The project location has a combination forests, stream crossings, and residential and commercial development. The largest stream and wetland crossing at Alum Creek will be made via HDD. The crossings of a number of smaller perennial and intermittent streams are proposed to be trenched, and will cause temporary disturbance. At this time, CED is also initiating consultation with the Ohio Department of Natural Resources (ODNR) about the potential for suitable habitat for rayed bean, round hickorynut, salamander mussel, or other State listed mussel species.

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

Sincerely,

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

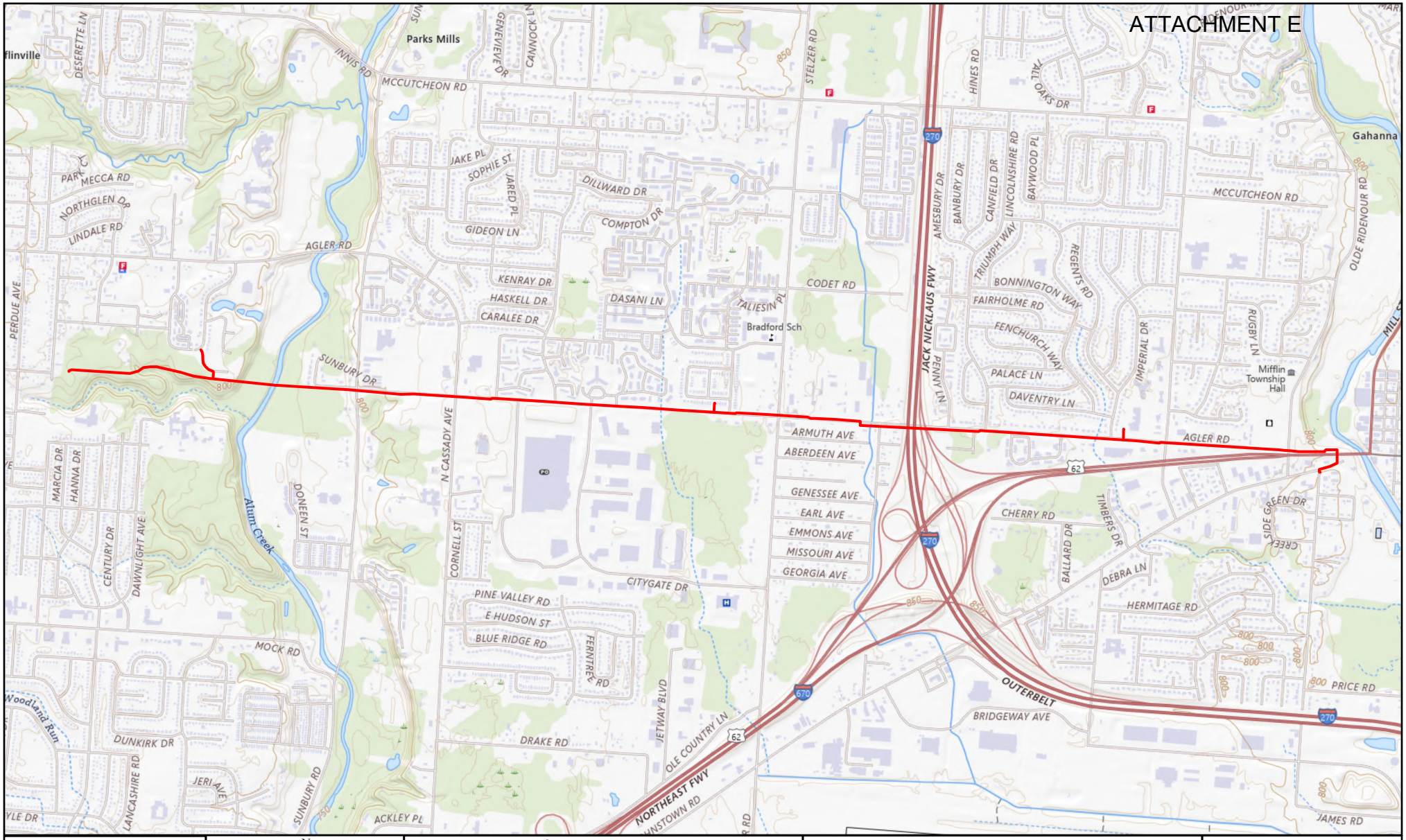
Jacqueline M. McCort
Geographic Discipline Leader, Natural Resources

Enclosures: Figure 1: Project Vicinity Map
USFWS Official Species List

JMM/

R:\Projects\2021\21004202A\Reports\Ecological\T&E\East Columbus Phase 3\USFWS requests\2024 Phase 3B\241211_USFWS_Consult Ltr_NCHP Phase 3B final.docx

ATTACHMENT E



Prepared For:

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

Prepared By:

Colliers Engineering & Design
Pittsburgh Office
1501 Reedsdale Street, Ste 302
Pittsburgh, PA 15233
T: 610.254.9140
www.colliersengineering.com

N
W E
S

0 0.07 0.15 0.3
Miles
0 0.13 0.25 0.5
Kilometers

Scale: 1:24,000

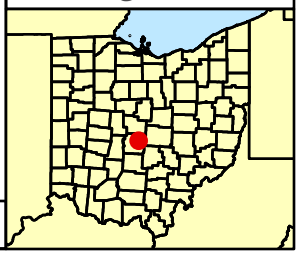
Project Alignment

Vicinity Map

NHCP Phase 3B Project

Franklin County, Ohio

Figure 1



Date Saved: 12/10/2024	CED PN: 21004202A	Revised by: frances.buchanek

United States Department of the Interior

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

In Reply Refer To: 12/11/2024 14:02:13 UTC
Project Code: 2025-0030100
Project Name: NCHP Phase 3B mainline and access road

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

To Whom It May Concern:

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

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

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

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

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

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

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

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

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

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

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

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

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

PROJECT SUMMARY

Project Code: 2025-0030100
Project Name: NCHP Phase 3B mainline and access road
Project Type: Natural Gas Distribution
Project Description: NiSource Inc. proposes the upgrade of the existing natural gas distribution system in the City of Columbus through the placement of approximately 3.75 miles of 24-inch pipeline, most of which will be installed within or immediately adjacent to paved roadways within the City. The project limits depicted include proposed access roads.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.020540600000004,-82.91613741372973,14z

Counties: Franklin County, Ohio

ENDANGERED SPECIES ACT SPECIES

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

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

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

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

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

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered

CLAMS

NAME	STATUS
Rayed Bean *Villosa fabalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5862	Endangered
Round Hickorynut *Obovaria subrotunda* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9879	Threatened
Salamander Mussel *Simpsonaias ambigua* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6208	Proposed Endangered

INSECTS

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

CRITICAL HABITATS

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

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

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Jacqueline McCort
Address: 5275 Parkway Plaza Blvd
Address Line 2: Suite 100
City: Charlotte
State: NC
Zip: 28217
Email jacqueline.mccort@collierseng.com
Phone: 9808903019

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers
Name: Rachel McCarty
Email: Rachel.A.Mccarty@usace.army.mil
Phone: 3048070826

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

December 16, 2024

Project Code: 2025-0030100

Dear Ms. McCort:

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

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

Seasonal Tree Clearing for Federally Listed Bat Species: The proposed project is in the vicinity of one or more confirmed records of Indiana bats and/or northern long-eared bats. Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.

