

**Duke Energy Ohio  
OPSB Case No. 20-1392-GA-BTA  
STAFF Second Set of Data Requests  
Date Received: November 13, 2020**

**STAFF-DR-02-004**

**REQUEST:**

Please briefly explain how Duke Energy Ohio, Inc. will address and dispose of discolored or contaminated soil if encountered during excavation.

**RESPONSE:** Duke Energy Ohio will address and dispose of any discolored or contaminated soil encountered during excavation pursuant to the terms of its Soil Management Plan, provided as STAFF-DR-02-004 Attachment.

**PERSON RESPONSIBLE:** James Olberding



# SOIL & WATER MANAGEMENT PLAN

**Duke Energy Ohio, Inc.**

**C350 Central Corridor Pipeline Project**

**Project No. 116892**

**7/10/2020**

# **SOIL & WATER MANAGEMENT PLAN**

**prepared for**

**Duke Energy Ohio, Inc.  
C350 Central Corridor Pipeline Project**

**Hamilton County, Ohio**

**Project No. 116892**

**7/10/2020**

**prepared by**

**Burns & McDonnell Engineering Company, Inc.  
Columbus, Ohio**

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## LIST OF ABBREVIATIONS

<b><u>Abbreviation</u></b>	<b><u>Term/Phrase/Name</u></b>
ACGIH	American Conference of Governmental Industrial Hygienists
bgs	below ground surface
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
CFR	Code of Federal Regulations
Duke Energy	Duke Energy Ohio, Inc.
FOIA	Freedom of Information Act
HASP	Site Specific Safety & Health Plan
HDD	Horizontal Directional Drilling
mg/L	Milligrams per Liter
MLV	Main Line Valve
Ohio EPA	Ohio Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
PPE	Personal Protective Equipment
Project	C350 Central Corridor Pipeline Project
SWP3	Storm Water Pollution Prevention Plan
SVOCs	Semi-Volatile Organic Compounds
TPH-DRO	Total Petroleum Hydrocarbons-Diesel Range Organics
TPH-GRO	TPH-Gasoline Range Organics
VOCs	Volatile Organic Compounds

## 1.0 INTRODUCTION

This Soil & Water Management Plan has been prepared by Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) for Duke Energy Ohio, Inc. (Duke Energy). The Soil & Water Management Plan was prepared to provide guidance regarding management of soil and water encountered during below grade construction activities (e.g., excavations, station grading, open trench pipeline installation, jack and bore, horizontal directional drilling (HDD), etc.) along the Duke Energy C350 Central Corridor Pipeline project (Project). The general location of the Site is depicted on Figure 1.

The Project will install approximately 13 miles of 20-inch, natural gas pipeline beginning at the Highpoint Station (39°17'18.17"N, 84°21'18.16"W) in Sycamore Township and terminating at the Norwood Station (39°10'45.12"N, 84°27'17.35"W) in the City of Cincinnati (see Figure 1). The pipeline route crosses the jurisdictions of Sycamore Township, Sharonville, Blue Ash, Evendale, Reading, Amberley, Golf Manor, and the City of Cincinnati. The Highpoint and Norwood Stations will be newly constructed as part of the Project. The workspace dimensions vary along the Project route, much of which includes or parallels existing public right-of-way (see Figure 2). Temporary laydown and staging areas will also be developed at strategic locations for use during the Project. Two small main line valve (MLV) sites will also be installed as part of the Project.

### 1.1 Historical Environmental Review

In 2017 Burns & McDonnell at the request of Duke Energy, conducted an environmental screening of properties along the proposed route for the Project ("Environmental Summary Report", *C314V Project – Environmental Summary Report*, 2017). The environmental screening was performed to identify potential environmental impacts associated with the current and historical usage of the properties along the proposed route, adjoining properties, and adjacent off-site sources. The purpose of the environmental screening was to identify properties along the Project that may have impacted soil and/or groundwater based on current or historical activities. The environmental screening data was used as one of several tools to evaluate the route placement, to evaluate potential construction worker risks, and to support pipeline permitting and construction.

Based on the results of the desktop review of properties, Duke completed 14 environmental borings were completed along the Project. Soil sample collection was conducted using direct push sampling equipment (e.g., Geoprobe®) to a depth of 10 feet below ground surface (bgs).

Soil samples were analyzed for contaminants based on records and document review, which included: Resource Conservation and Recovery Act (RCRA) metals, volatile organic compounds (VOCs), semi-

volatile organic compounds (SVOCs), total petroleum hydrocarbons-diesel range organics (TPH-DRO), and TPH-gasoline range organics (TPH-GRO). Results of the Environmental Summary Report did not identify specific areas along the Project with significantly impacted soil; however, impacted soil and/or water may be encountered that was not identified during the environmental screening process.

## 1.2 Plan Organization

This Soil and Water Management Plan has been developed to provide guidance to manage impacted soils and water that may be encountered during below grade construction activities. Other requirements for the Contractor related to the presence of impacted soil and water are provided in the following documents (including amendments and addendums):

- Storm Water Pollution Prevention Plan (SWP3), Duke Energy Ohio, Inc., C350 Central Corridor Pipeline Project, prepared by Burns & McDonnell (June 17, 2020)

The objectives of this Soil and Water Management Plan are to:

- Develop and implement a monitoring program during construction activities to maintain control measures for impacted soil and water.
- Develop and implement a waste characterization, storage, treatment, and disposal plan for impacted soil and water generated during construction activities.

This Soil and Water Management Plan is organized into the following sections:

- **Section 1.0 Introduction** - presents general information, organization, and purpose of the plan.
- **Section 2.0 Project Background Information** - summarizes the background information on the Site, Project and planned construction.
- **Section 3.0 Soil Management Procedures** – presents the procedures for soil management.
- **Section 4.0 Water Management Procedures** – presents the procedures for water management.
- **Section 5.0 Documentation** – presents the documentation that will be maintained for this work.

## **2.0 PROJECT BACKGROUND INFORMATION**

### **2.1 Site Location**

The Project will install approximately 13 miles of a 20-inch natural gas pipeline, between the Highpoint and Norwood stations. The pipeline will begin at Highpoint station (39°17'18.17"N, 84°21'18.16"W) in Sycamore Township located on School Rd, due east of the intersection of Conrey Rd and School Rd (see Figure 1). The property is mostly wooded with adjacent commercial structures to the north and south. The pipeline route generally travels due south and crosses several jurisdictions, including Sycamore Township, Sharonville, Blue Ash, Evendale, Reading, Amberley, Golf Manor, and the City of Cincinnati. Much of the pipeline route will lay within the public right-of-way (see Figure 2). The pipeline route will terminate at the Norwood Station (39°10'45.12"N, 84°27'17.35"W) in the City of Cincinnati due south of the intersection of Seymour Ave and Carthage Ct. The parcel is currently vacant. Adjacent properties to the north are predominantly commercial and properties to the south are predominantly residential.

