

4906-4-08

**HEALTH AND SAFETY, LAND USE AND ECOLOGICAL
INFORMATION**

4906-4-08 – Health and Safety, Land Use and Ecological Information

(A) The applicant shall provide information on health and safety. Examples of relevant information include:

(1) Equipment safety. A description of the safety and reliability of all equipment, including:

(a) How the facility will be constructed, operated, and maintained to comply with the requirements of applicable state and federal statutes and regulations, including, but not limited to, the national electrical safety code, applicable occupational safety and health administration regulations, U.S. department of transportation gas pipeline safety standards, and Chapter 4901:1-16 of the Administrative Code.

The construction and operation of the proposed Project will comply with 49 CFR Part 191, "Transportation of Natural and Other Gas By Pipeline; Annual, Incident, and Other Reporting," Part 192, "Transportation of Natural and Other Gas By Pipeline: Minimum Federal Safety Standards," and Part 199, "Drug and Alcohol Testing," Adm.Code 4901:1-16, and will meet all applicable safety standards established by Occupational Safety and Health Administration ("OSHA").

(b) All proposed major public safety equipment.

The Project does not have any jurisdictional major public safety equipment. The Project will be comply with 49 CFR Part 191 and Part 192.

(c) The reliability of the equipment.

Please see Columbia's response to Adm.Code 4906-4-08(A)(1)(b).

(d) The generation equipment manufacturer's safety standards, including a complete copy of the manufacturer's safety manual or similar document and any recommended setbacks from the manufacturer.

Adm.Code 4906-4-08(A)(1)(d) does not apply to this Project.

(e) The measures that will be taken to restrict public access to the facility.

Public access to the construction site will be restricted by fencing, concrete Jersey barriers, portable Jersey barriers, and/or traffic cones. Steel plating will be installed when the area is not being actively worked within the public ROW. Once construction is complete, the pipeline will be buried underground and therefore inaccessible to the public.

(f) The fire protection, safety, and medical emergency plan(s) to be used during construction and operation of the facility, and how such plan(s) will be developed in consultation with local emergency responders.

Contractors working for Columbia are required to meet OSHA standards and NiSource standards including *NiSource's Contractor Safety Manual 3.0*. A work safety health plan ("WSHP") will be kept and maintained on-site as well as at nearby emergency responders (police, fire, and EMS) to ensure an appropriate response to any emergencies occurring during construction of the Project. Columbia also requires that contractors complete daily task hazard assessments ("THAs") prior to any work during construction of the Project.

(g) The sensitive receptor considerations, ensuring that sensitive receptor index numbering is the same for all reports and maps listing sensitive receptors.

Refer to Figure 1 for a map of the sensitive receptors within 500 feet. Please see Columbia's response to Adm.Code 4906-4-08(A)(1)(b). Landowners crossed and adjacent to the gas pipeline will be informed of the Project's start of construction at least 7 days prior to any earth disturbance.

(2) Air pollution control. Except for wind farms and solar facilities, a description in conceptual terms of the probable impact to the population due to failures of air pollution control equipment.

Please see Columbia's response to Adm.Code 4906-4-07(B)(1)(d).

(3) Noise. A description of anticipated noise from the construction, operation, and maintenance of the facility, including:

(a) An estimate the nature of any intermittent or, recurring, or particularly annoying sounds from the following sources:

i. Blasting activities.

Columbia is not expecting blasting to be required for the installation of the Project. If necessary for installation of the pipeline, Columbia will submit a formal blasting plan as design proceeds and if conditions warrant the need for blasting.

ii. Operation of earth moving equipment.

Construction noise will include excavation which is expected to result in temporary and localized increased noise, which varies depending on proximity of equipment to the receptors and the type of equipment being used. Equipment will be outfitted with standard mufflers to reduce exhaust noise. Permit conditions and noise ordinances will be adhered to for all nighttime work to the extent practical or as approved by City of Columbus for road permits. Columbia anticipates nighttime work for Bethel Road, Morse Road, Karl Road, and the HDDs due to City of Columbus requirements. Open cuts of hard surfaces will be made with the appropriate equipment, such as air hammers and saws, and nighttime work will be limited as much as practical to lower noise activities.

iii. Driving of piles, rock breaking or hammering, and horizontal directional drilling.

Driving of piles is not anticipated during construction of the Project. Rock breaking and hammering activities may occur if shallow rock is encountered or at locations where pavement demolition or installation is required. Appropriate time-of-day restrictions will be in place to limit the noise disturbance to the public.

HDDs are currently anticipated at three locations, as summarized in Table 8. HDD construction will allow crossing under potential sensitive areas such as the Olentangy River, West Rathbone Avenue, and I-71 and the CSX and Norfolk Southern railroads. Based on preliminary feedback from a constructability review done on the proposed Project route, there is a possibility to combine HDD-1 and

HDD-2. This will need to be determined once the Project is approved and construction contractor has been awarded. Additional locations may be used for installing pipe under roads and drives or other obstacles with insufficient room for conventional lay and/or where traffic patterns or other public movements and activities must be maintained. Primary noise from HDD activities occurs at the entry and exit pit locations of the HDD. Increased sound levels are expected to be localized to receptors in close proximity to these entry/exit pit locations and sound levels are expected to decrease significantly with increased distance from the HDD pit. HDD activities are expected to be primarily limited to daytime hours when receptors are less sensitive to noise to minimize impacts to surrounding receptors.

Table 8: Potential HDD Location

HDD Number	Location/Name	Reason	Length (ft)
HDD-1	Olentangy River	Potential high-quality river	3,230
HDD-2	West Rathbone Ave	Densely congested area	1,850
HDD-3	I-71	I-71 Hwy and CSX and Norfolk Southern RR tracks	1,310

iv. Erection of structures.

Columbia anticipates the vast majority of the Project to be underground; however, pipeline markers and test stations will be installed as part of the Project. These locations will be available prior to the start of construction.

v. Truck traffic.

Truck traffic is expected to result in temporary and localized increased noise, which varies depending on proximity to the receptors and the type of equipment being used. Equipment will be outfitted with standard mufflers to reduce exhaust noise. Permit conditions and noise ordinances will be adhered to for all nighttime

work to the extent practical or as approved by City of Columbus for road permits. Columbia anticipates nighttime work for Bethel Road, Morse Road, Karl Road, and the HDDs due to City of Columbus requirements.

vi. Installation of equipment.

Please see Columbia's response to Adm.Code 4906-4-08(A)(3)(a)(iv).

(b) A description of the operational noise levels expected at the nearest property boundary, including:

- i. Operational noise from generation equipment.**
- ii. Processing equipment.**
- iii. Associated road traffic.**

As a natural gas pipeline facility, the Project will create no operational noise from generation equipment, nor will it involve any processing equipment or create any associated road traffic. Operational noise from the pipeline is not expected to be a significant noise contributor to the existing ambient environment.

(c) A description of the location of any noise-sensitive areas within one mile of the facility, and the operational noise level at each habitable residence, school, church, and other noise-sensitive receptors, under both day and nighttime operations. Sensitive receptor, for the purpose of this rule, refers to any occupied building.

The daytime and nighttime operational noise levels across all noise-sensitive areas within one mile of the pipeline facility is anticipated to be nonexistent as the facility will be installed underground. Refer to Figure 9 for a map with a one-mile buffer showing the potential for sensitive receptors.

(d) A description of equipment and procedures to mitigate the effects of noise emissions from the proposed facility during construction and operation,

including limits on the time of day at which construction activities may occur.

Construction noise is expected to result in temporary and localized increased noise, which varies depending on proximity of equipment to the receptors and the type of equipment being used. Equipment will be outfitted with standard mufflers to reduce exhaust noise. Permit conditions and noise ordinances will be adhered to for all nighttime work to the extent practical or as approved by City of Columbus for road permits. Columbia anticipates nighttime work for Bethel Road, Morse Road, Karl Road, and the HDDs due to City of Columbus requirements. Hydrostatic testing of the 20-inch pipeline activity will be relatively quiet. Pneumatic testing of the 12-inch pipeline will also be relatively quiet. Temporary increased noise levels can be anticipated once the testing activity is complete, when the testing medium is released from the pipeline. This activity is anticipated to occur during normal daytime operations. If blowdown must occur outside of daytime operations, a silencer will be utilized to decrease the noise levels.

(e) A preconstruction background noise study of the project area that includes measurements taken under both day and nighttime conditions.

Please see Columbia's response to Adm.Code 4906-4-08(A)(3)(c).

(4) Water impacts. A description of relevant information, including:

(a) An evaluation of the potential impact to public and private water supplies due to construction and operation of the proposed facility.

No Ohio EPA Drinking Water Source Protection Areas were identified within the Project area and the Project will avoid directly impacting streams by using HDD or trenching above culverts. Drinking Water Source Protection Areas are delineated by the Ohio EPA based on areas that supply water to wells or their surface water intake. No impacts to public and private water supplies are anticipated during either the construction or operation of the Project.

(b) An evaluation of the impact to public and private water supplies due to pollution control equipment failures.

According to the U.S. Geological Survey topographical map, from west of Karl Road, stormwater sheet flows west into Bill Moose Run that flows east to west within the Project boundary. West of this stream, stormwater sheet flows west, discharging to the Olentangy River. Failures in pollution control equipment would impact these receiving waters during the construction phase. No pollution control equipment is anticipated for the Project once it is in operation as there is no discharge from the Project. Any potential pipeline leaks will be identified through the pipeline monitoring system and fixed in accordance with federal and state regulations, as the Project location provides easy assembly and access to the pipeline.

(c) Existing maps of aquifers, water wells, and drinking water source protection areas that may be directly affected by the proposed facility, including, at a minimum, an additional one-mile buffer around the project area.

There are no known principal aquifers within one mile of the Project centerline, according to U.S. Geological Survey (“USGS”) maps. Utilizing the Ohio EPA’s online mapping tool for Ohio’s Drinking Water Source Protection Areas (“WSPA”), there are no known WSPAs within a mile of the Project centerline. WSPAs should include and protect well water within their WSPA, and no known wellheads are within a mile of the Project centerline. Figure 10 (“Water Impacts Map”) provides the nearest known aquifers, wellheads, and WSPA locations.

(d) A description of how construction and operation of the facility will comply with any drinking water source protection plans near the project area.

There are no known WSPAs within a mile of the Project centerline according to the Ohio EPA. Construction activities will follow NiSource’s Inadvertent Release Contingency Plan for HDD crossings, as well as implement BMPs such as perimeter controls and inlet protection. The Project is a pipeline that is not expected to produce or release pollutants into the community once it is in operation.

- (e) An analysis of the prospects of floods for the area, including the probability of occurrences and likely consequences of various flood stages, and describe plans to mitigate any likely adverse consequences.**

The Federal Emergency Management Agency (“FEMA”) provides flood risk maps. Utilizing these maps, only one area is within any flood zone risk. The proposed Project route crosses approximately 0.45 miles of FEMA mapped floodplain associated with the Olentangy River. The Olentangy River and its banks represent Regulatory Floodway, indicating this area floods regularly. HDD will be utilized on the Olentangy River, and the pipeline will be beneath the Regulatory Floodway.

Additionally, on the western side of the Olentangy River is an area of 0.2% Annual Chance of Flood Hazard, which is an area with a 0.2% probability of being inundated by a flood in any given year, that correlates to the area along the State Highway 315 (Olentangy Freeway). On the eastern side of the Olentangy River there is a small area of 1% Annual Chance of Flood Hazard, which is an area with a 1% probability of being inundated by a flood in any given year, and a sliver of 0.2% Annual Chance of Flood Hazard. As the pipeline will be trenched underground, there is no expected impact from the possibility of a flood within the vicinity of the Olentangy Freeway. The flood zone on the eastern side will be avoided with HDD.

Figure 3 of Appendix F.1 (“Ecological Field Survey Report”) depicts the referenced flood zones.

- (5) Geological features. A map of suitable scale showing the proposed facility, geological features of the proposed facility site, topographic contours, existing gas and oil wells, injection wells, and underground abandoned mines, as well as:**

See Figure 11 (“Geological Features Map”). There are no existing gas and oil wells, injection wells, or underground abandoned mines within 1,000 feet of the proposed Project route.

- (c) A description of the suitability of the soils for foundation construction, and areas with slopes that exceed twelve per cent and/or highly erodible soils (according to both the natural resource conservation service and county soil surveys and any other available survey resources representative of the project area) that may be affected by the proposed facility.**

No foundations or excavations/surface disturbances within areas with slopes exceeding 12 percent are anticipated for this scope of work.

- (d) The results and initial analysis of preliminary test borings and describe plans for additional test borings, including closure plans for such borings, and describe plans for the test borings that contain a timeline for providing the test boring logs and the following information to the board:**

- i. Subsurface soil properties.**
- ii. Static water level.**
- iii. Rock quality description.**
- iv. Per cent recovery.**
- v. Depth and description of bedrock contact.**

Based on preliminary reviews, the proposed Project route is within the Alluvium and Alluvial Terraces and Ground Moraine regions. The Alluvium and Alluvial Terraces consist of materials deposited in floodplains, ranging from silty clay to coarse sand and gravel. The ground moraine is a silty loam till.

During drilling, groundwater was encountered at depths between 11 and 23.5 feet, and upon completion, the static water level was observed at depths between 10 and 16 feet. The bedrock encountered was described as highly to moderately weathered siltstone, claystone, and dolomite, with a Rock Quality Designation ("RQD") ranging from poor to good.

A comprehensive geotechnical report containing the individual boring logs with specific details on rock quality, percent recovery, and the depth of bedrock contact will be made available at a later date.

- (e) A description of coordination with the Ohio department of natural resources on the geological suitability of the project within the proposed site in order to provide a response letter from the department to staff.**

Requests for an Environmental Review and Natural Heritage Database review were sent to ODNR on August 1, 2025. A response from the ODNR was received on September 2, 2025. A follow up request was submitted to ODNR on February 3, 2026. A response from the ODNR was received on March 2, 2026 (see Appendix F.1). ODNR did not identify any concerns regarding the geological suitability of the Project.

- (6) Wind velocity. An analysis of high wind velocities for the area, including the probability of occurrences and likely consequences of various wind velocities, and describe plans to mitigate any likely adverse consequences.**

Because the Project will be located underground, wind velocity will have no impact on the Project; therefore, Adm.Code 4906-4-08(A)(6) does not apply to this Project.

- (7) Blade shear. For a wind farm, an evaluation and description of the potential impact from blade shear at the nearest property boundary and public road.**

Adm.Code 4906-4-08(A)(7) does not apply to this Project.

- (8) Ice throw. For a wind farm, an evaluation and description of a site-specific ice throw risk analysis and assessment study, the potential impact from ice throw at the nearest property boundary and public road.**

Adm.Code 4906-4-08(A)(8) does not apply to this Project.

- (9) Shadow flicker. For a wind farm, an evaluation and description of the potential cumulative impact from shadow flicker at the property boundary and sensitive receptors within a distance of ten rotor diameters or at least one-half mile, whichever is greater, of a turbine, including its plans to minimize potential impacts.**

Adm.Code 4906-4-08(A)(9) does not apply to this Project.

- (10) Radio and TV reception. A description of the potential for the facility to interfere with radio and TV reception and describe measures that will be taken to minimize interference.**

The Project is not expected to have any potential interference with radio and TV reception; therefore, Adm.Code 4906-4-08(A)(10) does not apply to this Project.

- (11) Radar interference. A description of the potential for the facility to interfere with military and civilian radar systems and describe measures that will be taken to minimize interference.**

The Project is not expected to have any potential interference with military or civilian radar; therefore, Adm.Code 4906-4-08(A)(11) does not apply to this Project.

- (12) Navigable airspace interference. A description of the potential for the facility to interfere with navigable airspace and describe measures that will be taken to minimize interference, including plans to coordinate such efforts with appropriate state and federal agencies.**

Because the Project will be located underground, it is not expected to have any potential interference with navigable airspace; therefore, Adm.Code 4906-4-08(A)(12) does not apply to this Project.

- (13) Communication interference. A description of the potential for the facility to interfere with microwave communication paths and systems and describe measures that will be taken to minimize interference. Include all licensed systems and those used by electric service providers and emergency personnel that operate in the project area.**

The Project is not expected to have any potential interference with microwave communication; therefore, Adm.Code 4906-4-08(A)(13) does not apply to this Project.

