

NRG Ohio Pipeline Company LLC  
Avon Lake Pipeline Project

Location Map

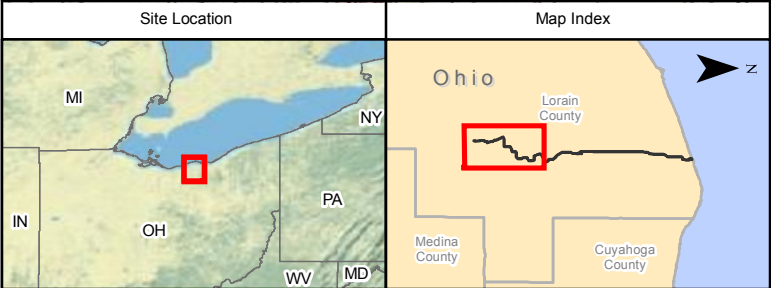
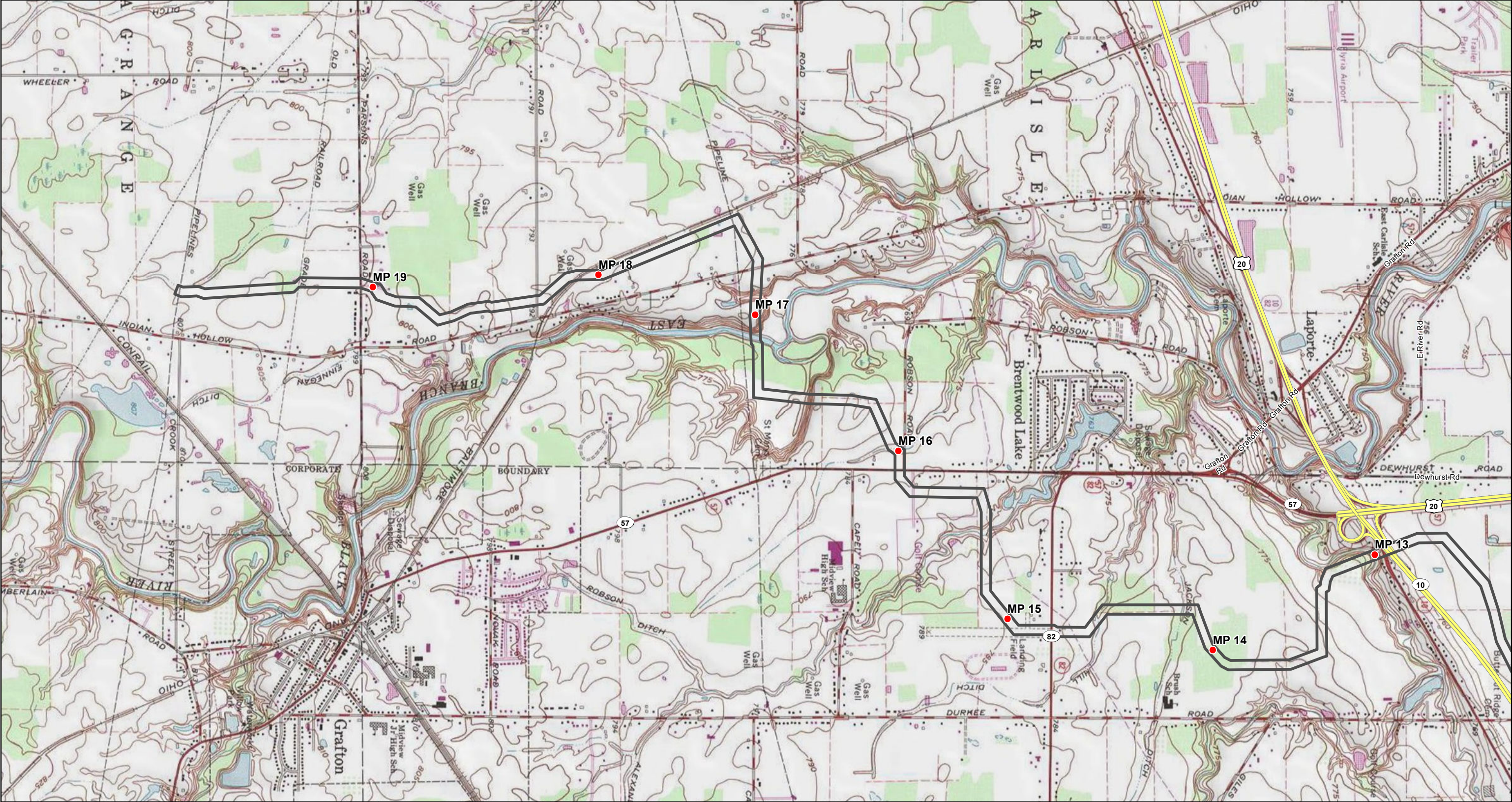
Page 2 of 3

**AECOM**

Figure 1

January 2014





Legend

- Milepost Preferred Route
- Preferred Route 200' Corridor
- Highway
- Major Road
- Other Major Road