### **2.2 Project Features & Preliminary Drawings**

This Project includes construction of two gas regulation stations, two MLV sites, and the underground pipeline installation. Construction will include, but not be limited to the following activities:

- Tree/vegetation clearing and site grading at station and MLV locations and select locations along the pipeline route.
- Establishment of temporary workspaces for pipeline installation (laydown and staging areas).
- Open trench pipeline installation.
- Jack and bore pipeline installation.
- Horizontal directional drilling (HDD) pipeline installation.

The Project site is approximately 140.2 acres, all of which has the potential to be disturbed by Project related construction activities including temporary workspaces, excavations, station and MLV site grading, and access roads. The Project area is heavily developed, and many of the workspaces include paved surfaces and previously disturbed soils. Highpoint Station is approximately 1.5 acres of disturbance, and Norwood Station is approximately 1.75 acres of disturbance. Construction activities are scheduled to begin in the first quarter of 2021 and be completed in the fourth quarter of 2021.

### **2.3 Environmental Considerations**

In 2017, Burns & McDonnell completed the Environmental Summary Report which included environmental screening of properties along the pipeline route. The environmental screening process of



potentially impacted parcels along the Project used a multi-tiered approach taking into consideration several factors including but not limited to: distance from the proposed route, regulatory program and current status of the site(s), historical knowledge of the area and/or site(s), and anticipated pipeline construction depths and excavation methods (see Figure 2). These sites were first reviewed to identify if sufficient information was available to determine if the listed site(s) was or was not a concern. If the site(s) was a concern or did not have enough information, further investigation was conducted. The remaining sites identified in the environmental database reports that were not within or adjacent to the proposed route were evaluated based on the regulatory program they were listed under and distance to the proposed route. This approach mitigated the potential for a site address to be listed outside of the set search distance, but due to the size and location could potentially impact the proposed route.

Additional investigation efforts then included a review of site status through regulatory databases and submitting Freedom of Information Act (FOIA) requests and subsequent to review available technical reports, permits, and any other environmental document. Reviews of these reports and documents were conducted to determine the current status of the sites, historical contamination, approximate location of impacts on the property, and any remedial actions. Based on the review of available environmental information and/or identified data gaps, select locations were identified for limited site investigations to evaluate soil and groundwater conditions. Analytical results from soil and/or groundwater samples were used to evaluate the presence of contaminants.

As provided in the Environmental Summary Report, laboratory data indicated soil results did not exceed Ohio Voluntary Action Program (VAP) commercial/industrial screening levels and construction/excavation direct contact soil standards. Laboratory data indicated only one analyte was detected in groundwater but did not exceed the Ohio VAP Generic Unrestricted Potable Use Standard for a Single Chemical. However, based on proposed Project construction activities, areas depicted in Figure 2 are considered potential Priority Properties where impacted soils may be encountered.

## **2.4 Health and Safety Requirements**

The Contractor involved in the below grade construction activities are responsible for complying with the Duke approved Health and Safety Plan (HASP), and its amendments and addendums. The Contractor are responsible for having appropriately trained staff/operators working at the Site during construction.

### **3.0 SOIL MANAGEMENT PROCEDURES**

This section summarizes soil management procedures in the event impacted soils are observed during below grade construction work. This section does not provide guidance in the event a spill or release caused by the Contractor. As provided in Section 2, the locations depicted in Figure 2 are considered Priority Sites (as depicted in Figure 2) where potentially impacted soil may be encountered.

#### **3.1 Below Grade Construction Activities**

All work will be conducted in accordance with worker protection and soil disposal requirements as may be required by Federal, State, and local applicable laws, regulations, and/or requirements. Because this construction is not a remedial project, over-excavation of impacted soil beyond the bounds of the defined excavations for the Project will not be performed.

All applicable regulations and standards [e.g., Occupational Safety and Health (OSHA), National Institute for Occupational Safety and Health (NIOSH) and American Conference of Government Industrial Hygienists (ACGIH)] will be adhered to during construction activities. The Contractor will determine the appropriate PPE for those performing the work and their supervisors.

The following initial procedures shall be followed in the event impacted soils are observed (e.g. staining and/or odor):

- Construction activities shall stop.
- The Duke Environmental Coordinator shall be contacted.
- The area along the Project with impacted soil will be photo documented and a brief summary of site conditions will be prepared (location, date, time, and general description of subsurface conditions). The information shall be provided to the Duke Environmental Coordinator.
- Duke will coordinate soil sampling activities with their approved third-party environmental contractor that will provide additional guidance based on the analytical results.

To limit cross-contamination of contaminated soils with areas considered not impacted, the following precautions will be maintained at the Site:

- Excavated soils deemed potentially impacted should be temporarily staged in stockpiles or covered roll-off containers (in areas with sufficient land space), at a location agreed upon by

Duke and the Contractor, that minimizes the potential spread of impacts. Each roll-off container will be covered. Any stockpiled soil will be covered by a 10-mil thick plastic sheeting with no less than 12 inches of overlap at seams and should be firmly secured or anchored to the ground to prevent the plastic sheeting from blowing off. Impacted soils will only be transferred and placed in roll off containers. Covering will be performed for the following reasons:

- Limit wind-blown dust from soil stockpiles.
- Limit infiltration of precipitation.
- Limit potential volatilization of organics from impacted soil.
- No soils excavated from the Site should be considered “clean fill” for offsite use.
- No soils excavated from the Site should be temporarily staged offsite without prior testing.
- Contact the disposal facility approved by Duke to determine what testing/analysis is required.
- Perform characterization testing/analysis and obtain approval prior to transport of excavated soil for offsite disposal.
- Based on disposal approval, the Contractor is responsible for:
  - loading and transport to the disposal facility.
  - inspection prior to loading to evaluate the condition of the material and its suitability for transport.
  - inspection during loading to confirm that the material meets disposal facility acceptance criteria.
  - inspection to identify that there is no free water.
  - amendment of material with a drying agent, as necessary, to absorb or bind any free water.

As approved by Duke, general soil sample collection procedures for disposal characterization will consist of composite sampling procedures in accordance with generally accepted practices. Soil samples will be tested and analyzed for the parameters required by the disposal facility approved by Duke. One composite sample comprising five aliquots will be collected per 200 cubic yards of excavated material (or other frequency specified by the disposal facility) using clean, decontaminated sampling tools. The soil samples will be placed in appropriate containers for delivery to the testing/analytical laboratory under chain-of-custody protocol.

Duke must be notified if soil analytical data indicates soil may need to be transported from the Site. No soil is authorized to be transported or disposed of prior to Duke notification and approval. Waste manifests, bill of lading, or other appropriate documentation is required for transportation and disposal of soils so that any given shipment can be tracked from the point of waste generation to the disposal facility. Documentation forms are commonly provided by the disposal facility. The transportation contractor is

responsible for keeping the wheels and exterior portions of transport vehicles free of excess soil and debris while on public roadways. Each shipment will be covered prior to leaving the Site to reduce the potential for material to leave the vehicle during transport. If excess soil and debris is deposited on roadways as a direct result of Contractor's activities, the Contractor will be responsible for cleaning the affected areas in a timely manner.

The Contractor should be prepared to manage equipment and other materials utilized to excavate or handle potentially impacted soil.