- (14) Electric and magnetic fields. For electric power transmission facilities where the centerline of the facility is within one hundred feet of an occupied residence or institution, and for electric substations where the boundary of the footprint is within one hundred feet of an occupied residence or institution, a**

description of the production of electric and magnetic fields during operation of the preferred and alternate site/route. If more than one conductor configuration is to be used on the proposed facility, a description of information for each configuration that constitutes more than ten per cent of the total line length, or more than one mile of the total line length being proposed. Where an alternate structure design is submitted, a description of information on the alternate structure, including:

- (a) Calculated electric and magnetic field strength levels at one meter above ground, under the conductors and at the edge of the right-of-way for:
 - i. Winter normal conductor rating.
 - ii. Emergency line loading.
 - iii. Normal maximum loading. Corresponding current flows, conductor ground clearance for normal maximum loading and distance from the centerline to the edge of the right-of-way using estimates for minimum conductor height. Also provide typical cross-section profiles of the calculated electric and magnetic field strength levels at the normal maximum loading conditions.
 - iv. Where there is only one occupied residence or institution within one hundred feet of the centerline, a description of only one set of field strength values. Where there are two or more occupied residences or institutions within one hundred feet of the centerline, a description of field strength values for each configuration that includes these occupied residences and institutions, and constitutes more than ten percent of the total line length, or more than one mile of the total line length being certificated.

Adm.Code 4906-4-08(A)(14)(a) does not apply to this Project.

- (b) References to the current state of knowledge concerning possible health effects of exposure to electric and magnetic field strength levels.

Adm.Code 4906-4-08(A)(14)(b) does not apply to this Project.

- (c) A description of the company's consideration of electric and magnetic field strength levels, both as a general company policy and specifically in the

design and siting of the electric power transmission line project including: alternate conductor configurations and phasing, tower height, corridor location, and right-of-way width.

Adm.Code 4906-4-08(A)(14)(c) does not apply to this Project.

(d) A description of the company's current procedures for addressing public inquiries regarding electric and magnetic field strength levels, including copies of informational materials and company procedures for customer electric and magnetic field strength level readings.

Adm.Code 4906-4-08(A)(14)(d) does not apply to this Project.

(B) The applicant shall provide information on ecological resources. Examples of relevant information include:

(1) Ecological information. Information regarding ecological resources in the project area including:

(a) A map of at least 1:24,000 scale, including the area one thousand feet on each side of the proposed facilities that discusses the following features:

Figure 12 includes the list of items in i – vii below.

i. The proposed facility and limits of disturbance.

Please see Figure 12 in Columbia's response to the rule requirement of Adm.Code 4906-4-08(B)(1)(a) above ("Ecological Information Map").

ii. Undeveloped or abandoned land such as wood lots or vacant tracts of land subject to past or present surface mining activities, not used as a registered game preserve or in agricultural production.

Undeveloped land includes the National Land Cover Database ("NLCD") Deciduous Forest land data, highlighted in yellow, as well as the nature preserves registered in the Protected Area Database, shown in red hatched lines on Figure 12 included in Columbia's response to rule requirement of Adm.Code 4906-4-08(B)(1)(a) above.

iii. Wildlife areas, nature preserves, and other conservation areas.

Please see Figure 12 in Columbia's response to the rule requirement of Adm.Code 4906-4-08(B)(1)(a) above ("Ecological Information Map"), Protected Area Database dataset. No ODNR lands are found within the 1,000-foot boundary. The Kenney Park Nature Preserve is within the Project 1,000-foot boundary, however, the Project will bore underneath the park using HDD and no impacts to the park are anticipated.

iv. Surface bodies of water, including wetlands, ditches, streams, lakes, reservoirs, ponds, and drainage channels. For wetlands, the estimated extent of the wetland if it extends outside of the project area.

Please see Figure 12 in Columbia's response to the rule requirement of Adm.Code 4906-4-08(B)(1)(a) above ("Ecological Information Map"), for the surface bodies of water including those extending outside the proposed Project route. See Figure 3 of Appendix F.1 ("Ecological Field Survey Report") which depicts the wetlands and streams that were delineated within the Survey Area.

v. Highly-erodible soils and slopes of twelve percent or greater.

Please see Figure 12 in Columbia's response to the rule requirement of Adm.Code 4906-4-08(B)(1)(a) above ("Ecological Information Map").

vi. Areas of proposed vegetative clearing, including the vegetative community type.

Please see Figure 12 in Columbia's response to the rule requirement of Adm.Code 4906-4-08(B)(1)(a) above ("Ecological Information Map").

vii. Naturally occurring woody and herbaceous vegetation land.

Please see Figure 12 in Columbia's response to the rule requirement of Adm.Code 4906-4-08(B)(1)(a) above ("Ecological Information Map"), for National Land Cover Database ("NLCD") Deciduous Forest land data.

- viii. **Sensitive habitat areas, including habitat used for breeding, of species identified as potentially impacted by the project through coordination with the Ohio department of natural resources and the United States fish and wildlife service in the project area, if present.**

No sensitive habitat areas are found within the Project area or 1,000-foot boundary.

- (b) The results of a field survey of the vegetation and surface waters within one-hundred feet of the potential construction impact area of the facility including: a description of the vegetative communities, and delineations of wetlands and streams; a map of at least 1:12,000 scale showing all delineated resources; the probable impact of the operation and maintenance of the proposed facility on vegetation and surface waters.**

See Figure 4 of the Ecological Field Survey Report included in Appendix F.1. On July 31, 2025, a wetland scientist and GIS specialist conducted a wetland delineation and protected species habitat assessment of the Survey Area, which is typically defined as the 100-foot buffer from the Project centerline, and recorded the location and extent of features identified within the Survey Area. The delineation was completed in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual (1987 Manual) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region – Version 2.0 (Regional Supplement). Upland habitat within the Survey Area consists primarily of maintained roadside within residential urban areas. Each delineated wetland within the Survey Area is assessed and assigned a category using the Ohio Rapid Assessment Method (“ORAM”) for Wetland Categorization. The Survey Area was inspected for streams and other Water of the United States (“WOTUS”). Additionally, a desktop and onsite habitat assessment was performed to identify potential habitat of federally and state-listed species within the Survey Area.

Three wetlands and five streams were delineated within the ecological survey area which includes all Project related activity and potential workspaces encompassing approximately 106.6 acres (Survey Area). A total of 0.16 acres of wetlands and 1,334.4 feet of stream from five streams were delineated within the Project Survey Area. All wetlands were classified as ORAM Category 1 Wetlands and not considered jurisdictional or a WOTUS.

Wetland (W)01 is a palustrine emergent (“PEM”) wetland. A total of 0.01 acres of W01 was delineated within the Survey Area. Dominant vegetation within the wetland included sandbar willow (*Salix interior*) and narrowleaf cattail (*Typha angustifolia*). Observed indicators of wetland hydrology included iron deposits, geomorphic position, and a positive FAC-neutral test.

W02 is a PEM wetland. A total of 0.12 acres of W02 was delineated within the Survey Area. Dominant vegetation within the wetland included broadleaf cattail (*Typha latifolia*) and common rush (*Juncus effusus*). Observed indicators of wetland hydrology included surface water, high water table, saturation, geomorphic position, and a positive FAC-neutral test.

W03 is a PEM wetland. A total of 0.03 acres of W03 was delineated within the Survey Area. Dominant vegetation within the wetland included broadleaf cattail (*Typha latifolia*) and sedge (*Carex spp*). Observed indicators of wetland hydrology included surface water, high water table, saturation, geomorphic position, and a positive FAC-neutral test.

Stream (S)01 is an unnamed ephemeral stream. A total of 535.9 feet of S01 was delineated within the Survey Area. S01 was approximately 3.5 feet wide, had a bank height of 2.0 feet, and a depth to Ordinary High Water Mark (“OHWM”) of 0.4 feet. It achieved a Headwater Habitat Evaluation Index (“HHEI”) score of 16. S01 flows offsite to the east.

S02 is an unnamed ephemeral stream. A total of 412.0 feet of S02 was delineated within the Survey Area. S02 was approximately 2.5 feet wide, had a bank height of 2.0 feet, and a depth to OHWM of 1.0 feet. It achieved a HHEI score of 28. S02 flows through a culvert under State Route 315 and into intermittent S03, and eventually into the Olentangy River.

S03 is an unnamed, relatively permanent intermittent stream. A total of 134.8 feet of S03 was delineated within the Survey Area. S03 was approximately 15 feet wide, had a bank height of 5.0 feet, and a depth to OHWM of 0.9 feet. It achieved a HHEI score of 64. S03 flows into the Olentangy River.

S04 or Olentangy River is a relatively permanent perennial stream. A total of 153.0 feet of S04 was delineated within the Survey Area. S04 was approximately 139.5 feet wide, had a bank height of 5.0 feet, and a depth to OHWM of 2.8 feet. It achieved a Qualitative Habitat Evaluation Index (“QHEI”) score of 66.5. S04 flows offsite towards the southeast.

S05 is an unnamed intermittent stream. A total of 98.6 feet of S05 was delineated within the Survey Area. S05 was approximately 15 feet wide, had a bank height of 4.0 feet, and a depth to OHWM of 0.1 feet. It achieved a HHEI score of 46. S05 flows into the Olentangy River.

Vegetation within the Survey Area can be categorized into three different communities: maintained corridor, wetland, and forest. Typical vegetation within the maintained corridor consists of Kentucky bluegrass (*Poa pratensis*), common wood sedge (*Carex blanda*), tall fescue (*Schedonorus arundinaceus*), buckhorn plantain (*Plantago lanceolata*), and amur honeysuckle (*Lonicera maackii*). Wetland vegetation identified within the Survey Area includes narrowleaf cattail (*Typha angustifolia*), broadleaf cattail (*Typha latifolia*), and common rush (*Juncus effusus*). Forested areas include a mix of American sycamore (*Platanus occidentalis*), silver maple (*Acer saccharinum*), Ohio buckeye (*Aesculus glabra*) and other tree species commonly found along the Olentangy River.

Probable impacts from operation of the pipeline to vegetation and surface waters are not anticipated. Probable impacts from maintenance of the pipeline to vegetation and surface water are minimal only when excavation is required. Otherwise, no probable impacts are anticipated from maintenance.

- (c) A description of the probable impact of the construction of the proposed facility on the vegetation and surface waters, including impacts from route/site clearing and grading, and disposal of vegetation, including the linear feet and acreage impacts, and the proposed crossing methodology of each stream and wetland that would be crossed by any part of the facility during construction equipment.**

Of the streams delineated, 153 feet were classified as perennial (S04 ("Olentangy River")) and will be bored beneath. Two streams representing 233.4 feet were classified as intermittent: S05 will be bored underneath and S03 will not be impacted as a result of the nearby HDD path. The remaining two streams (S01 and S02) were ephemeral and represent 947.9 feet and will also be bored underneath. Therefore, no temporary or permanent impacts are anticipated for any of the streams delineated within the Survey Area during construction.

The Project construction impacts on vegetation within the maintained corridor, wetlands, and forested areas will be temporary as the Project LOD will be restored to the extent practical following construction. The impacts to forested areas will likely be avoided through HDD across the Olentangy River, where a majority of the trees within the Project limit of disturbance are located. The amount of forested habitat present within the Project LOD is approximately 0.47 acres; these areas are found in or alongside Beechwold Park, Kenney Park Nature Preserve, and the Olentangy riverbank. Not all of these areas will need to be cleared and Figure 12, included in Columbia’s response to the rule requirement of Adm.Code 4906-4-08(B)(1)(a) above, (“Ecological Information Map”) shows where vegetation clearing is anticipated. Cleared vegetation that cannot be chipped and used on site will be disposed of off-site.

Table 9 shows the proposed temporary and permanent impacts to surface waters observed on the proposed Project route. No streams or wetlands are anticipated to be permanently impacted. The usage of HDD on the Olentangy River will allow S01, S02, S04 and S05 to be directly bored beneath, and S03 is not within the centerline and all impacts will be avoided by having HDD occurring nearby.

The grading of the site will be returned to its pre-construction condition after construction is completed. Stormwater Pollution Prevention Plan (“SWPPP”) inspections will observe how water is flowing within the restored boundary and note any issues as a result from grading.

Table 9: Surface Waters Proposed to be Impacted by the proposed Project route

Wetland ID	Classification	Delineated within Survey Area		Temporary Impacts		Permanent Impacts	
		Length (ft)	Acreage	Length (ft)	Acreage	Length (ft)	Acreage
W01	PEM	-	0.01	-	0	-	0
W02	PEM	-	0.12	-	0.12	-	0
W03	PEM	-	0.03	-	0	-	0
S01	Ephemeral	535.9	-	0	-	0	-
S02	Ephemeral	412.0	-	0	-	0	-
S03	Intermittent	134.8	-	0	-	0	-

S04 / Olentangy River	Perennial	153.0	-	0	-	0	-
S05	Intermittent	98.6	-	0	-	0	-
Total		1,334.3	0.16	0	0.12	0	0
Total Temporary Impacts				0	0.12	-	-
Total Permanent Impacts				-	-	0	0

(d) The results of a literature survey of the plant and animal life within at least one-fourth mile of the project area boundary which includes aquatic and terrestrial plant and animal species that are of commercial or recreational value, or species designated as endangered or threatened.

See the Ecological Field Survey Report included in Appendix F.1 for the literature survey regarding nearby animal and plant species. Table 10 shows a list of state and federally protected species within Franklin County, Ohio. Species were obtained from utilizing the Information for Planning and Consultation (“IPaC”) tool from the U.S. Fish and Wildlife Service, as well as the ODNR Franklin County species list.

Table 10: Habitat of Potentially Federally and State Listed Species within the NCHP Woodward Park Pipeline Project, Franklin County, Ohio

Common Name	Scientific Name	Federal/State Listing ^a	Habitat Preference	Habitat Observed?	Impact Assessment	Agency Comments/Recommendations
Mammals						
Indiana Bat	<i>Myotis sodalis</i>	FE, SE	Winter hibernacula includes caves or abandoned mines. Summer roosting habitat includes wooded areas containing dead or dying trees or living trees that have cracks, crevices, and/or exfoliating bark and a diameter at breast height (dbh) of 5 inches or greater. Tend to forage within forest or along forest edges.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project. Columbia intends to follow seasonal tree clearing guidance (October 1 to March 31).	USFWS: If the proposed project contains trees ≥ 5 inches dbh, USFWS recommends avoiding tree removal if possible. If no winter habitat is present and trees ≥ 5 inches dbh cannot be avoided, USFWS recommends removal of any trees ≥ 5 inches dbh occur between October 1 and March 31 to avoid adverse effects to Indiana bats. ODNR: Tree and/or tree limb clearing is recommended to 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 a dbh of $\geq 20''$ if possible.
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FE, SE	Winter hibernacula includes caves or abandoned mines. Summer roosting habitat includes wooded areas containing dead or dying trees or living trees that have cracks, crevices, and/or exfoliating bark and a diameter-at-breast-height (dbh) of 3 inches or greater. Tend to forage within forest or along forest edges.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project. Columbia intends to follow seasonal tree clearing guidance (October 1 to March 31).	USFWS: If the proposed project contains trees ≥ 3 inches dbh, USFWS recommends avoiding tree removal if possible. If no winter habitat is present and trees ≥ 3 inches dbh cannot be avoided, USFWS recommends removal of any trees ≥ 3 inches dbh occur between October 1 and March 31 to avoid adverse effects to Northern Long-eared bats. ODNR: Tree and/or tree limb clearing is recommended to 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 a dbh of $\geq 20''$ if possible.
Little Brown Bat	<i>Myotis lucifugus</i>	SE	Winter hibernacula includes caves or abandoned mines. Summer roosting habitat includes wooded areas containing dead or dying trees or living trees that have cracks, crevices, and/or exfoliating bark and a diameter-at-breast-height (dbh) of 5 inches or greater. Tend to forage within forest or along forest edges.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project. Columbia intends to follow seasonal tree clearing guidance (October 1 to March 31).	USFWS: This species is not federally listed. ODNR: Tree and/or tree limb clearing is recommended to 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 a dbh of $\geq 20''$ if possible.
Tricolored Bat	<i>Perimyotis subflavus</i>	PE, SE	This bat roosts in live and dead leaf clusters. Winter hibernacula includes caves or abandoned mines, culverts, and abandoned water wells. Tend to forage in forests or along forest edges.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project. Columbia intends to follow seasonal tree clearing guidance (October 1 to March 31).	USFWS: If the proposed project contains trees ≥ 3 inches dbh, USFWS recommends avoiding tree removal if possible. If no winter habitat is present and trees ≥ 3 inches dbh cannot be avoided, USFWS recommends removal of any trees ≥ 3 inches dbh occur between October 1 and March 31 to avoid adverse effects to Northern Long-eared bats. ODNR: Tree and/or tree limb clearing is recommended to 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 a Diameter Breast Height (DBH) $\geq 20''$ if possible.

