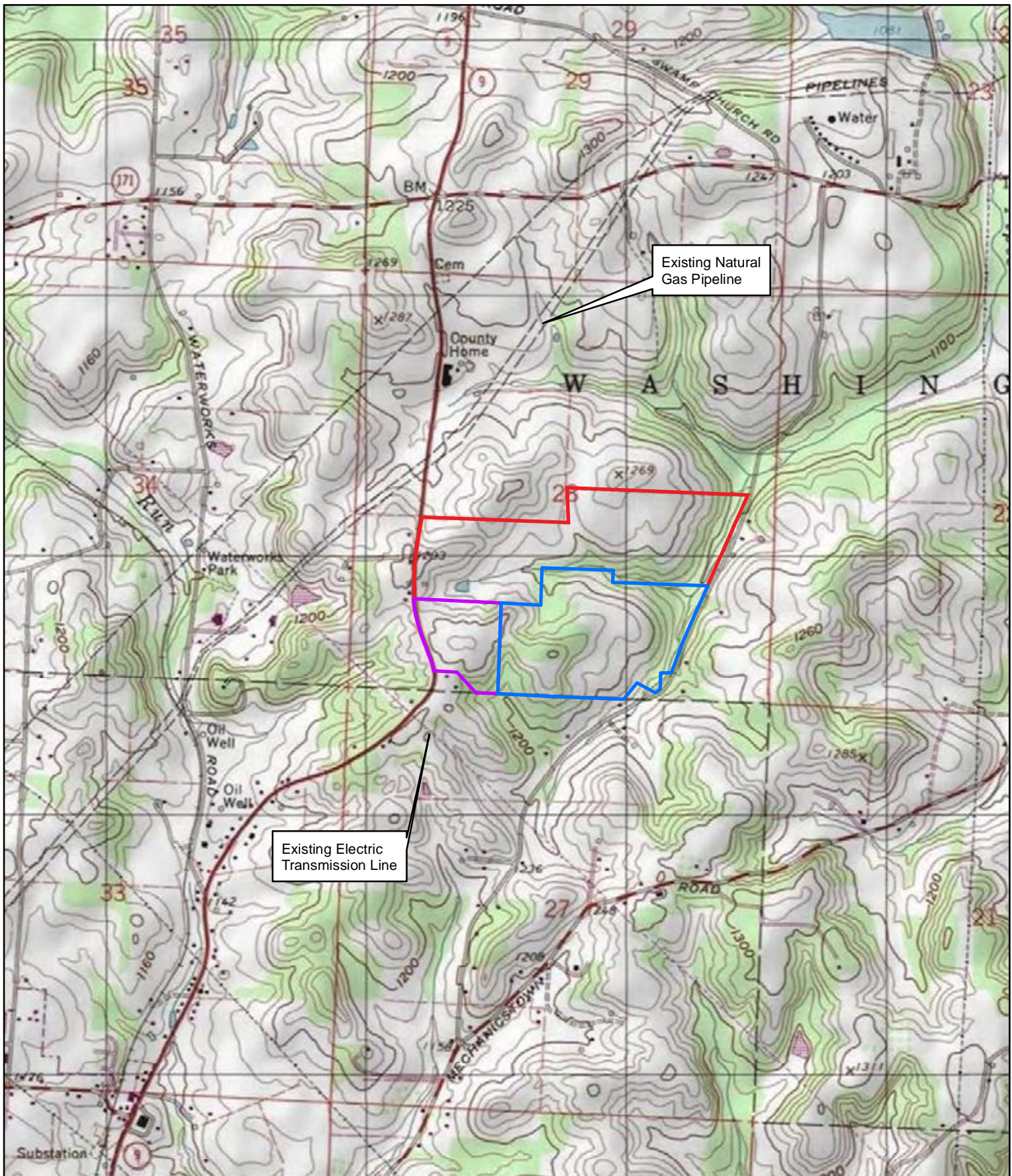


## **Section 13-01: Figures**

---

- **Figure 01-1: Facility Location** – Update Provided



**Carroll County**  
ENERGY



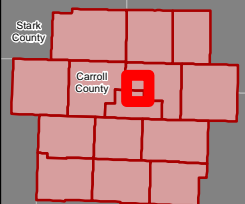
0 0.125 0.25  
Miles

**Figure 01-1**  
**Facility Location**  
Version

Carroll County Energy  
Carroll County, Ohio

- Facility Site
- Construction Laydown Area
- Additional Study Area

OVERVIEW MAP

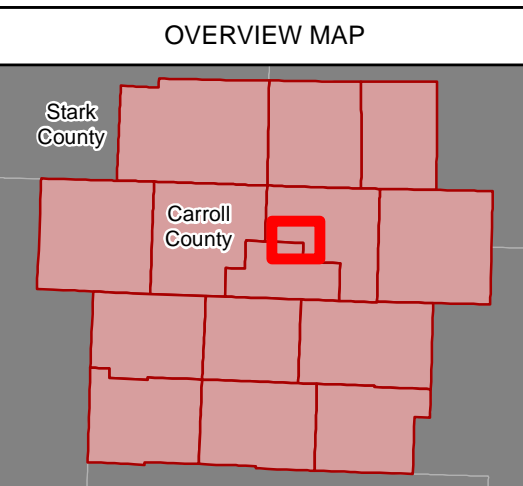
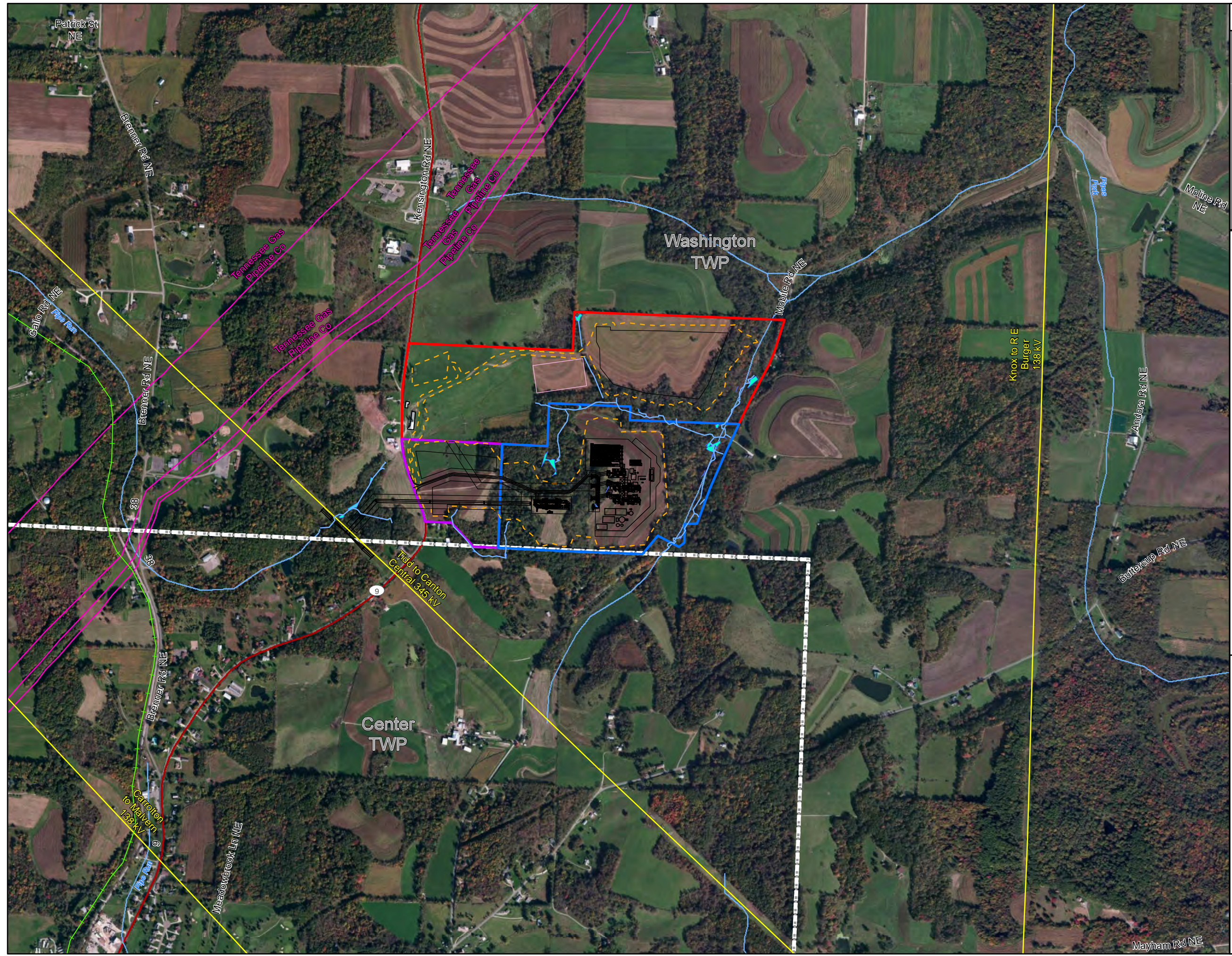