Decontamination procedures based on Site conditions and impacts encountered, will be implemented and no equipment will be moved from the location.

The Contractor is responsible for the safe performance of soil disturbance activities, the structural integrity of excavations, proper decontamination, management and disposal of soil and water, control of runoff from open excavations, and for protection of existing structures that may be affected by excavations.

Basic good housekeeping practices will be implemented at all times which are described in the SWP3 and in accordance with the Ohio EPA construction stormwater general permit.

## **4.0 WATER MANAGEMENT PROCEDURES**

This section summarizes water management procedures that are to be followed when below grade construction work encounters potentially impacted water. This section does not provide guidance in the event a spill or release caused by the Contractor.

### **4.1 Below Grade Construction Activities**

The following initial procedures should be followed in the event impacted water is observed (e.g. staining, sheen, and/or odor) or has been in contact with impacted soil:

- Construction activities shall stop.
- The Duke Environmental Coordinator shall be contacted.
- The area along the Project with impacted water will be photo documented and a brief summary of site conditions will be prepared (location, date, time, and general description of subsurface conditions). The information shall be provided to the Duke Environmental Coordinator.

All work will be conducted in accordance with worker protection and water disposal requirements as may be required by applicable Federal, State, and local laws, regulations, and requirements.

Basic good housekeeping practices will be implemented at all times which are described in the SWP3 and in accordance with the Ohio EPA construction stormwater general permit.

Groundwater is anticipated to be encountered from 5 to 15 feet. Groundwater infiltration volume entering an excavation is difficult to estimate because the extent of permeable saturated zones beneath the construction footprint is uncertain as are the construction means and methods. Precautions will be taken to minimize the quantity of groundwater and storm water that can enter excavations, trenches, drilled shafts, etc. These precautions and storm water management requirements that need to be followed during construction activities is outlined in the SWP3.

Duke will be contacted immediately in the event water encountered in excavations is considered impacted by the Contractor. Duke will coordinate water management activities for characterization and potential disposal as required.

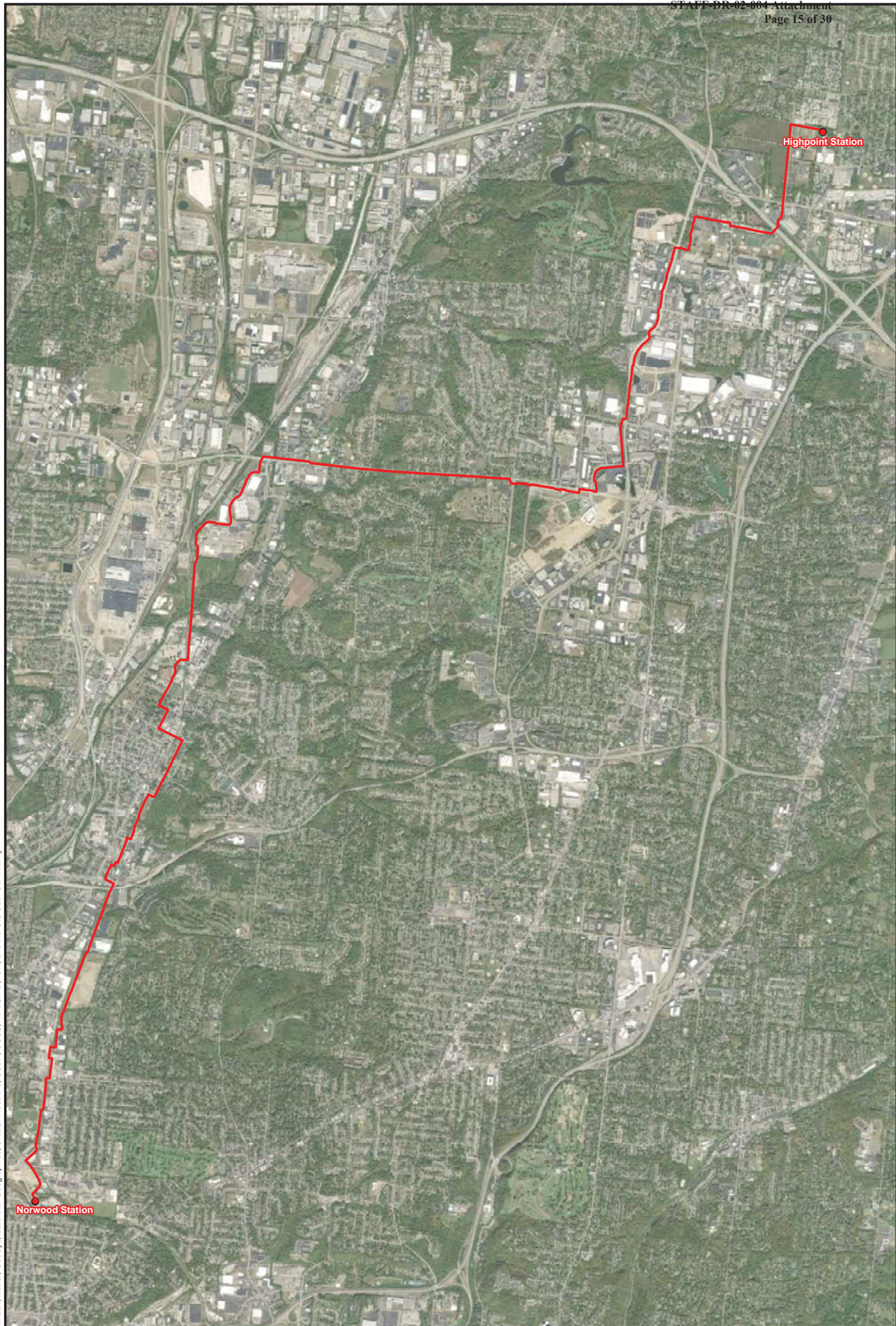
Decontamination procedures described in Section 3 will be used during water management activities.

## **5.0 DOCUMENTATION**

Documentation will be obtained by Duke's approved third-party environmental contractor and provided to Duke relative to any impacted soil or water activities.