Common Name	Scientific Name	Federal/ State Listing ^a	Habitat Preference	Habitat Observed?	Impact Assessment	Agency Comments/ Recommendations
Birds						
Sandhill Crane	<i>Antigone canadensis</i>	ST	Primarily breeds, migrates, winters, and forages in various wetland habitats. Habitats also include open grasslands such as harvested agriculture fields and marshy meadows.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: Construction should be avoided in grassland, prairie, or wetland habitats with wet meadows, shallow marshes or bogs during the species' nesting period of April 1 through August 31.
Upland Sandpiper	<i>Bartramia longicauda</i>	SE	Grasslands, including grazed and ungrazed pastures, and agricultural fields such as fallow and hay fields.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: Construction should be avoided in dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pastures, hayfield, and grasslands established through the Conservation Reserve Program (CRP) during the species' nesting period of April 15 through July 31.
American Bittern	<i>Botaurus lentiginosus</i>	SE	Freshwater and brackish marshes and swamps.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: No comments.
Lark Sparrow	<i>Chondestes grammacus</i>	SE	Open grassy habitats with scattered trees and shrubs including orchards, fallow fields, open woodlands, mesquite grasslands, savanna, sagebrush steppe, and grasslands.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: No comments.
Least Bittern	<i>Ixobrychus exilis</i>	ST	Freshwater or brackish marshes with tall grasses, cattails, and reeds. Winter in areas saltwater, brackish and freshwater wetlands.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: No comments.
Barn Owl	<i>Tyto furcata</i>	ST	Open areas, forest edges, clearings, farmland, and cities. Hunting habitats are predominantly open landscapes.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: No comments.
Fish						
Lake Chubsucker	<i>Erimyzon sucetta</i>	ST	Natural lakes, sluggish streams, along with marshes with dense aquatic vegetation and clear waters.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: 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.
Iowa Darter	<i>Etheostoma exile</i>	SE	Clean, clear, slow-moving waters such as lakes, ponds, and the backwaters of streams and rivers with vegetation.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: 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.

Common Name	Scientific Name	Federal/ State Listing ^a	Habitat Preference	Habitat Observed?	Impact Assessment	Agency Comments/ Recommendations
Spotted Darter	<i>Etheostoma maculatum</i>	SE	Found in the basin of the Ohio River and inhabits fast-flowing rocky riffles of medium-sized and smaller rivers, where there are many very large boulders or flat slabs of rock.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: 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.
Shortnose Gar	<i>Lepisosteus platostomus</i>	SE	Lakes, swamps, and the calm pools and backwaters of creeks and rivers.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: 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.
Blacknose Shiner	<i>Notropis heterolepis</i>	SE	Cool weedy creeks, small rivers, and lakes over sand.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: 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.
Paddlefish	<i>Polyodon spathula</i>	ST	Slow-moving, large, deep freshwater rivers and reservoirs.	Yes	Suitable habitat was identified within the Project area. While the Project area is in range of the species, no in-water work is anticipated.	USFWS: This species is not federally listed. ODNR: 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.
Reptile						
Smooth Greensnake	<i>Opheodrys vernalis</i>	SE	Lightly forested habitats, such as peat lands, pastures, bogs, marsh edges, and wet meadows.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: No comments.
Invertebrate						
Clubshell	<i>Pleurobema clava</i>	SE	Restricted mainly to headwater stretches of streams and small rivers. Prefers clean, loose sand and gravel.	No	No suitable habitat occurs in the Project area. No evidence of mussels was found within the Survey Area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.
Northern Riffleshell	<i>Epioblasma rangiana</i>	SE	Found in a variety of streams with firmly packed sand or gravel.	Yes	Suitable habitat was identified within the Project area. While the Project area is in range of the species, no evidence of mussels was found within the Survey Area and no in-water work is anticipated.	USFWS: This species is not federally listed. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.

Common Name	Scientific Name	Federal/ State Listing ^a	Habitat Preference	Habitat Observed?	Impact Assessment	Agency Comments/ Recommendations
Rayed Bean	<i>Villosa fabalis</i>	SE	Smaller, headwater creeks, but it is sometimes found in large rivers and wave-washed areas of glacial lakes. Prefers gravel or sand substrates.	Yes	Suitable habitat was identified within the Project area. While the Project area is in range of the species, no evidence of mussels was found within the Survey Area and no in-water work is anticipated.	USFWS: This species is not federally listed. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.
Salamander Mussel	<i>Simpsonaias ambigua</i>	PE, ST	Requires habitat conditions that support mudpuppy (<i>Necturus maculosus</i>) populations, including clean, clear, flowing water, flat rocks and bedrock that provide crevice for shelter.	No	No suitable habitat occurs in the Project area. No evidence of mussels was found within the Survey Area. This species is unlikely to be impacted by this Project.	USFWS: Project impacts to all wetland habitats (e.g., forests, streams, vernal pools) should be avoided and minimized 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. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.
Slippershell Mussel	<i>Alasmidonta viridis</i>	ST	Headwaters, including intermittent creeks.	No	No suitable habitat occurs in the Project area. No evidence of mussels was found within the Survey Area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.
Elephant-ear	<i>Elliptio crassidens</i>	SE	Strictly limited to big rivers, mainly Ohio River, in stable cobble and sand.	Yes	Suitable habitat was identified within the Project area. While the Project area is in range of the species, no evidence of mussels was found within the Survey Area and no in-water work is anticipated.	USFWS: This species is not federally listed. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.
Snuffbox	<i>Epioblasma triquetra</i>	SE	Small- to medium-sized creeks, inhabiting areas with a swift current, although it is also found in Lake Erie and some larger rivers. Adults often burrow deep in sand, gravel, or cobble substrates, except when they are spawning.	No	No suitable habitat occurs in the Project area. No evidence of mussels was found within the Survey Area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.
Pocketbook	<i>Lampsilis ovata</i>	SE	Rivers and large creeks in stable sand and cobble, although prefers a mix of gravel and sand with some silt or mud. Usually in moderately strong currents but can also exist in still water.	Yes	Suitable habitat was identified within the Project area. While the Project area is in range of the species, no evidence of mussels was found within the Survey Area and no in-water work is anticipated.	USFWS: This species is not federally listed. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.

Common Name	Scientific Name	Federal/State Listing ^a	Habitat Preference	Habitat Observed?	Impact Assessment	Agency Comments/Recommendations
Washboard	<i>Megaloniais nervosa</i>	SE	Inhabits small to large rivers, usually with slow currents and muddy to coarse gravel substrates.	Yes	Suitable habitat was identified within the Project area. While the Project area is in range of the species, no evidence of mussels was found within the Survey Area and no in-water work is anticipated.	USFWS: This species is not federally listed. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.
Round Hickorynut	<i>Obovaria subrotunda</i>	FT, ST	From large rivers to small streams with moderate flow, along with lakes, with sand, gravel, and cobble substrates.	Yes	Suitable habitat was identified within the Project area. While the Project area is in range of the species, no evidence of mussels was found within the Survey Area and no in-water work is anticipated.	USFWS: Project impacts to all wetland habitats (e.g., forests, streams, vernal pools) should be avoided and minimized 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. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.
Rabbitsfoot	<i>Theliderma cylindrica</i>	SE	Small to medium sized streams and some larger rivers. It occurs in shallow water areas along the bank and in shoals with reduced water velocity.	Yes	Suitable habitat was identified within the Project area. While the Project area is in range of the species, no evidence of mussels was found within the Survey Area and no in-water work is anticipated.	USFWS: Project impacts to all wetland habitats (e.g., forests, streams, vernal pools) should be avoided and minimized 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. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.
Pondhorn	<i>Unio merus tetralasmus</i>	ST	Quiet or slow-moving, shallow waters. Tolerant of poor water conditions. Sometimes found buried in fine silt and/or mud substrate.	Yes	Suitable habitat was identified within the Project area. While the Project area is in range of the species, no evidence of mussels was found within the Survey Area and no in-water work is anticipated.	USFWS: Project impacts to all wetland habitats (e.g., forests, streams, vernal pools) should be avoided and minimized 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. ODNR: No impacts must be made to native mussels, as all species of mussel are protected in Ohio. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi ² , which requires a reconnaissance survey.
Insects						
Monarch Butterfly	<i>Danaus plexippus</i>	PT	Milkweed and flowering plants in a variety of habitats. Adults roost in trees near water, such as maple and conifers in the northern USA, and pecan and oak trees in the southern USA.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: No adverse effects are anticipated for this species due to project type, size, and location. ODNR: No comments.
Stygian Shadowdragon	<i>Neurocordulia yamaskanensis</i>	SE	Nymphs are found living in stream beds and utilize the nearby rocks and trees for emergence from exoskeletons before taking flight.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	USFWS: This species is not federally listed. ODNR: No comments.

Common Name	Scientific Name	Federal/State Listing ^a	Habitat Preference	Habitat Observed?	Impact Assessment	Agency Comments/Recommendations
Plants						
Gattinger's-foxglove	<i>Agalinis gattingeri</i>	ST	Dry roadsides, open woodlands, forest margins, mesic prairies, exposed ridges, and outcrops	Yes	Suitable habitat was identified only for dry roadsides within the Project area. While impacts to habitat may be possible, this species was not observed within the Project area during the habitat survey.	<p>USFWS: This species is not federally listed.</p> <p>ODNR: No comments.</p>
Spreading Rock Cress	<i>Arabis patens</i>	SE	Moist rocky woods, limestone outcrops, and shady riverbanks.	Yes	Suitable habitat was identified within the Project area. Impacts to these habitats will be avoided through HDD.	<p>USFWS: This species is not federally listed.</p> <p>ODNR: No comments.</p>
Cypress-knee Sedge	<i>Carex decomposita</i>	SE	Very wet depressions in mixed swamp forests, most frequently on hummocks, exposed logs and peaty mounds. Found to be highly associated with buttonbush.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	<p>USFWS: This species is not federally listed.</p> <p>ODNR: No comments.</p>
Showy Goldenrod	<i>Solidago speciosa</i>	ST	Found in dry and sandy grasslands and fields, along with limestone barrens, oak savannas, open woods, and road embankments.	No	No suitable habitat occurs in the Project area. This species is unlikely to be impacted by this Project.	<p>USFWS: This species is not federally listed.</p> <p>ODNR: No comments.</p>

^aFE: Federally Endangered; FT: Federally Threatened; PE: Proposed Federally Endangered; PT Proposed Federally Threatened; SE: State Endangered; ST: State Threatened

- (e) The results of field surveys conducted as to the plant and animal species identified in the literature survey, including: their federal and state protection status; and a description of the probable impact of the construction, operation, and maintenance of the proposed facility on the species described in this rule and procedures to minimize such impacts, including impacts from route clearing and any impact to natural nesting areas.**

Table 10 includes all the state and federally threatened and endangered species known to potentially occur within the Project area. An environmental assessment of available habitat for these species within the Project area was conducted simultaneously with the wetland and waterbody delineations. Table 10 indicates whether habitat was observed for each species. Recommendations were provided by the ODNR and USFWS regarding the species listed and are included as part of the mitigation and avoidance proposals for the Project.

A reconnaissance survey was conducted along the banks of the Olentangy River. The Ohio Mussel Habitat Assessment Form was completed and is included alongside the Qualitative Habitat Evaluation Index (“QHEI”) in Appendix C of the Ecological Field Survey Report included in Appendix F.1. No evidence of mussels was documented for the section of the Olentangy River within the Survey Area. Furthermore, no in-water work is proposed within the Olentangy River therefore, no impacts to mussel species is expected to occur. HDD is proposed to minimize impacts to the Olentangy River and no further mussel surveys are required.

- (f) A summary of any additional studies which have been made by or for the applicant addressing the ecological impact of the proposed facility.**

Ecological studies conducted for this Project include an in-field habitat assessment and wetland delineation, included in Appendix F.1, as well as summarized above. As part of the habitat assessment, a mussel specific assessment was completed for the Olentangy River, the only waterbody within the Project area that could provide habitat for mussels. The Olentangy River is considered a Group 1 Stream by the ODNR, which indicates that federally

endangered mussels are not expected within the stream, as well as no evidence of mussels were documented within the portion of the Olentangy River that the Project crosses.

A desktop review for potential bat hibernacula (caves) was also performed for the Project. No karst features or mines were identified within the Project area so impacts to bat hibernacula is not anticipated by the Project.

(2) Ecological impacts. Information regarding potential impacts to ecological resources during construction.

(a) An evaluation of the impact of construction on the resources surveyed in response to paragraph (B)(1) of this rule, including the following:

- i. A table displaying the report name, linear feet and acreage impacted, quality, flow regime, and the proposed crossing methodology of each stream that would be crossed by or within the footprint of any part of the facility or construction equipment.**

See Table 11.

Table 11: Streams Delineated within the 100-foot Project Boundary

Stream ID/ Name	Stream Type ^a	Linear Feet	Acreage	Qualitative Habitat Evaluation Index Score ^b	Headwater Habitat Evaluation Index Score ^b	Crossing Method
S01	Ephemeral-NPW	535.9	0.04	n/a	16	HDD
S02	Ephemeral-NPW	412.0	0.02	n/a	28	HDD
S03	Intermittent-RPW	134.8	0.05	n/a	64	Not crossed by centerline – HDD will be used in vicinity

Stream ID/ Name	Stream Type ^a	Linear Feet	Acreage	Qualitative Habitat Evaluation Index Score ^b	Headwater Habitat Evaluation Index Score ^b	Crossing Method
S04 / Olentangy River	Perennial-RPW	153.0	0.49	66.5	n/a	HDD
S05	Intermittent-RPW	98.6	0.03	n/a	46	HDD

^a - RPW = Relatively Permanent Water = tributaries that have flowing or standing water year-round or continuously during certain times of year. NPW = Non-relatively Permanent Waters = tributaries that have flowing or standing water only in response to precipitation or that do not have continuously flowing or standing water at least seasonally.

^b – As defined by the Ohio Environmental Protection Agency.

Regarding impacts to streams within the 100-foot boundary of the proposed Project route, Streams (S)01 and S02 are considered Non-relatively Permanent Waters. Consequently, they are not jurisdictional and neither considered a Water of the United States (“WOTUS”) nor Water of the State (“WOS”). Stream 03, S04 (Olentangy River), and S05 are all considered Relatively Permanent Waters, thus each is considered jurisdictional, a WOTUS, and a WOS. HDD will be used to cross S01, S02, S04 and S05. The application of HDD for S01, S02, S04 and S05 will avoid ground work near S03, which is not crossed by the centerline, but is within the Project Survey Area.

- ii. **A table displaying the report name, acreage impacted, quality, Cowardin classification, and the proposed crossing methodology of each delineated wetland that would be crossed by or within the footprint of any part of the facility or construction equipment.**

See Table 12.

Table 12: Wetlands Delineated within the 100-foot Project Boundary

Wetland ID	Cowardin Classification ^a	Acreage	ORAM Score	ORAM Category	Crossing Method
W01	PEM	0.01	12	1	Not crossed by centerline – HDD will be used in vicinity
W02	PEM	0.12	12	1	Open trench/ timber matting – centerline goes adjacent to boundary
W03	PEM	0.03	11	1	Not crossed by Project – in Survey Area but not being used by Project

^a – PEM: Palustrine emergent wetland.

Regarding impacts to delineated wetlands within the 100-foot boundary of the proposed Project route, all features were classified as an ORAM Category 1 classification, which indicates a lack of functionality as a wetland habitat and limited ability for water movement. Only W02 will be temporarily impacted by open trenching and timber matting where needed. W01 is not crossed by the centerline, but is within the 100-foot boundary. While HDD will occur within the vicinity of W01, it will not be impacted by the Project. W03 is within the Survey Area but not within the 100-foot Project boundary and will not be impacted by the Project.

- iii. **A table displaying the extent of clearing of each vegetative community type, including a clearing total.**

Limited vegetation clearing is required, as a majority of the treed areas are adjacent to the Olentangy River and will be avoided with HDD. However, areas that will require vegetational clearing are depicted in Figure 12 included in Columbia’s response to the rule requirement of Adm.Code 4906-4-08(B)(1)(a) above (“Ecological Information Map”). See Table 13.

