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Columbus, Ohio 43215
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Jeanne W. Kingery
Associate General Counsel

February 13, 2017

Barcy McNeal
Ohio Power Siting Board
Docketing Division
180 East Broad Street
Columbus, OH 43215

Re: Case No. 16-0253-GA-BTX

Dear Ms. McNeal:

Please find enclosed some replacement pages to be inserted into the Amended Application that was filed on January 20, 2017. Included in this information is a discussion of the fourth public informational meeting, held on January 26, 2017. These pages provide supplemental information but do not otherwise alter the substance of the application.

Feel free to contact me if you have any questions.

Jeanne W. Kingery
Associate General Counsel

Cc: William L. Wright
Robert Eubanks
Patrick Donlon
Robert Holderbaum

ADDENDUM TO CERTIFICATE APPLICATION

Addendum to Section 4906-5-06, Subsection (D) Public Interaction and Economic Impact, of the Certificate Application

(3) Public Interaction and Plans

Fourth Public Informational Meeting – January 26, 2017

Duke Energy Ohio conducted a fourth public informational meeting on January 26, 2017, at the Crowne Plaza Hotel in the City of Blue Ash. As background information, subsequent to Duke Energy's September 13, 2016, filing of its Certificate Application, the OPSB's executive director determined that information in the initial Application constituted a substantial change to the Project since conducting the third public information meeting on June 15, 2016. The executive director cited the reduction in pipe diameter (from 30-inch to 20-inch) and operating pressure (from 600 PSIG to 400 PSIG), as well as route adjustments in several locations. On October 26, 2016, the OPSB executive director notified Duke Energy Ohio that the company must conduct a fourth public information meeting, including the notice requirements in the OPSB's rule.

The fourth public informational meeting provided members of the public the opportunity to comment on the latest modifications to the Preferred and Alternate Routes that were reported in Duke Energy Ohio's revised Certificate Application (Revision 1) which was filed with the OPSB on January 20, 2017. In the weeks leading up to the planned January 2017 public meeting, Duke Energy Ohio held several meetings with municipal agencies, community groups, and affected landowners. Several requests and suggestions were received by Duke Energy Ohio for improvements to the alignment of the Preferred Route and, to a lesser extent, the Alternate Route, to lessen the construction phase impacts on property owners. Additionally, Duke Energy Ohio identified specific areas where impacts on residential lands adjacent to public road ROW, and impacts on vehicle traffic during the construction phase, could potentially be reduced.

Similar to the previous public informational meetings, the fourth meeting in January 2017 included a drop-in format allowing neighbors to attend to suit their schedules. In addition, Duke Energy Ohio offered presentations (at two different times) during the meeting to provide an overview of the Project. Notification letters to all potentially affected neighbors along the

Preferred and Alternate Routes were mailed on January 3, 2017 (refer to Appendix 6-4 for a copy of the letter).

This meeting location in Blue Ash was selected because it is central to the Project area and was anticipated to have the capacity to handle the expected number of guests. Approximately 460 customers and members of the public attended. The most prevalent and frequent concerns expressed by the public at this meeting centered on natural gas pipeline safety, questions regarding the need for the Project, and pipeline routing through residential and near other sensitive areas like churches, schools, daycare facilities, and hospitals. The following summarizes the level of interest in the Project in terms of attendance and number of written/phone comments received during and following the meeting from customers and members of the public.

- Number of customers or members of the public that signed in for the meeting: 383
- Estimated total number in attendance: 460
- Members of the public attending the two overview presentation sessions: 400-450
- Number of questionnaires completed and submitted by attendees: 190
- Number of phone calls with Project comments from January 27 – February 6, 2017: 7
- Number of comment e-mails received from January 27 – February 6, 2017: 13

OPSB CASE NO. 16-0253-GA-BTX (Rev. 1)

Duke Energy C314V Central Corridor Pipeline Extension Project

Instructions for Replacement Pages and One Map Figure Addition

Insert the following replacement pages into the five copies of the Certificate Application provided to the OPSB Staff on January 20, 2017. Remove existing corresponding pages.

<u>Sections (body of the Application)</u>

Table of Contents: pages *iv, v* and *vi* (two double-sided pages)

Insert NOTE page in front of Appendix 4-1 (re: large format Figure 1-3 mislabeled as Figure 4-1)

Section 4906-5-08: page 8-1 and 8-2 (one double-sided page)

Section 4906-5-08: page 8-54 and 8-55 (one double-sided page)

<u>Figures Section</u>

Figure 5-1:	Project Features and Cultural Resource Map *(added existing electric transmission lines)*
(NEW) Figure 8-4A through 8-4R:	Slope Greater Than 12 Percent and Soil Erosion Hazard Within 1,000 Feet of Pipeline

6-1 Estimates of Applicable Intangible and Capital Costs for Both the Preferred and Alternate Sites

6-2 Counties, Townships, Villages, and Cities Within 1,000 Feet of the Proposed Pipeline Routes

6-1A (Appendix 6-1) List of Public Officials Contacted Regarding the Project

7-1 Preferred Route Proposed Trenchless Construction Locations

7-2 Alternate Route Proposed Trenchless Construction Locations

7-3 Length and Percent of Land Uses Crossed by Centerline of Route Alternatives

7-4 Acreage and Percent of Land Uses Crossed by Route Alternatives

7-5 Number of Land Use Features Near the Route Alternatives

7-1A (Appendix 7-1) List of Structures Within 200 Feet of Preliminary Right-of-Way for Preferred Route

7-1B (Appendix 7-1) List of Structures Within 200 Feet of Preliminary Right-of-Way for Alternate Route

8-1 NWI Wetlands within 1,000 feet of the Preferred and Alternate Routes

8-2 Delineated Wetlands within the Preferred and Alternate Route Environmental Survey Corridor and Construction Work Area

8-3 Streams within the Preferred and Alternate Route Environmental Survey Corridor and Construction Work Area

8-4 Delineated Ponds within the Preferred Route and Alternate Route Environmental Survey Corridors

8-6 Federally Listed Species in the Project Vicinity and Habitat Information

~~8-6 Slopes Greater than 12 percent Along the Preferred Route~~

8-8 NRCS Erosion Hazard Verbal Classification for Soils Crossed by the Preferred and Alternate Route

8-9 Soil Erosion Hazard Results for the Project

FIGURES

2-1 Project Vicinity Map

~~2-2 Study Area Overview Map~~

3-1 Diagram of the Main Pipelines and MAOPs in the Duke Energy Ohio System around Southwest Ohio and Northern Kentucky

3-2 Detail View of the Ohio and Kentucky High-pressure Natural Gas Pipeline Loop, Showing Pipelines, Peak Day Flow Directions, Stations and MAOPs

3-3 The Extent of Propane Flow into the Ohio Part of the System from the Propane-air Peaking Plants in Kentucky and Cincinnati, at Peak Demand Flow

3-4 The Extent of Propane Flow into the Northern Kentucky Part of the System from the Propane-air Peaking Plant~~s~~ at Peak Demand Flow

3-5 Modeled Pressures in the System with the Propane-air Peaking Plants Retired and No Additional Pipelines Constructed

3-6 Model Results Showing Peak Shaving Plants Retired, Flow from Foster Station Maximized and Proposed C314V Operational

3-7 Model Results Showing Propane-air Plants Retired, Flow through C314V Maximized to Show Reduction in Reliance on Foster Station

3-8 Gantt Chart of Proposed Schedule of Major Milestones

4-1 Constraint Map Showing Candidate Routes (24-inch by 36-inch ~~folded~~ map; referred to as "Figure 1-3" in the narrative of Section 4 and Appendix 4-1 Route Selection Study)

5-1A-F Project Features and Cultural Resource Map

6-3A (Appendix 6-3) Public Comments Depicted as Heat Map

7-1A-F Land Use Map

7-2A-R Structures within 200 feet of Permanent ROW Boundary

8-1 Ecology Index Map

8-2A-H Preferred Route Wetland and Waterbodies Delineation Map

8-3A-J Alternate Route Wetland and Waterbodies Delineation Map

8-4A-R Slope Greater Than 12 Percent and Soil Erosion Hazard Within 1,000 Feet of Pipeline

APPENDICES

4-1 Route Selection Study Report

6-1 List of Public Officials Contacted Regarding the Project

6-2 List of Public Officials to be Served a Copy of the Accepted Application

6-3 Public Comments Depicted as Heat Map

6-4 Public Informational Meeting Notifications, Materials, and Brochures

7-1 List of Structures Within 200 Feet of Preliminary Right-of-Way for Preferred and Alternate Route

Insert Page for Certificate Application Regarding FIGURE 1-3 Reference

NOTE: The large format (24 in. by 36 in.) map entitled "*FIGURE 4-1: CONSTRAINT MAP SHOWING CANDIDATE ROUTES*", which is part of the Appendix 4-1 - Route Selection Study Report, should be labeled as FIGURE 1-3. The narrative of the Certificate Application (Section 4 and Appendix 4-1) refers to this figure as Figure 1-3. This figure was labeled as Figure 4-1 in error.