## Section 13-02: Figures

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- **Figure 02-1: Facility Location within Five Miles** – See Original
- **Figure 02-2: Proposed Facility and Vicinity** – Update Provided
- **Figure 02-3: Facility Plot Plan** – Update Provided
- **Figure 02-4: Facility Rendering** – See Original
- **Figure 02-5a and 5b: Preliminary Water Balance** – Update Provided
- **Figure 02-6: Preliminary One-Line Diagram** – See Original
- **Figure 02-7: Project Schedule** – See Original





**Legend**

- Facility Layout
- Railroads
- Existing Electric Transmission Line
- Existing Natural Gas Pipeline
- Limit of Disturbance
- River/Stream
- Facility Site
- Construction Laydown Area
- Additional Study Area
- Rex Facility
- Wetlands
- Open Water
- Township Boundary

0 0.2 0.4  
Miles

N  
W E  
S

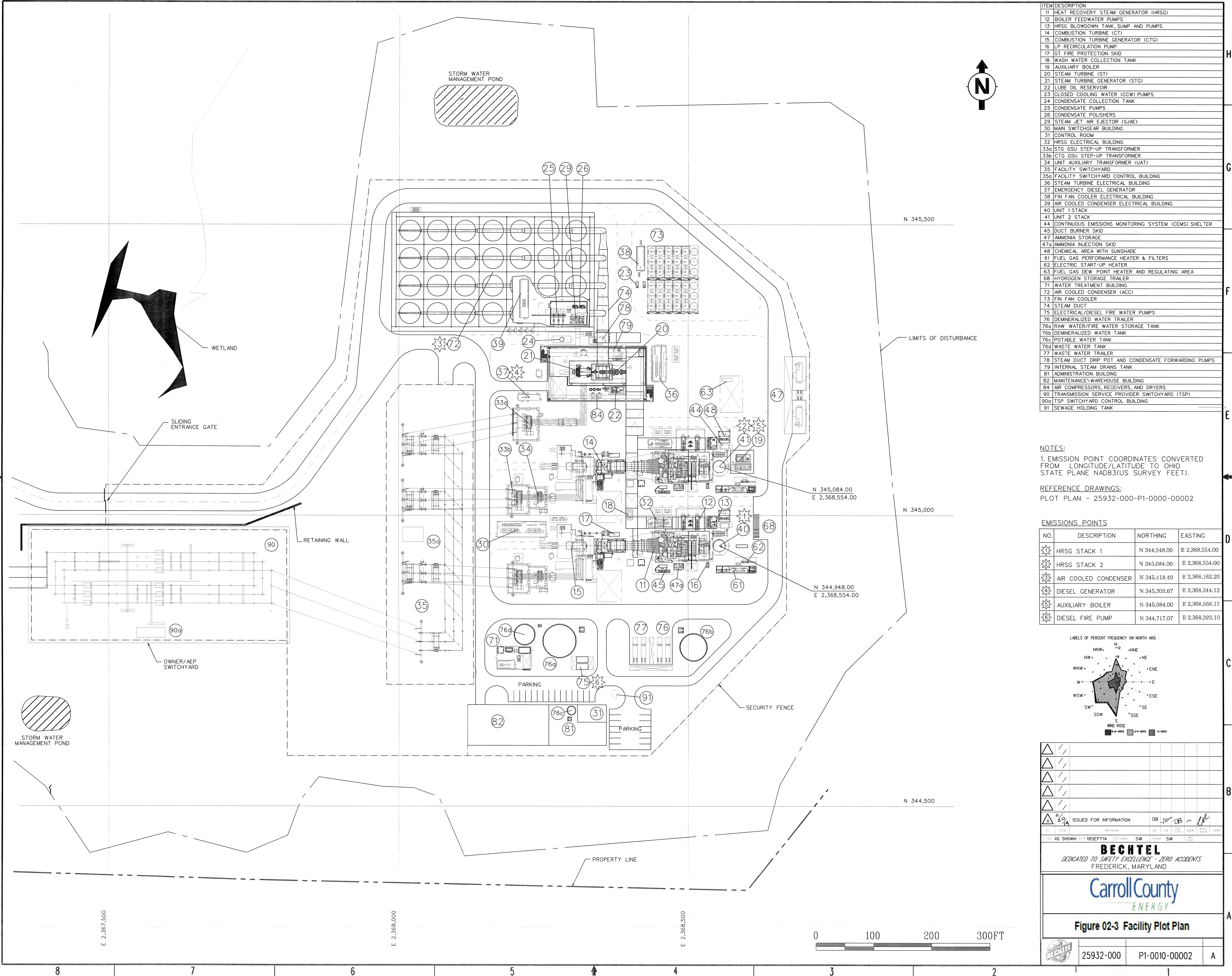


**Figure 02-2  
Proposed Facility  
and Vicinity**

Version 2.0

Carroll County Energy  
Carroll County, Ohio









Water Balance Stream Flow Rate Table									
	Carroll County Energy Project	CCA 19126	CCA 19126 1% BD	CCA 19127	CCA 19136	CCA 1930	CCA 1931	CCA 19135	
	Fuel	Gas	Gas	Gas	Gas	Gas	Gas	Gas	
	Loading	100%	100%	100%	100%	100%	100%	100%	
	Dry bulb temperature, °F	90	90	90	100	59	59	0	
	Relative Humidity, %	50%	50%	50%	50%	60%	60%	70%	
	Wet bulb temperature, °F	75.0	75.0	75.0	83.0	52.0	52.0	0.0	
	Evaporative coolers	ON	ON	ON	ON	ON	OFF	OFF	
	Duct burners	ON	ON	OFF	ON	ON	OFF	OFF	
Stream No.	STREAM DESCRIPTION	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Notes
1	Total Plant Makeup Water from Village of Carrollton Municipal Water System, gpm	89.3	70.0	75.0	94.0	62.5	47.7	22.6	
2	UF Influent, gpm	95.2	57.1	72.4	95.7	91.8	67.9	68.9	
3	Demineralized Water System Influent, gpm	85.7	51.4	65.2	86.1	82.6	61.1	62.0	
4	UF Backwash Flow, gpm	9.5	5.7	7.2	9.6	9.2	6.8	6.9	Note 5
5	Demineralized Water to Demineralized Water Storage Tank, gpm	85.7	51.4	65.2	86.1	82.6	61.1	62.0	
6	Demineralized Water to HRSG/Steam Cycle, gpm	85.7	51.4	65.2	86.1	82.6	61.1	62.0	
7	Sampling Losses to Wastewater Collection Tank, gpm	17.1	17.1	13.0	17.2	16.5	12.2	12.4	Note 6
8	HRSG/Steam Cycle Blowdown, gpm	68.6	34.3	52.2	68.9	66.1	48.9	49.6	Note 7
9	Blowdown System Vent Losses, gpm	38.7	19.4	24.4	38.9	37.3	22.5	22.6	
10	Blowdown Tank Effluent , gpm	29.9	14.9	27.8	30.0	28.8	26.4	27.0	
11	UF Cartridge Filter Effluent, gpm	9.5	5.7	7.2	9.6	9.2	6.8	6.9	
12	Evaporative Cooler Influent, gpm	67.5	67.5	67.5	73.5	33.6	33.6	0.0	
13	Evaporation from Evaporative Coolers, gpm	50.6	50.6	50.6	55.1	25.2	25.2	0.0	Note 8
14	Evaporative Cooler Blowdown to Wastewater Collection Tank, gpm	16.9	16.9	16.9	18.4	8.4	8.4	0.0	Note 8
15	Service Water to Service Water Users, gpm	5.0	5.0	5.0	5.0	5.0	5.0	5.0	Note 10 & 11
16	Oil / Water Separator Influent, gpm	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