Table 13: Vegetation Clearing within Community Type for the proposed Project route

Vegetation Clearing Location	Community Type	Area of Clearing (Acres)
Olentangy River Rd./ Bethel Rd.	Maintained corridor	0.57
Columbus Metropolitan Library (Karl Road Branch)	Maintained corridor	0.19

- iv. **A description of how such clearing work will be done so as to minimize removal of woody vegetation and minimize forest fragmentation.**

The Project occurs within a highly developed, urban area. The only area of contiguous forest occurs alongside the Olentangy River, and this area will utilize HDD to minimize impacts to the Olentangy River and forested area. A majority of the vegetation clearing required will occur within the maintained corridor along Olentangy River Road and Bethel Road. Tree trimming, if necessary, will occur within these areas. No tree clearing is proposed for the Project. This Project will not increase forest fragmentation and is unlikely to impact available habitat to forest species.

- v. **A description of impacts to wildlife, including listed species identified through coordination with the Ohio department of natural**

resources and/or the United States fish and wildlife service, will be avoided or minimized.

See the Ecological Field Survey Report included in Appendix F.1 for the literature survey regarding nearby animal and plant species. Table 10 shows a list of state and federally protected species within Franklin County, Ohio. Potentially suitable habitat was not identified throughout the Project area for any mammal, bird, reptile, or insect species. Potentially suitable habitat was identified for one fish species, multiple mussel species, and two plant species. All suitable habitat for the fish and mussel species occurred within the Olentangy River; however, impacts to suitable habitat for fish and mussels will be avoided due to the use of HDD under the Olentangy River. Finally, while potentially suitable habitats were observed for two plant species, one has suitable habitat alongside the Olentangy River, which will be avoided with HDD, and the other species has potentially suitable habitat along roadsides. Due to the Project following mostly large, busy roads, the roadsides are likely highly impacted already and unlikely to be negatively impacted by this Project. Additionally, no listed species identified by ODNR and USFWS were observed during the field assessments.

(b) A description of the mitigation procedures to be utilized to minimize both the short-term and long-term impacts due to construction, including the following:

- i. Plans for post-construction site restoration and stabilization of disturbed soils, especially in riparian areas and near wetlands. Restoration plans should include details on the removal and disposal of materials used for temporary access roads and construction staging areas, including gravel.**

Once final grading is complete after pipeline installation, the disturbed areas will be restored back to pre-construction conditions in accordance with the *NiSource Environmental Construction Standards*, attached hereto as Appendix G. All disturbed areas not yet stabilized should be stabilized with vegetation, including graded areas and areas where earth moving activities will occur within 12 months. As areas approach

final grade, preparations should begin for seeding and mulching. Topsoil will be applied prior to seeding. All seeded areas will be mulched or blanketed to minimize the potential for failure to establish an adequate vegetative cover. Columbia maintains lists of seed mixtures, application standards, fertilizers, etc. as defined in the *NiSource Environmental Construction Standards*.

- ii. **A detailed frac out contingency plan for stream and wetland crossings that are expected to be completed via horizontal directional drilling detailing environmental specialist presence, monitoring of drilling pressures and discharges within surface water resources, containment measures, cleanup and vacuum truck availability, and timelines and methods of restoration.**

Horizontal directional drilling is proposed to cross the streams S01, S02, S04, and S05 identified in Table 11. Stream S03, which is associated with the Olentangy River, will be in close proximity to the HDD path.

Nisource's Inadvertent Release Contingency Plan is attached hereto as Appendix A. This plan will be finalized once a construction contractor has been selected for the Project.

- iii. **Methods to demarcate surface waters and wetlands and to protect them, including any proposed buffers, from entry of construction equipment and material storage or disposal.**

Columbia's environmental standards, the *NiSource Environmental Construction Standards* included in Appendix G, discuss methods to minimize impacts on vegetation, streams, and wetland ecosystems. Columbia will also obtain coverage under the OEPA General Permit for Discharges of Stormwater Associated with Construction Activity under the National Pollution Discharge Elimination System, Permit No. OHC000006, and develop a storm water pollution prevention plan ("SWPPP") for the Project.

During the route selection process, Columbia avoided surface waters to the maximum extent practicable. The National Wetlands Inventory ("NWI") (USFWS 2025) database was utilized during the desktop

analysis phase of routing to avoid surface waters. After the field-based wetland delineation, wetlands and waterbodies observed were incorporated into engineering drawings along with methods to reduce impacts to these features.

The Project SWPPP will include best management practices (“BMPs”) outlined in an erosion and sediment control plan, in accordance with OEPA standards to avoid impacts to wetlands and waterbodies outside the construction area. Trench plugs and trench breakers will be used to protect stream, waterbody, and wetlands at Project centerline crossings, regardless of slope. BMPs used to protect surface waters include timber mats, silt fence, and filter socks.

HDD is proposed to cross S01, S02, S04 (“Olentangy River”) and S05, which is associated with the Olentangy River. Stream S03, while not crossed, will be in close proximity to the HDD path.

Minor watercourses, such as swales, ditches, channels, etc. less than 10 feet wide, will be flumed or pumped past the open trench at the time of crossing. If there is existing flow, the flume will be completed prior to trench excavation. If no flow exists during pipeline installation and the construction will be complete within one day, no flume will be installed. The watercourse contours will be reestablished as part of final stabilization. No streams will be impacted due to the usage of HDD and the streams being found away from the centerline.

Columbia will take the following precautions when streams and/or wetlands are near the construction limits, but will not be crossed:

- If possible, a 50-foot natural buffer will be maintained;
- If 50 feet cannot be maintained due to slope, attempts will be made to maintain 10 feet of undisturbed vegetation between top of bank of the waterbody and the Project centerline, except at crossing locations;
- Sediment barriers will be installed along the edge of the construction work area to contain spoil and sediment;

- Sediment barriers will be placed along the perimeter of the construction work area prior to clearing and grading activities;
- Sediment barriers will be installed as necessary to isolate potential areas of erosion and minimize sediment transport; and
- All streams and wetlands will be identified with signage and other indicators in the field.

iv. Procedures for inspection and repair of erosion control measures, especially after rainfall events.

Visual inspections of all cleared and graded areas of the construction site will be performed daily in areas of active construction or equipment operation. Visual inspections will be done once every seven calendar days in areas with no active construction, and by the end of the next calendar day (excluding weekends and holidays unless work is scheduled) following a rainfall event with precipitation greater than 0.5 inch in 24 hours. The inspection will be conducted by the SWPPP coordinator or designated qualified stormwater team members. The inspection will verify the structural BMPs described in the SWPPP are in good condition and are minimizing erosion. If following an inspection, repairs are required for temporary erosion control measures, the repairs will be made within 24 hours of identification.

The following inspection and maintenance practices will be used to maintain erosion and sediment controls:

- Build-up of sediment will be removed from silt fencing when it has reached one-third the height of the silt fence or filter sock;
- Silt fences or filter sock will be inspected for depth of sediment, tears, to ensure the fabric is securely attached to the fence posts and flush with the surface, and to verify that the fence posts are firmly in the ground;
- Temporary and permanent seeding will be inspected for bare spots, washouts, and healthy growth;
- The stabilized construction entrances will be inspected for sediment tracked on the road and clean gravel; and

- Inlet filter bags shall be maintained and cleaned out or replaced when the bag or structure is half full or when flow capacity has been reduced.

An inspection report will be made after each inspection. A copy of the report form to be completed by the SWPPP coordinator is provided in the appendices of the SWPPP. Completed forms will be maintained on-site during the entire Project construction. Following construction and submission of the Notice of Termination, the completed forms will be retained by Columbia in the work management system documents for a minimum of three years. If construction activities or design modifications are made to the site plan which could impact stormwater, the SWPPP will be amended appropriately. The amended SWPPP will have a description of the new activities that contribute to the increased pollutant loading and the planned source control activities.

- v. **Methods to protect and plans for restoration of vegetation in proximity to any project facilities from damage, particularly mature trees, wetland vegetation, and woody vegetation in riparian areas.**

During LOD clearing, Columbia will trim trees or remove brush within the construction work area, and, to the extent possible, avoid impacts on any trees or structures outside the work area. Large or otherwise valuable trees will be avoided whenever reasonably possible. Temporary erosion and sediment controls will be installed and functioning properly prior to clearing activities. While vegetation clearing is required for the Project, a majority of the forested areas will be avoided through HDD. The other trees being trimmed are planted trees, originally planted for visual appeal. Disturbed areas will be restored and stabilized with perennial vegetation as detailed within *NiSource's Environmental Construction Standards* in Appendix G.

- vi. **Options for disposing of downed trees, brush, and other vegetation during initial clearing for the project, and clearing methods that minimize the movement of heavy equipment and other vehicles**

within the project area that would otherwise be required for removing all trees and other woody debris off site.

Ordinarily, the use of wood products will be left to the landowner; however, woody materials will not be stockpiled in floodplains, streams, or wetlands. Woody brush may be piled at the edge of the construction work area in piles approximately 12 feet wide and compacted to four feet high, with breaks every 200 feet to permit wildlife travel. Brush may be burned or chipped, where permitted.

- vii. Avoidance measures for state or federally listed and protected species and their habitat, in accordance with paragraph (D) of rule 4906-4-09 of the Administrative Code.**

A habitat assessment was performed to determine the quantity and quality of habitat available within the Project area for species listed by the USFWS and ODNR. The full report is available in Appendix F.1. The only potentially suitable habitat identified was for mussel species, one fish species, and two plant species. Impacts to the mussel species, fish species, and one plant species will be avoided by utilizing HDD underneath the Olentangy River, and thus not impacting their potential habitat. The other plant species is not anticipated to be negatively impacted by the Project due to the urbanization and disturbance present within the Project area, as the Project follows major roadways and maintained lawns. Additional avoidance techniques include removing trees outside bat summer roosting season period (October 1-March 31).

- viii. Measures to divert storm water runoff away from fill slopes and other exposed surfaces.**

Sheet flow runoff from disturbed areas will be intercepted by silt fence or other appropriate sediment and erosion controls to protect adjacent surface waters from sediment transported via sheet flow. Silt fence will be placed on a level contour. The relationship between the maximum drainage area to silt fence for a particular slope range is shown in Table 14 below.

Table 14: Columbia Standard Silt Fence Specifications

Maximum drainage area (in acres) to 100 linear feet of silt fence	Range of slope for a particular drainage area (in percent)
0.5	<2%
0.25	> or = 2%, but < 20%
0.125	> or = 20%, but <50%

Sediment control practices (inlet protection) will be utilized to minimize sediment laden water from entering the active storm drain systems.

ix. A description of any expected use of herbicides for maintenance.

No herbicides will be used on the Project.

(3) Operational ecological impacts. Information regarding potential impacts to ecological resources during operation and maintenance of the facility.

(a) An evaluation of the impact of operation and maintenance on the undeveloped areas shown in response to paragraph (B)(1) of this rule.

The operation phase of the Project is not expected to have any impacts on undeveloped areas, or any associated ecological features with such areas due to the Project being underground. Operation of the natural gas pipeline does not produce noise or movement in the underground soil.

(b) A description of:

i. The procedures to be utilized to avoid, minimize, and mitigate both the short- and long-term impacts of operation and maintenance.

Constant pipeline operation is not anticipated to produce any short term or long term impacts to any ecological features nearby as the Project is installed underground. Columbia will continue to inspect the pipeline for any unforeseen changes in operations and will promptly address these concerns with the local governances should they arise.

Maintenance, when required, will be planned and conducted with careful consideration to ecological features.

ii. Methods for protecting streams, wetlands, and vegetation, particularly mature trees, wetland vegetation, and woody vegetation in riparian areas.

Normal operations of the pipeline are not anticipated to impact streams, wetlands, or vegetation as the pipeline will be installed underground.

If excavation is required for any maintenance, erosion and sediment controls will be established to prevent impacts to nearby streams and wetlands. Additionally, delineated wetlands, including their vegetation, will be marked for visibility to prevent accidental impacts from maintenance activities. The USFWS and the ODNR will be consulted with in the case where tree clearing is required for maintenance outside of October 1 through March 31. The wetland delineation of the Project area documented five streams and three wetlands.

iii. A description of any expected use of herbicides for maintenance.

No herbicides will be used on the Project.

(c) Any plans for post-construction monitoring of wildlife impacts.

There are no anticipated short- or long-term impacts to wildlife. Therefore, no post-construction wildlife monitoring is needed.

(4) A description of any mitigation procedures to be used during construction, operation, and maintenance of the proposed facility to minimize the impact on vegetation, surface waters, and species identified in paragraph (B) of this rule.

The Project has not identified any mitigation measures required throughout construction or operation phases for this Project. Avoidance and minimization measures have been documented throughout the paragraphs above and continue below.

- (5) A description of anticipated actions to prevent establishment and/or further propagation of noxious weeds identified in Chapter 901:5-37 of the Administrative Code and invasive species identified in rule 901:5-30-01 of the Administrative Code during implementation of any pollinator-friendly plantings. Additionally, a description of the commitment to comply with any public orders concerning the abatement of noxious weeds.**

The replanting of disturbed areas will be performed with a native seed mix that will not include noxious weeds. Given that most of the Project area is located within existing public ROW, the amount of vegetation is limited. Columbia is committed to full compliance with all applicable federal, state, and local laws and regulations governing the abatement of noxious weeds.

(C) Information on land use and community development.

- (1) Existing land use. Information regarding land use in the region and potential impacts of the facility through the following maps and related information, including a map of at least 1:24,000 scale showing the following:**
- (a) For a proposed electric generation facility, detail within one-mile of the project area boundary, and for a proposed electric power transmission, gas pipeline, or substation site within one thousand feet as to:**

Figure 13 includes the list of items in i – vi below.

- i. The proposed facility, substation, or compressor station.**

Please see Figure 13 in Columbia’s response to the rule requirement of Adm.Code 4906-4-08(C)(1)(a) above (“Existing Land Use Map”).

- ii. Centerline and right-of-way, if applicable, for each electric power transmission line or gas pipeline being proposed.**

Please see Figure 13 in Columbia’s response to the rule requirement of Adm.Code 4906-4-08(C)(1)(a) above (“Existing Land Use Map”).

- iii. **Land use, depicted as areas on the map. Land use, for the purposes of paragraph (C) of this rule, refers to the current economic use of each parcel. Categories should include residential, commercial, industrial, institutional, recreational, agricultural, and vacant, or as classified by the local land use authority.**

Land use areas along the proposed Project route include church, commercial, residential, institutional, and tax exempt. Please see Figure 13 in Columbia's response to the rule requirement of Adm.Code 4906-4-08(C)(1)(a) above ("Existing Land Use Map").

- iv. **Structures, depicted as points on the map. Identified structures should include residences, commercial centers or buildings, industrial buildings and installations, schools, hospitals, churches, civic buildings, and other occupied places.**

Please see Figure 13 in Columbia's response to the rule requirement of Adm.Code 4906-4-08(C)(1)(a) above ("Existing Land Use Map").

- v. **Incorporated areas and population centers.**

Please see Figure 13 in Columbia's response to the rule requirement of Adm.Code 4906-4-08(C)(1)(a) above ("Existing Land Use Map").

- vi. **Road names.**

The proposed Project route runs down the following roads:

- Postlewaite Road
- Bethel Road
- Olentangy River Road
- West Rathbone Avenue
- Morse Road
- Indianola Avenue
- Karl Road

Please see Figure 13 in Columbia's response to the rule requirement of Adm.Code 4906-4-08(C)(1)(a) above ("Existing Land Use Map").

(b) For the types of structures identified on the map in paragraph (C)(1)(a) of this rule, a table showing the following:

- i. For all structures within two hundred feet of the proposed facility right-of-way for an electric power transmission line, gas pipeline, or substation site, the distance between the nearest edge of the structure and the proposed facility right-of-way.**

There are 665 structures within 200 feet of the centerline of the proposed Project route. Table 15 provides a list of the structure types and the distance of the structure from the proposed centerline.