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

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

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

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

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

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

Sincerely,

Erin Knoll
Field Office Supervisor

cc: Matthew.Stooksbury@dnr.ohio.gov
Eileen.Wyza@dnr.ohio.gov

Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR MARY MERTZ, DIRECTOR

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

June 28, 2023

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

Re: 23-0631; East Columbus Project

Project: The proposed project involves the installation of 24-inch and 20-inch-high pressure steel pipelines.

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

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

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

Cypress-knee Sedge (*Carex decomposita*), E
Tippecanoe Darter (*Etheostoma tippecanoe*), SC
Smooth Greensnake (*Opheodrys vernalis*), E
Elktoe (*Alasmidonta marginata*), SC
Snuffbox (*Epioblasma triquetra*), E, FE
Wavy-rayed Lampmussel (*Lampsilis fasciola*), SC
Round Hickorynut (*Obovaria subrotunda*), T
Kidneyshell (*Ptychobranchus fasciolaris*), SC
Rainbow (*Villosa iris*), SC
Breeding Amphibian Site
Stream gorge
Beech-sugar maple forest plant community

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern;

SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

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 westernmost 7,500 feet of the project route is within the vicinity of records for the little brown bat (*Myotis lucifugus*), a state endangered species. Because presence of state endangered bat species has been established in this area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. However, if trees are present within this area, (outside of the area delineated above) and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "*OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING*". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW.

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

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 (*Megalonaias nervosa*)
Ohio pigtoe (*Pleurobema cordatum*)

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

This project must not have an impact on native mussels. This applies to both listed and non-listed species, as all species of mussel are protected in Ohio. Per the Ohio Mussel Survey Protocol (2022), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. If there is no in-water work proposed, impacts to mussels are not likely.

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

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

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

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

Natural Areas and Preserves: The Division of Natural Areas and Preserves has the following state nature preserve comments.

The ODNR Division of Natural Areas and Preserves staff have reviewed the proposed East Columbus pipeline project. The project appears to fall along the boundary of the dedicated Gahanna Woods State Nature Preserve. To continue the high level of protection and conservation of the preserve, the Division asks for a meeting between Colliers Engineering and Design, ODNR and the City of Gahanna, the manager of the property. New crossings on state dedicated nature preserve must undergo a thorough evaluation and if permitted, a real estate agreement and stringent best management practices must be in place before work commences. Please contact the Division of Natural Areas and Preserves Chief Botanist, Rick Gardner, at Richard.Gardner@dnr.ohio.gov or 614/265-6419 for meeting coordination.

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

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project.

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

Mike Pettegrew
Environmental Services Administrator

ATTACHMENT F

Inadvertent Release Contingency Plan

Agler Road NCHP Pipeline Replacement – City of Columbus and City of Gahanna, Ohio

Campos EPC Project Number: 00026.0000.0071

Date: December 11, 2024

Table of Contents

1. Project Background

1.1 Project Description

The overall project consists of two horizontal directional drill (HDD) crossings. The first HDD across Alum creek and an adjacent wetland, it will run west to east. The entry pit will be located within a privately owned forested parcel on the west side of Alum Creek, the exit pit will be located within City of Columbus Right-of-Way east of the Alum creek. This bore consist of a 24" steel pipeline approximately 2,825 feet long. The second HDD runs west to east along Agler Road, crossing Interstate 270. The entry and exit pit will be located within the Agler Road public Right-of-Way. This HDD will consist of a 24" steel pipeline approximately 1,730 feet long.

1.2 Environmentally Sensitive Resources

The Alum creek HDD is planned beneath a small wetland classified as Palustrine Emergent (PEM). Potential inadvertent returns (IRs) to the surface from HDD construction activities could have an impact on this wetland. In addition, the bore will run directly adjacent to a Palustrine Forested wetland also known as a PFO. Inadvertent returns may affect this wetland due to its proximity to the bore path. One additional bore will run under two small, unnamed streams; inadvertent returns may affect stream quality.

1.3 Environmental Inspection

While drilling or during any activities that may impact the wetland or water resource, Columbia Gas of Ohio ("Columbia") requires that an experienced Environmental Inspector be present on-site to monitor activities.

1.4 Drilling Fluid

One of the primary components of HDD installation is the drilling fluid. Drilling fluids vary, but generally consist of a base mixture of water and Wyoming bentonite products. This mixture is referred to as "mud" or "drilling fluid" and can contain many additional additives.
The drilling fluid enters the borehole through the drill bit and circulates back to either the entry or exit pit through the borehole. The primary functions of the drilling fluid in an HDD are:

- Hydraulic excavation – when drilling fluid leaves the bit at a high velocity it can excavate soil by erosion
- Transmission of hydraulic power – in rock, a mud motor is used and the drilling fluids transmit energy downhole to turn the mud motor and cut rock
- Transportation of soil and cuttings to the surface
- Cleaning and cooling drill bits and reamers
- Reduction of friction
- Borehole stabilization

As mentioned, drilling fluids primarily consist of water and bentonite clay. Bentonite clay is predominantly comprised of montmorillonite which is not listed as a hazardous material/substance as defined by U.S. Environmental Protection Agency's (USEPA) Emergency

Planning and Community Right-to-know Act (EPCRA) or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulatory criteria. If the product becomes a waste, it does not meet the criteria of a hazardous waste, as defined by the USEPA. Bentonite is non-toxic and commonly used in farming practices but has the potential to impact aquatic habitats and wildlife if discharged to waterways in significant quantities due to increases in localized turbidity.

The contractor may elect to use additives in their drilling fluid to adjust the behavior and properties of the fluid. Additives are supplementary to this mixture and often have more specialized properties for keeping positive balance within the bore. This balance is dictated by and tailored to the prevailing geology and the tooling used to perform the HDD.

It is imperative that the Material Safety Data Sheets for all additives provided to Columbia and the project team for pre-approval. If the Contractor intends to use a product that has not been pre-approved by Columbia and the project team, then the Contractor should submit the required documentation and wait for approval prior to using the product.

When conditions change within the geology, the fluid, fluid is not maintained, or pressures are not monitored and maintained; a loss in circulation may occur and drilling fluid can be released. This drilling fluid may be released to the formation or may inadvertently return to the surface.

It is recommended that the contractor provide the safety data sheets for all bentonite and additives (including polymers and surfactants) that are planned for or may be used during the duration of the HDD.

1.5 Plan Objectives

Numerous steps should be taken in the prevention, monitoring, and reacting to of inadvertent returns. Campos EPC has laid out the following guidelines or recommendations to minimize the risk of inadvertent releases of drilling fluid whilst drilling. This plan should be reviewed by the contractor prior to the beginning of installation and proposed modifications should be discussed by the project team.

1.6 Disposal Considerations

Excess drilling fluids and drill cuttings will need to be managed throughout all HDD construction efforts. The excess fluids and cutting should be disposed of offsite at an approved disposal facility.