## **FIGURES**





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

**Legend**  
● Station  
— Pipeline Centerline

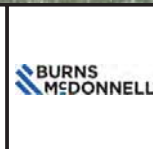
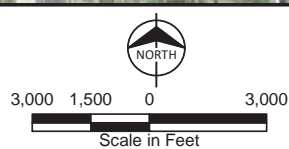
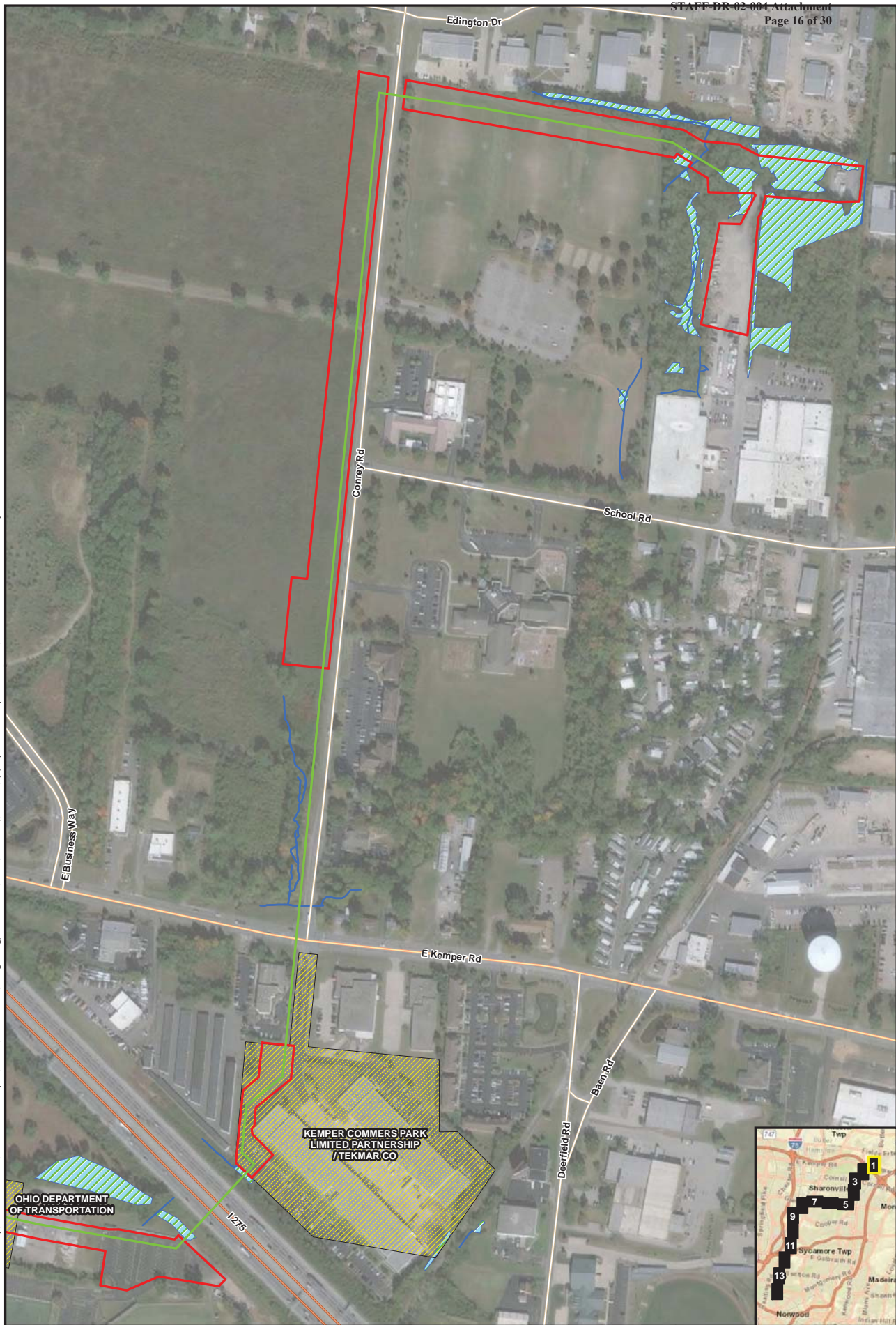


Figure 1  
Project Overview Map  
C350 Central Corridor  
Pipeline Project  
Duke Energy  
Hamilton County, OH





- Legend**
- Pipeline Centerline
  - Construction Footprint
  - Stream
  - Priority Parcel
  - Wetlands

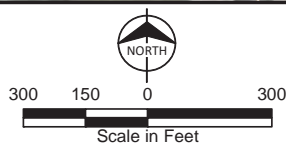


Figure 2  
Priority Properties Map  
C350 Central Corridor  
Pipeline Project  
Duke Energy  
Hamilton County, OH  
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- Legend**
- Pipeline Centerline
  - Construction Footprint
  - Stream
  - Priority Parcel
  - Wetlands

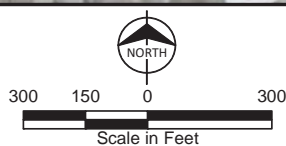
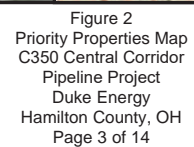
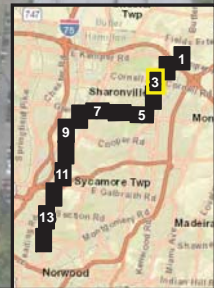
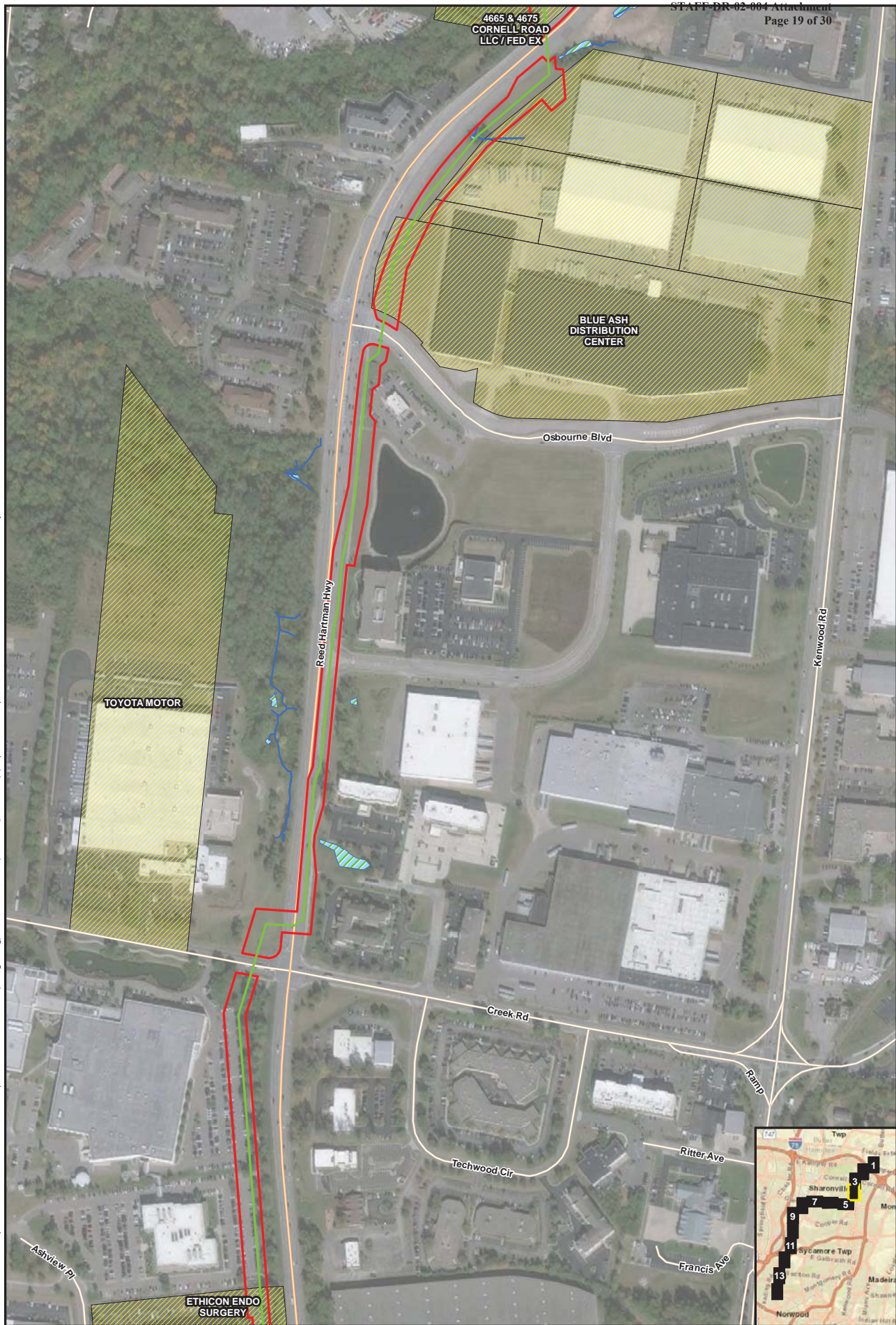


