RECORD OF PROCEEDINGS

Minutes of ***MIFFLIN TOWNSHIP BOARD OF TRUSTEES*** *Meeting*

OPS Center, 400 W Johnstown Rd, Gahanna OH 43230

Held December 26, 2024

Chair Kevin Cavener called the Special Meeting of the Mifflin Township Board of Trustees to order at 1:05 p.m. with Trustee Jamie Leeseberg, Police Chief David Briggs present. Administrative Communications Coordinator Becky Swingle also attended. Human Resources Director Mindy Owens participated remotely. Trustee Richard Angelou was absent.

CORRESPONDENCE:

The elected officials received correspondence from Columbia Gas of Ohio containing a notice of the proposed Agler Road (NCHP) pipeline project. (See attached.)

POLICE:

Police Chief Briggs requested an Executive Session per ORC §121.22(G)(1) to consider the discipline of a public employee.

Chair Cavener moved to go into Executive Session per ORC §121.22(G)(1) to consider the discipline of a public employee. Mr. Leeseberg seconded the motion. All voted yea. Motion carried.

At 1:05 p.m., the trustees and Police Chief Briggs, Ms. Swingle and Ms. Owens went into Executive Session.

At 1:34 p.m., they exited the Executive Session.

Police Chief Briggs presented a disciplinary recommendation for a patrol officer.

Res. 241-24 Accept the disciplinary recommendation for a patrol officer.

Trustee Leeseberg moved to accept the disciplinary recommendation for a patrol officer. Chair Cavener seconded the motion. Both voted yea. Motion carried.

Chair Cavener moved to adjourn the meeting. Mr. Leeseberg seconded the motion. Both voted yea. Motion carried. The meeting adjourned at 1:35 p.m.

_____
Kevin J. Cavener, Chairperson

_____
Richard J. Angelou, Vice Chairperson
(Absent)

_____
Jamie D. Leeseberg, Trustee

_____
Kelly Cararo, Fiscal Officer
(Absent)

MIFFLIN TOWNSHIP
Peace. Safety. Welfare.

TRUSTEES SPECIAL MEETING AGENDA

Thursday, December 26, 2024, 1:00 p.m.
OPS Center
400 W Johnstown Rd
2nd Floor, EOC Conference Room B

1. Call Meeting to Order
2. Prayer and Pledge
3. Roll Call

4. Police
   - Request to go into an Executive Session per ORC §121.22(G)(1) Purpose: to consider the discipline of a public employee.

5. Adjourn

Reminders:
1. January 6, 2025 – Annual Organizational & Regular Trustees Meeting, 10:00 a.m., OPS Center
2. January 28 – Trustees' Regular Meeting, 1:30 p.m. & Public Hearing, 3:00 p.m., OPS Center
3. January 29 – 31, 2025, OTA Winter Conference & Trade Show

290 W. Nationwide Blvd.
Columbus, Ohio 43215
josephclark@nisource.com

Columbia Gas of Ohio
A NiSource Company

December 23, 2024

Kevin Cavener
400 W. Johnstown Rd., Suite 200
Gahanna, Ohio 43230

RE: Columbia Gas of Ohio, Inc.
Letter of Notification: Agler Road NCHP Pipeline Project
OPSB Case No. 24-1126-GA-BLN

Dear Mr Cavener:

Enclosed please find the printed attachments containing Columbia Gas of Ohio, Inc.'s Letter of Notification concerning a proposed pipeline project referred to as the Agler Road NCHP Pipeline Project. Please do not hesitate to contact me directly if you have any questions.

Sincerely,

Joseph M. Clark
Director of Regulatory Policy

290 W. Nationwide Blvd.
Columbus, Ohio 43215

Direct: 614.285.2220
Fax: 614.460.8403
johnryan@nisource.com

Columbia Gas of Ohio
A NiSource Company

December 23, 2024

Ms. Tanowa Troupe
Secretary, Office of Administration
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

RE: *In the Matter of the Letter of Notification Application of Columbia Gas of Ohio, Inc. for a Certificate of Environmental Compatibility and Public Need for the Agler Road NCHP Pipeline Project*
OPSB Case No. 24-1126-GA-BLN

Dear Ms. Troupe:

Columbia Gas of Ohio, Inc. ("Columbia") submits this Letter of Notification, pursuant to R.C. 4906.03(F)(3) and Adm.Code 4906-6, concerning a proposed pipeline project known as the Agler Road NCHP Pipeline Project (the "Project").

Pursuant to Ohio Adm.Code 4906-6-03(B), Columbia respectfully requests expedited approval of this Letter of Notification. Further, in accordance with Ohio Adm.Code 4906-6-04(A)(1) and (2), Columbia has hand delivered a copy of this filing to the offices of the Ohio Power Siting Board along with the required two thousand-dollar payment. Specifically, Columbia requests approval of this Letter of Notification on or before March 14, 2025 in order to complete any tree clearing, if needed, during permitted seasonal tree cutting timeframes.

Figure 1: Agler Road NCHP Pipeline Project Route

As required by Adm.Code 4906-6-05, please be advised of the following:

(B) General Information

(1) The name of the project and applicant's reference number, names and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a letter of notification.

Columbia is proposing to construct the Project in Columbus, Ohio and Gahanna, Ohio. The proposed Project will be approximately 19,914 feet (3.8 miles) in length and consist of 24-inch diameter high pressure gas transmission class pipeline.

Much of the 24-inch natural gas main will be constructed within the public road right-of-way within the Cities of Columbus and Gahanna as well as within permanent private pipeline easements from six property owners as listed in Attachment D. Columbia plans to utilize a combination of conventional boring, horizontal directional drilling, and the open cut installation method to construct the Project. If any new information is discovered, and/or for public convenience or safety during construction, Columbia may utilize these methods interchangeably during construction of the Project.

This Project meets the requirements of the Letter of Notification as it is a replacement of gas pipelines or pipeline segments greater than one mile in length but not greater than five miles in length. See Appendix B of Adm.Code 4906-1-01.

(2) If the proposed letter of notification project is a gas pipeline, a statement explaining the need for the proposed facility.

PHMSA has begun implementing a comprehensive, three-part rule, aimed at increasing pipeline safety. These regulations are commonly known as the PHMSA Mega Rule and the entirety of the 24" mainline is being installed to comply with the PHMSA Mega Rule.

Mega Rule Part 1, which went into effect in 2020, involves new regulations for reconfirming the maximum allowable operating pressure ("MAOP") of pipelines and facilities installed before July 1, 2020, that are in certain class locations or high consequence areas ("HCAs"), and do not have available certain traceable, verifiable, and complete ("TVC") records, such as material

attributes and sufficient pressure test records. Operators have until 2035 to comply with these requirements, but 50% of the work in scope must be completed by July 2028. The Project is part of Columbia's plan to comply with the PHMSA Mega Rule.[1]

Moreover, replacing the existing pipeline increases the reliability of a critical piece of Columbia's service to the Columbus area through the NCHP system, as well as provides safety benefits. The safety benefits include, but are not limited to, a lower ratio of operating stress to yield strength of the pipeline material and updated pipeline records.

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

The map shown in Attachment A, Drawing Number AG-01: Overview Workspace illustrates the location of the Project in relation to existing transmission facilities in the Project area. The new pipeline is shown in red and the workspace for constructing the new pipeline is a black-dashed line. The existing NCHP pipeline that will be replaced is the blue line.

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

The proposed route was developed taking into consideration the current pipeline route, private property, the density of below-grade utilities, impact to the public, and environmental features. The proposed route minimizes the number of residential homes and businesses directly affected by the Project. Installation methods have been selected to further limit impact to high traffic roads, other infrastructure such as railroads, environmental features, and trees. Tree clearing and trimming will occur along the pipeline route as needed for safe construction and pipeline operation purposes along the public right-of-way as well as for permanent and temporary easement areas. Columbia currently plans to HDD under Alum Creek in Columbus to avoid the

[1] *See In the Matter of the Application of Columbia Gas of Ohio, Inc. for Approval of an Alternative Rate Plan*, Case Nos. 23-0046-GA-ALT, *et al.*, Staff Report at 10 (July 7, 2023).

environmental impacts of alternative crossings, and the HDD will continue east of Sunbury Road in order to minimize impacts to the mature trees along that portion of the Project. A second HDD is planned for the Interstate 270 (I-270) crossing at the Columbus and Gahanna city line. This trenchless installation is being pursued to avoid the traffic impacts to this vital thoroughfare. The HDD profiles are shown within Attachment B. The route has 499 structures within 1,000 feet of the centerline, five of which are schools or daycares, and one is a place of worship. Please see Attachment G for the Cultural Memorandum for the details of the cultural study.

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

Columbia will provide the notices required by the OPSB rules, including notices to landowners, newspaper notice, a copy of this Letter of Notification (with attachments) posted in libraries, and notices to public officials. Columbia will also be hosting a website dedicated to this phase of its Mega Rule compliance. That website is www.columbiagasohio.com/agler-road-nchp. Columbia will have a dedicated e-mail address to receive inquiries from any interested stakeholder and will be responding to those inquiries.

(6) The anticipated construction schedule and proposed in-service date of project.

At the present time, Columbia anticipates installation of the proposed pipeline to begin around April 2025 and to complete this work by December 31, 2025 with initial tree clearing commencing (as needed) in March. This timeframe and scope of work is subject to change based on evolving project planning and other variables, and Columbia will work with Columbus, Gahanna, Franklin County, and affected residents throughout the construction process.

(7) An area map of not less than 1:24,000 scale clearly depicting the facility and proposed limits of disturbance with clearly marked streets, roads, and highways, and an aerial image.

Attachment B is comprised of the pipeline alignment drawings and the pipeline workspace drawings that contain area maps at a 1"= 40' scale. The

maps and drawings depict the Project centerline, workspaces, and major street crossings. The Project centerline is shown as a dashed red line, and workspaces are shown as cyan-hatched areas bounded by dashed black lines for workspace within public right-of-way; grey-hatched areas bounded by dashed blue lines for permanent easement within private parcels; and pink-hatched areas bounded by dashed black lines for temporary easement within private parcels. Roads, streets, highways, and other crossings are clearly labeled throughout.

Attachment H contains the Management of Traffic (MOT) plans for the construction of the pipeline.

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

A list of all adjacent and impacted parcels and entities are listed in Attachment D.

As of the date of this filing, all necessary easements have been secured. Columbia may procure additional temporary easements for the purposes of temporary access and/or workspace as needed.

(9) Technical features of the project.

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

The Project will be tested such that it will have an MAOP of 720 pounds per square inch gauge ("psig"). Columbia will be installing 24-inch main-line piping that is coated steel with a wall thickness of 0.375 inches.

The location of the workspaces, easements, and right-of-way are shown in the drawings included in Attachment B.

(b) For electric power transmission lines that are within 100 feet of an occupied residence or institution, the production of electric and magnetic fields during the operation of the proposed electric power transmission line, describe:

(i) Calculated electric and magnetic field strength levels at one meter above ground under the lowest conductors and at the edge of the right-of-way for: (a) Normal maximum loading, (b) Emergency line loading, (c) Winter normal conductor rating.
(ii) The applicant's consideration of design alternatives with respect to electric and magnetic fields and their strength levels, including alternate conductor configuration and phasing, tower height, corridor location, and right-of-way width.

Not applicable to this Project as it does not relate to an electric power transmission line.

(c) The estimated capital cost of the project.

The estimated total cost of the proposed Project is $[redacted].

(10) Social and Ecological Impacts of the Project.

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

The Project is located within the Cities of Columbus and Gahanna, Franklin County, Ohio. The current land use along the route is comprised of mostly residential and commercial properties and one city park. There is an approximately 0.82-mile-long section of the route traversing wooded land. There are also transportation-related land use areas including one Interstate and several road crossings as well as a water crossing (Alum Creek).

Currently, the route has 499 structures within 1,000 feet of the centerline. Five schools or daycares, and one place of worship were identified based on desktop analysis.

There are no new planned residential developments within the Project study corridor that were discovered as part of the survey. The Project is not expected to significantly impact existing or planned land use within the vicinity of the Project. There are no federal lands that will be crossed by the Project. A city owned park is located just east of Alum Creek and will be crossed via HDD.

The municipalities, townships, and counties affected include Franklin County, Mifflin Township, the City of Gahanna, and the City of Columbus.

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

No agricultural land or agricultural district land parcels are impacted by the Project.

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

Colliers Engineering & Design (CED) was contracted by NiSource Inc. (NiSource) to perform a cultural resource background review for the Agler Road NCHP Pipeline 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 Columbia'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.

The Project area consists mostly of suburban neighborhoods with a few commercial buildings and a 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.

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.

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).

Based on the desktop 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 the Project area.

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).

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 including

Mifflin Cemetery 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 Columbia compliance with Section 106 of the NHPA.

A copy of the Cultural Report is included in Attachment G. Columbia will provide the response from SHPO upon receipt.

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

A copy of this Letter of Notification has been sent to the following public officials concurrently with its submittal to the Ohio Power Siting Board.

Franklin County	
Kevin L. Boyce	Erica C. Crawley
Franklin County Commissioner	Franklin County Commissioner
President	373 S. High Street
373 S. High Street	Columbus, Ohio 43215
Columbus, Ohio 43215	614-525-3600
614-525-3600	
John O'Grady	Maryellen O'Shaughnessy
Franklin County Commissioner	Clerk of Courts
373 S. High Street	373 S. High Street
Columbus, Ohio 43215	Columbus, Ohio 43215
614-525-3600	614-525-3600
Brad Foster, P.E., P.S.	
Franklin County Engineer	
970 Dublin Road	
Columbus, Ohio 43215	
614-525-3600	

Mifflin Township	
Kevin Cavener	Richard Angelou
Mifflin Township Chair	Mifflin Township Vice-Chair
400 W. Johnstown Rd., Suite 200	400 W. Johnstown Rd., Suite 200
Gahanna, OH 43230	Gahanna, OH 43230
(614) 471-4494	(614) 471-4494
Jamie Leeseberg	Kelly Cararo
Mifflin Township Trustee	Mifflin Township Fiscal Officer
400 W. Johnstown Rd., Suite 200	400 W. Johnstown Rd., Suite 200
Gahanna, OH 43230	Gahanna, OH 43230
(614) 471-4494	(614) 471-4494

City of Gahanna	
Laurie Jadwin	Merisa Bowers
City of Gahanna Mayor	Gahanna Council President Member at Large
200 S Hamilton Rd	200 S Hamilton Rd
Gahanna, OH 43230	Gahanna, OH 43230
614-342-4045	614-342-4090
Trenton Weaver	Michael Schnetzer
Gahanna Council Vice President	Gahanna Council Finance Chair
200 S Hamilton Rd	200 S Hamilton Rd
Gahanna, OH 43230	Gahanna, OH 43230
614-342-4090	614-342-4090
Jamille Jones	Nancy McGregor
Gahanna Council Member at Large	Gahanna Council Member at Large
200 S Hamilton Rd	200 S Hamilton Rd
Gahanna, OH 43230	Gahanna, OH 43230
614-342-4090	614-342-4090
Kaylee Padova	Stephen Renner
Gahanna Council Member	Gahanna Council Member
200 S Hamilton Rd	200 S Hamilton Rd
Gahanna, OH 43230	Gahanna, OH 43230
614-342-4090	614-342-4090
Jeremy VanMeter	Sophia McGuire
Gahanna Clerk of Council	City of Gahanna Deputy Clerk of Council
200 S Hamilton Rd	200 S Hamilton Rd
Gahanna, OH 43230	Gahanna, OH 43230
614-342-4090	614-342-4090

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
614-645-7671	614-645-7671
Rob Dorans	Nicholas J. Bankston
City of Columbus, Council President	Columbus City Council
Pro Tempore	90 W. Broad Street
90 W. Broad Street	Columbus, Ohio 43215
Columbus, Ohio 43215	614-645-7671
Lourdes Barroso de Padilla	Nancy Day-Achauer
Columbus City Council	Columbus City Council
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
614-645-7671	614-645-7671
Shayla Favor	Melissa Green
Columbus City Council	Columbus City Council
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
614-645-7671	614-645-7671
Emmanuel V. Remy	Christopher L. Wyche
Columbus City Council	Columbus City Council
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
614-645-7671	614-645-7671
Andrea Blevins	Toya Johnson
City of Columbus City Clerk	City of Columbus Deputy City Clerk
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
614-645-7671	614-645-7671

In addition to submitting this Letter of Notification to the Ohio Power Siting Board, the Project is subject to the following federal, state, and local agency reviews and authorizations to be received prior to construction beginning:

- U.S. Army Corps of Engineers (USACE) Nationwide Permit 12 Evaluation;
- U.S. Fish & Wildlife Service (USFWS) Ohio Ecological Field Office Section 7 Threatened and Endangered Species Consultation;
- Ohio State Historic Preservation Office Section 106 Historic Resources Consultation;
- Ohio Department of Natural Resources (ODNR) State Threatened and Endangered Species Consultation;
- Ohio Environmental Protection Agency (OEPA) Section 402 National Pollutant Discharge Elimination System (NPDES) and Construction Stormwater Permit and Stormwater Pollution Prevention Plan (SWPPP) requirements;
- City of Columbus Department of Public Service ROW Excavation Permit;
- City of Gahanna ROW Permit;
- Franklin County Permit;
- Ohio EPA Hydrostatic Test Water Discharge Permit; and
- Ohio Department of Transportation Right-of-Way and Utility Permit.

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

A threatened and endangered species review was conducted to become aware of the potential presence of Endangered or Threatened listed species that are located within the Project Study Area or within the vicinity. The United States Fish and Wildlife Service (USFWS) web page was reviewed to determine species that have Federal protection in Franklin County, within the state of Ohio. A refined search, using the USFWS Information for Planning and Consultation (IPaC) database, was performed to provide a more detailed list of species and critical habitat under USFWS jurisdiction that are known or expected to occur within the Project Study Area. The table below provides the USFWS IPaC Species List for the Project Study Area.

Table 1. USFWS Ipac Species List for Project Study Area		
Common Name	**Scientific Name**	**Status**
Insects		
Monarch Butterfly	Danaus plexippus	Candidate Species
Mammals		
Indiana Bat	Myotis sodalis	Federally Endangered
Northern Long-eared Bat	Myotis septentrionalis	Federally Endangered
Tricolored Bat	Perimyotis subflavus	Proposed Endangered
Clams		
Round Hickorynut	Obovaria subrotunda	Federally Threatened

In addition to the review of federal databases, CED conducted a review of the Ohio Department of Natural Resources (ODNR) web page regarding natural heritage resources surrounding the Project Study Area. The ODNR provides results of potential occurrences of rare species, natural communities, and federally listed species that have been documented within the immediate vicinity of the Project Study Area. Table 2 lists species that, as of May 22, 2023, potentially occur in Franklin County.

Table 2. ODNR Franklin County Species List as of May 22, 2023			
Common Name	Scientific Name	State Status	Federal Status
Mammals			
Indiana Myotis	*Myotis sodalis*	Endangered	Federally Endangered
Black Bear	*Ursus americanus*	Endangered	-
Northern Long- eared Bat	*Myotis septentrionalis*	Threatened	Federally Threatened
Star-nosed Mole	*Condylura cristata*	Species of Concern	-
Big Brown Bat	*Eptesicus fuscus*	Species of Concern	-
Red Bat	*Lasiurus borealis*	Species of Concern	-
Hoary Bat	*Lasiurus cinereus*	Species of Concern	-
Snowshoe Hare	*Lepus americanus*	Species of Concern	-
Woodland Vole	*Microtus pinetorum*	Species of Concern	-
Ermine	*Mustela erminea*	Species of Concern	-
Little Brown Bat	*Myotis lucifugus*	Species of Concern	-
Tri-colored Bat	*Perimyotis subflavus*	Species of Concern	-
Deer Mouse	*Peromyscus maniculatus*	Species of Concern	-
Smoky Shrew	*Sorex fumeus*	Species of Concern	-
Southern Bog Lemming	*Synaptomys cooperi*	Species of Concern	-
Badger	*Taxidea taxus*	Species of Concern	-
Common Gray Fox	*Urocyon cinereoargenteus*	Species of Concern	-
Evening Bat	*Nycticeius humeralis*	Special Interest	-
American Bison	*Bison bison*	Extirpated	-
Birds			
Upland Sandpiper	*Bartramia longicauda*	Endangered	-
American Bittern	*Botaurus lentiginosus*	Endangered	-
Cattle Egret	*Bubulucus ibis*	Endangered	-
Lark Sparrow	*Chondestes grammacus*	Endangered	-
Northern Harrier	*Circus hudsonius*	Endangered	-
Sandhill Crane	*Grus canadensis*	Threatened	-
Least Bittern	*Ixobrychus exilis*	Threatened	-
Black-crowned Night-Heron	*Nycticorax nycticorax*	Threatened	-
Barn Owl	*Tyto alba*	Threatened	-
Sharp-sinned Hawk	*Accipiter striatus*	Species of Concern	-
Henslow's Sparrow	*Ammodramus henslowii*	Species of Concern	-
Grasshopper Sparrow	*Ammodramus savannarum*	Species of Concern	-
Great Egret	*Ardea alba*	Species of Concern	-
Common Nighthawk	*Chordeiles minor*	Species of Concern	-
Sedge Wren	*Cistothorus platensis*	Species of Concern	-
Black-billed Cuckoo	*Coccyzus erythropthalmus*	Species of Concern	-
Northern Bobwhite	*Colinus virginianus*	Species of Concern	-

Table 2 Continued. ODNR Franklin County Species List as of May 22, 2023			
Common Name	Scientific Name	State Status	Federal Status
Birds Continued			
Bobolink	*Dolichonyx oryzivorus*	Species of Concern	-
American Coot	*Fulica americana*	Species of Concern	-
Common Gallinule	*Gallinula galeata*	Species of Concern	-
Red-headed Woodpecker	*Melanerpes erythrocephalus*	Species of Concern	-
Vesper Sparrow	*Pooecetes gramineus*	Species of Concern	-
Sora Rail	*Porzana carolina*	Species of Concern	-
Prothonotary Warbler	*Protonotaria citrea*	Species of Concern	-
Virginia Rail	*Rallus limicola*	Species of Concern	-
Cerulean Warbler	*Setophaga cerulea*	Species of Concern	-
Northern Shoveler	*Anas clypeata*	Special Interest	-
Green-Winged Teal	*Anas crecca*	Special Interest	-
American Black Duck	*Anas rubripes*	Special Interest	-
Veery	*Catharus fuscescens*	Special Interest	-
Hermit Thrush	*Catharus guttatus*	Special Interest	-
Brown Creeper	*Certhia americana*	Special Interest	-
Least Flycatcher	*Empidonax minimus*	Special Interest	-
Wilsons Snipe	*Gallinago delicata*	Special Interest	-
Dark-eyed Junco	*Junco hyemalis*	Special Interest	-
Yellow-crowned Night-Heron	*Nyctanassa violacea*	Special Interest	-
Nashville Warbler	*Oreothlypis ruficapilla*	Special Interest	-
Northern Waterthrush	*Parkesia noveboracensis*	Special Interest	-
Golden-crowned Kinglet	*Regulus satrapa*	Special Interest	-
Blackburnian Warbler	*Setophaga fusca*	Special Interest	-
Magnolia Warbler	*Setophaga magnolia*	Special Interest	-
Red-breasted Nuthatch	*Sitta canadensis*	Special Interest	-
Yellow-bellied Sapsucker	*Sphyrapicus varius*	Special Interest	-
Winter Wren	*Troglodytes hiemalis*	Special Interest	-
Golden-winged Warbler	*Vermivora chrysoptera*	Special Interest	-
Bell's Vireo	*Vireo bellii*	Special Interest	-
Insects			
-	*Chimarra socia*	Endangered	-
Two-spotted Skipper	*Euphyes bimacula*	Species of Concern	-
-	*Agroperina lutosa*	Species of Concern	-
Precious Underwing	*Catocala pretiosa*	Species of Concern	-
Slender Clearwing	*Hemaris gracilis*	Special Interest	-

Table 2 Continued. ODNR Franklin County Species List as of May 22, 2023			
Common Name	Scientific Name	State Status	Federal Status
Fish			
Iowa Darter	*Etheostoma exile*	Endangered	-
Spotted Darter	*Etheostoma maculatum*	Endangered	-
Tonguetied Minnow	*Exoglossum laurae*	Endangered	-
Goldeye	*Hiodon alosoides*	Endangered	-
Northern Brook Lamprey	*Ichthyomyzon fossor*	Endangered	-
Shortnose Gar	*Lepisosteus platostomus*	Endangered	-
Popeye Shiner	*Notropis ariommus*	Endangered	-
Lake Chubsucker	*Erimyzon sucetta*	Threatened	-
Tippecanoe Darter	*Etheostoma tippecanoe*	Threatened	-
Paddlefish	*Polyodon spathula*	Threatened	-
Muskellunge	*Esox masquinongy*	Species of Concern	-
Blue catfish	*Ictalurus furcatus*	Species of Concern	-
Blacknose Shiner	*Notropis heterolepis*	Extirpated	-
Longhead Darter	*Percina macrocephata*	Extirpated	-
Clams/Mollusk			
Butterfly	*Ellipsaria lineolata*	Endangered	-
Elephant-ear	*Elliptio crassidens*	Endangered	-
Purple Cats paw	*Epioblasma obliquata*	Endangered	Federally Endangered
Snuffbox	*Epioblasma triquetra*	Endangered	Federally Endangered
Longsolid	*Fusconaia subrotunda*	Endangered	-
Pink Mucket	*Lampsilis abrupta*	Endangered	Federally Endangered
Pocketbook	*Lampsilis ovata*	Endangered	-
Washboard	*Megalonaias nervosa*	Endangered	-
Clubshell	*Pleurobema clava*	Endangered	Federally Endangered
Ohio Pigtoe	*Pleurobema cordatum*	Endangered	-
Rabbitsfoot	*Theliderma cylindrica*	Endangered	Federally Threatened
Rayed Bean	*Villosa fabalis*	Endangered	Federally Endangered
Black Sandshell	*Ligumia recta*	Threatened	-
Threehorn Wartyback	*Obliquaria reflexa*	Threatened	-
Fawnsfoot	*Truncilla donaciformis*	Threatened	-
Pondhorn	*Uniomerus tetralasmus*	Threatened	-
Elktoe	*Alasmidonta marginata*	Species of Concern	-
Purple Wartyback	*Cyclonaias tuberculata*	Species of Concern	-
Wavy-rayed Lampmussel	*Lampsilis fasciola*	Species of Concern	-
Creek Heelsplitter	*Lasmigona compressa*	Species of Concern	-
Round Pigtoe	*Pleurobema sintoxia*	Species of Concern	-
Kidneyshelll	*Ptychobranchus fasciolaris*	Species of Concern	-

Table 2 Continued. ODNR Franklin County Species List as of May 22, 2023			
Common Name	Scientific Name	State Status	Federal Status
Clams/Mollusk **Continued**			
Deertoe	*Truncilla truncata*	Species of Concern	-
Mucket	*Actinonaias ligamentina ligamentina*	Extirpated	-
Rough Pigtoe	*Pleurobema plenum*	Extirpated	-
Reptiles/Amphibians			
Smooth Greensnake	*Opheodrys vernalis*	Endangered	-
Eastern Cricket Frog	*Acris crepitans crepitans*	Species of Concern	-
Four-toed Salamander	*Hemidactylium scutatum*	Species of Concern	-
Flowering Plants			
American Sweet-flag	*Acorus americanus*	Proposed Threatened	-
Gattinger's-foxglove	*Agalinis gattingeri*	Threatened	-
Spreading Rock Cress	*Arabis patens*	Endangered	-
Prairie False Indigo	*Baptisia lacteal*	Proposed Threatened	-
Prairie Brome	*Bromus kalmii*	Proposed Threatened	-
Pale Umbrella- sedge	*Carex acuminatus*	Endangered	-
Cypress-knee Sedge	*Carex decomposita*	Proposed Threatened	-
Tall Larkspur	*Delphinium exaltatum*	Proposed Threatened	-
One-sided Rush	*Juncus secundus*	Proposed Threatened	-
Scaly Blazing-star	*Liatris squarrosa*	Proposed Threatened	-
Weak Spear Grass	*Poa saltuensis ssp. Languida*	Proposed Threatened	-
Abor Vitae	*Thuja occidentalis*	Proposed Threatened	-
Three-birds Orchid	*Triphora trianthophora*	Proposed Threatened	-
Rock Elm	*Ulmus thomasii*	Proposed Threatened	-

A project review request letter was submitted to ODNR on May 26, 2023, seeking review of the potential impacts of the Project on federal and state listed species and their habitats within the Project area. A response was provided by ODNR on June 28, 2023, which identifies nine State-listed species that occur within one mile of the Project limits: Lark sparrow (*Chondestes grammacus*, Endangered), Yellow-crowned night-heron (*Nyctanassa violacea*, Special Interest), Purple wartyback (*Cyclonaias tuberculata*, Species of Concern), Elktoe (*Alasmidonta marginata*, Species of Concern), Wavy-rayed lampmussel (*Lampsilis fasciola*, Species of Concern), Black sandshell (*Ligumia recta*, Species of Concern), Round pigtoe (*Pleurobema sintoxia*, Species of Concern), Kidneyshell (*Ptychobranchus fasciolaris*, Species of Concern), and Rayed bean (*Villosa fabalis*, Endangered, Federally Endangered).

These species are not specifically recorded within the Project area itself. Due to the ongoing nature of the Project, an updated list was requested on May 24, 2024 and a response was received on June 26, 2024. No additional species were identified in the updated list provided by the ODNR.

Based on a review of the Northeast Columbus and New Albany Ohio Quadrangle USGS Map and historical aerial photographs, the Project Study Area appears to be mainly residential/commercial properties and forested areas comprise about 22%. The Project Study Area is relatively flat with elevations that range from 750 to 950 feet above mean sea level (MSL). The Project Study Area is located in the Eastern Corn Belt Plains ecoregion.

The habitat within the Project corridor is urban and primarily consists of residential and commercial areas with maintained lawn. Approximately 22% of forested habitat are also present within the Project area. During the wetland delineation study, an on-site habitat assessment was performed to identify potential habitat for federally and state protected species within the Project area. Common tree species observed within the Project area during the study include sweetgum (*Liquidambar styraciflua*), loblolly pine (*Pinus taeda*), red maple (*Acer rubrum*), and American beech (*Fagus grandifolia*). Please see the pipeline alignment and workspace drawings in Attachment B for impacted locations of forested habitat.

In addition, Columbia will adhere to seasonal tree clearing timeframes recommended by both USFWS and ODNR as the Project will result in brush

and tree clearing/trimming in the immediate habitat surrounding the Project area. By adhering to the timeframe referenced (tree cutting completed by 3/31/25), habitat removal is unlikely to result in significant impacts to bat species. Based on this information and the minimization and avoidance measures planned to be implemented by Columbia, it is not likely that direct impacts to the Indiana bat or northern long-eared bat will occur.

The Project was also assessed for the presence of habitats that could potentially support other listed species. No suitable habitat for the listed species was identified within the Project area. In addition, two streams and one wetland feature have been delineated within the Project area that will be crossed by the proposed pipeline.

Section 7(a)(2) of the Endangered Species Act (ESA) directs all Federal agencies to ensure that any action they authorize, fund, or carry-out does not jeopardize the continued existence of an endangered or threatened species or designated or proposed critical habitat (collectively, referred to as protected resources). The crossing of jurisdictional streams by the proposed pipeline will be subject to a USACE Nationwide Permit 12 (reporting or non-reporting). This action creates a federal nexus for this Project; therefore, no tree clearing will occur on any portion of the Project area until consultation under Section 7 of the ESA is completed.

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

An environmental review of the Project area was conducted on behalf of Columbia by its contractor, Campos EPC, LLC. According to the USFWS, there are no federal wilderness areas, wildlife refuges, or designated critical habitat within the vicinity of the Project area. Streams identified in the Project area are not part of a National or State wild and scenic river. For the full Wetland Delineation Report, please see Attachment C, and see the Inadvertent Release Plans for the horizontal directional drills (HDDs) in Attachment F. An excerpt of Attachment C is below:

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) were reviewed to identify any flood hazard areas that have been mapped for the proposed pipeline route. The Survey Corridor does contain a floodway and a floodplain according to FEMA Floodplain Panel Maps 39049C0189K, 39049C0193K, 39049C0194K, 39049C0213K, and 39049C0214K.

A copy of the aerial map with FEMA floodplain and floodway information for the Project area is included as Figure 4 in the Wetland Delineation Report located in Attachment C.

The Project Study Area is comprised of a 100-foot-wide survey corridor centered on the proposed pipeline alignment for 3.8 miles. The Project Study Area or "Survey Corridor" includes the proposed installation of 3.8 miles of 24-inch pipeline and additional workspaces. The additional workspaces are located along the alignment in the central and eastern end of the alignment. The Survey Corridor was investigated to identify potential jurisdictional Waters of the U.S. (WOTUS) and wetlands subject to Federal or State regulatory jurisdiction. The delineation methodologies developed by the USACE and the USEPA, as described in the 1987 Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) and the subsequently issued USACE regulatory guidance regarding the identification of jurisdictional stream channels through the recognition of field indicators of an ordinary high-water mark within drainage features (Environmental Laboratory, 1987; USACE 2012; USACE 2005) were utilized during our investigation. The location and size of jurisdictional areas delineated are shown in Figure 5, Delineation Results, in the Wetland Delineation Report located in Attachment C.

Six (6) wetland features, three (3) palustrine unconsolidated bottom (pond) features, and seventeen (17) stream features were delineated within the Survey Corridor by CED on March 2nd and 3rd, 2022 and October 24, 2022. A total of 2.02 acres of palustrine forested (PFO) wetland, 0.46 acres of palustrine emergent (PEM) wetland, 0.39 acres of pond (palustrine unconsolidated bottom – PUB), 2,131 linear feet of perennial (R3) stream, and 1,525 linear feet of intermittent (R4) stream were delineated. Field investigations were conducted in accordance with the manuals, methodologies, and regulatory guidance procedures as stated in Section 5.0 Wetland and Surface Water Delineation Methodology.

It is CED's professional opinion that Wetland Features "1" through "3" and "5" through "7" and Stream Features "002" through "10" and "13" through "20" are considered jurisdictional WOTUS since they are and/or drain into Walnut Creek Rocky Fork Creek, Alum Creek. These stream and wetland features can be considered jurisdictional WOTUS since they connect to Walnut Creek, Rocky Fork Creek, and Alum Creek which eventually drains to the Scioto River. The location and size of jurisdictional areas delineated are shown on Figure 5. Delineation Results

Impacts to vegetation along the proposed pipeline route will be minimal. Tree clearing and trimming will occur along the pipeline route as needed for safe construction and pipeline operation purposes along the public right-of-way as well as for permanent and temporary easement areas. Representative plant species within the wetland areas include the following: green ash (*Fraxinus pennsylvanica*), red maple (*Acer rubrum*), sycamore (*Platanus occidentalis*), sugar maple (*Acer saccharum*), amur honeysuckle (*Lonicera maackii*), multiflora rose (*Rosa multiflora*), and common rush (*Juncus effusus*).

Representative plant species within the upland areas include the following: sweetgum (*Liquidambar styraciflua*), loblolly pine (*Pinus taeda*), red maple, American beech (*Fagus grandifolia*), Christmas fern (*Polystichum acrostichoides*), common greenbrier (*Smilax rotundifolia*).

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

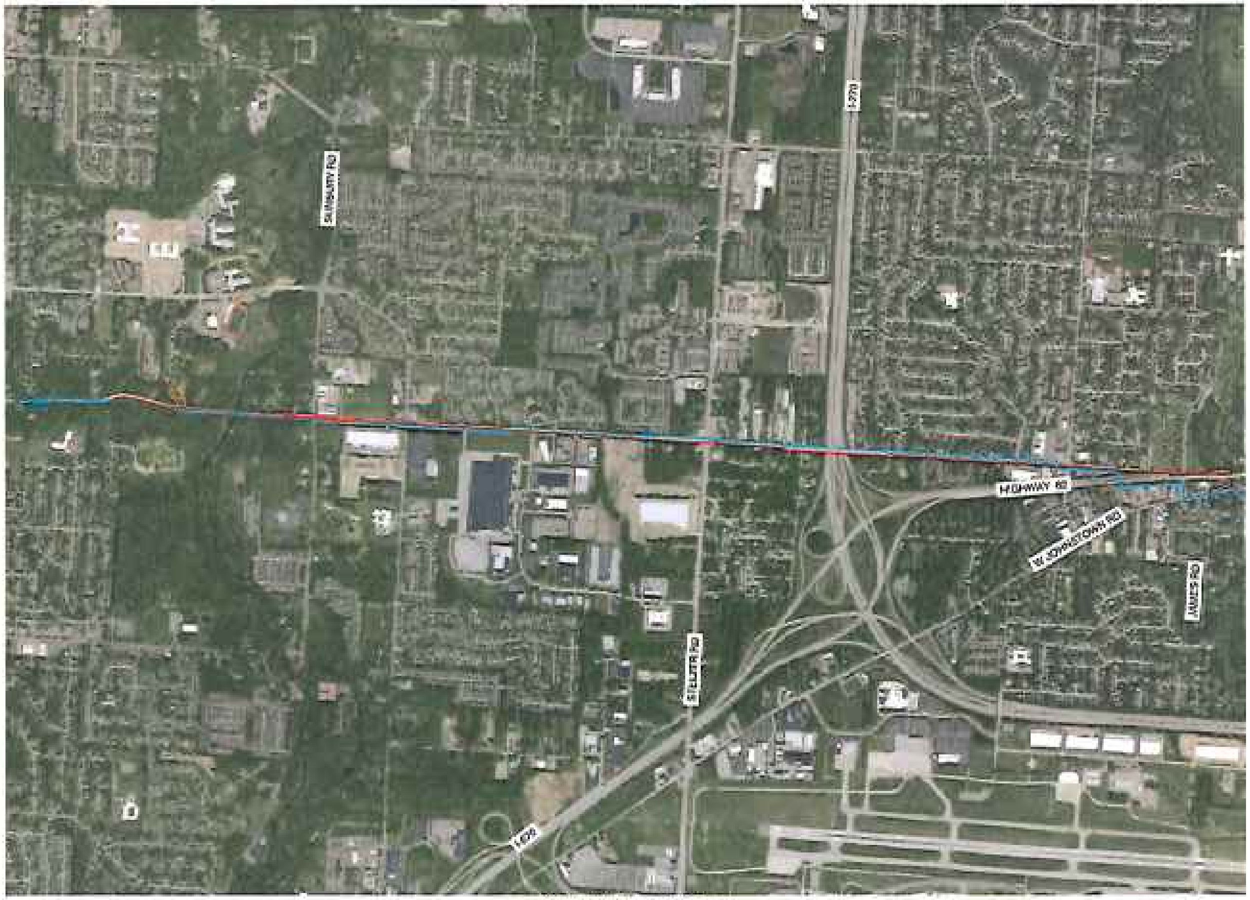
To the best of Columbia's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

Should staff of the Ohio Power Siting Board desire further information or discussion of this application, please do not hesitate to reach out to me at the information listed above.

Respectfully submitted,

/s/ John Ryan

Attachment A **Project Map**



OVERVIEW SHEET INDEX

SCALE: 1"=1000'

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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	[illegible]	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
[illegible]	AD	[illegible]	[illegible]
[illegible]	JMJ	[illegible]	[illegible]
CHECKED BY	[illegible]	[illegible]	[illegible]
[illegible]	TBD	TBD	TBD

SITE NAME:

INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793

DRAWING TITLE:

OVERVIEW WORKSPACE

DRAWING NO:

AG-01

Attachment B **Alignment and Workspace Drawings**

Columbia Gas®
A NiSource Company

INSTALLATION ORDER NUMBER 23-0083895-00
ABANDONMENT ORDER NUMBER 23-0083897-00
PROJECT ID 21-78793
AGLER ROAD NCHP PIPELINE PROJECT
JOB TYPE: MAINS-LEAKAGE ELIMINATION (557/558)

PROJECT INFORMATION

DESIGN ENGINEER	ANTHONY DIESIDIO
FIELD ENGINEER/TECHNICIAN	KAITLIN DIEGERT
CONSTRUCTION PFL:	MATTHEW AUFF
PERMITS	CITY OF COLUMBUS PERMIT
	CITY OF GAHANNA PERMIT
	FRANKLIN COUNTY PERMIT
	ENVIRONMENTAL PERMITS
	DOT PERMITS
	OPSB PERMIT
TCC/LOA	0823/COLUMBUS NORTHEAST
COUNTY	FRANKLIN COUNTY, OH
TASK DISTRICT/TOWNSHIP ID	0250150
	0250530
	0250540
	0250030
	0250520
MAP/GRID NUMBER	73364 28A
	73364 28B
	73364 28C
	73364 28D
	73324 28A
	73324 28B
24 HR. EMERGENCY LINE	1-800-344-4077

SYSTEM DATA

	MINIMUM (PSIG / MCFH)	MAXIMUM (PSIG / MCFH)	MAOP PSIG
[illegible]	110 PSIG	128 PSIG	180 PSIG
[illegible]	NA MCFH	NA MCFH	

DESIGN DATA

[illegible]	[illegible]	[illegible]

VICINITY MAP

SCALE: 1" = 3000'

PROJECT DESCRIPTION

INSTALLATION OF 3.8 MILES OF 24-INCH HIGH PRESSURE STEEL PIPELINE

SHEET INDEX

DWG.	DESCRIPTION
T-2001 - T-2002	TITLE SHEET AND INDEX SHEET
GN-2001 - GN-2002	GENERAL NOTES
O-2001	OVERVIEW SHEET
L-2001 - L-2021	ALIGNMENT SHEETS

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PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	[illegible]	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
[illegible]	AD	[illegible]	[illegible]
[illegible]	JAU	[illegible]	[illegible]
CHECKED BY	[illegible]	[illegible]	[illegible]
AS-BUILT BY	TBD	TBD	TBD

SITE NAME:

INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
AGLER ROAD NCHP PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:

TITLE SHEET

DRAWING NO:

T-2001

SHEET INDEX		
DWG.	DESCRIPTION	REV
	GENERAL	
T-2001	TITLE SHEET	A
T-2002	INDEX SHEET	A
GN-2001	NISOURCE GENERAL NOTES	A
GN-2002	GENERAL NOTES AND LEGEND	A
	ALIGNMENT SHEETS	
O-2001	OVERVIEW SHEET	A
L-2001	24" WEST UNDER ALIGNMENT STA 0+00 TO STA 1+12	A
L-2002	STA 0+00 TO STA 10+00	A
L-2003	STA 10+00 TO STA 20+00	A
L-2004	STA 20+00 TO STA 30+00	A
L-2005	STA 30+00 TO STA 40+00	A
L-2006	STA 40+00 TO STA 50+00	A
L-2007	STA 50+00 TO STA 60+00	A
L-2008	STA 60+00 TO STA 70+00	A
L-2009	STA 70+00 TO STA 80+00	A
L-2010	STA 80+00 TO STA 90+00	A
L-2011	STA 90+00 TO STA 100+00	A
L-2012	STA 100+00 TO STA 110+00	A
L-2013	STA 110+00 TO STA 120+00	A
L-2014	STA 120+00 TO STA 130+00	A
L-2015	STA 130+00 TO STA 140+00	A
L-2016	STA 140+00 TO STA 150+00	A
L-2017	STA 150+00 TO STA 160+00	A
L-2018	STA 160+00 TO STA 170+00	A
L-2019	STA 170+00 TO STA 180+00	A
L-2020	STA 180+00 TO STA 190+00	A
L-2021	STA 190+00 TO STA 198+02	A

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PROPOSED

REVISIONS		
A	12/2024	ISSUED FOR PERMIT
REV. #	DATE	DESCRIPTION

INTERNAL ENG.	AD	12/2024	[illegible]
DESIGNED BY	AJU	12/2024	[illegible]
CHECKED BY	RDW	12/2024	[illegible]
AS-BUILT BY	TBD	TBD	TBD
	NAME	DATE	PHONE #

SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
ADLER ROAD HC-P PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
INDEX SHEET

DRAWING NO.
T-2002

General Notes

1. Deviation from NiSource CAD Standards is at discretion of reviewing Professional Engineer.
2. Refer to project documentation for the associated Environmental Compliance Plan (ECP) and any project-specific documentation.
3. The proposed gas facility locations shown are approximate and are subject to change.
4. Property lines, structures, street lines, etc. were compiled using the NiSource GIS and are to be considered approximate and not to scale.
5. Existing utilities, where shown, have been compiled from above ground evidence only and are to be considered approximate. NiSource does not guarantee the location of the underground utilities shown or that all existing utilities and/or subsurface structures are shown.
6. Individual service line designs for services smaller than 3 inches in diameter are not provided by Engineering. These services shall be installed using the standard design criteria and material specified in the NiSource standards. Services 3 inches and larger in diameter shall be designed, reviewed, and represented on a separate plan set as necessary.
7. This project will adhere to all applicable federal, state or local permitting requirements for abandonment and installation of natural gas pipelines. All Federal, State, and Local codes and standards will be adhered including, but not limited to, the following:
   Code of Federal Regulations (CFR)
   49 CFR 192 Pipeline Safety Regulations
   29 CFR 1910 Occupational Safety and Health Administration (OSHA)
   American Society of Mechanical Engineers (ASME)
   ASME B31.8 Gas Transmission and Distribution Piping Systems
8. All NiSource design codes and standards will be adhered to as applicable.
9. Prior to beginning any excavation on site, the person responsible for earth moving shall notify utility owners of their intent to excavate and to have the exact locations of the utility lines marked by contacting the one call center in their state subject to any applicable state advance notification requirements.
10. Proposed or completed gas facility installation location references may be indicated by a combination of the following codes:

F - FRONT	CLP - CENTER OF PAVEMENT	D - DRIVEWAY EDGE
BK - BACK	CLR - CENTER OF RIGHT-OF-WAY	EP - EDGE OF PAVEMENT
L - LEFT	CEL - CENTER OF EASTBOUND LANE	ES - EDGE OF SIDEWALK
R - RIGHT	CWL - CENTER OF WESTBOUND LANE	PL - PROPERTY LINE
B - BUILDING EDGE	CNL - CENTER OF NORTHBOUND LANE	
CU - CURB	CSL - CENTER OF SOUTHBOUND LANE	

Drawing Revision Conditions:

1. If, during the course of project construction, anticipated changes to project plans result in complex project criteria being met as defined by NiSource Gas Standard 251.0.050 "Stakeholder Reviews of Design Capital Projects," the changes shall not be implemented until revised project documentation is reviewed by the Project Engineer and approved by a Professional Engineer as necessary.
2. Any additional gas pressure containing material not listed on the project Bill of Materials must be reviewed by the Project Engineer and reviewing Professional Engineer prior to use.
3. Any significant changes to proposed primary pipeline installation methods and location must be reviewed by the Project Engineer and reviewing Professional Engineer.
4. Any significant changes to proposed project scope must be reviewed by the Project Engineer and reviewing Professional Engineer. Significant changes to project scope may include changes to proposed design pressure, change of proposed pipe size and material affecting system hydraulics, and the addition or removal of significant amounts of pipeline installation or abandonment.
5. Any significant changes to proposed tie-ins must be reviewed by the Project Engineer and reviewing Professional Engineer. Significant changes may include the following: addition or removal of a tie-in, change in proposed tie-in material, change in proposed tie-in method, and change in tie-in location if system hydraulics may be affected.
6. This project involves the installation of facilities in permitted locations within public right-of-way. If, during the course of installation, it is found that the installation must deviate from the permitted location, construction must cease until the deviation is reviewed by the Project Engineer and reviewing Professional Engineer.

Environmental Notes

1. All NiSource construction activities must be completed in accordance with the Environmental Construction Standards (NSE 4440.020) and the project Environmental Compliance Plan (ECP). Said ECP shall be provided by others.
2. The project ECP and any site-specific erosion control drawings, must be provided to the contractor with the project drawings for review and planning prior to the start of construction activities. This includes any tree clearing activities required prior to the start of facility construction activities.
3. The project ECP and any associated drawings must be reviewed with construction, the contractor, and an environmental representative prior to the start of construction activities.
4. These documents must remain on site for the duration of the construction project, and any project scope changes, with the potential to impact the requirements of the ECP or environmental drawings, must be coordinated with an environmental representative prior to completion.