2. Inadvertent Release Mitigation Efforts

2.1 Geotechnical Exploration

A geotechnical exploration program was undertaken, consisting of thirty two (32) soil borings, to various depths, along the proposed alignment to determine the subsurface conditions, evaluate the engineering characteristics of the subsurface materials, and provide recommendations for the proposed improvements and design.

2.2 Bore Path Design

The bore path designs were developed referencing the geology identified in the geotechnical and geophysical analyses, and in consideration of the risks of an IR during installation. Typically, with increasing soil/rock cover the risk of having an IR decreases. With these factors in mind, the depth of cover was optimized for the design.

2.3 Hydrofracture Analysis

Hydrofracture occurs when the pressure of the drilling fluids in the bore hole exceeds the strength of the surrounding soils. The excess pressures fracture the soil around the bore hole allowing fluids to escape the bore hole and migrate into the surrounding soil. A hydraulic fracture analysis was performed to evaluate how the anticipated fluid pressure compares to the allowable drilling fluid pressures during construction. The results of this analysis were utilized in the development of the designed HDD plan and profile.

2.4 Site Preparation

The contractor is responsible for preparing the site prior to beginning any drilling, as well as maintaining the site during drilling. Preparation should follow environmental best management practices and consist of some number of thought out and well-placed environmental control devices. Upon arrival, the contractor shall walk the alignment and evaluate HDD entry and exit locations for evidence of areas that may have an increased potential for IRs. Some areas of concern may include: locations where water pools naturally, waterways, wetlands, areas of lower depth of cover, areas with transitions, surface areas loaded with cobbles and boulders, etc. This walk allows the contractor to identify areas that should be monitored more closely, evaluate readiness for managing an IR should it occur, regardless of access difficulty.

Within designated workspaces, containments should be set up around stationary equipment and erosion control devices (ECDs) and erosion control measures (ECMs) should be deployed downslope of potential areas of immediate impact.

While Campos EPC respects the means and methods of contractors, recommendations for ECDs/ECMs may include the following:

1. Storm drain inlets shall be secured by silt sock
2. Numerous rolls of vis-queen
3. Silt fence placed and dug-in downslope of heavy equipment or workspaces.
4. Containment areas, consisting of self-standing enviro-basin, or polyethylene sheeting that can be rolled over straw wattles or four-by-four boards to create a barrier.
5. Spill kits, to deal with other drilling fluid releases
6. IR kit, which may contain haybales, trash-bags, additional silt socks, additional silt fence, stakes, stake mallet, etc.
7. It is recommended that these materials be readily available in quantity to replace existing materials or respond to IRs.

3. Inadvertent Release Monitoring Plan

This section addresses monitoring approaches for early detection and mitigation when high risk circumstances present themselves onsite.

During HDD operations, the contractor shall maintain the drilling fluid monitoring equipment onsite. The contractor shall designate a qualified representative to monitor and control drilling fluid properties. The qualified representative shall be easily capable to perform the following activities to evaluate fluid properties and adjust improve stability, increase cutting return, and reduce risk of IR:

1. Communicate directly with the driller at the driller's console/chair to receive reports of annular pressure, mud-motor stalls, and changing conditions that can only be immediately felt by the driller.
2. Maintain fluids in the mud tank, check levels, charge pressure, and measure the rate of depletion in relation to the progression of new-bore.
3. Monitor the condition of drilling fluid at least three times a day, and once for every observed change in material:
    a. Take drilling fluid weight with approved test kit and include units in notes
    b. Take viscosity with marsh funnel and accurate durational measurement
    c. Take sand content measurement by the book to monitor content of superfines that slip through filtration. If the sand content gets too high, disposal and remixture should be considered.
    d. Take PH measurements to ensure that the platelet content of the drilling fluid stays high (platelets are the armor that coats the bore-wall in permeable conditions and often help prevent seep progression leading to IR, acidic conditions destroy the ability for drilling fluid to form platelets and lowers the viscosity)
4. Recommend which surfactants/polymers such as clay cutters for balling, stabilizers, etc., or natural remedies (ex. sawdust) should be used and recognize when deployment is necessary. Surfactants and polymers are extremely potent. It is critical to give particular attention to recommended mixing rations. Many requiring a ratio of 1 quart or less to 50 bags of bentonite
5. Monitor the return pit for solids content accumulation as it relates to proper suspension and carrying. A pit full of dense cuttings, not being reclaimed by the mud reclaiming pump may be an indication of conditions present in the borehole. This can result in an eventual build-up of down-hole material, which may cause annular pressure spikes.
6. A competent person should visually inspect the bore path at the completion of each joint; inspecting 100 feet upstream and downstream and if possible, laterally along alignment.
7. Ensure with the driller that annular pressures do not exceed calculated predicted pressure for hydraulic fracturing and that spikes are noted. Ensure steps taken to mitigate or reverse the rise in pressure. Steps can include tripping while rotating pipe, inspecting the degree of balling on tooling if it is suspected to be occurring, performing

a bottoms-up (circulating a volume of drilling fluid equivalent to the entire current borehole volume).

8. Inspect waterways and sites previously identified during the site walk as areas of concern. When inspecting waterways look for tan, brown, to gray levels of turbidity that stand out and are joining the flow of water. Often, in slower waters an IR will look like a cloud.
9. Contain all drilling fluids and cuttings for proper disposal at an approved facility and note the volume of cuttings in the spoils pit as it relates to drilled volume. The cutting volume should be within reasonable proximity of the drilled volume.
10. If possible, a vacuum truck with sufficient hoses to reach all areas along the bore alignment shall be staged prior to and during drilling activities. If a vacuum truck cannot be staged onsite, the truck shall be readily available. An interim pump shall be onsite to reach low areas and aid the vacuum truck. It is recommended that this resource be capable of departing and arriving onsite within one hour.

4. Inadvertent Release Contingency Plan

This section lays out the response if an IR were to occur.

4.1 Materials

The drilling contractor shall have the necessary fluid containment and clean-up provisions onsite and readily available at all times during drilling operations. Examples of materials that should be kept onsite include:

- Brooms, squeegees, and shovels
- Disposal bags and ties
- Vac trucks
- Spill kits
- Straw bales (weed and invasive free)
- Compost filter sock (12-inch diameter minimum)
- Weighted sediment tube
- Wooden stakes and mallet
- Sand bags
- Silt fence
- Plastic sheeting
- Trash pumps
- Turbidity curtain

The contractor should include a list of proposed inadvertent release response materials in their work plan for review by the project team. Quantities of one-time-use materials may need to be replenished if they are utilized during the course of work.

4.2 Loss of Fluid Returns to Entry Pit

A loss of fluid returns to the entry pit is often the first sign of an inadvertent fluid release. If a loss of fluid returns to the entry pit is observed, care should be taken to evaluate the next steps forward. It is recommended that the following steps be taken:

1. Stop drilling/pumping fluids as soon as a loss of returns is observed.
2. Walk the alignment to see if fluid has returned to the ground surface.
3. Restart mud pumps and trip rods back several joints until returns are re-established.
4. Re-drill the hole while advancing the drill bit paying close attention that fluid returns are maintained.