17	Oil / Water Separator Sludge to Off-Site Disposal, gpm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Note 3
18	Oil / Water Separator Effluent to Wastewater Collection Tank, gpm	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
19	Potable Water from Potable Water Supply, gpm	0.6	0.6	0.6	0.6	0.6	0.6	0.6	Note 9 & 11
20	Potable Water to Sanitary Users, gpm	0.6	0.6	0.6	0.6	0.6	0.6	0.6	Note 9 & 11
21	Sanitary Waste to Holding Tank, gpm	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
22	Sanitary Sewage to Off-Site Disposal, gpm	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
23	Fire Water Users, gpm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Note 3 & 11
24	CTG Wash Water, gpm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Note 3
25	ACC Wash Water, gpm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Note 3
26	Total Discharge to WW Ion Exchange, gpm	78.4	59.6	69.9	80.2	67.9	58.8	51.3	
27	Recycle from WW Ion Exchange to Service / Fire Water Tank, gpm	78.4	59.6	69.9	80.2	67.9	58.8	51.3	

NOTES:

1. Water flow rates are based on the specified process conditions for the plant configuration shown on Sheet 1 and are shown in gpm unless otherwise specified. These cases may or may not represent the appropriate design flow for a particular stream. Therefore, it is not appropriate to reference this drawing alone as a basis for establishing system, equipment or line sizing design flows.
2. Design based on a 2 x 2 x 1 configuration combined cycle power plant and heat balances titled GE Carroll County Energy Center 207FA.05 dated 07/11/14 via email.
3. Normally no flow.
4. Condensate polisher is regenerated off-site.
5. UF Backwash is estimated at 10% of the influent flow.
6. Sampling losses are estimated at 0.5% of the steam turbine exhaust flow.
7. HRSG blowdown is equal to 2% of the steam turbine exhaust flow for all cases except the CCA 19126 1% BD case, in which the HRSG blowdown is equal to 1% of the steam turbine exhaust flow .
8. Evaporative cooler evaporation is from heat balances referenced in Note 2 above. The evaporative coolers are assumed to operate at 4 cycles of concentration (COC) based on GE Power Systems Water Supply Requirements for Gas Turbine Inlet Air Evaporative Coolers, GEK107158A, January 2002. Actual COC may vary depending on water quality, heat balance case, and ambient temperature.
9. Potable water usage (daily average) calculated based on 25 employees each using 35 gpd.
10. Service water usage is estimated to be 5 gpm.
11. Flows referenced by this note are associated with batch processes and represent average flows. Instantaneous flows may be higher.
12. HRSG blowdown is cooled by the CCW heat exchanger.  
The quench water temperature for the boiler blowdown tank is assumed to be 70 °F, the Blowdown Tank effluent is 212 °F and the quenched blowdown temperature is 140 °F.