4906-5-08 ECOLOGICAL INFORMATION AND COMPLIANCE WITH PERMITTING REQUIREMENTS

This section of the Application provides a summary of the studies conducted to assess the potential effects of the Project on the ecology of the area. A map and literature search was conducted for a corridor 1,000 feet either side of the centerline of both the Preferred and Alternate Routes. A field survey of ecological habitat and features was performed within a 280-foot wide corridor (100 feet on either side of the planned 80-foot wide disturbance corridor) for both the Preferred and Alternate Routes with one exception discussed in Section (B) below. Information in the following subsections is provided separately for the Preferred and Alternate Routes.

(A) ECOLOGICAL MAP

Maps at a scale of 1:24,000 (1 inch = 2,000 feet) including the corridor 1,000 feet either side of the centerlines (referred to as the 2,000-foot corridor) of the Preferred and Alternate Routes are presented as Figures 7-1A through 7-1F. These maps depict the proposed pipeline alignments and land use classifications, including vegetative cover. Additionally, lakes, ponds, and/or reservoirs, ~~highly erodible soils and slopes of 12 percent or greater,~~ abandoned or undeveloped land, wildlife areas, nature preserves, and conservation areas within the 2,000-foot corridor are identified on these maps. Figures 7-1A through 7-1F also show the proposed regulation station and valve station locations and station expansion areas. Features within 1,000 feet of the proposed Routes were identified from published data and verified by the pedestrian ecological field survey. Areas of potential highly erodible soils and slopes of 12 percent or greater for both routes are depicted on Figures 8-4A through 8-4R. An ecological overview map is provided as Figure 8-1. More detailed maps at 1:7,000 scale depicting field-delineated water features are provided as Figures 8-2A through 8-2H (Preferred Route) and Figures 8-3A through 8-3J (Alternate Route).

In the discussion below, the term “survey corridor” refers to the corridor encompassing 100 feet either side of the planned disturbance area (*i.e.*, an estimated 80-foot wide construction work area or right-of-way [ROW]), which equates to a survey corridor of 280 feet in width. This survey corridor was evaluated by CH2M’s field biologists through pedestrian field observations. The term “construction work area (CWA)” refers to the planned 80-foot corridor that will be used

during the construction process (temporary equipment access, soil piles, etc.). The planned 80-foot wide CWA along the pipeline is preliminary and conceptual as of this Application submittal. The CWA will be refined once the final route is approved and detailed engineering design and construction plans commence. The use of the 80-foot CWA for purposes of this Application allows for a comparison of the various types of land use settings and sensitive ecological features that are present and the approximate extent of areas that may be disturbed during construction of either the Preferred or Alternate Route.

(B) FIELD SURVEY REPORT FOR VEGETATION AND SURFACE WATERS

The ecological field surveys along the Preferred and Alternate Routes, which included a 280-foot wide survey corridor centered along the Preferred and Alternate Route centerlines, were conducted between April 11, 2016, and ~~July 21~~December 22, 2016, by CH2M's field biologists. The results of the field surveys are presented in the following sections. Duke Energy Ohio has completed all field surveys for the Preferred and Alternate Route corridor.~~ with the exception of 1.2 miles of the Alternate Route. This remaining section of Alternate Route, representing less than 9 percent of the overall length of the Alternate Route, will be surveyed and the results submitted as a supplemental filing to the OPSB by October 17, 2016. The field survey of this 1.2-mile section (from Ronald Reagan Cross County Highway south to Losantiville Avenue) was suspended at the request of the Hamilton County Commissioners during the July 27th symposium with community representatives where Duke Energy Ohio participated in a question and answer forum to discuss the Project.~~ The extent of one stream and three wetlands (formed in a railroad corridor swale) on the Norfolk Southern Railroad corridor could not be fully evaluated (refer to footnotes of Tables 8-2 and 8-3). These features will be delineated once Norfolk Southern provides approval for safe access to this active railroad, if deemed necessary by OPSB in the event that the Alternate Route is to be certificated versus the Preferred Route. A parcel owned by the Cincinnati Port Authority, adjacent to the railroad, could not be directly field reviewed because of the site undergoing active soil grading work in preparation for construction of a building. Additionally, the residential backyards adjacent to the Preferred Route alignment along the eastern and southern perimeter of the Kenwood Country Club property were observed for streams and wetlands from the common property boundary between the golf course property and residential properties. The construction workspace would not be located on these residential properties.

(2) Slopes and Foundation Soil Suitability

Landslides can be an issue in the Cincinnati area. However, landslides can be predictable as they are typically caused by inherent geologic conditions. The presence of one or more of the following conditions can cause potential landslide issues: steep slopes, jointed rocks, fine-grained, permeable rock or sediment, clay or shale units subject to lubrication, and the introduction of large amounts of water. Additionally, one or more of the following triggering mechanisms are required to initiate downslope movement: vibrations, over-steepened slope, increased weight on the crown of a slope, and removal of vegetation (ODGS, 1995).

If bedrock slope failure occurs, Ordovician bedrock in Hamilton County generally experiences rotational slumps and earthflows. The majority of bedrock slope failures occur in the shale-dominated Kope Formation or the Miamitown Shale, to a lesser degree. Landslides tend to occur in the thick colluvium developed on these units when excessive hydrostatic pressure builds up in the colluvium (ODGS, 1995). Approximately ~~64~~61 percent of the Preferred Route occurs within the Miamitown Shale and ~~16~~15 percent within the Kope Formation. Approximately ~~39~~38 percent of the Alternate Route occurs within the Miamitown Shale and ~~41~~42 percent within the Kope Formation.

Landslides are not anticipated to be an issue during Project construction. As discussed in the following subsections, slopes are relatively shallow along both the Preferred and Alternate Routes and no areas along either route are rated as having “severe” potential for erosion.

(a) Slopes

Approximately 11 percent of the Preferred Route centerline traverses land where slopes exceed 12 percent. Slopes exceeding 12 percent occur along approximately 13 percent of the Alternate Route centerline. Duke Energy Ohio used more detailed and higher resolution data to recalculate slopes greater than 12 percent for this Application, resulting in changes to the percentage of the routes crossing slopes greater than 12 percent.

During construction, Duke Energy Ohio will implement a SWPPP and associated BMPs as necessary to control erosion and sedimentation in areas with slopes exceeding 12 percent. Once construction is complete, soils will be revegetated and stabilized. As a result, no erosional impacts resulting from slopes exceeding 12 percent are expected.

~~Slopes in the areas crossed by the Preferred Route do not exceed 12 percent except for very short distances along streams and road berms where slope mechanics are not expected to cause significant problems. The Alternate Route does not cross slopes greater than 12 percent. Overall, only 0.19 percent of the Preferred Route crosses land with slopes greater than 12 percent. Table 8-7 summarizes areas along the Preferred Route that consist of slopes greater than 12 percent.~~

~~TABLE 8-7 SLOPES GREATER THAN 12 PERCENT ALONG THE PREFERRED ROUTE~~

~~Route~~	~~Milepost Begin~~	~~Milepost End~~	~~Total Distance (feet)~~	~~Percent of Route~~
~~Preferred~~	~~9.327~~	~~9.333~~	~~30.4~~	~~0.04~~
	~~9.334~~	~~9.341~~	~~37.2~~	~~0.05~~
	~~10.362~~	~~10.370~~	~~39.1~~	~~0.06~~
	~~10.523~~	~~10.528~~	~~30.4~~	~~0.05~~
~~**TOTAL**~~			~~**137.1**~~	~~**0.19**~~

Figure 8-4A through 8-4-R illustrates areas having greater than 12 percent slopes as well as the soil erodibility ratings.