DRAWING LEGEND

Gas Main Symbology
- Existing Gas Main
- Existing Gas Main to Be Abandoned
- Proposed Gas Main
- Proposed Gas Main Uprate

Gas Main Material/Pressure Label References
MATERIAL CODES
- CS* Coated Steel Gas Main
- WT* Weld Treated Gas Main
- CI* Cast Iron Gas Main
- BS* Bare Steel Gas Main
- WI* Wrought Iron Gas Main
- PH* High Density Polyethylene Gas Main
- PM* Medium Density Polyethylene Gas Main

PRESSURE CODES
- *LP Low Pressure
- *IP Intermediate Pressure
- *MP Medium Pressure
- *HP High Pressure

MISCELLANEOUS CODES
- *-SER Service
- *-R Riser
- (TC) Transmission Class

Gas Main Installation Method Label References
- AT Attached
- BH Bridge Hanger
- BLGH Building Hanger
- DB Directional Bore
- IS Inserted
- OC Open Cut
- PB Pneumatic Bore
- PL Plowed
- RT Roof Top
- (E) Existing
- (P) Proposed

Weld Location

Gas Main Tie-In Location

Gas Main Abandonment Location

Gas Facility Symbology
- ⊗x"GV Gas Valve
- ●x"PV Critical Gas Valve (Gate - GV, Plug - PV, PE Ball - BP, ST Ball - BV)
- ○x"HVTT High Volume Tapping Tee
- ○x"SST Pressure Control Fitting - ShortStopp Tee
- ○x"SPH Pressure Control Fitting - Spherical Tee
- ○x"MF-BO Pressure Control Fitting - Mueller Bottom-out
- ○x"MF-SO Pressure Control Fitting - Mueller Side-cut
- ○x"MF-FT Pressure Control Fitting - Mueller Range Tee
- ⊠x"SS Pressure Control Fitting - ShortStopp
- ⊠x"MF Pressure Control Fitting - Mueller Stopper
- Xx4x4" POLYTAP Polytapp Side Saddle Fitting
- Transition
- End Cap
- Riser
- Reducer
- Electronic Marker
- Flushmounted Tracer Wire Station
- Post Pipeline Marker with Tracer Wire
- Gas Main Marker without Tracer Wire
- Test Well
- Regulator Station
- Single Customer Regulator
- Meter
- Meter with Regulator
- Test Point (Station)
- Gas Service Tie-over
- Gas Service Replacement
- MMO Meter Move Out

Swing Tie Symbology
- Telephone Manhole
- Drain Manhole
- Electric Manhole
- Catch Basin
- Sewer Manhole
- Fire Hydrant
- Utility Pole
- Property Marker
- Telephone Pedestal
- Television Pedestal
- Unknown Manhole
- Water Box
- Water Gate
- Electric Pedestal
- Iron Pin
- Light Pole

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CAMPOS EPC

PROPOSED

REVISIONS		
REV. #	DATE	DESCRIPTION
DRAWN BY:	AD	
CHECKED BY:	JNL	
APPROVED BY:	REW	
ACCEPTED BY:	TBD	TBD
	NAME	DATE PHONE #

SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
ACLER ROAD N.GP. PIPELINE PROJECT
COLUMBUS / GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
NISOURCE GENERAL NOTES

DRAWING NO:
GN-2001

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL CITY, COUNTY, STATE, AND FEDERAL GUIDELINES/REGULATIONS APPLICABLE TO CONSTRUCTION OF THIS SITE.
2. SITE CONTRACTOR SHALL VERIFY ALL COORDINATES AND DIMENSIONAL INFORMATION PRIOR TO CONSTRUCTION, BRING ANY DISCREPANCIES WITH LAYOUT TO ATTENTION OF OWNER PRIOR TO STARTING CONSTRUCTION.
3. UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE DRAWINGS, CONTRACTOR SHALL MAINTAIN A MINIMUM 0'-0" OFFSET FROM PROPERTY LINES AND FROM EDGE OF PAVEMENT (EXCLUDING ROAD AND PROPERTY LINE CROSSINGS). ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CURRENT SPECIFICATIONS AND STANDARDS OF OWNER.
4. ALL WORK SHALL BE IN COMPLIANCE WITH OSHA, TITLE 29 OF THE CODE OF FEDERAL REGULATIONS, AND ALL OTHER FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.
5. CONTRACTOR SHALL PERFORM A SITE VISIT AND VERIFY ALL COORDINATES AND DIMENSIONAL INFORMATION PRIOR TO CONSTRUCTION. IF DISCREPANCIES ARE OBSERVED, THE ENGINEER SHALL BE NOTIFIED.
6. CONTRACTOR IS RESPONSIBLE FOR KNOWING LOCATION OF ALL ENVIRONMENTALLY SENSITIVE AREA RESTRICTIONS PERTAINING TO THIS PROJECT.
7. CONTRACTOR TO VERIFY WETLANDS HAVE BEEN PERMITTED AND MITIGATED PRIOR TO DISTURBING ANY WETLAND AREAS.
8. CONTRACTOR SHALL REMAIN WITHIN THE CONSTRUCTION WORKING LIMITS. ACCESS TO AREAS OUTSIDE WORKING LIMITS MUST BE COORDINATED WITH THE OWNER OR OBTAINED DIRECTLY BY CONTRACTOR.
9. CONTRACTOR SHALL USE ALL NECESSARY MEANS TO ENSURE SAFE AND PROPER TRAFFIC FLOW DURING CONSTRUCTION, IN ACCORDANCE WITH OWNER AND LOCAL DOT STANDARDS.
10. CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF THEIR WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION METHODS AND TECHNIQUES, SEQUENCES, TIME OF PERFORMANCE, AND ALL SAFETY PRECAUTIONS.
11. CONTRACTOR TO LESSEN THE LIMITS OF DISTURBANCE AS MUCH AS PRACTICAL DURING CONSTRUCTION TO MINIMIZE AMOUNT OF RE-PAVING NECESSARY.
12. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A MINIMUM COVER OF 6'-0" TO ACCOUNT FOR DEPTH OF UNKNOWN SERVICE LINES.
13. MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0".
14. BENDS UNDER 4° ARE NOT SHOWN.
15. PIPE FIELD BENDS ARE LIMITED TO 20° UNLESS APPROVED BY ENGINEERING.

DESIGN BASIS

1. EXISTING CONDITIONS WERE TAKEN FROM:
   A TOPOGRAPHIC SURVEY PERFORMED BY CAMPOS EPC
   AN ENVIRONMENTAL SURVEY PERFORMED BY COLLIERS
2. GEOTECHNICAL ENGINEERING REPORTS PREPARED BY OLZ APPROXIMATE BOREHOLE LOCATIONS HAVE BEEN SHOWN ON THE PLANS.
3. GEOTECHNICAL DATA IS PROVIDED FOR CONTRACTOR REFERENCE. CONTRACTOR SHALL INTERPRET THE GEOTECHNICAL DATA BETWEEN EXPLORATION POINTS. CONTRACTOR SHALL OBTAIN ADDITIONAL DATA DEEMED NECESSARY FOR BID PREPARATION OR CONSTRUCTION AT THE CONTRACTOR'S EXPENSE.
4. ALL DIMENSIONS ARE TAKEN FROM TO EDGE OF PAVEMENT, CENTERLINE OF UTILITY OR EDGE OF EASEMENT UNLESS OTHERWISE NOTED.
5. PROPOSED PIPE LOCATIONS SHOWN ARE AS FIELD IDENTIFIED BY OWNER AND ARE BASED ON EVALUATION OF ABOVE GROUND FEATURES. THE FINAL ALIGNMENT AND LOCATION OF PIPE SHALL BE DETERMINED BY OWNER AND ITS DESIGNATED INSPECTOR(S).
6. STATIONING IS IN FEET BY HORIZONTAL MEASUREMENT AND REFERS TO CENTERLINE OF PROPOSED BORE PATH.
7. DRILL PATH ELEVATIONS REFER TO THE CENTERLINE OF THE PILOT HOLE AND NOT TO THE TOP OF INSTALLED PIPE.
8. DRILL PATH ENTRY AND EXIT LABELS ARE FOR REFERENCE ONLY AND DO NOT SPECIFY WHICH SIDE OF THE BORE PATH A RIG WILL BE SET UP ON. CONTRACTOR MAY ELECT TO DRILL FROM EITHER OR BOTH SIDES BASED ON THEIR MEANS AND METHODS.

SCOPE

1. CONTRACTOR SHALL INSTALL THE PIPE STRING USING THE CONSTRUCTION METHODS SET FORTH IN THE DRAWINGS. ANY DEVIATIONS MUST BE COORDINATED WITH NISOURCE AND THE CITY OF COLUMBUS.
2. CONTRACTOR SHALL PROVIDE AND MOBILIZE ALL NECESSARY EQUIPMENT, INSTRUMENTATION, AND SUPPLIES TO INSTALL THE WELDED PIPE STRING USING HDD METHOD OF CONSTRUCTION.
3. CONTRACTOR SHALL ACTIVELY MONITOR THE DRILLED ALIGNMENT FOR IMPACTS THAT COULD OCCUR AS A RESULT OF HDD OPERATIONS (I.E. SETTLEMENT, HEAVE, AND DRILLING FLUID FLOW). CONTRACTOR'S MONITORING PROCEDURES AND ASSOCIATED EMERGENCY RESPONSE PLANS SHALL BE APPROPRIATE TO ENSURE THAT PUBLIC SAFETY IS NOT COMPROMISED.

EXISTING UTILITIES

1. THE CONTRACTOR SHALL NOTIFY THE PUBLIC UTILITY LOCATING SYSTEM (811) AND OBTAIN A CLEARED, APPROVED TICKET PRIOR TO BEGINNING WORK.
2. LOCATIONS OF EXISTING UNDERGROUND UTILITIES AND SITE FEATURES ARE APPROXIMATE. ACTUAL EXISTING CONDITIONS MAY VARY FROM WHAT IS REPRESENTED IN THESE DRAWINGS AND SHALL BE VERIFIED IN THE FIELD BY CONSTRUCTION PERSONNEL PRIOR TO BEGINNING WORK.
3. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND POSITIVELY IDENTIFYING THE UTILITIES WITHIN THE WORKSPACE. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES WITHIN THE CONSTRUCTION AREA. CONTRACTOR IS RESPONSIBLE FOR ALL LOSSES AND REPAIRS OCCASIONED BY DAMAGE TO UNDERGROUND FACILITIES / UTILITIES RESULTING FROM THEIR WORK.
4. IF EXISTING UTILITIES ARE IDENTIFIED IN THE FIELD AND DEEMED TO BE IN CONFLICT WITH THE PROPOSED BORE PROFILE, CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SO THE CONFLICT MAY BE RESOLVED.
5. THE PIPELINE SHALL BE INSTALLED SO AS TO PROVIDE A MINIMUM OF TWENTY FOUR (24) INCHES OF CLEARANCE TO ALL OTHER UNDERGROUND UTILITIES AND STRUCTURES. WHERE THIS IS NOT POSSIBLE, APPROPRIATE PROTECTION SHALL BE INSTALLED, WITH THE APPROVAL OF NISOURCE REPRESENTATIVE OR INSPECTOR.
6. WHERE NOTED ON PLANS, REFER IN XXXX TO POTHOLE EXHIBITS FOR TYPE, DEPTH, SIZE, ETC.
7. CONTRACTOR TO CONTACT POWER COMPANIES WHEN POWER POLES ARE WITHIN 5' OF A TRENCH OR PIT.

CONTRACTOR NOTES

CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING NOTIFICATIONS:

1. UTILITY NOTIFICATION CENTER OF OHIO (OHIO811), 1-800-362-2764. CALL TWO (2) BUSINESS DAYS PRIOR (NOT INCLUDING THE DAY OF THE CALL). OHIO811 ADVISES THE CONTRACTOR/EXCAVATOR TO SUBMIT THEIR DIG NOTIFICATION REQUEST TO OHIO811, RECEIVE THEIR REFERENCE NUMBER AND WAIT THE REQUIRED 48 HOURS (EXCLUDING WEEKENDS AND LEGAL HOLIDAYS) BEFORE EXCAVATION TO BE COMPLIANT WITH OHIO LAW.
   a. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES, WHETHER SHOWN OR NOT SHOWN ON THE APPROVED CONSTRUCTION DOCUMENTS.
   b. PROVIDING NOTIFICATION AND RECEIVING MARKINGS OF UNDERGROUND MEMBER UTILITIES IN NO WAY CONSTITUTES PERMISSION TO PERFORM CONSTRUCTION.
2. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
   THE CLIENT'S UTILITY CUSTOMERS SHALL BE NOTIFIED OF POTENTIAL SERVICE OUTAGES. CONSTRUCTION WILL COORDINATE WITH THE CLIENT FOR DETERMINATION OF MINIMUM TIME REQUIREMENT. CLIENT SHALL BE NOTIFIED TWO BUSINESS DAYS (48 HOURS) IN ADVANCE TO SCHEDULE AN OUTAGE.
   THE CLIENT MUST BE NOTIFIED 24 HOURS IN ADVANCE FOR OBSERVATIONS OF WORK IN PROGRESS. OBSERVATION AND ONSITE VISITS ARE NOT TO BE CONSTRUED AS A GUARANTEE OR APPROVAL BY CLIENT. START OF CONTRACTOR'S WORK OR CONTRACTUAL COMMITMENT. IF WORK IS SUSPENDED FOR LONGER THAN 5 DAYS AFTER INITIAL START-UP, CONTRACTOR SHALL NOTIFY THE CLIENT CONSTRUCTION INSPECTION SUPERVISOR ONE (1) BUSINESS DAYS (24 HOURS) PRIOR TO RESTART OF CONSTRUCTION.
3. CONTRACTOR TO PROVIDE SHORING PER REQUIREMENTS OF CITY OF COLUMBUS PERMIT PACKAGE. ALTERNATIVE RECOMMENDATIONS ARE PERMITTED, BUT WILL REQUIRE APPROVAL BY NISOURCE AND THE CITY OF COLUMBUS PRIOR TO IMPLEMENTING.

SURVEY NOTES

1. SURVEY DATUM IS OHIO STATE PLANES, SOUTH ZONE, US SURVEY FEET.
2. REFER TO STAMPED SURVEY DOCUMENTATION FOR FURTHER INFORMATION.

CATHODIC PROTECTION NOTES

1. TEST STATIONS TO BE ATTACHED AS INDICATED ON ALIGNMENT SHEETS. FINAL LOCATIONS TO BE APPROVED IN FIELD BY COMPANY REPRESENTATIVE. PLACEMENT MUST BE REMOVED FROM PAVEMENT, TRAFFIC LANES AND SHOULDERS, AND WHEN POSSIBLE ALIGNED WITH POWER POLES OR FENCE POSTS FOR ADDITIONAL MECHANICAL PROTECTION.
2. FOREIGN CROSSING TEST STATIONS SHALL BE ADDED AS STEEL FOREIGN CROSSINGS ARE DISCOVERED. NOT INSTALLING A TEST STATION AT AN IDENTIFIED FOREIGN CROSSING MUST BE APPROVED BY NISOURCE CORROSION SME.
3. ALL TEST STATION LEADS MUST HAVE ENOUGH EXCESS CABLE TO ALLOW FOR FULL REMOVAL OF TEST STATION HEAD WHILE TERMINATED.
4. CORROSION PROTECTION IS DESIGNED BY NISOURCE AND IS NOT COVERED WITHIN THE ENGINEER'S STAMP.
5. 20" PIPING FIELD BENDS LIMITED TO 20° UNLESS APPROVED BY ENGINEERING.

LEGEND

EXIST FIBER OPTIC	FO
EXIST TELECOMM LINE	T
EXIST BURIED POWER	E
GAS MAIN	G
EXIST OVERHEAD POWER	OH
TR BURIED POWER / TR OVERHEAD POWER	TR
UNKNOWN UTILITY	
FENCE	
PROPERTY LINE	
RIGHT-OF-WAY	R/W
PULLBACK STRING	STRG
CENTERLINE	
BED LINE	
RAILROAD	
ROAD EDGE	
WATERWAY	
SANITARY SEWER	SS
STORM SEWER	ST
WATER MAIN	W
MAJOR CONT	
MINOR CONT	
PERMANENT EASEMENT	
EXISTING GAS EASEMENT	
TEMPORARY WORKSPACE WITHIN R.O.W.	
TEMPORARY EASEMENT	
TEMPORARY WORKSPACE	
COH OWNED PROPERTY	
EXISTING UTILITY EASEMENT	
STORM DRAIN	
SANITARY SEWER MANHOLE	
VALVE	
CATCH BASIN	
OVERHEAD POWER POLE	
POTHOLE LOCATION	
FIRE HYDRANT	
TRAFFIC BOX	TB

SYMBOLOGY

ELBOW	ELL
FIELD BEND	FB
PROPERTY LINE	PL
LEFT BEND	LB
RIGHT BEND	RB
OVER BEND	OB
SAG	SAG

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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	12/20/24	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
DRAWN BY	AD	12/20/24	[illegible]
DESIGNED BY	JAL	12/20/24	[illegible]
CHECKED BY	RFW	12/20/24	[illegible]
APPROVED BY	TBD	TBD	TBD

SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
ADLER ROAD HCMP PIPELINE PROJECT
COLUMBUS / GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
GENERAL NOTES & LEGEND

DRAWING NO:
GN-2002

OVERVIEW SHEET INDEX

SCALE: 1"=1000'

NOTE:
1. AERIAL IMAGERY IS FOR REFERENCE ONLY.

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PROPOSED

REVISIONS		
A	12/20/24	ISSUED FOR PERMIT
REV. #	DATE	DESCRIPTION

INTERNAL ENG.	AD	12/20/24	[illegible]
DESIGNED BY	AMJ	12/20/24	[illegible]
CHECKED BY	RDW	12/20/24	[illegible]
AS-BUILT BY	TBD	TBD	TBD
	NAME	DATE	PHONE #

SITE NAME:

INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793

AGLER ROAD HCHP PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:

OVERVIEW SHEET

DRAWING NO:

O-2001

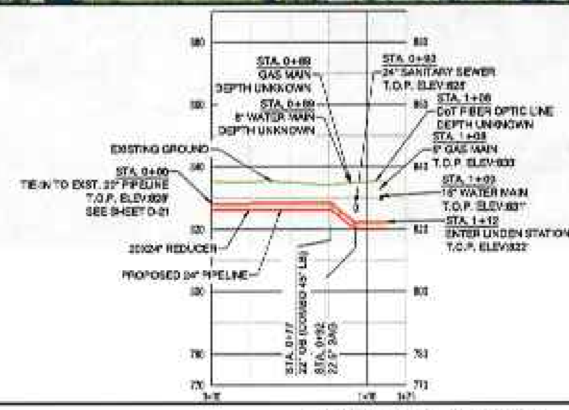
OWNERSHIP	STA. 0+00	FRANKLIN COUNTY	STA. 1+12
JURISDICTION / PARCEL ID		CITY OF COLUMBUS / FRANKLIN COUNTY	
TEST PRESSURE / DESIGN INFO		1090 PSIG MIN / 1050 PSIG MAX / CLASS 4 / 720 PSIG	
CONSTRUCTION METHOD		OPEN CUT	
PIPE			
FITTINGS			

HORIZONTAL STATIONING

STA. 0+00 TIE-IN TO EXISTING 20" PIPELINE
STA. 0+07 DOP OVERHEAD POWER
STA. 0+13 20" EB
STA. 0+20 20" INSULATING JOINT
STA. 0+20 TEST STATION WITH #17 ANODE
STA. 0+24 24" X 20" REDUCER
STA. 0+36 24" EB
STA. 0+55 24" EB
STA. 0+77 24" EB (COMBO 22" DB)
STA. 0+89 GAS MAIN
STA. 0+89 8" WATER MAIN
STA. 0+92 24" SAG
STA. 0+93 24" SANITARY SEWER
STA. 1+06 DoT FIBER OPTIC LINE
STA. 1+08 6" GAS MAIN
STA. 1+09 16" WATER MAIN
STA. 1+11 DOP OVERHEAD POWER
STA. 1+12 ENTER LINDEN STATION

PROPOSED PLAN

PROPOSED PROFILE



NOTES:

1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 6'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES. MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0"
4. VERTICAL BENDS CALLED OUT IN PROFILE ARE FOR REFERENCE. CONTRACTOR TO MAKE USE OF ROPING AND FIELD BENDS WHERE POSSIBLE. REFER TO GS 3010.030 FOR FURTHER DETAILS
5. CORROSION PROTECTION IS DESIGNED BY NISOURCE AND IS NOT COVERED WITHIN THE ENGINEER'S STAMP
6. AERIAL IMAGERY IS FOR REFERENCE ONLY
7. FITTING EXTENTS SHOWN IN THE PROFILE ARE FOR REFERENCE ONLY. REFER TO STATIONING BAND FOR LOCATIONS OF ANTICIPATED FITTINGS. A 3X DIAMETER OF STRAIGHT PIPE IS REQUIRED BETWEEN ALL FITTINGS. REFER TO GS 2110.020 FOR FURTHER DETAILS

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PROPOSED

REVISIONS

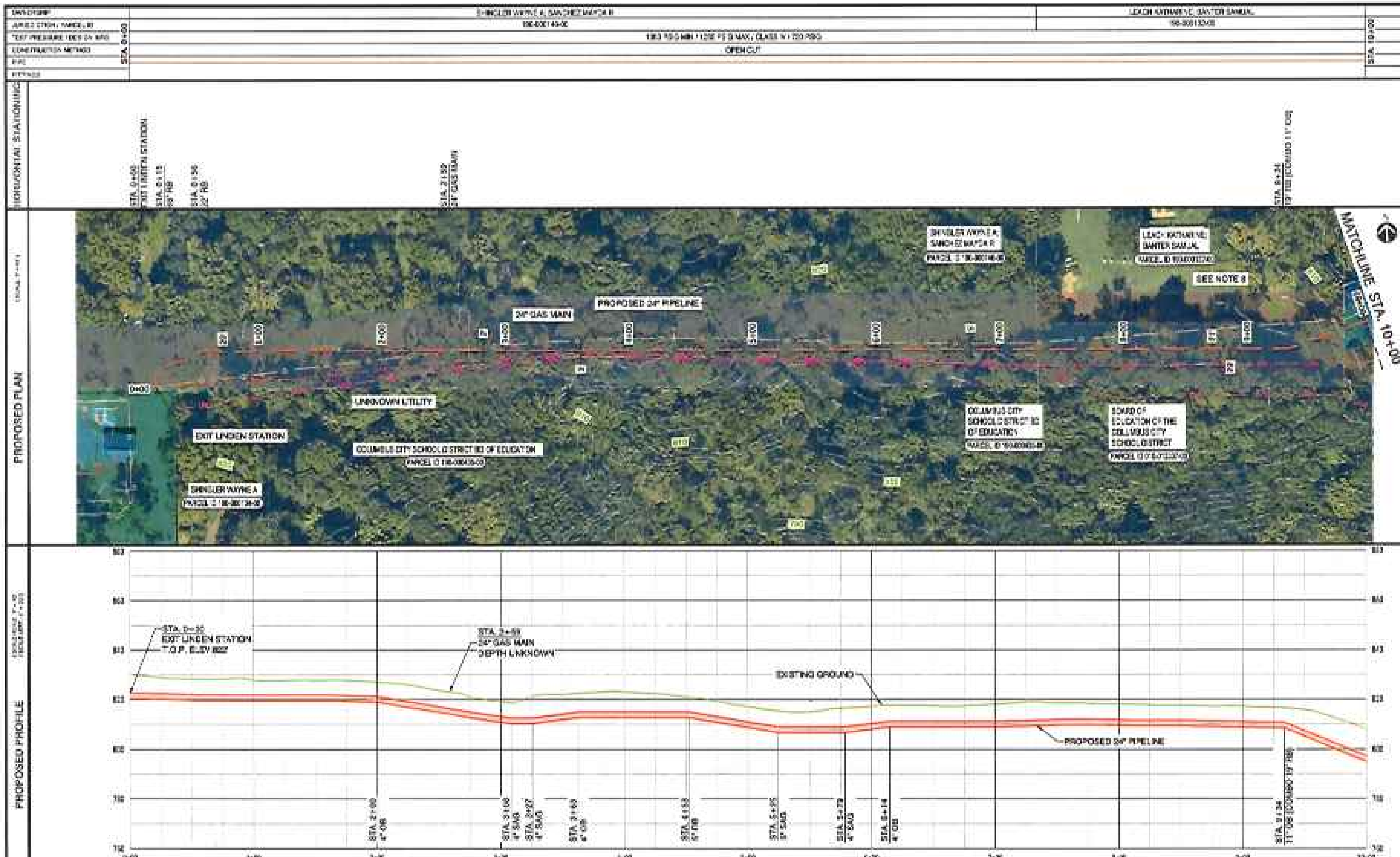
REV. #	DATE	DESCRIPTION
A	12/20/24	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL ENG	KD	12/20/24	[illegible]
DESIGNED BY	JAJ	12/20/24	[illegible]
CHECKED BY	TEW	12/20/24	[illegible]
APPROVED BY	TBD	TBD	TBD

SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
AGLER ROAD HIGH P PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
24" WEST LINDEN ALIGNMENT
STA. 0+00 TO STA. 1+12

DRAWING NO.
L-2001



NOTES:

1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 6'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES. MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0"
4. VERTICAL BENDS CALLED OUT IN PROFILE ARE FOR REFERENCE. CONTRACTOR TO MAKE USE OF ROPING AND FIELD BENDS WHERE POSSIBLE. REFER TO GS 3010.030 FOR FURTHER DETAILS
5. CORROSION PROTECTION IS DESIGNED BY NISOURCE AND IS NOT COVERED WITHIN THE ENGINEER'S STAMP
6. AERIAL IMAGERY IS FOR REFERENCE ONLY
7. FITTING EXTENTS SHOWN IN THE PROFILE ARE FOR REFERENCE ONLY. REFER TO STATIONING BAND FOR LOCATIONS OF ANTICIPATED FITTINGS. A 3X DIAMETER OF STRAIGHT PIPE IS REQUIRED BETWEEN ALL FITTINGS. REFER TO GS 2110.330 FOR FURTHER DETAILS
8. DECIDUOUS TREE NOT TO BE DISTURBED DURING CONSTRUCTION

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PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	[illegible]	ISSUED FOR PERMIT

SITE NAME:

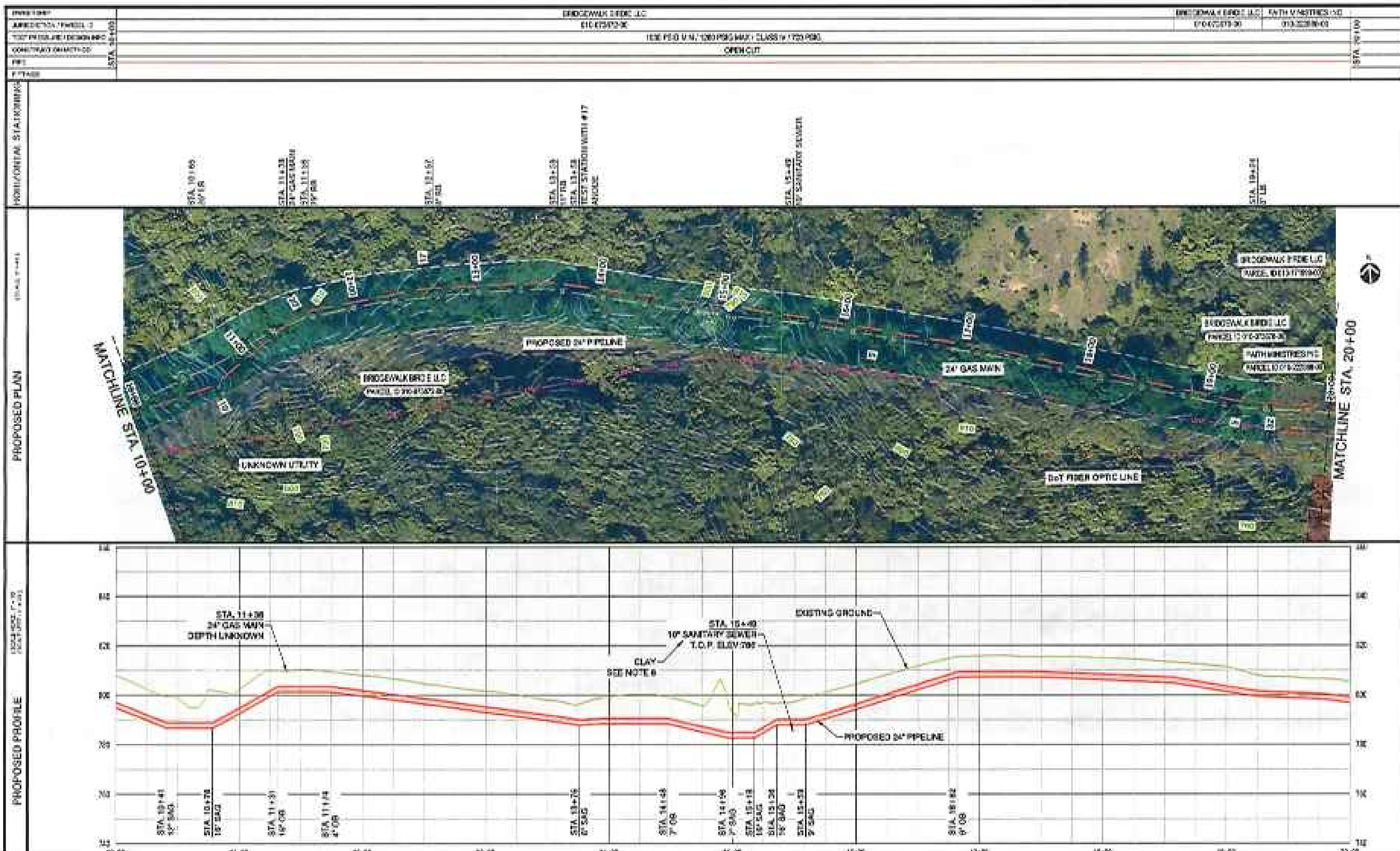
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793

DRAWING TITLE:

STA. 0+00 TO STA. 10+00

DRAWING NO:

L-2002



NOTES:

1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 6'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES. MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0"
4. VERTICAL BENDS CALLED OUT IN PROFILE ARE FOR REFERENCE. CONTRACTOR TO MAKE USE OF ROPING AND FIELD BENDS WHERE POSSIBLE. REFER TO GS 3010.030 FOR FURTHER DETAILS
5. CORROSION PROTECTION IS DESIGNED BY NISOURCE AND IS NOT COVERED WITHIN THE ENGINEER'S STAMP
6. AERIAL IMAGERY IS FOR REFERENCE ONLY
7. FITTING EXTENTS SHOWN IN THE PROFILE ARE FOR REFERENCE ONLY. REFER TO STATIONING BAND FOR LOCATIONS OF ANTICIPATED FITTINGS. A 5X DIAMETER OF STRAIGHT PIPE IS REQUIRED BETWEEN ALL FITTINGS. REFER TO GS 2110.020 FOR FURTHER DETAILS
8. SANITARY SEWER MATERIAL IS CLAY. DO NOT EXPOSE SANITARY SEWER

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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	12/20/24	ISSUED FOR PERMIT

SITE NAME:

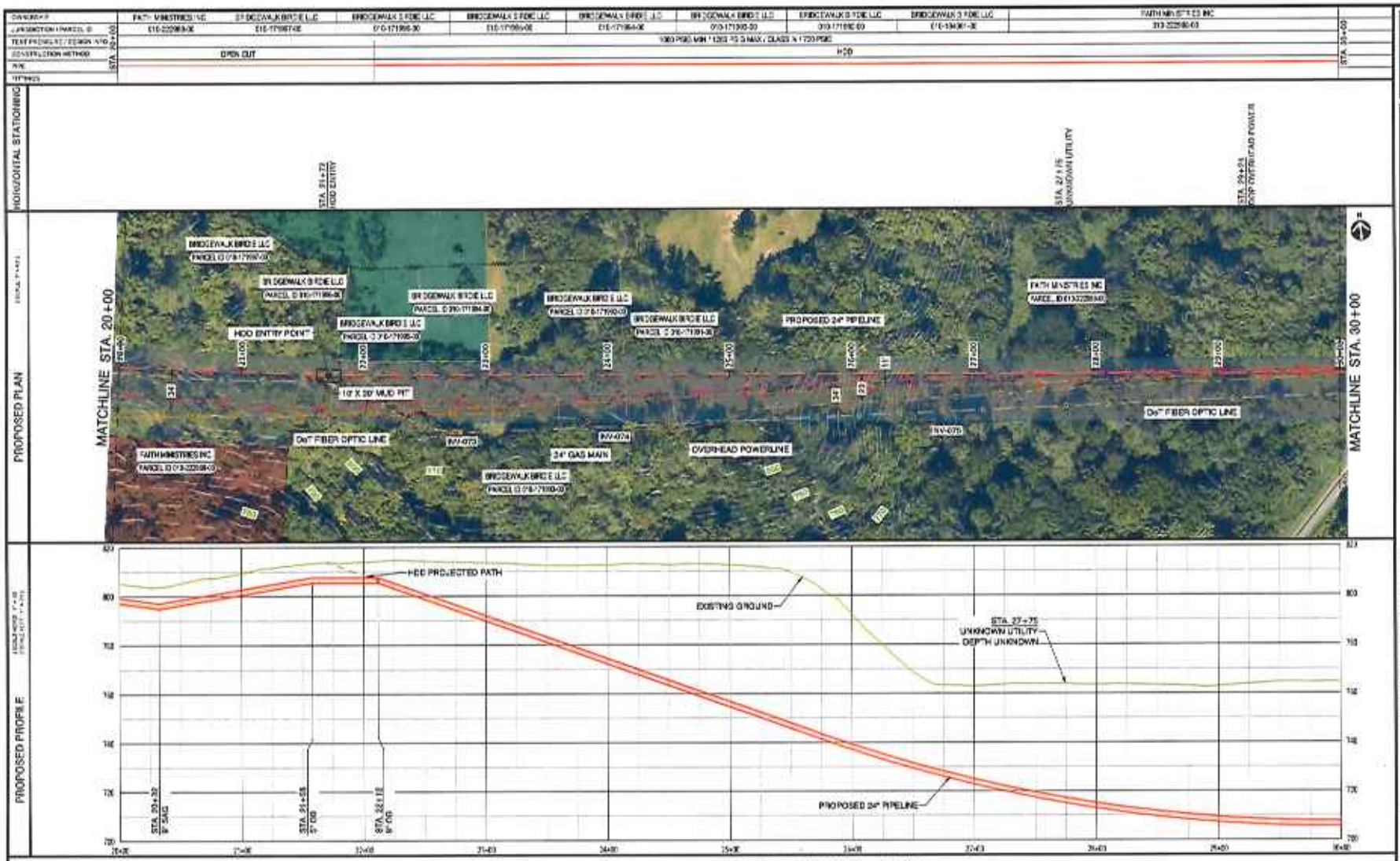
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793

DRAWING TITLE:

STA. 10+00 TO STA. 20+00

DRAWING NO.:

L-2003



NOTES:
1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 6'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES. MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0"
4. VERTICAL BENDS CALLED OUT IN PROFILE ARE FOR REFERENCE. CONTRACTOR TO MAKE USE OF ROPING AND FIELD BENDS WHERE POSSIBLE, REFER TO GS 3010.032 FOR FURTHER DETAILS
5. CORROSION PROTECTION IS DESIGNED BY NISOURCE AND IS NOT COVERED WITHIN THE ENGINEER'S STAMP
6. AERIAL IMAGERY IS FOR REFERENCE ONLY
7. FITTING EXTENTS SHOWN IN THE PROFILE ARE FOR REFERENCE ONLY. REFER TO STATIONING BAND FOR LOCATIONS OF ANTICIPATED FITTINGS. A 3X DIAMETER OF STRAIGHT PIPE IS REQUIRED BETWEEN ALL FITTINGS. REFER TO GS 2110.032 FOR FURTHER DETAILS

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PROPOSED

REVISIONS		
REV. #	DATE	DESCRIPTION
A	12/2024	ISSUED FOR PERMIT

	NAME	DATE	PHONE #

SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
ADLER ROAD HCAP PIPELINE PROJECT
COLUMBUS/CHANNAHON, FRANKLIN COUNTY, OH

DRAWING TITLE:
STA. 20+00 TO STA. 30+00

DRAWING NO:
L-2004

OWNERSHIP	FAITH MINISTRIES INC	ALUM CREEK	CITY OF COLUMBUS OHIO	WILLIAMS CHRISTOPHER STEPHEN
JURISDICTION / PARCEL ID	010-222080-00	CITY OF COLUMBUS / FRANKLIN COUNTY	010-137322-00	[illegible]
TEST PRESSURE / DESIGN MAOP	1080 PSIG MIN / 1200 PSIG MAX / CLASS IV / 720 PSIG			
CONSTRUCTION METHOD	HDD			
PIPE				
FITTINGS				

STA. 30+00 — STA. 40+00

NOTES:
1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS.
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY.
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 6'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES, MINIMUM ALLOWABLE DEPTH OF COVER 3'-0"
4. VERTICAL BENDS CALLED OUT IN PROFILE ARE FOR REFERENCE. CONTRACTOR TO MAKE USE OF ROPING AND FIELD BENDS WHERE POSSIBLE. REFER TO GS 3010.030 FOR FURTHER DETAILS
5. CORROSION PROTECTION IS DESIGNED BY NISOURCE AND IS NOT COVERED WITHIN THE ENGINEER'S STAMP
6. AERIAL IMAGERY IS FOR REFERENCE ONLY
7. FITTING EXTENTS SHOWN IN THE PROFILE ARE FOR REFERENCE ONLY. REFER TO STATIONING BAND FOR LOCATIONS OF ANTICIPATED FITTINGS. A 5X DIAMETER OF STRAIGHT PIPE IS REQUIRED BETWEEN ALL FITTINGS. REFER TO GS 2110.020 FOR FURTHER DETAILS
8. TREES LOCATED ON CITY OF COLUMBUS-OWNED PROPERTY ARE NOT PERMITTED TO BE REMOVED AND MUST REMAIN UNDISTURBED

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CAMPOS EPC

PROPOSED

REVISIONS

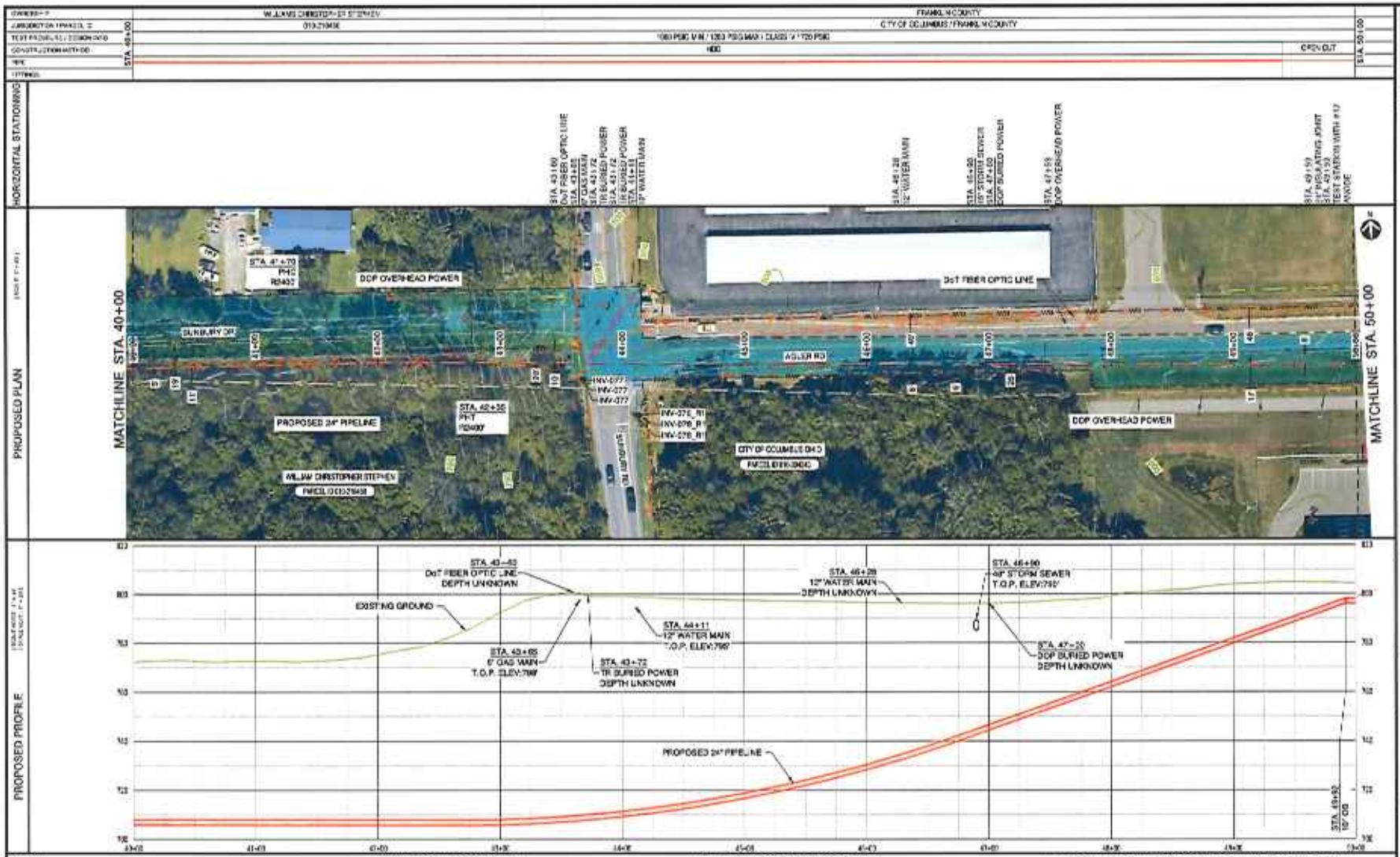
REV. #	DATE	DESCRIPTION
A	12/20/24	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL ENG	KO	12/20/24	614-801-8087
DESIGNED BY	JMJ	12/20/24	855-296-7671
CHECKED BY	RBA	12/20/24	855-296-7671
APPROVED BY	TBD	TBD	TBD

SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
AGLER ROAD HC-P PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
STA. 30+00 TO STA. 40+00

DRAWING NO.
L-2005



NOTES:

1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 6'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES. MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0"
4. VERTICAL BENDS CALLED OUT IN PROFILE ARE FOR REFERENCE. CONTRACTOR TO MAKE USE OF ROPING AND FIELD BENDS WHERE POSSIBLE. REFER TO GS 3010.005 FOR FURTHER DETAILS
5. CORROSION PROTECTION IS DESIGNED BY NISOURCE AND IS NOT COVERED WITHIN THE ENGINEER'S STAMP
6. AERIAL IMAGERY IS FOR REFERENCE ONLY
7. FITTING EXTENTS SHOWN IN THE PROFILE ARE FOR REFERENCE ONLY. REFER TO STATIONING BAND FOR LOCATIONS OF ANTICIPATED FITTINGS. A 3X DIAMETER OF STRAIGHT PIPE IS REQUIRED BETWEEN ALL FITTINGS. REFER TO GS 21.10.020 FOR FURTHER DETAILS
8. TREES LOCATED ON CITY OF COLUMBUS OWNED PROPERTY ARE NOT PERMITTED TO BE REMOVED AND MUST REMAIN UNDISTURBED.

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Ohio Utilities Protection Service
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CAMPOS EPC

PROPOSED

REVISIONS		
REV. #	DATE	DESCRIPTION
A	12/20/24	ISSUED FOR PERMIT

ENGINEER	AG	12/20/24	[illegible]
DESIGNER	MJ	12/20/24	[illegible]
CHECKED BY	FDW	12/20/24	[illegible]
APPROVED BY	TBD	TBD	TBD
	NAME	DATE	PHONE #

SITE NAME:

INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793

AGLER ROAD HC-P PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:

STA. 40+00 TO STA. 50+00

DRAWING NO:

L-2006

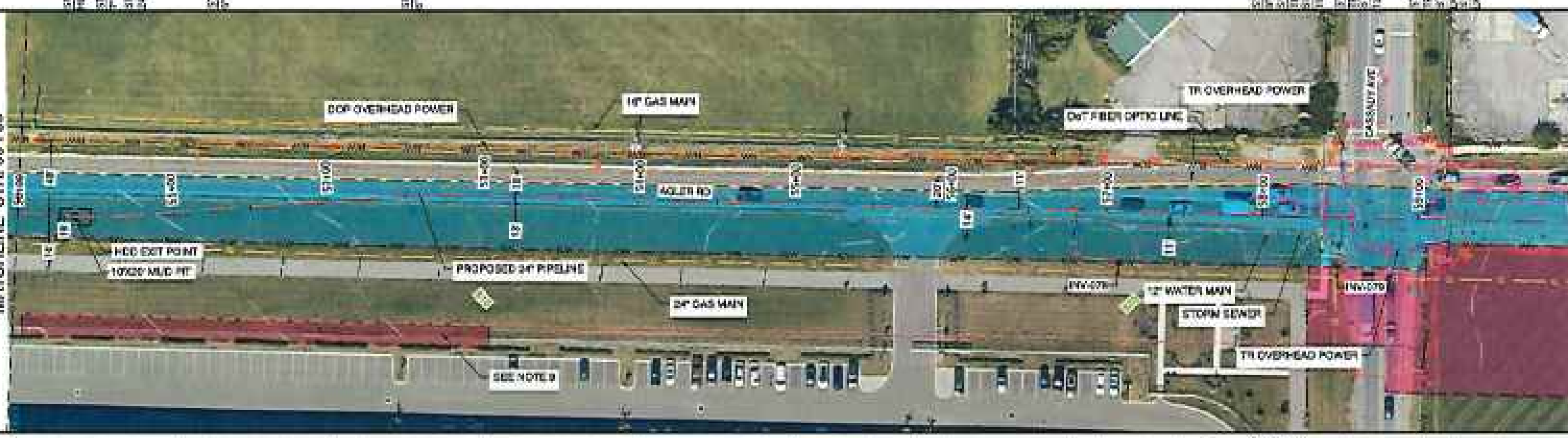
OWNERSHIP	FRANKLIN COUNTY	CITY OF COLUMBUS
JURISDICTION / PARCEL ID	CITY OF COLUMBUS / FRANKLIN COUNTY	
TEST PRESSURE / DESIGN MAOP	1080 PSIG MIN / 1260 PSIG MAX / CLASS IV / 720 PSIG	
CONSTRUCTION METHOD	OPEN CUT	
PIPE		
FITTINGS		

STA. 50+00 — STA. 60+00

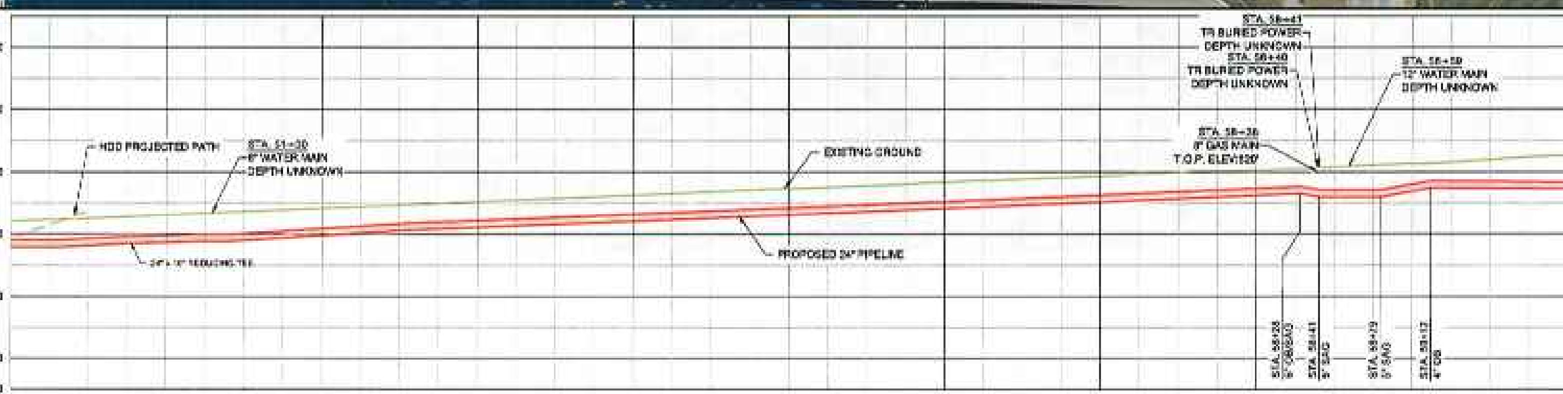
HORIZONTAL STATIONING

STA. 50+37 HDD EXIT
STA. 50+58 7° LB
STA. 50+76 24" X 10" REDUCING TEE
STA. 51+30 6" WATER MAIN
STA. 52+54 5° RB
STA. 58+28 8" GAS MAIN
STA. 58+40 TR BURIED POWER
STA. 58+41 TR BURIED POWER
STA. 58+57 TR OH POWER
STA. 58+59 12" WATER MAIN
STA. 59+10 TR OH POWER
STA. 59+18 DOP OVERHEAD POWER
STA. 59+25 DOP OVERHEAD POWER

PROPOSED PLAN



PROPOSED PROFILE



NOTES:

1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS.
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY.
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 8'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES. MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0".
4. VERTICAL BENDS CALLED OUT IN PROFILE ARE FOR REFERENCE. CONTRACTOR TO MAKE USE OF ROPING AND FIELD BENDS WHERE POSSIBLE. REFER TO GS 3030.090 FOR FURTHER DETAILS.
5. CORROSION PROTECTION IS DESIGNED BY NISOURCE AND IS NOT COVERED WITHIN THE ENGINEER'S STAMP.
6. AERIAL IMAGERY IS FOR REFERENCE ONLY.
7. FITTING EXTENTS SHOWN IN THE PROFILE ARE FOR REFERENCE ONLY. REFER TO STATIONING BAND FOR LOCATIONS OF ANTICIPATED FITTINGS. A 3X DIAMETER OF STRAIGHT PIPE IS REQUIRED BETWEEN ALL FITTINGS. REFER TO GS 2110.020 FOR FURTHER DETAILS.
8. WORKSPACE TO REMAIN OUTSIDE OF FENCED AREA.

NiSource

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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A		ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL ENG.	AG		
DESIGNED BY	JAL		
CHECKED BY	RPA		
AS BUILT BY	TBD	TBD	TBD

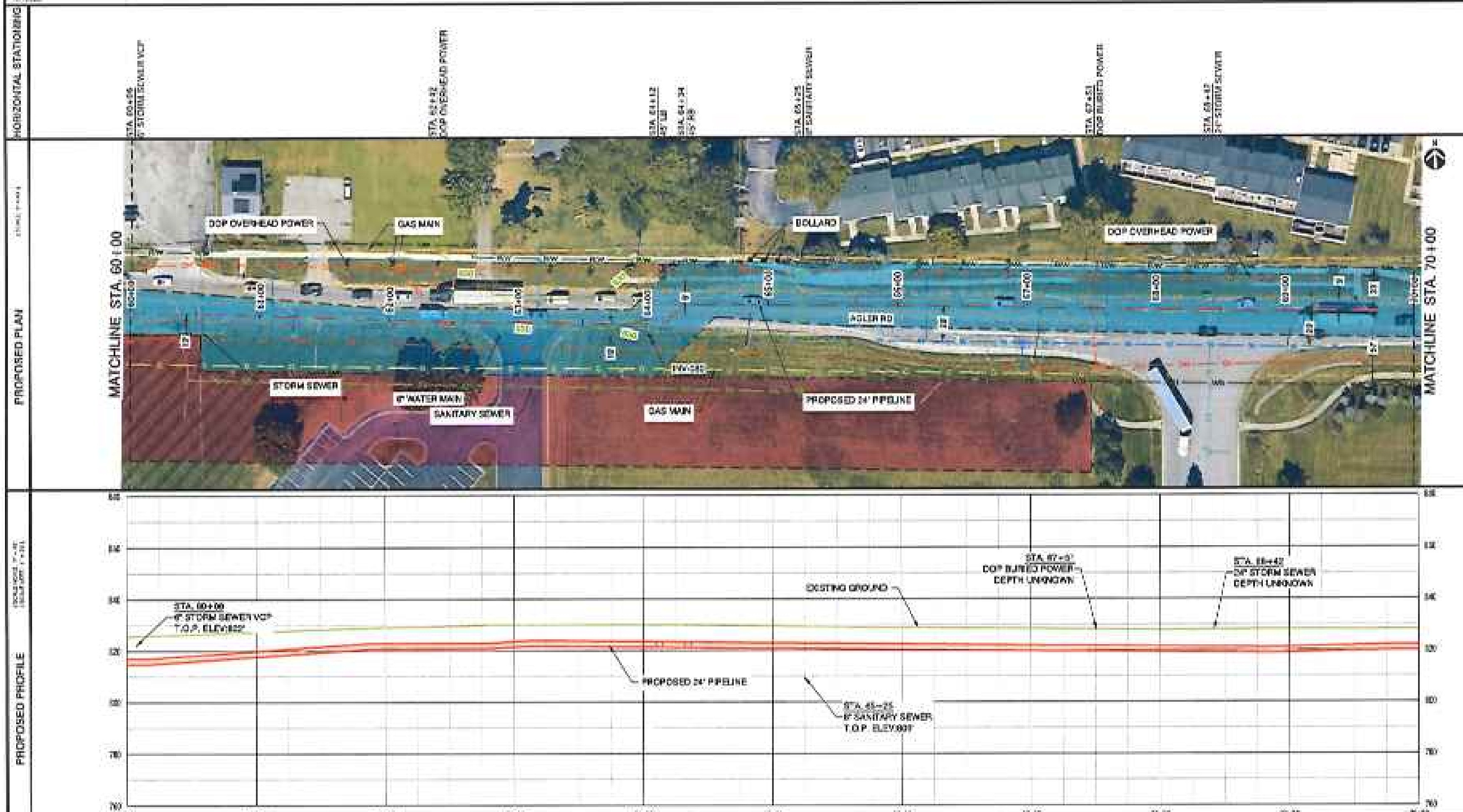
SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
ADLER ROAD HCHP PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
STA. 50+00 TO STA. 60+00

DRAWING NO.
L-2007

OWNERSHIP	CITY OF COLUMBUS
JURISDICTION / PARCEL ID	CITY OF COLUMBUS / FRANKLIN COUNTY
TEST PRESSURE / DESIGN INFO	1000 PSIG MAOP / 1280 PSIG MAX / CLASS IV / 720 PSIG
CONSTRUCTION METHOD	OPEN CUT
PIPE	
FITTINGS	

STA. 60+00 — STA. 70+00



NOTES:

1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS.
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY.
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 6'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES. MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0".
4. VERTICAL BENDS CALLED OUT IN PROFILE ARE FOR REFERENCE. CONTRACTOR TO MAKE USE OF ROPING AND FIELD BENDS WHERE POSSIBLE. REFER TO GS 3030.000 FOR FURTHER DETAILS.
5. CORROSION PROTECTION IS DESIGNED BY NISOURCE AND IS NOT COVERED WITHIN THE ENGINEER'S STAMP.
6. AERIAL IMAGERY IS FOR REFERENCE ONLY.
7. FITTING EXTENTS SHOWN IN THE PROFILE ARE FOR REFERENCE ONLY. REFER TO STATIONING BAND FOR LOCATIONS OF ANTICIPATED FITTINGS. A 3X DIAMETER OF STRAIGHT PIPE IS REQUIRED BETWEEN ALL FITTINGS. REFER TO GS 3112.000 FOR FURTHER DETAILS.