Figure 2  
 Priority Properties Map  
 C350 Central Corridor  
 Pipeline Project  
 Duke Energy  
 Hamilton County, OH  
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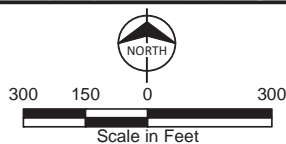








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- Pipeline Centerline
  - Construction Footprint
  - Stream
  - Priority Parcel
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Figure 2  
 Priority Properties Map  
 C350 Central Corridor  
 Pipeline Project  
 Duke Energy  
 Hamilton County, OH  
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- Legend**
- Pipeline Centerline
  - Construction Footprint
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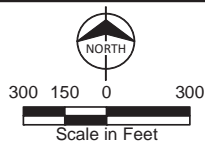
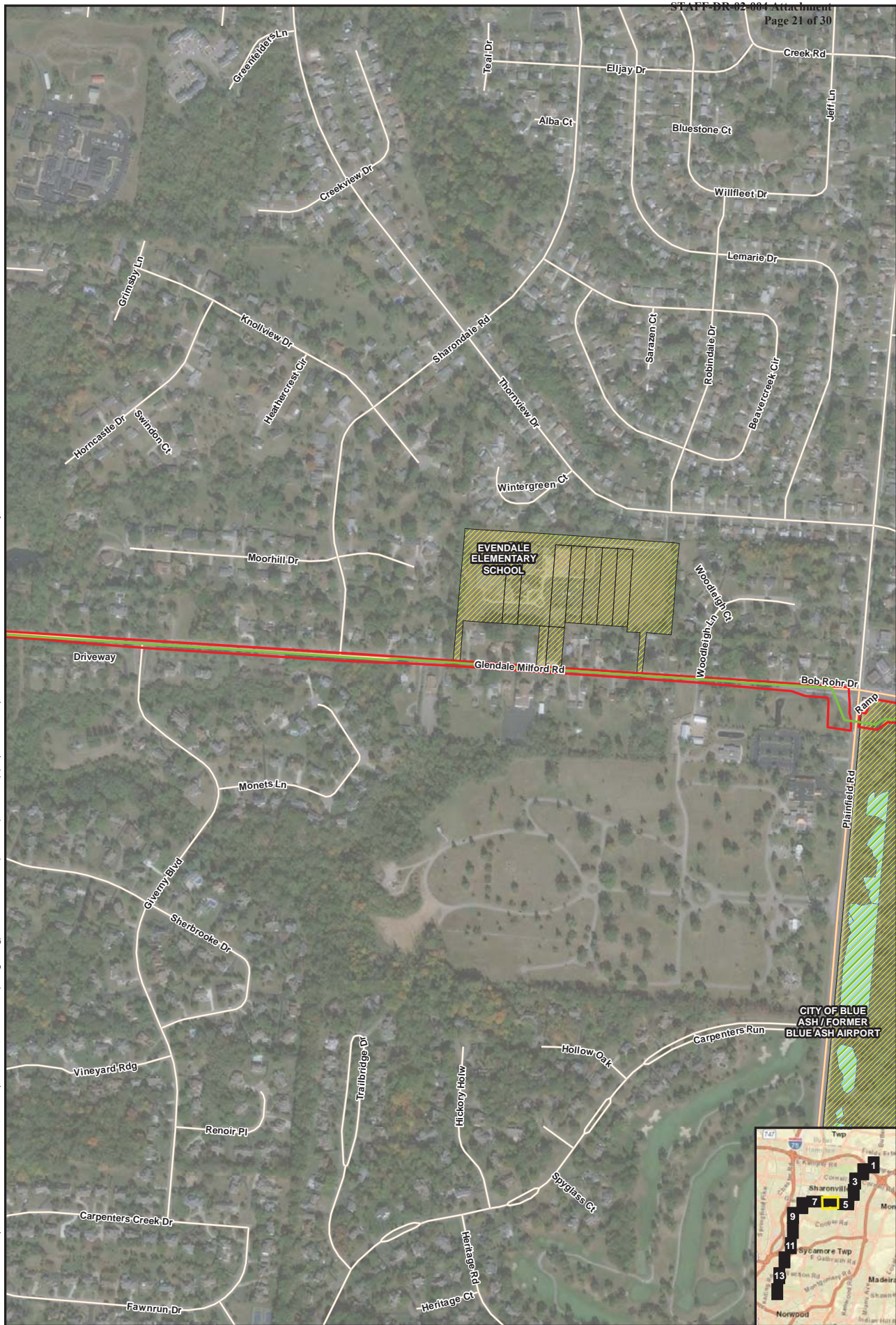


Figure 2  
 Priority Properties Map  
 C350 Central Corridor  
 Pipeline Project  
 Duke Energy  
 Hamilton County, OH  
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**Legend**