0 1,000 2,000 4,000 Feet  
1:24,000

NRG Ohio Pipeline Company LLC  
Avon Lake Pipeline Project

Location Map

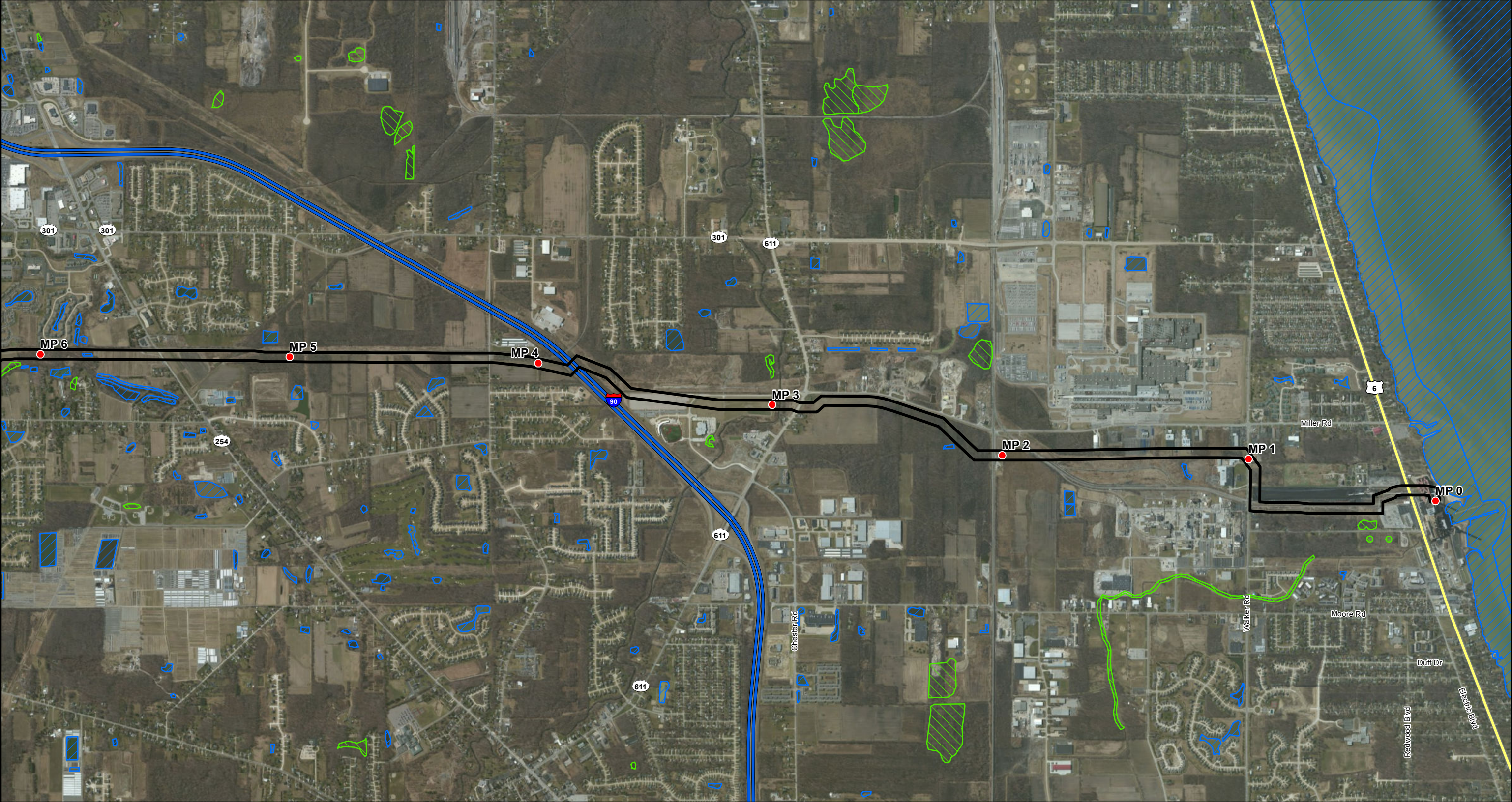
Page 3 of 3



Figure 1

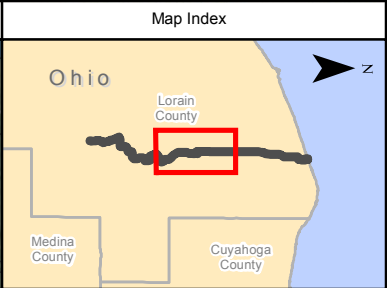
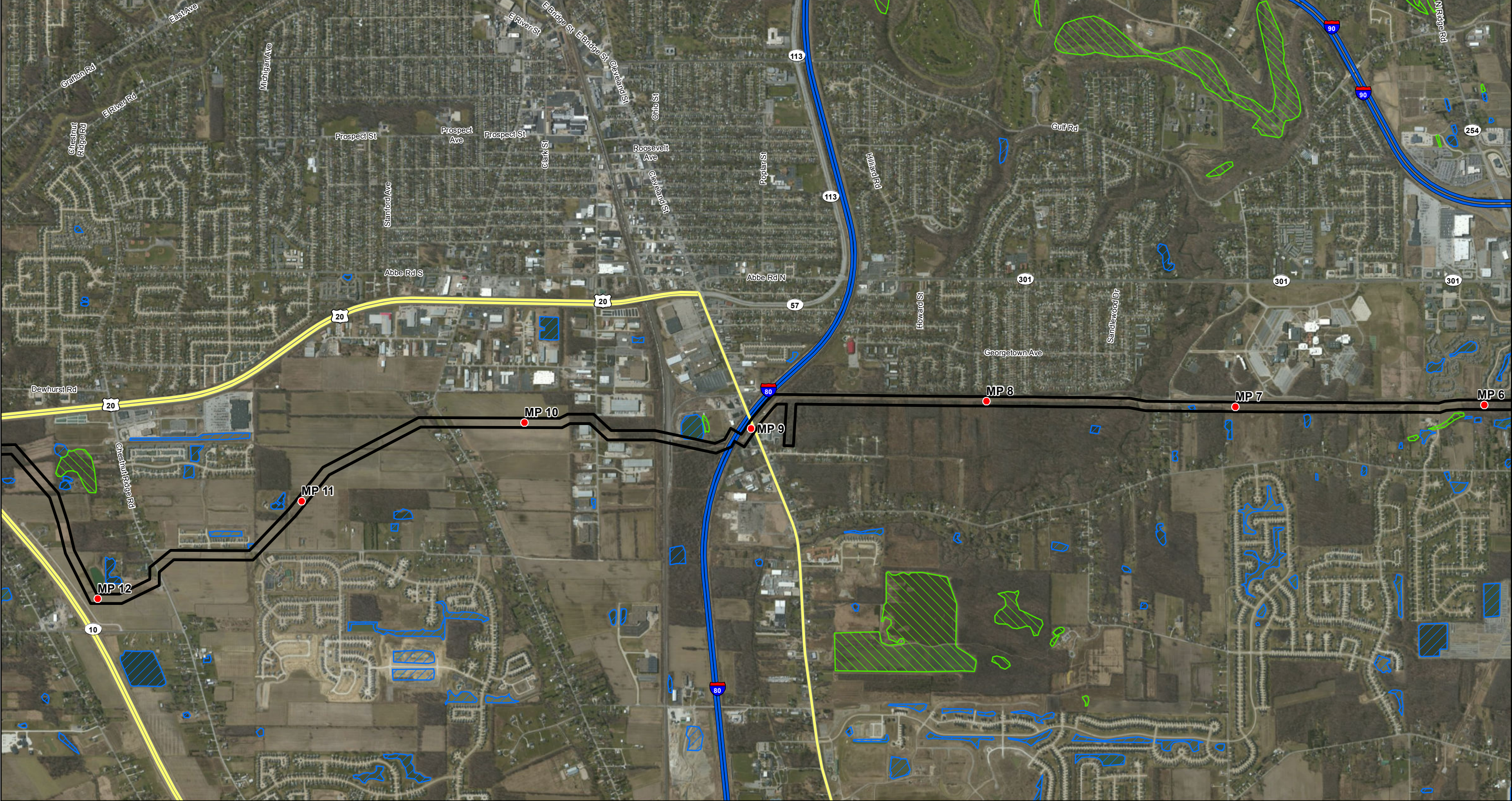
January 2014





<p>Site Location</p>	<p>Map Index</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"><li>● Milepost Preferred Route</li><li>▬ Preferred Route 200' Corridor</li><li>▨ NWI Wetland</li><li>▨ NWI Waterbody</li><li>▬ Highway</li><li>▬ Major Road</li><li>▬ Other Major Road</li></ul> <p>0 1,000 2,000 4,000 Feet</p> <p>1:24,000</p>	<p>NRG Ohio Pipeline Company LLC Avon Lake Pipeline Project</p> <p>Aerial Map</p> <p>Page 1 of 3</p>	<p><b>AECOM</b></p> <p>Figure 2</p> <p>January 2014</p>
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**Legend**

- Milepost Preferred Route
- ▬ Preferred Route 200' Corridor
- ▨ NWI Wetland
- ▨ NWI Waterbody
- ▬ Highway
- ▬ Major Road
- ▬ Other Major Road