If this procedure does not re-establish returns, alternative approaches such as a complete trip out or enlarging the borehole may be considered.

4.3 Fluid Release Response

In the event of an IR to the surface, the following procedures should be implemented to document, communicate, contain, minimize, and potentially stop the IR:

1. Immediately and simultaneously kill charge pump and back trip (bottom-hole assembly) a full joint length off bottom (bore-face)
2. Get on location and characterize IR. Document location and proximity to centerline, size (volume), breadth, drilling conditions when IR occurred (hard/soft, rock/gravel, mud data, pressure data (over the last several joints), document setting (high grass, trees, marsh, waterway), and take pictures
3. Notify individuals whose contact information is listed within Section 4.4, and all appropriate personnel to include environmental inspector (EI) if onsite.
4. Inspect the return pit. This will be entry pit during pilot drilling, but during reaming could also be exit pit. Ensure volume in the pit is the same as before the IR. Next check mud recycler and confirm when the mud tank was last topped off. Proceed by conveying with driller and move to inspect the remainder of the right-of-way/centerline vicinity (generously).
5. Make the best possible concise statement with the available information of fluid released and fluid lost (ex. T:1530, BHA at release STA 1000 + 75, Release at STA 1000 + 50 / 20 ft off centerline, approx. 500 gal released, approx. 1,000 gal lost to formation, gravelly/discolored cuttings in returns, release amongst the pines and high-grass and accessible). Do NOT repeat hearsay.
6. Determine if potential threats existto the health and safety of workers by initiating cleanup
7. Determine if any potential threats to the environment exist.
8. If environmental impacts are observed, remove and/or contain material to minimize affected area while minimizing disturbance to the area.
9. Consider countermeasure contingency simultaneously with consideration for what measures are necessary to monitor and control the potential continued release.
10. Once controls are in place, allow formation to rest before resuming.
11. When resuming or deploying loss circulation material (LCM), exercise extreme caution with flow rate and pressure. Check IR activity/dormancy as well as fluid returns in real-time.
12. Consider other measures such as tripping all the way out or installing a burp-hole to relieve overhead pressure within the borehole.(ex. bore is 5’ below grade in entry pit, lengthen pit so bore begins 10’ below grade, ex. dig pit where bore is 10’ lower than at entry and lower reclaiming pump to 7’ and pump reclaimed mud to recycler from newly created burp-hole), if tripping all the way out, note clay that may be clinging to tooling, take pictures, communicate with mud-engineer.
13. If in groundwater, consider the use of a containment structure, such as a piece of pile that can be placed over the IR and secured/driven, place pump, etc.
14. Inspect all IRs in the presence of all involved parties.
15. Request environmental monitors onsite if needed to ensure environmental requirements are met.

4.4 Notification Contact Information

The following individuals shall be immediately notified in the event of an inadvertent release being observed at the ground surface or within the river.

Name	Agency	Title	Phone No.
Scott Brown	N/A	NiSource Environmental Coordinator	412-676-0329
Steven Barker	N/A	NiSource Natural Resource Permitting Manager	219-246-7290
Brian Kortum	N/A	Director Environmental Permitting	219-776-3141

ATTACHMENTS

ATTACHMENT G

Colliers Engineering & Design

Cultural Resource Desktop Review

East Columbus Project

Colliers Engineering & Design Project Number: 21004202A

May 30, 2023

Prepared for:

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

Prepared by:

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

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APPENDICES

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Colliers Engineering & Design

1.0 PURPOSE OF DOCUMENT

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

2.0 INTRODUCTION

2.1 PROJECT DESCRIPTION

The Project proposes to install about 8.1 miles (13.04 kilometers [km]) of 24-inch-high pressure steel main line pipeline.

2.2 PROJECT LOCATION

The Project area originates 31 meters (101.76 feet) southwest of the intersection of Windbrook Drive and Taylor Station Road and terminates at the intersection of Woodland Ave and Denune Ave in Columbus, Franklin County, Ohio. The Project is depicted on the *Northeast Columbus*, Ohio US Geological Survey (USGS) 7.5-minute topographic map quadrangle.

2.3 EXISTING CONDITIONS AND VICINITY CHARACTERISTICS

The Project area consists mostly of suburban neighborhoods with a few commercial buildings and a very small, wooded area on the easternmost side. The Project area has been subject to heavy disturbance from residential and commercial construction activities for many years. The Project area is bordered on all sides by further residential and commercial development.

3.0 Environmental Background

3.1 Physiography and Geology

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

The Project is underlain by the Ohio Shale geological formation. The Ohio Shale geological formation consists of mudstone, siltstone and very fine-grained sandstone that ranges from reddish-brown to purple. There are also sand filled burrows two to five meters thick bordering the formation. Shale and sandstone also make up a majority of the valley's lowlands and ridges. Diabase layers underline the main formation of the region (Slucher et. al 2006).

3.2 Topography and Soils

The Natural Resources Conservation Service (NRCS) Soil Survey for Franklin County, Ohio available on the Web Soil Survey, identifies twenty (20) soil types underlying the Project area (**Table 1**). Soils range from poorly drained to well drained (NRCS 2022).

Table 1. Soil Types in the Project Area

Soil Symbol	Soil Name	Slope %	Drainage	Landform
AdC2	Alexandria silt loam	6-12	Well Drained	Moraines, till plains
AdD2	Alexandria silt loam	12-18	Well Drained	Moraines, till plains
AdE2	Alexandria silt loam	18-25	Well Drained	Moraines, till plains
BeA	Bennington silt loam	0-2	Somewhat Poorly Drained	End moraines, ground moraines
BeB	Bennington silt loam	2-6	Somewhat Poorly Drained	End moraines, ground moraines
BfA	Bennington-Urban land complex	0-2	Somewhat poorly drained	Ground moraines, end moraines
BfB	Bennington-Urban land complex	0-6	Somewhat poorly drained	Ground moraines, end moraines
CbB	Cardington-Urban land complex	2-6	Moderately well drained	Ground moraines, end moraines
Cn	Condit silt loam	-	Poorly Drained	Ground moraines
Crd1B1	Cardington silt loam	0-2	Moderately Well Drained	End moraines, ground moraines
Crd1C2	Cardington silt loam	6-12	Moderately Well Drained	End moraines, ground moraines
Ee	Eel silt loam	0-2	Moderately Well Drained	Flood-plain steps
ElB	Eldean silt loam	2-6	Well Drained	Outwash terraces

Soil Symbol	Soil Name	Slope %	Drainage	Landform
ElC2	Eldean silt loam	6-12	Well Drained	Outwash terraces
ElD2	Eldean silt loam	12-18	Well Drained	End moraines, kames, outwash terraces
EmA	Eldean-Urban land complex	0-2	Well Drained	Terraces, moraines, eskers, kames
KeB	Kendallville silt loam	2-6	Well Drained	Terraces, moraines
Mh	Medway silt loam	-	Moderately Well Drained	Flood plains
Pm	Pewamo silty clay loam	0-2	Very Poorly Drained	Flood plains
Pn	Pewamo low carbonate till- Urban land complex	0-2	Very Poorly Drained	Flood plains
Sh	Shoals silt loam	-	Somewhat Poorly Drained	Flood plains
So	Sloan silt loam, Columbus Lowland	0-2	Very Poorly Drained	Flood plains
Ut	Udorthents-Urban land complex	2-12	--	--
WdA	Warsaw silt loam	0-2	--	--