Table 15: Structures Located within 200 Feet of the centerline of the proposed Project route in Franklin County, Ohio

Structure Type	Distance to Proposed Centerline (Feet)
Residential	23
Residential	24
Commercial	25
Residential	28
Residential	28
Residential	30
Residential	35
Residential	35
Residential	35
Residential	35
Residential	36
Residential	36
Residential	36
Residential	38
Residential	38
Residential	39
Residential	39
Residential	40
Residential	40
Residential	40

Structure Type	Distance to Proposed Centerline (Feet)
Residential	53
Residential	54
Residential	54
Residential	54
Residential	54
Residential	54
Residential	54
Residential	54
Residential	54
Residential	54
Residential	54
Residential	55
Commercial	55
Residential	55
Residential	55
Residential	55
Residential	55
Residential	56
Residential	56
Residential	56
Residential	56
Commercial	56
Residential	56
Residential	56
Residential	56
Residential	56
Unclassified	56
Residential	56
Residential	56
Residential	57
Residential	57
Residential	57
Residential	58
Residential	58
Residential	58
Residential	58

Structure Type	Distance to Proposed Centerline (Feet)
Residential	58
Residential	58
Residential	58
Residential	58
Residential	58
Unclassified	59
Residential	59
Residential	59
Residential	59
Residential	59
Commercial	60
Commercial	60
Commercial	60
Commercial	60
Residential	61
Residential	61
Residential	61
Government	61
Residential	61
Commercial	61
Education	62
Residential	62
Residential	62
Residential	62
Residential	62
Residential	62
Residential	62
Residential	62
Residential	62
Residential	62
Commercial	62
Residential	62
Residential	62
Residential	63
Residential	63
Residential	63
Residential	63

Structure Type	Distance to Proposed Centerline (Feet)
Residential	70
Residential	70
Residential	72
Residential	72
Residential	72
Residential	72
Residential	72
Residential	72
Residential	72
Residential	72
Residential	73
Residential	73
Residential	74
Residential	74
Residential	74
Residential	74
Commercial	75
Residential	75
Residential	75
Residential	75
Residential	75
Residential	76
Residential	76
Residential	76
Residential	76
Residential	77
Civic Center	77
Residential	78
Residential	78
Residential	79
Residential	80
Residential	80
Commercial	80
Residential	80
Residential	80
Residential	81

Structure Type	Distance to Proposed Centerline (Feet)
Commercial	81
Residential	81
Residential	81
Residential	81
Residential	81
Residential	81
Residential	81
Residential	81
Residential	82
Residential	82
Residential	82
Commercial	82
Residential	82
Residential	82
Residential	82
Residential	83
Residential	83
Residential	83
Residential	83
Residential	84
Residential	84
Residential	84
Residential	84
Residential	84
Residential	84
Residential	84
Residential	84
Residential	84
Residential	84
Residential	84
Residential	85
Residential	85
Residential	85
Residential	85

Structure Type	Distance to Proposed Centerline (Feet)
Residential	85
Residential	85
Commercial	85
Residential	86
Residential	86
Commercial	86
Residential	86
Residential	86
Residential	86
Residential	86
Residential	86
Residential	87
Residential	87
Residential	87
Residential	87
Residential	87
Residential	87
Residential	88
Residential	88
Residential	88
Residential	88
Residential	88
Commercial	88
Residential	88
Commercial	89
Residential	89
Residential	89
Residential	89
Residential	89
Residential	89
Residential	89
Residential	90
Commercial	91
Residential	91
Residential	91
Residential	91
Residential	91
Education	92

Structure Type	Distance to Proposed Centerline (Feet)
Residential	92
Residential	92
Residential	92
Residential	93
Residential	94
Residential	94
Residential	95
Commercial	95
Residential	95
Commercial	95
Civic Center	96
Civic Center	96
Residential	96
Residential	96
Residential	96
Residential	97
Residential	97
Residential	99
Residential	99
Residential	99
Residential	99
Commercial	100
Commercial	100
Residential	101
Residential	101
Residential	101
Residential	101
Residential	101
Commercial	102
Residential	102
Residential	102
Residential	102
Residential	102
Residential	103
Residential	103

Structure Type	Distance to Proposed Centerline (Feet)
Residential	103
Residential	104
Residential	104
Residential	105
Residential	105
Residential	105
Residential	105
Commercial	105
Residential	105
Residential	106
Residential	106
Residential	106
Residential	106
Residential	106
Residential	106
Residential	107
Commercial	107
Residential	107
Residential	108
Residential	108
Residential	108
Residential	108
Residential	108
Residential	108
Residential	109
Residential	109
Residential	110
Residential	110
Residential	110
Residential	110
Residential	110
Commercial	111
Residential	111
Residential	111
Residential	111
Residential	112
Residential	112

Structure Type	Distance to Proposed Centerline (Feet)
Residential	113
Residential	113
Residential	114
Commercial	114
Residential	114
Residential	114
Residential	114
Residential	114
Residential	115
Education	115
Residential	115
Residential	115
Residential	115
Residential	115
Residential	116
Residential	116
Residential	116
Residential	116
Residential	116
Commercial	116
Residential	116
Residential	117
Residential	117
Residential	117
Residential	117
Residential	118
Residential	118
Residential	119
Residential	120
Residential	121
Residential	121
Residential	122
Residential	122
Residential	122
Residential	122
Residential	122

Structure Type	Distance to Proposed Centerline (Feet)
Residential	123
Residential	123
Residential	123
Residential	124
Residential	124
Residential	124
Education	124
Residential	125
Residential	125
Residential	126
Residential	126
Residential	127
Residential	127
Residential	128
Residential	129
Residential	129
Residential	129
Residential	130
Residential	130
Residential	130
Residential	130
Residential	131
Residential	131
Residential	131
Residential	131
Residential	132
Residential	133
Residential	134
Commercial	134
Residential	135
Commercial	136
Residential	137
Unclassified	137
Commercial	138
Residential	138

Structure Type	Distance to Proposed Centerline (Feet)
Residential	164
Government	164
Residential	164
Residential	165
Civic Center	165
Residential	165
Civic Center	165
Residential	165
Residential	165
Residential	165
Residential	165
Residential	166
Residential	166
Residential	166
Residential	166
Residential	167
Residential	167
Residential	168
Residential	168
Residential	168
Commercial	169
Commercial	169
Commercial	170
Residential	170
Residential	171
Residential	172
Residential	173
Commercial	173
Residential	173
Residential	174
Residential	174
Residential	174
Commercial	175
Residential	175
Commercial	175
Government	175
Residential	176

Structure Type	Distance to Proposed Centerline (Feet)
Commercial	176
Residential	176
Unclassified	176
Residential	177
Residential	177
Commercial	177
Residential	178
Education	178
Residential	178
Residential	179
Residential	179
Commercial	179
Residential	180
Commercial	181
Residential	181
Commercial	181
Government	181
Residential	181
Residential	182
Residential	182
Residential	182
Residential	183
Residential	183
Commercial	183
Residential	183
Residential	183
Residential	183
Residential	183
Residential	184
Residential	184
Residential	185
Residential	186
Residential	186
Residential	186
Commercial	186

Structure Type	Distance to Proposed Centerline (Feet)
Commercial	187
Residential	187
Residential	187
Residential	188
Residential	188
Residential	188
Residential	188
Residential	189
Residential	189
Unclassified	190
Residential	190
Government	190
Residential	190
Residential	191
Residential	191
Government	192
Residential	192
Commercial	192
Residential	193
Residential	193
Residential	193
Residential	194
Residential	194
Residential	194
Residential	195
Education	195
Residential	195
Residential	195
Industrial	195
Residential	196
Residential	196
Residential	196
Residential	196
Residential	196
Residential	196
Residential	196

Structure Type	Distance to Proposed Centerline (Feet)
Residential	196
Residential	197
Civic Center	197
Residential	197
Residential	198
Residential	198
Residential	198
Residential	199
Residential	200
Residential	200
Residential	200
Residential	200
Residential	200
Government	200

- ii. For all structures and property lines within two hundred fifty feet of a collection line, access road, substation, or other associated facility component, the distance between both the structure or property line and the associated facility component.**

Adm.Code 4906-4-08(C)(1)(b)(ii) does not apply to this Project.

- iii. For each structure and property in the table, whether the property is being leased by the applicant for the proposed facility.**

Adm.Code 4906-4-08(C)(1)(b)(iii) does not apply to this Project.

- iv. A description of the mitigation procedures to be used during the construction, operation, and maintenance of the proposed facility to minimize impact to structures near the facility.**

Columbia is minimizing impacts to nearby structures by routing through public ROW whenever possible. If residences or commercial

properties are within close proximity of the construction work area, the following measures will be implemented by Columbia:

- Timely notification of required construction activities to ensure safe access and maneuverability;
- While a pipeline trench is open, the edge of the construction work area adjacent to the residence or business will be protected by safety fence for a distance of approximately 100 feet or as site conditions allow on either side of the residence or business to ensure safety within the construction work area as feasible; and
- If directly impacted, all residential and commercial lawns will be restored to final restoration or temporary restoration in a timely manner after backfilling the trench, pending weather and soil conditions.

(c) An evaluation of the impact of the proposed facility on the above land uses identified on the map in paragraph (C)(1)(a) of this rule. Include, for each land use type, the construction impact area and the permanent impact area in acres, in total and for each project component (e.g., turbines, collection lines, access roads, substations), and the explanation of how such estimate was calculated. Also, a description of the construction impact area and permanent impact area in acres total for all land use types.

Table 16 further breaks down each land use type described above into detailed categories of each, and shows Project components, including the gas pipeline, laydown areas, tie-in locations, and access roads within each detailed land use type. The temporary and permanent impacts to land use types were calculated using the construction footprint and the parcel data and calculating the acreage where they overlap in GIS.

Table 16: Temporary and Permanent Impacts Calculated for Each Land Use Type and Project Component on the proposed Project route, Franklin County, Ohio

Project Component	Land Use Type	Temporary Impacts (ac)	Permanent Impacts (ac)
Pipeline Installation	Pasture	0	0
	Urban/Developed	0.13	0

Project Component	Land Use Type	Temporary Impacts (ac)	Permanent Impacts (ac)
	New Field	0	0
	Agriculture	0	0
	Early Successional	0	0
	Upland Wooded Lot	0.49	0
	Old Field	0	0
	Forested Wetland	0	0
	Maintained Lawn	18.18	0
	Maintained ROW	55.88	0
	Open Water	0	0
	Non-Forested Wetland	0.12	0
	Specialty Agriculture	0	0
Laydown Areas	Maintained Lawn	0	0
	Agriculture	0	0
	Maintained ROW	0	0
	Old Field	0	0
	Pasture	0	0
	Urban/Developed	8.60	0
Additional Temporary Workspace	Agriculture	0	0
	Old Field	0	0
	Upland Wooded Lot	0	0
	Urban/Developed	0.64	0
	Maintained ROW	0	0
	Maintained Lawn	1.53	0
Access Roads	Agriculture	0	0
	Old Field	0	0
	Urban/Developed	0	0
	Maintained ROW	0	0
	Maintained Lawn	0	0
	Pasture	0	0
	Upland Wooded Lot	0	0

All impacts from the proposed Project route are temporary, due to the underground nature of a natural gas pipeline

(d) The identity of structures that will be removed or relocated.

No structures are proposed to be removed or relocated.

(2) Wind farm maps.

Adm.Code 4906-4-08(C)(2) does not apply to this Project.

(3) Setback waivers. Setback requirements apply in all cases except those in which all owner(s) of property adjacent to the wind farm property waive application of the setback to that property. In order to be effective, waiver(s) must meet the following requirements:

(a) Content of waiver.

- (i) Be in writing;**
- (ii) Provide a brief description of the facility;**
- (iii) Notify the applicable property owner(s) of the statutory minimum setback requirements;**
- (iv) Describe the adjacent property subject to the waiver through a legal description;**
- (v) Describe how the adjacent property is subject to the statutory minimum setback requirements; and**
- (vi) Advise all subsequent purchasers of the adjacent property subject to the waiver that the waiver of the minimum setback requirements shall run with the land.**

(b) Required signature. The waiver shall be signed by the applicant and the applicable property owner(s), indicating consent to construction activities without compliance with the minimum setback requirements.

(c) Recordation of waiver. The waiver shall be recorded in the county recorder's office where the property that is the subject of the waiver is located.

Adm.Code 4906-4-08(C)(3) does not apply to this Project.

(4) Land use plans. Provide information regarding land use plans.

(a) Describe formally adopted plans for future use of the project area and surrounding lands for anything other than the proposed facility.

The proposed Project is intended to replace existing pipeline to comply with the PHSMA Mega Rule. As a below-ground utility, no other plans are in place for future use of the Project area and surrounding lands.

(b) Describe the applicant's plans for concurrent or secondary uses of the site.

No other use beyond the construction and installation of the proposed Project is intended for the Project site.

(c) Describe the impact of the proposed facility on regional development, including housing, commercial and industrial development, schools, transportation system development, and other public services and facilities.

The proposed Project is not anticipated to have long-term impacts on regional development as it is a below-ground utility gas pipeline mainly restricted to public road rights-of-way in already developed areas. Temporary impacts to roadways and public transportation routes will be mitigated with a traffic maintenance plan. Construction activity and noise near schools and houses will be minimized to the greatest extent reasonably possible.

(d) Assess the compatibility of the proposed facility and the anticipated resultant regional development with current regional plans.

The proposed Project is not anticipated to have long-term impacts to current regional plans as it is a below-ground utility mainly restricted to public ROW in already developed areas.

(e) Provide current population counts or estimates, current population density, and ten-year population projections for counties and populated places within five miles of the project area.

See Table 17.

Table 17: Population Information for Counties and Towns in the Vicinity of the Project

Municipality	County	Current Population	Population Density (per square mile)	10-Year Population Projection
Westerville	Franklin/ Delaware	38,612	2,999.4	n/a
Genoa Township	Delaware	25,298	1,480.9	n/a
Liberty Township	Delaware	33,252*	948.7	n/a
Orange Township	Delaware	37,452*	3,942.3	n/a
Columbus	Franklin/ Delaware/ Fairfield	933,263	4,265.8	n/a
Dublin	Franklin/ Delaware/ Union	49,456	2,001.5	n/a
Gahanna	Franklin	35,544	2,843.5	n/a
Upper Arlington	Franklin	36,140	3,676.5	n/a
Hilliard	Franklin	38,832	2,836.5	n/a
Blendon Township	Franklin	9,124*	1,003.7	n/a
Clinton Township	Franklin	4,109*	1,173.9	n/a
Mifflin Township	Franklin	35,713*	2,834.4	n/a
Norwich Township	Franklin	10,832*	1,177.3	n/a
Perry Township	Franklin	3,742*	890.9	n/a
Sharon Township	Franklin	16,368*	1,760.0	n/a
N/A	Franklin	1,361,536	2,525.0	1,701,536 (2050)
N/A	Delaware	242,032	540.3	422,032 (2050)

Population estimates are primarily from the U.S. Census Bureau’s 2024 and 2025 estimates and data compiled by the Mid-Ohio Regional Planning Commission (“MORPC”). Where recent estimates were not available (*), the 2020 or older Decennial Census count was used.

(D) Information on cultural and archaeological resources.

- (1) Landmark mapping. A description on a map of at least 1:24,000 scale, of any formally adopted land and water recreation areas, recreational trails, scenic rivers, scenic routes or byways, and registered landmarks of historic, religious, archaeological, scenic, natural, or other cultural significance within ten miles of the project area if the proposed facility is an electric generation facility, or within one thousand feet if the facility is an electric power transmission line, gas pipeline, or substation. Examples of landmarks to be considered for purposes of paragraph (D) of this rule include those districts, sites, buildings, structures, and objects that are recognized by, registered with, or identified as eligible for registration by the national registry of natural landmarks, the state historical preservation office, or the Ohio department of natural resources.**

Please refer to the Cultural Desktop Review figures indicating archeological sites, surveys, and above-ground historic resources within one mile of the proposed Project route in Appendix F.2. There are no ODNR registered landmarks along the proposed Project route. All other landmark mapping areas are shown on Figure 12 included in Columbia's response to the rule requirement of Adm.Code 4906-4-08(B)(1)(a) above ("Ecological Information Map").

- (2) A description of any studies used to determine the location of cultural resources within the area of potential effects, and include correspondence with the state historic preservation office.**

Two desktop reviews were conducted with a 1-mile Survey Area encompassing the proposed Project route. Findings were provided to the Ohio State Historic Preservation Office ("SHPO"). Additionally, the Ohio SHPO recommended a non-invasive geophysical survey for the portion of the Project that is within 55 feet of a known cemetery/mound. The geophysical survey was conducted in October and November 2025. Correspondence with SHPO is included in Appendix F.2.

- (3) A description of impacts on mapped landmarks, including an evaluation of the impact of the construction, operation, and maintenance of the proposed facility on the preservation and continued meaningfulness of these landmarks and describe plans to avoid or mitigate any adverse impact.**

It was recommended by SHPO in a letter dated December 30, 2025, that archaeological monitoring should occur during construction activities near the

Wyandotte cemetery. The SHPO continues to agree in a letter dated February 17, 2026, that no cultural resource studies are warranted for the majority of the Project. Furthermore, SHPO continued to agree that archaeological monitoring should be conducted in the area near the aforementioned cemetery.

(4) Recreation and scenic areas.

(a) A description of the recreation and scenic areas identified under paragraph (D)(1) of this rule in terms of their proximity to the project, population centers, uniqueness, topography, vegetation, hydrology, and wildlife.