0 1,000 2,000 4,000 Feet  
1:24,000

NRG Ohio Pipeline Company LLC  
Avon Lake Pipeline Project

Aerial Map

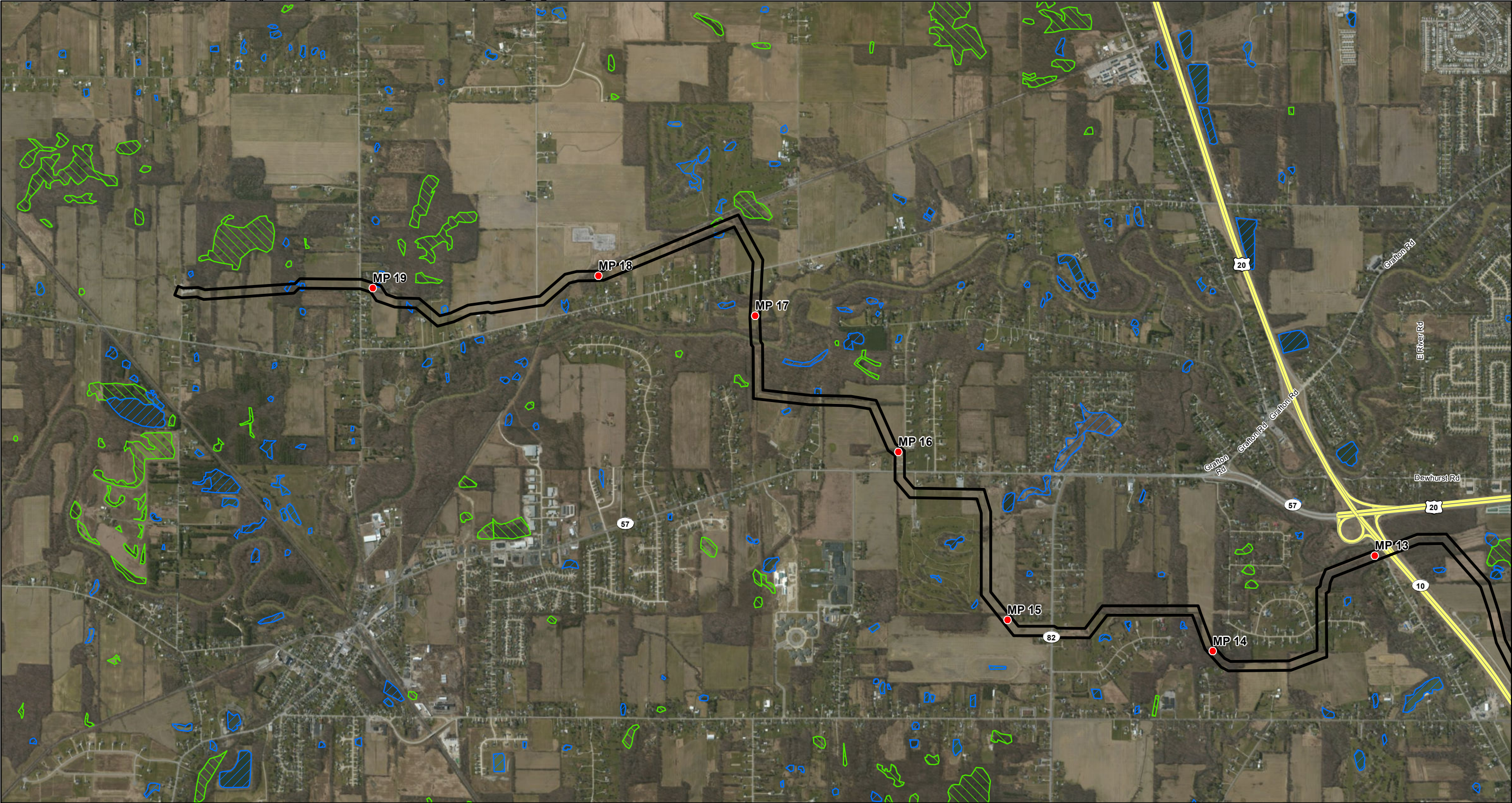
Page 2 of 3

**AECOM**

Figure 2

January 2014





<p>Site Location</p>	<p>Map Index</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"><li>Milepost Preferred Route</li><li>Preferred Route 200' Corridor</li><li>NWI Wetland</li><li>NWI Waterbody</li><li>Highway</li><li>Major Road</li><li>Other Major Road</li></ul> <p>0 1,000 2,000 4,000 Feet</p> <p>1:24,000</p>	<p>NRG Ohio Pipeline Company LLC Avon Lake Pipeline Project</p> <p>Aerial Map</p> <p>Page 3 of 3</p>	<p><b>AECOM</b></p> <p>Figure 2</p> <p>January 2014</p>
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**NRG Ohio Pipeline Company LLC  
Avon Lake Pipeline Project**

**Latitude and Longitude for 1,000ft Increments  
along the Proposed Pipeline Route**

1,000 foot Increments	Latitude	Longitude
Pipeline Start 0	41.50435455	-82.05555704
1000	41.50204446	-82.0563126
2000	41.49996644	-82.05499425
3000	41.49722204	-82.05501984
4000	41.49448256	-82.05515567
5000	41.49388315	-82.0580238
6000	41.49168198	-82.05935427
7000	41.48893768	-82.05935081
8000	41.48619346	-82.05930147
9000	41.48344919	-82.05925603
10000	41.48070482	-82.05924448
11000	41.47796037	-82.05926292
12000	41.47588761	-82.06150016
13000	41.47337249	-82.06285807
14000	41.47069393	-82.06351451
15000	41.46809119	-82.06305037
16000	41.46537249	-82.06325117
17000	41.46262899	-82.06330116
18000	41.45990907	-82.06378836
19000	41.45727362	-82.06451079
20000	41.4550024	-82.06644251
21000	41.45255398	-82.06644941
22000	41.44984009	-82.06695539
23000	41.44709623	-82.06700887
24000	41.44435185	-82.06704456
25000	41.44160745	-82.06707792
26000	41.43886306	-82.06711287
27000	41.43611964	-82.06717635
28000	41.43337882	-82.06728068
29000	41.43063448	-82.06732311
30000	41.42789014	-82.06736552
31000	41.4251458	-82.06740794
32000	41.42240149	-82.06745452

33000	41.41967505	-82.06724978
34000	41.41693062	-82.06728113
35000	41.41418617	-82.0673099
36000	41.41144173	-82.06734045
37000	41.4086974	-82.06738577
38000	41.40595312	-82.06743601
39000	41.40321652	-82.06758446
40000	41.40048345	-82.06778074
41000	41.39773919	-82.06783288
42000	41.3949952	-82.0678897
43000	41.392251	-82.0679477
44000	41.38950675	-82.06800246
45000	41.3867625	-82.06805661
46000	41.38401824	-82.06811075
47000	41.38152686	-82.06738526
48000	41.37976483	-82.0652663
49000	41.37741257	-82.06472186
50000	41.3747236	-82.06541149
51000	41.37209519	-82.06581188
52000	41.36966572	-82.06645451
53000	41.36692992	-82.06643551
54000	41.36418544	-82.06646616
55000	41.36144096	-82.0664968
56000	41.35899475	-82.06486299
57000	41.35655455	-82.06319569
58000	41.3546299	-82.06067859
59000	41.35278343	-82.05798748
60000	41.35057668	-82.05630881
61000	41.34783216	-82.05633398
62000	41.34592877	-82.05450472
63000	41.34359141	-82.05298779
64000	41.3416922	-82.05482356
65000	41.34073006	-82.05820787
66000	41.33974448	-82.06154769
67000	41.33793579	-82.06428673
68000	41.33534556	-82.0641007
69000	41.33277843	-82.06281255
70000	41.3307885	-82.06081935
71000	41.33060179	-82.05730651
72000	41.329133	-82.05502398
73000	41.32641396	-82.05481795
74000	41.32410075	-82.0561957