4.0 CULTURAL RESOURCE DESKTOP REVIEW

The following information was gathered as part of the desktop review to identify previously recorded cultural resources within a 0.5-mile (0.8-km) radius of the Project area. The background review consisted of a cultural resources and literature review of the Project area. A CED archaeologist reviewed the online database hosted by the Ohio History Connection (OHC), the State Historic Preservation Office (SHPO) of Ohio, for any previously recorded surveys, historic or prehistoric sites, and cemeteries located in or near the Project. Site files, relevant maps, and National Register of Historic Places (NRHP) locations were also examined. Aerial photographs, topographic maps, and the NRCS Web Soil Survey were also examined for historical and environmental information related to the Project area.

4.1 PREVIOUSLY CONDUCTED CULTURAL RESOURCE SURVEYS

The background review revealed that two (2) previous archaeological surveys have been conducted in portions of the Project area. The first was a "Phase I Cultural Resource Management Investigation of the 2.725 Ha (6.734 A.) Proposed Construction Site for the Providence Glen Apartments and the Corban Commons Apartments in Mifflin Township, Franklin County, Ohio" conducted in 1998, and the second one was "Phase I Cultural Resources Management Investigation for the 25.6 Ha (63.3 A.) Proposed Construction of the United States Postal Service Facility in Mifflin Township, Franklin County, Ohio" conducted in 1999. Both surveys intersect the Project Area at Agler Rd and Gatewood Rd. Several additional surveys have also been conducted within a 0.5-mile (0.80 km) radius of the Project area (OHC 2023) (**Table 2**).

Table 2. Previously Conducted Cultural Resource Surveys within 0.5 mile (0.8 km) of the Project Area.

Project Name	Investigating Firm	Date of Survey	Distance to Project Area
Archaeological Survey of Proposed Interstate 315 - (Columbus & Worthington) Franklin County, Ohio	Ohio Department of Transportation	1976	48.2 meters N (58.4 feet)
An Archaeological Literature Review and Survey: Proposed Olentangy River Bicycle Path in the City of Columbus, Clinton Township, Franklin County, Ohio	ASC Group, Inc.	1990	16.1 meters S (52.8 feet)
Phase I Cultural Resources Survey of NiSource's Proposed Ackerman Road 20-inch Natural Gas Pipeline Project in the City of Columbus, Franklin County, Ohio	URS Corp., Cincinnati	2012	Intersects
An Eligibility Assessment of Site 33FR801 within the Proposed Olentangy River Bicycle Path in The City of Columbus, Clinton Township, Franklin County, Ohio	ASC Group, Inc.	1991	16.1 meters S (52.8 feet)
Phase II National Register Testing of Site 33-FR-801, for the Proposed Ackerman Road 20-inch Natural Gas Pipeline Project in the City of Columbus, Franklin County, Ohio (OPSB case # 11-3534-GA-BTX)	URS Corp., Cincinnati	2012	32.2 meters SE (105.6 feet)

Phase I Archaeological Investigations for the 7.2 ha (17.9 ac) Havens Meadows Housing Development in Jefferson Township, Franklin County, Ohio	Weller & Associates, Inc	2019	400 meters N (1,312.3 feet)
Phase I Archaeological Survey of Select U.S. Army Reserve Facilities in Ohio, (Gahanna & Blacklick) Franklin, and (Cincinnati) Hamilton Counties, Ohio	Brockington and Associates, Inc.	2015	450 meters S (1,572 feet)
Phase I Cultural Resource Management Investigations for the FRA-270-37.04 Interchange 37 / Hamilton Rd Median Improvement Project and FRA-Tech Center Drive Improvement Project in the City of Gahanna, Franklin County, Ohio	EMH&T, Inc.	2008	Intersects
Phase I Archaeological Survey for the Proposed Bridgeway Hangar Development Project, Port Columbus International Airport, City of Columbus, Franklin County, Ohio	ASC Group, Inc.	2016	478.1 meters SW (1,568.7 feet)
Literature Review and Archaeological Reconnaissance Survey for Proposed Gahanna Riverwalk Project, Gahanna, Franklin County, Ohio	Hardlines Design Co.	1997	218.4 meters NE (716.79 feet)
Literature Review and Reconnaissance Survey of the Proposed Improvements Along Stelzer Road From Morse Road To Interstate 670 In Blendon And Mifflin Townships, Franklin County, Ohio	ASC Group, Inc.	1992	Intersects
Phase I Cultural Resources Management Investigations for the Approximately 18.21 ha (45 a.) Village at Stonecliff Housing Development in the City of Columbus, Franklin County, Ohio	EMH&T, Inc.	2004	363.1 meters S (1,119.39 feet)

4.2 Previously Recorded Cultural Resources

Based on the review, there are no archaeological sites or above-ground historic resources documented within the Project area; however, there are multiple cultural resources documented within a 0.5-mile (0.80 km) radius of Project area as summarized below (OHC 2023) (**Table 3**).

Table 3. Previously Recorded Cultural Resources within 0.5 mile (0.80 km) of the Project Area.

OHI/OAI Number	Name of Resource	Date of Significance/ Temporal	Address
FR0200	Archaeological Site	Prehistoric	N/A
FR0201	Archaeological Site	Prehistoric	N/A
FR0202	Archaeological Site	Prehistoric	N/A
FR0204	Archaeological Site	Prehistoric	N/A
FR0205	Archaeological Site	Prehistoric	N/A

OHI/OAI Number	Name of Resource	Date of Significance/ Temporal	Address
FR0802	Archaeological Site	Prehistoric	N/A
FR0801	Archaeological Site	Prehistoric and Historic	N/A
FR0803	Archaeological Site	Historic	N/A
FR2874	Archaeological Site	Prehistoric	N/A
FRA0167010	Historic Structure	1910	191 W Delhi Ave Columbus, OH
FRA0167310	Clinton Theatre	1927	3377-3381 N High St Columbus, OH
FRA0712110	Clinton Elementary School	1922	10 Clinton Heights Ave Columbus, OH
FRA0165410	Clinton School	1910	10 Clinton Heights Ave Columbus, OH
FRA0167610	Historic Structure	1910	65 E North Broadway Columbus, OH
FRA0166910	Como Ave Methodist Episcopal	1916	29 E Como Ave Columbus, OH
FRA0165910	Harold Scott House	1910	3119 N High St Columbus, OH
FRA0166010	Clinton Chapel	1938	3100 N High St Columbus, OH
FRA0166213	Posey Prop	1915	57 E Weber Rd Columbus, OH
FRA0166113	Shockey House	1915	83 E Weber Rd Columbus, OH
NR-06000361	Coe, Truman & Sylvia Bull, House	1880-1885	75 E Lakeview Ave Columbus, OH 43202
NR-15000323	Graham, AB, House	1938-1960	159 Clinton Heights Ave Columbus, OH 43202
FRA0003813	Olentangy Amusement Park Site	1939	2800 N High St Columbus, OH
FRA0947310	Patrick & Coleen Berry House	1954	567 E North Broadway Columbus, OH
FRA0947610	Almanza & Elta McCreight House	1928	577 E North Broadway Columbus, OH
FRA0947810	LE & Ella Gross House	1931	583 E North Broadway Columbus, OH
FRA0948010	Lemuel & Juanita DeForest House	1929	589 E North Broadway Columbus, OH
FRA0948210	Ed & Inez Gibson House	1936	599 E North Broadway Columbus, OH
FRA0948410	William Robbers House	1936	605 E North Broadway Columbus, OH