(b) Erosion Potential

Erosion is the detachment and movement of soil material and may be natural or accelerated by human activity. Depending on the local landscape and weather conditions, erosion may be very slow or very rapid (USDA NRCS, 1993). The NRCS rates erosion hazard both verbally and numerically. For the soil types crossed by the routes, ~~Verbally~~ the hazard is described as “slight,” “moderate,” and “severe” for roads/trails. The ratings in this interpretation indicate the hazard of soil loss from ~~unsurfaced~~ off-road~~s~~ and off-trail~~s~~ areas. The ratings are based on soil erosion factor K~~,~~ and slope~~, and content of rock fragments~~. These terms are defined in Table 8-8.

TABLE 8-8
NRCS Erosion Hazard Verbal Classification for Soils Crossed by the Preferred and Alternate Route

NRCS Erosion Hazard Classification	Definition
Slight	Little or no erosion is likely under ordinary climatic conditions.
Moderate	Indicates that some erosion is likely, ~~that the roads or trails may require occasional maintenance,~~ and that ~~simple~~ erosion-control measures ~~are~~ may be needed.
Severe	Indicates that ~~significant~~ erosion is ~~expected~~very likely, ~~that the roads or trails require frequent maintenance,~~ and that ~~costly~~ erosion-control measures are ~~needed~~advised.

Source: USDA NRCS, 2016

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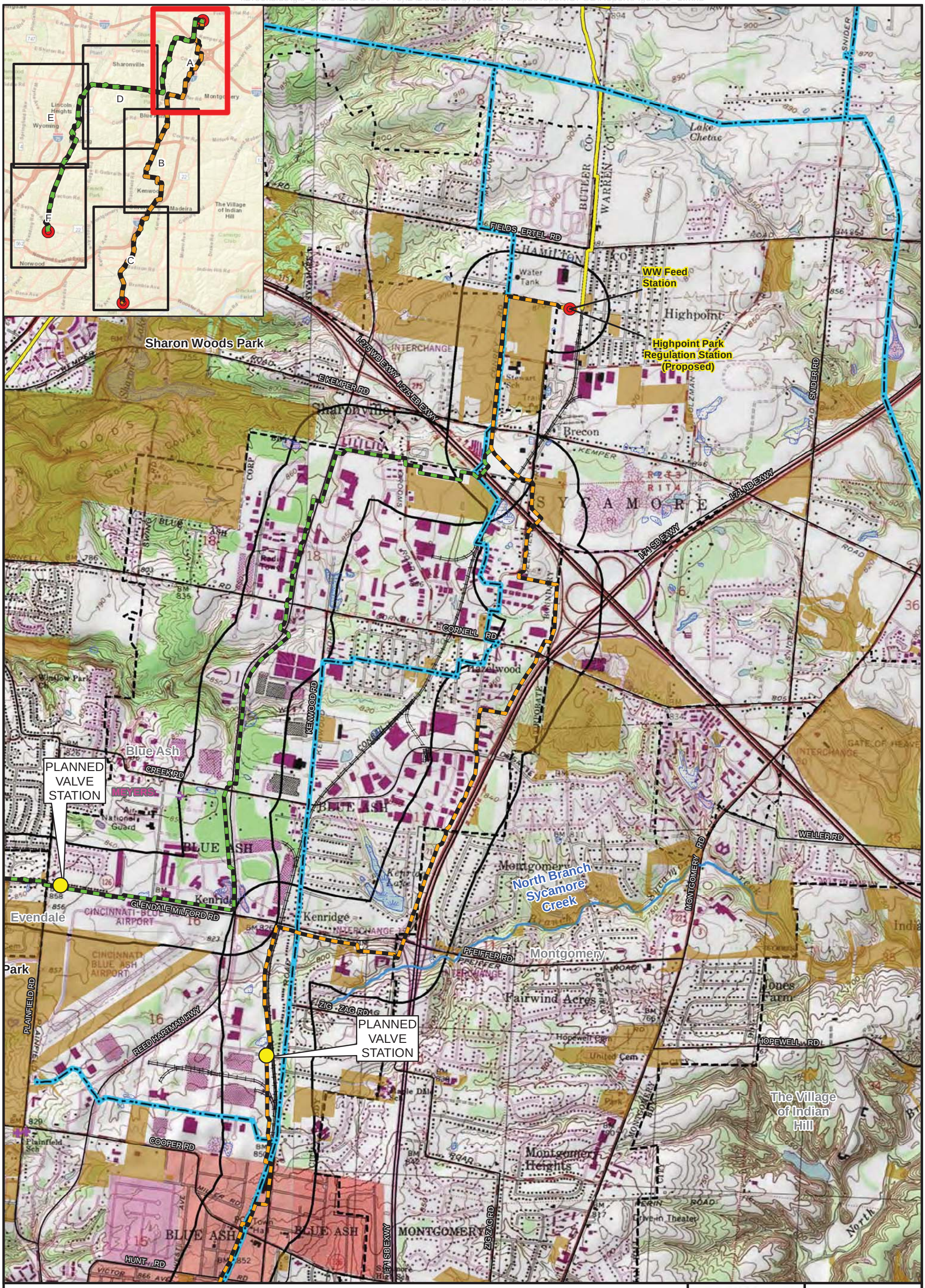

LEGEND:

- Preferred Route
- Alternate Route
- 1,000 Foot Buffer of Preferred and Alternate Roue
- National Register Listed
- National Register Determination of Eligibility
- Cemetery
- NHD Stream
- Existing Pipelines
- Existing Electric Transmission Lines
- Railroad
- NWI Wetland
- Park or Recreation Area
- Municipal Boundary
- Historic District

N

0 2,000 4,000

Scale In Feet

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle Cincinnati East 1982, Glendale 1982 Madeira 1983, Mason 1982