The proposed Project route will be located within 1,000 feet of several scenic or recreational areas that are cataloged in the Protected Areas Database of the United States ("PAD-US"), found on Figure 12, included in Columbia's response to the rule requirement of Adm.Code 4906-4-08(B)(1)(a) above ("Ecological Information Map"), which are listed below:

The Olentangy Trail is managed by the City of Columbus Recreation and Parks Department. It serves as a vital transportation corridor, linking communities and providing access to major destinations like the Ohio State University campus, Ohio Stadium, and the Scioto Greenway Trail. The trail's topography is generally characterized by gently rolling and flat terrain, making it suitable for a variety of recreational activities. It is bordered by a "forest corridor" for much of its length, featuring a variety of trees such as willow, red and silver maple, sycamore, oak, basswood, and green ash. The trail runs parallel to the Olentangy River which has a drainage area of 536 square miles and is a significant tributary to the Scioto River. Deer, beavers, and muskrats, along with various birds species have been documented along the trail.

The Anheuser-Busch Sports Park is managed by the City of Columbus Recreation and Parks Department. The park serves its role as a host for numerous leagues and tournaments due to its extensive athletic facilities. This recreational area is relatively flat with maintained grassy areas.

The Olentangy Parkland is managed by the Worthington Parks & Recreation Department. It features over two miles of multi-use trails that wind along the Olentangy River, providing opportunities for biking, jogging, in-line skating, or leisurely walks. Most of the parkland is generally flat with woody vegetation

such as large sycamore trees. As such, this area harbors variety of wildlife such as birds, deer, and squirrels.

The Beechwold Park (or Beechwold Park Nature Preserve) is managed by the City of Columbus Recreation and Parks Department. It is unique for its historical qualities as the area was a zoo in the early 20th century. The nature preserve is located within the Old Beechwold Historical District, which was listed on the Columbus Register of Historic Properties in 1985 and on the National Register of Historic Places in 1987. The area is generally flat, consisting of a mature upland forest, wetland and some grass, along with a ravine that deepens as it approaches the Olentangy River. It is estimated to contain 4,000 linear feet of streams that flow into the Olentangy River and a 1.3-acre floodplain. Several species of birds, mammals and reptiles have been documented in the Beechwold Park Nature Preserve.

The Kenney Park Nature Preserve is managed by the City of Columbus Recreation and Parks Department. Its main purpose is to provide vital habitat within the developed area of the city. It is primarily characterized as a successional forest with a significant portion of riparian habitat along the Olentangy River, with some upland forests and forested wetlands. It's estimated to contain 3,850 linear feet of streams within its boundaries. This area supports a diverse range of plants and animals including Eastern screech owl (*Megascops asio*), Map turtle (*Graptemys geographica*), and Toadshade (*Trillium sessile*).

The Kenney Park (and Delawanda PAD-US area) is managed by the City of Columbus Recreation and Parks Department. It acts as a flat, maintained neighborhood park for the Clintonville community and provides access to the Nature Preserve.

The Indianola Park in Worthington is managed by the Worthington Parks & Recreation Department. It is a recreational area for the local community that is flat with maintained grass.

- (b) An evaluation of the impact of the proposed facility on those identified recreational and scenic areas and describe plans to mitigate any adverse impact.**

With HDD proposed for the Olentangy River crossing, along with erosion and sediment control plans and best management practices in place, the proposed Project route is anticipated to have minimum temporary impacts to the Beechwold Park while avoiding impacts to the Olentangy Trail and Anheuser-Busch Sports Park. The proposed Project route will not overlap any other scenic or recreational area listed above.

- (5) A description of plans to avoid or mitigate any adverse impacts to cultural resources. A description of mitigation procedures to be used during the operation and maintenance of the proposed facility as developed in consultation with the Ohio history connection. A description of procedures for flagging and avoiding all landmarks in the project area, including measures to be taken should previously unidentified landmarks be discovered during construction of the project.**

A desktop review of cultural resources within the 1-mile study area revealed 13 archaeological sites, 264 above-ground historic resources, 7 cemeteries, 4 NRHP listings, and 3 NRHP districts within one mile of proposed pipeline. Initial coordination with the Ohio State Historic Preservation Office (“SHPO”) was conducted on August 6, 2025. The Ohio SHPO commented that the Project has a low potential to encounter intact, significant archeological deposits while recommending a non-invasive geophysical survey for the portion of the Project that is within 55 feet of a known cemetery/mound. The geophysical survey was conducted in October and November 2025, concluding no clear indications of graves or the cemetery while advising caution. Coordination with the Ohio SHPO was reinstated on December 30, 2025, in which the office recommended archeological monitoring to occur during construction activities. Further coordination was initiated on February 5, 2026 and the Ohio SHPO continued to agree that no cultural resource studies are warranted for the majority of the Project and for archeological monitoring to continue as previously recommended. A monitoring report is to be submitted to the Ohio SHPO upon completion. Agency Correspondence can be found in Appendix F.2.

- (6) Visual impact of facility. The visual impact of the proposed above-ground facility within at least a ten-mile radius from the project area, as conducted or**

reviewed by a licensed landscape architect or other professional with experience in developing a visual impact assessment.

The Project is not anticipated to visually impact the surrounding landscape as it is a below-ground natural gas pipeline.

- (a) A description of the visibility of the project, including a viewshed analysis and area of visual effect, shown on a corresponding map of the study area. The viewshed analysis should not incorporate deciduous vegetation, agricultural crops, or other seasonal land cover as viewing obstacles. Viewshed analysis that includes atmospheric conditions should incorporate the atmospheric conditions under which the facility would be most visible.**

The Project is not anticipated to visually impact the surrounding landscape as it is a below-ground natural gas pipeline.

- (b) A description of the visibility of the proposed facility from such sensitive vantage points as residential areas, lookout points, scenic highways, waterways, and landmarks identified in (D)(1) of this rule.**

The Project is not anticipated to visually impact the surrounding landscape as it is a below-ground natural gas pipeline.

- (c) A description of the existing landscape and evaluate its scenic quality including documentation of a review of existing plans, policies, and regulations of the communities within the study area, and list all references to identified visual resources or other indications of the visual preferences of the community.**

The Project is not anticipated to visually impact the surrounding landscape as it is a below-ground natural gas pipeline.

- (d) A description of the alterations to the landscape caused by the facility, including a description and illustration of the scale, form, and materials of all facility structures, and evaluate the impact of those alterations to the scenic quality of the landscape. This description should also include a**

narrative of how the proposed facility will likely affect the aesthetic quality of the site and surrounding area.

The Project is not anticipated to visually impact the surrounding landscape as it is a below-ground natural gas pipeline.

- (e) An evaluation of the visual impacts to the resources identified in paragraph (D) of this rule, and any such resources within ten miles of the project area that are valued specifically for their scenic quality.**

The Project is not anticipated to visually impact the surrounding landscape as it is a below-ground natural gas pipeline.

- (f) Photographic simulations or artist's pictorial sketches of the proposed facility from public vantage points that cover the range of landscapes, viewer groups, and types of scenic resources found within the study area. The applicant should explain its selection of vantage points, including any coordination with local residents, public officials, and historic preservation groups in selecting these vantage points.**

The Project is not anticipated to visually impact the surrounding landscape as it is a below-ground natural gas pipeline.

- (g) A description of measures that will be taken to minimize any adverse visual impacts created by the facility, including, but not limited to, project area location, lighting, turbine layout, visual screening, and facility coloration. A description that these measures do not conflict with relevant safety requirements.**

The Project is not anticipated to visually impact the surrounding landscape as it is a below-ground natural gas pipeline.

(E) Information regarding agricultural districts and potential impacts to agricultural land.

- (1) Mapping of agricultural land. On a map of at least 1:24,000 scale, a description of the proposed facility, electric power transmission line or gas pipeline alignment, or substation site, inclusive of the potential disturbance area, and all**

agricultural land, and separately all agricultural district land existing at least sixty days prior to submission of the application located within the project area boundaries. Where available, distinguish between agricultural uses such as cultivated lands, permanent pasture land, managed woodlots, orchards, nurseries, livestock and poultry confinement areas, and agriculturally related structures.

There is no agricultural land within the proposed Project route.

(2) Agricultural information. For all agricultural land, and separately for agricultural uses and agricultural districts identified under paragraph (E)(1) of this rule, the following:

(a) A quantification of the acreage impacted.

There is no agricultural land within the proposed Project route.

(b) An evaluation of the impact of the construction, operation, and maintenance of the proposed facility on the land and the following agricultural facilities and practices within the project area:

i. Field operations such as plowing, planting, cultivating, spraying, aerial applications, and harvesting.

There is no agricultural land within the proposed Project route.

ii. Irrigation. A description of irrigation systems and demonstrate how impacts to those systems will be avoided or mitigated, and how damaged irrigation systems will be promptly repaired to original conditions.

There is no agricultural land within the proposed Project route.

iii. Field drainage systems. A description and map of field drainage systems that can reasonably be determined and demonstrate how impacts to those systems will be avoided or mitigated, and describe how damaged drainage systems will promptly be repaired to restore

original drainage conditions. A description of data sources and methods used to obtain information for field drainage system mapping.

There is no agricultural land within the proposed Project route. No field drainage systems are anticipated to be impacted.

- iv. Soils. A description of the anticipated impacts to soils in agricultural lands, how topsoil will be excavated and restored, and how compaction of soil will be avoided and how compacted soil will be restored to original condition.**

There is no agricultural land within the proposed Project route. No topsoil or any soils utilized for cultivation are anticipated to be impacted.

- v. Structures used for agricultural operations. A description of all agricultural structures that will be removed or repurposed, the impacts of removal or repurposing on agricultural operations, and how such impacts will be mitigated or avoided.**

There is no agricultural land within the proposed Project route. No agricultural structures are anticipated to be impacted.

- vi. The viability as agricultural district land of any land so identified, including identifying all agricultural district properties and properties enrolled in the current agricultural use valuation (CAUV) program, discussing the specific impacts on each property, and providing an evaluation on how those impacts will affect the viability of the property as agricultural land.**

There is no agricultural land within the proposed Project route. No properties listed within the CAUV program are anticipated to be impacted.

- (c) A description of mitigation procedures to be utilized by the applicant during construction, operation, and maintenance to reduce impacts to agricultural land, structures, and practices, including how avoidance and mitigation procedures will achieve segregation of excavated topsoil, and decompaction**

and restoration of all topsoil to original conditions unless otherwise agreed to by the landowner.

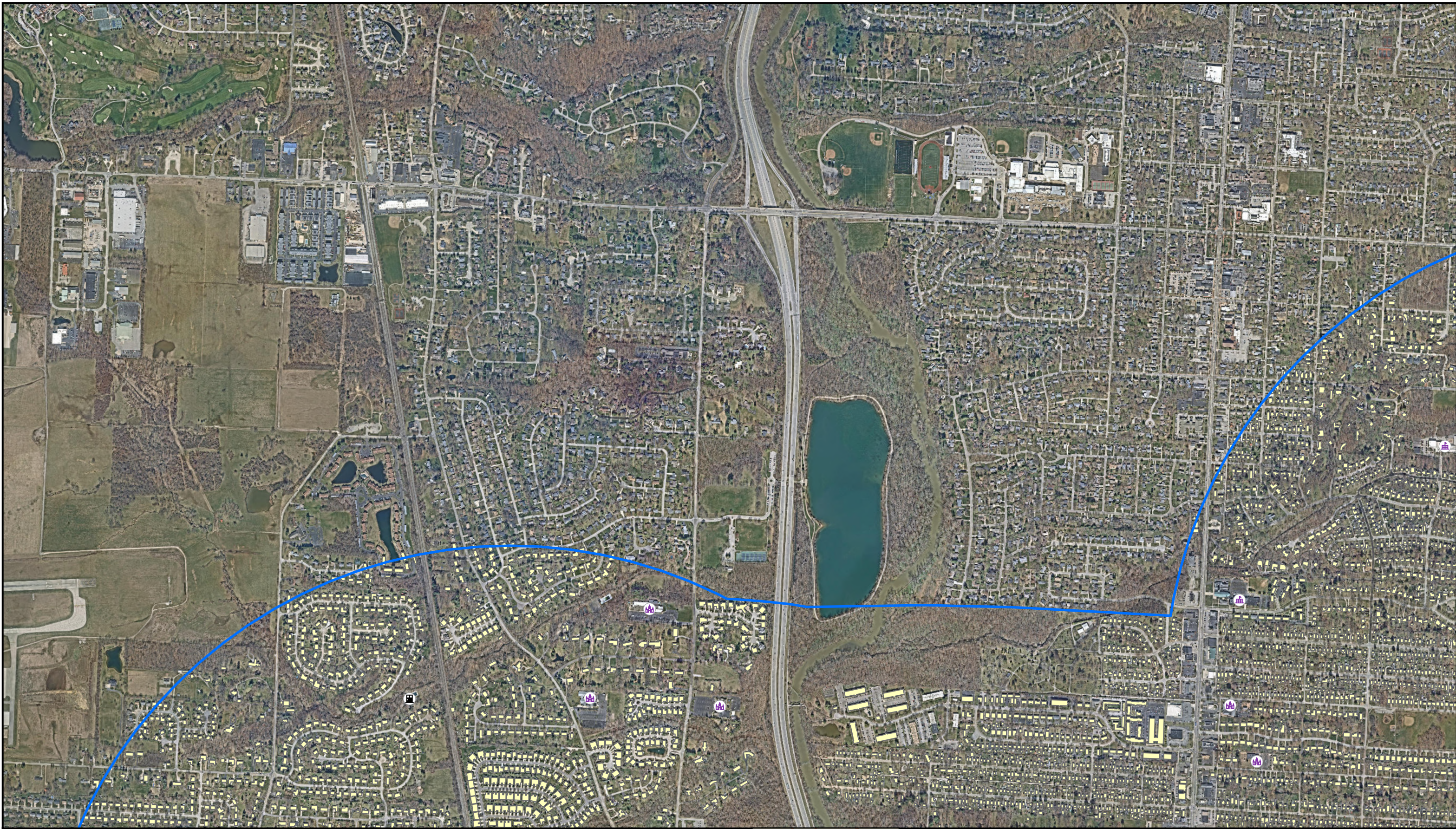
There is no agricultural land within the proposed Project route. The majority of the Project LOD is restricted to the public ROW within the developed area of the City of Columbus.

(3) Drain tile considerations. Examples of relevant information include:

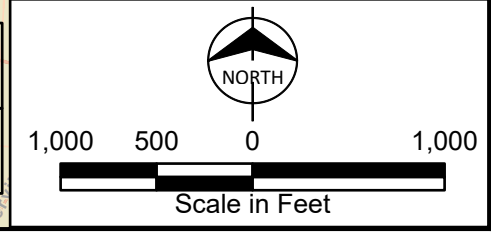
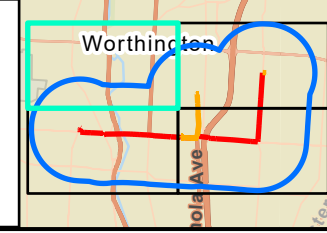
- (a) Benchmark conditions of the project drain tile system by locating all mains and laterals and consult with owners of all parcels adjacent to the property, the county soil and water conservation district, and appropriate county representatives to request drainage system information over those parcels.**
- (b) Plans to avoid known drain tile systems that flow into or out of the construction area and repair any damage that occurs from the project.**
- (c) Plans to locate and avoid all mains and laterals in the construction area and, where any main or lateral is damaged, to repair such damage in a timely manner.**
- (d) Plans to avoid, where possible, or minimize to the extent practicable, any damage to functioning field tile drainage systems and soils resulting from the construction, operation, and/or maintenance of the facility in agricultural areas.**
- (e) Plans to promptly repair, at applicant's expense, damaged field tile systems to at least original conditions or modern equivalent. However, if the affected landowner agrees to not having the damaged field tile system repaired, the landowner may do so only if the field tile systems of adjacent landowners and public rights-of-way remain unaffected by the non-repair of the landowner's field tile system. Following completion of any repair, the applicant will file a map of the repaired drain tile systems in the case docket at the close of the project's construction.**

No drain tiles are expected to be encountered in the Project LOD as there is no agricultural land within the proposed Project route.