OHI/OAI Number	Name of Resource	Date of Significance/ Temporal	Address
FRA0948510	Frank & Florence Pote House	1939	615 E North Broadway Columbus, OH
FRA0940613	Todd & Hair House	1952	555 Olentangy St Columbus, OH
FRA0940513	Fisher House	1952	553 Olentangy St Columbus, OH
FRA0940413	Fowkes House	1950	549 Olentangy St Columbus, OH
FRA0940313	Dheel House	1926	547 Olentangy St Columbus, OH
FRA0936413	Glen Echo Ravine Culvert	1910	Glen Echo Ravine at RR tracks Columbus, OH
Multiple	Historic Houses	Multiple	2680-2612 N 4th St (all even #'s) Columbus, OH
Multiple	Historic Houses	Multiple	2604-2574 N 4th St (all even #'s) Columbus, OH
FRA0937913	James L Geygan House	1925	2538 N 4th St Columbus, OH
Multiple	Historic Houses	Multiple	2539-2517 N 4th St (All odd #'s) Columbus, OH
Multiple	Historic Houses	Multiple	2500-2502- 2474-2476 N 4th St (all even #'s) Columbus, OH
FRA0534213	Steward & Silver Cement Block	1915	527 E Hudson St Columbus, OH
FRA0947810	LE & Ella Gross House	1931	583 E North Broadway Columbus, OH
FRA0948010	Lemuel & Juanita DeForest House	1929	589 E North Broadway Columbus, OH
FRA0948210	Ed & Inez Gibson House	1936	599 E North Broadway Columbus, OH
FRA0948410	William Robbers House	1936	605 E North Broadway Columbus, OH
FRA0948510	Frank & Florence Pote House	1939	615 E North Broadway Columbus, OH
FRA0940613	Todd & Hair House	1952	555 Olentangy St Columbus, OH
FRA0940513	Fisher House	1952	553 Olentangy St Columbus, OH
FRA0940413	Fowkes House	1950	549 Olentangy St Columbus, OH
FRA0940313	Dheel House	1926	547 Olentangy St

OHI/OAI Number	Name of Resource	Date of Significance/ Temporal	Address
			Columbus, OH
FRA0936413	Glen Echo Ravine Culvert	1910	Glen Echo Ravine at RR tracks Columbus, OH
Multiple	Historic Houses	Multiple	2680-2612 N 4th St (all even #'s) Columbus, OH
Multiple	Historic Houses	Multiple	2604-2574 N 4th St (all even #'s) Columbus, OH
FRA0937913	James L Geygan House	1925	2538 N 4th St Columbus, OH
Multiple	Historic Houses	Multiple	2539-2517 N 4th St (All odd #'s) Columbus, OH
Multiple	Historic Houses	Multiple	2500-2502- 2474-2476 N 4th St (all even #'s) Columbus, OH
FRA0534213	Steward & Silver Cement Block	1915	527 E Hudson St Columbus, OH
Multiple	Historic Houses	Multiple	506-526 E Tompkins St (all even #'s) Columbus, OH
Multiple	Historic Houses	Multiple	2464-2422 N 4th St (all even #'s) Columbus, OH
Multiple	Historic Houses	Multiple	513-515 E Tompkins Ave (all odd #'s) Columbus, OH
FRA0937813	Fleming Deal House	1910	527 E Tompkins Ave (rear) Columbus, OH
Multiple	Historic Houses	Multiple	514-522 Clinton Ave (all even #'s) Columbus, OH
FRA0134413	Miller Property	1899	453 E Hudson St Columbus, OH
Multiple	Historic Houses	Multiple	2514-2430 Summit St (all even #'s) Columbus, OH
Multiple	Historic Houses	Multiple	2515-2431 1/2 Summit St (all odd #'s) Columbus, OH
FRA0153813	Hale Property	1911	2570 Summit St Columbus, OH
NR-97001241	Glen Echo Historic District	1910-1943	Roughly bounded by Glen Echo Ravine, Big Four RR tracks, Indianola Ave, & Hudson St
FRA0155313	Finn House	1911	2625 N Summit St Columbus, OH
FRA0155213	Gregg House	1910	411 Arcadia Ave (and 2630 Glen Echo) Columbus, OH
FRA0152913	Walsh House	1920	416 Glen Echo Circle

OHI/OAI Number	Name of Resource	Date of Significance/ Temporal	Address
			Columbus, OH
2500698	Bridge	1921	3.22 miles north of IR 670
FRA1033513	Columbus Fire Station 13	1957	309 Arcadia Ave Columbus, OH
FRA0151213	Bernler House	1939	308 Cliffside Dr Columbus, OH
NR -89000175	Hamilton, Gilbert H., House	1927	290 Cliffside Dr Columbus, OH 43211
FRA0153313	Glen Echo United Presbyt	1930	220 Cliffside Dr Columbus, OH
FRA0150913	Historic Structure	1895	2584-2586 Dayton St Columbus, OH
FRA0156613	Zissis House	1905	2600 Medary Ave Columbus, OH
FRA0151013	O'Harra Rental House	1899	235-237 E Duncan St (2610 Medary) Columbus, OH
FRA0152513	Welshans House	1899	195 E Duncan St Columbus, OH
NR-87000984	North High School	1923	100 Arcadia Ave Columbus, OH
FRA0156413	Pfeiffer Rental House	1880	2673 Adams Ave Columbus, OH
FRA0156513	Marie Ranke Rental House	1880	2667 Adams Ave Columbus, OH
Multiple	Historic Houses	Multiple	2682-2636 Findley Ave Columbus, OH
FRA0761013	Lang House	1910	2643 Findley Ave Columbus, OH
FRA0761313	Sayre/Waltzer/Snook/Stultz	1925	2651 Findley Ave Columbus, OH
FRA0153513	Hayden House	1940	96-98 E Dodridge St Columbus, OH
FRA0154113	McConnell House	1899	74 E Dodridge St Columbus, OH
FRA0151413	Harness House	1899	57 E Dodridge St Columbus, OH
FRA0152813	Historic Structure	1899	37 E Dodridge St Columbus, OH
FRA0154313	Burkepile Rental House	1876	2695 East Ave Columbus, OH
FRA0154213	Harness House	1875	45 E Arcadia Ave Columbus, OH