### **Section 13-03: Figures**

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- **Figure 03-1: Carroll County Site Selection Attributes – See Original**
- **Figure 03-2: Site Selection Constraints within 1 Mile of Facility Area – See Original**

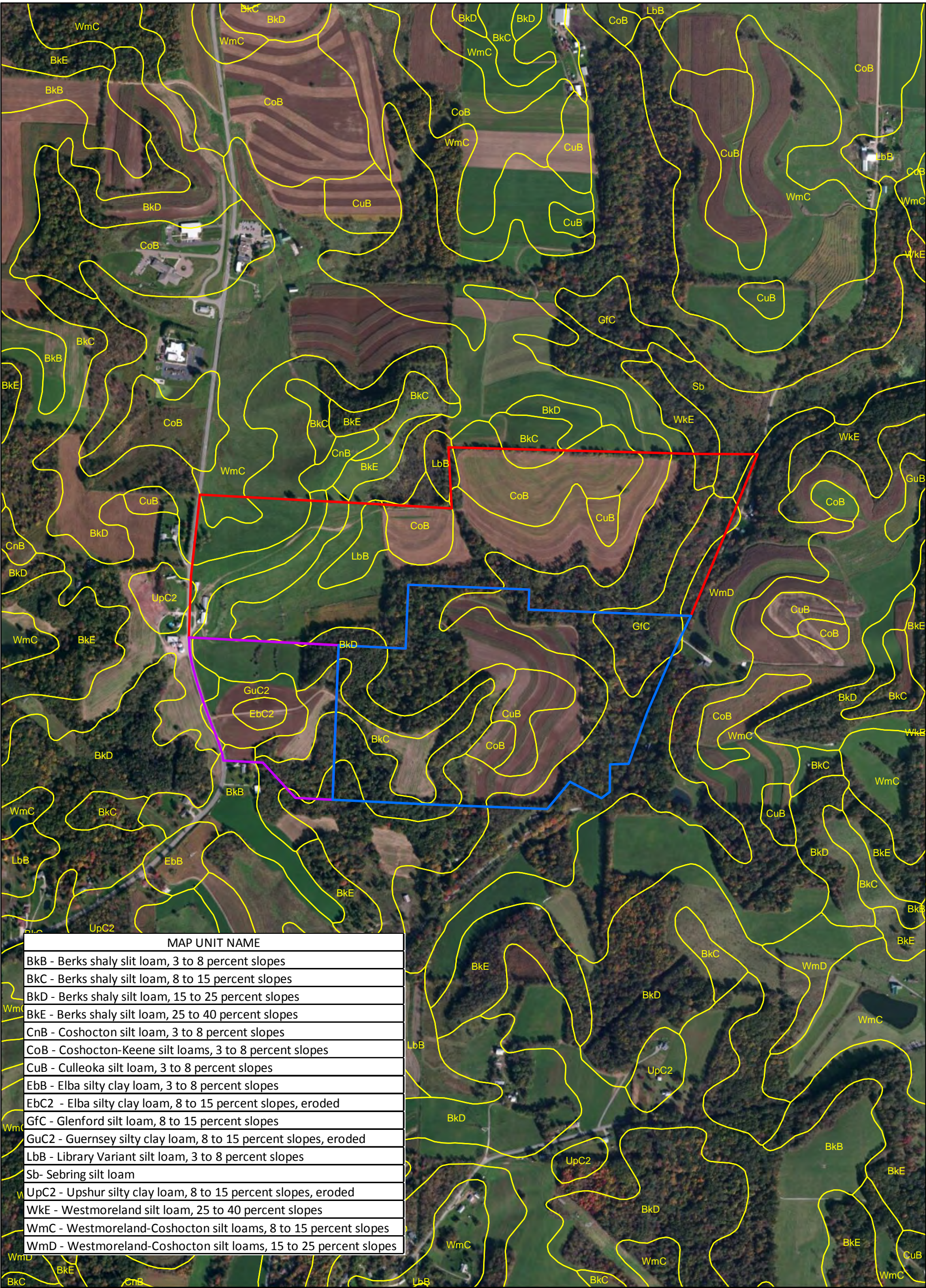


## **Section 13-04: Figures**


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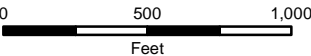

- **Figure 04-1: Site Survey Map** – See Original
- **Figure 04-2: Soils and Floodplain** – Update Provided
- **Figure 04-3: Soil Boring Locations** – See Original
- **Figure 04-4: Geological Cross-Section** – See Original
- **Figure 04-5: Wind Rose** – See Original
- **Figure 04-6: Aquifer Information** – Update Provided
- **Figure 04-7: Water Wells, Oil and Gas Wells and Drinking Water Source Protection Areas** – Update Provided






MAP UNIT NAME
BkB - Berks shaly slit loam, 3 to 8 percent slopes
BkC - Berks shaly silt loam, 8 to 15 percent slopes
BkD - Berks shaly silt loam, 15 to 25 percent slopes
BkE - Berks shaly silt loam, 25 to 40 percent slopes
CnB - Coshocton silt loam, 3 to 8 percent slopes
CoB - Coshocton-Keene silt loams, 3 to 8 percent slopes
CuB - Culleoka silt loam, 3 to 8 percent slopes
EbB - Elba silty clay loam, 3 to 8 percent slopes
EbC2 - Elba silty clay loam, 8 to 15 percent slopes, eroded
GfC - Glenford silt loam, 8 to 15 percent slopes
GuC2 - Guernsey silty clay loam, 8 to 15 percent slopes, eroded
LbB - Library Variant silt loam, 3 to 8 percent slopes
Sb- Sebring silt loam
UpC2 - Upshur silty clay loam, 8 to 15 percent slopes, eroded
WkE - Westmoreland silt loam, 25 to 40 percent slopes
WmC - Westmoreland-Coshocton silt loams, 8 to 15 percent slopes
WmD - Westmoreland-Coshocton silt loams, 15 to 25 percent slopes