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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	12/20/24	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
ORIGINAL DWG.	AC	12/20/24	614-367-3630
DESIGNED BY	JMJ	12/20/24	855-268-7671
CHECKED BY	RSW	12/20/24	855-268-7671
AS-BUILT BY	TBD	TBD	TBD

SITE NAME:

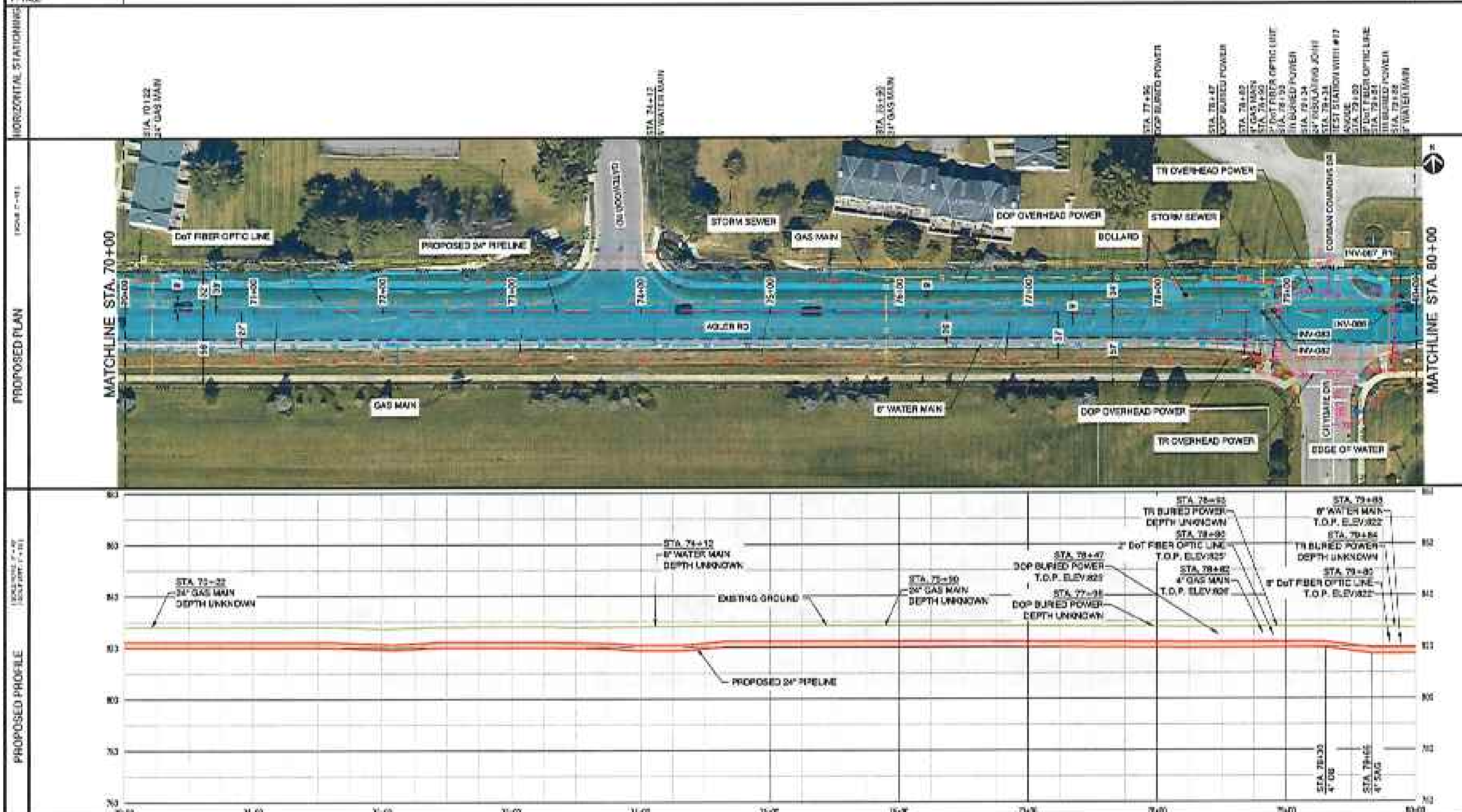
INST# 23-0083695-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
ADLER ROAD MD-P PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:

STA. 60+00 TO STA. 70+00

DRAWING NO.

L-2008



NOTES:

1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS.
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY.
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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	12/05/24	ISSUED FOR PERMIT

SITE NAME:

INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793

DRAWING TITLE:

STA. 70+00 TO STA. 80+00

DRAWING NO.

L-2009

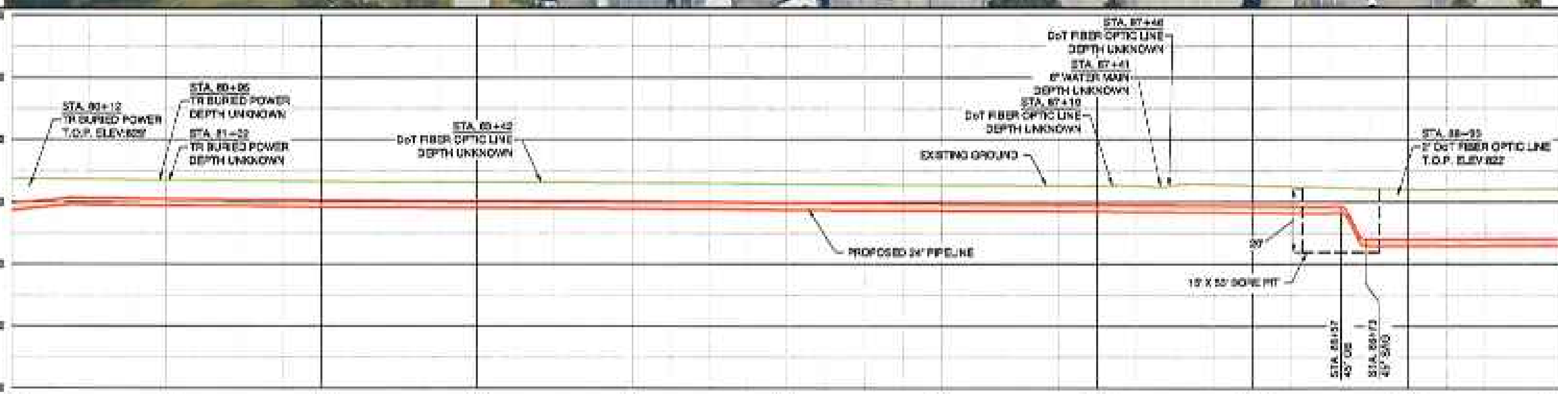
OWNERSHIP	CITY OF COLUMBUS
JURISDICTION / PARCEL ID	CITY OF COLUMBUS / FRANKLIN COUNTY
TEST PRESSURE / DESIGN MAOP	1006 PSIG MIN / 1280 PSIG MAX / CLASS IV, 720 PSIG
CONSTRUCTION METHOD	OPEN CUT / BORE
PIPE	
FITTINGS	

HORIZONTAL STATIONING

STA. 80+00 — STA. 90+00

PROPOSED PLAN

PROPOSED PROFILE



NOTES:

1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS.
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY.
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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	12/20/24	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL ENG.	AD	12/20/24	
DESIGNED BY	JNU	12/20/24	
CHECKED BY	RBW	12/20/24	
ISSUED BY	TBD	TBD	TBD

SITE NAME:

INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793

AGLER ROAD HDP PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:

STA. 80+00 TO STA. 90+00

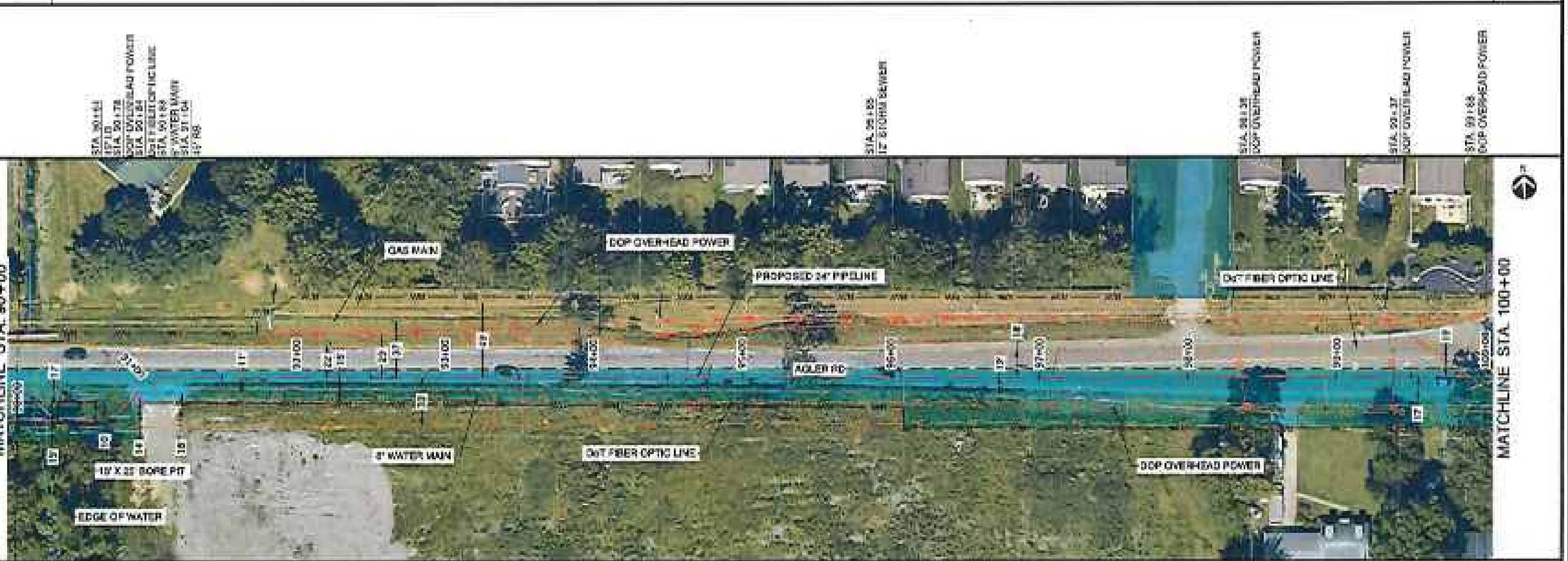
DRAWING NO:

L-2010

OWNERSHIP	CITY OF COLUMBUS
JURISDICTION / PARCEL ID	CITY OF COLUMBUS / FRANKLIN COUNTY
TEST PRESSURE / DESIGN MAOP	1080 PSIG MIN / 1203 PSIG MAX CLASS IV / 720 PSIG
CONSTRUCTION METHOD	BORE / OPEN CUT
PIPE	
FITTINGS	

HORIZONTAL STATIONING

PROPOSED PLAN



PROPOSED PROFILE

NOTES:

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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	12/20/24	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL ENG.	AD	12/20/24	[illegible]
DESIGNED BY	JAU	12/20/24	[illegible]
CHECKED BY	RBW	12/20/24	[illegible]
AS BUILT BY	TBD	TBD	TBD

SITE NAME:

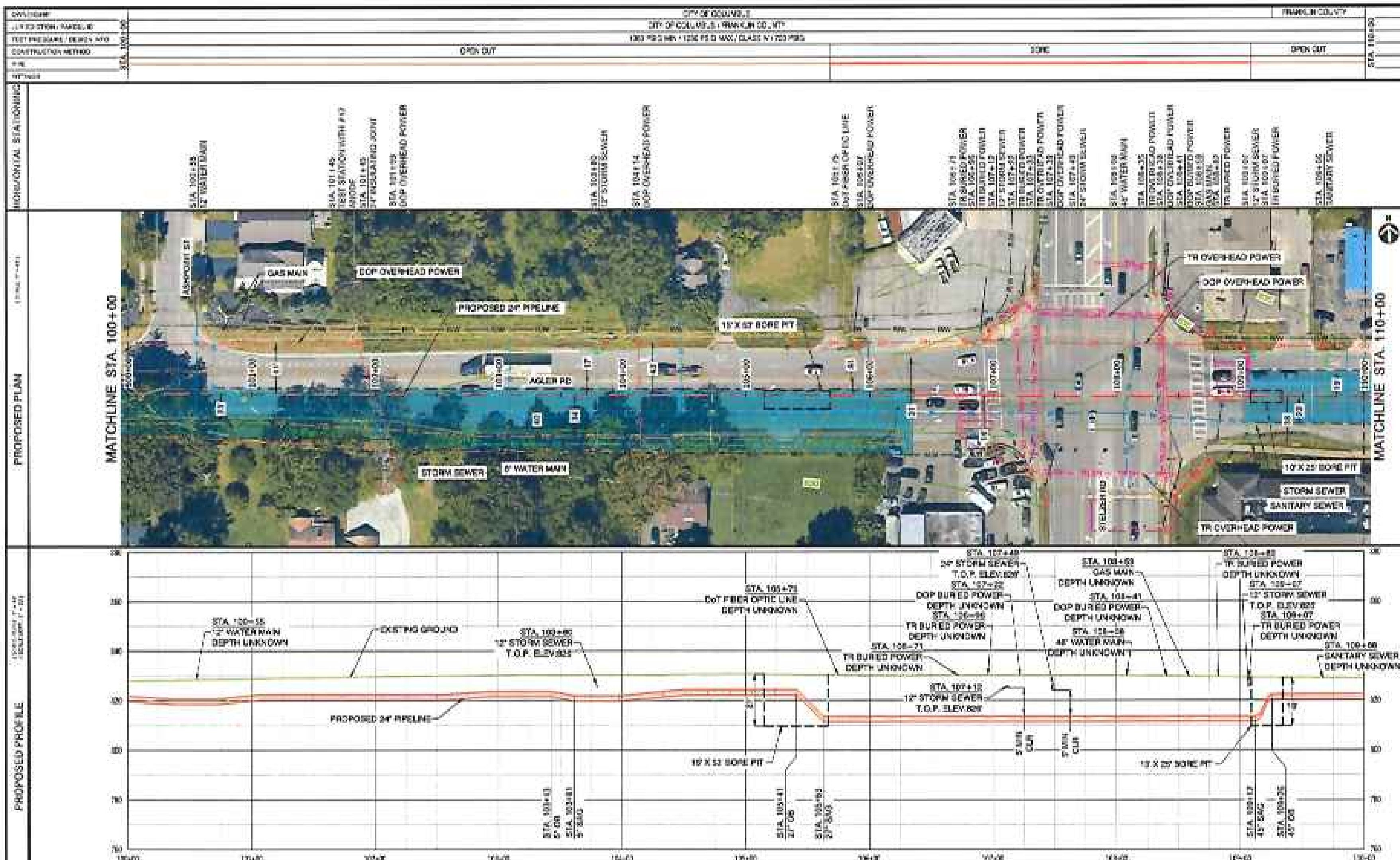
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
ASLER ROAD HC-P PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:

STA. 90+00 TO STA. 100+00

DRAWING NO.

L-2011


CITY OF COLUMBUS
FRANKLIN COUNTY
OPEN CUT
BORE
OPEN CUT
STA. 100+00
STA. 110+00
HORIZONTAL STATIONING
PROPOSED PLAN
PROPOSED PROFILE
MATCHLINE STA. 100+00
MATCHLINE STA. 110+00
STA. 100+55 12" WATER MAIN
STA. 101+45 TEST STATION WITH #17 ANODE
STA. 101+45 24" INSULATING JOINT
STA. 101+99 DOP OVERHEAD POWER
STA. 103+80 12" STORM SEWER
STA. 104+14 DOP OVERHEAD POWER
STA. 105+73 DoT FIBER OPTIC LINE
STA. 106+07 DOP OVERHEAD POWER
STA. 107+49 24" STORM SEWER
STA. 108+08 48" WATER MAIN
STA. 109+96 SANITARY SEWER
ASHPOINT ST
GAS MAIN
DOP OVERHEAD POWER
PROPOSED 24" PIPELINE
15' X 53' BORE PIT
AGLER RD
STORM SEWER
6" WATER MAIN
STELZER RD
TR OVERHEAD POWER
DOP OVERHEAD POWER
10' X 25' BORE PIT
STORM SEWER
SANITARY SEWER
TR OVERHEAD POWER
EXISTING GROUND
PROPOSED 24" PIPELINE
STA. 103+80 12" STORM SEWER T.O.P. ELEV.825'
STA. 105+73 DoT FIBER OPTIC LINE DEPTH UNKNOWN
STA. 106+71 TR BURIED POWER DEPTH UNKNOWN
STA. 107+12 12" STORM SEWER T.O.P. ELEV.826'
STA. 107+49 24" STORM SEWER T.O.P. ELEV.826'
STA. 108+08 48" WATER MAIN DEPTH UNKNOWN
STA. 108+63 GAS MAIN DEPTH UNKNOWN
STA. 108+41 DOP BURIED POWER DEPTH UNKNOWN
STA. 109+07 12" STORM SEWER T.O.P. ELEV.825'
STA. 109+07 TR BURIED POWER DEPTH UNKNOWN
STA. 109+96 SANITARY SEWER DEPTH UNKNOWN
15' X 53' BORE PIT
10' X 25' BORE PIT
5' MIN CLR
STA. 103+43 5° OB
STA. 103+81 5° SAG
STA. 105+41 27° OB
STA. 105+83 27° SAG
STA. 109+17 45° SAG
STA. 109+26 45° OB

NOTES:
1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS.
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY.
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 6'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES. MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0".
4. VERTICAL BENDS CALLED OUT IN PROFILE ARE FOR REFERENCE. CONTRACTOR TO MAKE USE OF ROPING AND FIELD BENDS WHERE POSSIBLE. REFER TO GS 3010.030 FOR FURTHER DETAILS.
5. CORROSION PROTECTION IS DESIGNED BY NISOURCE AND IS NOT COVERED WITHIN THE ENGINEER'S STAMP.
6. AERIAL IMAGERY IS FOR REFERENCE ONLY.
7. FITTING EXTENTS SHOWN IN THE PROFILE ARE FOR REFERENCE ONLY. REFER TO STATIONING BAND FOR LOCATIONS OF ANTICIPATED FITTINGS. A 3X DIAMETER OF STRAIGHT PIPE IS REQUIRED BETWEEN ALL FITTINGS. REFER TO GS 2110.030 FOR FURTHER DETAILS.

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Ohio Utilities Protection Service
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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	[illegible]	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL ENG.	AG	[illegible]	[illegible]
DESIGNED BY	JNL	[illegible]	[illegible]
CHECKED BY	RPW	[illegible]	[illegible]
AS-BUILT BY	TBD	TBD	TBD

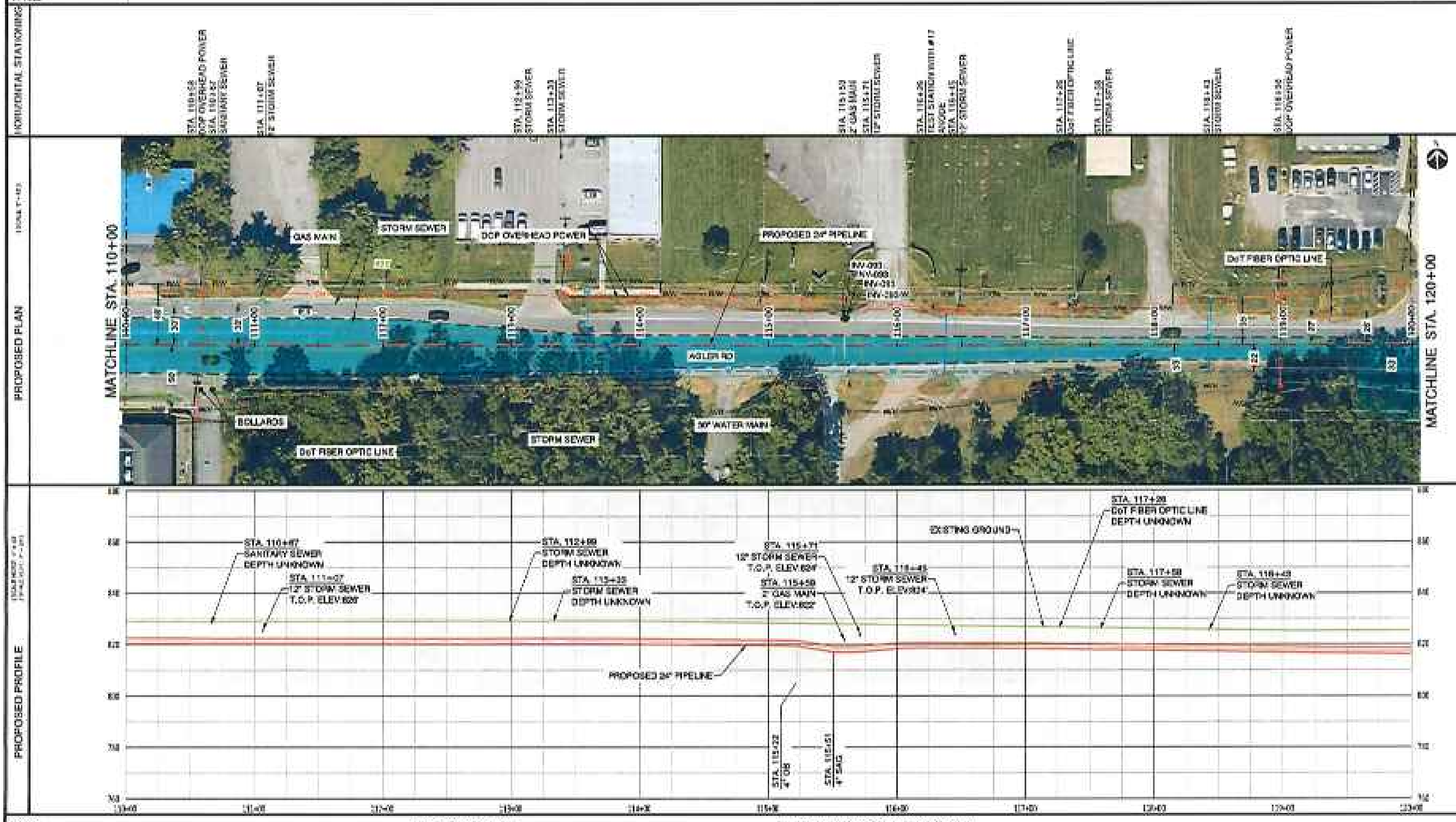
SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
AGLER ROAD NCHP PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
STA. 100+00 TO STA. 110+00

DRAWING NO.:
L-2012

OWNERSHIP	CITY OF COLUMBUS
JURISDICTION / PARCEL ID	CITY OF COLUMBUS / FRANKLIN COUNTY
TEST PRESSURE / DESIGN RATING	1000 PSIG MIN / 1280 PSIG MAOP CLASS IV / 720 PSIG
CONSTRUCTION METHOD	OPEN CUT
PIPE	
FITTINGS	

STA. 110+00 — STA. 120+00



NOTES:

1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS.
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY.
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 5'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES, MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0".
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Ohio Utilities Protection Service
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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	12/2024	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
STORMAL ENG.	AU	12/2024	[illegible]
DESIGNED BY	JMJ	12/2024	[illegible]
CHECKED BY	RPM	12/2024	[illegible]
AS-BUILT BY	TBD	TBD	TBD

SITE NAME:

INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
AGLER ROAD NCHP PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:

STA. 110+00 TO STA. 120+00

DRAWING NO.

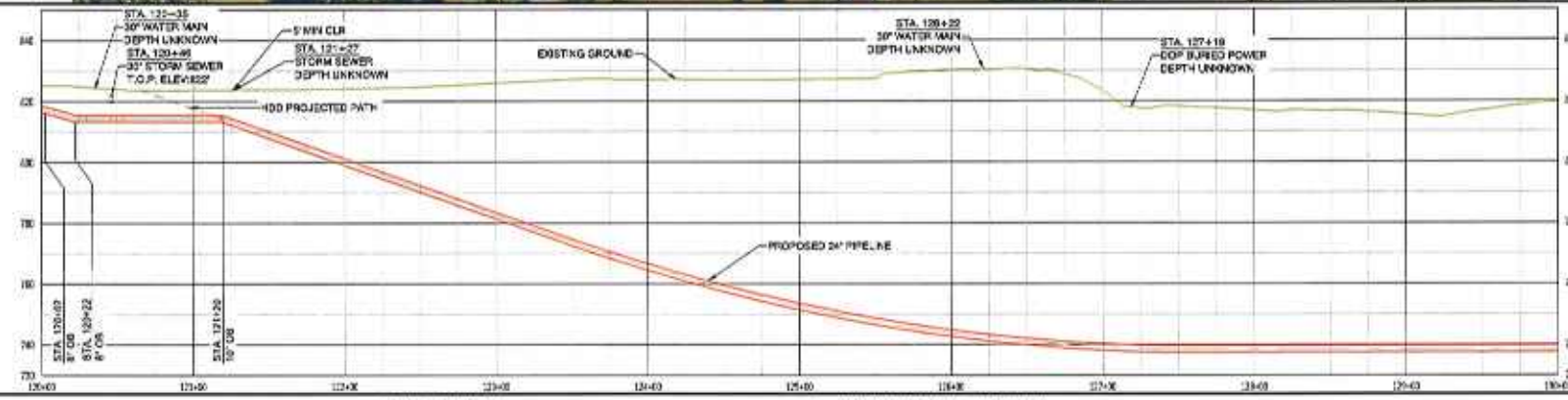
L-2013

OWNERSHIP	CITY OF COLUMBUS		O-H DOT
JURISDICTION / PARCEL #	CITY OF COLUMBUS / FRANKLIN COUNTY		CITY OF COLUMBUS / FRANKLIN COUNTY
TEST PRESSURE / DESIGN PRESSURE	1383 PSIG MIN / 1200 PSIG MAX; CLASS IV / 720 PSIG		
CONSTRUCTION METHOD	OPEN CUT	HDD	
PIPE			
FITTINGS			

HORIZONTAL STATIONING

PROPOSED PLAN

PROPOSED PROFILE



NOTES:
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2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 6'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES. MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0"
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CAMPOS EPC

PROPOSED

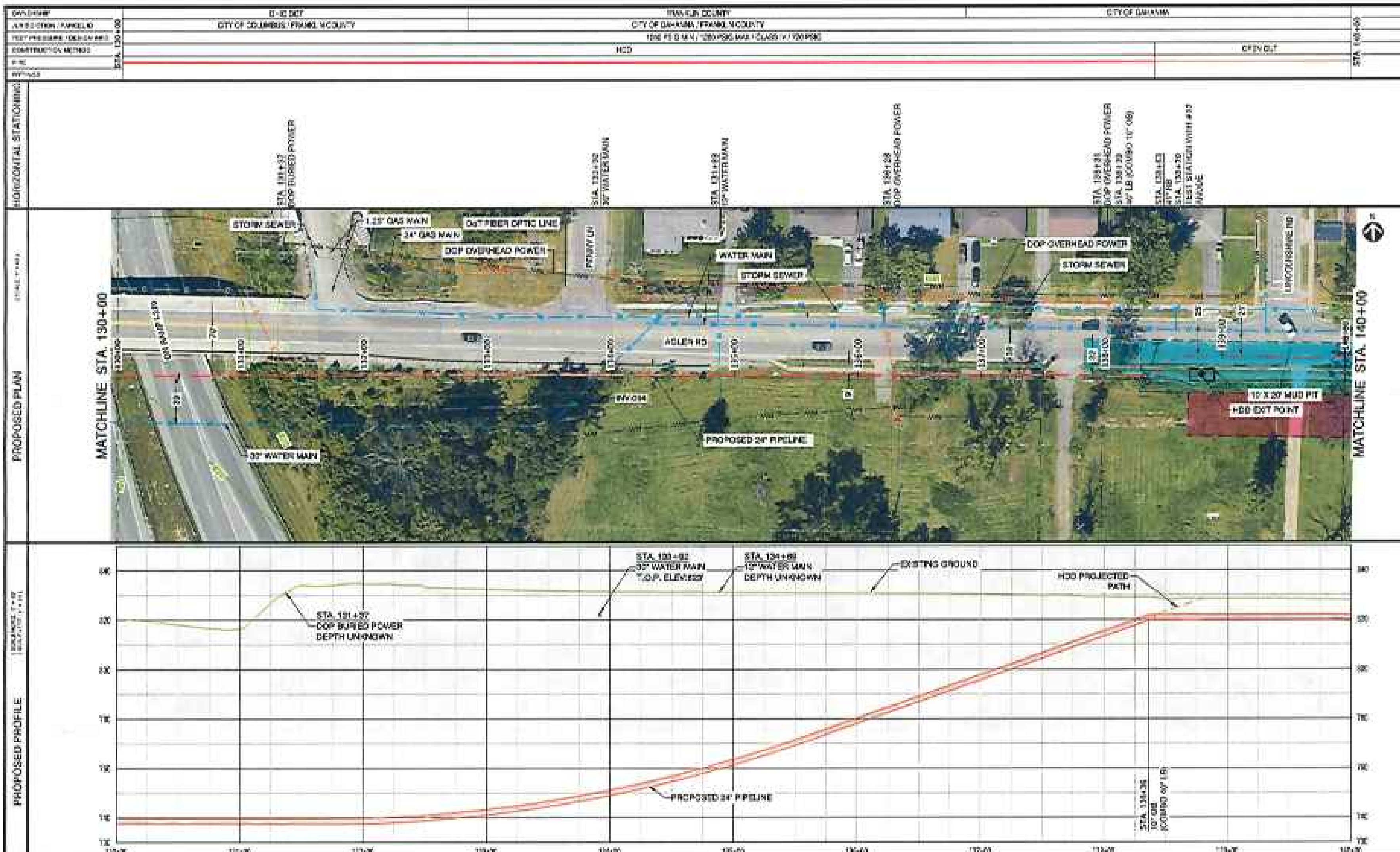
REVISIONS		
A		ISSUED FOR PERMIT
REV. #	DATE	DESCRIPTION

DESIGNED BY	JW	
DRAWN BY	RBA	
CHECKED BY	TED	TED
APPROVED BY	NAME	DATE PHONE #

SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
AGLER ROAD HDP MAINLINE PROJECT
COLUMBUS (GAHANNA), FRANKLIN COUNTY, OH

DRAWING TITLE:
STA. 120+00 TO STA. 130+00

DRAWING NO.:
L-2014



NOTES:

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CAMPOS EPC

PROPOSED

REVISIONS		
A	12/2024	ISSUED FOR PERMIT
REV. #	DATE	DESCRIPTION

	NAME	DATE	PHONE #
TECHNICAL ENG.	AD	12/2024	[illegible]
DESIGNED BY	JMJ	12/2024	[illegible]
CHECKED BY	RBM	12/2024	[illegible]
AS-BUILT BY	TBD	TBD	TBD

SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
AGLER ROAD HC-P PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
STA. 130+00 TO STA. 140+00

DRAWING NO.
L-2015

OWNERSHIP	CITY OF GAHANNA
JURISDICTION / PARCEL ID	CITY OF GAHANNA / FRANKLIN COUNTY
TEST PRESSURE / DESIGN INFO	1000 PSIG MIN / 1200 PSIG MAX / CLASS IV / 720 PSIG
CONSTRUCTION METHOD	OPEN CUT
EPC	
FITTINGS	

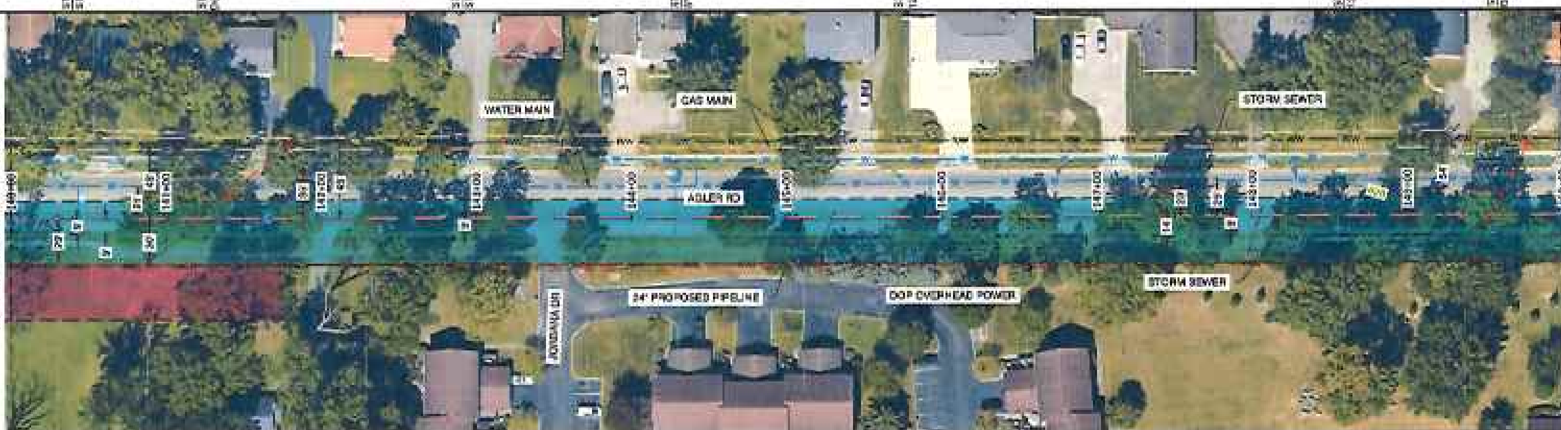
STA. 140+00 — STA. 150+00

HORIZONTAL STATIONING

STA. 140+35 STORM SEWER
STA. 141+33 DOP OVERHEAD POWER
STA. 142+86 STORM SEWER
STA. 144+28 8" WATER MAIN
STA. 145+72 12" STORM SEWER
STA. 148+05 12" STORM SEWER
STA. 149+51 DOP OVERHEAD POWER

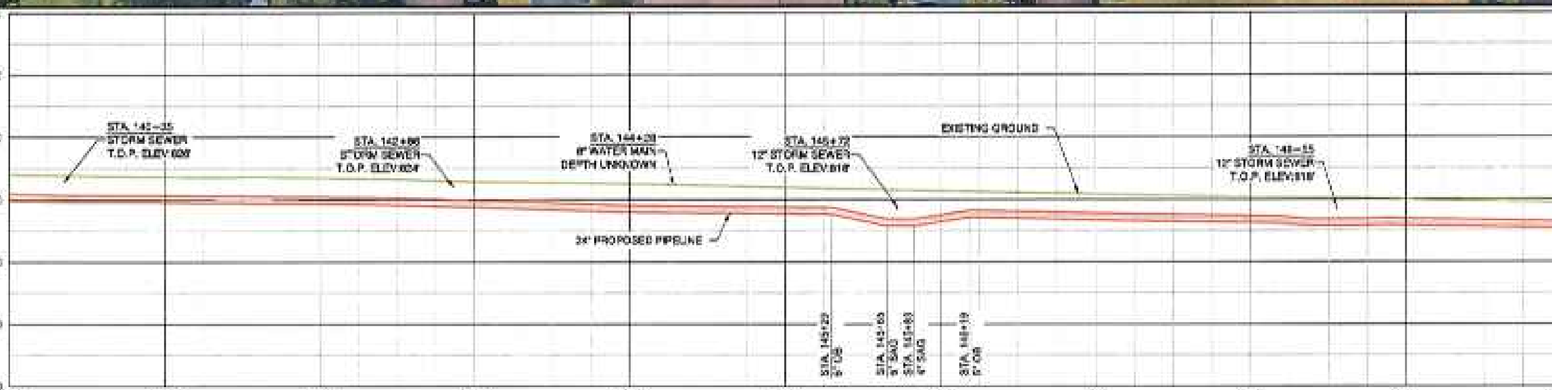
PROPOSED PLAN

MATCHLINE STA. 140+00



MATCHLINE STA. 150+00

PROPOSED PROFILE



NOTES:
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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	12/03/24	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL ENG.	AG	12/03/24	
DESIGNED BY	JAL	12/03/24	
CHECKED BY	RPA	12/03/24	
AS-BUILT BY	TBD	TBD	TBD

SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
AGLER ROAD HIGH PRESSURE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
STA. 140+00 TO STA. 150+00

DRAWING NO.:
L-2016

OWNERSHIP	CITY OF GAHANNA
JURISDICTION / PARCEL ID	CITY OF GAHANNA / FRANKLIN COUNTY
TEST PRESSURE LOCATION INFO	1080 PSIG MIN / 1300 PSIG MAX / CLASS IV / 720 PSIG
CONSTRUCTION METHOD	OPEN CUT
PIPE	
FITTINGS	

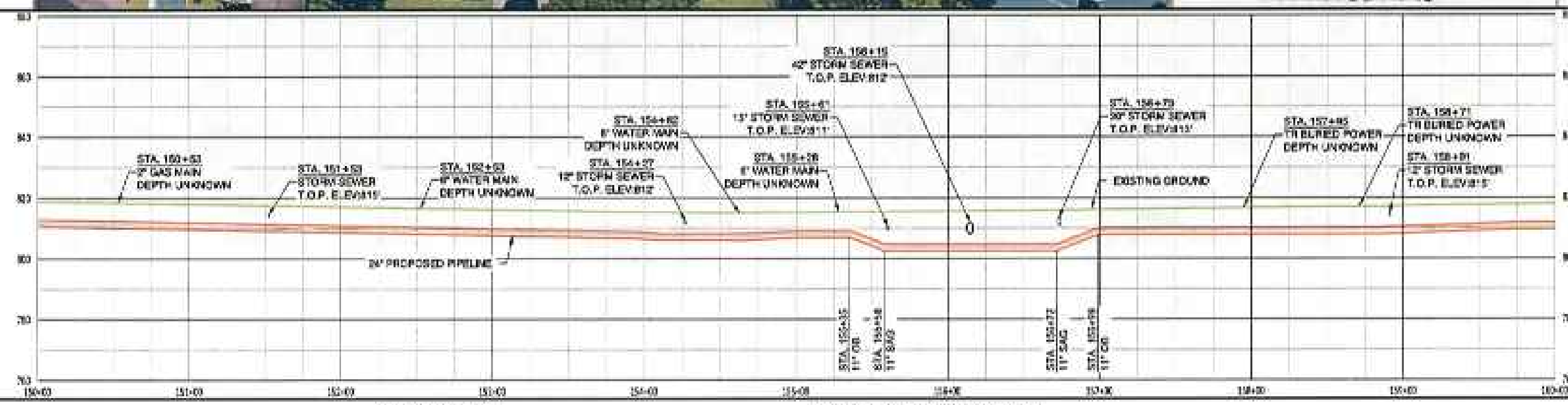
STA. 150+00 — STA. 160+00

HORIZONTAL STATIONING

STA. 150+53 2" GAS MAIN; STA. 151+53 STORM SEWER; STA. 152+53 6" WATER MAIN; STA. 153+53 DCP OVERHEAD POWER; STA. 153+68 24" INSULATING JOINT; STA. 153+68 TEST STATION WITH #17 ANODE; STA. 154+27 12" STORM SEWER; STA. 154+62 6" WATER MAIN; STA. 155+28 6" WATER MAIN; STA. 155+61 15" STORM SEWER; STA. 156+15 42" STORM SEWER; STA. 156+73 30" STORM SEWER; STA. 157+85 TR BURIED POWER; STA. 158+71 TR BURIED POWER; STA. 158+91 12" STORM SEWER

PROPOSED PLAN

PROPOSED PROFILE



NOTES:
1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 5'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES, MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0"
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5. CORROSION PROTECTION IS DESIGNED BY NISOURCE AND IS NOT COVERED WITHIN THE ENGINEER'S STAMP
6. AERIAL IMAGERY IS FOR REFERENCE ONLY
7. FITTING EXTENTS SHOWN IN THE PROFILE ARE FOR REFERENCE ONLY. REFER TO STATIONING BAND FOR LOCATIONS OF ANTICIPATED FITTINGS. A 5X DIAMETER OF STRAIGHT PIPE IS REQUIRED BETWEEN ALL FITTINGS. REFER TO GS 2110.020 FOR FURTHER DETAILS

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REV. #	DATE	DESCRIPTION
A	12/23/24	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL ENG	AD	12/23/24	614-691-6800
DESIGNED BY	JMJ	12/23/24	850-766-7877
CHECKED BY	RBM	12/23/24	850-766-7877
AS BUILT BY	TBD	TBD	TBD

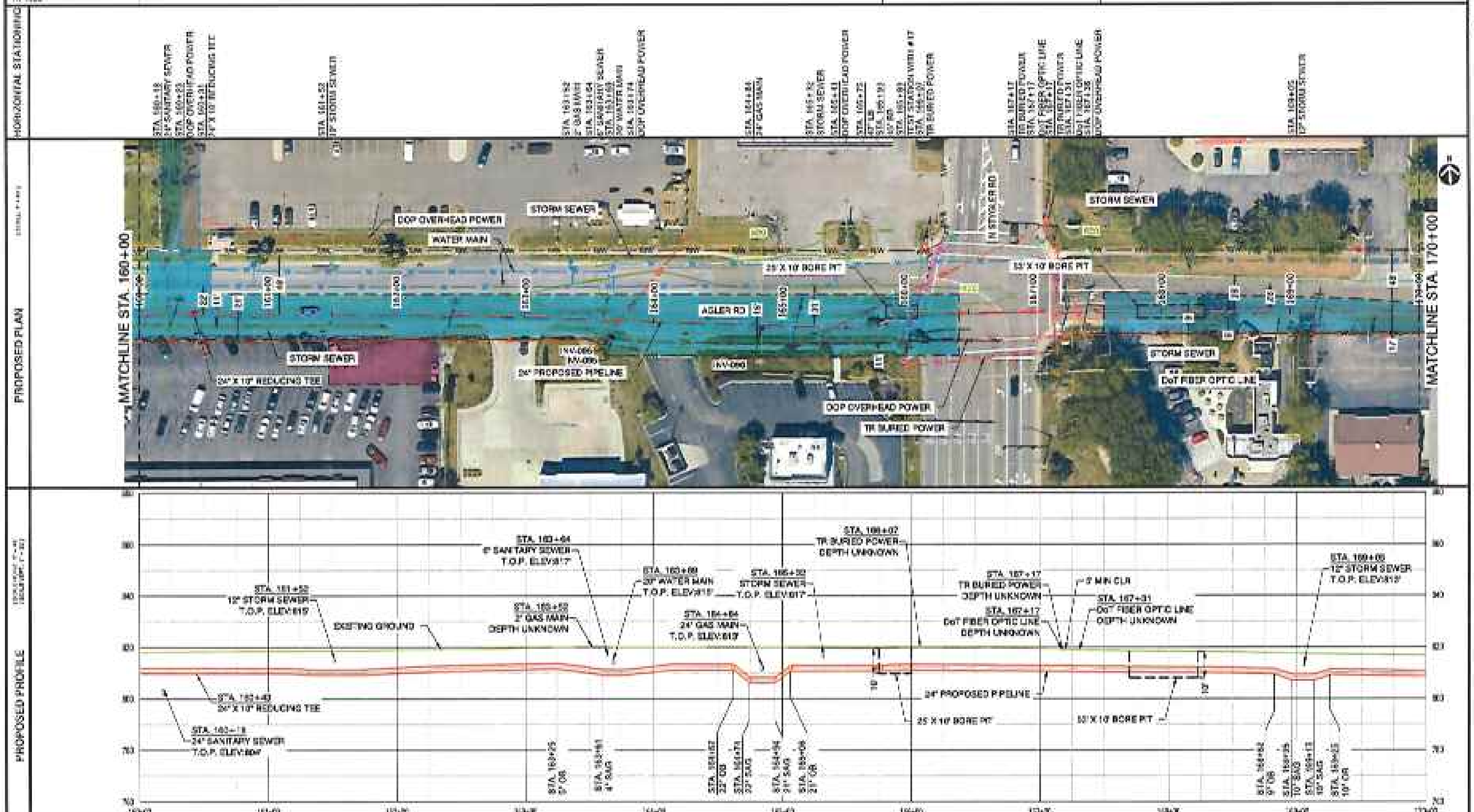
SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
AGLER ROAD HCHP PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
STA. 150-00 TO STA. 160+00

DRAWING NO:
L-2017

OWNERSHIP	CITY OF GAHANNA		
JURISDICTION / PARCEL ID	CITY OF GAHANNA / FRANKLIN COUNTY		
TEST PRESSURE / DESIGN MAOP	1030 PSIG MIN / 1290 PSIG MAX / CLASS IV / 720 PSIG		
CONSTRUCTION METHOD	OPEN CUT	BORE	OPEN CUT
PIPE			
FITTINGS			

STA. 160+00 — STA. 170+00



NOTES:

1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS.
2. SERVICE LINE CROSSINGS SHOWN IN SURVEY ARE NOT STATIONED OR SHOWN IN PROFILE FOR CLARITY.
3. THE PIPELINE HAS GENERALLY BEEN DESIGNED WITH A COVER OF 6'-0" TO ACCOUNT FOR THE DEPTH OF UNKNOWN SERVICE LINES. MINIMUM ALLOWABLE DEPTH OF COVER IS 4'-0".
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REVISIONS

REV. #	DATE	DESCRIPTION
A	12/2024	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL DIG	AG		
DESIGNED BY	JAL		
CHECKED BY	RBW		
APPROVED BY	TBD	TBD	TBD

SITE NAME:

INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793

AGLER ROAD NSHP PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:

STA. 160+00 TO STA. 170+00

DRAWING NO:

L-2018

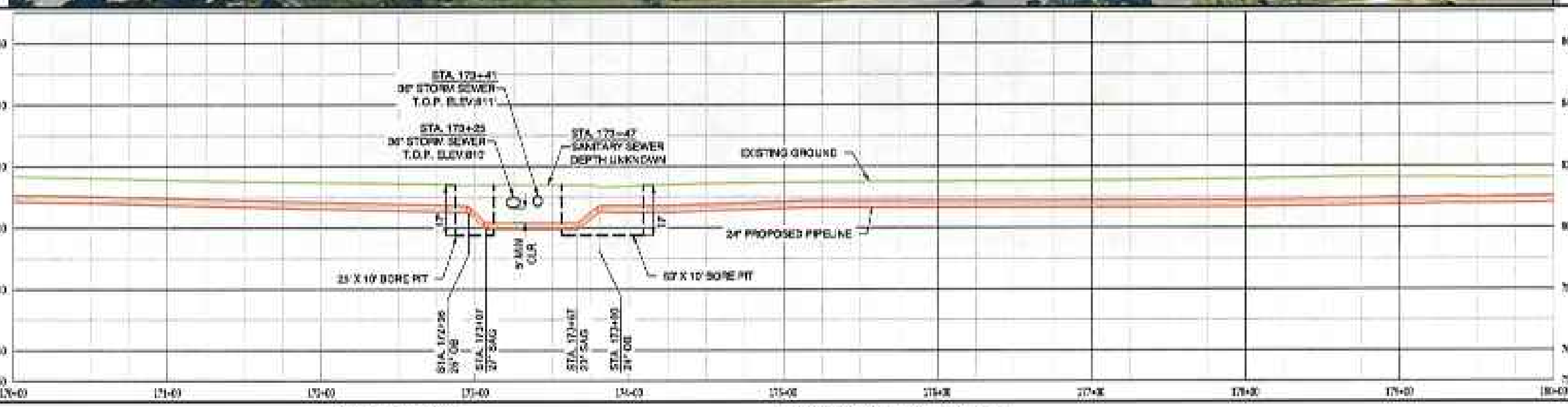
OWNERSHIP	STA. 170+00	CITY OF GAHANNA	STA. 180+00
JURISDICTION / PARCEL #		CITY OF GAHANNA / FRANKLIN COUNTY	
TEST PRESSURE / DESIGN INFO		1080 PSIG MIN / 1350 PSIG MAX / CLASS IV / 720 PSIG	
CONSTRUCTION METHOD		OPEN CUT / BORE / OPEN CUT	
PIPE			
FITTINGS			

HORIZONTAL STATIONING

STA. 173+25 36" STORM SEWER
STA. 173+41 36" STORM SEWER
STA. 173+47 SANITARY SEWER
STA. 179+16 DOP OVERHEAD POWER
STA. 179+83 DOP OVERHEAD POWER

PROPOSED PLAN

PROPOSED PROFILE



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REV. #	DATE	DESCRIPTION
A	12/23/24	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL ENG.	AG	12/23/24	[illegible]
DESIGNED BY	JAL	12/23/24	[illegible]
CHECKED BY	RRA	12/23/24	[illegible]
AS-BUILT BY	TBD	TBD	TBD

SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
ADLER ROAD NONP PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
STA. 170+00 TO STA. 180+00

DRAWING NO:
L-2019

OWNERSHIP	CITY OF GAHANNA	ODOT
JURISDICTION / PARCEL ID	CITY OF GAHANNA / FRANKLIN COUNTY	CITY OF GAHANNA / FRANKLIN COUNTY
TEST PRESSURE / DESIGN MAOP	1300 PSIG MIN / 1200 PSIG MAX / CLASS IV / 720 PSIG	
CONSTRUCTION METHOD	OPEN CUT	
PIPE		
FITTINGS		

HORIZONTAL STATIONING

STA. 180+35 TEST STATION WITH #17 ANODE

STA. 184+04 4" RB

STA. 184+52 4" LB

STA. 184+58 1.5" DoT FIBER OPTIC LINE

STA. 184+81 DOP OVERHEAD POWER

STA. 184+98 STORM SEWER

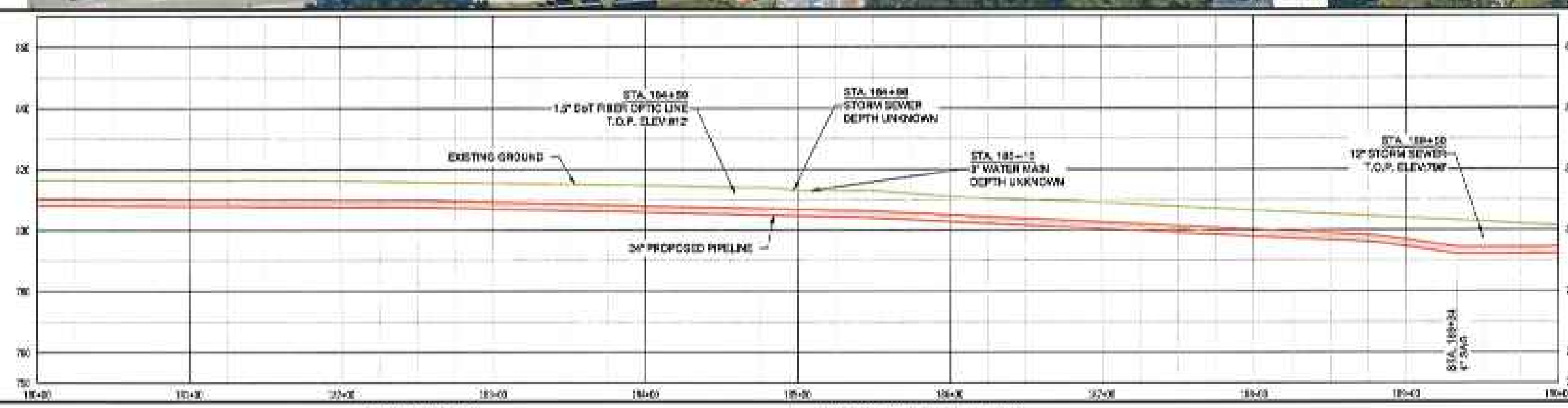
STA. 185+44 4" RB

STA. 186+48 4" LB

STA. 189+50 12" STORM SEWER

PROPOSED PLAN

PROPOSED PROFILE



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PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	12/2024	ISSUED FOR PERMIT

SITE NAME

INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
AGLER ROAD NOHP PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE

STA. 180+00 TO STA. 190+00

DRAWING NO.