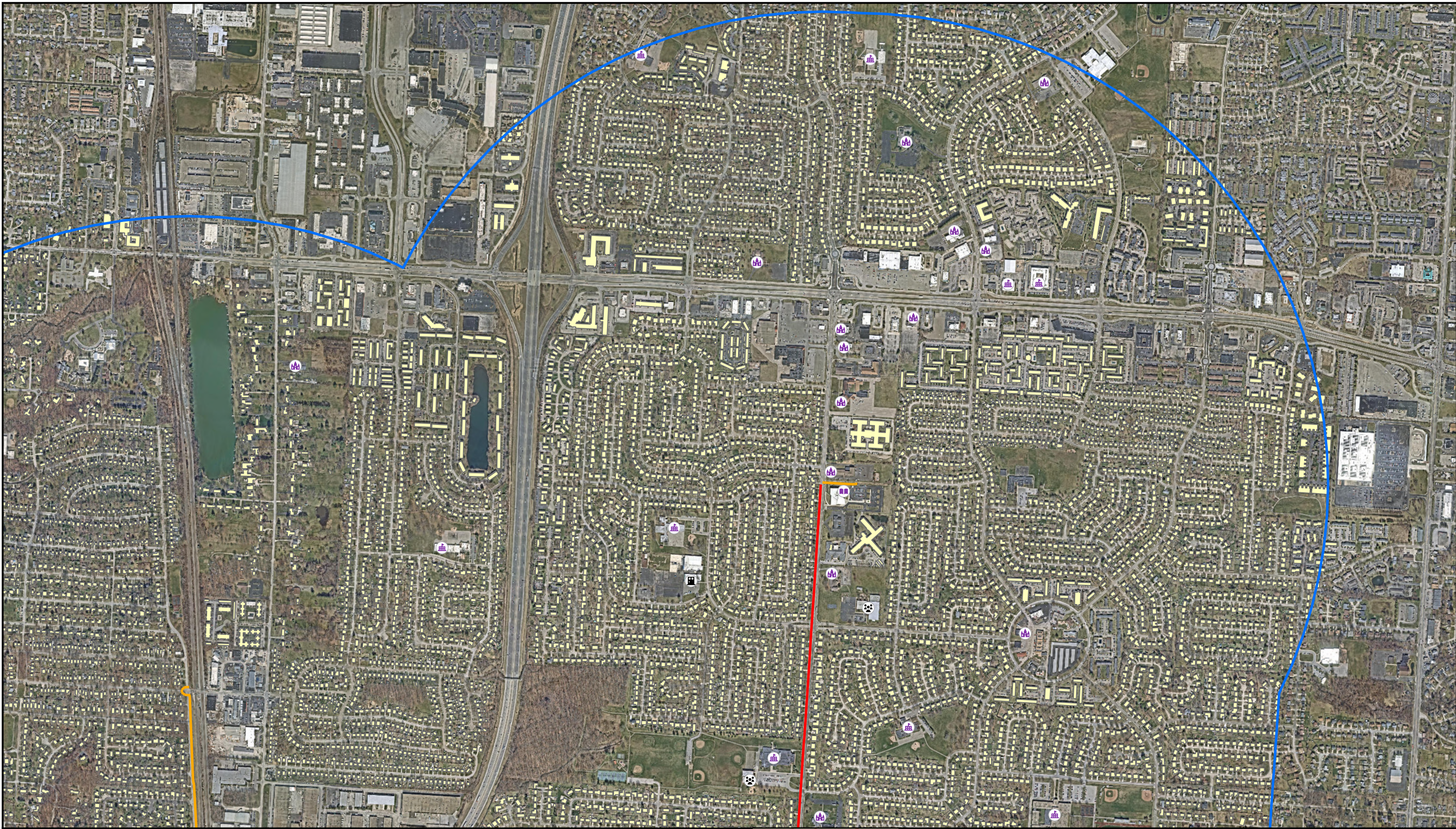
FIGURE 9
1-Mile Sensitive Receptors Map



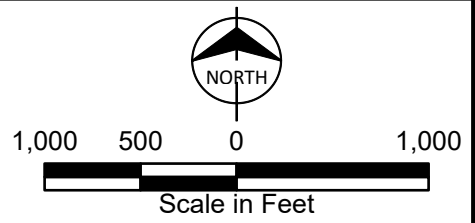
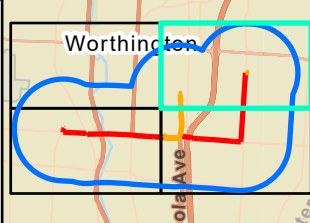
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|----------------------|-----------------------------|----------------------|
| 1-Mile Boundary | Schools | House of Worship |
| Main Pipeline | Technical/Trade Schools | Library |
| Lateral Pipeline | Community/Recreation Center | Other Public Places |
| Residential Building | Convention Center | Theater/Concert Hall |



1-Mile Sensitive Receptors Map
 NiSource NCHP Woodward Park
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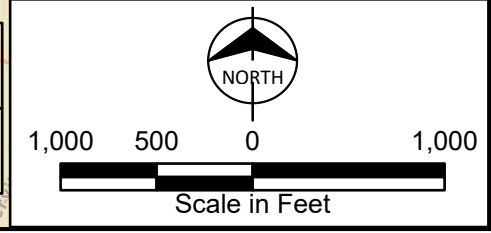
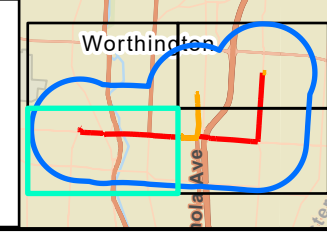
- ▭ 1-Mile Boundary
- ▭ Main Pipeline
- ▭ Lateral Pipeline
- Residential Building
- Schools
- Technical/Trade Schools
- Community/Recreation Center
- Convention Center
- House of Worship
- Library
- Other Public Places
- Theater/Concert Hall



1-Mile Sensitive Receptors Map
 NiSource NCHP Woodward Park
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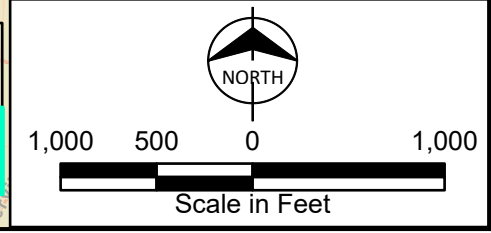
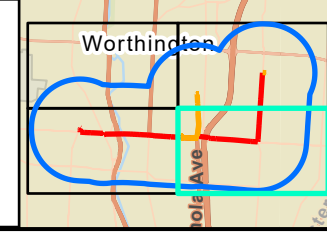
- ▭ 1-Mile Boundary
- ▭ Main Pipeline
- ▭ Lateral Pipeline
- ▭ Residential Building
- Schools
- Technical/Trade Schools
- Community/Recreation Center
- Convention Center
- House of Worship
- Library
- Other Public Places
- Theater/Concert Hall



1-Mile Sensitive Receptors Map
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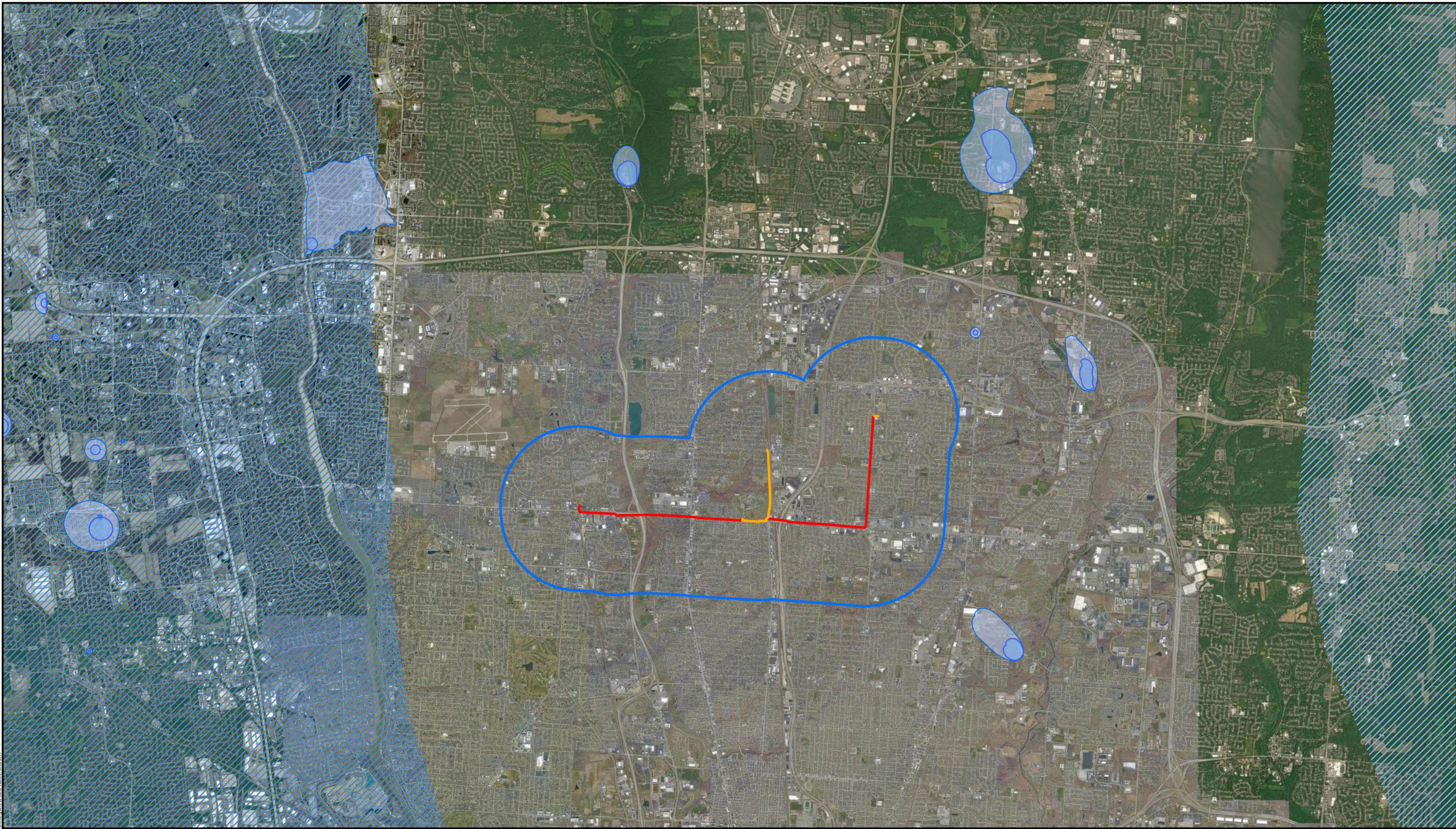
- ▭ 1-Mile Boundary
- ▭ Main Pipeline
- ▭ Lateral Pipeline
- Residential Building
- Schools
- Technical/Trade Schools
- Community/Recreation Center
- Convention Center
- House of Worship
- Library
- Other Public Places
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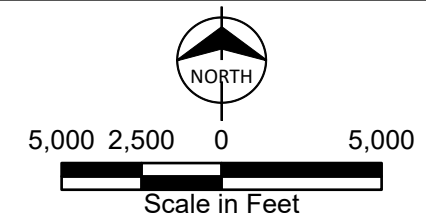
1-Mile Sensitive Receptors Map
 NiSource NCHP Woodward Park
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FIGURE 10

Water Impacts Map



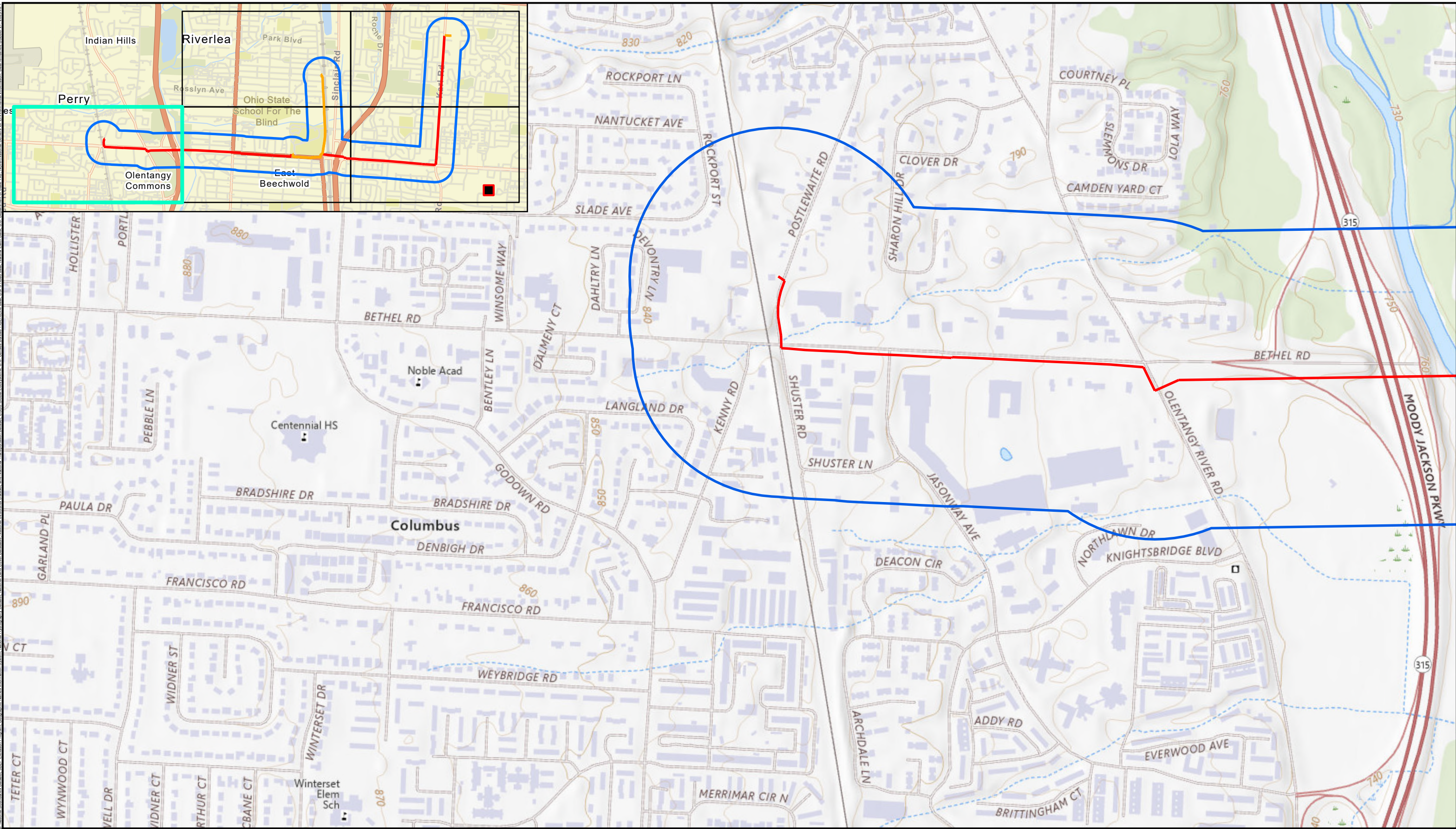
- 1-Mile Boundary
- Main Pipeline
- Lateral Pipeline
- Inner Management Zones (groundwater)
- Source Water Protection Areas (groundwater)
- Aquifers**
- Mississippian Aquifers
- Silurian-devonian Aquifers



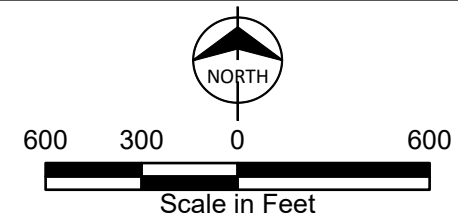
Water Impacts Map
 NiSource NCHP Woodward Park
 Pipeline System Project
 Franklin County, OH