**Figure 04-2**  
**Soils and Floodplain**  
Version 2.0

Carroll County Energy  
Carroll County, Ohio

 Facility Site

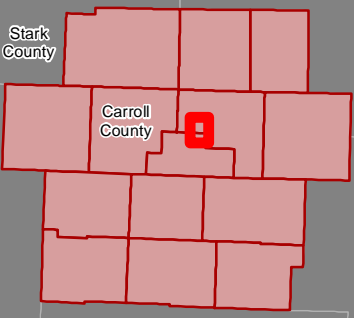
 Construction Laydown Area

 Additional Study Area

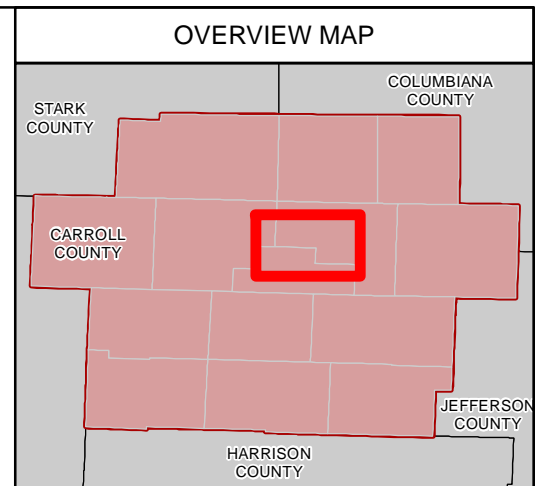
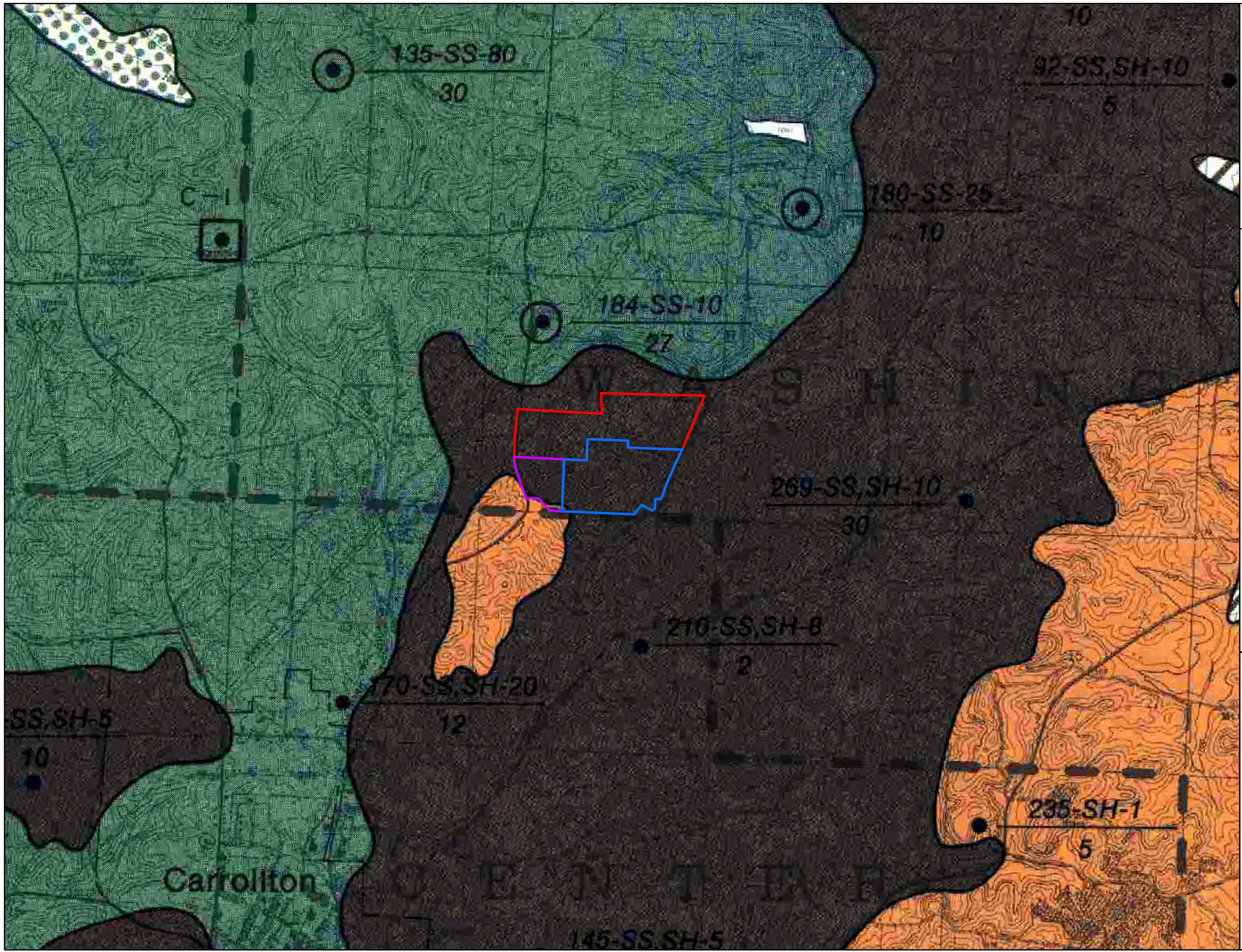
 Soil Map Unit

*\*No floodplains exist within 0.78 mile of the Facility Site and Construction Laydown Area*

OVERVIEW MAP







**Legend**

- Construction Laydown Area
- Facility Site
- Additional Study Area
- Areas in Which Yields of 10 to 25 Gallons Per Minute May Be Developed
- Areas in Which Yields of 3 to 10 Gallons Per Minute May Be Developed
- Areas in Which Yields Seldom Exceed 3 Gallons Per Minute

0 1,000 2,000 4,000  
Feet

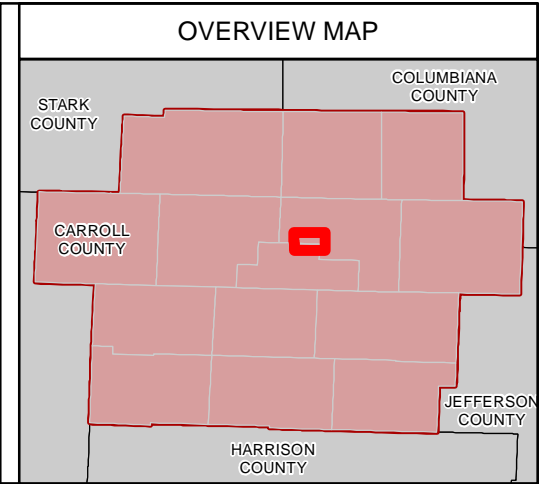
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W E  
S



**Figure 04-6**  
**Aquifer Information**  
Version 2.0

Carroll County Energy  
Carroll County, Ohio

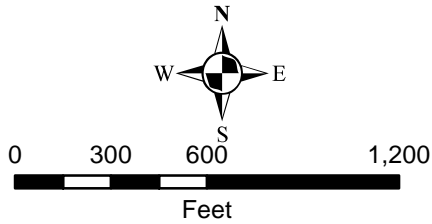




**Legend**

- REX Gas Well
- Gas Well
- Water Well
- Facility Site
- Construction Laydown Area
- Additional Study Area

- NOTES:
1. Water well locations provided by the Ohio Department of Natural Resources.
  2. No gas wells exist in proximity to the Facility Site.
  3. No Water Source Protection Areas exist in proximity to the Facility Site.