L-2020

OWNERSHIP	OHIO DOT	CITY OF GAHANNA
JURISDICTION / PARCEL ID	CITY OF GAHANNA / FRANKLIN COUNTY	CITY OF GAHANNA / FRANKLIN COUNTY
TEST PRESSURE / DESIGN INFO	1010 PSIG M.V. / 1260 PSIG MAX / CLASS IV / 720 PSIG	
CONSTRUCTION METHOD	OPEN CUT / BORE	OPEN CUT
PIPE		
FITTINGS		

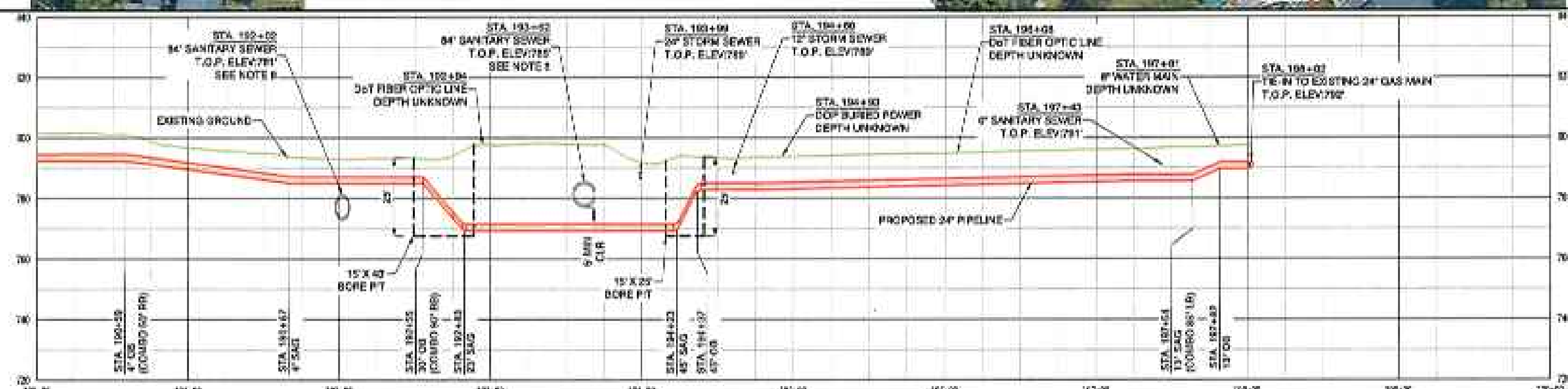
STA. 190+00 — STA. 198+02

HORIZONTAL STATIONING

STA. 190+53 10° RB (COMBO 4° OB)
STA. 190+89 11° RB
STA. 192+02 84" SANITARY SEWER
STA. 192+56 90° RB (COMBO 30° OB)
STA. 192+94 DOT FIBER OPTIC LINE
STA. 193+62 84" SANITARY SEWER
STA. 193+99 24" STORM SEWER
STA. 194+60 12" STORM SEWER
STA. 194+56 22° RB
STA. 194+56 TEST STATION WITH #17 ANODE
STA. 194+93 DOP BURIED POWER
STA. 195+58 DOP OVERHEAD POWER
STA. 196+08 DOT FIBER OPTIC LINE
STA. 197+43 6" SANITARY SEWER
STA. 197+72 85° LB (COMBO 13° SAG)
STA. 197+81 8" WATER MAIN
STA. 197+89 13° OB
STA. 198+02 DOP OVERHEAD POWER
STA. 198+02 TIE IN TO EXISTING 24" GAS MAIN

PROPOSED PLAN

PROPOSED PROFILE



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8. DEPTH, LOCATION, AND SIZE OF THE 84" SANITARY SEWER WERE DETERMINED FROM AS-BUILT DRAWINGS.

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PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A	12/2024	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL ENG.	AU	12/2024	
DESIGNED BY	JNL	12/2024	
CHECKED BY	RPA	12/2024	
AS-BUILT BY	TBD	TBD	TBD

SITE NAME:
INST# 23-0083895-00
ABAN# 23-0083897-00
PROJECT ID# 21-78793
AGLER ROAD NCHP PIPELINE PROJECT
COLUMBUS/GAHANNA, FRANKLIN COUNTY, OH

DRAWING TITLE:
STA. 190+00 TO STA. 198+02

DRAWING NO:
L-2021

Attachment C **Wetland Delineation Report**

Colliers
Engineering
& Design

Wetland Delineation Report

NCHP Phase 3B Project

Colliers Engineering & Design Project Number: 21004202A

December 20, 2024

Prepared for:

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

Prepared by:

Colliers Engineering & Design, Inc.
1501 Reedsdale Street,
Suite 302
Pittsburgh, PA 15233
Main: 412-618-5390
Colliersengineering.com

Colliers Engineering & Design

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APPENDIX D – PHOTOGRAPHS

Colliers
Engineering
& Design

EXECUTIVE SUMMARY

On behalf of NiSource Inc., Colliers Engineering & Design (CED) conducted field delineations for the North Columbus High Pressure (NCHP) Pipeline Project – Phase 3B within Franklin County, Ohio (hereinafter described as "Survey Corridor"). The Survey Corridor 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 Survey Corridor is located approximately 5 miles north of Columbus, Ohio. Access to the Survey Corridor can be achieved from Woodlawn Road, Granville Street, W Johnstown Road, James Road, and Agler Road.

The Project Study Area is comprised of a 100-foot wide survey corridor centered on the proposed pipeline alignment for approximately 3.75 miles. The Survey Corridor was investigated to identify potential jurisdictional Waters of the U.S. (WOTUS) and wetlands subject to Federal or State regulatory jurisdiction. The delineation methodologies developed by the USACE and the USEPA, as described in the *1987 Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* and the subsequently issued USACE regulatory guidance regarding the identification of jurisdictional stream channels through the recognition of field indicators of an ordinary high-water mark within drainage features (Environmental Laboratory, 1987; USACE 2012; USACE 2005) were utilized during our investigation. The location and size of jurisdictional areas delineated are shown on the attached Figure 5. Delineation Results (**Appendix A**).

Based on the field investigations, five (5) wetland features, one (1) palustrine unconsolidated bottom (pond) feature, and seven (7) stream features were delineated within the Survey Corridor by CED on March 2nd and 3rd, 2022, October 24, 2022, and December 17, 2024. A total of 0.67 acres of palustrine forested (PFO) wetland, 0.23 acres of palustrine emergent (PEM) wetland, 0.18 acres of pond (palustrine unconsolidated bottom – PUB), 806 linear feet of perennial (R3) stream, and 1,120 linear feet of intermittent (R4) stream were delineated. It is CED's professional opinion that Wetland Features "5" through "9" and Stream Features "4" through "10" are considered jurisdictional WOTUS since they are and/or drain into Big Walnut Creek and Alum Creek. These stream and wetland features can be considered jurisdictional WOTUS since they connect and/or are directly connected to Big Walnut Creek and Alum Creek, which eventually drain to the Scioto River. The location and size of jurisdictional areas delineated are shown on Figure 5. Delineation Results (**Appendix A**).

1.0 PROJECT INFORMATION

Project Name	North Columbus High Pressure (NCHP) Pipeline Project – Phase 3B
Project Location	Woodlawn Road, Granville Street, W Johnstown Road, James Road, and Agler Road
Municipality	Columbus
County	Franklin
State	Ohio
Latitude/Longitude	40.021989 N / -82.950258 W to 40.018147 N / -82.882347 W
Survey Corridor Size	+/- 3.75 mi 100 feet wide survey corridor
U.S.G.S. Quadrangle	Northeast Columbus OH
Potential Jurisdictional Waters of the U.S. (WOTUS) and wetlands	See Aquatic Resource Area Summary Table on Page 5
River Basin (HUC) & sub-watershed	Upper Scioto Basin: 8 Digit HUC Code 05060001
Nearest Stream	Big Walnut Creek, Alum Creek
Navigable Water Nexus	Stream features delineated on the Survey Corridor would be considered jurisdictional WOTUS and wetlands since these features drain towards Big Walnut Creek and Alum Creek
Isolated Wetlands/Waters Present (Yes/No)	No

2.0 INTRODUCTION

On behalf of NiSource Inc., Colliers Engineering & Design (CED) conducted field delineations for the North Columbus High Pressure (NCHP) Pipeline Project – Phase 3B located in the greater North Columbus area within Franklin County, Ohio (hereinafter described as "Survey Corridor"). The Survey Corridor 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 Survey Corridor is located approximately 5 miles north of Columbus, Ohio. Access to the Survey Corridor can be achieved from Woodlawn Road, Granville Street, W Johnstown Road, James Road, and Agler Road. The Survey Corridor is bordered by residential homes, commercial properties, and forested areas. There are unnamed tributaries located within the Survey Corridor that eventually drain to Big Walnut Creek and Alum Creek.

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

3.0 PROPERTY DESCRIPTION

The Survey Corridor is located within the Upper Scioto River Basin (8 Digit HUC Code 05060001). Access to the Survey Corridor can be achieved from Woodlawn Road, Granville Street, W Johnstown Road, James Road, and Agler Road. The western section of the Survey Corridor drains south and east towards Alum Creek and the central and eastern sections of the Survey Corridor drain to Big Walnut Creek. The Survey Corridor does contain a floodway and a floodplain according to FEMA Floodplain Panel Maps 39049C0189K, 39049C0193K, and 39049C0194K (eff. 6/17/2008). The Survey Corridor contains approximately 35% forested communities and 65% residential properties and commercial properties. The forested areas are comprised of a mixture of oak, tulip poplar, red maple, pine, and sweetgum species that dominate the canopy layer. Big Walnut Creek is located in the eastern section and Alum Creek is located in the western section of the Survey Corridor, flowing north to south. Unnamed tributaries can be found throughout the Survey Corridor eventually discharging into Big Walnut Creek and Alum Creek.

4.0 BACKGROUND INFORMATION

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

4.1 U.S. Geological Survey Map

The Survey Corridor appears on the *Northeast Columbus OH* Quadrangle USGS Maps (Figure 1. Project Location Map, **Appendix A**) and is depicted as developed properties which contains approximately 35% forested areas habitat communities and 65% residential and commercial properties. The USGS also depicts unnamed tributaries located within the project limits. Residential and forested areas are located within the vicinity of the Survey Corridor to the north, south, east, and west. Elevations at the Survey Corridor range from approximately 770 to 830 feet above mean sea level (MSL) based on the USGS map.

4.2 Soil Survey

The NRCS Web Soil Survey depicts the following 19 soil series map units within the Survey Corridor and Table 1 provides a description of the properties and qualities of each soil:

Table 1. NCHP Phase 3B Project USDA NRCS Soil Series

Map Unit Symbol	Map Unit Name	Drainage Class	Runoff Class	Depth to Water Table
AdC2	Alexandria silt loam, 6 to 12 percent slopes, eroded	Well Drained	High	More than 80 inches
BeB	Bennington silt loam, 2 to 6 percent slopes	Somewhat Poorly Drained	High	About 6 to 12 inches
BfA	Bennington-Urban land complex, 0 to 2 percent slopes	Somewhat Poorly Drained	High	About 6 to 12 inches
CbC	Cardington-Urban land complex, 6 to 12 percent slopes	Moderately Well Drained	High	About 24 to 36 inches
Crd1B1	Cardington silt loam, 2 to 6 percent slopes	Moderately Well Drained	Medium	About 12 to 24 inches
Ee	Eel silt loam, 0 to 2 percent slopes, occasionally flooded	Moderately Well Drained	Low	About 15 to 24 inches

Map Unit Symbol	Map Unit Name	Drainage Class	Runoff Class	Depth to Water Table
ElB	Eldean silt loam, 2 to 6 percent slopes	Well Drained	Low	More than 80 inches
ElD2	Eldean silt loam, 12 to 18 percent slopes, eroded	Well Drained	High	More than 80 inches
So	Sloan silt loam, Columbus Lowland, 0-2 percent slopes, frequently flooded	Very Poorly Drained	Negligible	About 0 to 6 inches
Mh	Medway silt loam, occasionally flooded	Moderately Well Drained	Low	About 18 to 36 inches
Pm	Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes	Very Poorly Drained	Negligible	About 0 to 12 inches
Sh	Shoals silt loam, occasionally flooded	Somewhat Poorly Drained	Very low	About 12 to 36 inches
Pn	Pewamo low carbonate till-Urban land complex, 0 to 2 percent slopes	Very Poorly Drained	Negligible	About 0 to 12 inches
ElC2	Eldean silt loam, 6 to 12 percent slopes, eroded	Well Drained	High	More than 80 Inches
AdE2	Alexandria silt loam, 18 to 25 percent slopes, eroded	Well Drained	Very High	More than 80 inches
KeB	Kendallville silt loam, 2 to 6 percent slopes	Well Drained	Low	More than 80 inches
Cn	Condit silt loam, 0 to 1 percent slopes	Poorly Drained	Negligible	About 0 to 12 inches
BeA	Bennington silt loam, 0 to 2 percent slopes	Somewhat Poorly Drained	High	About 6 to 12 inches
Ut	Udorthents-Urban land complex, gently rolling	-	-	More than 80 inches

Of the 19 mapped soil units, seven (7) soil units: Alexandria silt loam (AdC2), Bennington silt loam (BeB), Bennington-Urban land complex (BfA), Cardington silt loam (Crd1B1), Eel silt loam (Ee), Sloan silt loam, Columbus Lowland (So), and Pewamo silty clay loam (Pm), are listed as being hydric.

5.0 WETLAND & SURFACE WATER DELINEATION METHODOLOGY

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

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

6.0 WETLAND AND SURFACE WATER DELINEATION RESULTS

6.1 WETLAND AND SURFACE WATER SUMMARY

On-site field investigations of the Survey Corridor were conducted by CED on March 2nd & 3rd, 2022, October 24, 2022, and December 17, 2024. The on-site delineation did verify the presence of wetlands and surface waters within Survey Corridor. A summary of the aquatic resources identified within the Survey Corridor is provided below in Table 2: Aquatic Resource Summary. The location and size of the aquatic resources delineated are shown on Figure 5. Wetland Delineation Map (**Appendix A**).

Table 2: Aquatic Resource Area Summary Table

Aquatic Resource	PFO Area (AC)	PEM Area (AC)	Aquatic Resource	PUB Area (AC)	Aquatic Resource	R3 Length (LF)	R4 Length (LF)
W-5	0.03	-	PUB3	0.18	S-4	-	204
W-6	-	0.23	-	-	S-5	-	750
W-7	0.29	-	-	-	S-6	-	166
W-8	0.02	-	-	-	S-7	155	-
W-9	0.33	-	-	-	S-8	39	-
-	-	-	-	-	S-9	337	-
-	-	-	-	-	S-10	275	-
Total Wetlands by Class (AC)	0.67	0.23	Total Pond (AC)	0.18	Total Stream by Class (LF)	806	1,120
Total Wetlands (AC)	0.9				Total Stream (LF)	1,926	

Note 1: Cowardin Classification; PFO = palustrine forested wetland; PEM = palustrine emergent wetland; PUB = palustrine unconsolidated bottom (pond), R3 = perennial stream, R4 = intermittent stream

6.2 VEGETATION

Representative plant species within the wetland areas include the following: green ash (*Fraxinus pennsylvanica*), red maple (*Acer rubrum*), sycamore (*Platanus occidentalis*), eastern cottonwood (*Populus deltoides*), amur honeysuckle (*Lonicera mackaii*), multiflora rose (*Rosa multiflora*), reed canary grass (*Phalaris arundinacea*), and broadleaf cattail (*Typha latifolia*).

Representative plant species within the upland areas include the following: eastern cottonwood, red maple, black cherry (*Prunus serotina*), Indian olive (*Elaeagnus angustifolia*), Tatarian honeysuckle (*Lonicera tatarica*), wild privet (*Ligustrum vulgare*), Callery pear (*Pyrus calleryana*) and tall fescue (*Schedonorus arundinaceus*).

6.3 SOILS

Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil (USDA 2003). The soils in the wetland areas were variable, but for the most part, exhibited low chroma matrices with redoximorphic

features. Soils within the wetland areas on-site exhibit low chroma matrix colors and concentrations that are characteristic of reducing anaerobic conditions associated within the formation of hydric soils. Wetland soils were typically dark grayish brown (10YR 4/2), weak red (2.5Y 4/2 and 2.5Y 5/2), and dark gray (10YR 4/1) within the upper 16 inches. Redox concentrations greater than 3% were observed between 0 and 16 inches below soil surface and are typically dark yellowish brown (10YR 4/6). Soils within jurisdictional areas meet the F3 Depleted Matrix hydric soil indicator. Textures within the jurisdictional areas include clay, silt, and silty clay loam. The upland soils within each area varied from very dark grayish brown (10YR 3/2), yellowish brown (10YR 5/4 and 10YR 5/6), and dark brown (10YR 3/3) and (10YR 5/6) within the upper 16 inches. Soil textures include silt and clay.

6.4 HYDROLOGY

On-site field investigations of the Survey Corridor were conducted by CED on March 2nd & 3rd, 2022, October 24, 2022, and December 17, 2024. The USACE Antecedent Precipitation Tool (APT) was utilized for the Survey Corridor and is provided **Appendix B**. Based the USACE APT tool, the on-site field investigations were conducted in "Wetter than Normal" precipitation conditions in March 2022, "Normal Conditions" in October 2022, and "Normal Conditions" in December 2024 (with a 30-day rolling total).

The delineated wetlands exhibited primary and secondary indicators of wetland hydrology. Positive indicators of wetland hydrology on the property included the following: surface water (A1), high water table (A2), saturation (A3), water marks (B1), and water-stained leaves (B9). Secondary indicators include drainage patterns (B10), and the FAC-neutral test (D5). Indicators of wetland hydrology are largely absent in upland areas.

7.0 WETLAND DELINEATION CONCLUSION

Five (5) wetland features, one (1) palustrine unconsolidated bottom (pond) feature, and seven (7) stream features were delineated within the Survey Corridor by CED on March 2nd and 3rd, 2022, October 24, 2022, and December 17, 2024. A total of 0.67 acres of palustrine forested (PFO) wetland, 0.23 acres of palustrine emergent (PEM) wetland, 0.18 acres of pond (palustrine unconsolidated bottom – PUB), 806 linear feet of perennial (R3) stream, and 1,120 linear feet of intermittent (R4) stream were delineated. Field investigations were conducted in accordance with the manuals, methodologies, and regulatory guidance procedures as stated in Section 5.0 Wetland and Surface Water Delineation Methodology.

It is CED's professional opinion that Wetland Features "5" through "9" and Stream Features "4" through "10" are considered jurisdictional WOTUS since they are and/or drain into Big Walnut Creek and Alum Creek. These stream and wetland features can be considered jurisdictional WOTUS since they connect to Big Walnut Creek and Alum Creek, which eventually drain to the Scioto River. The location and size of jurisdictional areas delineated are shown on Figure 5. Delineation Results (**Appendix A**).

8.0 REFERENCES

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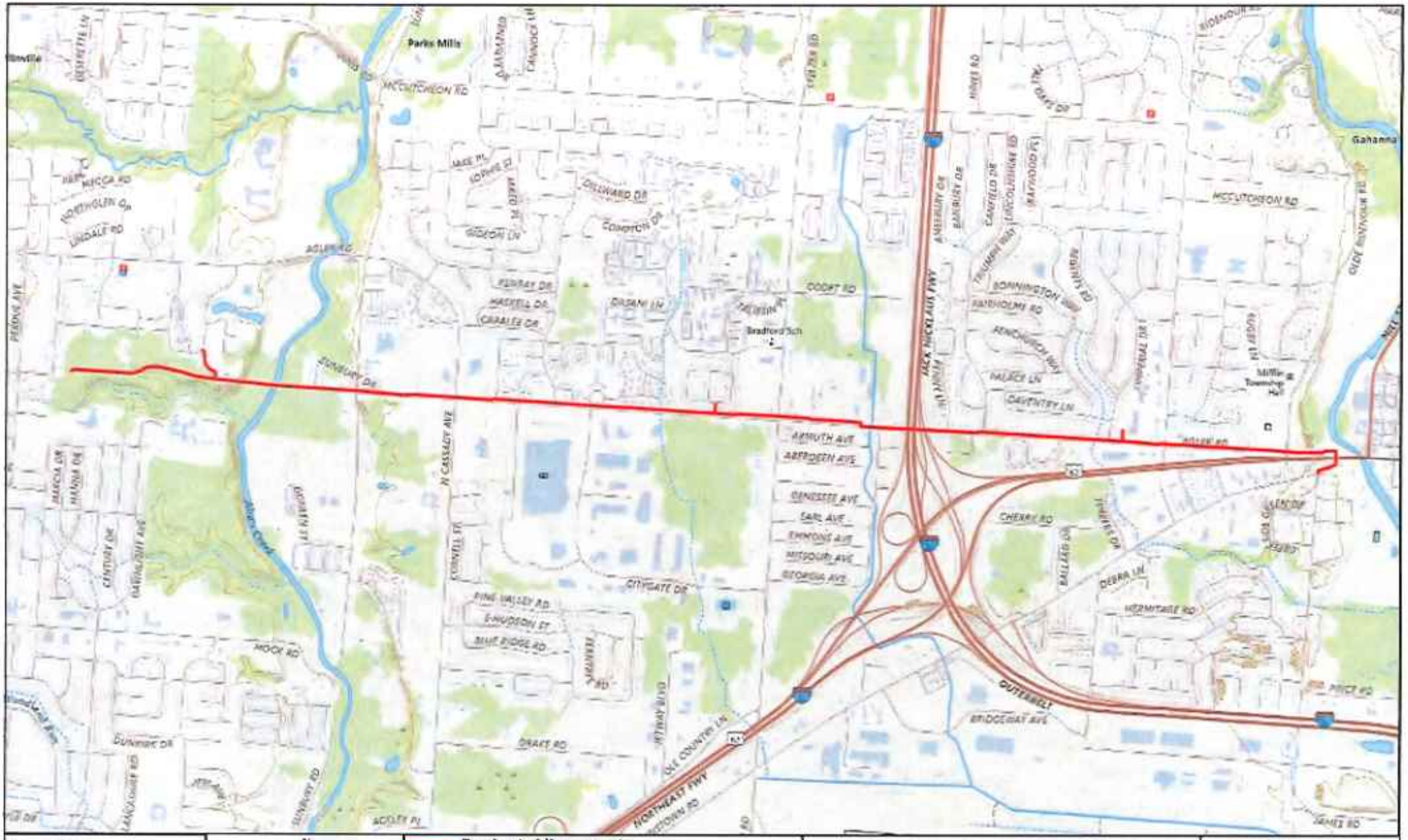
Appendix
Appendix A | Figures



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Prepared By:

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Pittsburgh Office
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Miles

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Kilometers

Scale: 1:24,000

Project Location Map

NHCP Phase 3B Project

Franklin County, Ohio

Figure 1

Date Saved: 12/20/2024	CED PN: 210042024	Revised by: Patrick Zacharias

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Scale: 1:24,000

Project Alignment

Soil Units (SSURGO)

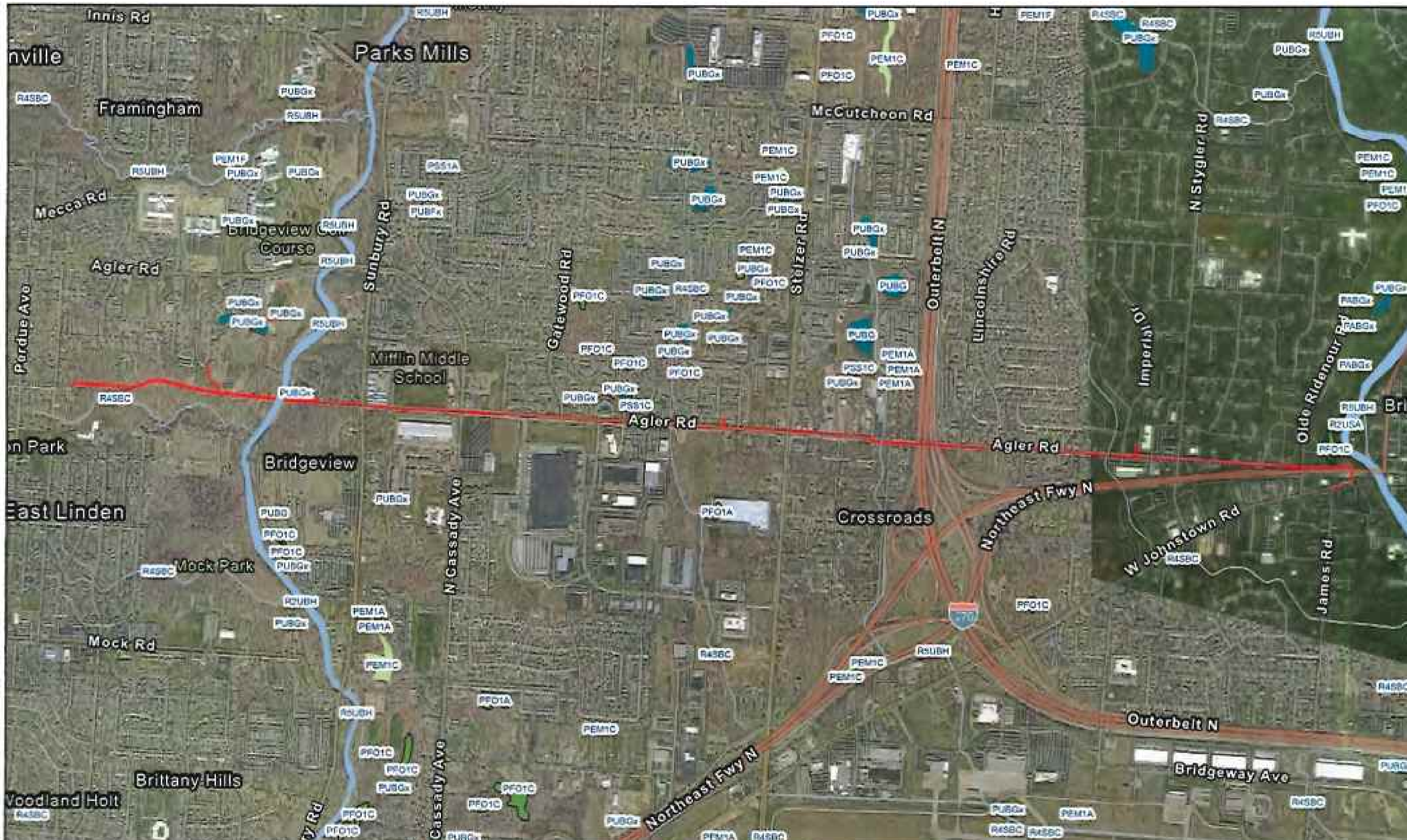
Soil Series Map

NHCP Phase 3B Project

Franklin County, Ohio

Date Saved: 12/20/2024	CED Pn: 2130420.2A	Revised by: Parker Buchanan

Figure 2



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Pittsburgh Office

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Scale: 1:24,000

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

NWI Series Map

NHCP Phase 3B Project

Franklin County, Ohio

Date Saved: 12/20/2024 | CED PN: 21004202A

Figure 3

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- Project Alignment
- NHD Flowline
- NHD Waterbody
- 100-Year Floodplain

FEMA/ NHD Map

NHCP Phase 3B Project

Franklin County, Ohio

Date Saved: 12/30/2024	CED PN: 21004202A	Revised by: francis buchanan

Figure 4

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Project Data

- Project Alignment
- Study Corridor

Survey Data

- Culvert
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PUB Water
- Perennial Stream

Delineation Results Map

NHCP Phase 3B Project

Franklin County, Ohio

Date Saved: 12/20/2024	CED Prj: 21004202A	Revised by: frances buchanek

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Scale: 1:3,000

Project Data

- Project Alignment
- Study Corridor

Survey Data

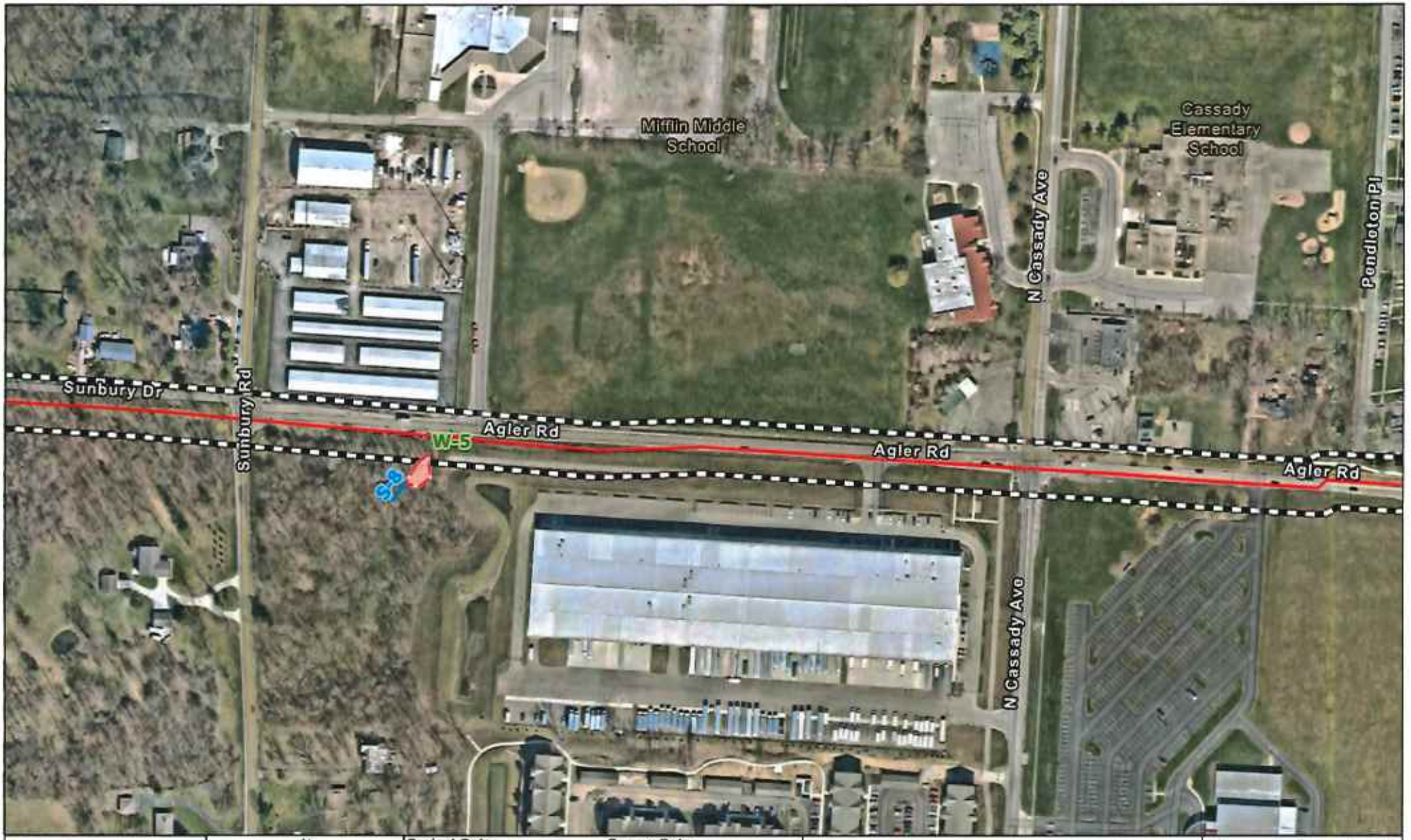
- Culvert
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PUB Water
- Perennial Stream

Delineation Results Map

NHCP Phase 3B Project

Franklin County, Ohio

Date Saved: 12/20/2024	CED PN: 210042024	Revised by: frances buchanek



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Project Data
- Project Alignment
- Study Corridor

Survey Data
- Culvert
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PUB Water
- Perennial Stream

Delineation Results Map

NHCP Phase 3B Project

Franklin County, Ohio

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Figure 5 - Page 3 of 9

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Project Data

- Project Alignment
- Study Corridor

Survey Data

- Culvert
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PUB Water
- Perennial Stream

Delineation Results Map

NHCP Phase 3B Project

Franklin County, Ohio

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Project Data

- Project Alignment
- Study Corridor

Survey Data

- Culvert
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PUB Water
- Perennial Stream

Delineation Results Map

NHCP Phase 3B Project

Franklin County, Ohio

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Figure 5 - Page 5 of 9

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Project Data

- Project Alignment
- Study Corridor

Survey Data

- Culvert
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PUB Water
- Perennial Stream

Delineation Results Map

NHCP Phase 3B Project

Franklin County, Ohio

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Project Data

- Project Alignment
- Study Corridor

Survey Data

- Culvert
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PUB Water
- Perennial Stream

Delineation Results Map

NHCP Phase 3B Project

Franklin County, Ohio

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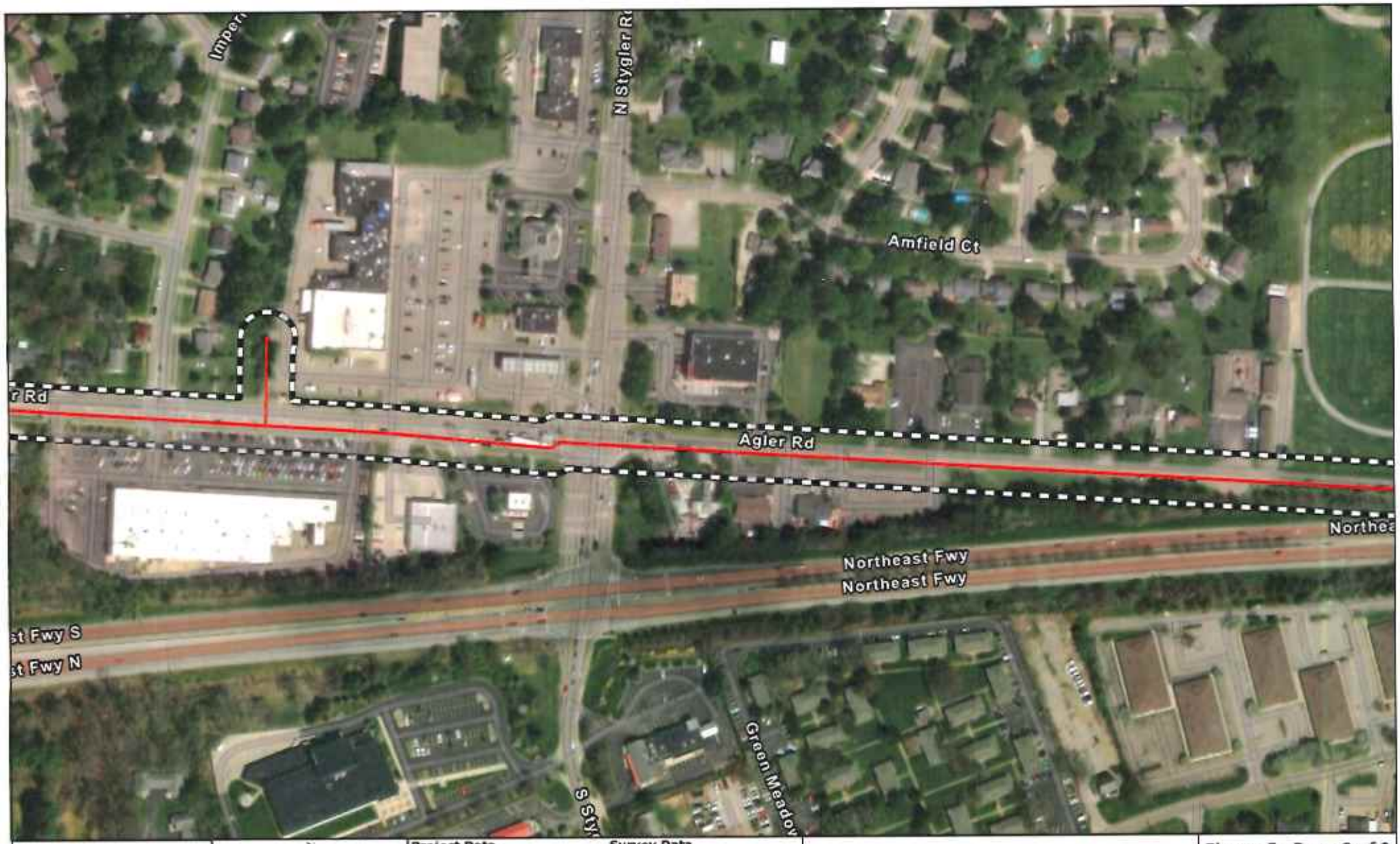

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Project Data

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- Study Corridor

Survey Data

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- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PUB Water
- Perennial Stream

Delineation Results Map

NHCP Phase 3B Project

Franklin County, Ohio

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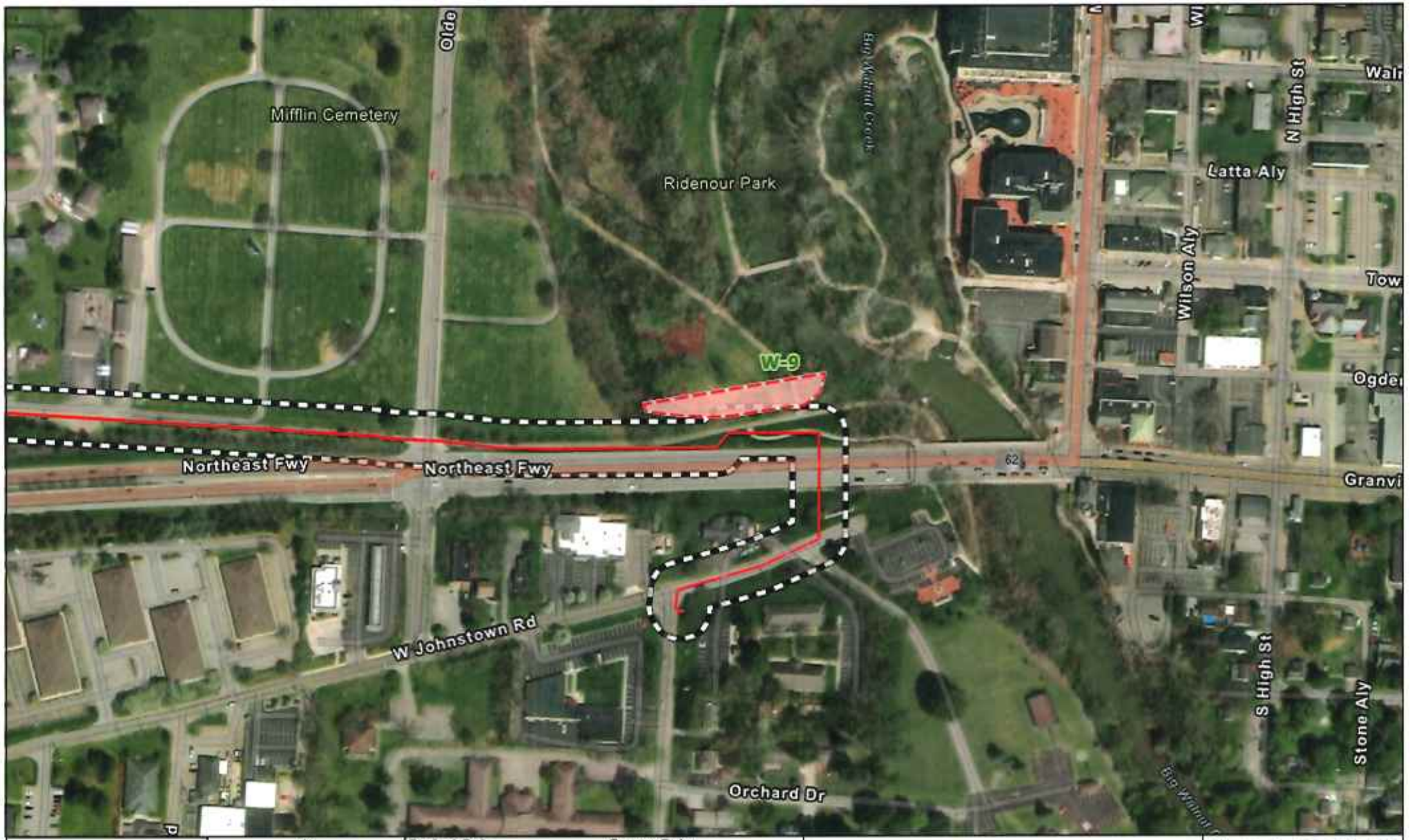
Figure 5 - Page 8 of 9



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Project Data

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Survey Data

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- Perennial Stream
- PEM Wetland
- PFO Wetland
- PUB Water
- Perennial Stream

Delineation Results Map

NHCP Phase 3B Project

Franklin County, Ohio

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Figure 5 - Page 9 of 9

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Appendix B | Data Forms

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: NC HF City/County: Columbus/Franklin Sampling Date: 3/2/22
Applicant/Owner: Nisource State: OH Sampling Point: WOODS (PFO)
Investigator(s): REL Section, Township, Range: T1N R17W
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none) concave
Slope (%): 5 Lat: Long: Datum:
Soil Map Unit Name: AdC2 NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes Y No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
PFO adj to WOODS

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Liriodendron tulipifera	45	Y	FACW
2. Populus deltoides	10	N	FAC
3.			
4.			
5.			
	55 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15x15)			
1. Platanus occidentalis	5	Y	FACW
2. Lonicera maackii *	15	—	NL
3.			
4.			
5.			
	20 = Total Cover		

Herb Stratum (Plot size: 5'x5')			
1. Euonymus fortunei	5	-	NL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		

Woody Vine Stratum (Plot size: 30x30)			
1. Vitis riparia	5	Y	FACW
2.			
	5 = Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
Y 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

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

SOIL

Sampling Point: WDOS1(PFO)

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/2	92	10YR 4/4	8	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- Y Surface Water (A1)
- Y High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X 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)
- Y FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Y No ____ Depth (inches): 8"

Water Table Present? Yes X No ____ Depth (inches): 3"

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 0"

Wetland Hydrology Present? Yes X No ____

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

N/A

Remarks

outlets into channelized stream

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: NLHP City/County: Columbus/Franklin Sampling Date: 3/3/22
Applicant/Owner: NiSource State: OH Sampling Point: WOO16 (PEM)
Investigator(s): REK Section, Township, Range: T1N R17W
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave
Slope (%): 3 Lat: Long: Datum:
Soil Map Unit Name: EIC2 NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
PEM rep to WOO16 - PEM w/in ROW, PFO/PSS on edges

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Platanus occidentalis	10	Y	FACW
2. Acer rubrum	5	Y	FAC
3. Populus deltoides	5	Y	FAC
4.			
5.			
	20	= Total Cover	

Sapling/Shrub Stratum (Plot size: 5x5)			
1. Platanus occidentalis	10	Y	FACW
2. Rosa multiflora	2	N	FACU
3. Cornus amomum	3	Y	FACW
4.			
5.			
	15	= Total Cover	

Herb Stratum (Plot size: 5x5)			
1. Phalaris arundinacea	80	Y	FACW
2. Verbesina alternifolia	10	N	FACW
3. Vernonia noveboracensis	5	N	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.	95	= Total Cover	

Woody Vine Stratum (Plot size: 30x30)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
Y 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

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

SOIL

Sampling Point WDW1 (PEM)

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/2	95	10YR 4/4	5	C	M	clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- X 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)
- X 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)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1"

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

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 4"

Wetland Hydrology Present? Yes X No ___

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

N/A

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: NCHP City/County: Columbus/Franklin Sampling Date: 3/3/22
Applicant/Owner: NiSource State: Sampling Point: WD021 (PEM)
Investigator(s): DEK Section, Township, Range: T1N R17W
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
Slope (%): 5 Lat: Long: Datum:
Soil Map Unit Name: Ee NWI classification: PUBGx
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30X30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	30	Y	FAC
2. Platanus occidentalis	15	Y	FACW
3. Populus deltoides	10	N	FAC
4.			
5.			
	55 = Total Cover		

Sapling/Shrub Stratum (Plot size: 5X15)			
1. Acer saccharum	45	Y	FAC
2. Platanus occidentalis	10	N	FACW
3. Fraxinus pennsylvanica	5	N	FACW
4.			
5.			
	60 = Total Cover		

Herb Stratum (Plot size: 5X5)			
1. Phalaris arundinacea	75	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	75 = Total Cover		

Woody Vine Stratum (Plot size:)			
1. Parthenocissus			
2.			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 11 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

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

SOIL

Sampling Point W007 (PFO)

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/2	95	10YR 4/6	5	C	M	clay loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1"

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

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0"

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: North Columbus High Pressure Pipeline Project City/County: Gahannah/Franklin Sampling Date: 12/17/24

Applicant/Owner: Campos EPC State: OH Sampling Point: Wet 8

Investigator(s): AAY Section, Township, Range: T/N R116W

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

Slope (%): 0-3 Lat: 40.022098° Long: -82.941762° Datum: NAD 83

Soil Map Unit Name: Cardington silt loam, 2 to 6 percent slopes NWI or WWI classification: NA

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

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

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

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

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

Remarks:

PFO rep to Wetland 8

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	70	Y	FAC
2.			
3.			
4.			
5.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 20')			
1. *Populus deltoides*	20	Y	FAC
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	_____	= Total Cover	
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
	_____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	90	x 3 =	270
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		270 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Outside growing season.

SOIL

Sampling Point: Wet 8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/2	90	10YR 5/6	10	C	M	SiCL	
6-15	2.5Y 5/2	80	10YR 5/6	20	C	M	Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Meets F3

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ 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)
- X Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 2

Water Table Present? Yes X No ___ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Standing water

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: North Columbus High Pressure Pipeline Project City/County: Gahannah/Franklin Sampling Date: 12/17/24

Applicant/Owner: Campos EPC State: OH Sampling Point: Wet 9

Investigator(s): AAY Section, Township, Range: T/N R11W

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

Slope (%): 0-3 Lat: 019161° Long: -82.881995° Datum: NAD 83

Soil Map Unit Name: Sloan silt loam, Columbus Lowland, 0 to 2 percent slopes, frequently flooded NWI or WWI classification: PFO1C

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

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

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

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

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

Remarks:

PFO/PEM rep to Wetland 9

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	10	Y	FACW
2.			
3.			
4.			
5.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Typha latifolia*	70	Y	OBL
2. *Epilobium hirsutum*	10	N	FACW
3. *Polygonum pensylvanicum*	10	N	FACW
4. *Persicaria sagittata*	10	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
	____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	30	x 2 =	60
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		140 (B)

Prevalence Index = B/A = 1.27

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

Outside growing season.

SOIL

Sampling Point: Wet 9

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10YR 4/1	20	7.5YR 5/6	20	C	M	SiC	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ 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)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 2

Water Table Present? Yes X No _____ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Standing water

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: North Columbus High Pressure Pipeline Project City/County: Gahannah/Franklin Sampling Date: 12/17/24

Applicant/Owner: Campos EPC State: OH Sampling Point: Up 8

Investigator(s): AAY Section, Township, Range: T/N R11W

Landform (hillslope, terrace, etc.): Sideslope Local relief (concave, convex, none): Convex

Slope (%): 3-5 Lat: 40.022016° Long: -82.941911° Datum: NAD 83

Soil Map Unit Name: Alexandria silt loam, 6 to 12 percent slopes, eroded NWI or WWI classification: NA

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

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

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

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

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

Remarks:

Upland woodlands adjacent to Wetland 8

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	30	Y	FAC
2. *Prunus serotina*	30	Y	FACU
3. *Acer rubrum*	10	N	FAC
4.			
5.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 20')			
1. *Elaeagnus angustifolia*	40	Y	FACU
2. *Lonicera tatarica*	40	Y	FACU
3. *Ligustrum vulgare*	40	Y	FACU
4.			
5.			
	120	= Total Cover	
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	_____	= Total Cover	
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
	_____	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 20.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	150	x 4 =	600
UPL species	0	x 5 =	0
Column Totals:	190 (A)		720 (B)

Prevalence Index = B/A = 3.79

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

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

Outside growing season.

SOIL

Sampling Point: Up 8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					SiL	
6-15	10YR 5/4	100					SiCL	Gravelly

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: North Columbus High Pressure Pipeline Project City/County: Gahannah/Franklin Sampling Date: 12/17/24

Applicant/Owner: Campos EPC State: Sampling Point: Up 9

Investigator(s): AAY Section, Township, Range: T/N R116W

Landform (hillslope, terrace, etc.): Sideslope Local relief (concave, convex, none): Convex

Slope (%): 5-8 Lat: 40.019084° Long: -82.881988° Datum: NAD 83

Soil Map Unit Name: Udorthents-Urban land complex, gently rolling NWI or WWI classification: NA

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

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

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

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

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

Remarks:

Upland maintained lawn/early successional veg adjacent to Wetland 9

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Pyrus calleryana*	20	Y	NI
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 5')			
1. *Schedonorus arundinaceus*	90	Y	FACU
2. *Trifolium repens*	10	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	100 (A)		400 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

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

SOIL

Sampling Point: Up 9

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3	100					SIL	
6-12	10YR 5/6	100					CL	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

ORAM v. 5.0 Field Form Quantitative Rating

Site: NCMP	Rater(s): REK	Date: 3/2/22

Metric 1. Wetland Area (size).

max 8 pts. | subtotal: 1 | 1

WOOS PFO

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (8 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [X] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

max 14 pts. | subtotal: 2 | 3

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

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

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

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

Metric 3. Hydrology.

max 30 pts. | subtotal: 8 | 11

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

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [ ] Seasonal/intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

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

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

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [X] 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)
- [X] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

max 20 pts. | subtotal: 7 | 18

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

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

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

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

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

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

Check all disturbances observed

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

subtotal this page: 18

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ORAM v. 5.0 Field Form Quantitative Rating

Site: NCHP	Rater(s): DEK	Date: 3/2/22

18 subtotal first page

WOOS PFD

Metric 5. Special Wetlands.

max 10 pts.	subtotal
0	18

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

max 20 pts.	subtotal
5	23

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

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

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

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

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

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

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

- [0] Vegetated 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

23 Cat 1

End of Quantitative Rating. Complete Categorization Worksheets.