75000	41.32287542	-82.05911915
76000	41.32013087	-82.05914366
77000	41.31761931	-82.05853013
78000	41.31527999	-82.05746311
79000	41.31266071	-82.05788968
80000	41.31109899	-82.06081037
81000	41.31111275	-82.06445043
82000	41.31083414	-82.06803369
83000	41.30818019	-82.06826852
84000	41.30611461	-82.06978856
85000	41.30527212	-82.07300498
86000	41.30358825	-82.0753455
87000	41.30084956	-82.075518
88000	41.29812373	-82.07594308
89000	41.29789151	-82.07932161
90000	41.29777609	-82.08291462
91000	41.29782608	-82.08651429
92000	41.29639487	-82.08921895
93000	41.29385127	-82.08785183
94000	41.29130766	-82.08648482
95000	41.28875462	-82.08517879
96000	41.28621906	-82.08427327
97000	41.28376863	-82.08298303
98000	41.28106303	-82.08256495
99000	41.27864895	-82.08252688
100000	41.2761143	-82.08353362
101000	41.27369579	-82.08465466
102000	41.27104314	-82.08440355
103000	41.26833444	-82.08408662
Pipeline End 104000	41.26560271	-82.08392542





# Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

**Office of Real Estate**  
*Paul R. Baldridge, Chief*  
2045 Morse Road – Bldg. E-2  
Columbus, OH 43229  
Phone: (614) 265-6649  
Fax: (614) 267-4764

February 28, 2014

Nate Rozic  
NRG Ohio Pipeline Company, LLC  
121 Champion Way, Suite 300  
Canonsburg Pennsylvania 15317

**Re:** 14-065; NRG Ohio Pipeline Company, LLC, Avon Lake Pipeline Project, Lorain County, Ohio

**Project:** The project entails the construction of 20 miles of natural gas pipeline in the Cities of Avon Lake, Avon, North Ridgeville, and Elyria.

**Location:** The project is located in Eaton, Carlisle, Lagrange Townships, Lorain County, Ohio.

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

**Fish and Wildlife:** The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

This project must not have an impact on freshwater native mussels in the area. This applies to both listed and non-listed species. The Ohio Mussel Survey Protocol requires a mussel survey for streams, and water bodies listed in Appendix A of the protocol. Streams with a watershed of 10<sup>2</sup> miles or larger above the impact point that are not listed in Appendix A of the protocol should also be assessed for mussels and/or mussel habitat. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any streams that meet any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, as a last resort, the DOW recommends a professional malacologist collect and relocates the mussels to suitable and similar habitat. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol.



The project is within the range of the Indiana bat (*Myotis sodalis*), a state and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: Shagbark hickory (*Carya ovata*), Shellbark hickory (*Carya laciniata*), Bitternut hickory (*Carya cordiformis*), Black ash (*Fraxinus nigra*), Green ash (*Fraxinus pennsylvanica*), White ash (*Fraxinus americana*), Shingle oak (*Quercus imbricaria*), Northern red oak (*Quercus rubra*), Slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), Eastern cottonwood (*Populus deltoides*), Silver maple (*Acer saccharinum*), Sassafras (*Sassafras albidum*), Post oak (*Quercus stellata*), and White oak (*Quercus alba*). Indiana bat habitat consists of suitable trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. If suitable trees occur within the project area, these trees should be conserved. If suitable habitat occurs on the project area and trees must be cut, cutting must occur between October 1 and March 31. If suitable trees must be cut during the summer months, a net survey must be conducted between June 15 and July 31, prior to cutting. Net surveys shall incorporate either two net sites per square kilometer of project area with each net site containing a minimum of two nets used for two consecutive nights, or one net site per kilometer of stream within the project limits with each net site containing a minimum of two nets used for two consecutive nights. If no tree removal is proposed, the project is not likely to impact this species.

The DOW recommends no in-water work from at least April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat.

The ODNR Natural Heritage Database has a record within one mile of the project route for a great blue heron rookery. Due to the location, and the type of work planned, this project is not likely to impact this animal assemblage.

The ODNR Natural Heritage Database has a record within one mile of the project route for the lake sturgeon (*Acipenser fulvescens*), a state endangered, and a federal species of concern. If there is no in-water work planned in Lake Erie, this project is not likely to impact this species.

The project is within the range of the piping plover (*Charadrius melodus*), a state and federally endangered bird species. This species does not nest in the state but only utilize stopover habitat as it migrates through the region. Therefore, the project is not likely to have an impact on this species.

The project is within the range of the Kirtland's warbler (*Setophaga kirtlandii*), a state endangered and federally endangered species. This species migrates through Ohio in the spring and fall, traveling between its breeding grounds in Michigan, Wisconsin, and Ontario and its wintering grounds in the Bahamas. Migration is energetically demanding for birds of all species. During stop-over, birds are often faced with the need to acquire food in a short period of time, in unfamiliar surroundings, and while avoiding predators and competing with other migrants and resident birds for limited resources.