**Figure 04-7**  
**Water Wells,**  
**Oil and Gas Wells**  
**and Drinking Water**  
**Source Protection Areas**  
Version 2.0

Carroll County Energy  
Carroll County, Ohio



## **Section 13-05: Figures**

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- **No Figures**



## Section 13-06: Figures

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- **Figure 06-1: Air Monitoring Stations and Major Source Mapping** – See Original
- **Figure 06-2: Air Modeling Isopleth: Annual NO<sub>2</sub>** – See Original
- **Figure 06-3: Air Modeling Isopleth: 1-hour NO<sub>2</sub>** – See Original
- **Figure 06-4: Air Modeling Isopleth: 8-hour CO** – See Original
- **Figure 06-5: Air Modeling Isopleth: 1-hour CO** – See Original
- **Figure 06-6: Air Modeling Isopleth: Annual PM<sub>2.5</sub>** – See Original
- **Figure 06-7: Air Modeling Isopleth: 24-hour PM<sub>2.5</sub>** – See Original
- **Figure 06-8: Air Modeling Isopleth: 24-hour PM<sub>10</sub>** – See Original
- **Figure 06-9: Air Modeling Isopleth: 1-hour SO<sub>2</sub>** – See Original
- **Figure 06-10: Air Modeling Isopleth: 3-hour SO<sub>2</sub>** – See Original
- **Figure 06-11: Air Transportation Facilities** – See Original

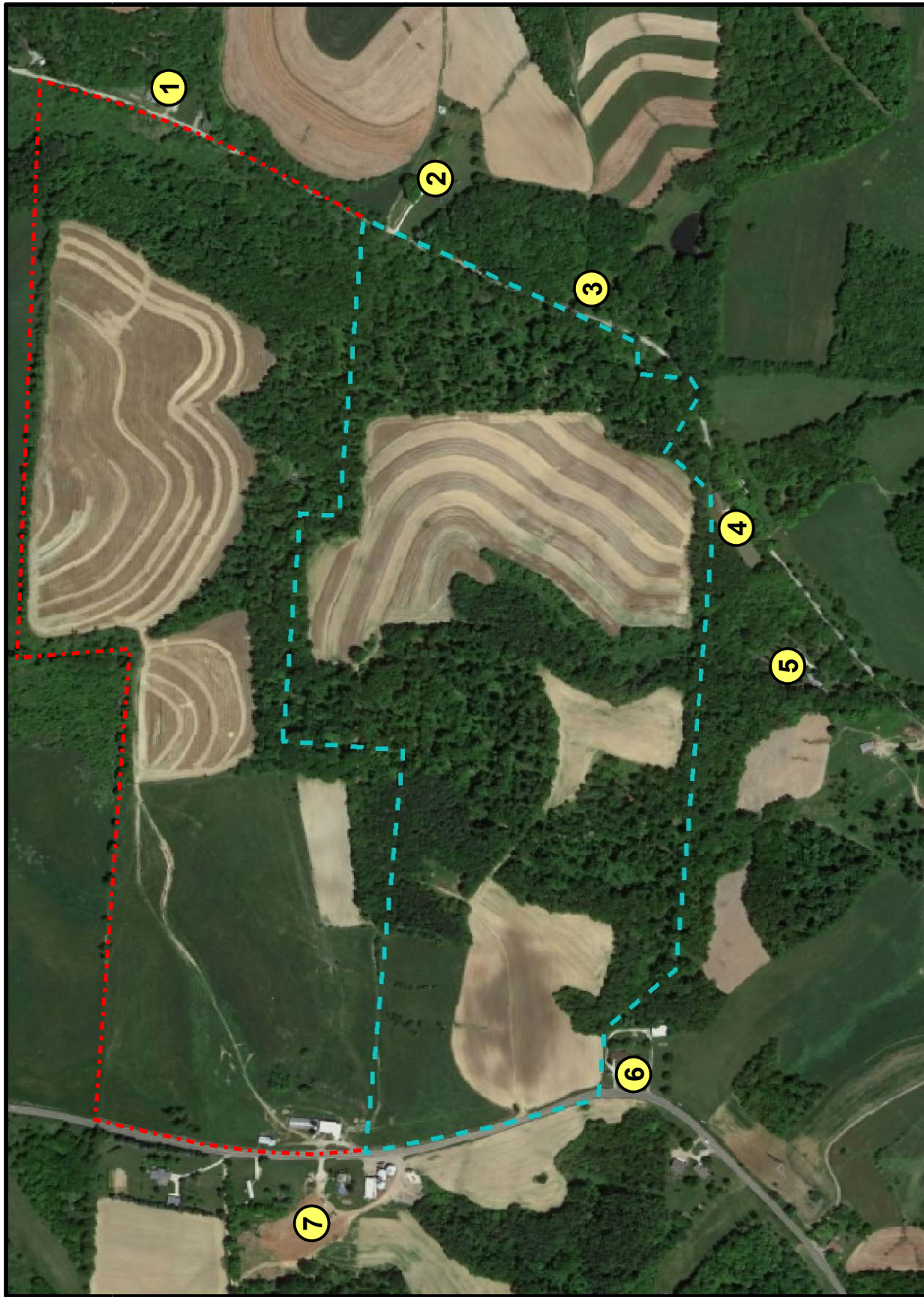


## **Section 13-07: Figures**

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- **Figure 07-1: Ambient Noise Monitoring Locations** – See Original
- **Figure 07-2: Noise Sensitive Receptors** – Update Provided
- **Figure 07-3: Mitigated Noise Impact Contours** – See Original
- **Figure 07-4: Natural Resource Characteristics of the Site and Surroundings** – Update Provided
- **Figure 07-5: Surrounding Land Use** – Update Provided
- **Figure 07-6: Cultural and Recreational Areas** – See Original
- **Figure 07-7: Agricultural Land** – Update Provided





NEARBY NOISE-SENSITIVE RECEPTORS	
 <b>Michael Theriault</b> ASSOCIATES INC. <small>NOISE CONTROL CONSULTING SERVICES</small>	
CARROLL COUNTY ENERGY CARROLL COUNTY, OHIO	
REPORT NO. 1905	