DUKE ENERGY

C314V Central Corridor Pipeline Extension Project

FIGURE 5-1A
PROJECT FEATURES AND CULTURAL RESOURCE MAP

PN: 672247	DATE: 2/10/2017
CREATED BY: TH	ch2m
REVIEWED BY:MF	

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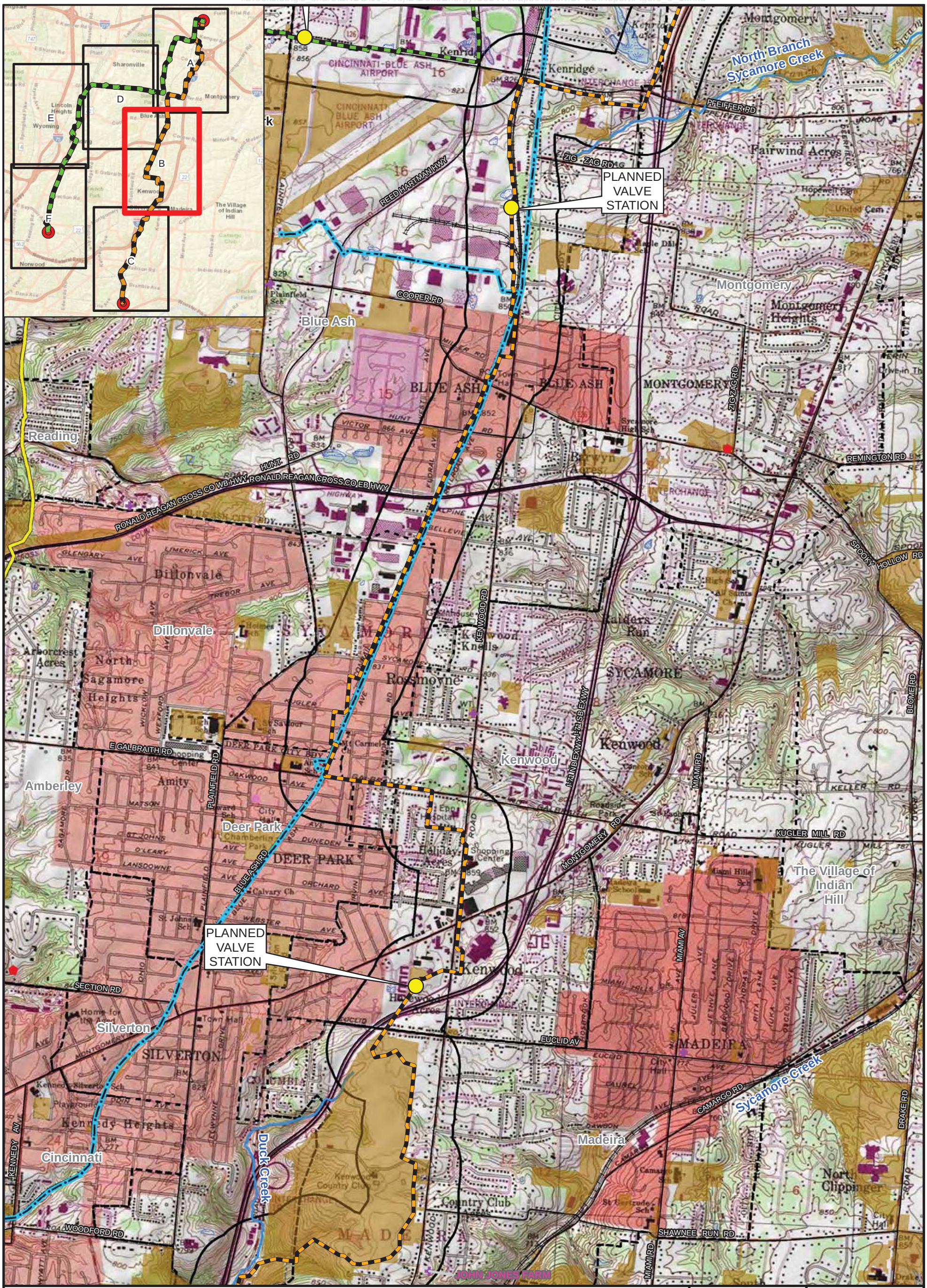

LEGEND:

- Preferred Route
- Alternate Route
- 1,000 Foot Buffer of Preferred and Alternate Roue
- National Register Listed
- National Register Determination of Eligibility
- Cemetery
- NHD Stream
- Existing Pipelines
- Existing Electric Transmission Lines
- Railroad
- NWI Wetland
- Park or Recreation Area
- Municipal Boundary
- Historic District

N

0 2,000 4,000

Scale In Feet

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982,
Glendale 1982
Madeira 1983, Mason 1982

DUKE ENERGY

C314V Central Corridor Pipeline Extension Project

FIGURE 5-1B
PROJECT FEATURES AND CULTURAL RESOURCE MAP

PN: 672247	DATE: 2/10/2017
CREATED BY: TH	ch2m
REVIEWED BY:MF	

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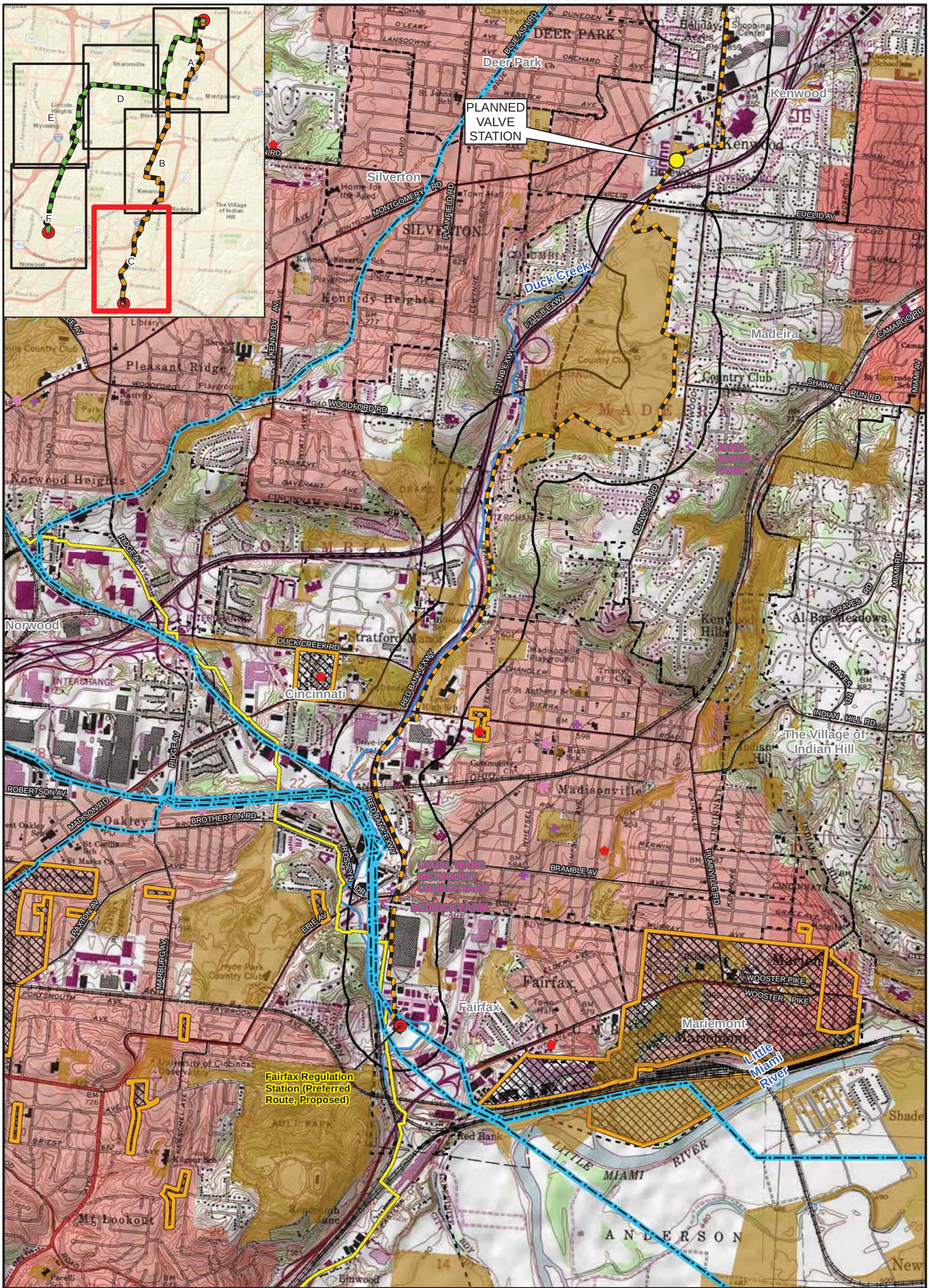

LEGEND:

- Preferred Route
- Alternate Route
- 1,000 Foot Buffer of Preferred and Alternate Roue
- National Register Listed
- National Register Determination of Eligibility
- Cemetery
- NHD Stream
- Existing Pipelines
- Existing Electric Transmission Lines
- Railroad
- NWI Wetland
- Park or Recreation Area
- Municipal Boundary
- Historic District

N

0 2,000 4,000
Scale In Feet

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982,
Glendale 1982
Madeira 1983, Mason 1982