In the spring, migrating Kirtland's warblers stopping over in Ohio will have traveled thousands of miles, will be immediately in need of food to satisfy energetic demands, and are thought to be racing to the breeding grounds to establish territories as early as possible. While fall migration is typically not as fast-paced as spring migration, it appears that fall migrating Kirtland's warblers do not build up fat reserves prior to initiating migration, and therefore nearby stopover habitat would be increasingly important for this species.

While migration occurs in a broad front across the entire state, approximately half of all observations in Ohio have occurred within 3 miles of the shore of Lake Erie. During migration, individual birds usually forage in shrub/scrub or forested habitat and may stay in one area for a few days. Because so much of the southern Lake Erie shoreline is already developed, and stopover habitat is already so fragmented, the



DOW recommends that this stopover habitat, (i.e. shrub/scrub or forested area), within three miles of the shoreline be preserved whenever possible. If clearing of suitable habitat cannot be avoided, to preclude adverse effects to Kirtland's warblers, clearing within 3 miles of the shoreline of Lake Erie should not occur from April 22 to June 1 or from August 15 to October 15.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the habitat at the project site and within the vicinity of the project area, and the type of work proposed, this project is not likely to impact this species.

Attached is a set of ArcView shape files with the Ohio Natural Heritage Program records for the project. The files are projected in NAD83 Ohio State Plane South. The units are feet. Records included in the "data" layer may be for rare and endangered plants and animals, geologic features, high quality plant communities and animal assemblages. Fields included are scientific and common names, state and federal statuses, as well as managed area and date of the most recent observation. State and federal statuses are defined as: E = endangered, T = threatened, P = potentially threatened, SC = species of concern, SI = special interest, A = recently added to inventory, status not yet determined, FE = federal endangered, FT = federal threatened, FPE = federal potentially endangered, FC = federal candidate and FSC = federal species of concern.

Also included is a layer for Scenic Rivers ('sr'), Conservation Sites ('sites') and managed areas ('ma') which includes state wildlife areas, nature preserves, parks and forests, national wildlife refuges, county metro parks, as well as sites owned by non-profit groups (such as The Nature Conservancy), museums (such as the Cleveland Museum of Natural History), and others. Please be aware that the managed areas layer may not be complete. We are continually updating this layer as additional information becomes available to us.

The ODNR Natural Heritage Database has no other records for rare or endangered species at this project site. We are unaware of any other unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges or other protected natural areas within the project area. Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas.

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler  
ODNR Office of Real Estate  
2045 Morse Road, Building E-2  
Columbus, Ohio 43229-6693  
John.Kessler@dnr.state.oh.us



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+1 847 258 8901 (fax)



December 19, 2014

Mr. John Kessler  
Ohio Department of Natural Resources  
2045 Morse Road, Bldg E-2  
Columbus, OH 43229

Subject: Avon Lake Gas Addition Project  
Lorain County, Ohio

Dear Mr. Kessler:

As you know, NRG Ohio Pipeline Company LLC ("NRG Ohio Pipeline") is planning to install a 24-inch diameter high-grade steel natural gas pipeline that will extend south approximately 20-miles from the existing Avon Lake Power Plant, which is located along the Lake Erie shoreline in the City of Avon Lake, to a proposed supply tap location southwest of the Village of Grafton.

The proposed pipeline requires siting approval from the Ohio Power Siting Board ("OPSB"), as well as permits and approvals from other local, State, and federal agencies. NRG Ohio Pipeline anticipates submitting a Letter of Notification ("LON") for OPSB review in December 2014. NRG Ohio Pipeline has been consulting with various federal, State and local authorities, such as the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers, and will continue to consult with these authorities. Applications for permits required for the construction of the pipeline will be submitted to the appropriate agencies contemporaneously with the filing of the LON.

Field studies for NRG Ohio Pipeline's proposed route were completed in May 2014. Subsequent to the completion of the field studies, some affected property owners requested adjustments to the proposed route, many of which NRG Ohio Pipeline has accommodated. Additional field studies were conducted in September and October 2014 where the route has been adjusted outside of the May 2014 survey corridor.

Maps illustrating the current proposed route are enclosed with this letter. ERM does not anticipate that the incorporated route adjustments will result in any new or significant adverse impacts to the Indiana bat (*Myotis sodalis*) or Kirtland's warbler (*Setophaga kirtlandii*), as the same mitigation measures the Department previously recommended for these species (letter correspondence dated February 28, 2014) will be implemented.

Further, no adverse impacts to fresh water mussels are anticipated. As you know, the Ohio Mussel Survey Protocol defines how surveys should be conducted for these species should any



potential for impact to these species be anticipated, and which waters of the State are subject to the Protocol. The East Branch of the Black River is the only waterway subject to the protocol that NRG Ohio Pipeline proposes to cross. However, NRG Ohio Pipeline will install the proposed pipeline beneath this waterway via horizontal directional drilling so any potential for impacts to mussels will be entirely avoided. The Department concurred with this conclusion during our April 28, 2014 meeting.

Based on the information provided above and as depicted on the enclosed maps, ERM respectfully requests your concurrence with our conclusion that no adverse effects to federal or State designated listed species are anticipated to occur.

Thank you in advance for your time and consideration. If you have any questions or require additional information about the Project, please do not hesitate to contact me at (616) 738-7370, or via email at [jeff.williams@erm.com](mailto:jeff.williams@erm.com). You may also contact Nate Rozic at (724) 597-8630, or via email at [nathan.rozic@nrg.com](mailto:nathan.rozic@nrg.com).