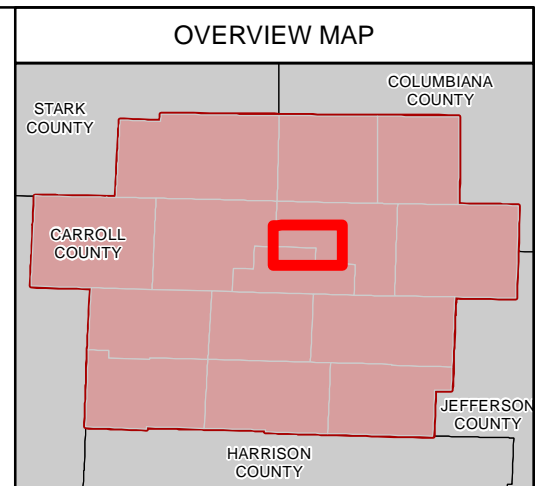
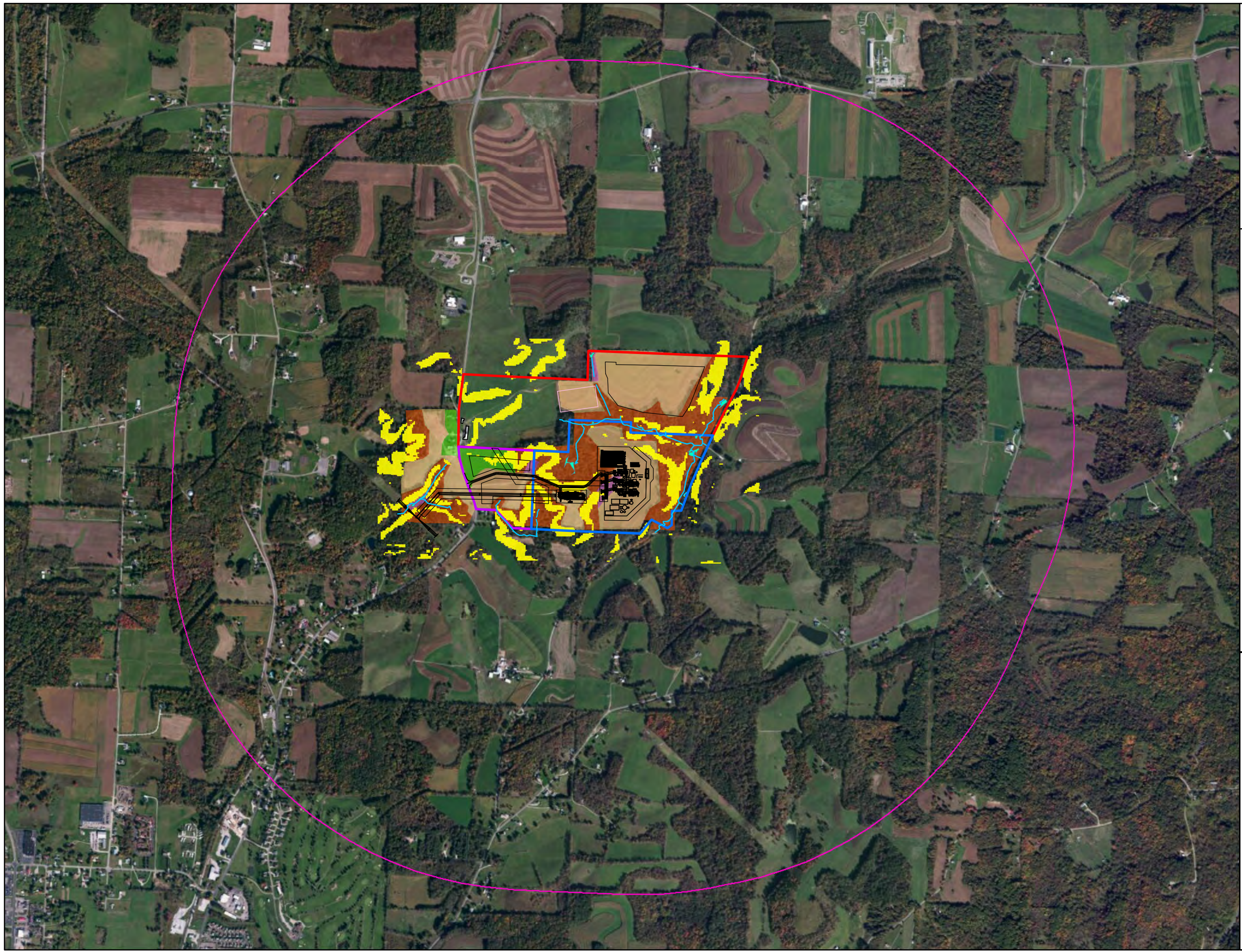
Addition Study Area

Property Line

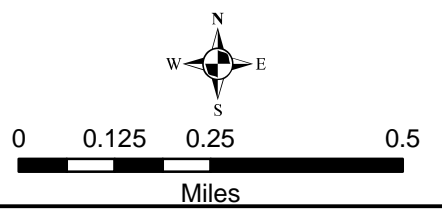
0 250 500 750 1000 feet

**Figure 07-2**  
**Noise Sensitive Receptors**  
 Version 2.0





- Facility Layout
- Stream
- Agricultural Field
- Forested Upland
- Maintained Grass Field
- Upland Thicket
- Wetlands
- Facility Site
- Construction Laydown Area
- Rex Facility
- 1-mile Buffer