- Pipeline Centerline
- Construction Footprint
- Priority Parcel
- Wetlands

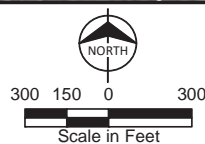
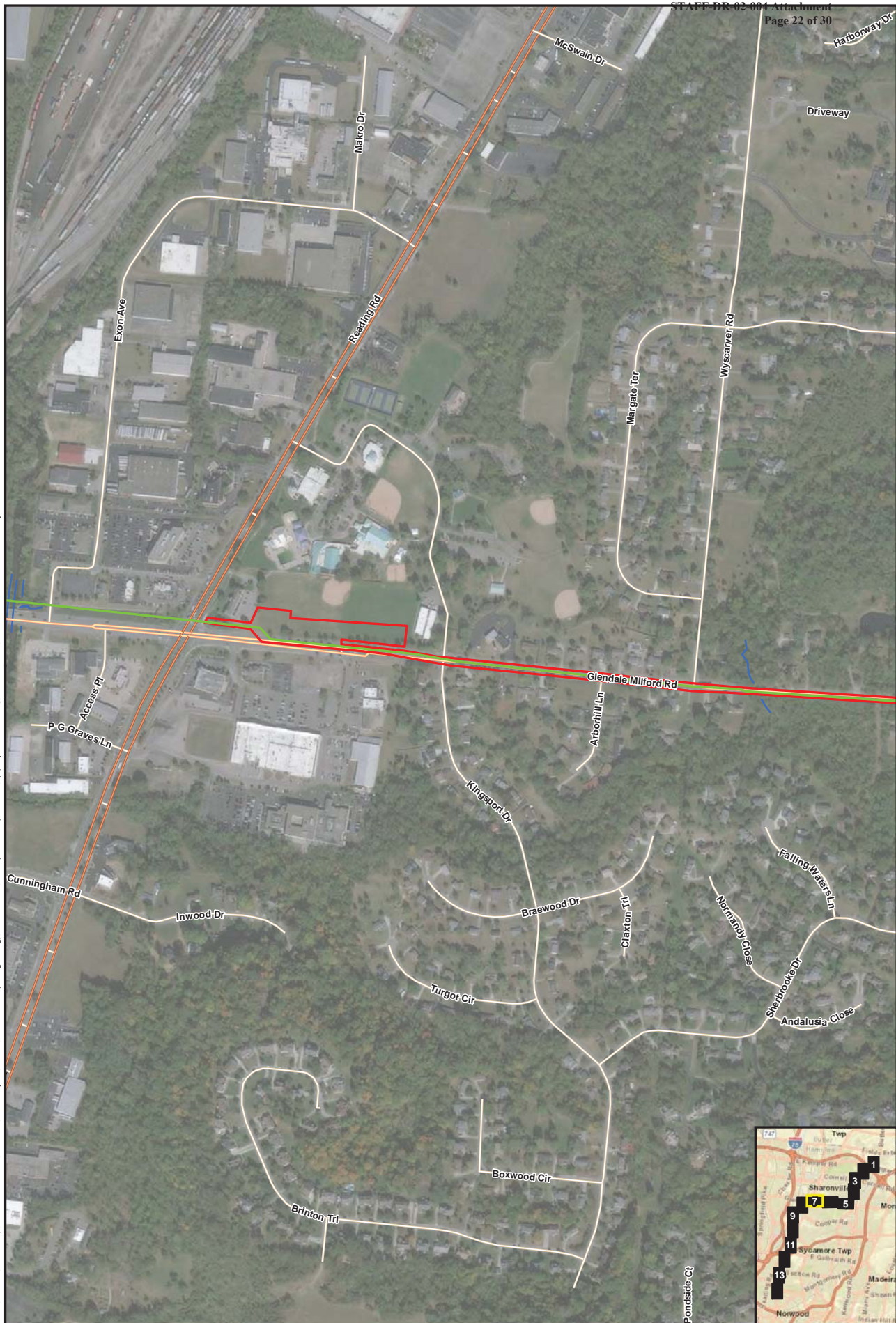
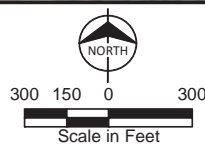


Figure 2  
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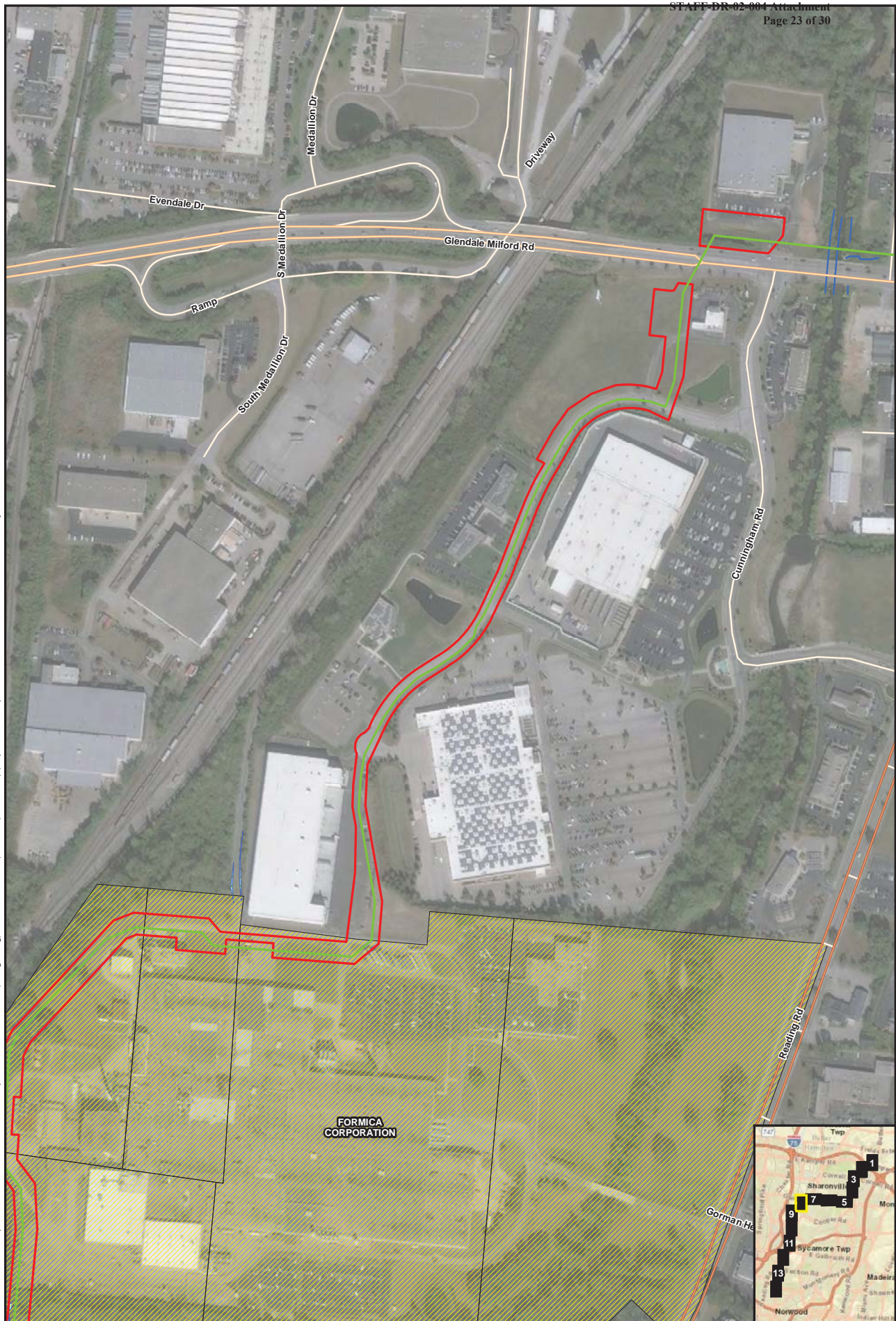
- Legend**
- Pipeline Centerline
  - Construction Footprint
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**BURNS  
MCDONNELL**

**Figure 2**  
Priority Properties Map  
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Hamilton County, OH  
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- Legend**
- Pipeline Centerline
  - Construction Footprint
  - Stream
  - Priority Parcel
  - Wetlands