Sincerely,

Jeff Williams  
Senior Biologist

Enclosures: Topographic and Aerial Maps of the Proposed Route, including a CD

cc: Nate Rozic, NRG  
Doni Murphy, ERM  
Matt Teichert, ERM

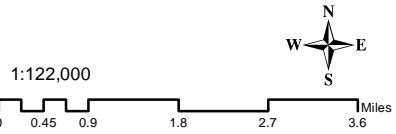


AVON LAKE GAS ADDITION PROJECT

Proposed Route Overview Map

Legend

- Above Ground Proposed Route
- Below Ground Proposed Route
- County Boundary
- Political Township Boundary
- Municipal Boundary
- Railroad
- Roads
  - Interstate
  - US Highway
  - State Highway





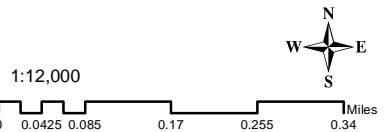
AVON LAKE GAS ADDITION PROJECT

Proposed Route

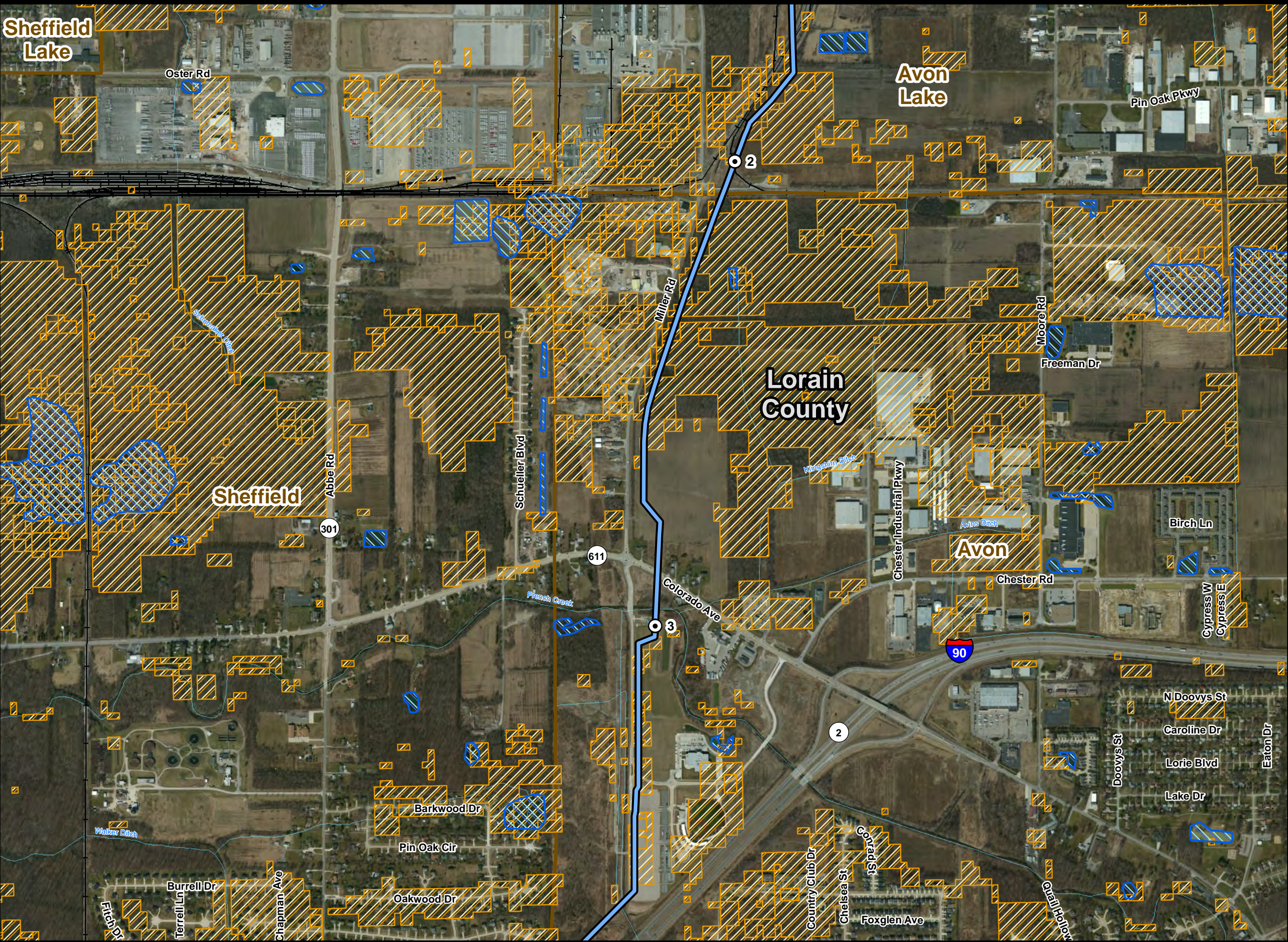
- Legend**
- Above Ground Proposed Route
  - Below Ground Proposed Route
  - Mile Post
  - NWI Wetland
  - Ohio Wetland Inventory Wetland
  - Known Protected Species Occurrence
  - Lake
  - River/Stream
  - County Boundary
  - Political Township Boundary
  - Municipal Boundary
  - Railroad


- Roads**
- Interstate
  - US Highway
  - State Highway

Aerial Photo Source: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, iPC, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community