Site: NLHP	Rater(s): ZEK	Date: 3/3/22

WOOD
PEM

Metric 1. Wetland Area (size).

2 | 2 (max 6 pts. | subtotal)

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

12 | 14 (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)
- [x] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

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

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] 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)

Metric 3. Hydrology.

16 | 30 (max 30 pts. | subtotal)

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

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/intermittent surface water (3)
- [x] Perennial surface water (lake or stream) (5)

6

3b. Connectivity. Score all that apply.

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

3

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

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

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

- [ ] Semi- to permanently inundated/saturated (4)
- [x] 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)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

9 | 39 (max 20 pts. | subtotal)

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

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

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

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

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

2

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

Check all disturbances observed

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

39 (subtotal this page)

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Site: MCHR	Rater(s): REK	Date: 3/3/22

39
subtotal first page

WOOS PEM

Metric 5. Special Wetlands.

0 (max 10 pts.) | 39 (subtotal)

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

3 (max 20 pts.) | (subtotal)

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

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

5

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

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

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

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

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

- [0] Vegetated hummucks/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

42

Cat Mod 2

End of Quantitative Rating. Complete Categorization Worksheets.

Site: NCHP	Rater(s): REK	Date: 3/3/22

WOO 7 (PFO)

Metric 1. Wetland Area (size).

1 (max 6 pts.) | 1 (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)
- [x] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

9 (max 14 pts.) | 10 (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)
- [x] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

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

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] 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)

Metric 3. Hydrology.

13 (max 30 pts.) | 23 (subtotal)

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

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [x] Seasonal/intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

4

3b. Connectivity. Score all that apply.

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

3

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

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

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

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [x] 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)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

8 (max 20 pts.) | 31 (subtotal)

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

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

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

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

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

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

Check all disturbances observed

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

3 (subtotal this page)

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ORAM v. 5.0 Field Form Quantitative Rating

Site: NCHP	Rater(s): REV	Date: 3/3/22

31 subtotal first page

W007 PFO

Metric 5. Special Wetlands.

0 max 10 pts. | 31 subtotal

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

6 max 20 pts. | 37 subtotal

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

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

5

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

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

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

- [ ] Extensive >75% cover (-5)
- [X] 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 hummucks/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
†	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

37 cat mod 2.

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: NCHP-Wet 8	Rater(s): AAY	Date: 11/7/24

Metric 1. Wetland Area (size).

0 | 0 (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)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

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

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

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

Metric 3. Hydrology.

10 | 18 (max 30 pts | subtotal)

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

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [x] 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)
- [x] <0.4m (<15.7in) (1)

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

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [x] 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)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

8 | 16 (max 20 pts | subtotal)

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

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

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

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

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

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

Check all disturbances observed

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

16 (subtotal this page)

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ORAM v. 5.0 Field Form Quantitative Rating

Site: NCHP - Wet 8	Rater(s): AM	Date: 12/17/24

26
subtotal first page

0	26
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	30
max 20 pts	subtotal

Metric 6. Plant communities, interspersion, microtopography.

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

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

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

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

6c. Coverage of invasive plants. Refer 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)
- [X] Absent (1)

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

- [ ] Vegetated hummucks/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

30

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: NCHP-WL9 | Rater(s): AAY | Date: 12/17/24

Metric 1. Wetland Area (size).

3 | 0 (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)
- [x] 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)

Metric 2. Upland buffers and surrounding land use.

5 | 8 (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)
- [x] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

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

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

Metric 3. Hydrology.

15 | 23 (max 30 pts | subtotal)

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

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/intermittent surface water (3)
- [x] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

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

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

- [ ] Semi- to permanently inundated/saturated (4)
- [x] 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)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

8 | 31 (max 20 pts | subtotal)

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

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

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

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

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

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

Check all disturbances observed

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

31 (subtotal this page)

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ORAM v. 5.0 Field Form Quantitative Rating

Site: NC HP - Wet 9	Rater(s): RM	Date: 12/17/24

31
subtotal first page

0	31
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)

8	39
max 20 pts	subtotal

Metric 6. Plant communities, interspersion, microtopography.

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

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

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

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [X] 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)
- [X] Nearly absent <5% cover (0)
- [ ] Absent (1)

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

- [ ] Vegetated hummucks/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

39

End of Quantitative Rating. Complete Categorization Worksheets.

5001

OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 46

SITE NAME/LOCATION NSCHP

SITE NUMBER 5001 RIVER BASIN Scioto River DRAINAGE AREA (mi²) 4 mi²

LENGTH OF STREAM REACH (ft) 1516 LAT. 40.013582 LONG. 82.834119 RIVER CODE _____ RIVER MILE _____

DATE 5/2/22 SCORER DBK COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☒ RECENT OR NO RECOVERY — culvert, channelization

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]		☒☐	SILT [3 pt]	90
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]	5	☐☐	CLAY or HARDPAN [0 pt]	
☐☒	GRAVEL (2-64 mm) [9 pts]	15	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]		☐☐	ARTIFICIAL [3 pts]	10

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 5 (A) 12 (B) 4

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI Metric Points

Substrate Max = 40: 16

A + B

2. Maximum Pool Depth *(Measure the maximum pool depth within the 61 meter (200 ft)* evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☒ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 10

Pool Depth Max = 30: 15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

- ☐ > 4.0 meters (> 13') [30 pts]
- ☐ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
- ☐ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]
- ☒ > 1.0 m - 1.5 m (> 3' 3" - 4' 6") [15 pts]
- ☐ ≤ 1.0 m (≤ 3' 3") [5 pts]

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): 1.2

Bankfull Width Max=30: 15

This information must also be completed

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

RIPARIAN WIDTH L	R	(Per Bank)	FLOODPLAIN QUALITY L	R	(Most Predominant per Bank)	L	R	
☐	☐	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☐	Immature Forest, Shrub or Old Field	☒	☒	Urban or Industrial
☒	☒	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS _____

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

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

- ☐ None
- ☒ 0.5
- ☐ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >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)

October 24, 2002 Revision

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: Rocky Fork Distance from Evaluated Stream 0.8mi

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

USGS Quadrangle Name: New Albany, OH NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Franklin Township / City: Gahanna

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 2/25/22 Quantity: 0.8"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 15%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

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

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

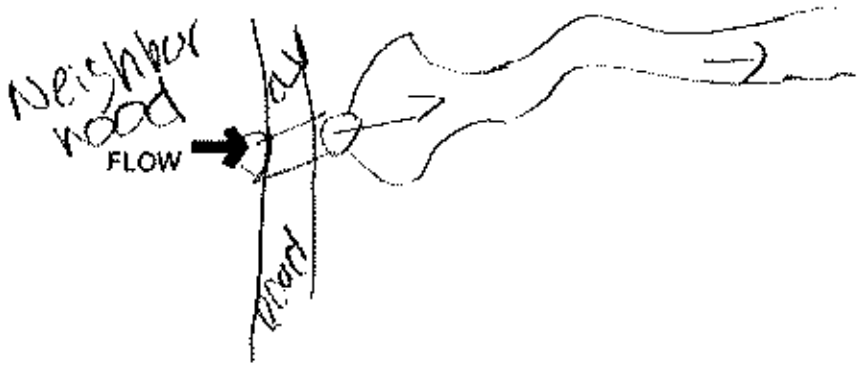
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

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



5002

OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 61

SITE NAME/LOCATION DCHP

SITE NUMBER 5002 RIVER BASIN Scioto DRAINAGE AREA (mi²) 0.3mi²

LENGTH OF STREAM REACH (ft) 200 LAT. 40.01017 LONG. 82.83406 RIVER CODE _____ RIVER MILE _____

DATE 8/2/17 SCORER REK COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]		☒	SILT [3 pts]	80
☐	BOULDER (>256 mm) [16 pts]		☐	LEAF PACK/WOODY DEBRIS [3 pts]	
☐	BEDROCK [16 pt]		☐	FINE DETRITUS [3 pts]	
☐	COBBLE (65-256 mm) [12 pts]	5	☐	CLAY or HARDPAN [0 pt]	
☒	GRAVEL (2-64 mm) [9 pts]	10	☐	MUCK [0 pts]	
☐	SAND (<2 mm) [6 pts]		☐	ARTIFICIAL [3 pts]	5

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 5 (A) 12 (B) 4

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI Metric Points

Substrate Max = 40: 16

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐	> 30 centimeters [20 pts]	☒	> 5 cm - 10 cm [15 pts]
☐	> 22.5 - 30 cm [30 pts]	☐	< 5 cm [5 pts]
☐	> 10 - 22.5 cm [25 pts]	☐	NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 8

Pool Depth Max = 30: 15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

☒	> 4.0 meters (> 13') [30 pts]	☐	> 1.0 m - 1.5 m (> 3' 3" - 4' 6") [15 pts]
☐	> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	☐	≤ 1.0 m (≤ 3' 3") [5 pts]
☐	> 1.5 m - 3.0 m (> 9' 7" - 4' 6") [20 pts]		

COMMENTS Widened @ CLW xing AVERAGE BANKFULL WIDTH (meters) 4.6

Bankfull Width Max=30: 30

This information must also be completed

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

RIPARIAN WIDTH L	R	(Per Bank)	FLOODPLAIN QUALITY L	R	(Most Predominant per Bank)	L	R	
☐	☐	Wide >10m	☒	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☒	☒	Moderate 5-10m	☐	☐	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☒	☒	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS _____

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

☒	Stream Flowing	☐	Moist Channel, isolated pools, no flow (Intermittent)
☐	Subsurface flow with isolated pools (Interstitial)	☐	Dry channel, no water (Ephemeral)

COMMENTS _____

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

☒	None	☐	1.0	☐	2.0	☐	3.0
☐	0.5	☐	1.5	☐	2.5	☐	>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)

October 24, 2002 Revision

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: Rocky Fork Distance from Evaluated Stream 0.8 mi.

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

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

County: Franklin Township / City: Gahanna

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 2/25/22 Quantity: 0.8"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 10%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

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

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

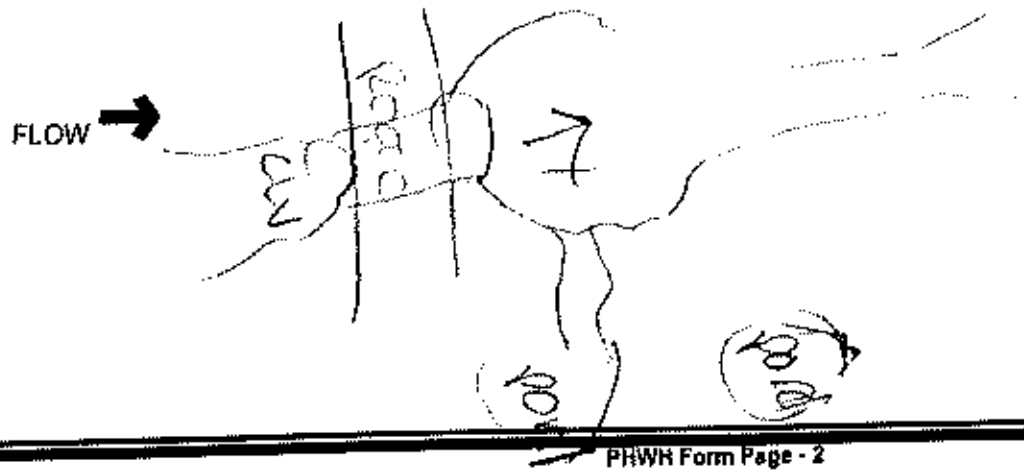
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

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



5005

OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 41

SITE NAME/LOCATION NCHP

SITE NUMBER 5005 RIVER BASIN Scioto River DRAINAGE AREA (mi^2) 2.01m.^{2}

LENGTH OF STREAM REACH (ft) 80' LAT 40.00240 LONG -82.93516 RIVER CODE _____ RIVER MILE _____

DATE 3/2/22 SCORER RLEK COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

Culvert at, Rd King

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]		☐☒	SILT [3 pt]	40
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]		☐☐	CLAY or HARDPAN [0 pt]	
☐☐	GRAVEL (2-64 mm) [9 pts]		☐☐	MUCK [0 pts]	
☒☐	SAND (<2 mm) [6 pts]	60	☐☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0

(A) 9 (B) 2

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **TOTAL NUMBER OF SUBSTRATE TYPES:**

HHEI Metric Points

Substrate Max = 40

11

A + B

2. Maximum Pool Depth *(Measure the maximum pool depth within the 61 meter (200 ft)* evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☒ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ **MAXIMUM POOL DEPTH (centimeters):** 9

Pool Depth Max = 30

15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

- ☐ > 4.0 meters (> 13') [30 pts]
- ☐ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
- ☐ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]
- ☒ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (≤ 3' 3") [5 pts]

COMMENTS _____ **AVERAGE BANKFULL WIDTH (meters)** 1.7

Bankfull Width Max=30

13

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) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R	L	R
☐	☐ Wide >10m	☐	☐ Mature Forest, Wetland	☐	☐ Conservation Tillage
☐	☐ Moderate 5-10m	☒	☒ Immature Forest, Shrub or Old Field	☑	☑ Urban or Industrial
☒	☒ Narrow <5m	☐	☐ Residential, Park, New Field	☐	☐ Open Pasture, Row Crop
☐	☐ None	☐	☐ Fenced Pasture	☐	☐ Mining or Construction

COMMENTS _____

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

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

- ☒ None
- ☐ 0.5
- ☐ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >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: Rocky Fork Distance from Evaluated Stream 1.3

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

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

County: Franklin Township / City: Gahanna

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 2/25/12 Quantity: 0.8"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 20%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

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

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

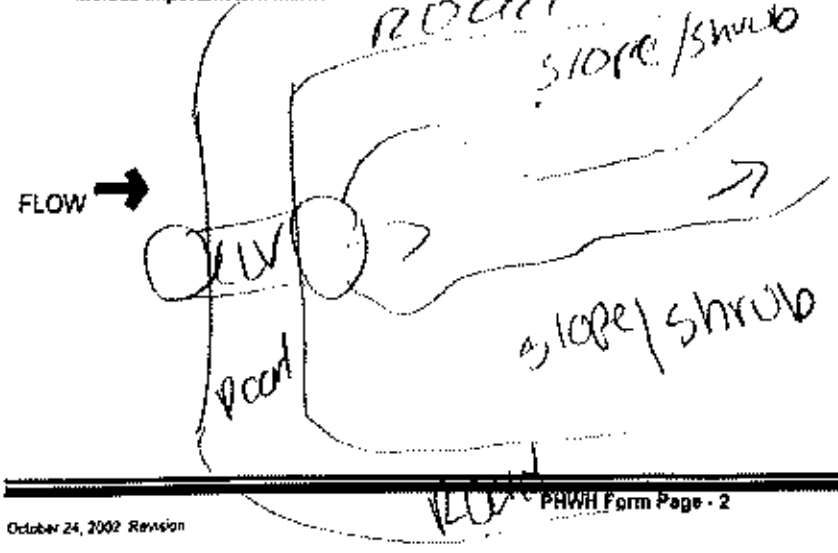
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) ___

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



5003

OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 47

SITE NAME/LOCATION NCHP

SITE NUMBER 5003 RIVER BASIN Scioto River DRAINAGE AREA (mi²) 0.04m.²

LENGTH OF STREAM REACH (ft) 105 LAT: 40.005079 LONG: -82.834662 RIVER CODE _____ RIVER MILE _____

DATE 3/2/22 SCORER RFK COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

Culverted, road xing

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]		☒	SILT [3 pt]	40
☐	BOULDER (>256 mm) [16 pts]		☐	LEAF PACK/WOODY DEBRIS [3 pts]	10
☐	BEDROCK [16 pt]		☐	FINE DETRITUS [3 pts]	
☐	COBBLE (65-256 mm) [12 pts]	10	☐	CLAY or HARDPAN [0 pt]	
☒	GRAVEL (2-64 mm) [9 pts]	30	☐	MUCK [0 pts]	
☐	SAND (<2 mm) [6 pts]	10	☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 10 (A) 12

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

(B) 5 **TOTAL NUMBER OF SUBSTRATE TYPES:**

HHEI Metric Points

Substrate Max = 40 17

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐	> 30 centimeters [20 pts]	☒	> 5 cm - 10 cm [15 pts]
☐	> 22.5 - 30 cm [30 pts]	☐	< 5 cm [5 pts]
☐	> 10 - 22.5 cm [25 pts]	☐	NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ **MAXIMUM POOL DEPTH (centimeters):** 10

Pool Depth Max = 30 15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

☐	> 4.0 meters (> 13') [30 pts]	☒	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐	> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	☐	≤ 1.0 m (≤ 3' 3") [5 pts]
☐	> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		

COMMENTS _____ **AVERAGE BANKFULL WIDTH (meters)** 0.6

Bankfull Width Max=30 15

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) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R	L	R	
☐	☐	Wide >10m	☐	☐	Mature Forest, Wetland	☐ ☐ Conservation Tillage
☒	☒	Moderate 5-10m	☒	☒	Immature Forest, Shrub or Old Field	☒ ☒ Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☐ ☐ Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐ ☐ Mining or Construction

COMMENTS _____

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

☒ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

☒ None	☐ 1.0	☐ 2.0	☐ 3.0
☐ 0.5	☐ 1.5	☐ 2.5	☐ >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)

October 24, 2002 Revision

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: Rocky Fork Distance from Evaluated Stream 1.1 mi.

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

USGS Quadrangle Name: New Albany, OH NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Franklin Township / City: Gahanna

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 2/25/22 Quantity: 0.8"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 15

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

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

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

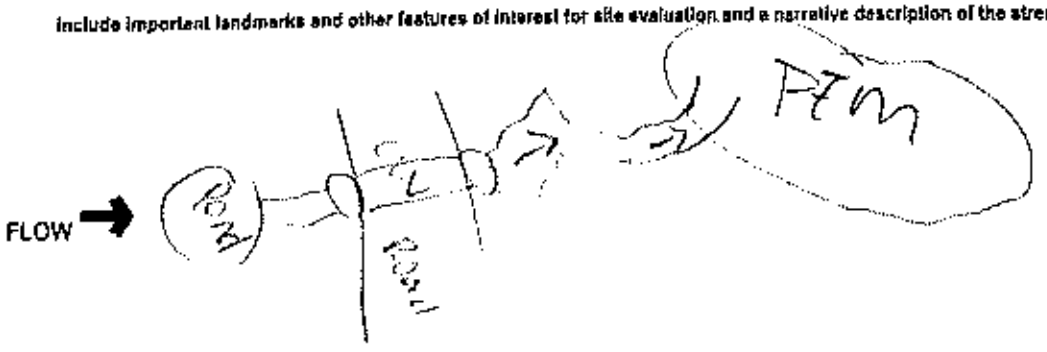
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) Y Voucher? (Y/N) N

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



5000

OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 44

SITE NAME/LOCATION NCHP

SITE NUMBER 5000 RIVER BASIN Scioto River DRAINAGE AREA (mi²) 0.11mi²

LENGTH OF STREAM REACH (ft) 200' LAT 40.007994 LONG. -82.895057 RIVER CODE _____ RIVER MILE _____

DATE 3/2/22 SCORER REK COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☑ RECENT OR NO RECOVERY — culvert, road ditch

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]		☐	SILT [3 pt]	15
☐	BOULDER (>256 mm) [16 pts]		☐	LEAF PACK/WOODY DEBRIS [3 pts]	
☐	BEDROCK [16 pt]		☐	FINE DETRITUS [3 pts]	
☐	COBBLE (65-256 mm) [12 pts]	5	☐	CLAY or HARDPAN [0 pt]	
☐	GRAVEL (2-64 mm) [9 pts]	10	☐	MUCK [0 pts]	
☒	SAND (<2 mm) [6 pts]	100	☐	ARTIFICIAL [3 pts]	10

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 5 (A) 9 (B) 5

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI Metric Points

Substrate Max = 40: 14

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☒ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 3

Pool Depth Max = 30: 5

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

- ☐ > 4.0 meters (> 13') [30 pts]
- ☐ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
- ☐ > 1.5 m - 3.0 m (> 9' 7" - 4' 6") [20 pts]
- ☒ > 1.0 m - 1.5 m (> 3' 3" - 4' 6") [15 pts]
- ☐ ≤ 1.0 m (≤ 3' 3") [5 pts]

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 1

Bankfull Width Max=30: 15

This information must also be completed

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

RIPARIAN WIDTH L	R	(Per Bank)	FLOODPLAIN QUALITY L	R	(Most Predominant per Bank)	L	R	
☐	☐	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☐	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☒	☒	Narrow <5m	☒	☒	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS _____

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

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

☒ None	☐ 1.0	☐ 2.0	☐ 3.0
☐ 0.5	☐ 1.5	☐ 2.5	☐ >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)

October 24, 2002 Revision

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: Big Walnut Creek Distance from Evaluated Stream 0.0

☐ 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: New Albany NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Franklin Township / City: Gahanna

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 2/25/22 Quantity: 0.8"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 70%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id, and attach results) Lab Number: _____

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

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

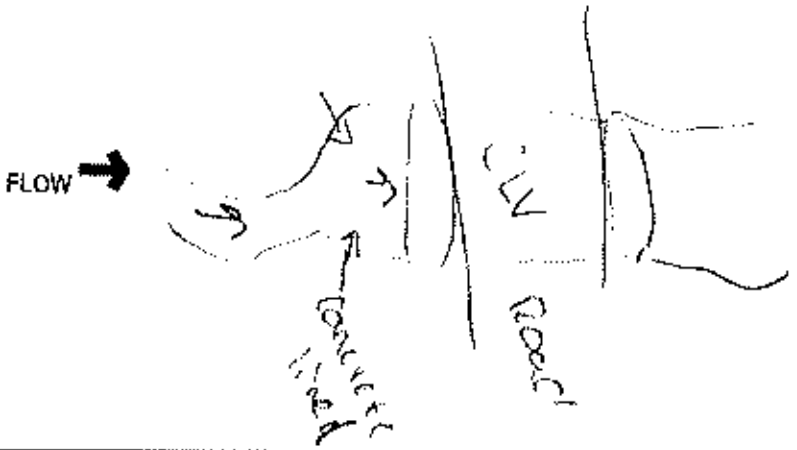
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

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



OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 66

SITE NAME/LOCATION NCHP
SITE NUMBER 5007 RIVER BASIN Scioto DRAINAGE AREA (mi²) 0.45mi²
LENGTH OF STREAM REACH (ft) 150' LAT. 40.004493 LONG. -82.86282 RIVER CODE ______ RIVER MILE ______
DATE 3/2/22 SCORER REK COMMENTS ______

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☒ RECENT OR NO RECOVERY
Channelized, culvert, recent dist.

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]		☐☐	SILT [3 pt]	20
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☒	COBBLE (65-256 mm) [12 pts]	20	☐☐	CLAY or HARDPAN [0 pt]	
☒☐	GRAVEL (2-64 mm) [9 pts]	30	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]	20	☐☐	ARTIFICIAL [3 pts]	10

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 20

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: (A) 21

TOTAL NUMBER OF SUBSTRATE TYPES: (B) 5

HHEI Metric Points — Substrate Max = 40: 26 (A + B)

2. Maximum Pool Depth *(Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes)* (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☒ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS ______ MAXIMUM POOL DEPTH (centimeters): 10

Pool Depth Max = 30: 15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

- ☐ > 4.0 meters (> 13') [30 pts]
- ☒ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
- ☐ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (≤ 3' 3") [5 pts]

COMMENTS ______ AVERAGE BANKFULL WIDTH (meters): 3

Bankfull Width Max=30: 25

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) L R		FLOODPLAIN QUALITY (Most Predominant per Bank) L R		L R	
☐☐	Wide >10m	☐☐	Mature Forest, Wetland	☐☐	Conservation Tillage
☐☐	Moderate 5-10m	☐☐	Immature Forest, Shrub or Old Field	☒☒	Urban or Industrial
☒☒	Narrow <5m	☒☒	Residential, Park, New Field	☐☐	Open Pasture, Row Crop
☐☐	None	☐☐	Fenced Pasture	☐☐	Mining or Construction

COMMENTS ______

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

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS ______

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

- ☒ None
- ☐ 0.5
- ☐ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >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: Big Walnut Creek Distance from Evaluated Stream: 0.58 mi

☐ 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: New Albany NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Franklin Township / City: Gahanna

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 2/25/22 Quantity: 0.8"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 75%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

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

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

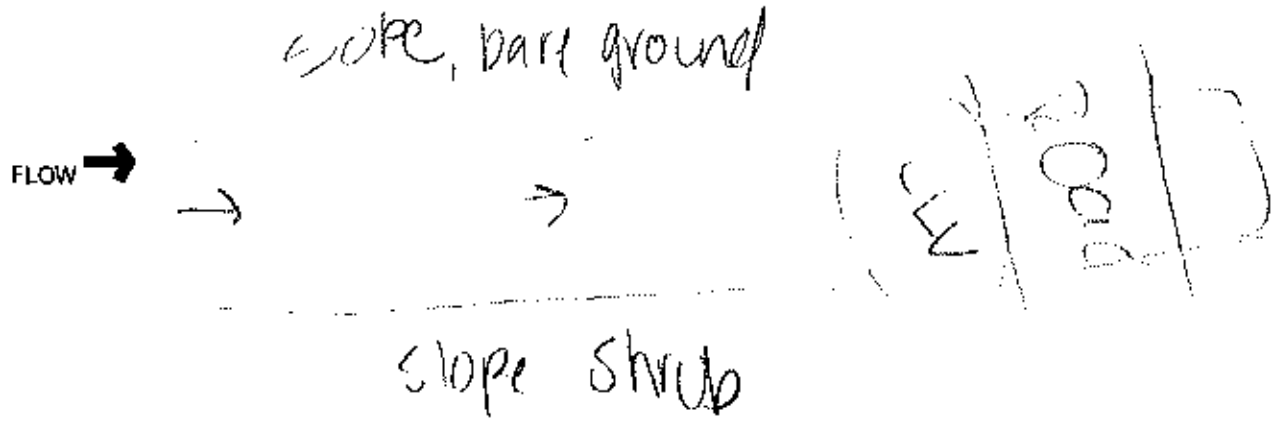
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

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



OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 106

SITE NAME/LOCATION NCHP

SITE NUMBER 0008 RIVER BASIN Scioto DRAINAGE AREA (mi²) <0.1 mi²

LENGTH OF STREAM REACH (ft) 200' LAT. 40.020419 LONG. -82.80390 RIVER CODE _____ RIVER MILE _____

DATE 3/2/22 SCORER REK COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

Channelized

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]		☐	SILT [3 pt]	20
☐	BOULDER (>256 mm) [16 pts]		☐	LEAF PACK/WOODY DEBRIS [3 pts]	
☐	BEDROCK [16 pt]		☐	FINE DETRITUS [3 pts]	
☒	COBBLE (65-256 mm) [12 pts]	20	☐	CLAY or HARDPAN [0 pt]	
☒	GRAVEL (2-64 mm) [9 pts]	30	☐	MUCK [0 pts]	
☐	SAND (<2 mm) [6 pts]	20	☐	ARTIFICIAL [3 pts]	10

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 20 (A) 2 (B) 5

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **TOTAL NUMBER OF SUBSTRATE TYPES:**

HHEI Metric Points

Substrate Max = 40

26

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☒ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ **MAXIMUM POOL DEPTH (centimeters):** 10

Pool Depth Max = 30

15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

- ☐ > 4.0 meters (> 13') [30 pts]
- ☒ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
- ☐ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (≤ 3' 3") [5 pts]

COMMENTS _____ **AVERAGE BANKFULL WIDTH (meters)** 3

Bankfull Width Max=30

25

This Information must also be completed

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

RIPARIAN WIDTH L	R	(Per Bank)	FLOODPLAIN QUALITY L	R	(Most Predominant per Bank)	L	R	
☐	☐	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☐	Immature Forest, Shrub or Old Field	☐	☒	Urban or Industrial
☒	☒	Narrow <5m	☒	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS _____

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

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, Isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

- ☒ None
- ☐ 0.5
- ☐ 1.0
- ☐ 1.5
- ☐ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >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)

October 24, 2002 Revision

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: Big Walnut Creek Distance from Evaluated Stream 0.97m.

☐ 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: New Albany NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Franklin Township / City: Gahanna

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 2/25/12 Quantity: 0.8"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 85%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

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

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

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

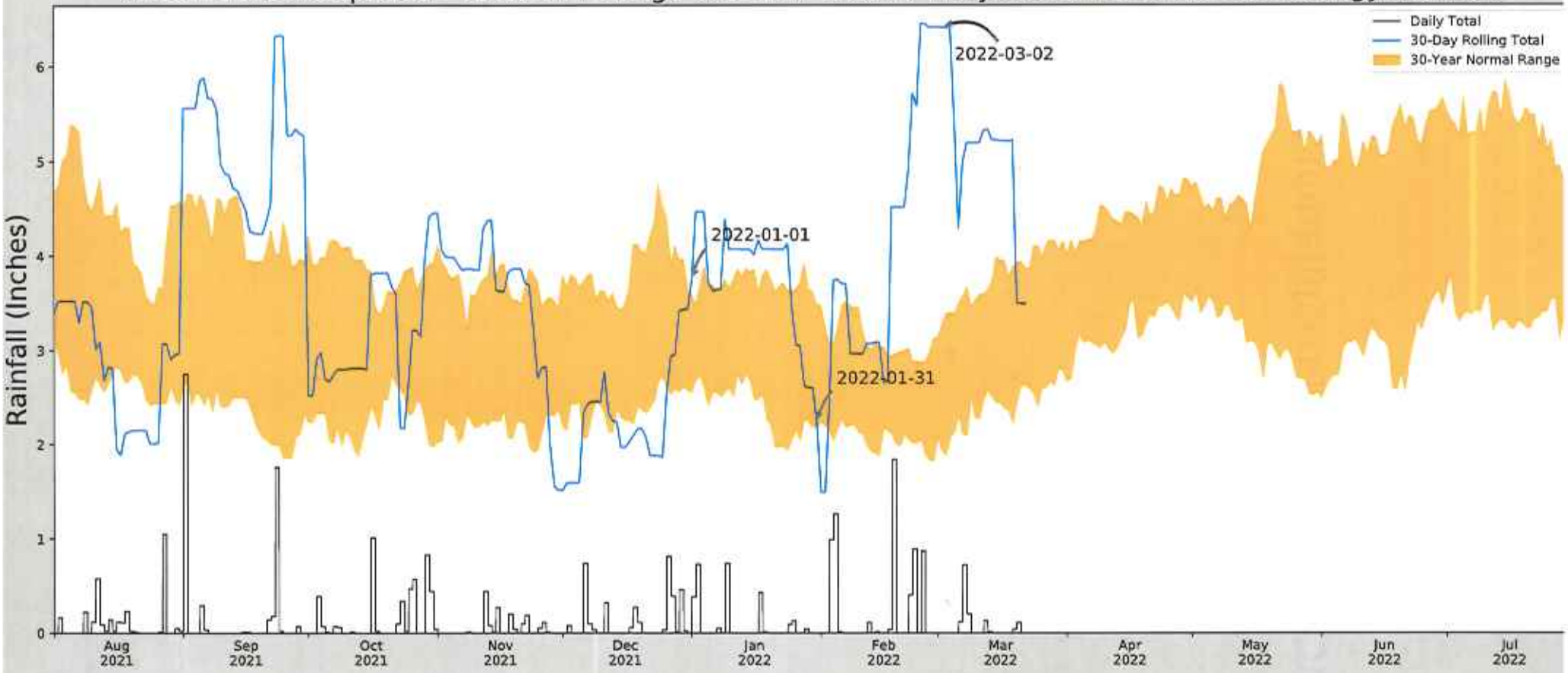
residential

FLOW →

Colliers
Engineering
& Design

Appendix C | USACE Antecedent Precipitation Tool

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



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

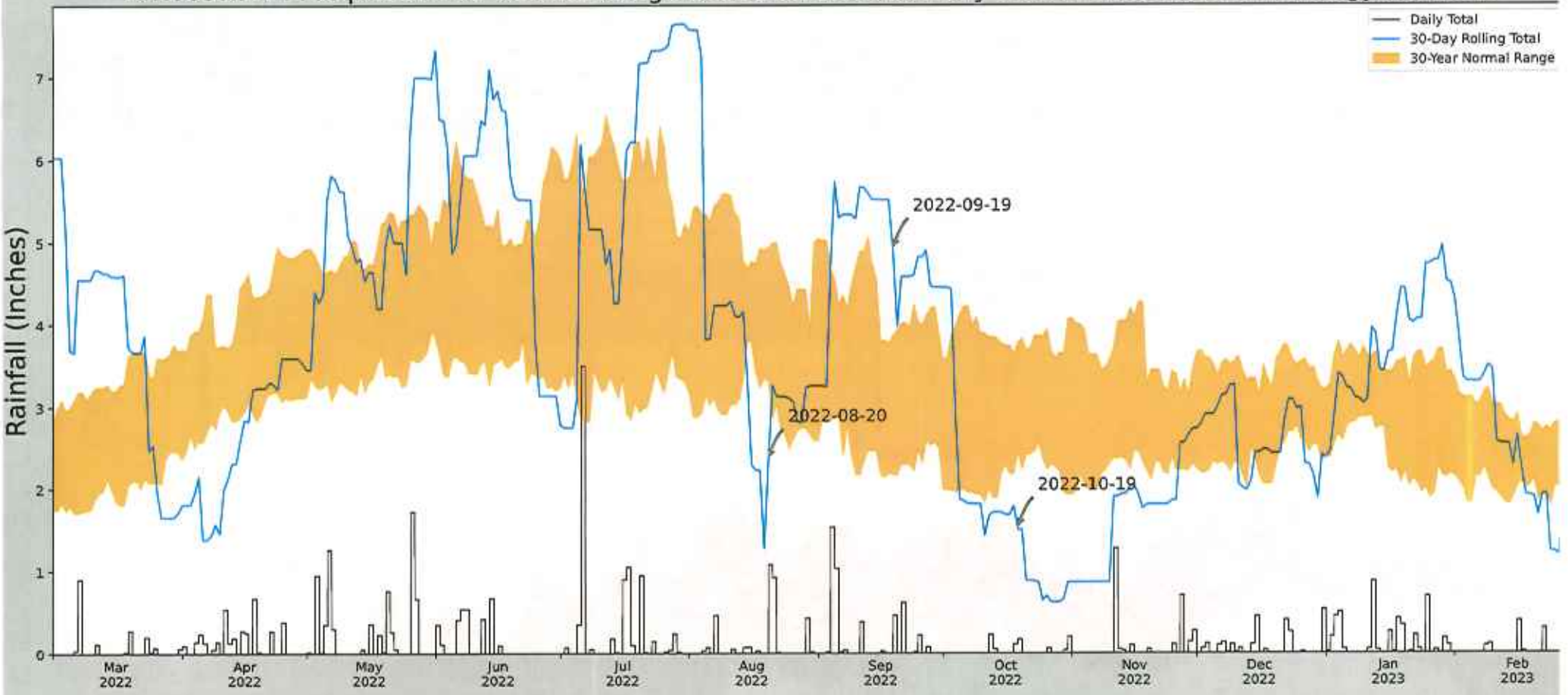
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-03-02	1.933071	3.275197	6.413386	Wet	3	3	9
2022-01-31	2.189764	3.494882	2.220473	Normal	2	2	4
2022-01-01	2.555906	3.585433	3.736221	Wet	3	1	3
Result							Wetter than Normal - 16

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

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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

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



Coordinates	40.021777, -82.950994
Observation Date	2022-10-19
Elevation (ft)	834.369
Drought Index (PDSI)	Moderate wetness
WebWIMP H_2O Balance	Wet Season

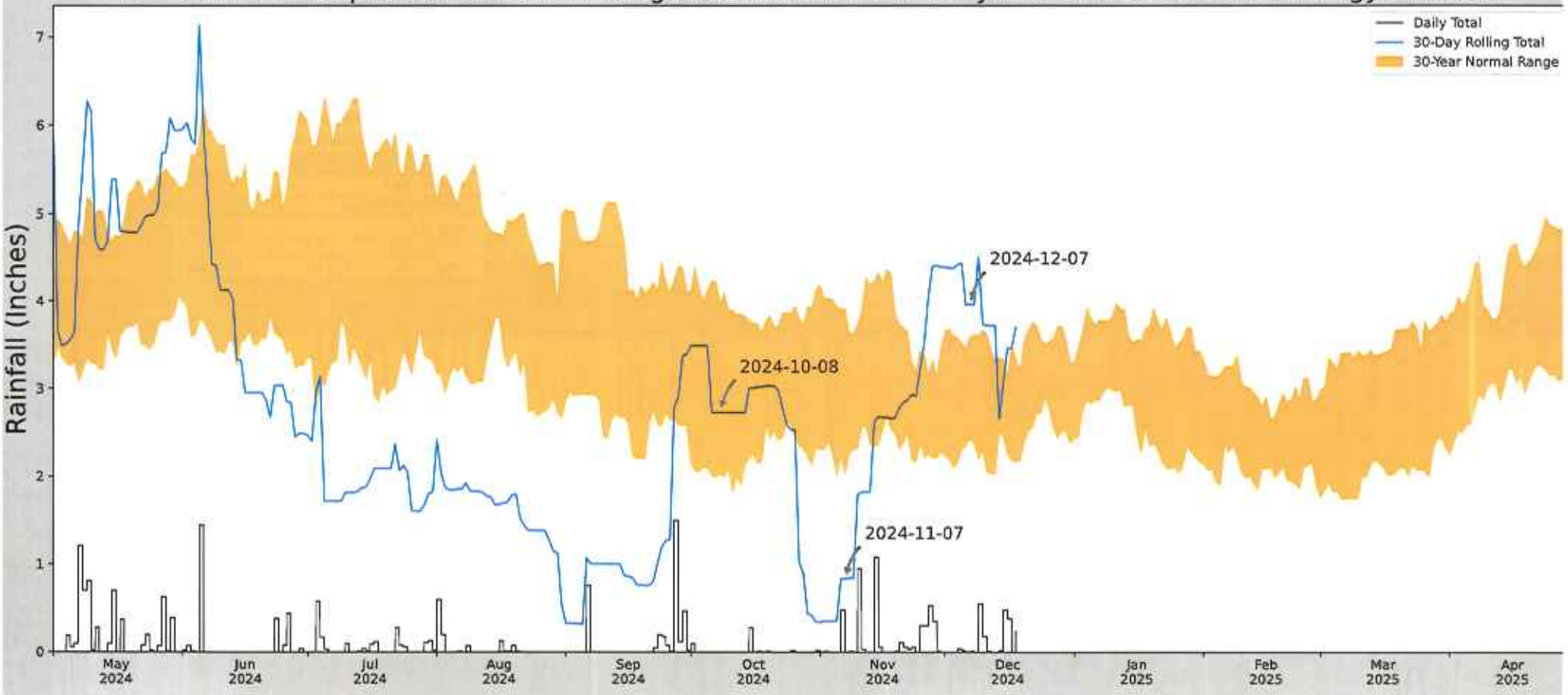
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-10-19	2.468504	3.775197	1.496063	Dry	1	3	3
2022-09-19	2.169685	3.864567	4.897638	Wet	3	2	6
2022-08-20	3.333858	4.935827	2.34252	Dry	1	1	1
Result							Normal Conditions - 10

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
COLUMBUS-HAP CREMEAN WP	40.0603, -82.8942	831.037	4.014	3.332	1.82	10742	90
COLUMBUS 8.2 NE	40.0639, -82.8673	955.053	1.444	124.016	0.829	7	0
COLUMBUS 3.5 NE	40.0287, -82.9477	833.005	3.574	1.968	1.615	2	0
WESTERVILLE 0.2 WNW	40.1226, -82.9213	886.155	4.537	55.118	2.292	43	0
JOHN GLENN INTL AP	39.9906, -82.8769	810.039	4.902	20.998	2.309	559	0

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



Coordinates	40.020811, -82.922588
Observation Date	2024-12-07
Elevation (ft)	828.822
Drought Index (PDSI)	Severe drought (2024-11)
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-12-07	2.442126	3.587795	3.964567	Wet	3	3	9
2024-11-07	2.036221	3.903937	0.834646	Dry	1	2	2
2024-10-08	2.032284	3.978347	2.728347	Normal	2	1	2
Result							Normal Conditions - 13

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
COLUMBUS-HAP CREMEAN WP	40.0603, -82.8942	831.037	3.114	2.215	1.408	10771	78
COLUMBUS 8.2 NE	40.0639, -82.8673	955.053	1.444	124.016	0.829	8	11
GAHANNA 1.2 NNE	40.0408, -82.868	874.016	1.933	42.979	0.953	0	1
COLUMBUS 3.5 NE	40.0287, -82.9477	833.005	3.574	1.968	1.615	2	0
WESTERVILLE 3.0 ESE	40.1107, -82.8622	875.0	3.871	43.963	1.912	1	0
WESTERVILLE 0.2 WNW	40.1226, -82.9213	886.155	4.537	55.118	2.292	43	0
JOHN GLENN INTL AP	39.9906, -82.8769	810.039	4.902	20.998	2.309	528	0

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Appendix D | Photographs

Site Photographs

December 17, 2024
CED Project No. 21004202A

Photo #1 –Looking east at Wetland 8; near wetland flag W8.4

Site Photographs

December 17, 2024
CED Project No. 21004202A

Photo #2: Looking at west at upland woodlands near wetland flag W8.4.

Site Photographs

December 17, 2024
CED Project No. 21004202A

Photo #3: Looking north at Wetland 9; near wetland flag W9.5

Site Photographs

December 17, 2024
CED Project No. 21004202A

Photo #4: Looking at west at upland maintained lawn/early successional vegetation near wetland flag W9.5.

Site Photographs

December 17, 2024
CED Project No. 21004202A

Photo #5: Looking north at typical conditions at Stelzer inlet.

Site Photographs

December 17, 2024
CED Project No. 21004202A

Photo #6: Looking north at typical conditions at Stygler inlet.

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Attachment D Right-of-Way Contact List/Affected Property Owners

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

Franklin County	
Kevin L. Boyce	Erica C. Crawley
Franklin County Commissioner	Franklin County Commissioner
President	373 S. High Street
373 S. High Street	Columbus, Ohio 43215
Columbus, Ohio 43215	614-525-3600
614-525-3600	
John O'Grady	Maryellen O'Shaughnessy
Franklin County Commissioner	Clerk of Courts
373 S. High Street	373 S. High Street
Columbus, Ohio 43215	Columbus, Ohio 43215
614-525-3600	614-525-3600
Brad Foster, P.E., P.S.	
Franklin County Engineer	
970 Dublin Road	
Columbus, Ohio 43215	
614-525-3500	

City of Gahanna	
Laurie Jadwin	Merisa Bowers
City of Gahanna Mayor	Gahanna Council President Member at Large
200 S Hamilton Rd	200 S Hamilton Rd
Gahanna, OH 43230	Gahanna, OH 43230
614-342-4045	614-342-4090
Trenton Weaver	Michael Schnetzer
Gahanna Council Vice President	Gahanna Council Finance Chair
200 S Hamilton Rd	200 S Hamilton Rd
Gahanna, OH 43230	Gahanna, OH 43230
614-342-4090	614-342-4090
Jamille Jones	Nancy McGregor
Gahanna Council Member at Large	Gahanna Council Member at Large
200 S Hamilton Rd	200 S Hamilton Rd
Gahanna, OH 43230	Gahanna, OH 43230
614-342-4090	614-342-4090
Kaylee Padova	Stephen Renner
Gahanna Council Member	Gahanna Council Member
200 S Hamilton Rd	200 S Hamilton Rd
Gahanna, OH 43230	Gahanna, OH 43230
614-342-4090	614-342-4090
Jeremy VanMeter	Sophia McGuire
Gahanna Clerk of Council	City of Gahanna Deputy Clerk of Council
200 S Hamilton Rd	200 S Hamilton Rd
Gahanna, OH 43230	Gahanna, OH 43230
614-342-4090	614-342-4090

Mifflin Township	
Kevin Cavener	Richard Angelou
Mifflin Township Chair	Mifflin Township Vice-Chair
400 W. Johnstown Rd., Suite 200	400 W. Johnstown Rd., Suite 200
Gahanna, OH 43230	Gahanna, OH 43230
(614) 471-4494	(614) 471-4494
Jamie Leeseberg	Kelly Cararo
Mifflin Township Trustee	Mifflin Township Fiscal Officer
400 W. Johnstown Rd., Suite 200	400 W. Johnstown Rd., Sure 200
Gahanna, OH 43230	Gahanna, OH 43230
(614) 471-4494	(614) 471-4494

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
614-645-7671	614-645-7671
Rob Dorans	Nicholas J. Bankston
City of Columbus, Council President	Columbus City Council
Pro Tempore	90 W. Broad Street
90 W. Broad Street	Columbus, Ohio 43215
Columbus, Ohio 43215	614-645-7671
Lourdes Barroso de Padilla	Nancy Day-Achauer
Columbus City Council	Columbus City Council
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
614-645-7671	614-645-7671
Shayla Favor	Melissa Green
Columbus City Council	Columbus City Council
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
614-645-7671	614-645-7671
Emmanuel V. Remy	Christopher L. Wyche
Columbus City Council	Columbus City Council
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
614-645-7671	614-645-7671
Andrea Blevins	Toya Johnson
City of Columbus City Clerk	City of Columbus Deputy City Clerk
90 W. Broad Street	90 W. Broad Street
Columbus, Ohio 43215	Columbus, Ohio 43215
614-645-7671	614-645-7671