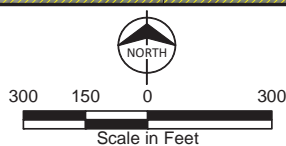


Figure 2  
Priority Properties Map  
C350 Central Corridor  
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Hamilton County, OH  
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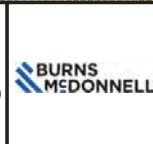
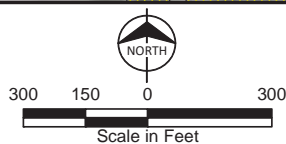
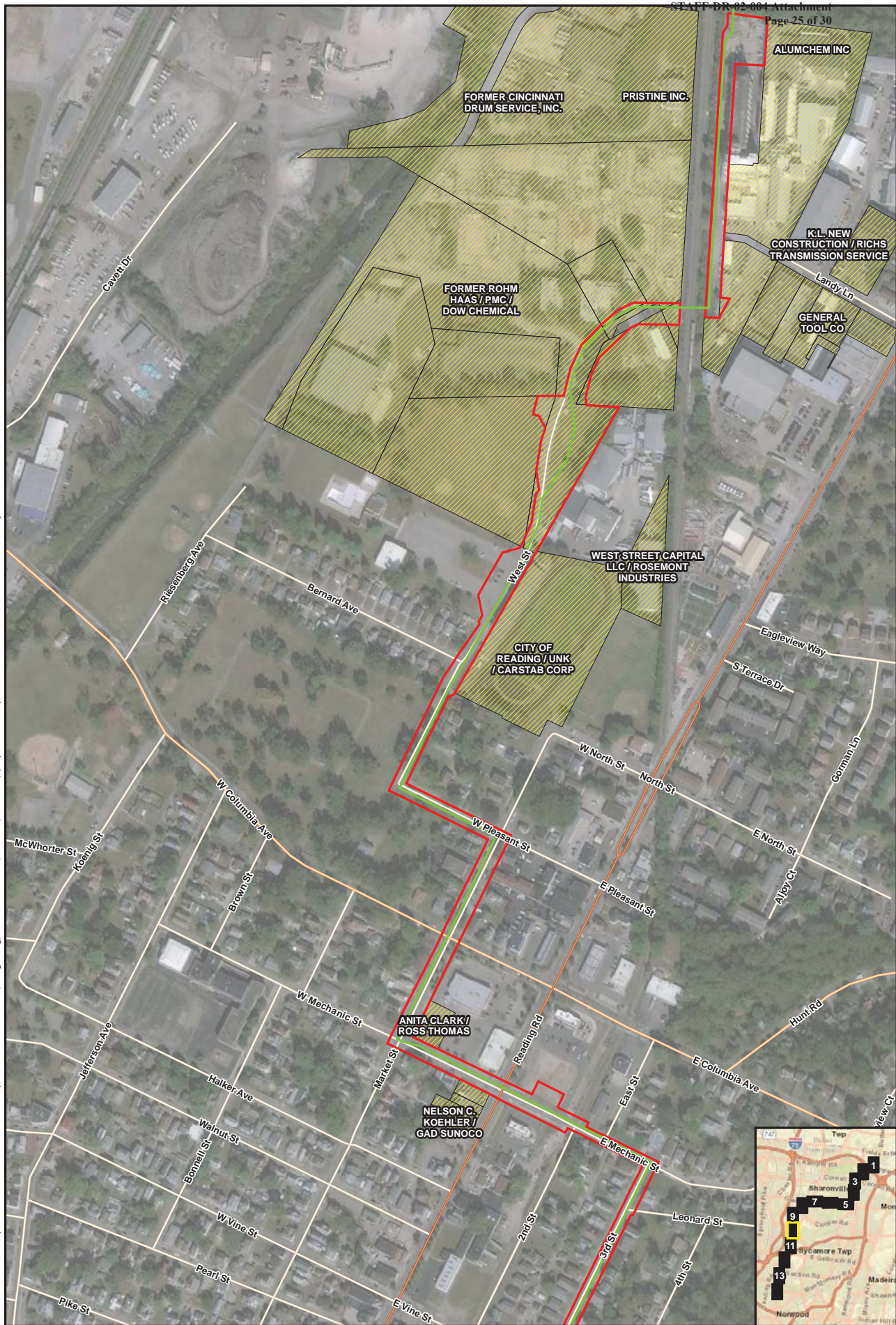


Figure 2  
 Priority Properties Map  
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 Hamilton County, OH  
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- Legend**
- Pipeline Centerline
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  - Priority Parcel

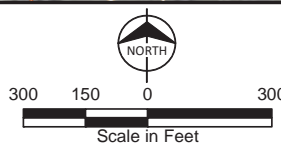
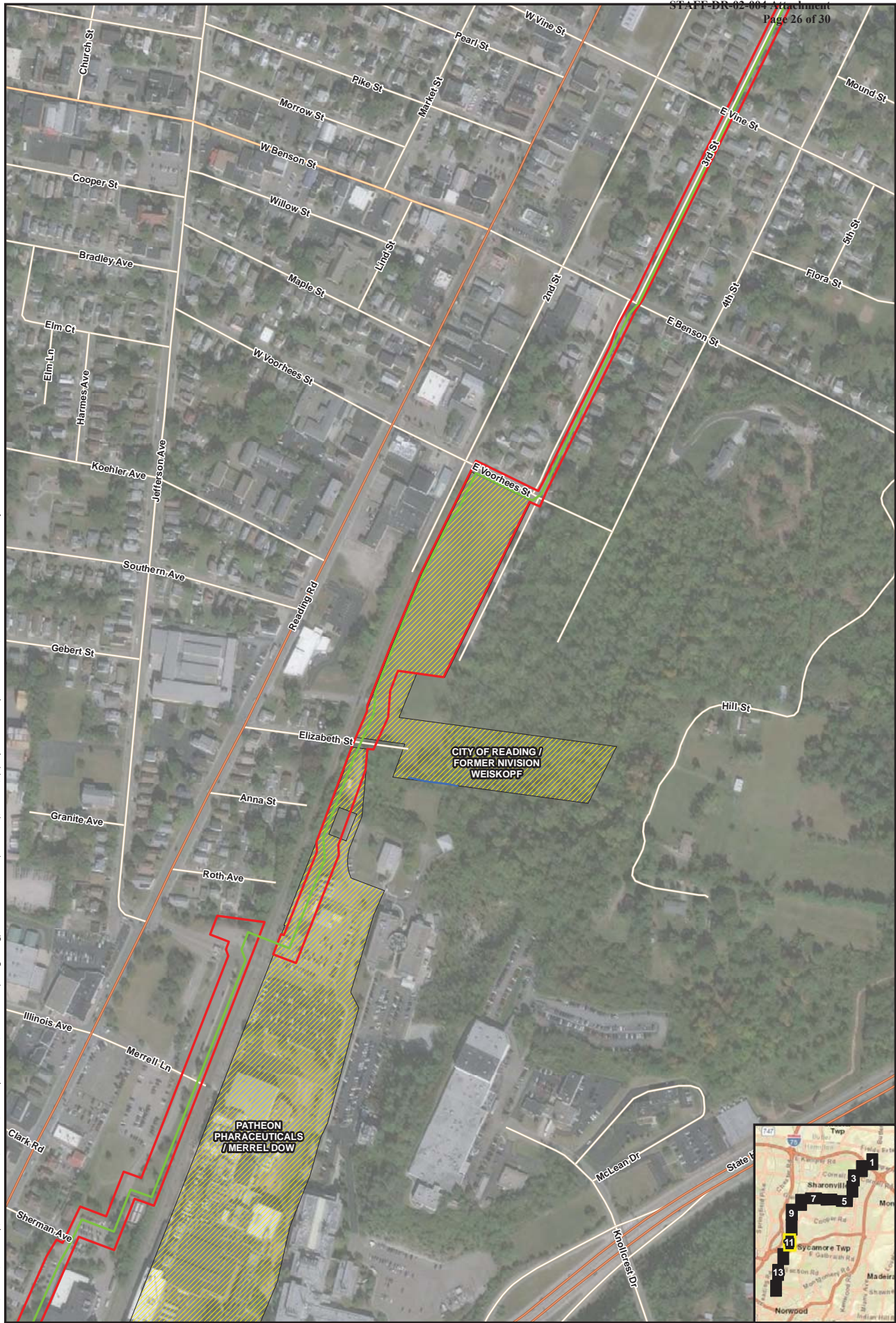