OHI/OAI Number	Name of Resource	Date of Significance/ Temporal	Address
FRA0370313	Bilikam General Store	1880	2662-2664 N High St Columbus, OH
FRA0370213	Gray Nook Restaurant	1920	2657-2659 N High St Columbus, OH
FRA0006813	Ramlow Block/Crosby Drugs	1891	2659-2661 N High St Columbus, OH
NR-10000828	North Columbus Commercial Historic District	N/A	N/A
FRA0430513	Barber Shop	1865	17 W Dodridge St Columbus, OH
Multiple	Historic Houses	Multiple	44-110 W Dodridge St Columbus, OH
Multiple	Historic Houses	Multiple	69-49 North St Columbus, OH
FRA0768713	Prosser-Yoder House	1937	2683-2685 Neil Ave Columbus, OH
FRA0166710	Historic Structure	1937	224 E California Ave Columbus, OH
FRA0166610	Historic Structure	1910	259 Walhalla Rd Columbus, OH
FRA0844313	Crestview Junior High School	1914	251 E Weber Rd Columbus, OH
FRA0941013	Short House	1939	589 E Weber Rd Columbus, OH
FRA0940913	Gawlikowski House	1946	589 Tibet Rd Columbus, OH
FRA0940813	Robson House	1922	578 E Tulane Rd Columbus, OH
FRA0940713	Landis House	1948	577 E Tulane Rd Columbus, OH
FRA1033611	Columbus Fire Station 16	1953	1130 Weber Rd Columbus, OH
FRA0308311	Historic Structure	1910	1676 Manchester Ave Columbus, OH
FRA1053611	Historic Structure	1925	2741 Cleveland Ave Columbus, OH
FRA1053811	Historic Structure	1930	2750 Cleveland Ave Columbus, OH
FRA1053711	Historic Structure	1940	2742 Cleveland Ave Columbus, OH
FRA1025611	IGA and Strip Mall	1940	2682-92 Westerville Rd Columbus, OH

OHI/OAI Number	Name of Resource	Date of Significance/ Temporal	Address
FRA0260212	Schrock House	1834	2422 Sunbury Rd Columbus, OH
FRA0165713	Colonial Cany Shoppe	1939	2923-2931 N High St Columbus, OH
FRA0383413	White Castle Restaurant	1951	2725 N High St Columbus, OH
FRA0165613	The Elmwood	1915	149 E Kelso Rd Columbus, OH
FRA0864813	HL Brickels House	1921	238 Crestview Rd Columbus, OH
FRA0166610	Historic Structure	1910	259 Walhalla Rd Columbus, OH
FRA0429810	Porshinsky Apartments	1930	3211 Indianola Ave
FRA1045311	Como School	1957	2989 Reis Ave Columbus, OH
Multiple	Multiple	Multiple	513-515 E Tompkins Ave Columbus, OH
Multiple	Multiple	Multiple	2500-2458 N 4th Street
Multiple	Multiple	Multiple	506-524 E Tomkins Street
FRA0534213	Steward & Silver Cement Block	1915	527 E Hudson St Columbus, OH
Multiple	Multiple	Multiple	547-555 Olentangy St Columbus, OH
FRA1017111	New Salem Baptist Church	1951	2956 Cleveland Ave Columbus, OH
FRA1053411	Historic Structure	1940	2572 Cleveland Ave Columbus, OH
FRA1053311	1695-1697 Minnesota Avenue	1930	1695-1697 Minnesota Ave Columbus, OH
Multiple	Multiple	Multiple	2533-2557 Cleveland Ave Columbus, OH
FRA0308311	Historic Structure	1910	1676 Manchester Ave Columbus, OH
FRA1038511	Ohio Townhouses Family Apartments	1974	2775 Brentnell Rd Columbus, OH
FRA0711711	East Linden Elementary School	1911	2500 Perdue Rd Columbus, OH
N/A	Clinton Chapel-Webster Cemetery	1825	3100 N High St Columbus, OH
N/A	Mifflin Cemetery	N/A	2142 Mock Road. West of Sunbury Road. Near Woodland Avenue. East of Parkwood Avenue

OHI/OAI Number	Name of Resource	Date of Significance/ Temporal	Address
N/A	Old Union-Union	1806	East of Ackerman and Olentangy River Road

4.3 Historic Topographic Maps and Aerial Imagery

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

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5.0 SUMMARY AND RECOMMENDATIONS

The Project proposes to install about 8.1 miles (13.04 km) of 24-inch high pressure steel main line pipeline. The Project area originates 68 meters (223 feet) southwest of the intersection of Windbrook Drive and Taylor Station Road and terminates at the intersection of Woodland Ave and Denune Ave in Columbus, Franklin County, Ohio. The Project is depicted on the Northeast Columbus, Ohio US Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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

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

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2022b 1963 Aerial Imagery. Available online: https://www.historicaerials.com/viewer, accessed April 2022.

2022c 1971 Aerial Imagery. Available online: https://www.historicaerials.com/viewer, accessed April 2022.

2022d 1985 Aerial Imagery. Available online: https://www.historicaerials.com/viewer, accessed April 2022.

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2010b Topographic Map of Northwest Columbus, Ohio 1:24000. Available online: https://ngmdb.usgs.gov/topoview/, accessed April 2022.

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https://store.usgs.gov/assets/MOD/StoreFiles/Ecoregion/21631_in_oh_front.pdf. accessed April 2022.