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

PARCELID	Property Class Description	Parcel Address	Parcel City	Parcel Zip Code	Owner Name 1	Owner Name 2	Mailing Address 1	Mailing Address 2
010-006485	APARTMENTS 40+ FAMILY	2444 GATEWOOD RD	COLUMBUS	43219	AGLER GREEN LIMITED PARTNERSHIP		PO BOX 92202	COPPELL TX 75019-9208
010-012075	VACANT COMMERCIAL LAND	3402 E AGLER RD	COLUMBUS	43219	AFRIKAN VILLAGE LLC		2435 STELZER RD	COLUMBUS OH 43219
010-013357	EXEMPT PROPERTY OWNED BY BOE	3505 BRENTNELL AV	COLUMBUS	43211	BOARD OF EDUCATION OF THE COLUMBUS CITY SCHOOL DISTRICT		270 E STATE ST	COLUMBUS OH 43215-4312
010-073672	VACANT PLATTED RES LAND	WEDGE ST	COLUMBUS	43211	BRIDGEWALK BIRDIE LLC		52 E GAY ST	COLUMBUS OH 43215
010-073678	VACANT PLATTED RES LAND	WEDGE ST	COLUMBUS	43211	BRIDGEWALK BIRDIE LLC		52 E GAY ST	COLUMBUS OH 43215
010-109830	APARTMENTS 40+ FAMILY	3209 - 3227 CHERYL CT	COLUMBUS	43219	AGLER GREEN LIMITED PARTNERSHIP		PO BOX 92202	COPPELL TX 75019-9208
010-107906	VACANT COMMERCIAL LAND	AGLER RD	COLUMBUS	43219	COLUMBUS CHRISTIAN CENTER INC		2300 N CASSADY AVE	COLUMBUS OH 43219
010-109008	EXEMPT PROPERTY OWNED BY PARK DIST	3470 ABERDEEN AV	COLUMBUS	43231	CITY OF COLUMBUS		90 W BROAD ST RM 425	COLUMBUS, OH 43215
010-110997	OTHER RETAIL STRUCTURE	3140 AGLER RD	COLUMBUS	43219	KWK INVESTMENTS LLC		4785 BRITTONHURST DR	HILLIARD OH 43026
010-115462	APARTMENTS 40+ FAMILY	3160 - 3199 AGLER RD	COLUMBUS	43219	AGLER GREEN LIMITED PARTNERSHIP		1225 DUBLIN RD STE 220	COLUMBUS OH 43215
010-123468	HOUSING-ELDERLY/OTHER COMM	3426 CORSAIR COMMONS DR	COLUMBUS	43219	AGLER ELDERLY HOUSING LP		1263 E BROAD ST	COLUMBUS, OH 43205-1429
010-129757	EXEMPT PROPERTY OWNED BY COLLEGES	3440 DAWNLIGHT AV	COLUMBUS	43211	KIPP COLUMBUS FOUNDATION		2900 INSPIRE DR	COLUMBUS OH 43224
010-137508	ONE-FAMILY DWLG ON PLATTED LOT	3146 AGLER RD	COLUMBUS	43219	OPEN WATER 6090 LLC		3146 AGLER RD	COLUMBUS OH 43219
010-137510	ONE-FAMILY DWLG ON PLATTED LOT	3152 AGLER RD	COLUMBUS	43219	CHAUDHRY ILYAS		3146 AGLER RD	COLUMBUS OH 43219
010-137521	INDUSTRIAL WHSE CENTERS	3101 AGLER RD	COLUMBUS	43219	MIDWEST INDUSTRIAL AGLER ROAD OWNER LLC		2001 ROSS AVE STE 3400	DALLAS TX 75201
010-137522	EXEMPT PROPERTY OWNED BY PARK DIST	2497 SUNBURY RD	COLUMBUS	43219	CITY OF COLUMBUS OHIO		90 W BROAD ST RM 425	COLUMBUS, OH 43215
010-140574	VAC UNPLT RES LAND: 10-19.99 AC	AGLER RD	COLUMBUS	43219	TRUSTEES AGLER RD PARCEL 2 LLC		PO BOX 24550	COLUMBUS OH 43224
010-171992	VACANT PLATTED RES LAND	MELICK DR	COLUMBUS	43211	BRIDGEWALK BIRDIE LLC		52 E GAY ST	COLUMBUS OH 43215
010-171993	VACANT PLATTED RES LAND	MELICK DR	COLUMBUS	43211	BRIDGEWALK BIRDIE LLC		52 E GAY ST	COLUMBUS OH 43215
010-171994	VACANT PLATTED RES LAND	MELICK DR	COLUMBUS	43211	BRIDGEWALK BIRDIE LLC		52 E GAY ST	COLUMBUS OH 43215
010-171995	VACANT PLATTED RES LAND	MELICK DR	COLUMBUS	43211	BRIDGEWALK BIRDIE LLC		52 E GAY ST	COLUMBUS OH 43215
010-171996	VACANT PLATTED RES LAND	MELICK DR	COLUMBUS	43211	BRIDGEWALK BIRDIE LLC		52 E GAY ST	COLUMBUS OH 43215
010-171997	VACANT PLATTED RES LAND	MELICK DR	COLUMBUS	43211	BRIDGEWALK BIRDIE LLC		52 E GAY ST	COLUMBUS OH 43215
010-171998	VACANT PLATTED RES LAND	MELICK DR	COLUMBUS	43211	BRIDGEWALK BIRDIE LLC		52 E GAY ST	COLUMBUS OH 43215
010-171999	VACANT PLATTED RES LAND	MELICK DR	COLUMBUS	43211	BRIDGEWALK BIRDIE LLC		52 E GAY ST	COLUMBUS OH 43215
010-184061	VACANT PLATTED RES LAND	CLUBHOUSE DR	COLUMBUS	43224	BRIDGEWALK BIRDIE LLC		52 E GAY ST	COLUMBUS OH 43215
010-216362	APARTMENTS 40+ FAMILY	2100 AGLER RD	COLUMBUS	43219	AGLER FAMILY HOUSING LP		1263 E BROAD ST	COLUMBUS OH 43205-1429
010-216456	ONE-FAMILY DWLG ON PLATTED LOT	2429 SUNBURY RD	COLUMBUS	43219	WILLIAMS CHRISTOPHER STEPHEN		2429 SUNBURY RD	COLUMBUS, OH 43219-3500
010-218250	VACANT COMMERCIAL LAND	AGLER RD	COLUMBUS	43219	TRUSTEES AGLER RD PARCEL 2 LLC		PO BOX 24550	COLUMBUS OH 43224
010-222988	OTHER COMMERCIAL STRUCTURE	2747 AGLER RD	COLUMBUS	43224	FAITH MINISTRIES INC		2747 AGLER RD	COLUMBUS OH 43224
010-235556	CARWASH SELF SERVICE	2322 STELZER RD	COLUMBUS	43219	SPN PARTNERS LLC		1310 HARRISON POND DR	NEW ALBANY, OH 43219
010-235557	OTHER COMMERCIAL STRUCTURE	2300 CASSADY AV	COLUMBUS	43219	COLUMBUS CHRISTIAN CENTER INC		1763 E LAKEVIEW AVE	COLUMBUS OH 43224
010-240052	OFFICE BLDG 1 & 2 STORIES	3443 AGLER RD	COLUMBUS	43219	CHP AGLER ROAD OFFICE LP		3443 AGLER RD	COLUMBUS, OH 43219-3085
010-240056	WAREHOUSE: 26% TO 33% OFC	2500 CITYGATE DR	COLUMBUS	43219	BERTEC LLC		PO BOX 360358	COLUMBUS OH 43236
010-240057	OFFICE BLDG 1 & 2 STORIES	3493 AGLER RD	COLUMBUS	43219	AGLER LLC		2084 US HIGHWAY 68 S	BELLEFONTAINE OH 43311
010-247563	EXEMPT PROPERTY OWNED BY USA	3175 AGLER RD	COLUMBUS	43219	UNITED STATES POSTAL SERVICE		P O BOX 80565	PHILADELPHIA PA 19197
010-268080	ONE-FAMILY DWLG ON PLATTED LOT	2348 ASHPOINT ST	COLUMBUS	43219	DERRI ABDULAZAQ MOHAMMED	ALI SUAD A	2348 ASHPOINT ST	COLUMBUS, OH 43219
010-268081	ONE-FAMILY DWLG ON PLATTED LOT	2354 ASHPOINT ST	COLUMBUS	43219	CLARDY WENDY		2354 ASHPOINT ST	COLUMBUS OH 43219
010-268082	ONE-FAMILY DWLG ON PLATTED LOT	2360 ASHPOINT ST	COLUMBUS	43219	LINDSEY KELVIN A		2360 ASHPOINT ST	COLUMBUS OH 43219
010-268138	ONE-FAMILY DWLG ON PLATTED LOT	3583 ASHRIDGE ST	COLUMBUS	43219	GEBREWEDIN TSIGE		3982 WINDING PATH DR	CANAL WINCHESTER OH 43110
010-268139	ONE-FAMILY DWLG ON PLATTED LOT	3599 ASHRIDGE ST	COLUMBUS	43219	KING DIANA P		3599 ASHRIDGE ST	COLUMBUS OH 43219
010-268140	ONE-FAMILY DWLG ON PLATTED LOT	3605 ASHRIDGE ST	COLUMBUS	43219	FERADU WELDESILASSIE HAILU	SEUL WEDHIN	3605 ASHRIDGE ST	COLUMBUS OH 43219
010-268141	ONE-FAMILY DWLG ON PLATTED LOT	3611 ASHRIDGE ST	COLUMBUS	43219	BANGURA MOHAMAD		3611 ASHRIDGE ST	COLUMBUS OH 43219
010-268142	ONE-FAMILY DWLG ON PLATTED LOT	3617 ASHRIDGE ST	COLUMBUS	43219	LEE BEOM J TR	LEE UNDA Y TR	870 GALLATIN WAY	SUWANEE GA 30024
010-268143	ONE-FAMILY DWLG ON PLATTED LOT	3623 ASHRIDGE ST	COLUMBUS	43219	MAERA BARBARA A		3623 ASHRIDGE ST	COLUMBUS OH 43219
010-268144	ONE-FAMILY DWLG ON PLATTED LOT	3629 ASHRIDGE ST	COLUMBUS	43219	ANDROWS ALISSA M	RUFFVAN CALEB N	3629 ASHRIDGE ST	COLUMBUS OH 43219
010-268145	ONE-FAMILY DWLG ON PLATTED LOT	3635 ASHRIDGE ST	COLUMBUS	43219	AUSTIN RACHEL A		3635 ASHRIDGE ST	COLUMBUS OH 43219
010-268146	ONE-FAMILY DWLG ON PLATTED LOT	3641 ASHRIDGE ST	COLUMBUS	43219	FISHER AMY SARAH	FISHER SEAN MICHAEL	3641 ASHRIDGE ST	COLUMBUS OH 43219
010-268147	ONE-FAMILY DWLG ON PLATTED LOT	3647 ASHRIDGE ST	COLUMBUS	43219	MATHEW ANAND	GEORGE LEAH A	3647 ASHRIDGE ST	COLUMBUS OH 43219
010-268148	ONE-FAMILY DWLG ON PLATTED LOT	3653 ASHRIDGE ST	COLUMBUS	43219	FOSTER PROPCO II-HLD LP		1850 PARKWAY PL STE 900	MARIETTA GA 30067-8261
010-268149	ONE-FAMILY DWLG ON PLATTED LOT	3659 ASHRIDGE ST	COLUMBUS	43219	NOURI MARWIC	NOURI MARWIC	3659 ASHRIDGE ST	COLUMBUS OH 43219
010-268150	ONE-FAMILY DWLG ON PLATTED LOT	3665 ASHRIDGE ST	COLUMBUS	43219	ZHANG YJEI	HAGER CHRIS	3189 AUTUMN APPLAUSE DR	LEWIS CENTER OH 43035
010-268151	ONE-FAMILY DWLG ON PLATTED LOT	3671 ASHRIDGE ST	COLUMBUS	43219	TESFAMIKE GIRWAY	GEBRESELASIE HADEN F	3671 ASHRIDGE ST	COLUMBUS OH 43219
010-268152	ONE-FAMILY DWLG ON PLATTED LOT	3677 ASHRIDGE ST	COLUMBUS	43219	TESFAI HABTEMARIAM A		3677 ASHRIDGE ST	COLUMBUS OH 43219
010-304243	EXEMPT PROPERTY OWNED BY CITIES	SUNBURY RD	COLUMBUS	43219	CITY OF COLUMBUS OHIO		90 W BROAD ST RM 425	COLUMBUS, OH 43215
025-000046	EXEMPT PROPERTY OWNED BY CITIES	MILL ST REAR	GAHANNA	43230	CITY OF GAHANNA		200 S HAMILTON RD	GAHANNA OH 43230-2996
025-000262	APARTMENTS 40+ FAMILY	12 JESS CA WAY	GAHANNA	43230	BAKER SAMUEL M-WOODS OF GAHANNA LLC		3319 E LIVINGSTON AVE	COLUMBUS OH 43227
025-000622	OTHER COMMERCIAL STRUCTURE	720 AGLER RD	GAHANNA	43230	GAHANNA RV & BOAT STORAGE LLC		4419 SE BOISE ST	PORTLAND OR 97206
025-000756	OFFICE BLDG 1 & 2 STORIES	122 JOHNSTOWN RD	GAHANNA	43230	BOROVETZ JEFFREY H TR		36 KESWICK DR	NEW ALBANY OH 43054-8876
025-000797	ONE-FAMILY DWLG UNPLT: 0-0.99 AC	162 JOHNSTOWN RD	GAHANNA	43230	CHALLOMILL ENTERPRISES INC		2701 TALLY HO LN	BLACKLICK OH 43004
025-000798	MEDICAL CLINICS AND OFFICES	175 JOHNSTOWN RD	GAHANNA	43230	ACCESS ENERGY LLC		175 JOHNSTOWN RD	GAHANNA OH 43230
025-000800	MEDICAL CLINICS AND OFFICES	144 JOHNSTOWN RD	GAHANNA	43230	WORMAN JOHN L TR	MARIE PALLA A TR	144 W JOHNSTOWN RD	COLUMBUS OH 43230
025-000808	OFFICE BLDG 1 & 2 STORIES	127 - 157 JOHNSTOWN RD	GAHANNA	43230	MILE HIGH INVESTMENTS LLC		149 W JOHNSTOWN RD	COLUMBUS OH 43230
025-000818	RESTAURANT/CAFETERIA OR BAR	333 AGLER RD	GAHANNA	43230	LEATHERBUCK LLC		5 E LONG ST STE 1250	COLUMBUS OH 43215
025-000820	GAS STATION/CONVEN FOOD STORE	180 JOHNSTOWN RD	GAHANNA	43230	UNITED DAIRY FARMERS INC		3955 MONTGOMERY RD	CINCINNATI OH 45212
025-000826	OFFICE BLDG 1 & 2 STORIES	168 JOHNSTOWN RD	GAHANNA	43230	TIME WARNER CABLE MIDWEST LLC		7820 CRESCENT EXEC DR	CHARLOTTE NC 28212
025-000827	ONE-FAMILY DWLG UNPLT: 0-0.99 AC	635 AGLER RD	GAHANNA	43230	SOUTHARD STEPHEN J		634 LAUREL RIDGE CT	GAHANNA, OH 43230-6105
025-000834	EXEMPT PROPERTY OWNED BY CITIES	JOHNSTOWN RD	GAHANNA	43230	CITY OF GAHANNA		200 S HAMILTON RD	GAHANNA OH 43230-2996
025-000842	ONE-FAMILY DWLG UNPLT: 0-0.99 AC	158 JOHNSTOWN RD	GAHANNA	43230	158 JOHNSTOWN ROAD LLC		2701 TALLY HO DR	BLACKLICK, OH 43004-9503
025-000855	NURSING HOME-FULL SRVC HOSP	123 JAMES RD	GAHANNA	43230	ACCESS ENERGY LLC		99 N BRICE RD STE 430D	COLUMBUS OH 43213
025-000882	APARTMENTS 40+ FAMILY	AGLER RD	GAHANNA	43230	BAKER SAMUEL M-WOODS OF GAHANNA LLC		3319 E LIVINGSTON AVE	COLUMBUS OH 43227
025-000883	EXEMPT PROPERTY OWNED BY CITIES	JOHNSTOWN RD	GAHANNA	43230	CITY OF GAHANNA		200 S HAMILTON RD	GAHANNA OH 43230-2996
025-000887	ONE-FAMILY DWLG UNPLT: 0-0.99 AC	507 AGLER RD	GAHANNA	43230	FULK SCOTT J		507 AGLER RD	COLUMBUS OH 43230
025-000890	MEDICAL CLINICS AND OFFICES	175 JOHNSTOWN RD	GAHANNA	43230	ACCESS ENERGY LLC		175 JOHNSTOWN RD	GAHANNA OH 43230
025-000899	APARTMENTS 40+ FAMILY	577 AGLER RD	GAHANNA	43230	BAKER SAMUEL M-WOODS OF GAHANNA LLC		3319 E LIVINGSTON AVE	COLUMBUS OH 43227
025-000937	EXEMPT PROPERTY OWNED BY CITIES	JOHNSTOWN RD	GAHANNA	43230	CITY OF GAHANNA		200 S HAMILTON RD	GAHANNA OH 43230-2996
025-000942	OTHER COMMERCIAL STRUCTURE	75 W JOHNSTOWN RD	GAHANNA	43230	CITY OF GAHANNA		200 S HAMILTON RD	GAHANNA OH 43230
025-000943	OFFICE BLDG 1 & 2 STORIES	151 JOHNSTOWN RD	GAHANNA	43230	W JOHNSTOWN RD LLC		3497 SUMMIT RD	PATASKALA OH 43062
025-000944	OFFICE BLDG 1 & 2 STORIES	109 JOHNSTOWN RD	GAHANNA	43230	W JOHNSTOWN RD LLC		3497 SUMMIT RD	PATASKALA OH 43062
025-000945	OFFICE BLDG 1 & 2 STORIES	JOHNSTOWN RD	GAHANNA	43230	W JOHNSTOWN RD LLC		3497 SUMMIT RD	PATASKALA OH 43062
025-000946	ONE-FAMILY DWLG ON PLATTED LOT	102 JAMES RD	GAHANNA	43230	TERRY GABE		102 JAMES RD	GAHANNA OH 43230
025-000947	ONE-FAMILY DWLG ON PLATTED LOT	110 JAMES RD	GAHANNA	43230	GARRETT MICHAEL E	GARRETT KAREN D	110 JAMES RD	COLUMBUS OH 43230
025-000972	APARTMENTS 40+ FAMILY	AGLER RD	GAHANNA	43230	BAKER SAMUEL M-WOODS OF GAHANNA LLC		3319 E LIVINGSTON AVE	COLUMBUS OH 43227
025-000973	VAC UNPLT RES LAND: 0-0.99 AC	643 AGLER RD	GAHANNA	43230	SOUTHARD JAMES G JR	SOUTHARD LENORA D	2256 MAPLE LEAF CT	BLACKLICK, OH 43004

025-000977	ONE-FAMILY DWLG UNPLT: 0-9.99 AC	455 AGLER RD	GAHANNA	43230	MCKEE ANNETTE LE	MCKEE ANNETTE R RMRO, DOUGAN THERESA RMRO, MCKEE-REESE JULIE RMRO, MCKEE ANNETTE R, MCKEE WILLIAM RMRO, BROWN BEATRICE R RMRO, MATHEWS MARYANN RMRO	455 ALDER ROAD	GAHANNA OH 43230
025-000978	APARTMENTS 40+ FAMILY	AGLER RD	GAHANNA	43230	BAKER SAMUEL M/WOODS OF GAHANNA LLC		3319 E LIVINGSTON AVE	COLUMBUS OH 43227
025-000979	APARTMENTS 40+ FAMILY	AGLER RD	GAHANNA	43230	BAKER SAMUEL M/WOODS OF GAHANNA LLC		3319 E LIVINGSTON AVE	COLUMBUS OH 43227
025-001083	VACANT PLATTED RES LAND	925 AGLER RD	GAHANNA	43230	SOUTHARD BRADLEY	SOUTHARD LAURA M	788 ACADEMY WOODS DR	COLUMBUS OH 43230
025-001013	NEIGHBORHOOD SHOPPING CENTER	AGLER RD	GAHANNA	43230	SNYDER DEVELOPMENT CO		PO BOX 21555	COLUMBUS OH 43221-0555
025-001014	NEIGHBORHOOD SHOPPING CENTER	411 - 445 AGLER RD	GAHANNA	43230	SNYDER DEVELOPMENT CO		PO BOX 21555	COLUMBUS OH 43221-0555
025-001015	NEIGHBORHOOD SHOPPING CENTER	411 - 445 AGLER RD	GAHANNA	43230	SNYDER DEVELOPMENT CO		PO BOX 21555	COLUMBUS OH 43221-0555
025-001029	SMALL RETAIL STRUCT<10000 SF	403 AGLER RD	GAHANNA	43230	DEELY AUTO ENTERPRISES LLC		233 S PATTERSON AVE	SPRINGFIELD MO 65802
025-001078	FAST FOOD/DRIVE-IN RESTAURANT	365 STYGLER RD	GAHANNA	43230	TIM DONUT US LIMITED INC		PO BOX 460389	HOUSTON TX 77056
025-001089	APARTMENTS 40+ FAMILY	AGLER RD	GAHANNA	43230	BAKER SAMUEL M/WOODS OF GAHANNA LLC		3319 E LIVINGSTON AVE	COLUMBUS OH 43227
025-001095	RESTAURANT/CAFETERIA OR BAR	345 AGLER RD	GAHANNA	43230	EBRIGHT NANCY L TR		345 AGLER RD	COLUMBUS OH 43230
025-003307	ONE-FAMILY DWLG ON PLATTED LOT	674 AGLER RD	GAHANNA	43230	MILLER TERESA R	MILLER DAVID J	3542 CLOTTS RD	GAHANNA OH 43230
025-003309	ONE-FAMILY DWLG ON PLATTED LOT	684 AGLER RD	GAHANNA	43230	MATTHES LANCE		684 AGLER RD	COLUMBUS OH 43230
025-003312	FAST FOOD/DRIVE-IN RESTAURANT	359 AGLER RD	GAHANNA	43230	MCDONALDS CORP		PO BOX 182571	COLUMBUS OH 43218-2571
025-003314	ONE-FAMILY DWLG ON PLATTED LOT	64 LINCOLNSHIRE RD	GAHANNA	43230	PUGH NANCY A		64 LINCOLNSHIRE AVE	COLUMBUS OH 43230
025-003315	ONE-FAMILY DWLG ON PLATTED LOT	618 AGLER RD	GAHANNA	43230	PUPP MATTHEW J	PUPP ESTE	618 AGLER RD	GAHANNA OH 43230
025-003316	ONE-FAMILY DWLG ON PLATTED LOT	610 AGLER RD	GAHANNA	43230	SLANE ROBERT M TR	SLANE DEBORAH L TR	1050 ROLLSBEACH LN	GALLOWAY OH 43119
025-003317	ONE-FAMILY DWLG ON PLATTED LOT	602 AGLER RD	GAHANNA	43230	JACOBS DANIEL		757 CEDAR RUN DR	BLACKLICK OH 43004
025-003318	ONE-FAMILY DWLG ON PLATTED LOT	590 AGLER RD	GAHANNA	43230	SVEC DENES		590 AGLER RD	GAHANNA OH 43230
025-003319	ONE-FAMILY DWLG ON PLATTED LOT	580 AGLER RD	GAHANNA	43230	MORGEN JOHN		580 AGLER RD	COLUMBUS OH 43230
025-003320	ONE-FAMILY DWLG ON PLATTED LOT	570 AGLER RD	GAHANNA	43230	KABA MOHAMED		570 AGLER RD	COLUMBUS OH 43230
025-003321	ONE-FAMILY DWLG ON PLATTED LOT	560 AGLER RD	GAHANNA	43230	MILLER PAUL J	MILLER MELANIE K	560 AGLER RD	COLUMBUS OH 43230-2373
025-001332	ONE-FAMILY DWLG ON PLATTED LOT	550 AGLER RD	GAHANNA	43230	NASUOVSKA MILANA		550 AGLER RD	COLUMBUS OH 43230
025-001333	ONE-FAMILY DWLG ON PLATTED LOT	540 AGLER RD	GAHANNA	43230	INGRAM MALCOLM		540 AGLER RD	COLUMBUS OH 43230
025-001334	ONE-FAMILY DWLG ON PLATTED LOT	530 AGLER RD	GAHANNA	43230	LAUFFER RICHARD D		530 AGLER RD	GAHANNA 43230
025-001335	ONE-FAMILY DWLG ON PLATTED LOT	520 AGLER RD	GAHANNA	43230	ELBAZ JESSICA A	JOHNSON NICHOLAS	520 AGLER RD	COLUMBUS OH 43230
025-001336	ONE-FAMILY DWLG ON PLATTED LOT	510 AGLER RD	GAHANNA	43230	BROWNELL CASSIE	BROWNELL NICHOLAS	510 AGLER RD	COLUMBUS OH 43230-3173
025-001337	ONE-FAMILY DWLG ON PLATTED LOT	500 AGLER RD	GAHANNA	43230	NEUBERGER VICTORIA		500 AGLER RD	COLUMBUS OH 43230
025-001365	EXEMPT PROPERTY OWNED BY CITIES	IMPERIAL DR	GAHANNA	43230	CITY OF GAHANNA		200 S HAMILTON RD	GAHANNA OH 43230-2994
025-001384	ONE-FAMILY DWLG ON PLATTED LOT	66 IMPERIAL DR	GAHANNA	43230	THOMAS DEBORAH E		66 IMPERIAL DR	COLUMBUS OH 43230
025-001377	ONE-FAMILY DWLG ON PLATTED LOT	63 IMPERIAL DR	GAHANNA	43230	BOYER BRUCE A		63 IMPERIAL DR	GAHANNA OH 43230
025-001378	ONE-FAMILY DWLG ON PLATTED LOT	464 AGLER RD	GAHANNA	43230	RICH STEVEN L		464 AGLER RD	COLUMBUS OH 43230-1404
025-001379	ONE-FAMILY DWLG ON PLATTED LOT	472 AGLER RD	GAHANNA	43230	WEDDEO AYAN	WARDAN ABRAHAM	472 AGLER RD	COLUMBUS OH 43230
025-001380	ONE-FAMILY DWLG ON PLATTED LOT	478 AGLER RD	GAHANNA	43230	WILLIAMS LUKE	WILLIAMS HARL	478 AGLER RD	GAHANNA OH 43230
025-001381	ONE-FAMILY DWLG ON PLATTED LOT	484 AGLER RD	GAHANNA	43230	ALLEN JILL	REIS AMANDA	484 AGLER RD	GAHANNA OH 43230
025-001639	DAYCARE PRESCHOOL	230 AGLER RD	GAHANNA	43230	BLT HOLDINGS LLC		230 AGLER RD	COLUMBUS OH 43230
025-001887	ONE-FAMILY DWLG ON PLATTED LOT	624 AGLER RD	GAHANNA	43230	WOODWARD RODNEY		624 AGLER RD	COLUMBUS OH 43230
025-001858	EXEMPT PROPERTY OWNED BY CITIES	JOHNSTOWN RD	GAHANNA	43230	CITY OF GAHANNA		200 S HAMILTON RD	GAHANNA OH 43230-2956
025-001935	ONE-FAMILY DWLG UNPLT: 0-9.99 AC	475 AGLER RD	GAHANNA	43230	TS FAMILY HOLDINGS LTD		5353 LEESLAND DRIVE	WESTERVILLE OH 43081
025-001949	OTHER RETAIL STRUCTURE	STYGLER RD	GAHANNA	43230	40 GAHANNA OH LLC		545 EMPIRE BLVD #102	BROOKLYN NY 11225
025-002000	DWELLING CONVERTED TO OFFICE	244 AGLER RD	GAHANNA	43230	T E O REAL ESTATE LLC		244 AGLER RD	COLUMBUS OH 43230
025-002073	CHARITABLE EXEMPT FOR HOSPITALS ETC	256 AGLER RD	GAHANNA	43230	GAHANNA AGES AND ABILITIES PARTNERSHIP INC		530 WOODMARK RUN	GAHANNA OH 43230
025-002082	DWELLING CONVERTED TO OFFICE	264 AGLER RD	GAHANNA	43230	FARAH SHAMIS M		4663 PENN GARDEN DR	NEW ALBANY OH 43054
025-002303	ONE-FAMILY DWLG ON PLATTED LOT	276 AGLER RD	GAHANNA	43230	SCHNEIDER JEFF L	SCHNEIDER JEFFREY L SCHNEIDER JOHN D JR	1436 COBURG ROAD	COLUMBUS OH 43227
025-002304	DWELLING CONVERTED TO RETAIL	284 AGLER RD	GAHANNA	43230	PINNELL DONALD R	PINNELLI JEAN M	3965 CLOTTS RD	COLUMBUS OH 43230-2844
025-002305	DWELLING CONVERTED TO RETAIL	286 AGLER RD	GAHANNA	43230	PINNELL DONALD R	PINNELLI JEAN M	3965 CLOTTS RD	COLUMBUS OH 43230-2844
025-002306	DWELLING CONVERTED TO OFFICE	314 AGLER RD	GAHANNA	43230	HEALTH FIRST PROPERTIES LLC		5665 SUGARWOOD DR	NEW ALBANY OH 43054
025-002307	VACANT COMMERCIAL LAND	324 AGLER RD	GAHANNA	43230	COMMUNITY IMPROVEMENT CORP OF GAHANNA		200 S HAMILTON RD	GAHANNA OH 43230
025-002308	OTHER RETAIL STRUCTURE	AGLER RD	GAHANNA	43230	40 GAHANNA OH LLC		545 EMPIRE BLVD #102	BROOKLYN NY 11225
025-002035	FRANCHISED DRUG STORE	60 N STYGLER RD	GAHANNA	43230	40 GAHANNA OH LLC		545 EMPIRE BLVD #102	BROOKLYN NY 11225
025-002033	EXEMPT PROPERTY OWNED BY CEMETERIES	238 AGLER RD	GAHANNA	43230	TRUSTEES OF MIFFLIN TOWNS		155 OLDE RIDENOUR RD	COLUMBUS OH 43230-2565
025-002213	ONE-FAMILY DWLG ON PLATTED LOT	63 LINCOLNSHIRE RD	GAHANNA	43230	SCHNITZINGER WILLIAM L	SCHNITZINGER MARCIA	63 LINCOLNSHIRE RD	COLUMBUS OH 43230
025-002225	ONE-FAMILY DWLG ON PLATTED LOT	57 LINCOLNSHIRE RD	GAHANNA	43230	COOKE SARAH L		57 LINCOLNSHIRE RD	GAHANNA OH 43230
025-002221	ONE-FAMILY DWLG ON PLATTED LOT	552 AGLER RD	GAHANNA	43230	EDWARDS LAWRENCE		552 AGLER RD	COLUMBUS OH 43230
025-002222	ONE-FAMILY DWLG ON PLATTED LOT	560 AGLER RD	GAHANNA	43230	RAMSEY GINGER	RAMSEY JOHN	560 AGLER RD	COLUMBUS OH 43230
025-002223	ONE-FAMILY DWLG ON PLATTED LOT	564 AGLER RD	GAHANNA	43230	GEARY BRITTANY		564 AGLER RD	COLUMBUS OH 43230
025-002098	VACANT COMMERCIAL LAND	182 - 188 JOHNSTOWN RD	GAHANNA	43230	UNITED DAIRY FARMERS INC		3955 MONTGOMERY RD	CINCINNATI OH 45212
025-002125	VACANT PLATTED RES LAND	JOHNSTOWN RD	GAHANNA	43230	CITY OF GAHANNA		200 S HAMILTON RD	GAHANNA OH 43230
025-002203	GAS STATION/CONVEN FOOD STORE	RIDENOUR RD	GAHANNA	43230	UNITED DAIRY FARMERS INC		3955 MONTGOMERY RD	CINCINNATI OH 45212
025-002610	APARTMENTS 40+ FAMILY	SEE PENNY LN SOUTH	GAHANNA	43230	PENNY LANE MEWS DAG LLC		4203 GOLDENGATE OVAL	COLUMBUS OH 43224
025-007165	NEIGHBORHOOD SHOPPING CENTER	459 AGLER RD	GAHANNA	43230	FJ GAHANNA OHIO AGLER ROAD LLC		459 AGLER ROAD	COLUMBUS OH 43230-2483
025-010194	GAS STATION/CONVEN FOOD STORE	370 AGLER RD	GAHANNA	43230	F & A LTD		80 BISHOP SQ	COLUMBUS OH 43209
025-011941	FAST FOOD/DRIVE-IN RESTAURANT	365 STYGLER RD	GAHANNA	43230	TIM DONUT US LIMITED INC		PO BOX 460389	HOUSTON TX 77056
025-013025	OFFICE BLDG 1 & 2 STORIES	JOHNSTOWN RD	GAHANNA	43230	[illegible]		[illegible]	NEW ALBANY OH 43054-8076
025-013757	COMMUNITY SHOPPING CENTER	71 - 87 STYGLER RD	GAHANNA	43230	TM GAHANNA LLC		2501 E BROAD ST	COLUMBUS OH 43209
190-001142	OTHER RESIDENTIAL	2655 - 2657 TEMPLE AV	COLUMBUS	43211	LEACH KATHARINE	SHAFER SAMUEL	2657 TEMPLE AVE	COLUMBUS OH 43211
190-010146	ONE-FAMILY DWLG UNPLT: 0-9.99 AC	2624 WOODLAND AV	COLUMBUS	43211	SWINGLER WAYNE A	SANCHEZ MARIA R	2624 WOODLAND AVE	COLUMBUS OH 43211
190-020151	EXEMPT PROPERTY OWNED BY BOE	2505 CASSADY AV	COLUMBUS	43219	BOARD OF EDUCATION		2505 CASSADY AV	COLUMBUS OH 43219
190-020179	ONE-FAMILY DWLG ON PLATTED LOT	2209 DENUNE AV	COLUMBUS	43211	KAP PROPERTIES LLC		PO BOX 318	NEW ALBANY OH 43054
190-020230	ONE-FAMILY DWLG ON PLATTED LOT	2239 DENUNE AV	COLUMBUS	43211	WARD LEIGH ANN		1599 MANCHESTER AVE	COLUMBUS OH 43211
190-020258	OTHER COMMERCIAL STRUCTURE	2900 WOODLAND AV	COLUMBUS	43211	COLUMBIA GAS OF OHIO INC		2900 WOODLAND AV	COLUMBUS OH 43211
190-020267	MINI WAREHOUSE	2472 SUNBURY RD	COLUMBUS	43219	EASTON SELF STORAGE LLC		2474 SUNBURY RD	COLUMBUS OH 43219
190-020335	EXEMPT PROPERTY OWNED BY BOE	AGLER RD	COLUMBUS	43211	COLUMBUS CITY SCHOOL DISTRICT BD OF EDUCATION		2271 BRIXTON RD	COLUMBUS OH 43221
190-021173	ONE-FAMILY DWLG ON PLATTED LOT	2613 WOODLAND AV	COLUMBUS	43211	RACHEL DANIEL		2613 WOODLAND AV	COLUMBUS OH 43211
190-021186	ONE-FAMILY DWLG ON PLATTED LOT	2230 DENUNE AV	COLUMBUS	43211	CUMBOW NANCY A		2230 DENUNE AVE	COLUMBUS OH 43211
190-021188	ONE-FAMILY DWLG ON PLATTED LOT	2022 PERDUE AV	COLUMBUS	43211	SHUTT RANDALL E		2022 PERDUE AV	COLUMBUS OH 43211
190-031177	ONE-FAMILY DWLG UNPLT: 0-9.99 AC	2273 DENUNE AV	COLUMBUS	43211	AMBROSE EDWARD J TR		5001 PLANTATION RD	SUNBURY OH 43074
190-031191	ONE-FAMILY DWLG ON PLATTED LOT	2500 SUNBURY DR	COLUMBUS	43219	HAYDEN LYNNE	HAYDEN MARLENA	2500 SUNBURY DR	COLUMBUS OH 43219-3405
190-031192	ONE-FAMILY DWLG ON PLATTED LOT	2510 SUNBURY DR	COLUMBUS	43219	WHITE-DIXON GAIL		3857 BRYDEN RD	COLUMBUS OH 43206
190-031196	ONE-FAMILY DWLG ON PLATTED LOT	2505 SUNBURY DR	COLUMBUS	43219	EVANSHINE ADAM D	EVANSHINE DANIELLE E	2505 SUNBURY DR	COLUMBUS OH 43219
190-031197	ONE-FAMILY DWLG ON PLATTED LOT	2535 SUNBURY DR	COLUMBUS	43219	CUNNINGHAM CAMERON M		2535 SUNBURY DR	COLUMBUS OH 43219
190-031109	ONE-FAMILY DWLG UNPLT: 0-9.99 AC	2221 DENUNE AV	COLUMBUS	43211	RICHARDS KRISTA N		2221 DENUNE AVE	COLUMBUS OH 43211
190-034597	COMMERCIAL GARAGE	3106 AGLER RD	COLUMBUS	43219	NGUYEN PHUONG T		2184 SURREYWOOD DR	DUBLIN OH 43016
190-035072	ONE-FAMILY DWLG ON PLATTED LOT	2473 SUNBURY RD	COLUMBUS	43219	PLACHETKA SYLVIA		2473 SUNBURY RD	COLUMBUS OH 43219

191-000168	ONE-FAMILY DWLG UNPLT: 0-9.99 AC	3637 AGLER RD	GAHANNA	43219	GREEN HAUL TRUCKING LLC		3527 AGLER ROAD	COLUMBUS OH 43219
191-000237	CONVENIENT FOOD STORES	2360 - 2365 STELZER RD	GAHANNA	43219	KRISHNAS STELZER LLC		6868 W LOCKE CT	CENTERVILLE OH 45459
191-000252	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	SAFARI HOMES INC		3358 MELROSE AVE	COLUMBUS OH 43224
191-000255	OTHER RESIDENTIAL	3735 E AGLER RD	GAHANNA	43219	HOLMAN MICHAEL J JR		8023 MORSE RD	NEW ALBANY, OH 43054-9530
191-000260	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	SAFARI HOMES INC		3358 MELROSE AVE	COLUMBUS OH 43224
191-000262	OTHER RESIDENTIAL	AGLER RD	GAHANNA	43219	B&W RHAPSODY LLC		8927 PINEBRIDGE RD	SAN ANTONIO TX 78257
191-000263	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	B&W RHAPSODY LLC		8927 PINEBRIDGE RD	SAN ANTONIO TX 78257
191-000264	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	MIDWEST LAND CO		PO BOX 30361	COLUMBUS OH 43230
191-000265	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	MIDWEST LAND CO		PO BOX 30361	COLUMBUS OH 43230
191-000266	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	MIDWEST LAND CO		PO BOX 30361	COLUMBUS OH 43230-0361
191-000267	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	MIDWEST LAND CO		PO BOX 30361	COLUMBUS OH 43230-0361
191-000268	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	MIDWEST LAND CO		PO BOX 30361	COLUMBUS OH 43230-0361
191-000269	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	MIDWEST LAND CO		P O BOX 30361	COLUMBUS OH 43230
191-000271	ONE-FAMILY DWLG ON PLATTED LOT	3603 E AGLER RD	GAHANNA	43219	LAREWAY CURTIS		3603 AGLER RD	COLUMBUS OH 43219
191-000274	ONE-FAMILY DWLG ON PLATTED LOT	2255 N MIFFLIN RD	GAHANNA	43219	GALLION ROBERT J		2255 MIFFLIN RD	COLUMBUS OH 43219
191-000275	ONE-FAMILY DWLG ON PLATTED LOT	N MIFFLIN RD	GAHANNA	43219	GALLION ROBERT J		2255 MIFFLIN RD	COLUMBUS OH 43219
191-000291	CELL STE AND IMPROVEMENTS	2350 MIFFLIN RD	GAHANNA	43219	MYERS MICHAEL H	FRASER SHERRI LYNN, MYERS TIMOTHY EDWARD, DUNLAP GALE SUSAN	8629 SWISHER CREEK XING	NEW ALBANY, OH 43054-8385
191-000292	CELL STE AND IMPROVEMENTS	N MIFFLIN RD	GAHANNA	43219	MYERS MICHAEL H	FRASER SHERRI LYNN, MYERS TIMOTHY EDWARD, DUNLAP GALE SUSAN	8629 SWISHER CREEK XING	NEW ALBANY, OH 43054-8385
191-000295	ONE-FAMILY DWLG ON PLATTED LOT	3909 E AGLER RD	GAHANNA	43219	MYERS SUSAN M	JOHNSON JENNIFER, MYERS JILL	3909 AGLER ROAD	COLUMBUS OH 43219
191-001309	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	PROVAN PATRICIA L		55021 LABRADOR POINTE CT	OSCEOLA IN 46561-9535
191-001310	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	OHIO CAPITAL DEVELOPMENTS LLC		424 SANDBURR DR	COLUMBUS OH 43230
191-001311	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	OHIO CAPITAL DEVELOPMENTS LLC		424 SANDBURR DR	COLUMBUS OH 43230
191-001312	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	OHIO CAPITAL DEVELOPMENTS LLC		424 SANDBURR DR	COLUMBUS OH 43230
191-001313	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	OHIO CAPITAL DEVELOPMENTS LLC		148 N HIGH ST	COLUMBUS OH 43230
191-001314	VACANT PLATTED RES LAND	E AGLER RD	GAHANNA	43219	OHIO CAPITAL DEVELOPMENTS LLC		148 N HIGH ST	COLUMBUS OH 43230
191-001315	VACANT PLATTED RES LAND	4050 AGLER RD	GAHANNA	43219	OHIO CAPITAL DEVELOPMENTS LLC		148 N HIGH ST	COLUMBUS OH 43230
191-001316	VACANT PLATTED RES LAND	CARROLL RD	GAHANNA	43219	OHIO CAPITAL DEVELOPMENTS LLC		148 N HIGH ST	COLUMBUS OH 43230
191-001317	VACANT PLATTED RES LAND	CARROLL RD	GAHANNA	43219	OHIO CAPITAL DEVELOPMENTS LLC		148 N HIGH ST	COLUMBUS OH 43230
191-001318	VACANT PLATTED RES LAND	CARROLL RD	GAHANNA	43219	OHIO CAPITAL DEVELOPMENTS LLC		148 N HIGH ST	COLUMBUS OH 43230
191-002552	VAC UNPLT RES LAND: 0-9.99 AC	AGLER RD	GAHANNA	43219	GREEN HAUL TRUCKING LLC		3527 AGLER ROAD	COLUMBUS OH 43219
191-002664	ONE-FAMILY DWLG UNPLT: 0-9.99 AC	3650 AGLER RD	GAHANNA	43219	BATTS LEWIS TEDDER		PO BOX 331	WORTHINGTON OH 43085
191-002699	LODGE HALLS	3550 AGLER RD	GAHANNA	43219	MASJID IBNU TAYMIYAH	ISLAMIC CENTER	2334 MOCK ROAD	COLUMBUS OH 43219
191-002717	OTHER COMMERCIAL STRUCTURE	3600 AGLER RD	GAHANNA	43219	KITZMILLER LYNN TTR	KITZMILLER DORIS J TR	4994 JOHNSTOWN RD	NEW ALBANY OH 43054
191-002723	ONE-FAMILY DWLG UNPLT: 0-9.99 AC	3856 AGLER RD	COLUMBUS	43219	PATTON JEFFREY L		3856 AGLER RD	GAHANNA 43230
191-002726	LODGE HALLS	AGLER RD	GAHANNA	43219	MASJID IBNU TAYMIYAH	ISLAMIC CENTER	2334 MOCK ROAD	COLUMBUS OH 43219
191-002750	ONE-FAMILY DWLG UNPLT: 0-9.99 AC	3863 AGLER RD	GAHANNA	43219	LARBUS BENJAMIN R		3838 AGLER RD APT C	COLUMBUS OH 43219
191-002753	OTHER COMMERCIAL STRUCTURE	AGLER RD	GAHANNA	43230	GAHANNA RV & BOAT STORAGE LLC		4419 SE BOISE ST	PORTLAND OR 97206
191-002754	OTHER EXEMPT	3738 AGLER RD	COLUMBUS	43219	LAWRENCE PAULS MEMORIAL POST 9857 VFW		3738 AGLER RD	GAHANNA 43219
191-002758	3 FAM DWLG UNPLT: 0-9.99 AC	3896 AGLER RD	GAHANNA	43219	TVSS AGLER RD LLC		1119 GOODALE AVE STE 500	COLUMBUS OH 43212
191-003166	COMMERCIAL GARAGE	3641 AGLER RD	GAHANNA	43219	CR DIRECT INC		5070 SHANNON HOUSE WAY	DUBLIN OH 43017
191-003285	ONE-FAMILY DWLG UNPLT: 0-9.99 AC	3623 AGLER RD	GAHANNA	43219	COLUMBUS AREA REAL ESTATE SERVICES LLC	RAMIREZ FRANCISCA SUSANA	846 NEIL AVE	COLUMBUS OH 43215
191-003290	ONE-FAMILY DWLG UNPLT: 0-9.99 AC	3615 AGLER RD	GAHANNA	43219	ZEHNER RICHARD T		3615 AGLER RD	COLUMBUS OH 43219
191-003296	VAC UNPLT RES LAND: 0-9.99 AC	AGLER RD	GAHANNA	43219	GREEN HAUL TRUCKING LLC		3527 AGLER ROAD	COLUMBUS OH 43219
191-003318	VACANT PLATTED RES LAND	AGLER RD	GAHANNA	43230	ISUR ABDIKARIM H		915 PEPPERCORN PL	GAHANNA OH 43230
191-003319	VAC UNPLT RES LAND: 0-9.99 AC	AGLER RD	GAHANNA	43230	SOUTHARD JAMES G	SOUTHARD SANDRA D	2256 MAPLE LEAF CT	BLACKLICK OH 43004
195-256426	COMMERCIAL WAREHOUSE	3750 AGLER RD	GAHANNA	43230	AGLER PROPERTIES LLC		3750 AGLER RD	COLUMBUS OH 43219
445-257468	SMALL RETAIL STRUCT<10000 SF	3728 AGLER RD	COLUMBUS	43219	SUNSHINE PLUS PROPERTIES INC		4400 GROVES RD	GROVE CITY OH 43123
445-290473	COMMERCIAL WAREHOUSE	3383 AGLER RD	COLUMBUS	43219	KEYSTONE PROPERTY HOLDINGS LLC		2400 LANDMARK WAY	COLUMBUS OH 43219
445-290474	COMMERCIAL WAREHOUSE	3387 AGLER RD	COLUMBUS	43219	KEYSTONE PROPERTY HOLDINGS LLC		2400 LANDMARK WAY	COLUMBUS OH 43219
445-299413	VACANT COMMERCIAL LAND	LANDMARK WY	COLUMBUS	43219	NRM-COLUMBUS LLC		4330 VINE ST STE 80-125	HAYS, KS 67601-9594
445-299615	COMMERCIAL WAREHOUSE	2341 LANDMARK WY	COLUMBUS	43219	NRM-COLUMBUS LLC		4330 VINE ST STE 80-125	HAYS, KS 67601-9594
520-143573	VAC UNPLT RES LAND: 10-19.99 AC	3573 AGLER RD	GAHANNA	43230	TRUSTEES AGLER RD PARCEL 3 LLC		PO BOX 24552	COLUMBUS OH 43224
520-162411	ONE-FAMILY DWLG UNPLT: 0-4.99 AC	3583 AGLER RD	GAHANNA	43219	WEST PROPERTY GROUP LLC		6805 EARRINGS DR	COLUMBUS OH 43232
520-164641	COMMERCIAL GARAGE	3750 AGLER RD	GAHANNA	43219	R&S TIRE & TRUCK SERVICE INC		3700 AGLER RD	COLUMBUS OH 43219

Attachment E Threatened and Endangered Species Memorandum

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/

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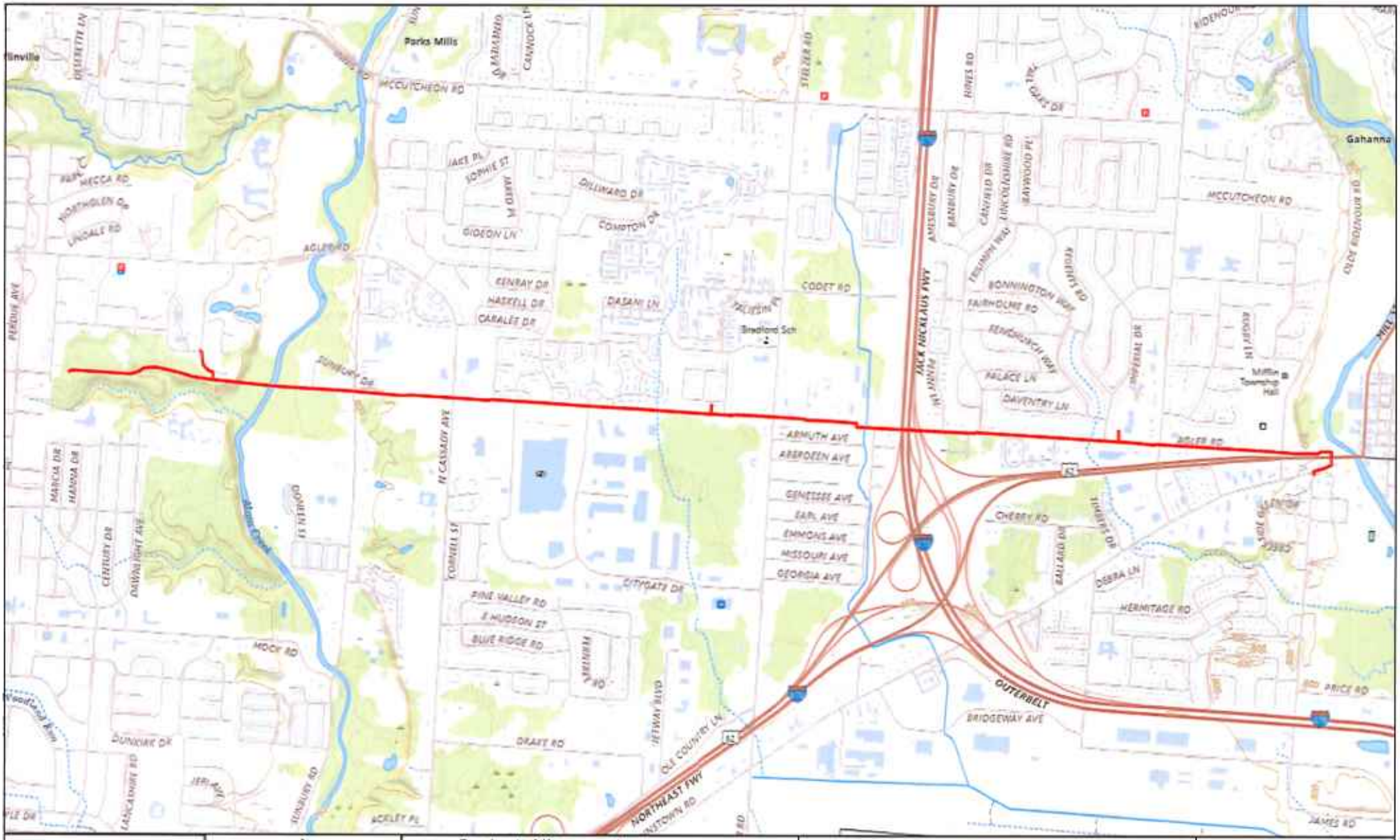

Prepared For:

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

Prepared By:

Colliers Engineering & Design
Pittsburgh Office
1301 Riverside Street, Ste 302
Pittsburgh, PA 15233
T: 610.254.9740
www.collierseng.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

Date Saved: 12/10/2024	CED PN: 218042024	Revised by: Frances Buchanek

Figure 1

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. B-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 $\geq$ 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 rifflcshell (*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 Plans**

CAMPOS EPC

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

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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 **Cultural Memorandum**

Colliers

Engineering & Design

Cultural Resource Desktop Review

East Columbus Project

Colliers Engineering & Design Project Number: 21004202A

May 30, 2023

Prepared for:

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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	Billkam 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).

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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6.0 REFERENCES

Nationwide Environmental Title Research (NETR)

2022a 1953 Aerial Imagery. Available online: https://www.historicaerials.com/viewer, accessed April 2022.

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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2022 US Department of Agriculture, Natural Resources Conservation Services. Electronic document, http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm, accessed April2022.

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

Woods, Alan J., James M. Omernik, C. Scott Brockman, Timothy D. Gerber, William D. Hosteter, and Sandra H. Azevedo

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

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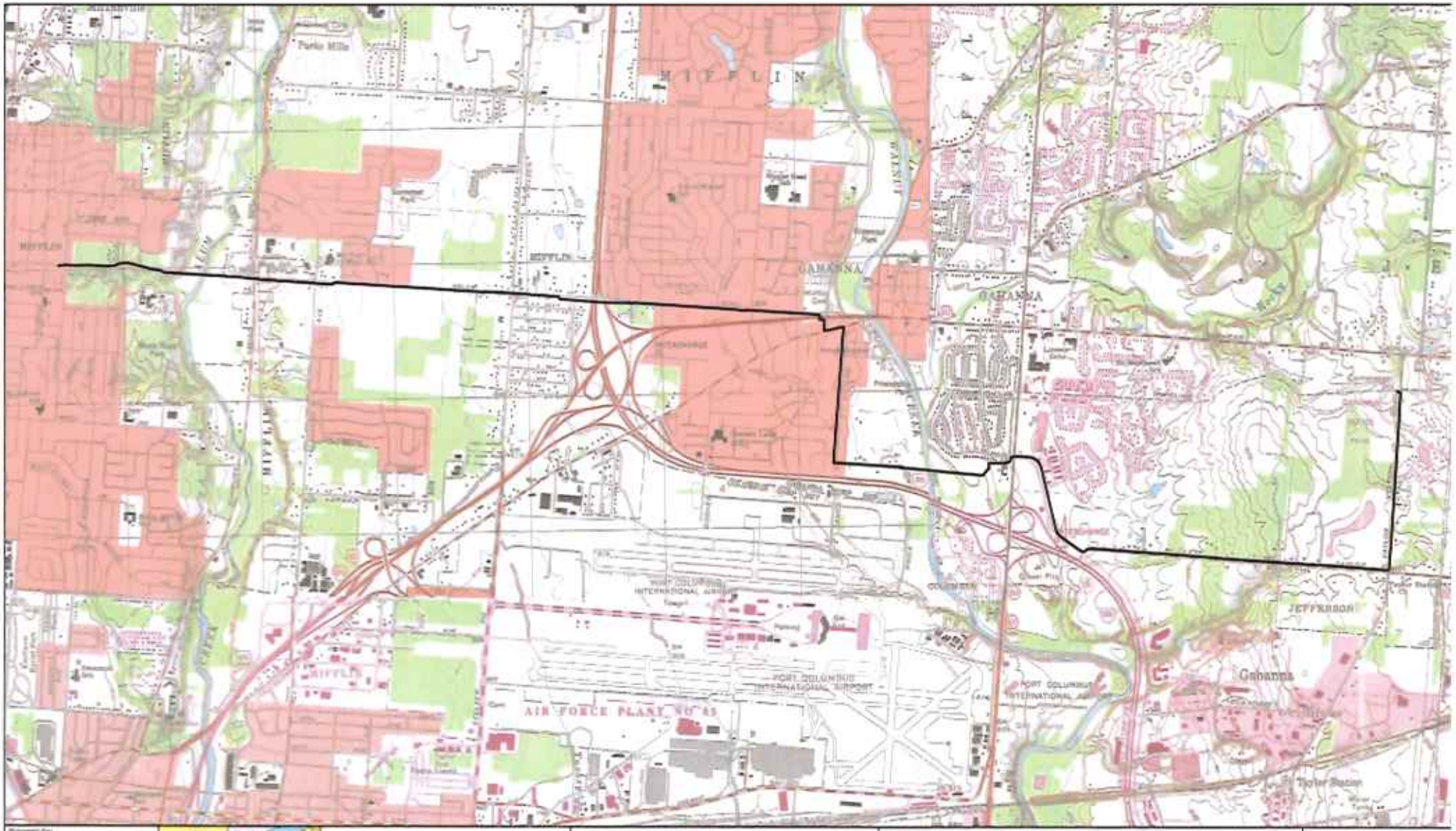
Appendix

Appendix A | Project Location Map



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

Sheet 1 of 1

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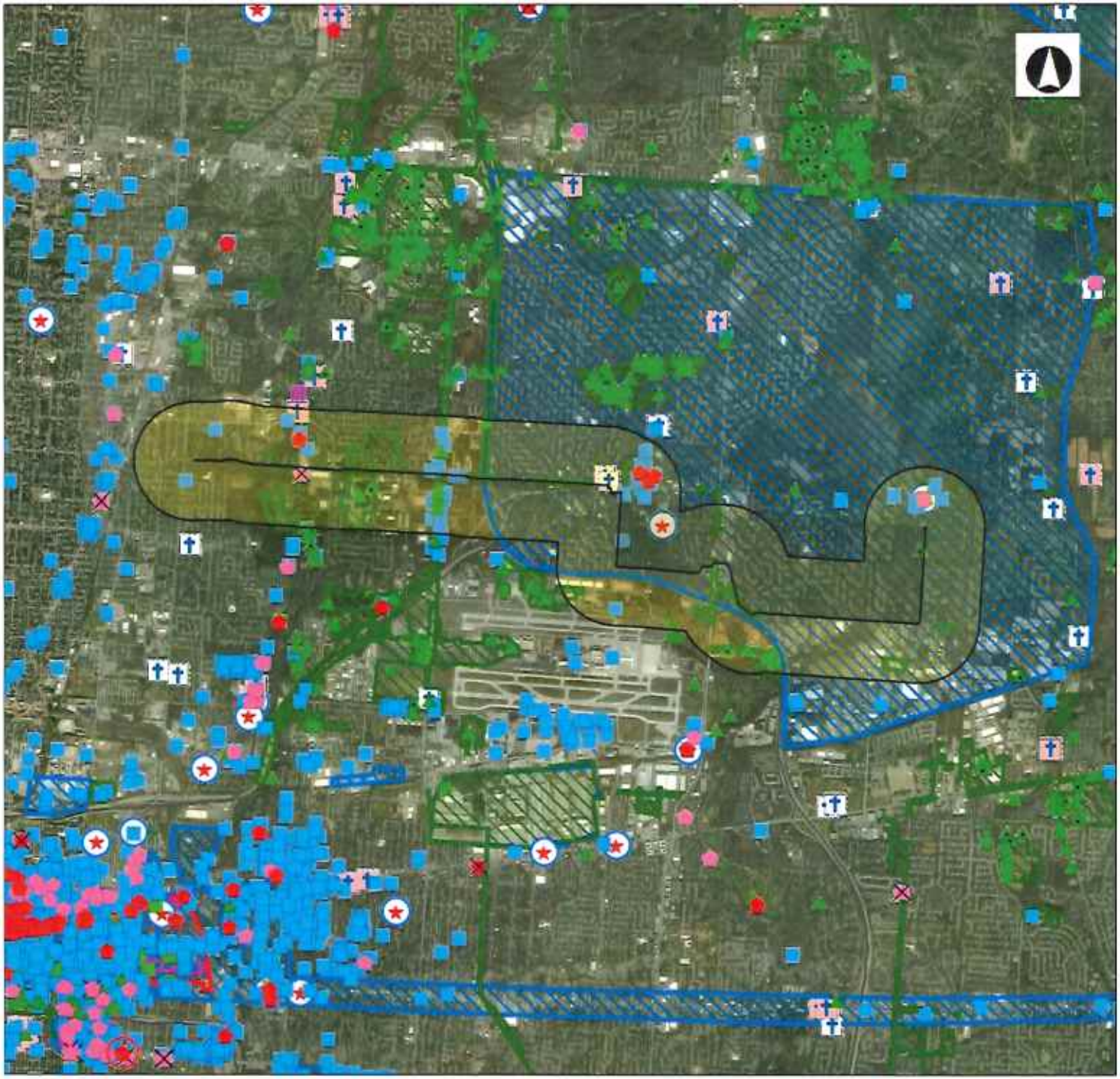
Appendix B | Cultural Resources Background Map



OHIO HISTORY CONNECTION

State Historic Preservation Office

Legend

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

0 1.28 2.56 Miles

1: 101,310

Copyright/Disclaimer

Datum: [Datum]

Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere

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Attachment H **Management of Traffic (MOT) Plans**

TEMPORARY TRAFFIC CONTROL

1. ALL TEMPORARY TRAFFIC CONTROL (TTC) DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE CITY OF COLUMBUS STANDARD DRAWINGS (CURRENT EDITION).

2. CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TRAFFIC CONTROL IS IN PLACE AND APPROVED BY THE DEPARTMENT OF PUBLIC SERVICE INSPECTOR. IF THE CONTRACTOR DOES NOT COMPLY WITH THE STANDARDS, INCLUDING THE INSTALLATION OF TEMPORARY PAVEMENT MARKINGS AND THE REMOVAL OF CONFLICTING TRAFFIC CONTROLS, THEIR PERMIT SHALL BE REVOKED AND ALL WORK SHALL BE TERMINATED. TEMPORARY PAVEMENT MARKINGS TO INCLUDE, BUT NOT LIMITED TO, CHANNELIZING LINES, EDGE LINES, AND CENTERLINES SHALL BE INSTALLED AND MAINTAINED ON ALL CONSTRUCTION OPERATIONS LASTING A MINIMUM OF 14 CALENDAR DAYS OR AS DIRECTED BY THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR THE PROJECT ENGINEER.

3. THE CONTRACTOR SHALL GIVE ADVANCE NOTIFICATION (WRITTEN AND VERBALLY) TO THE TEMPORARY TRAFFIC CONTROL COORDINATOR AT 614-645-0055 OR 614-645-3645 & THE DIVISION OF REFUSE COLLECTION'S OPERATION MANAGER AT 614-645-1975. WRITTEN NOTIFICATION TO PAVING THE WAY AT [illegible] OR VERBAL TO (614)[illegible] PROJECT ENGINEER, AND THE SENIOR SERVICE PLANNER OF COTA AT 614-[illegible] OR FAX 614-[illegible], INFORMING THEM OF ALL UPCOMING MAINTENANCE OF TRAFFIC CHANGES ON A WEEKLY BASIS. NOTIFICATION SHALL INCLUDE, BUT NOT BE LIMITED TO, WHAT, WHERE, WHEN, AND HOW PEDESTRIAN AND VEHICULAR TRAFFIC WILL BE AFFECTED, AND THE TEMPORARY TRAFFIC CONTROL PROCEDURES THE CONTRACTOR IS PLANNING TO USE. THE TYPE OF TRAFFIC CHANGE SHALL DETERMINE THE LENGTH OF ADVANCE NOTIFICATION REQUIRED.

TYPE OF CHANGE	ADVANCE NOTIFICATION REQUIRED
DETOURS/ROAD CLOSURES	30-DAYS NOTIFICATION PRIOR TO CLOSURE
LANE CLOSURES LASTING 2 WEEKS OR MORE	2-WEEKS
LANE CLOSURES OF LESS THAN 2 WEEKS	3-DAYS
LANE CLOSURES OF 3 DAYS OR LESS	1-DAY

THE COTA SENIOR SERVICE PLANNER SHALL BE CONTACTED 30 DAYS PRIOR TO ANY PLANNED CLOSURE ON ASSIGNED COTA ROUTES. ANY OTHER UNFORESEEN IMPACTS TO TRAFFIC SHALL BE IMMEDIATELY REPORTED AS THEY OCCUR.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND SAFE MOVEMENT OF PEDESTRIANS THROUGH, AROUND, OR DETOURED AWAY FROM THE CONSTRUCTION SITE. TRAFFIC CONTROL FOR PEDESTRIAN MOVEMENT SHALL BE AS PER CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, CITY OF COLUMBUS STANDARD CONSTRUCTION DRAWINGS, AND FIGURES 6H-28 (TA-28) AND 6H-29 (TA-29) OF PART VI OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. WHEN NOT SHOWN ON A SIGNED PLAN, ALL SIDEWALK DETOURING AND TEMPORARY MID-BLOCK CROSSINGS SHALL BE PRE-APPROVED BY THE PROJECT ENGINEER OR THE TEMPORARY TRAFFIC CONTROL COORDINATOR. ACCESS FOR PEDESTRIAN AND VEHICULAR TRAFFIC TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

HOLIDAYS AND SPECIAL EVENTS

[illegible]

ITEM 614 - MAINTAINING TRAFFIC

[illegible]

TEMPORARY TRAFFIC CONTROL

[illegible]

EXISTING PERMANENT TRAFFIC CONTROL

[illegible]

EXISTING PERMANENT TRAFFIC CONTROL

[illegible]

CITY OF COLUMBUS SPECIFIC NOTES

[illegible]

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PROPOSED

REVISIONS		
A	[illegible]	ISSUED FOR PERMIT
REV. #	DATE	DESCRIPTION

INTERNAL ENG.	CK	[illegible]	[illegible]
DESIGNED BY	JAL	[illegible]	[illegible]
CHECKED BY	SW	[illegible]	[illegible]
AS-BUILT BY	TBD	TBD	TBD
	NAME	DATE	PHONE #

SITE NAME:

INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

PROJECT ID# 21-78793
ND-P PIPELINE REPLACEMENT, ASLER ROAD
COLUMBUS, FRANKLIN COUNTY, OH

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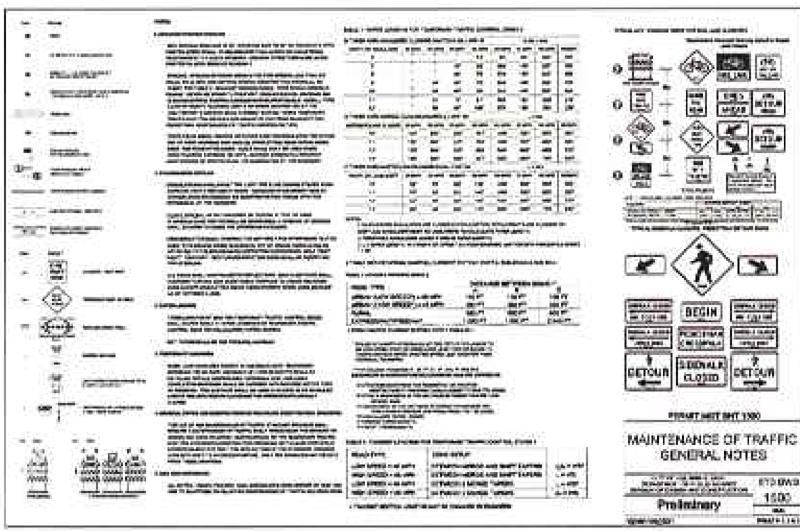

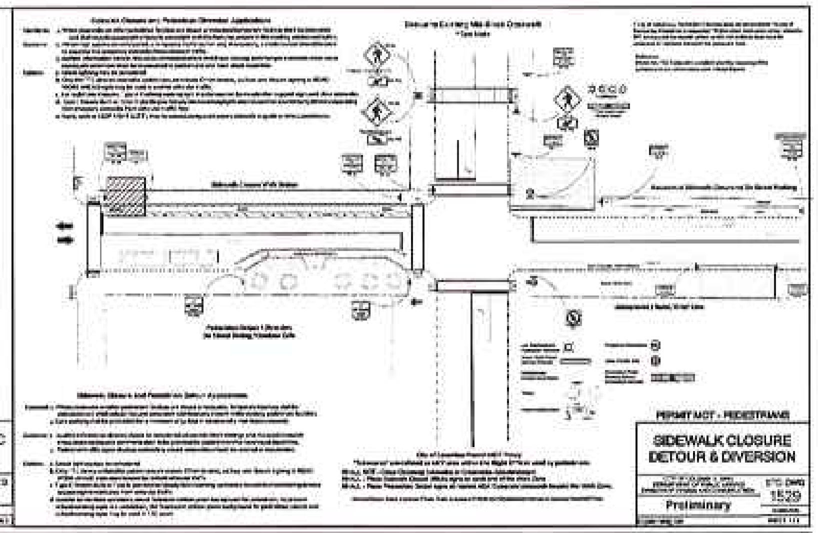

PERMIT MOT NOTES

https://www.columbus.gov/publicservice/Design-and-Construction/Document-Library/

1. PERMIT MOT / TTC - SUBMITTAL

a. STANDARD DRAWINGS - ONLY COLUMBUS 1500 / 1530 WILL BE ACCEPTED FOR USE MOT / TTC ON PERMITS

b. SITE SPECIFIC TRAFFIC CONTROL PLANS

2. MASS TRANSIT AND RIDE SHARE

a. COTA BUS STOPS

b. COTA ASSETS - SIGNS, BENCHES, PERMANENT STRUCTURES

c. COGO - RIDE SHARE BIKE CHARGING STATIONS

3. BIKES AND PEDESTRIANS

a. BIKE LANE CLOSURE & BIKE SHARROWS

b. SIDEWALKS / CROSSWALKS

4. PARKING

a. DRIVEWAYS

b. CURBSIDE

5. ADVANCE WARNING SIGNS

a. SIGNS, SIZES, SPACING, DISTANCE

6. TMC - SIGNAL TIMING, CAMERA MONITORING AND RECORDING

7. SHOULDER CLOSURES

a. DEFINITIONS

GUIDANCE

8. EASEMENTS

PERMIT MOT RECOMMENDED TRAFFIC CONTROL DEVICE SPACING

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REV. #	DATE	DESCRIPTION
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	NAME	DATE	PHONE #
DRAWN BY	[illegible]	[illegible]	[illegible]
DESIGNED BY	[illegible]	[illegible]	[illegible]
CHECKED BY	[illegible]	[illegible]	[illegible]
AS-BUILT BY	TBD	TBD	TBD

SITE NAME:
INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

PROJECT ID# 21-78793

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MOT COMBO

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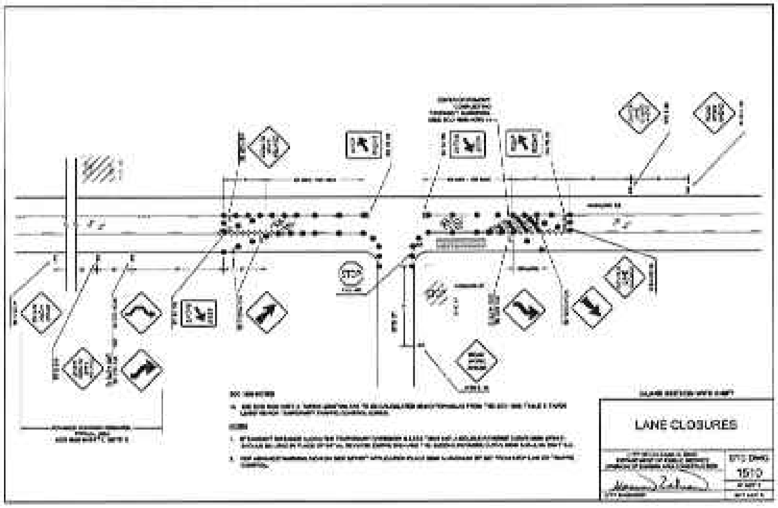

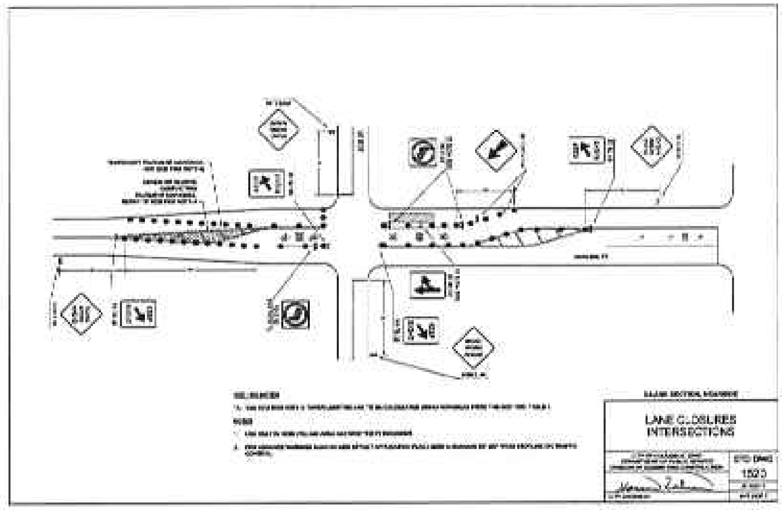

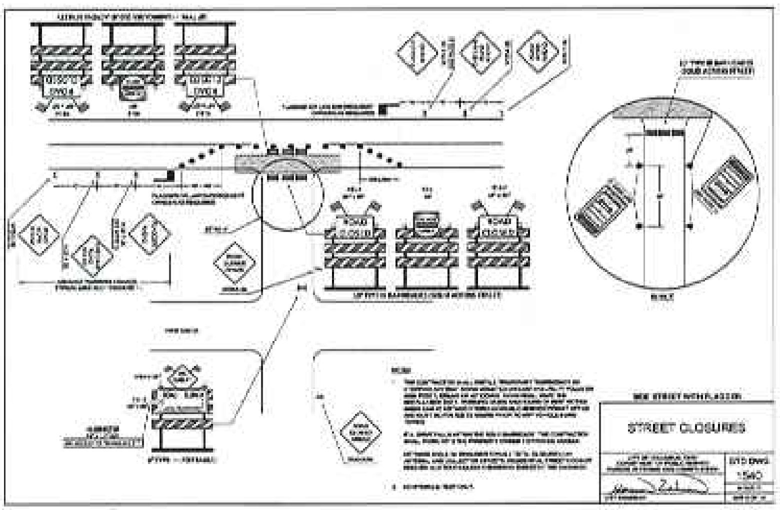

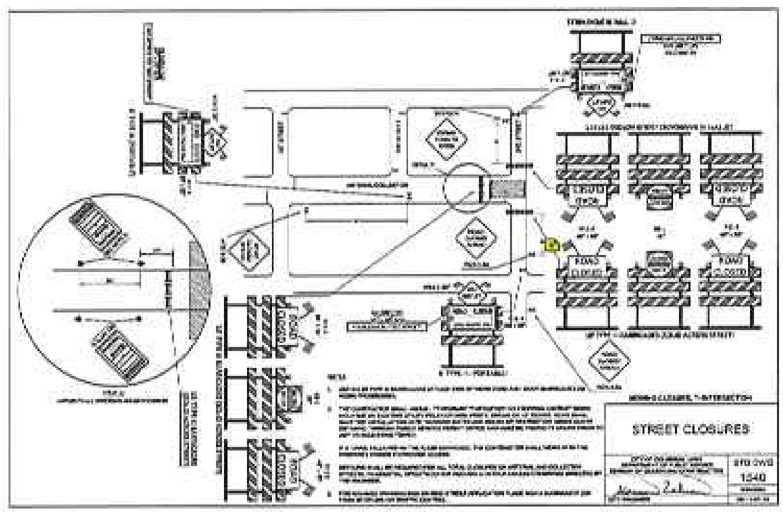

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REV. #	DATE	DESCRIPTION

[illegible]	EF	[illegible]	[illegible]
DESIGNED BY	[illegible]	[illegible]	[illegible]
CHECKED BY	[illegible]	[illegible]	[illegible]
[illegible]	TBD	TBD	TBD
	NAME	DATE	PHONE #

SITE NAME:

INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

PROJECT ID# 21-78793

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COLUMBUS, FRANKLIN COUNTY, OH

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STANDRAD DRAWINGS

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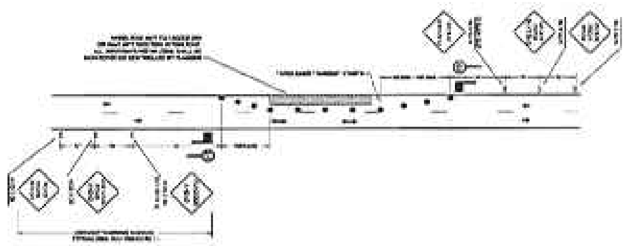
MOT-1000B



FLAGGING OPERATIONS

STD DWG 1550

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REVISIONS

REV. #	DATE	DESCRIPTION
A	3/21/24	ISSUED FOR PERMIT

	NAME	DATE	PHONE #
INTERNAL ENG.	ZK		
DESIGNED BY	JML		
CHECKED BY	SW		
APPROVED BY	TBD	TBD	TBD

SITE NAME:
INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

PROJECT ID# 21-78793
HC-P PIPELINE REPLACEMENT, KILER ROAD
COLUMBUS, FRANKLIN COUNTY, OH

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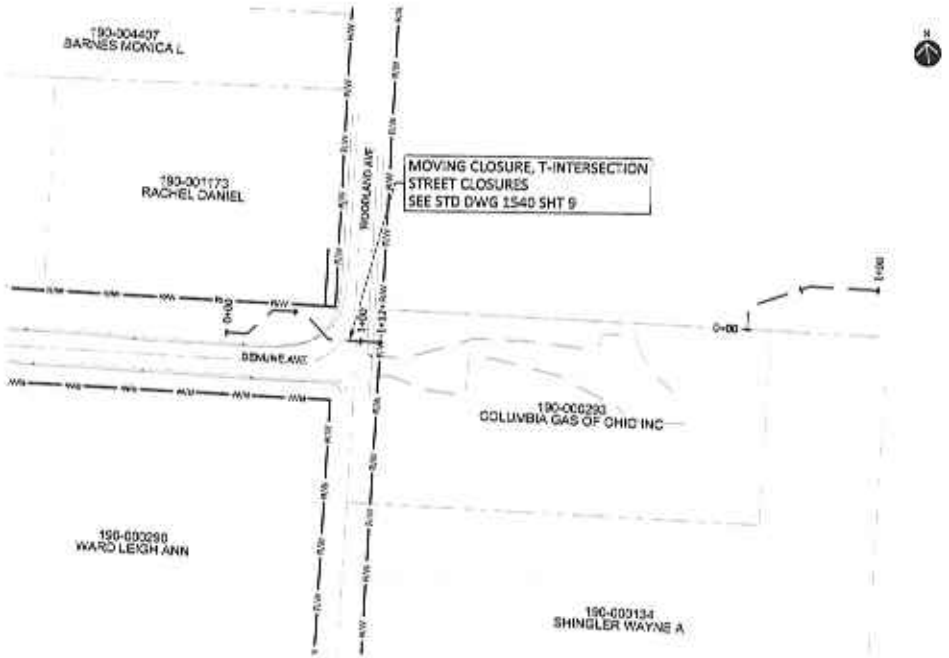

PROPOSED PLAN - STA. 0+00 TO STA. 1+12

SCALE: 1" = 40'

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REVISIONS		
A	08/15/24	ISSUED FOR PERMIT
REV. #	DATE	DESCRIPTION

INTERNAL DWG		TBD	TBD
DESIGNED BY		NAME	DATE / PHONE #
DRAWN BY			
CHECKED BY			
APPROVED BY			

SITE NAME:
INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

PROJECT ID# 21-78793
NG-P PIPELINE REPLACEMENT, ADLER ROAD
COLUMBUS, FRANKLIN COUNTY, OH

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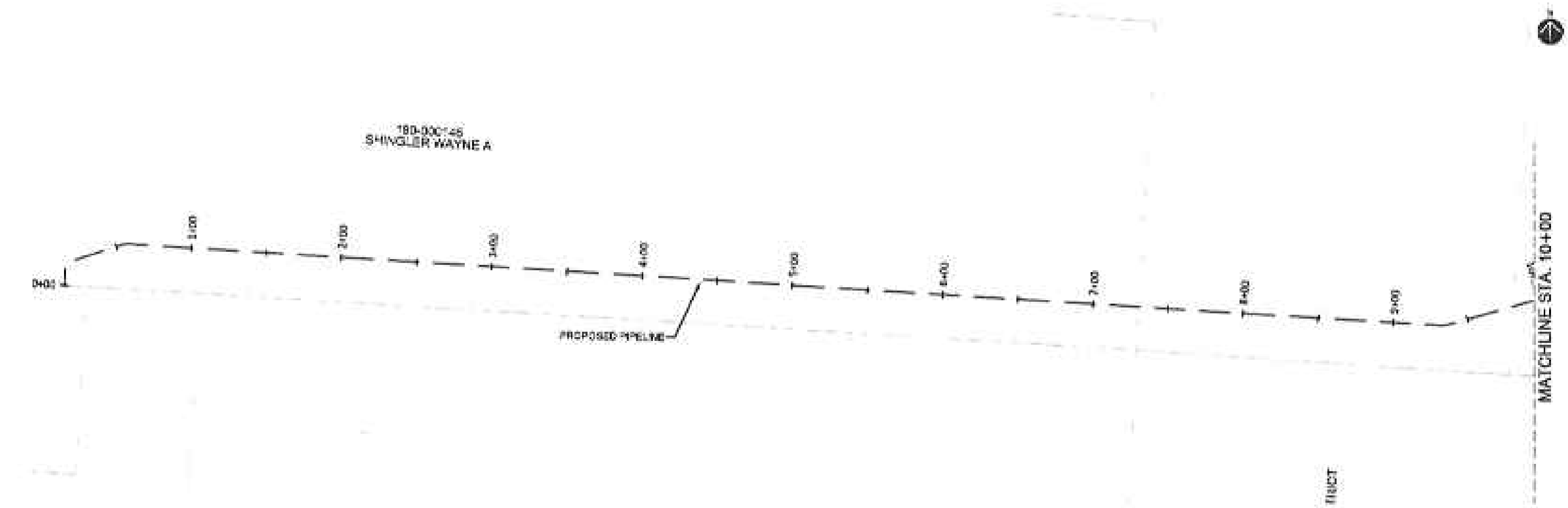
MAINTENANCE OF TRAFFIC
LINDEN STATION - CHECK VALVE

DRAWING NO:
MOT-1001



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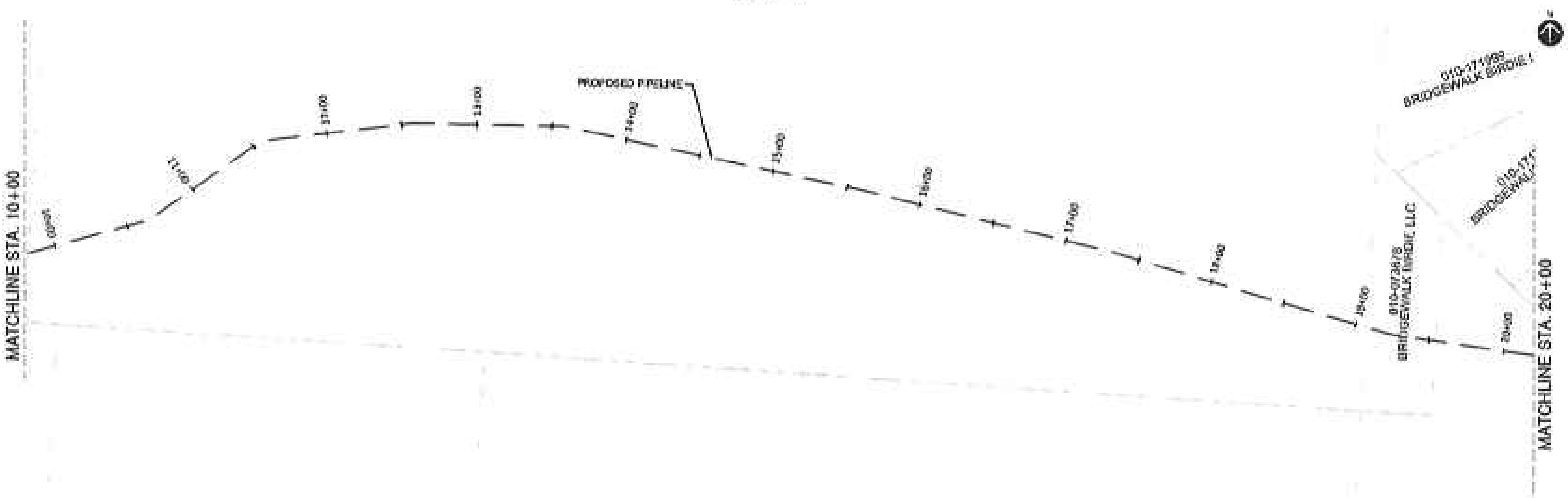
SCALE: 1" = 40'



PROPOSED PLAN - STA. 10+00 TO STA. 20+00
SCALE: 1" = 40'

NiSource

Ohio Utilities Protection Service
Call 811 before you dig

CAMPOS EPC

PROPOSED

REVISIONS		
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REV. #	DATE	DESCRIPTION

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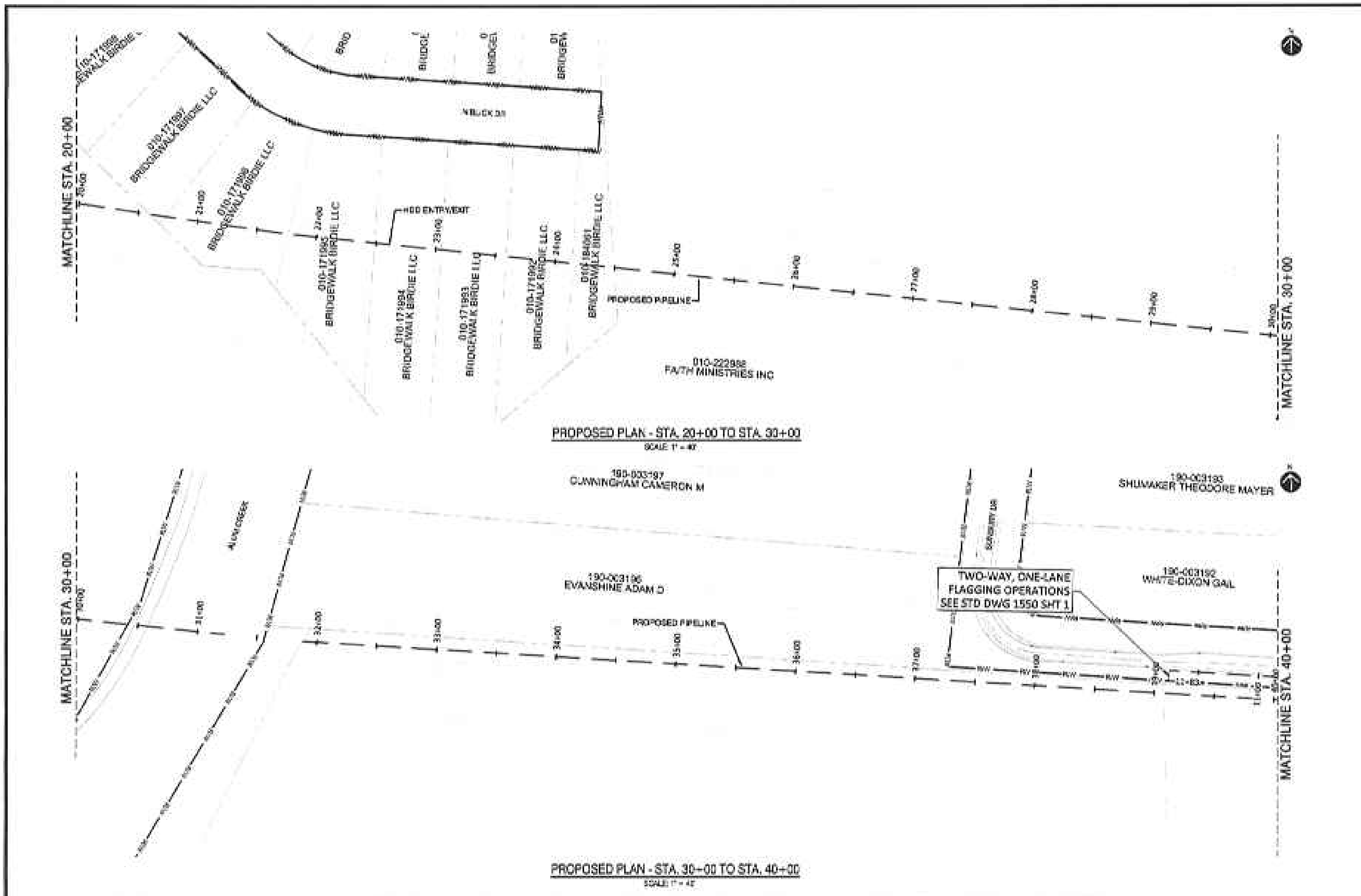
[illegible]	AAJ	[illegible]	[illegible]
CHECKED BY	SW	[illegible]	[illegible]
[illegible]	TBD	TBD	TBD
	NAME	DATE	PHONE #

SITE NAME:
INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

PROJECT ID# 21-78793

DRAWING TITLE:
MAINTENANCE OF TRAFFIC
STA 0+00 TO STA 20+00

DRAWING NO.
MOT-1002



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CAMPOS EPC

PROPOSED

REVISIONS

REV. #	DATE	DESCRIPTION
A		ISSUED FOR PERMIT

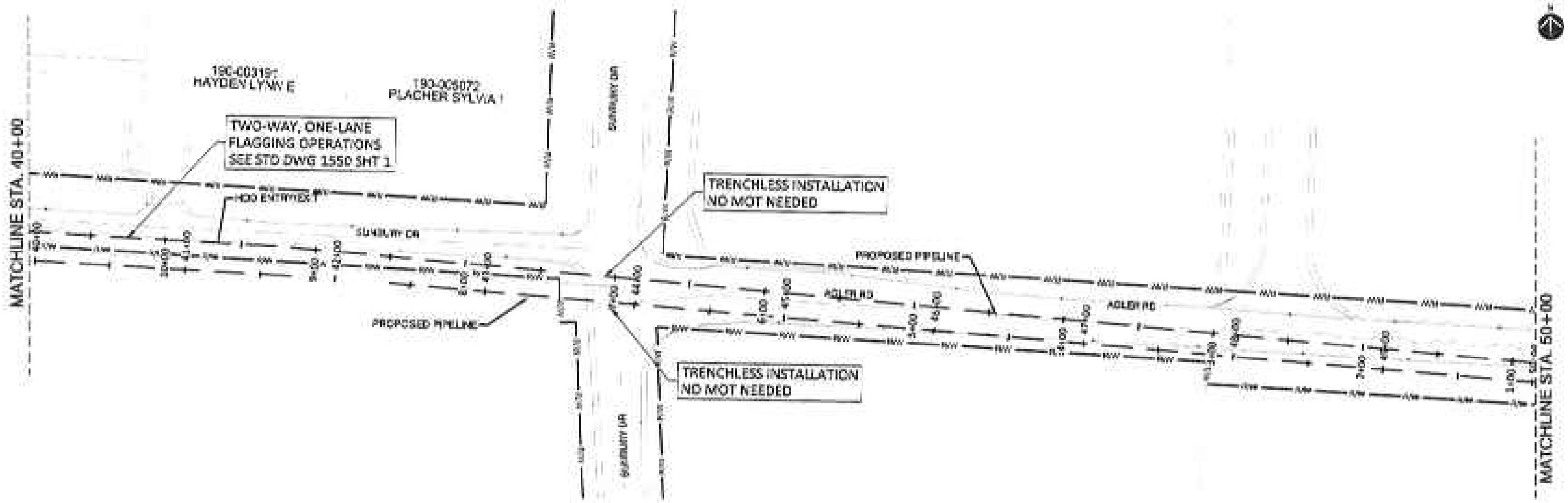
SITE NAME:

INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

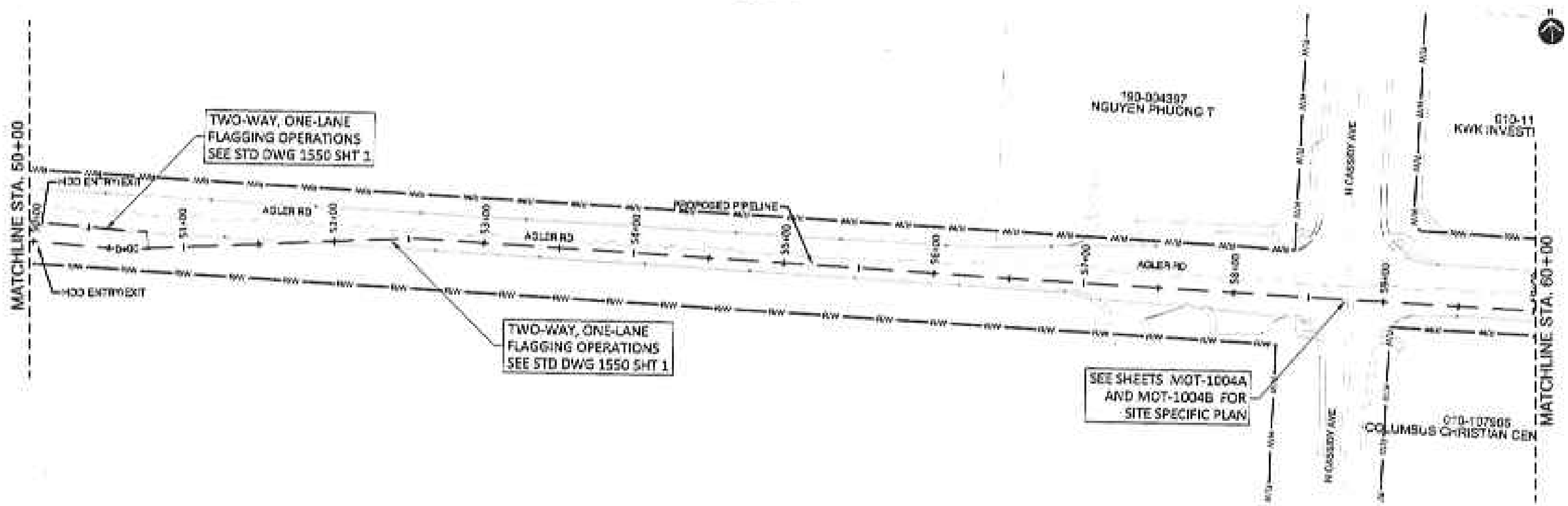
PROJECT ID# 21-78793

DRAWING TITLE:
MAINTENANCE OF TRAFFIC
STA 20+00 TO STA 40+00

DRAWING NO:
MOT-1003



PROPOSED PLAN - STA. 40+00 TO STA. 50+00



PROPOSED PLAN - STA. 50+00 TO STA. 60+00

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PROPOSED

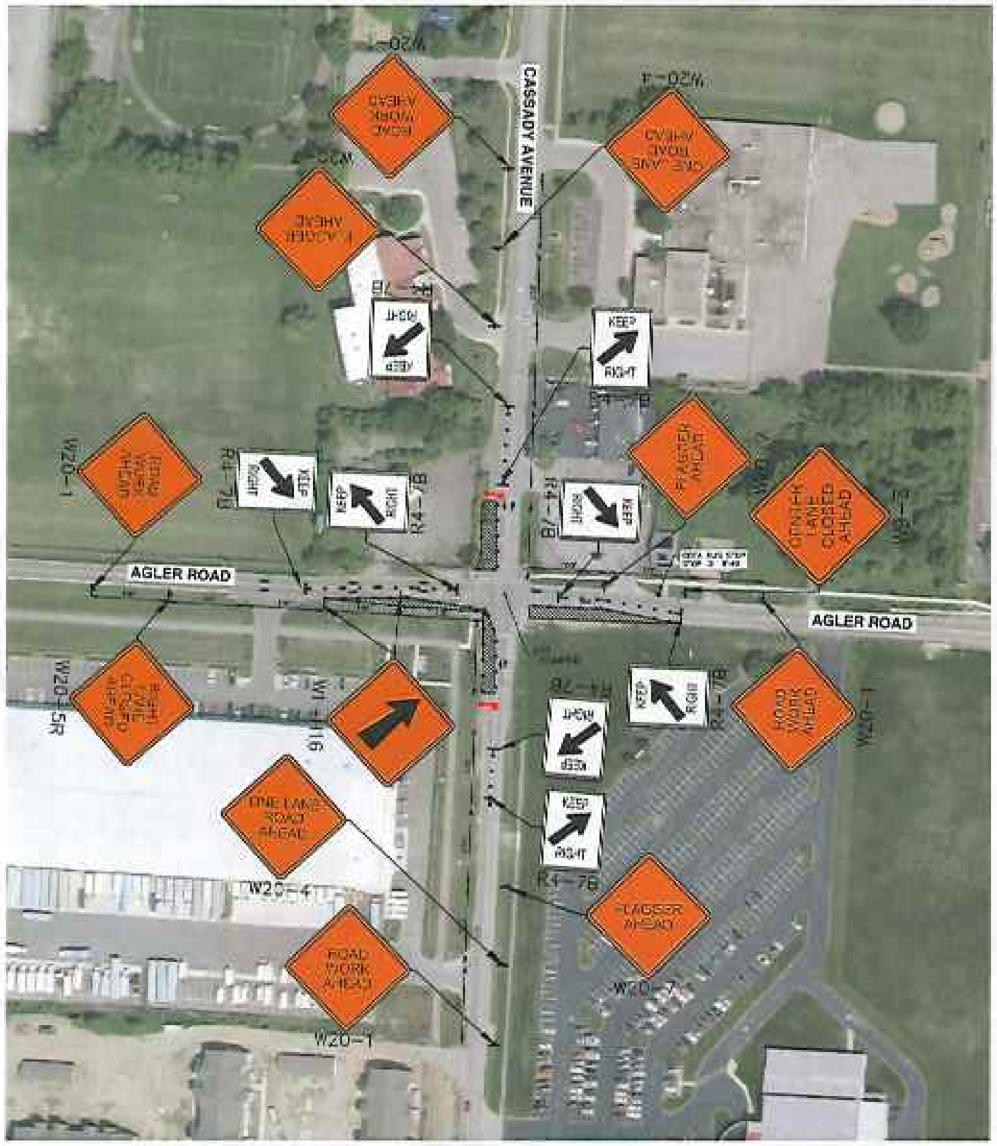
REVISIONS

SITE NAME:
INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

PROJECT ID# 21-78793

DRAWING TITLE:
MAINTENANCE OF TRAFFIC
STA 40+00 TO STA 60+00

DRAWING NO:
MOT-1004



NOTE TO CONTRACTOR

THIS TRAFFIC CONTROL PLAN IMPACTS THE CITY OF COLUMBUS DIVISION OF FIRE, MIFFLIN TOWNSHIP FIRE DEPARTMENT, AND CLINTON TOWNSHIP FIRE DEPARTMENT. YOU ARE REQUIRED TO PROVIDE ADVANCE NOTIFICATION 72 HOURS MINIMUM PRIOR TO START.

MIFFLIN TOWNSHIP FIRE DEPARTMENT, STATION 132
2452 AGLER ROAD, COLUMBUS, OH 43224
CONTACT: CAPTAIN TORRES (OR THE OFFICER ON DUTY)
614-471-0542, TORRESA@MIFFLIN-OH.GOV

MIFFLIN TOWNSHIP FIRE DEPARTMENT, STATION 134
422 MCCUTCHEON ROAD, GAHANNA, OH 43230
CONTACT: CAPTAIN JOHN KING (OR THE OFFICER ON DUTY)
614-471-0536, KINGJ@MIFFLIN-OH.GOV

STELZER ROAD FIRE STATION, BATTALION 2, STATION 28
3240 MCCUTCHEON ROAD, COLUMBUS, OH 43219
CONTACT: CAPTAIN ASTIN KERNS (OR THE OFFICER ON DUTY)
614-221-3132 X74428, ADKERNS@COLUMBUS.GOV

LEGEND

EXISTING TRAFFIC FLOW	TYPE A WARNING FLASHER
PROPOSED TRAFFIC FLOW	STAGING AREA
PAVEMENT MARKING	WORK ZONE
LIGHTED ARROW PANEL	DETOUR ROUTE
TYPE III BARRICADE	JERSEY BARRIER
SIGN	FLAGGER
TRAFFIC BARREL	
TRAFFIC SHIFT	
PARKING METER	

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CAMPOS EPC

PROPOSED

REVISIONS		
A	[illegible]	ISSUED FOR PERMIT
REV. #	DATE	DESCRIPTION

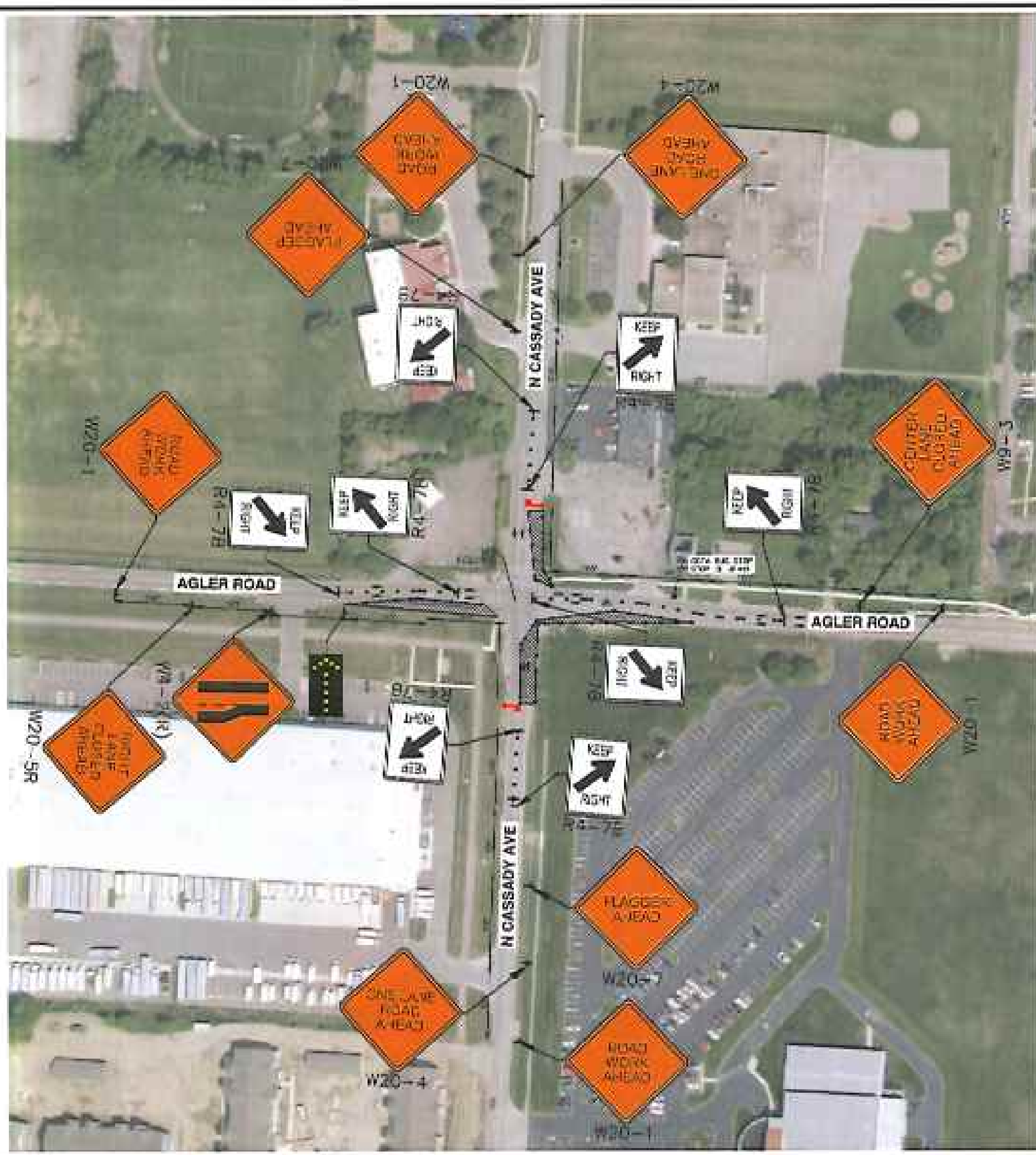
INTERNAL ENG.	[illegible]	[illegible]	[illegible]
DESIGNED BY	JMJ	[illegible]	[illegible]
CHECKED BY	[illegible]	[illegible]	[illegible]
ADMIN. BY	TBD	TBD	TBD
	NAME	DATE	PHONE #

SITE NAME:
INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

PROJECT ID# 21-78793
NO-P PIPELINE REPLACEMENT, AGLER ROAD
COLUMBUS, FRANKLIN COUNTY, OH

DRAWING TITLE:
AGLER & CASSADY
MAINTENANCE OF TRAFFIC-PHASE 1

DRAWING NO:
MOT-1004A



NOTE TO CONTRACTOR

THIS TRAFFIC CONTROL PLAN IMPACTS THE CITY OF COLUMBUS DIVISION OF FIRE, MIFFLIN TOWNSHIP FIRE DEPARTMENT, AND CLINTON TOWNSHIP FIRE DEPARTMENT. YOU ARE REQUIRED TO PROVIDE ADVANCE NOTIFICATION 72 HOURS MINIMUM PRIOR TO START.

MIFFLIN TOWNSHIP FIRE DEPARTMENT, STATION 132
2452 AGLER ROAD, COLUMBUS, OH 43224
CONTACT: CAPTAIN TORRES (OR THE OFFICER ON DUTY)
614-471-2340, [illegible]

MIFFLIN TOWNSHIP FIRE DEPARTMENT, STATION 134
435 MCCUTCHEON ROAD, GAHANNA, OH 43230
CONTACT: CAPTAIN JOHN [illegible] (OR THE OFFICER ON DUTY)
614-471-[illegible], [illegible]

STELZER ROAD FIRE STATION, BATTALION 2, STATION 26
3240 MCCUTCHEON ROAD, COLUMBUS, OH 43219
CONTACT: CAPTAIN KEITH [illegible] (OR THE OFFICER ON DUTY)
614-221-2122 X74426, [illegible]

LEGEND

→	EXISTING TRAFFIC FLOW		TYPE A WARNING FLASHER
→	PROPOSED TRAFFIC FLOW		STAGING AREA
	PAVEMENT MARKING		WORK ZONE
	LIGHTED ARROW PANEL		DETOUR ROUTE
	TYPE III BARRICADE		JERSEY BARRIER
	SIGN		FLAGGER
	TRAFFIC BARREL		
	TRAFFIC SHIFT		
	PARKING METER		

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CAMPOS EPC

PROPOSED

REVISIONS		
A	[illegible]	ISSUED FOR PERMIT
REV. #	DATE	DESCRIPTION

[illegible]	[illegible]	[illegible]	[illegible]
DESIGNED BY	JAJ	[illegible]	[illegible]
CHECKED BY	[illegible]	[illegible]	[illegible]
[illegible]	TBD	TBD	TBD
	NAME	DATE	PHONE #

SITE NAME:
INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

PROJECT ID# 21-78793
[illegible] PIPELINE REPLACEMENT, AGLER ROAD
COLUMBUS, FRANKLIN COUNTY, OH

DRAWING TITLE:
AGLER & CASSADY
MAINTENANCE OF TRAFFIC-PHASE 2

DRAWING NO.:
MOT-1004B

NOTE TO CONTRACTOR

THIS TRAFFIC CONTROL PLAN IMPACTS THE CITY OF COLUMBUS DIVISION OF FIRE, MIFFLIN TOWNSHIP FIRE DEPARTMENT, AND CLINTON TOWNSHIP FIRE DEPARTMENT. YOU ARE REQUIRED TO PROVIDE ADVANCE NOTIFICATION 72 HOURS MINIMUM PRIOR TO START.