Figure 2  
Priority Properties Map  
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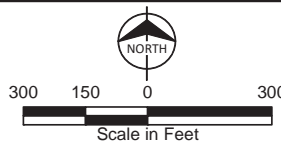


Figure 2  
 Priority Properties Map  
 C350 Central Corridor  
 Pipeline Project  
 Duke Energy  
 Hamilton County, OH  
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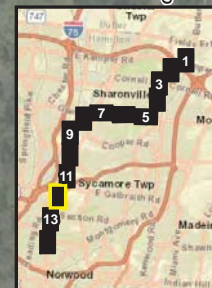
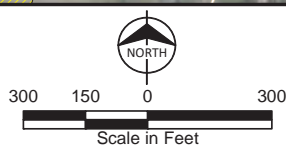
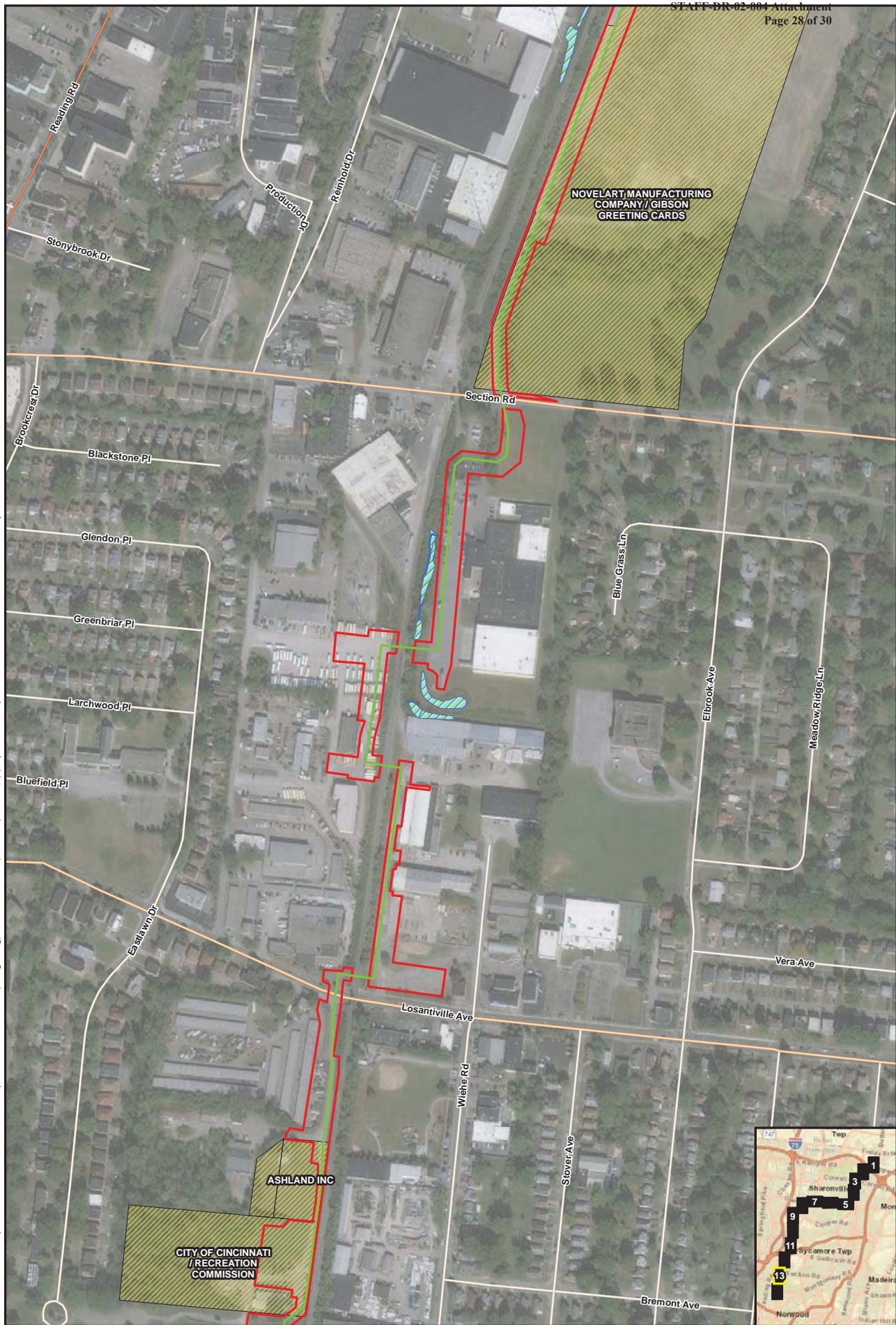


Figure 2  
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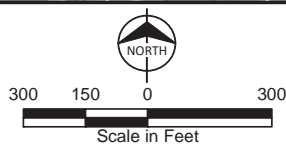


Figure 2  
Priority Properties Map  
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- Pipeline Centerline
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  - Priority Parcel

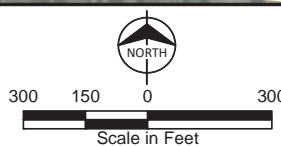
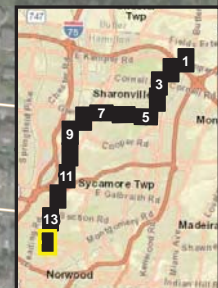


Figure 2  
 Priority Properties Map  
 C350 Central Corridor  
 Pipeline Project  
 Duke Energy  
 Hamilton County, OH  
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Summary: Correspondence Duke Energy Ohio, Inc.'s Response to Staff Data Request 02-004 electronically filed by Carys Cochern on behalf of Duke Energy Ohio, Inc.