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**AVON LAKE GAS ADDITION PROJECT**

**Proposed Route**

**Legend**

- Above Ground Proposed Route
- Below Ground Proposed Route
- Mile Post
- NW1 Wetland
- Ohio Wetland Inventory Wetland
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**Roads**

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- US Highway
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Aerial Photo Source: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, iPC, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

1:12,000

0 0.0425 0.085 0.17 0.255 0.34 Miles



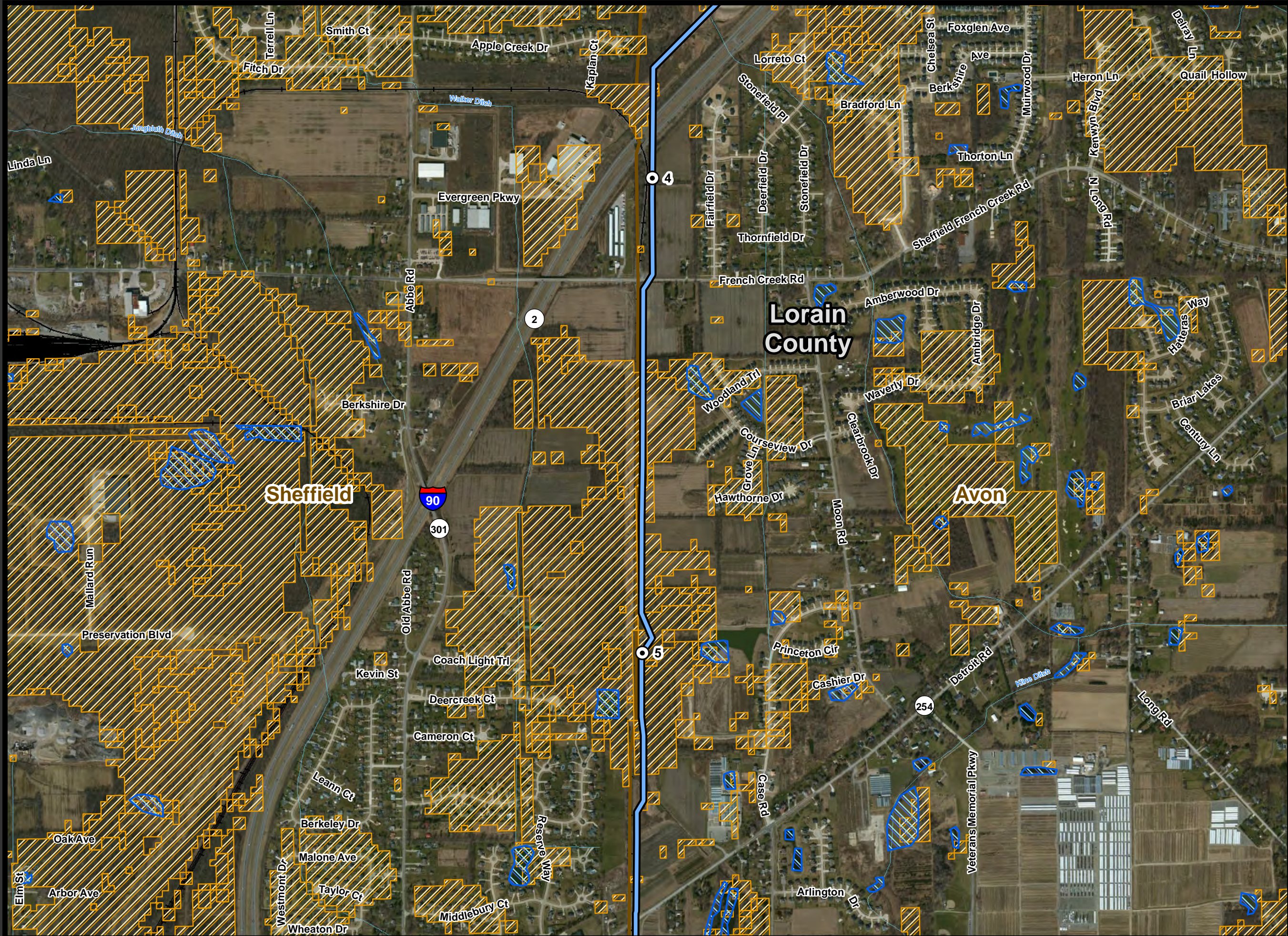
Date: 12/15/2014

Page: 2

Drawn by: JPS

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## AVON LAKE GAS ADDITION PROJECT

### Proposed Route

#### Legend

- Above Ground Proposed Route
- Below Ground Proposed Route
- Mile Post
- NWI Wetland
- Ohio Wetland Inventory Wetland
- Known Protected Species Occurrence
- Lake
- River/Stream
- County Boundary
- Political Township Boundary
- Municipal Boundary
- Railroad

#### Roads

- Interstate
- US Highway
- State Highway

Aerial Photo Source: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, iPC, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community





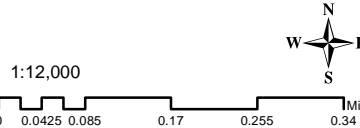
AVON LAKE GAS ADDITION PROJECT

Proposed Route

Legend

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**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**12/19/2014 12:29:19 PM**

**in**

**Case No(s). 14-1717-GA-BLN**

Summary: Application of NRG Ohio Pipeline Company LLC continued - Attachment H (Part 3)  
electronically filed by Teresa Orahod on behalf of Sally Bloomfield