DUKE ENERGY

C314V Central Corridor Pipeline Extension Project

FIGURE 5-1C
PROJECT FEATURES AND CULTURAL RESOURCE MAP

PN: 672247	DATE: 2/10/2017
CREATED BY: TH	ch2m
REVIEWED BY:MF	

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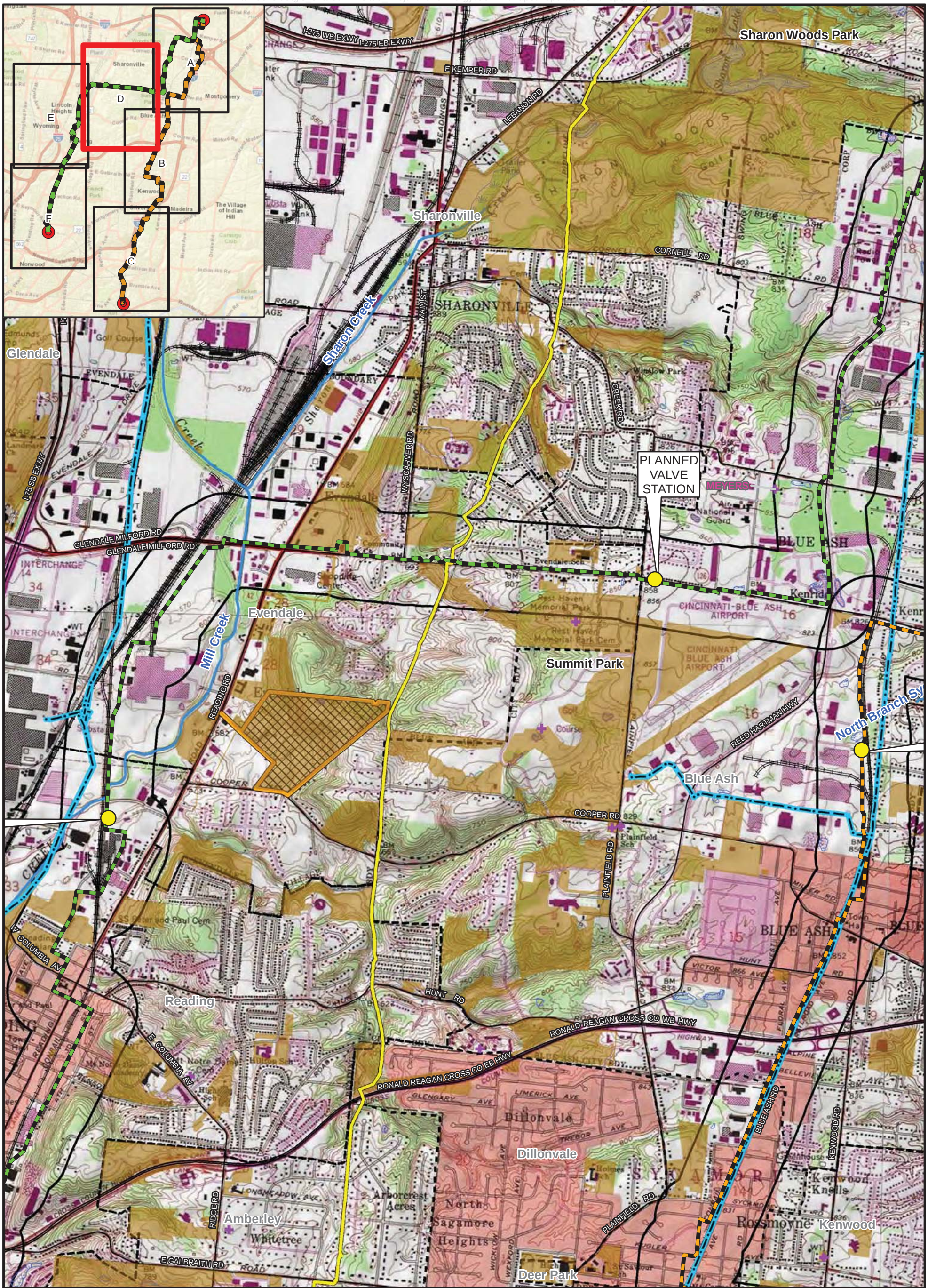

LEGEND:

- Preferred Route
- Alternate Route
- 1,000 Foot Buffer of Preferred and Alternate Roue
- National Register Listed
- National Register Determination of Eligibility
- Cemetery
- NHD Stream
- Existing Pipelines
- Existing Electric Transmission Lines
- Railroad
- NWI Wetland
- Park or Recreation Area
- Municipal Boundary
- Historic District

N

0 2,000 4,000

Scale In Feet

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982,
Glendale 1982
Madeira 1983, Mason 1982

DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

FIGURE 5-1D
PROJECT FEATURES AND CULTURAL RESOURCE MAP

PN: 672247	DATE: 2/10/2017
CREATED BY: TH	ch2m
REVIEWED BY:MF	

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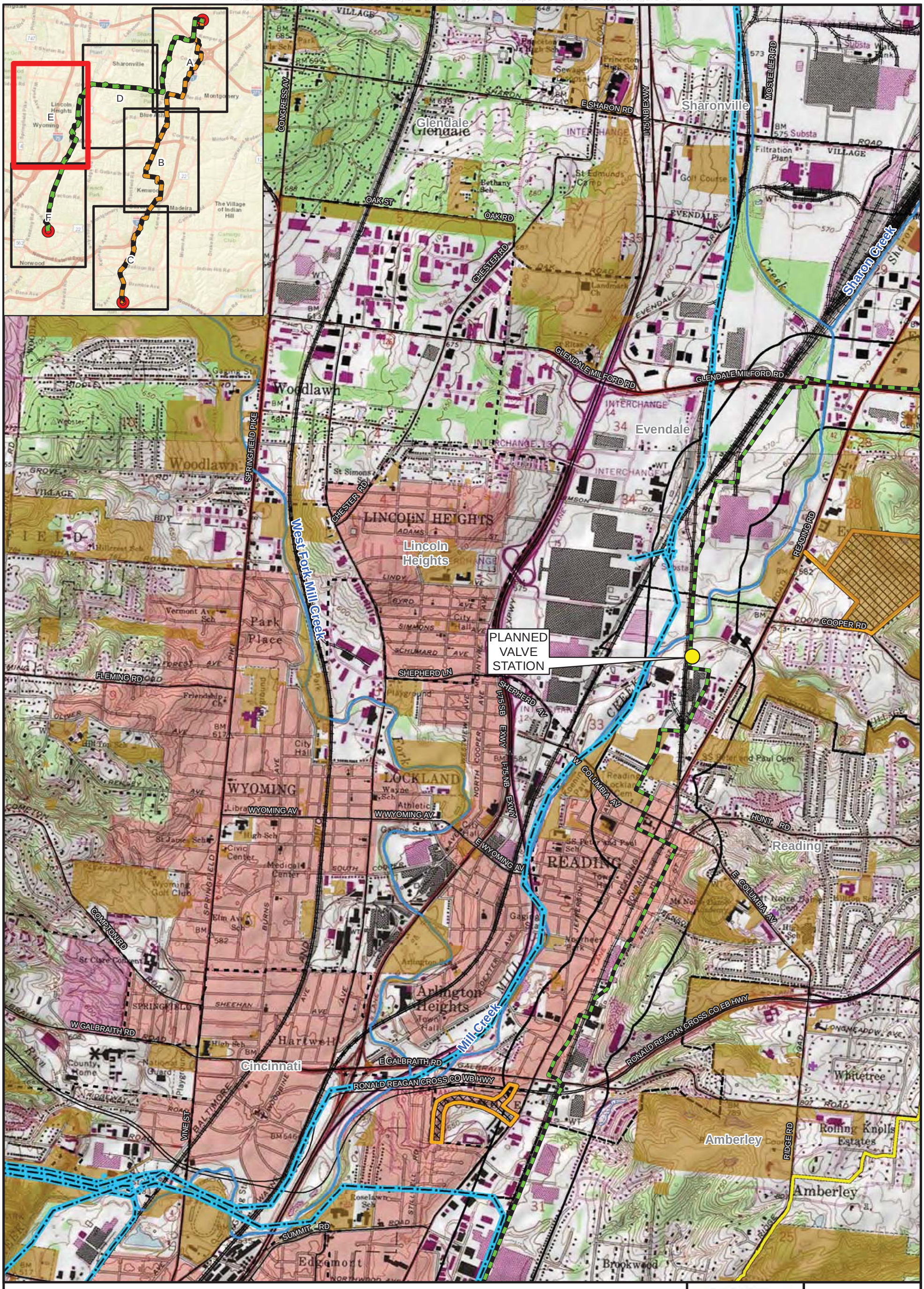

LEGEND:

- Preferred Route
- Alternate Route
- 1,000 Foot Buffer of Preferred and Alternate Roue
- National Register Listed
- National Register Determination of Eligibility
- Cemetery
- NHD Stream
- Existing Pipelines
- Existing Electric Transmission Lines
- Railroad
- NWI Wetland
- Park or Recreation Area
- Municipal Boundary
- Historic District

N

0 2,000 4,000

Scale In Feet

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982,
Glendale 1982
Madeira 1983, Mason 1982

DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

FIGURE 5-1E
PROJECT FEATURES AND CULTURAL RESOURCE MAP

PN: 672247	DATE: 2/10/2017
CREATED BY: TH	ch2m
REVIEWED BY:MF	

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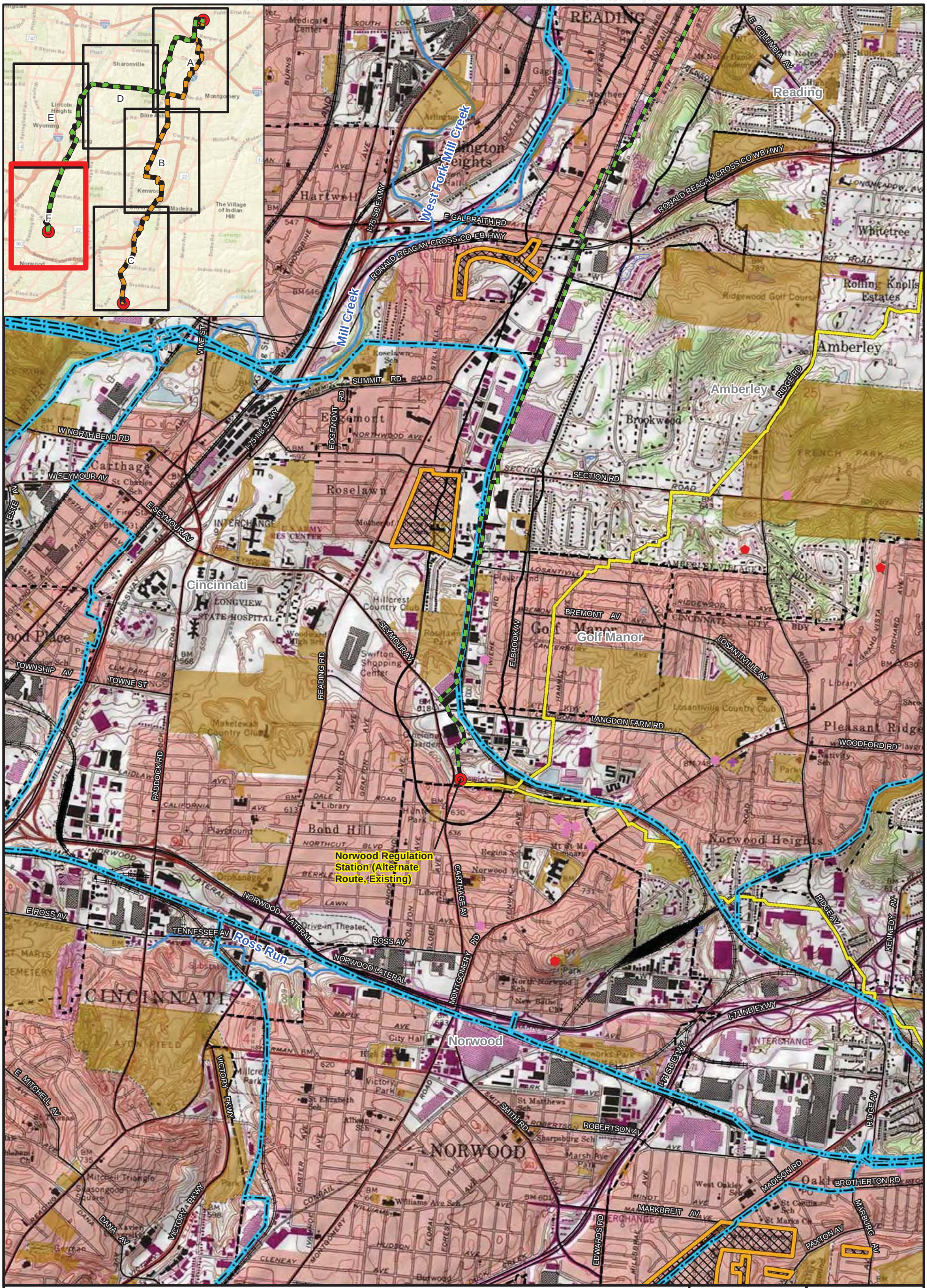


LEGEND:

- Preferred Route
- Alternate Route
- 1,000 Foot Buffer of Preferred and Alternate Roue
- National Register Listed
- National Register Determination of Eligibility
- Cemetery
- NHD Stream
- Existing Pipelines
- Existing Electric Transmission Lines
- Railroad
- NWI Wetland
- Park or Recreation Area
- Municipal Boundary
- Historic District

N

0 2,000 4,000

Scale In Feet

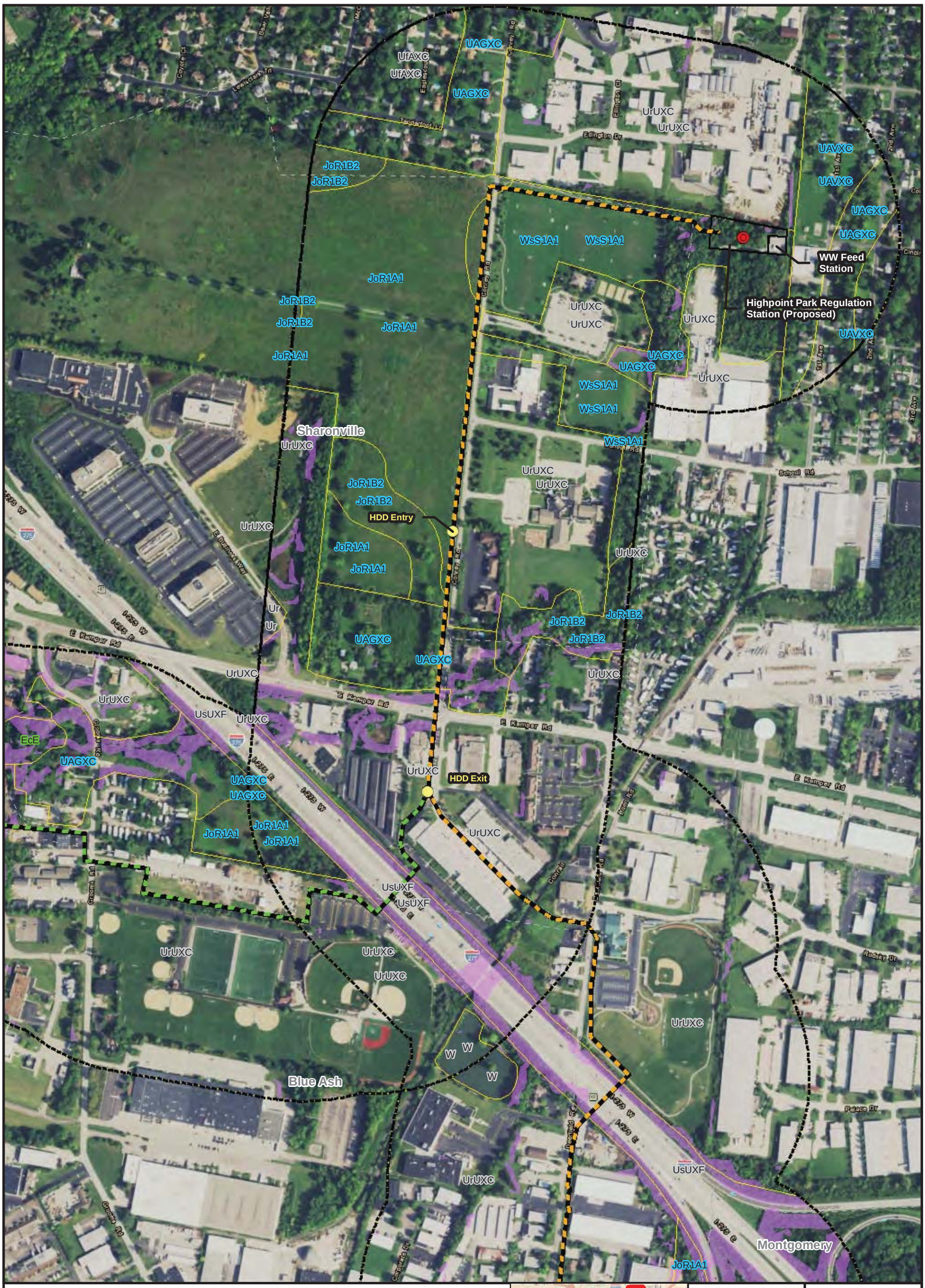
BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982,
Glendale 1982
Madeira 1983, Mason 1982

DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

FIGURE 5-1F
PROJECT FEATURES AND CULTURAL RESOURCE MAP

PN: 672247	DATE: 2/10/2017
CREATED BY: TH	ch2m
REVIEWED BY:MF	



LEGEND:

- Preferred Route
- Alternate Route
- Existing or Future Regulation Station
- HDD Entry/Exit
- Municipal Boundary

0 240 480 960
Scale in Feet

Erosion Hazard

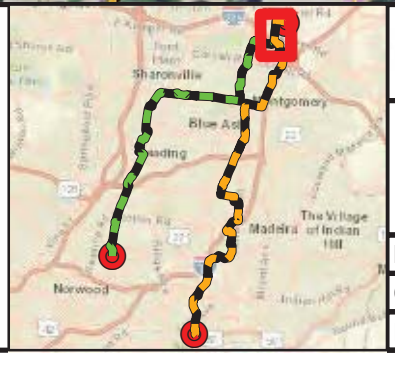
- Ab Very severe
- Ab Severe
- Ab Moderate
- Ab Slight
- Ab Not rated

- Slope >= 12%
- 1,000 Foot Buffer Around Preferred and Alternate Route

N

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982, Glendale 1982
Madeira 1983, Mason 1982

USDA-NRCS Soil Survey Geographic (SSURGO)
Erosion hazard ratings indicate the hazard of soil loss from off-road and off-trail areas. The ratings are based on soil erosion factor K and slope.



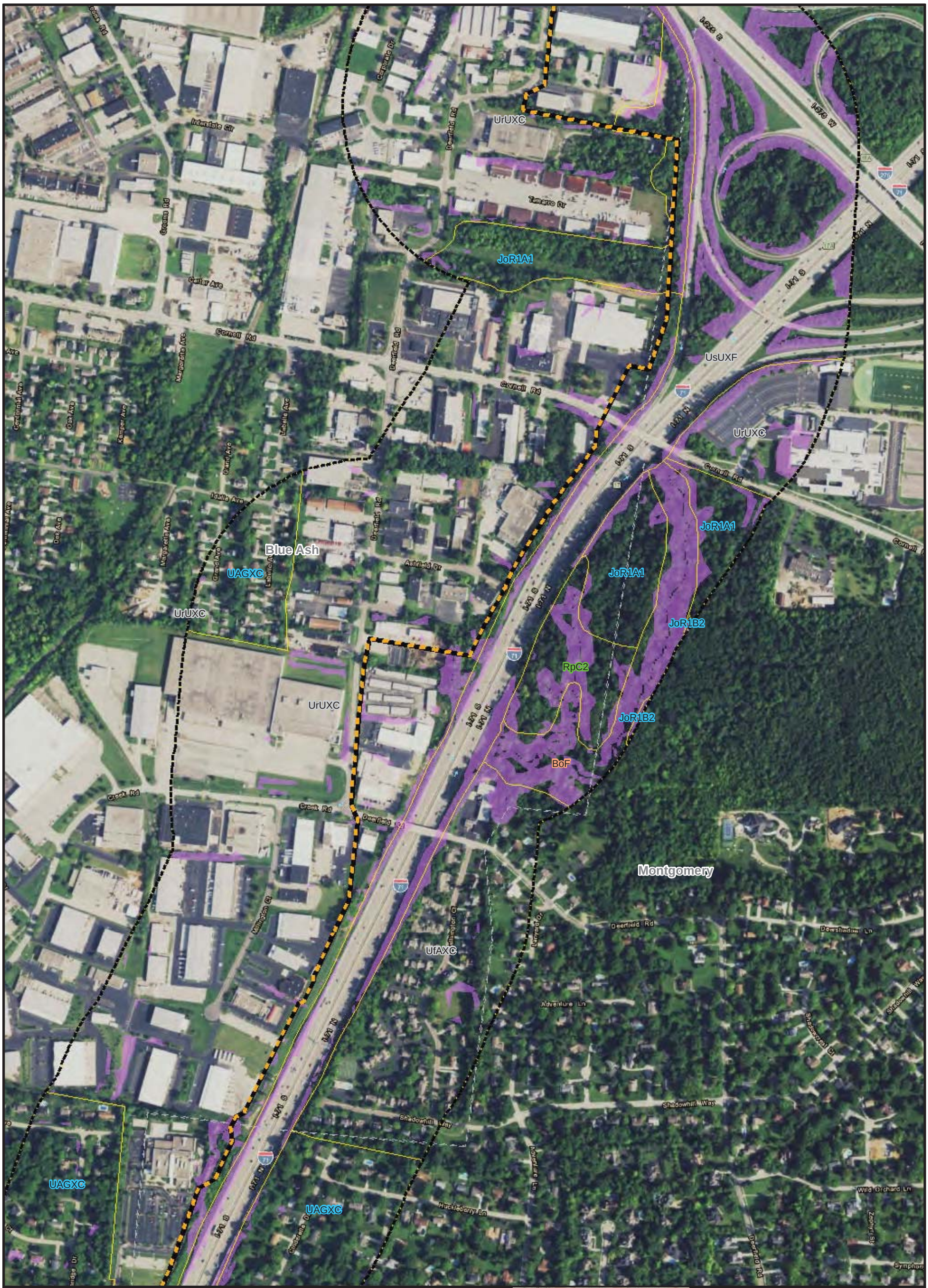
DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

FIGURE 8-4A
SLOPE GREATER THAN 12%
AND SOIL EROSION HAZARD
WITHIN 1,000 FEET OF PIPELINE

PN: 672247
CREATED BY: CA
REVIEWED BY: JJ

ch2m



LEGEND:

- Preferred Route
- Alternate Route
- Existing or Future Regulation Station
- HDD Entry/Exit
- Municipal Boundary

Erosion Hazard

- Ab Very severe
- Ab Severe
- Ab Moderate
- Ab Slight
- Ab Not rated

- Slope >= 12%
- 1,000 Foot Buffer Around Preferred and Alternate Route

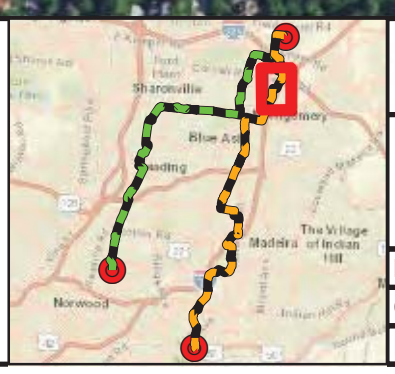
0 240 480 960

Scale in Feet

N

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982, Glendale 1982
Madeira 1983, Mason 1982

USDA-NRCS Soil Survey Geographic (SSURGO)
Erosion hazard ratings indicate the hazard of soil loss from off-road and off-trail areas. The ratings are based on soil erosion factor K and slope.



DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

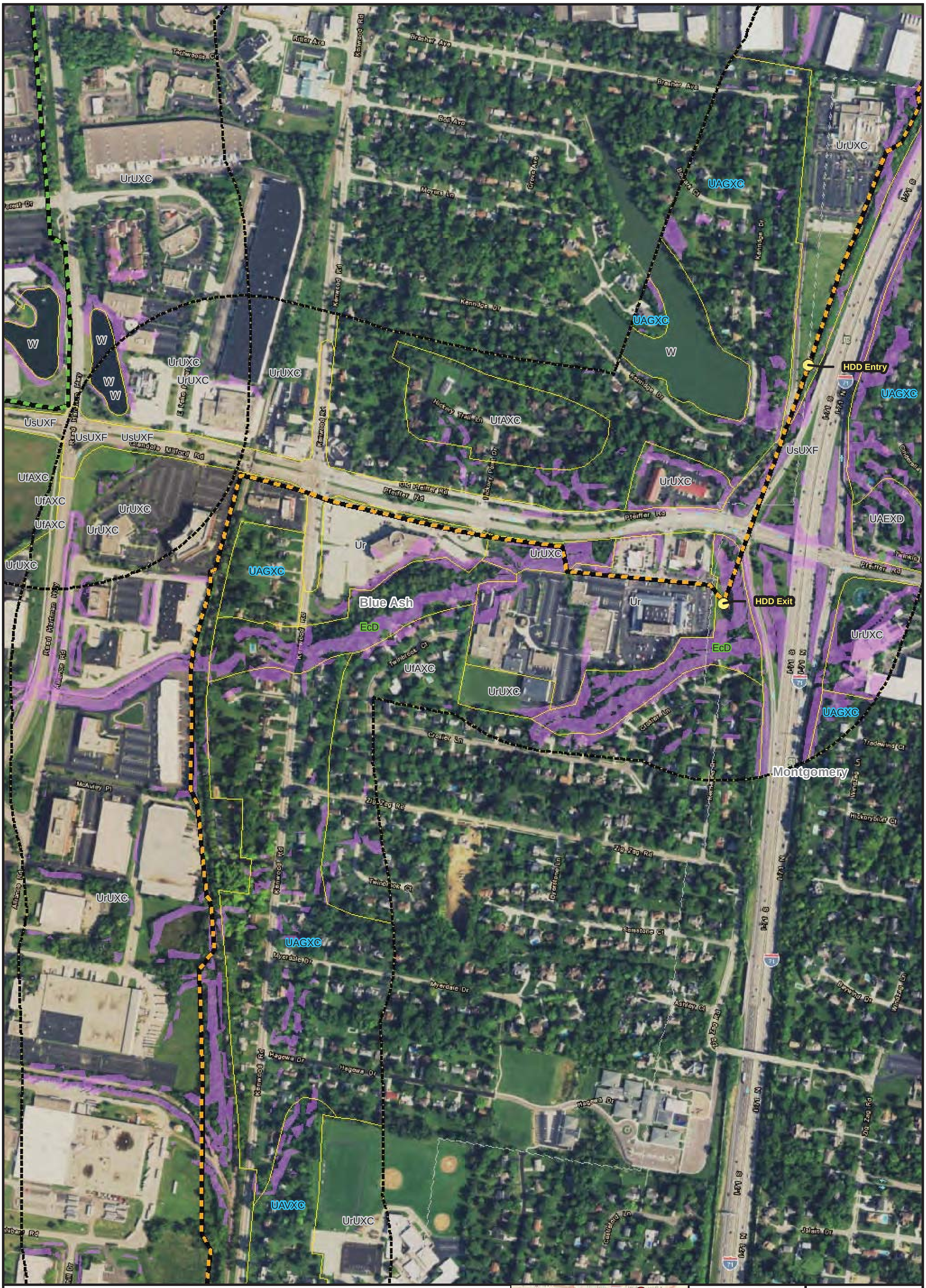
FIGURE 8-4B
SLOPE GREATER THAN 12% AND SOIL EROSION HAZARD WITHIN 1,000 FEET OF PIPELINE

PN: 672247

CREATED BY: CA

REVIEWED BY: JJ

ch2m



LEGEND:

- Preferred Route
- Alternate Route
- Existing or Future Regulation Station
- HDD Entry/Exit
- Municipal Boundary

Erosion Hazard

- Ab Very severe
- Ab Severe
- Ab Moderate
- Ab Slight
- Ab Not rated

- Slope >= 12%
- 1,000 Foot Buffer Around Preferred and Alternate Route

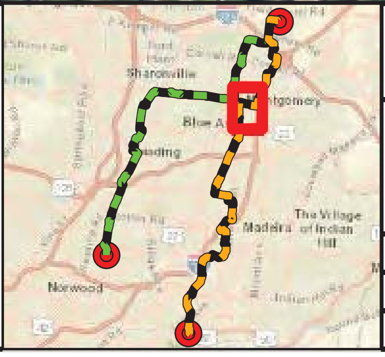
0 240 480 960

Scale in Feet

N

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982, Glendale 1982
Madeira 1983, Mason 1982

USDA-NRCS Soil Survey Geographic (SSURGO)
Erosion hazard ratings indicate the hazard of soil loss from off-road and off-trail areas. The ratings are based on soil erosion factor K and slope.



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C314V Central Corridor Pipeline Extension Project

FIGURE 8-4C
SLOPE GREATER THAN 12%
AND SOIL EROSION HAZARD
WITHIN 1,000 FEET OF PIPELINE

PN: 672247

CREATED BY: CA

REVIEWED BY: JJ

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LEGEND:

- Preferred Route
- Alternate Route
- Existing or Future Regulation Station
- HDD Entry/Exit
- Municipal Boundary

Erosion Hazard

- Ab Very severe
- Ab Severe
- Ab Moderate
- Ab Slight
- Ab Not rated

- Slope >= 12%
- 1,000 Foot Buffer Around Preferred and Alternate Route

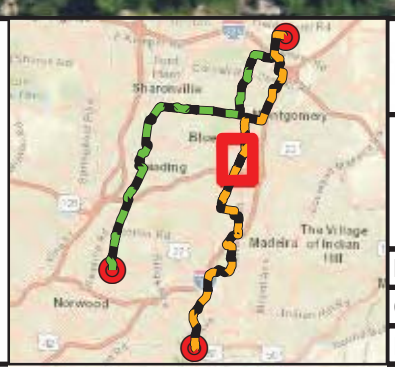
0 240 480 960

Scale in Feet

N

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982, Glendale 1982
Madeira 1983, Mason 1982

USDA-NRCS Soil Survey Geographic (SSURGO)
Erosion hazard ratings indicate the hazard of soil loss from off-road and off-trail areas. The ratings are based on soil erosion factor K and slope.



DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

FIGURE 8-4D
SLOPE GREATER THAN 12%
AND SOIL EROSION HAZARD
WITHIN 1,000 FEET OF PIPELINE

PN: 672247

CREATED BY: CA

REVIEWED BY: JJ

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LEGEND:

- Preferred Route
- Alternate Route
- Existing or Future Regulation Station
- HDD Entry/Exit
- Municipal Boundary

0 240 480 960

Scale in Feet

Erosion Hazard

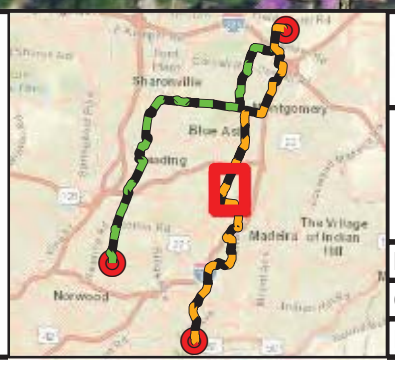
- Ab Very severe
- Ab Severe
- Ab Moderate
- Ab Slight
- Ab Not rated

- Slope >= 12%
- 1,000 Foot Buffer Around Preferred and Alternate Route

N

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982, Glendale 1982
Madeira 1983, Mason 1982

USDA-NRCS Soil Survey Geographic (SSURGO)
Erosion hazard ratings indicate the hazard of soil loss from off-road and off-trail areas. The ratings are based on soil erosion factor K and slope.



DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

FIGURE 8-4E
SLOPE GREATER THAN 12%
AND SOIL EROSION HAZARD
WITHIN 1,000 FEET OF PIPELINE

PN: 672247

CREATED BY: CA

REVIEWED BY: JJ

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2/13/2017 1:51:00 PM

in

Case No(s). 16-0253-GA-BTX

Summary: Application Supplemental Information for Amended Application - Part 1 electronically filed by Jeanne W Kingery on behalf of Duke Energy Ohio