FIGURE 11

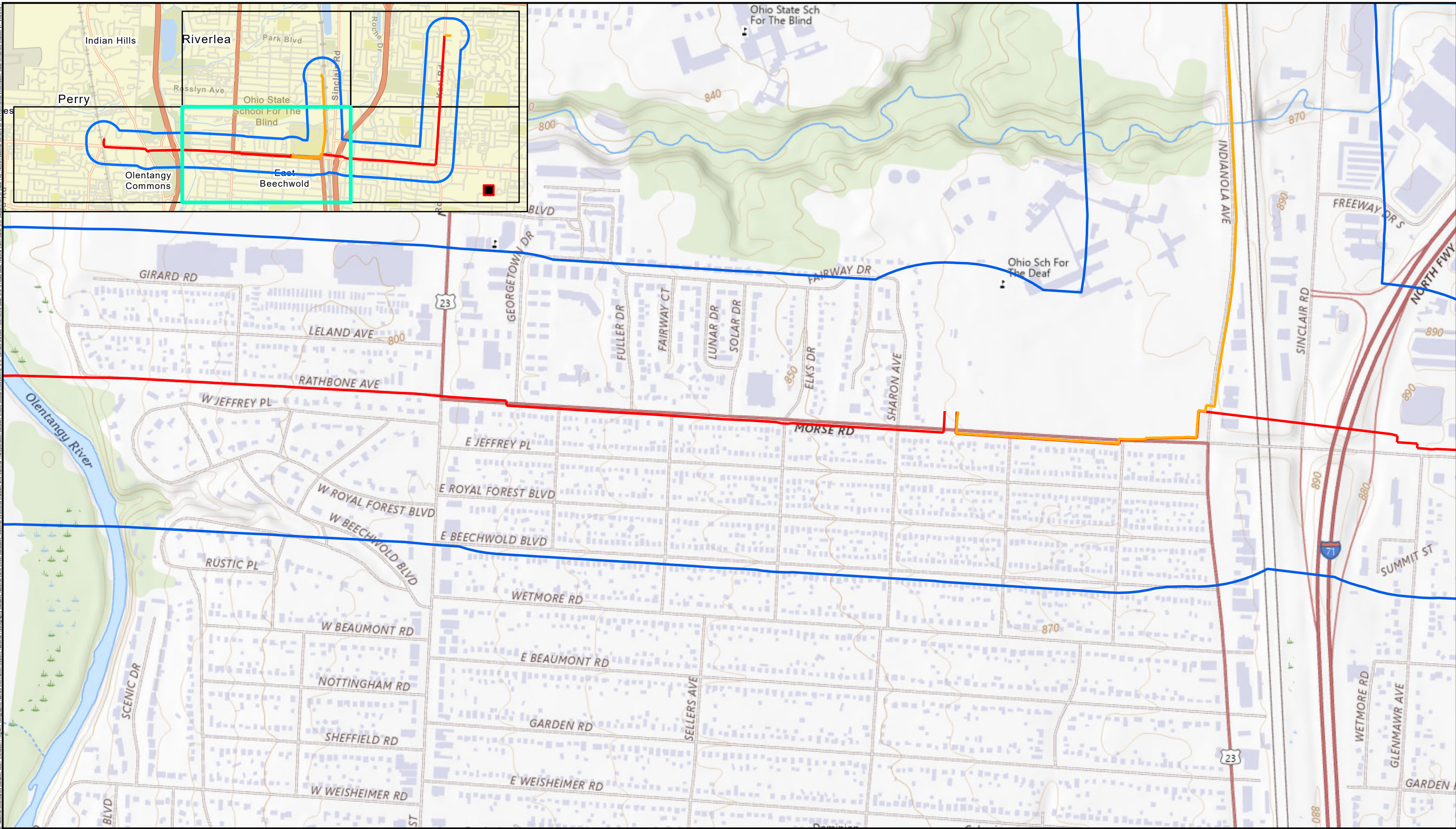
Geological Features Map



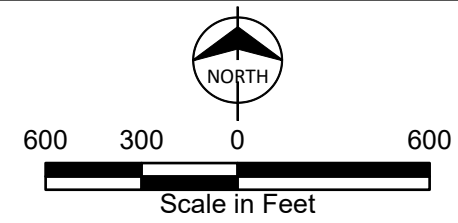
- 1,000 ft. Boundary
- Oil and Gas Well Status
- Main Pipeline
- Plugged and Abandoned Well
- Lateral Pipeline



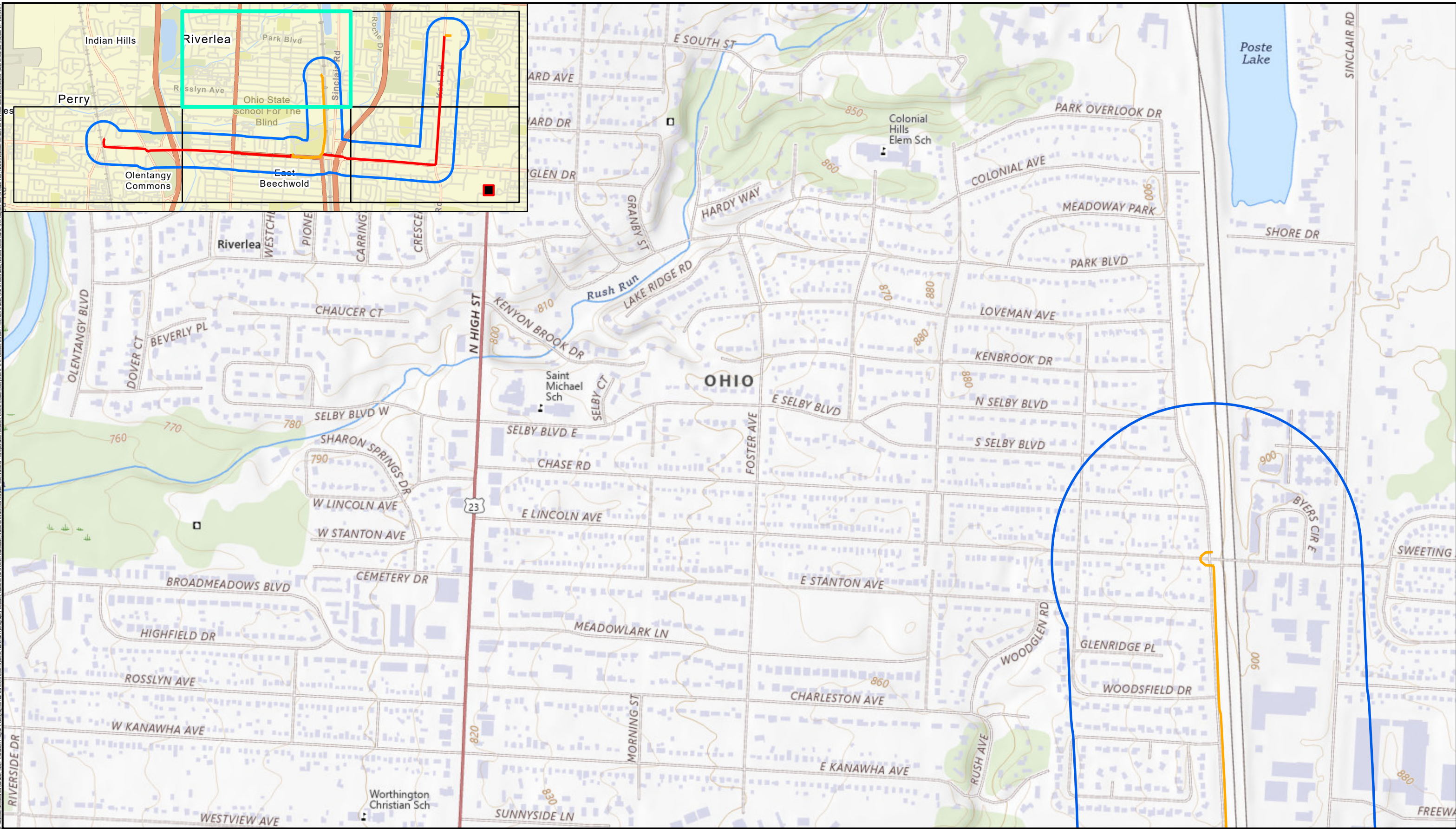
Geological Features Map
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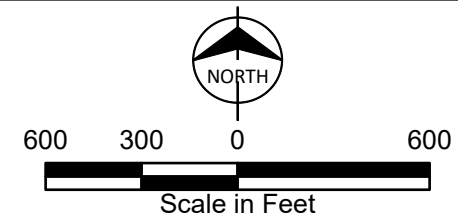
- 1,000 ft. Boundary
- Main Pipeline
- Lateral Pipeline
- Oil and Gas Well Status**
- Plugged and Abandoned Well



Geological Features Map
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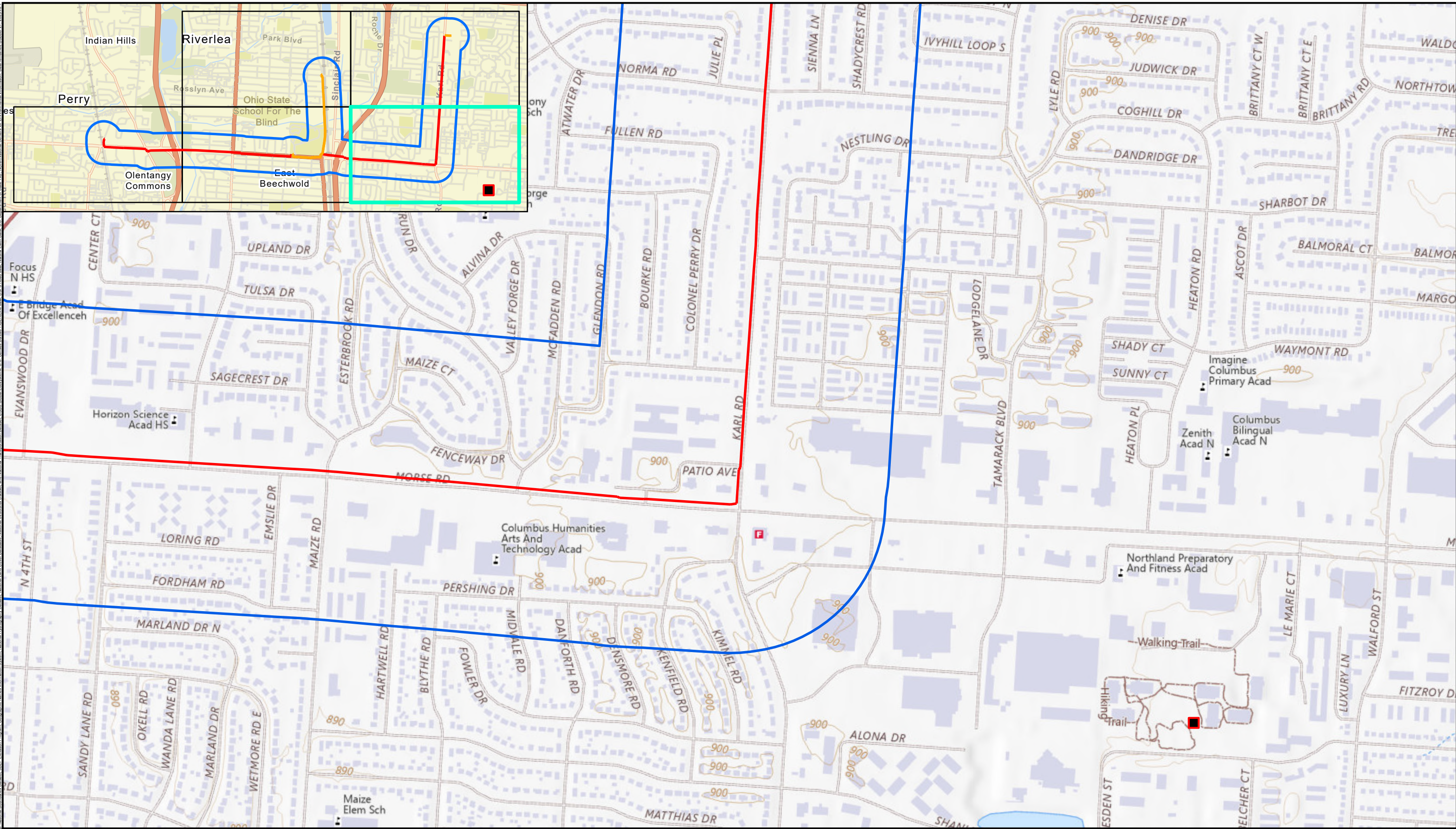


- 1,000 ft. Boundary
- Main Pipeline
- Lateral Pipeline
- Oil and Gas Well Status
- Plugged and Abandoned Well

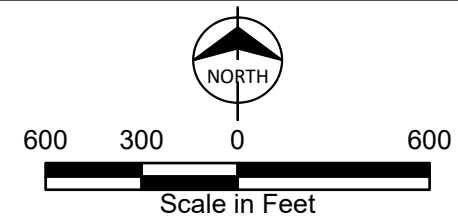



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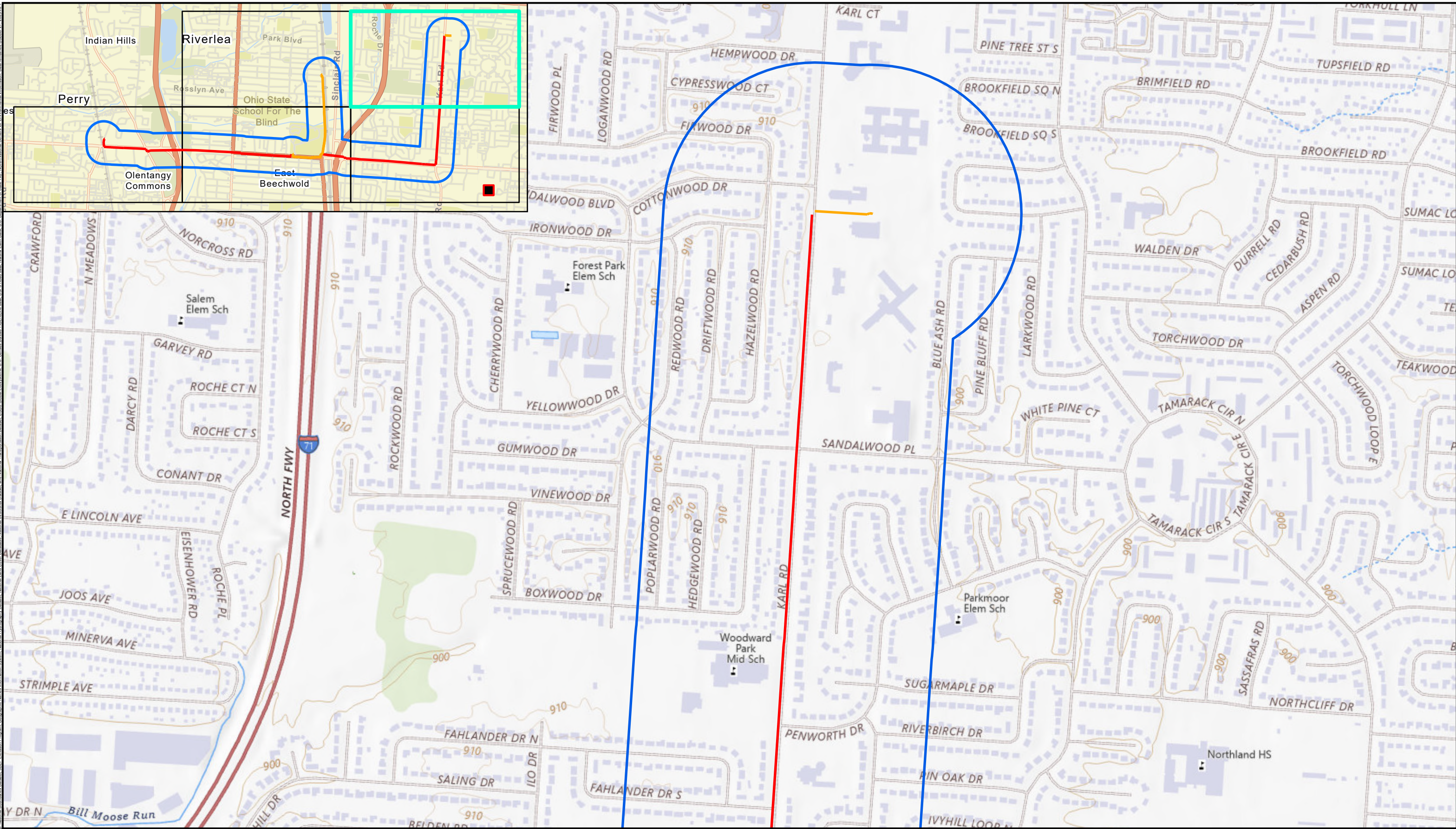


- 1,000 ft. Boundary
- Main Pipeline
- Lateral Pipeline
- Oil and Gas Well Status**
- Plugged and Abandoned Well

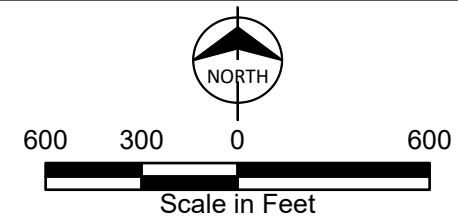




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- ▭ 1,000 ft. Boundary
- ▬ Main Pipeline
- ▬ Lateral Pipeline
- Oil and Gas Well Status
- Plugged and Abandoned Well



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