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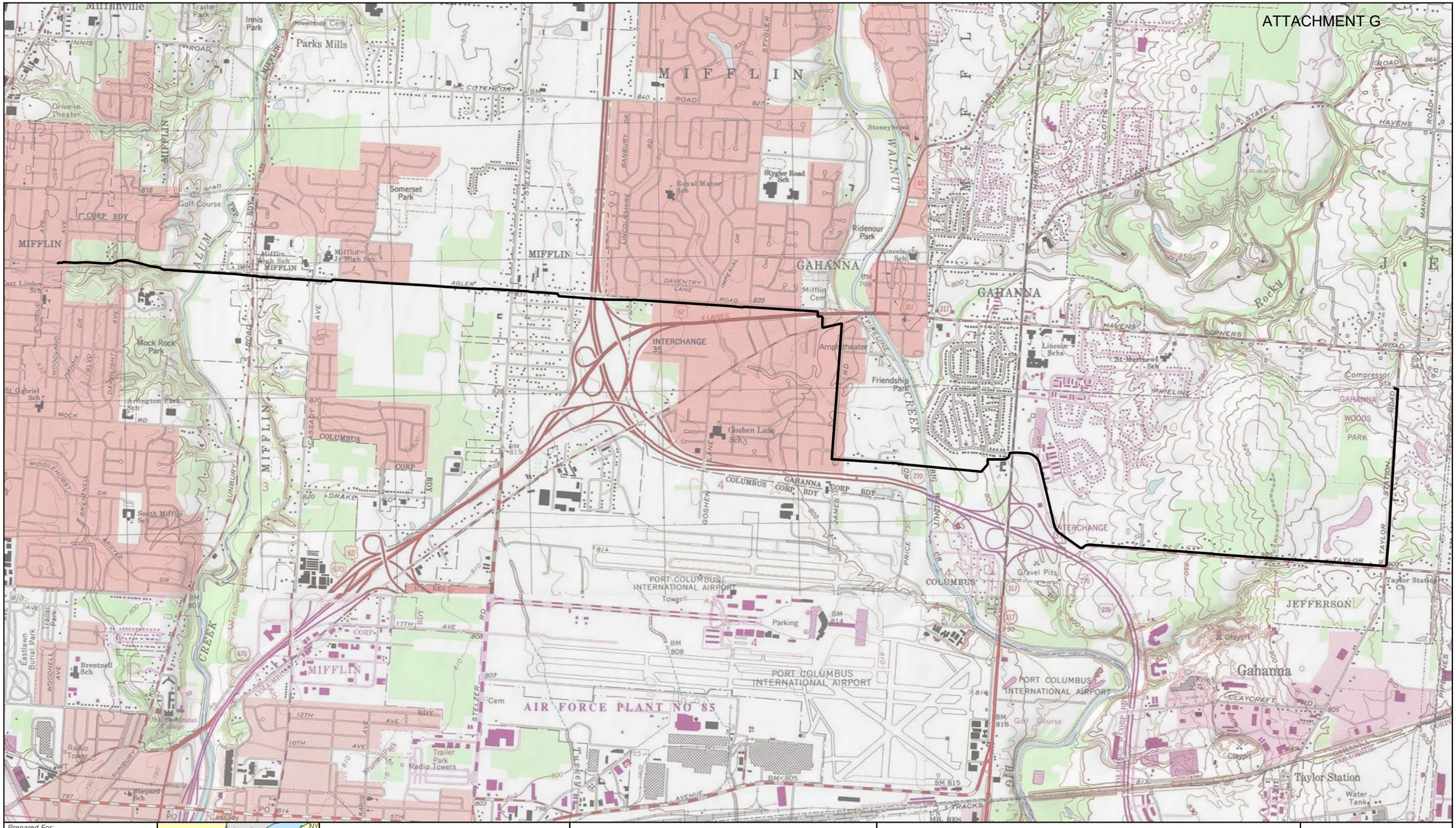
Appendix

Appendix A | Project Location Map

ATTACHMENT G



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Colliers Engineering & Design

0 1,100 2,200 Feet

1" = 2,200 feet

N W E S

Source: USGS 24k Quadrangles: Northeast Columbus, New Albany, Southeast Columbus, and Reynoldsburg, OH

Figure 1 - Project Location Map

East Columbus

Franklin County, Ohio

Date:	MC Project #:	Drawn By:
5/23/2023	21004202A	KHY

Main Line

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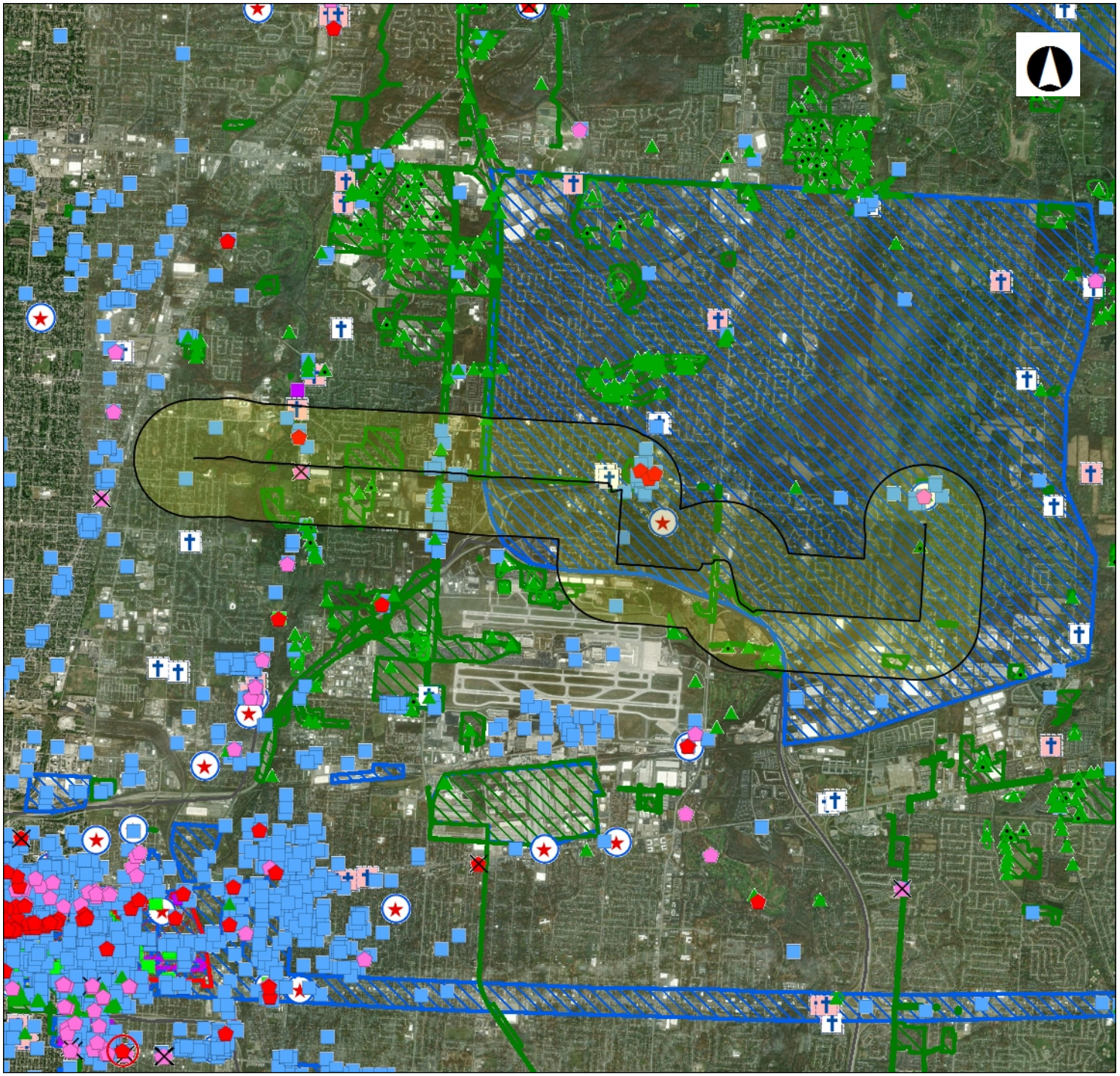
Appendix B | Cultural Resources Background Map

ATTACHMENT G



OHIO HISTORY CONNECTION

State Historic Preservation Office

Legend

- NR Listings
  - Listed
  - National Historic Landmark
  - Delisted
- Determinations of Eligibility
  - DOE
  - Demolished
- Archaeological Sites
  - Site
  - Isolated Find
- Historic Structures
- Historic Bridges
- Historic Tax Credit Projects
- Local Designations
- OGS Cemeteries
  - Confident
  - Not Confident
- Historic Markers

0 1.28 2.56 Miles

1: 101,310

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Datum: [Datum]

Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere

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