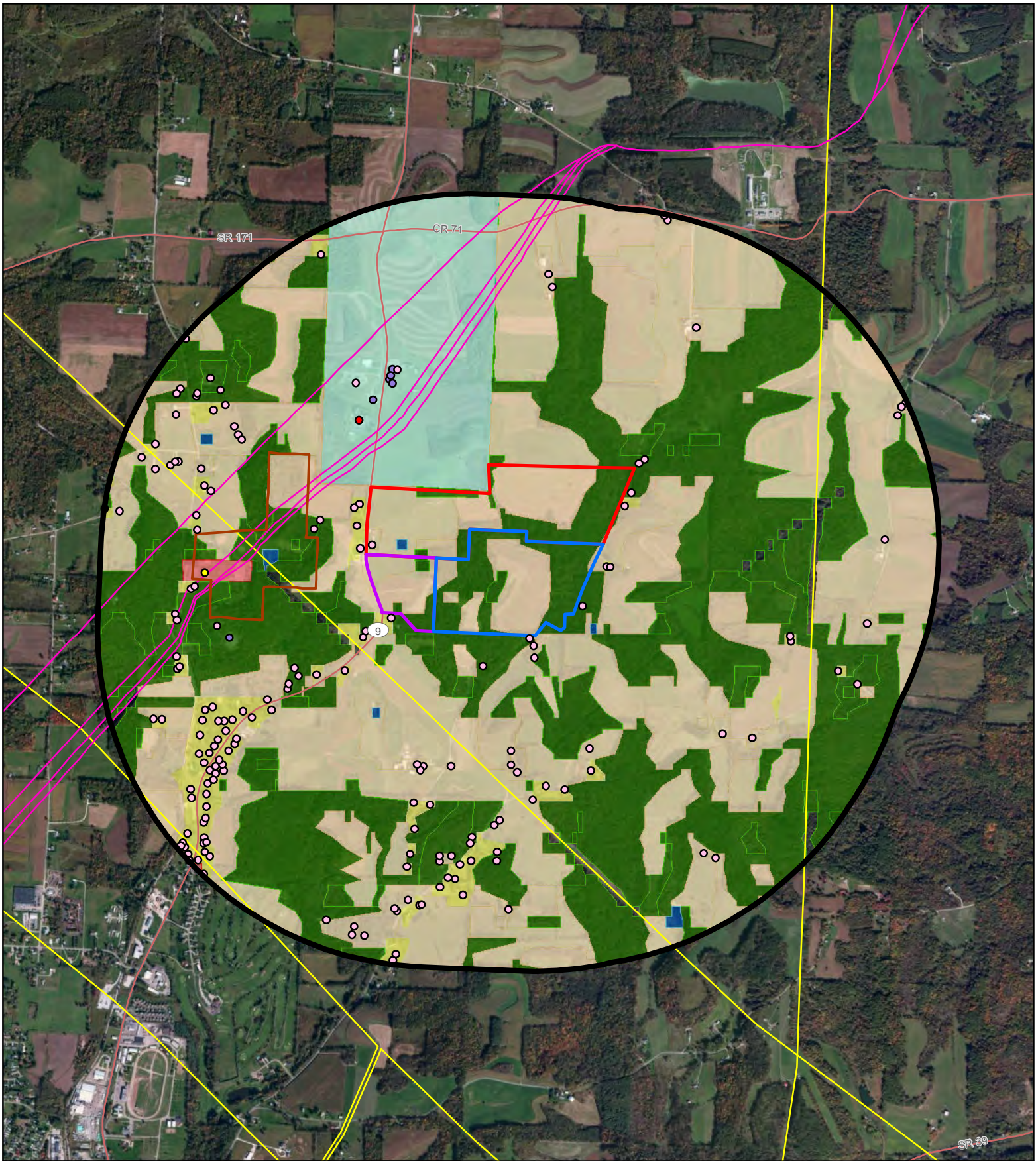


**Figure 07-4**  
**Natural Resource**  
**Characteristics of**  
**the Site**  
**and Surroundings**

Version 2.0

Carroll County Energy  
Carroll County, Ohio





**Carroll County**  
ENERGY



0 0.125 0.25  
Miles

**Figure 07-5**  
**Surrounding Land Use**  
Version 2.0

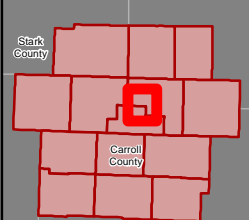
Carroll County Energy  
Carroll County, Ohio

**Legend**

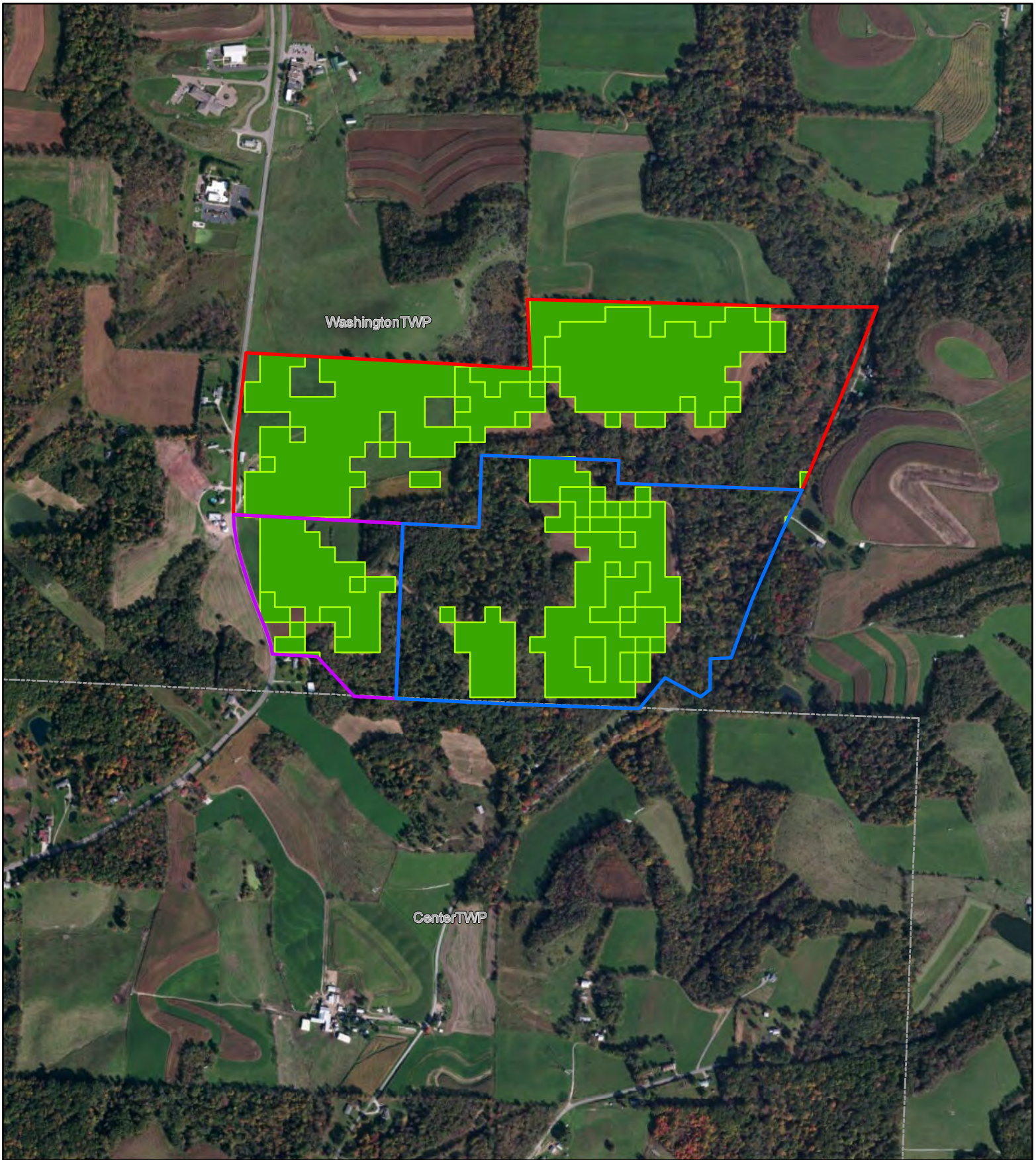
- Commercial
- Residence
- School
- Park/Recreation Area
- Existing Gas Line
- Existing Electric Transmission Line
- 1-mile radius
- Facility Site
- Construction Laydown Area
- Additional Study Area
- Land Use
  - Agricultural
  - Commercial
  - Forest, Shrub and Brush
  - Institutional
  - Lakes
  - Residential
  - Carroll County Veterans Memorial park

Source: National Landuse Cover Dataset, refined using Carroll County property mapping

**OVERVIEW MAP**







**Carroll County**  
ENERGY



0 200 400 800  
Feet

**Figure 07-7**  
**Agricultural Land**  
Version 2.0

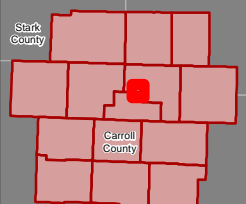
Carroll County Energy  
Carroll County, Ohio

**Legend**

- Facility Site
- Construction Laydown Area
- Additional Study Area
- Township Boundary
- Agricultural Field

*\*There are no Agricultural Districts in Carroll County, Ohio*

**OVERVIEW MAP**





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

**Commission of Ohio Docketing Information System on**

**11/26/2014 3:40:17 PM**

**in**

**Case No(s). 14-2085-EL-BGA**

Summary: Application - Figures electronically filed by Mr. Michael J. Settineri on behalf of  
Carroll County Energy LLC