MIFFLIN TOWNSHIP FIRE DEPARTMENT, STATION 132
2452 AGLER ROAD, COLUMBUS, OH 43224
CONTACT: CAPTAIN TORRES (OR THE OFFICER ON DUTY)
614-471-0342, TORRES@MIFFLIN-OH.GOV

MIFFLIN TOWNSHIP FIRE DEPARTMENT, STATION 134
423 MCCUTCHEON ROAD, GAHANNA, OH 43230
CONTACT: CAPTAIN JOHN KING (OR THE OFFICER ON DUTY)
614-471-0365, KING@MIFFLIN-OH.GOV

STELZER ROAD FIRE STATION, BATTALION 2, STATION 28
3240 MCCUTCHEON ROAD, COLUMBUS, OH 43219
CONTACT: CAPTAIN AUSTIN KERNS (OR THE OFFICER ON DUTY)
614-221-3132 X74428, ADKERNS@COLUMBUS.GOV

LEGEND

	EXISTING TRAFFIC FLOW		TYPE A WARNING FLASHER
	PROPOSED TRAFFIC FLOW		STAGING AREA
	PAVEMENT MARKING		WORK ZONE
	LIGHTED ARROW PANEL		DETOUR ROUTE
	TYPE III BARRICADE		JERSEY BARRIER
	SIGN		FLAGGER
	TRAFFIC BARREL		
	TRAFFIC SHIFT		
	PARKING METER		

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Ohio Utilities Protection Service
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CAMPOS EPC

PROPOSED

REVISIONS		
A	[illegible]	ISSUED FOR PERMIT
REV. #	DATE	DESCRIPTION

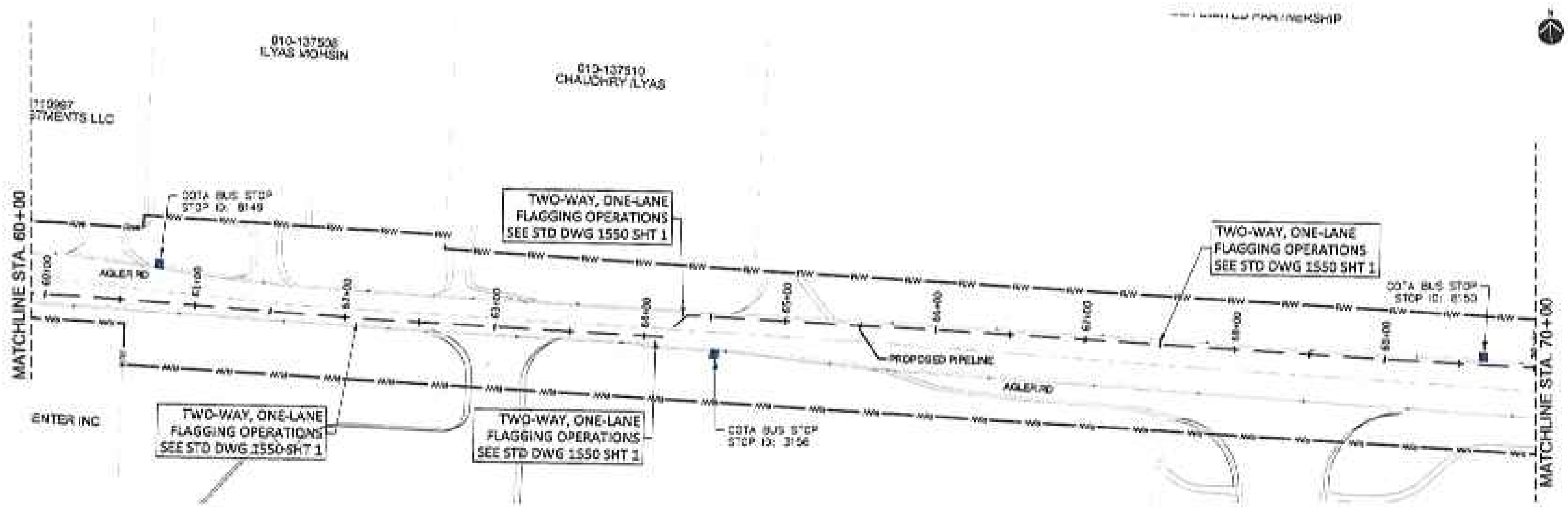
INTERNAL ENG	[illegible]	[illegible]	[illegible]
DESIGNED BY	[illegible]	[illegible]	[illegible]
CHECKED BY	[illegible]	[illegible]	[illegible]
SUBMITTED BY	TBD	TBD	TBD
	NAME	DATE	PHONE #

SITE NAME:
INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

PROJECT ID# 21-78793
NC-PIPELINE REPLACEMENT, AGLER ROAD
COLUMBUS, FRANKLIN COUNTY, OH

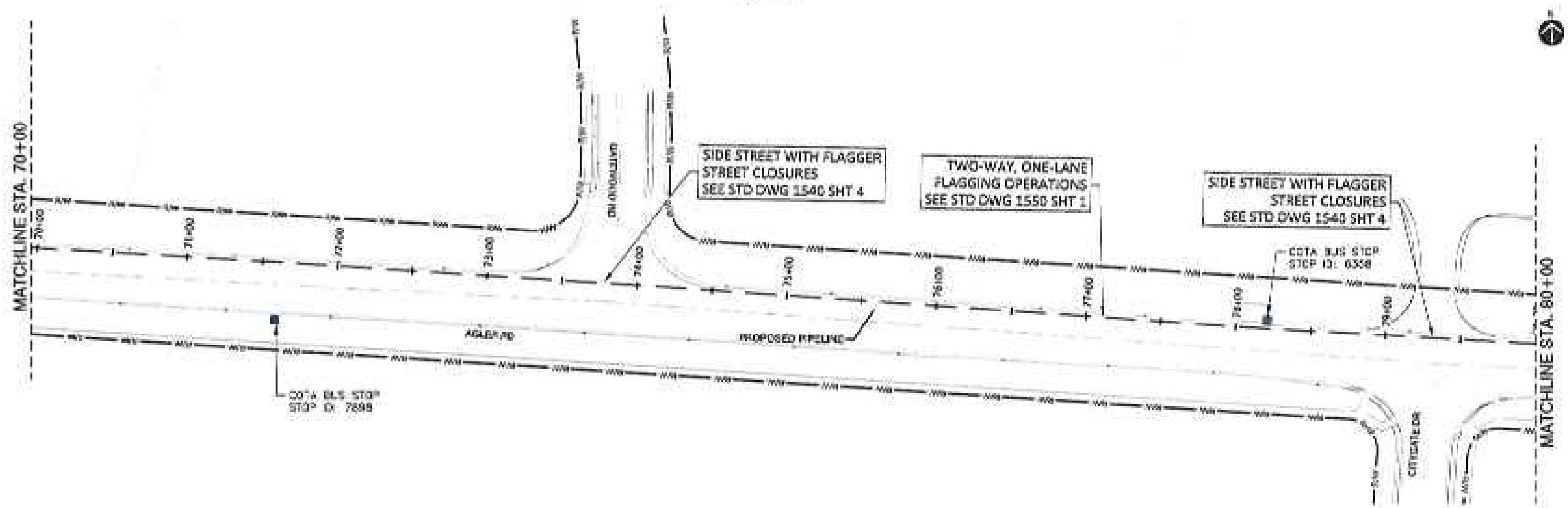
DRAWING TITLE:
AGLER & CASSADY
MAINTENANCE OF TRAFFIC-PHASE 3

DRAWING NO.:
MOT-1004C



PROPOSED PLAN - STA. 60+00 TO STA. 70+00

SCALE: 1" = 40'



PROPOSED PLAN - STA. 70+00 TO STA. 80+00

SCALE: 1" = 40'

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Call 811 before you dig

CAMPOS EPC

PROPOSED

REVISIONS		
A	[illegible]	ISSUED FOR PERMIT
REV. #	DATE	DESCRIPTION

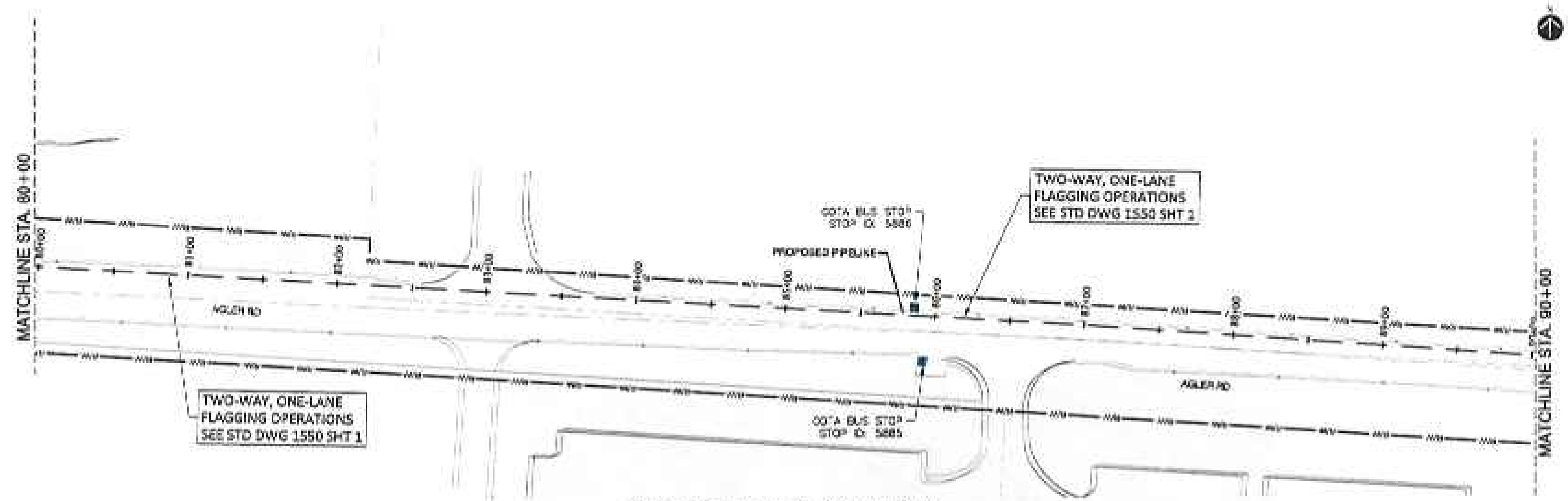
INSTALL DWG	[illegible]	[illegible]	[illegible]
DESIGNED BY	[illegible]	[illegible]	[illegible]
CHECKED BY	[illegible]	[illegible]	[illegible]
APPROVED BY	TBD	TBD	TBD
	NAME	DATE	PHONE #

SITE NAME:
INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

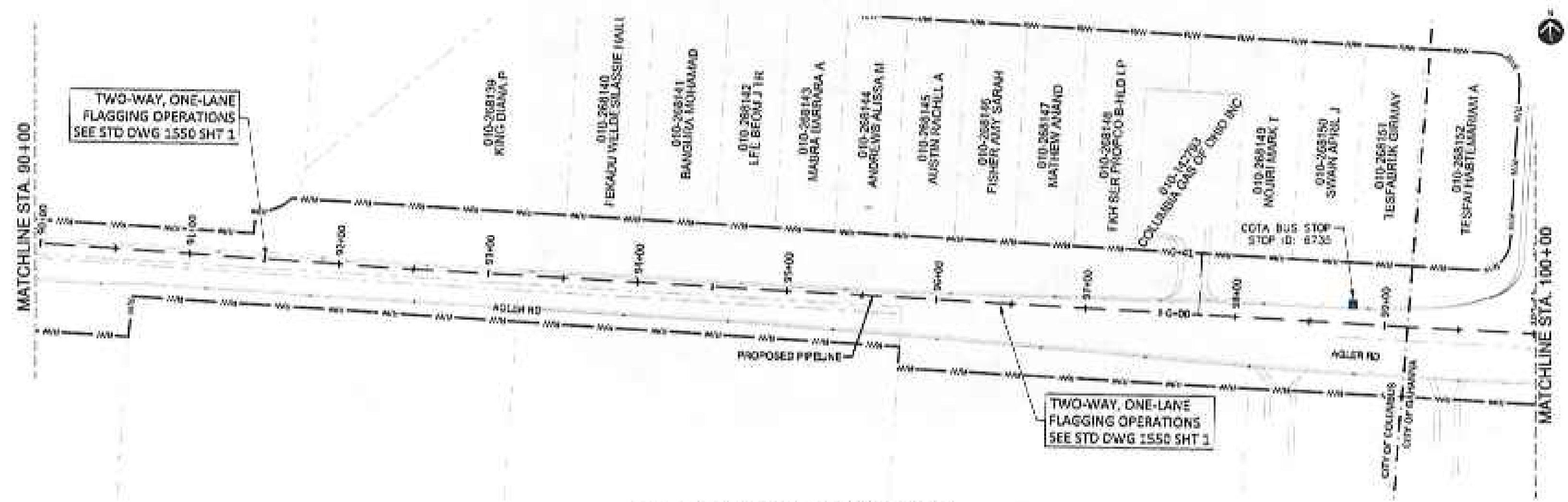
PROJECT ID# 21-78793
[illegible] PIPELINE REPLACEMENT, AGLER ROAD
COLUMBUS, FRANKLIN COUNTY, OH

DRAWING TITLE:
MAINTENANCE OF TRAFFIC
STA 60+00 TO STA 80+00

DRAWING NO:
MOT-1005



PROPOSED PLAN - STA. 80+00 TO STA. 90+00
SCALE: 1" = 40'



PROPOSED PLAN - STA. 90+00 TO STA. 100+00
SCALE: 1" = 40'

NiSource

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CAMPOS EPC

PROPOSED

REVISIONS		
A		ISSUED FOR PERMIT
REV. #	DATE	DESCRIPTION

SITE NAME:
INST# XX-XXXXX-XX
ABAN# XX-XXXXX-XX

PROJECT ID# 21-78793
HP PIPELINE REPLACEMENT, AGLER ROAD
COLUMBUS, FRANKLIN COUNTY, OH

DRAWING TITLE:
MAINTENANCE OF TRAFFIC
STA 80+00 TO STA 100+00

DRAWING NO:
MOT-1006

TRAFFIC CONTROL PLANS

NCHP PIPELINE REPLACEMENT, AGLER ROAD

FRANKLIN COUNTY, OHIO

COUNTY MAP
NOT TO SCALE

PROJECT NARRATIVE

THE PROJECT WILL INVOLVE THE INSTALLATION OF 3.8 MILES OF 24-INCH HIGH PRESSURE STEEL PIPELINE.

PROJECT AREA SPANS ACROSS JURISDICTIONS OF FRANKLIN COUNTY.

THE PROJECT WILL OCCUR WITH ROAD CLOSURES AND SINGLE LANE CLOSURES IN SERIES BY WORKZONES.

SHEET INDEX

01 COVER SHEET
02 NOTES
03 WORK ZONE 1 - OVERALL MAP
04 WORK ZONE 1 - TRAFFIC CONTROL PLAN
05 WORK ZONE 1 - TRAFFIC CONTROL PLAN
06 WORK ZONE 1 - TRAFFIC CONTROL PLAN
07 WORK ZONE 2 - OVERALL MAP
08 WORK ZONE 2 - TRAFFIC CONTROL PLAN

PROJECT CONTACTS

RIGHT-OF-WAY PERMITTING

STEVE [illegible]
CITY OF GAHANNA RIGHT OF WAY PROJECT ADMINISTRATOR
200 HAMILTON RD
GAHANNA, OH 43230
PHONE: 614.342.4000
EMAIL: [illegible]@GAHANNA.GOV

ENGINEER

METRO CONSULTING ASSOCIATES
CONTACT: CHRISTOPHER SUTTON, PE
45345 FIVE MILE ROAD
PLYMOUTH, MI 48170
PHONE: 800.525.6016
FAX: 734.454.[illegible]
EMAIL: CSUTTON@METROCA.NET

CONTRACTOR

SUB-CONTRACTOR

TRAFFIC CONTROL NOTES

1. ACCESS TO ALL RESIDENTIAL AND COMMERCIAL DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES. THIS DOES NOT APPLY TO THE SIDEWALK IN THE CLOSURE AREA.
2. ALL TRAFFIC CONTROL DEVICES AND THEIR USAGE SHALL CONFORM TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), 2012 EDITION.
3. ALL EXISTING PAVEMENT MARKINGS THAT ARE REMOVED FOR TRAFFIC CONTROL OR OBLITERATED DURING CONSTRUCTION OPERATIONS SHALL BE REPLACED WITH WATERBORNE FOR THE LONGITUDINAL LANE LINES AND OVERLAY COLD PLASTIC FOR SPECIAL MARKINGS (STOP BARS, ARROWS, ETC).
4. ANY PERMANENT ODOT SIGNS IMPACTED DURING CONSTRUCTION MUST BE REPLACED AT THE CONTRACTORS EXPENSE ON NEW SUPPORTS PER ODOT STANDARDS.
5. ALL SIGN MATERIALS AND SUPPORTS MUST MEET NCHRP-350 CRASH WORTHY OR MASH REQUIREMENTS.
6. TEMPORARY WARNING, REGULATORY, AND GUIDE SIGNS NOT REQUIRED FOR A PARTICULAR LANE OR SHOULDER CLOSURE MUST BE REMOVED, COVERED OR LAID DOWN WITH THE LEGS REMOVED.
7. DURING CONSTRUCTION AND LANE CLOSURES, ACCESS TO ALL BUSINESS AND RESIDENTIAL DRIVES MUST BE MAINTAINED AT ALL TIMES. IN ADDITION, ACCESS FOR EMERGENCY VEHICLES (FIRE, AMBULANCE, POLICE) SHALL BE MAINTAINED TO ADJACENT HOMES, BUSINESSES AND SUBDIVISIONS AT ALL TIMES.
8. FLAGGERS SHALL BE USED WHEN NECESSARY, IN CONJUNCTION WITH TEMPORARY TRAFFIC LIGHTS.

CAMPOS, EPC

NCHP PIPE LINE REPLACEMENT AGLER ROAD

TRAFFIC CONTROL
COVER SHEET

1" = 2000'

01

TEMPORARY TRAFFIC CONTROL

1. ALL TEMPORARY TRAFFIC CONTROL (TTC) DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCH EDITION). ZONES ARE AVAILABLE FROM THE O+D DEPARTMENT OF TRANSPORTATION, OFFICE OF CONSTRUCTION, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43223. NOTE: ALL DEVICES SHALL COMPLY FOR CONSTRUCTION AND LOCATION WITH THE CURRENT EDITION OF THE NCHRP 350 AND MASH CRASH TESTING GUIDELINES.

2. CONSTRUCTION OPERATIONS SHALL NOT BECOME UNTIL ALL TRAFFIC CONTROL IS IN PLACE AND APPROVED BY THE DEPARTMENT OF PUBLIC SERVICE INSPECTOR. IF THE CONTRACTOR DOES NOT COMPLY WITH THE STANDARDS, INCLUDING THE INSTALLATION OF TEMPORARY PAVEMENT MARKINGS AND THE REMOVAL OF CONFLICTING TRAFFIC CONTROLS, THEN PERMIT SHALL BE REVOKED AND WORK SHALL BE TERMINATED. "TEMPORARY PAVEMENT" MARKINGS TO INCLUDE, BUT NOT LIMITED TO, CHANNELIZING LINES, EDGE LINES AND CENTERLINES SHALL BE INSTALLED AND MAINTAINED ON ALL CONSTRUCTION OPERATIONS LASTING A MINIMUM OF 14 CALENDAR DAYS OR AS DIRECTED BY THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR THE PROJECT ENGINEER.

3. THE CONTRACTOR SHALL GIVE ADVANCE NOTIFICATION (WRITTEN AND VERBALLY) TO THE CITY OF DAHANNA ENGINEERING DEPARTMENT, 614-342-4000, WRITTEN NOTIFICATION TO PAVING THE WAY AT PAVINGTHEWAY@NOPAVING.OH OR VERBAL TO (614)000-4000 , PROJECT CHANGES, AND THE CDOT OR SERVICE PLANNER AT (OTH) 614-000-4333 OR FAX 614-275-5632, INFORMING THEM OF ALL UPCOMING MAINTENANCE OF TRAFFIC CHANGES ON A WEEKLY BASIS. NOTIFICATION SHALL INCLUDE, BUT NOT BE LIMITED TO, AREAS, WHERE, WHEN, AND HOW PEDESTRIAN AND VEHICULAR TRAFFIC WILL BE AFFECTED, AND THE TEMPORARY TRAFFIC CONTROL PROCEDURES THE CONTRACTOR IS PLANNING TO USE. THE TYPE OF TRAFFIC CHANGE SHALL DETERMINE THE LENGTH OF ADVANCE NOTIFICATION REQUIRED:

TYPE OF CHANGE NOTIFICATION IN DAYS	ADVANCE
DETOURS/ROAD CLOSURES PRIOR TO CLOSURE	14-DAY NOTIFICATION
LANE CLOSURES LASTING 2 WEEKS OR MORE	2-WEEKS
LANE CLOSURES OF LESS THAN 2 WEEKS	3-DAYS
LANE CLOSURES OF 2 DAYS OR LESS	1-DAY

THE CDOT'S SENIOR SERVICE PLANNER SHALL BE CONTACTED 30 DAYS PRIOR TO ANY PLANNED CLOSURE ON ARTERIAL CDOT ROUTES. ANY OTHER UNFORESEEN IMPACTS TO TRAFFIC SHALL BE IMMEDIATELY REPORTED AS THEY OCCUR.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND SAFE MOVEMENT OF PEDESTRIAN TRAFFIC OF ADJACENT WAYS FROM THE CONSTRUCTION SITE. TRAFFIC CONTROL FOR PEDESTRIAN MOVEMENT SHALL BE AS PER CITY OF DAHANNA CONSTRUCTION AND MATERIAL SPECIFICATIONS, CITY OF DAHANNA STANDARD CONSTRUCTION DRAWINGS, AND FIGURES 6H-28 (TH-28) AND 6H-29 (TH-29) OF PART 6 OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, WHEN NOT SHOWN ON A SIGNED PLAN. ALL SIDEWALK DIVERSIONS AND TEMPORARY WALK-BLOCK CROSSINGS SHALL BE PREAPPROVED BY THE PROJECT ENGINEER. ACCESS FOR PEDESTRIAN AND NON-CULAR TRAFFIC TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

HOLIDAYS AND SPECIAL EVENTS

1. NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING DESIGNATED HOLIDAYS OR SPECIAL EVENTS. THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. CONTACT THE CITY OF DAHANNA ENGINEERING DEPARTMENT, 614-342-4000 FOR EVENT DATES, LOCATIONS, AND SCHEDULE. HOLIDAYS WILL CONSIST OF CHRISTMAS, NEW YEARS, FOURTH OF JULY, MEMORIAL DAY, LABOR DAY, THANKSGIVING, RED, WHITE AND BOOM, FIREWORKS CELEBRATION AND A MINIMUM OF ONE DAY PRIOR TO FRIENDSHIP NIGHT SHALL INCLUDE ALL TEMPORARY TRAFFIC CONTROL DEVICES TO BE STORED FROM THE PROJECT AREA AND PLACE OTHER IN A PRE-DETERMINED LOCATION APPROVED BY THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR CONFLICTS REMOVED FROM THE SITE.

2. THE CONTRACTOR SHALL CONTACT THE CITY OF DAHANNA FOR ANY ADDITIONAL HOLIDAY REQUIREMENTS FOR SPECIAL EVENTS.

3. THE CONTRACTOR SHALL MAINTAIN ALL PERMANENT TRAFFIC CONTROLS NOT IN CONFLICT WITH THE TEMPORARY TRAFFIC CONTROLS THROUGHOUT THIS PROJECT. PERMANENT TRAFFIC CONTROLS TEMPORARILY RELOCATED OR COVERED, AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED, OR IMPROPERLY PLACED SIGNS.

4. ANY WORK DONE BY THE ENGINEERING DEPARTMENT, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF TEMPORARY TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTORS' EXPENSE.

5. THE ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL THE ORIGINAL PERMANENT TRAFFIC CONTROLS ARE IN PLACE OR UNTIL TEMPORARY TRAFFIC CONTROLS APPROVED BY THE ENGINEER ARE INSTALLED. THE ORIGINAL PERMANENT TRAFFIC CONTROLS ARE: STOP, YIELD, ONE - WAY, DO NOT ENTER, RESTRICTED TURN SIGNS AND ALL STREET NAME SIGNS. OTHER CRITICAL SIGNS MAY BE NOTED ON THE PLANS AS WELL. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.

ITEM 614 - MAINTAINING TRAFFIC

1. ALL COSTS THAT CONSIST OF MAINTAINING AND PROTECTING VEHICULAR AND PEDESTRIAN TRAFFIC ACCORDING TO THE LATEST EDITION OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS, THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCH), AND PER THE REQUIREMENTS DESIGNATED IN THE PLAN INCLUDING ALL LAW ENFORCEMENT OFFICER (LEO) AND FLAGGER HOURS, SHALL BE INCLUDED IN THE LUMP SUM ITEM 614. IN ADDITION TO THE REQUIREMENTS HEREIN, AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, A UNIFORMED LAW ENFORCEMENT OFFICER (LEO) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC UNDER THE FOLLOWING CONDITIONS:

- WORK WITHIN A 2 SIGNALIZED INTERSECTION, DEFINED AS THE AREA ENCLOSED BY THE REAR X-WALK LINES.
- WHEN FLAGGING WITHIN THE INTERSECTION OF TWO ARTERIAL ROADWAYS
- WHEN SPECIFIED IN THE MAINTENANCE OF TRAFFIC PLAN OR AS WHEN DIRECTED BY THE PROJECT ENGINEER
- WHEN SHIFTING TRAFFIC LEFT OF CENTER, THROUGH A SIGNALIZED INTERSECTION, WITHOUT SHIFTING SIGNAL HEADS

2. A FLAGGER SHALL BE UTILIZED TO ASSIST IN CONTROLLING TRAFFIC WHILE EQUIPMENT IS ENTERING OR EXITING AN INTERSECTION OR WORK ZONE. THE CONTRACTOR MAY UTILIZE HIS OWN FLAGGERS OR LEO UNDER PAY ITEM 614 MAINTAINING TRAFFIC, LUMP SUM. FLAGGERS AND LEO'S SHALL BE EQUIPPED ACCORDING TO THE STANDARDS FOR FLAGGING TRAFFIC CONTAINED IN THE OMUTCH. FLAGGING OPERATIONS PERFORMED BY LEOS ON DESIGNATED FLAGGING SHALL ONLY BE PERMITTED AS LONG AS ALL TRAFFIC CONTROL IS IN PLACE ACCORDING TO FIGURE 6H-10 (TH-10) IN THE OHIO MANUAL. PATROL DUTIES SHALL NOT BE USED IN FLAGGING OPERATIONS.

3. IF THE CONTRACTOR WISHES TO UTILIZE LEO'S WITH OR WITHOUT PATROL DUTIES FOR TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. THE CONTRACTOR SHALL MAKE ARRANGEMENT THROUGH THE DAHANNA POLICE DIVISION AT (614) 342-4040.

4. LEO'S SHALL BE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH EMPLOYED BY THE CONTRACTOR, THE CITY REPRESENTATIVE SHALL HAVE CONTROL OVER THEIR PLACEMENT. LEO'S SHALL NOT HAVE THE AUTHORITY TO CHANGE, EDIT OR MODIFY ANY MAINTENANCE OF TRAFFIC SCHEME WITHOUT THE PERMISSION OF THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR PROJECT ENGINEER UNLESS AN EMERGENCY DEVELOPS.

5. IF A SAFETY HAZARD DEVELOPS, A LEO MAY BE ASSIGNED BY THE DOWNING PUBLIC SAFETY AND/OR THE PUBLIC SERVICE DIRECTOR AT THE CONTRACTOR'S EXPENSE.

TEMPORARY TRAFFIC CONTROL

1. APPROVABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO CLOSURE OF A ROADWAY. THE MESSAGE SHALL NOTIFY THE MOTORIST OF THE DATES, TIMES AND DURATION OF THE CLOSURE. THE PCMS SHALL REMAIN IN PLACE FOR 7 DAYS AFTER THE START OF THE CLOSURE.

2. TYPES NOT INCLUDED IN A SIGNED PLAN, A TTC PLAN (TTCP), INCLUDING PEDESTRIAN CONTROL SHALL BE SUBMITTED TO THE CITY OF DAHANNA ENGINEERING DEPARTMENT, 614-342-4000 AT THE PRE-CONSTRUCTION MEETING OR A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO BEGINNING WORK AND FINAL APPROVAL COPIES OF THE APPROVED TTCP SHALL BE GIVEN TO THE PROJECT ENGINEER AND KEPT ON SITE ALONG WITH THE STREET CLOSURE/ROADWAY PERMIT.

3. TYPE C STRAW/BURN OR TYPE D 360-DEGREE STEADY-BURN WARNING LIGHTS SHALL BE REQUIRED ON ALL BARRICADES, DRUMS, AND SIMILAR TRAFFIC CONTROL DEVICES IN USE AT NIGHT. ONLY 42" REFLECTORIZED CHANNELIZING DEVICES (CDNCD) SHALL BE PERMITTED FOR NIGHTTIME USE WITH THE APPROVAL OF THE CITY OF DAHANNA ENGINEERING DEPARTMENT, 614-342-4000 PER D.C.B.T. STANDARDS.

4. A FLASHING ARROW PANEL (MP X 96"-TYPE C) SHALL BE USED IN LANE CLOSURES AS PER THE OHIO MANUAL.

5. ALL THRESHOLDS WITHIN THE ROAD RIGHT-OF-WAY SHALL BE BARRICADED OR SECURELY PLATED PER CITY OF DAHANNA DURING NON-WORKING HOURS.

6. ALL EXISTING TRAFFIC LANES SHALL BE FULLY OPEN TO TRAFFIC AT ALL TIMES ON _____.

7. ALL TRAFFIC LANES SHALL BE FULLY OPEN TO TRAFFIC FROM 8:00 A.M. TO 9:30 A.M. MONDAY THROUGH FRIDAY ON _____.

8. _____ LANE(S) MAY BE CLOSED TO TRAFFIC DURING WORKING HOURS.

9. ONE-WAY _____ LANE(S) OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON _____.

10. TWO-WAY, TWO-LANE (ONE-LANE EACH DIRECTION) TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF EXISTING, PROPOSED, OR TEMPORARY PAVEMENT PER CITY OF COLUMBUS MAINTENANCE OF TRAFFIC STANDARD CONSTRUCTION DRAWING 1510 AND FIGURE 6H-28 (TH-28) OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCH).

11. TWO-WAY, ONE-LANE TRAFFIC MAY BE MAINTAINED DURING CONSTRUCTION OPERATIONS ON _____ PER THE CITY OF COLUMBUS MAINTENANCE OF TRAFFIC STANDARD CONSTRUCTION DRAWING 1500 AND FIGURE 6H-10 (TH-10) OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

12. _____ MAY BE CLOSED BETWEEN _____ AND _____ FOR A MAXIMUM OF _____ HOURS/DAY(S) BETWEEN THE HOURS OF _____ AND _____ PER THE CITY OF DAHANNA MAINTENANCE OF TRAFFIC STANDARD CONSTRUCTION DRAWING 1540 AND FIGURE 6H-28 (TH-28) OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS IN PROVIDING DETOUR INCLUDING THE REMOVAL AND RELOCATION OF ANY CONFLICTING TRAFFIC CONTROL AND/OR ANY NECESSARY TRAFFIC SIGNAL WORK.

13. A TEMPORARY DIVERSION SHALL BE PROVIDED AND MAINTAINED IN GOOD CONDITION ON _____ DURING THE PERIOD OF WORK. ALL SUCH DIVERSIONS SHALL BE IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

14. THE DEPARTMENT OF PUBLIC SERVICE WILL REMOVE OR COVER ALL PARKING METER HEADS PUT OUT OF SERVICE BY THIS PROJECT. THERE IS A $82.00 DOLLAR CHARGE FOR THE REMOVAL AND REINSTALLATION OF EACH METER. IN ADDITION A DAILY METER FEE WILL BE CHARGED FOR ALL ENFORCEMENT HOURS FOR EACH METER TAKEN OUT OF SERVICE, PLUS THE PARKING METER DAY OR DOLLAR FEES (NOTE FOR MORE INFORMATION AND THE CALCULATION OF METERS TAKEN OUT OF SERVICE, PLUS THE METER POST AND SIGN ADS. THOSE CHARGES WILL BE COLLECTED FROM THE CONTRACTOR IN ADVANCE WITH THE ISSUANCE OF THE STREET OCCUPANCY/EXCAVATION PERMIT FROM THE DEPARTMENT OF PUBLIC SERVICES PERMIT OFFICE, (614-342-4025) PARKING SERVICES SHALL BE NOTIFIED A MINIMUM OF EIGHTY-EIGHT (48) HOURS (EXCLUDING SAT, SUN, & HOLIDAYS) PRIOR TO SESSIONS WORK. CALL 614-342-4025. THIS COST IS TO BE INCLUDED IN THE BID FOR THIS PROJECT AS A PART OF ITEM 614 MAINTENANCE OF TRAFFIC, LUMP SUM.

15. FOR MOBILE PAYMENT ONLY ZONES, PLEASE ADVISE THE POSTED MOBILE PAYMENT ZONE SIGN AND PROVIDE THE MOBILE PAYMENT ZONE NUMBER FOR THE PARKING SPACE(S) THAT WILL BE REMOVED FROM SERVICE. IF "NON-WORKSPACE" NOTICED WITHIN THE PARKING ZONE, THEN COUNT THE NUMBER OF SPACES NEEDED TO BE OUT OF SERVICE. IF NO "NON-WORKS" ARE WITHIN THE PARKING ZONE, THEN CALCULATE THE NUMBER OF "SPACES" NEEDED BY USING 20 FEET PER SPACE, SINCE ALL THE INFORMATION LISTED ABOVE HAS BEEN COLLECTED FOR ANY PAID PARKING TO BE REMOVED FROM SERVICE, CONTACT THE CITY OF DAHANNA, DIVISION OF PUBLIC SERVICES AT 614-342-4005 FOR ASSISTANCE WITH ESTIMATING THE DAILY PAID PARKING REVENUE RATE PROFILE. THE PROJECT LOCATION IN THE QUADRANT AND OF THE ENVELOPE, THE ONE-HR METER MAP WILL ALSO INCLUDE THE HOURLY RATE FOR MOBILE PAYMENT ZONES. THIS COST IS TO BE INCLUDED IN THE BID FOR THE PROJECT AS A PART OF ITEM 614 MAINTENANCE OF TRAFFIC, LUMP SUM AT THE TIME THE CONTRACTOR SUBMITS FOR THE STREET OCCUPANCY/EXCAVATION PERMIT, ALONG WITH THE PAID PARKING DEVIATION NUMBERS TO BE INCLUDED ON THE PERMIT REQUEST FORM, THE CONTRACTOR IS TO PROVIDE A LISTING OF THE METER IDENTIFICATION NUMBERS AND/OR MOBILE PAYMENT ONLY ZONE NUMBERS AND THE NUMBER OF DAYS THAT EACH PAID PARKING SPACE IS TO BE OUT OF SERVICE. TO THE DEPARTMENT OF PUBLIC SERVICE PERMIT OFFICE. PLEASE VERIFY THAT THE HOURLY RATES ARE CORRECT AND CALCULATE THE COST OF THE PERMIT.

16. "TEMPORARY "EMERGENCY NO PARKING" SIGNS SHALL BE INSTALLED BY THE CONTRACTOR IN AREAS WITH NO PARKING METERS AND TO REMOVE PARKING FROM SERVICE IN AREAS WHERE PARKING METERS, HOODS, AND OR MOBILE PAYMENT ZONE(S) PARKING HAS BEEN TAKEN OUT OF SERVICE. THE SIGNS SHALL SHOW THE CURRENT A.M/P.M. INSTALLATION DATE, REMOVAL DATES, AND HOURS OF RESTRICTION ON EACH SIGN. SIGNS SHALL BE POSTED AT 50 O/C MINIMUM BY USE OF ANY OF THE FOLLOWING ITEMS: EXISTING SIGN POSTS, EXISTING UTILITY POLES, DRUMS AND/OR 42" CONES AND REMOVED BY THE CONTRACTOR IN AREAS WITH NO PARKING METERS. THE TEMPORARY SIGN(S) SHALL HAVE THE INSTALLATION DATE, WORKING DATES, AND HOURS OF RESTRICTION SHOWN ON EACH SIGN. THOSE SIGNS MAY BE OBTAINED FROM THE DEPARTMENT OF PUBLIC SERVICE'S PERMIT OFFICE. THE POLICE DIVISION REQUIRES THE "EMERGENCY NO PARKING" SIGNS BE POSTED A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY VEHICLE BEING TOWED, WITHIN TWENTY-FOUR (24) HOURS OF POSTING, THE CONTRACTOR SHALL SUPPLY THE DEPARTMENT OF PUBLIC SERVICE WITH A WRITTEN RECORD OF POSTED LOCATIONS (PHONE: 614-342-4005).

18. THE CONTRACTOR SHALL CONTACT OHIO UTILITY PROTECTION SERVICE (OUPS) NOW TO HAVE THEM LOCATE AND MARK ALL UNDERGROUND TRAFFIC CONTROL CABLES PRIOR TO THE BEGINNING OF ANY WORK WITHIN 100 FEET OF ANY SIGNALIZED INTERSECTION(S) OR WITHIN ANY POSTED AREA WHERE THE DEPARTMENT HAS UNDERGROUND CABLE. THE SIGNAL OPERATION ENGINEER (614-645-8418) SHALL BE NOTIFIED SIX (6) WEEKS IN ADVANCE FOR SIGNAL REVISIONS OR POLE RELOCATIONS.

19. THE CONTRACTOR SHALL CONTACT THE DIVISION OF SEWER OPERATIONS, OPERATIONS MANAGER MICHAEL PICKARD, 614-645-1615.

19. NO EXCAVATION SHALL BE MADE WITHIN THE (5) FEET OF ANY FOUNDATION THAT SUPPORTS SIGNAL POLES, TRAFFIC SIGNAL DISPLAYS OR SIGNS BY MAST ARM OR SIGNAL SPAN. EXCAVATION WITHIN EIGHT (8) FEET, BUT MORE THAN FIVE (5) FEET SHALL REQUIRE ADDITIONAL SUPPORT (DOWN GUY, HEAD GUY, BASE GUY, ETC.). THE CONTRACTOR SHALL CONTACT SIGNAL OPERATION PERSONNEL AT 614-645-0423(CELL 614-413-4569) AT LEAST FORTY-EIGHT (48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE BEGINNING OF EXCAVATION SO THAT THE CITY CAN APPROVE THE STABILIZATION SETUP BY THE CONTRACTOR. IF UNABLE TO MAKE CONTACT THROUGH ABOVE NUMBERS, DIAL 614-645-7260. STABILIZATION WILL BE DONE BY THE CONTRACTOR AT THE OWNERS/CONTRACTING AGENCYS EXPENSE.

19. SIGNAL STANDARD CLEARANCE 7' HORIZONTAL AND 1' VERTICAL FROM ADJACENT UTILITIES SHALL BE MAINTAINED AT ALL TIMES.

20. WHEN ANY TRAFFIC SIGNAL'S DEVICE, CONDUIT, OR CABLE IS DAMAGED, THE CONTRACTOR SHALL NOTIFY SIGNAL OPERATION PERSONNEL AT 614-645-0423 (CELL 614-419-4501) BETWEEN 7:30 AM AND 4:00 PM, MONDAY THROUGH FRIDAY, IF UNABLE TO MAKE CONTACT THROUGH THE OTHER NUMBERS (CELL 614-645-7260).

21. THE ROADWAY OR ANY SECTION OF ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL ALL TEMPORARY, NON-REFLECTIVE, BLACKOUT TAPE HAS BEEN CONCEALED OR REMOVED FROM NON-CONFLICTING PERMANENT PAVEMENT MARKINGS FOR THAT AREA OF THE ROADWAY, OR UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. THIS IS SUPPLEMENTAL TO CITY OF DAHANNA.

22. WHENEVER YELLOW CENTERLINES OR TURN-LANE LINES ARE PAVED OVER, REMOVED, OR OTHERWISE UNDISTINGUISHABLE, THE CONTRACTOR SHALL INSTALL CLASS 1 TEMPORARY STRIPING (MINIMUM 4" LONG SEGMENTS). TEMPORARY PAINT SHALL BE USED ON ALL MILLED SURFACES. TEMPORARY TAPE SHALL BE USED ON ALL FINAL COURSES OF ASPHALT. PAINT OR TAPE MAY BE USED ON INTERMEDIATE COURSES OF ASPHALT, IF APPROVED BY THE ENGINEER. DRUMS WITH STEADY BURNING TYPE C OR TYPE B 360 DEGREE WARNING LIGHTS AND "KEEP RIGHT" SIGNS MAY BE SUBSTITUTED FOR CENTERLINE MARKINGS.

23. CLASS 1 TEMPORARY STRIPING (MINIMUM 4" LONG SEGMENTS) SHALL BE AS PER ITEM 614 - WORK ZONE PAVEMENT MARKING AND SHALL BE PLACED WITHIN ONE (1) FOOT LONGITUDINAL TOLERANCE OF THE PERMANENT STRIPE(S). ALL TEMPORARY STRIPING NOT TO WITHIN ONE (1) FOOT TOLERANCE SHALL BE REMOVED AND RELOCATED IN THE PROPER LOCATION BY THE CONTRACTOR. CLASS 1 TEMPORARY STRIPING SHALL BE APPLIED IN APPROPRIATE COLORS AND SPACED A MAXIMUM OF FORTY (40) FEET CENTER TO CENTER.

EXISTING PERMANENT TRAFFIC CONTROL

1. ALL SACRIFICIAL CABLE, AND DOWN GUYS OR BACK GUYS SHALL NOT BLOCK ANY PORTION OF A TRAFFIC SIGNAL, TRAFFIC CONTROL SIGN, OR OTHER TRAFFIC CONTROL DEVICE SUCH THAT VISIBILITY OR OPERATION OF THE TRAFFIC CONTROL DEVICE IS IMPAIRED.

2. ALL PERMANENT PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS AS SHOWN ON THIS PLAN SHALL BE INSTALLED BY THE CONTRACTOR AT THE PROJECT'S EXPENSE. THE PROJECT ENGINEER SHALL BE NOTIFIED TO INSPECT APPROPRIATE PERSONNEL A MINIMUM OF FORTY-EIGHT (48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE INSTALLATION OF PERMANENT MARKINGS TO INSPECT AND APPROVE THE PAVEMENT MARKING LAYOUT PRIOR TO PLACING THE PERMANENT MARKINGS.

3. PERMANENT STRIPING OR CLASS 1 TEMPORARY STRIPING SHALL BE INSTALLED NO LATER THAN FOURTEEN (14) CALENDAR DAYS AFTER THE FINAL PAVING COURSE IS COMPLETED. THE PAVING CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE STRIPING CONTRACTOR TO INSURE THE PERMANENT STRIPING IS INSTALLED WITHIN THE FOURTEEN (14) CALENDAR DAY LIMIT.

4. IF THE ENGINEERING DEPARTMENT IS TO INSTALL PERMANENT STRIPING, THE PROJECT ENGINEER SHALL BE NOTIFIED TO INSPECT APPROPRIATE PERSONNEL A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE APPLICATION OF THE FINAL COURSE OF PAVEMENT.

EXISTING PERMANENT TRAFFIC CONTROL

1. ANY WORK DONE BY THE ENGINEERING DEPARTMENT, INCLUDING INSTALLATION, RELOCATION, REMOVAL, AND/OR REPLACEMENT OF PERMANENT TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTORS' EXPENSE.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTALLATION AND/OR REPLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES DAMAGED OR REMOVED DURING CONSTRUCTION. PERMANENT TRAFFIC CONTROL NO LONGER IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE REPLACED IMMEDIATELY.

3. THE CONTRACTOR SHALL REPLACE ALL PAVEMENT MARKINGS, INCLUDING RAISED PAVEMENT MARKERS (RPM), SHOWN IN EXISTING, REMOVED DUE TO CONSTRUCTION OR MAINTENANCE OF TRAFFIC SET UP, RECEIVED OR RECEIVED UNSATISFACTORILY BY THE PROJECT ENGINEER. ALL PAVEMENT MARKING MATERIALS SHALL BE REPLACED IN-LIKE KIND TO THE CURRENT ODOT SPECIFICATION REQUIREMENTS IF NOT SHOWN IN THE PLAN OR POINT INCLUDING RAISED PAVEMENT MARKERS. ALL PAVEMENT MARKINGS SHALL BE REPLACED IN FULL, NO PARTIAL LENGTH OR SECTIONS OF PAVEMENT MARKINGS SHALL BE REPLACED WITHOUT REMOVING THE ENTIRE MARKING BY USE OF THE WATER BLAST METHOD. REMOVAL BY ABRASIVE WHEEL GRINDING SHALL ONLY BE APPROVED BY THE PROJECT ENGINEER.

811 Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER. BEFORE DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES, DO NOT EXCAVATE WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PROTECT ANY SUCH UNDERGROUND UTILITIES.

CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR; NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY ADJACENT STRUCTURES, OR OF ANY OTHER PERSONS.

No.	DESCRIPTION
1	

MCA Making Safer Choices Different

DATE	BY	CHK'D	APP'D
12/21/2021	SM	DS	

CAMPOS, EPC

NCHP PIPE LINE REPLACEMENT AGLER ROAD

DESIGNED	DRAWN	CHECKED
TRAVELIN	SAWMAN	

SCALE	DATE	SHEET NO.
N/A	N/A	N/A

TRAFFIC CONTROL NOTES

NOT TO SCALE

02

LEGEND

EXISTING TRAFFIC FLOW	TYPE A WARNING FLASHER
PROPOSED TRAFFIC FLOW	STAGING AREA
PAVEMENT MARKING	WORK ZONE
LIGHTED ARROW PANNEL	DETOUR ROUTE
TYPE III BARRICADE	JERSEY BARRIER
SIGN	FLAGGER
TRAFFIC BARREL	
TRAFFIC SHIFT	
PARKING METER	

CAMPOS, EPC

NGHP PIPE LINE REPLACEMENT AGLER ROAD

TRAFFIC CONTROL

WORK ZONE 1 - OVERALL MAP

NOT TO SCALE

03

LEGEND

- EXISTING TRAFFIC FLOW
- PROPOSED TRAFFIC FLOW
- PAVEMENT MARKING
- LIGHTED ARROW PANNEL
- TYPE III BARRICADE
- SIGN
- TRAFFIC BARREL
- TRAFFIC CHEVRON
- PARKING METER
- TYPE A WARNING FLASHER
- STAGING AREA
- WORK ZONE
- DETOUR ROUTE
- JERSEY BARRIER
- FLAGGER

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MCA
Planning Engineering Surveying CORPORATE

CAMPOS, EPC

NCMP PIPE LINE REPLACEMENT AGLER ROAD

TRAFFIC CONTROL

WORK ZONE 1 - OVERALL MAP 2

NOT TO SCALE

D4

MATERIAL LIST		
ITEM	CODE	QTY.
END ROAD WORK	C20-2	1
MERGE LEFT	W1-4L	1
LEFT ARROW	W1-6L	1
CENTER LANE CLOSED AHEAD	W3-3	1
CENTER LANE CLOSED	W3-H30	1
ROAD WORK AHEAD	W20-1	2

LEGEND

- EXISTING TRAFFIC FLOW
- PROPOSED TRAFFIC FLOW
- PAVEMENT MARKING
- LIGHTED ARROW PANEL
- TYPE III BARRICADE
- DRUM
- TRAFFIC BARREL
- TRAFFIC SHIFT
- PARKING METER
- TYPE A WARNING FLASHER
- STAGING AREA
- WORK ZONE
- DETOUR ROUTE
- JERSEY BARRIER
- FLAGGER

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CAMPOS, EPC

MCHP PIPE LINE REPLACEMENT AGLER ROAD

TRAFFIC CONTROL

WORK ZONE 1 - TRAFFIC CONTROL PLAN

1" = 100'

05

MATERIAL LIST		
SIGN	CODE	QTY
LANE USE CONTROL LEFT / THRU	R3-6LT	1
LANE USE CONTROL RIGHT / THRU	R3-6TR	1
LANE USE CONTROL LEFT / RIGHT / THRU	R3-H6B	1
ROAD WORK AHEAD	W20-1	1

LEGEND

- EXISTING TRAFFIC FLOW
- PROPOSED TRAFFIC FLOW
- PAVEMENT MARKING
- LIGHTED ARROW PANEL
- TYPE III BARRICADE
- SIGN
- TRAFFIC BARREL
- TRAFFIC SHIFT
- PARKING METER
- TYPE A WARNING FLASHER
- STAGING AREA
- WORK ZONE
- DETOUR ROUTE
- JERSEY BARRIER
- FLAGGER

CAMPOS, EPC

NCHF PIPE LINE REPLACEMENT AGLER ROAD

TRAFFIC CONTROL

WORK ZONE 1 - TRAFFIC CONTROL PLAN

06

N

MATERIAL LIST		
SIGN	CODE	QTY
STREET NAME	D3-1	11
LANE USE CONTROL (LEFT / RIGHT / THRU)	R3-H63	1
ROAD CLOSED	R11-2	1
ROAD WORK AHEAD	W20-1	2
ONE LANE ROAD XX FT	W20-4	1
FLAGGER AHEAD	W20-7	1
DETOUR AHEAD	W20-2	2
ROAD CLOSED AHEAD	W20-3	2
DETOUR RIGHT	W4-9R	1
DETOUR LEFT	W4-9L	2
DETOUR STRAIGHT	W4-9S	1

LEGEND

EXISTING TRAFFIC FLOW
PROPOSED TRAFFIC FLOW
PAVEMENT MARKING
LIGHTED ARROW PANEL
TYPE III BARRICADE
SIGN
TRAFFIC BARREL
TRAFFIC SHIFT
PARKING METER
TYPE A WARNING FLASHER
STAGING AREA
WORK ZONE
DETOUR ROUTE
JERSEY BARRIER
FLAGGER

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MCA

CAMPOS EPC

NDHP PIPE LINE REPLACEMENT AGLER ROAD

TRAFFIC CONTROL

WORKZONE 1 - TRAFFIC CONTROL PLAN

07

N

MATERIAL LIST		
SIGN	CODE	QTY
STREET NAME	D3-1	1
DETOUR LEFT	M4-9L	1
DETOUR RIGHT	M4-9R	2
DETOUR AHEAD	W20-2	1
ROAD CLOSED AHEAD	W20-3	1

LEGEND

- EXISTING TRAFFIC FLOW
- PROPOSED TRAFFIC FLOW
- PAVEMENT MARKING
- LIGHTED ARROW PANNEL
- TYPE III BARRICADE
- SIGN
- TRAFFIC BARREL
- TRAFFIC SHIFT
- PARKING METER
- TYPE A WARNING FLASHER
- STAGING AREA
- WORK ZONE
- DETOUR ROUTE
- JERSEY BARRIER
- FLAGGER

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CAMPUS EPC

NCHP PIPE LINE REPLACEMENT AGLER ROAD

TRAFFIC CONTROL

WORKZONE 1 - TRAFFIC CONTROL PLAN

1" = 60'

08

N

MATERIAL LIST		
SIGN	CODE	QTY
ROAD CLOSED LOCAL TRAFFIC ONLY	R11-3A	2

LEGEND

- EXISTING TRAFFIC FLOW
- PROPOSED TRAFFIC FLOW
- PAVEMENT MARKING
- LIGHTED ARROW PANEL
- TYPE III BARRICADE
- SIGN
- TRAFFIC BARREL
- TRAFFIC SHIFT
- PARKING METER
- TYPE A WARNING FLASHER
- STAGING AREA
- WORK ZONE
- DETOUR ROUTE
- JERSEY BARRIER
- FLAGGER

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CAMPOS, EPC

NCHP PIPE LINE REPLACEMENT ADLER ROAD

TRAFFIC CONTROL

WORK ZONE 2 - TRAFFIC CONTROL PLAN

1" = 60'

09