

# **SOCIOECONOMIC, LAND USE AND AGRICULTURAL DISTRICT REVIEW REPORT**

## **MELMORE – TIFFIN CENTER 138KV LINE PROJECT**

**SENECA COUNTY, OHIO**

*Prepared for:*



*American Electric Power  
700 Morrison Rd.  
Gahanna, OH 43230*

*Prepared by:*



*Commonwealth Associates, Inc.  
2700 W. Argyle St.  
Jackson, MI 49202*

*Report Date: September 2013*

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## 1.0 PROJECT DESCRIPTION

The proposed Melmore-Tiffin Center 138kV transmission line project consists of rebuilding the Tiffin Center Extension 138kV transmission line from the proposed Melmore Station in Eden Township to the existing Tiffin Center Station in Clinton Township in Seneca County, Ohio. AEP Ohio Transco will be rebuilding from single circuit H-Frame structures to double circuit single steel poles. The Melmore-Tiffin Center line is part of AEP's Fremont Area Improvement Plan – a transmission reinforcement effort designed to help AEP maintain adequate transmission reliability in northwestern Ohio. This improvement project addresses low-voltage concerns identified by PJM. The project extends approximately 7.15 miles as shown on the Location Map.

The project is located in Sections 3, 10 & 15 Eden Township (T1N, R15E) and Sections 10, 15, 22, 27 & 34 Clinton Township (T2N, R15E) in Seneca County, Ohio as shown in Figure 1.

As part of the Ohio Siting Board (OPSB) Letter of Notification (LON) requirements, AEP Ohio Transco is required to describe the environmental impacts of the proposed project, as stated in Ohio Administrative Code (OAC) Rule 4906-11-01(D)(1 & 2). This rule states:

- (D) Socioeconomic data. Describe the social and ecological impacts of the project. This description shall contain the following information:*
- (1) A brief, general description of land use within the vicinity of the proposed project, including: (a) a list of municipalities, townships, and counties affected; and (b) estimates of population density adjacent to rights-of-way within the study corridor (the U.S. census information may be used to meet this requirement).*
  - (2) The location and general description of all agricultural land (including agricultural district land) existing at least sixty days prior to submission of the letter of notification within the proposed electric power transmission line right-of-way, or within the proposed electric power transmission substation fenced-in area, or within the construction site boundary of a proposed compressor station.*

AEP Ohio Transco retained Commonwealth to conduct a desktop review of socioeconomic, land use, and agricultural district land in the Project area. A study corridor of 2,000 feet centered on the transmission line centerline was established. In conjunction with aerial photo interpretation and the ecological field and site access reviews, Commonwealth noted land uses crossed by the existing right-of-way. This report will be used to assist in efforts to avoid or minimize impacts to socioeconomic characteristics and land uses potentially present in the study area during construction activities.

## 2.0 GENERAL LAND USE DESCRIPTIONS

Land use within the 2,000 foot wide study corridor (centered on the transmission line centerline) of the project is shown on Map Sets A and B. Current land use characteristics were obtained

through review of United States U.S. Department of Agriculture (USDA) and Natural Resource Conservation Service (NRCS) digital aerial photography taken in 2006; United States Geological Survey (USGS) 7.5 minute Topographic Map of Tiffin South and Tiffin North (2010), <http://www.usgs.gov>; Land Use/Land Cover (Data collected in 1976) obtained from webGIS, [www.webgis.com](http://www.webgis.com) and updated using photo interpretation; base map Data obtained from GIS Data Depot (U.S. Census Bureau TIGER/Line 2011), [www.data.geocomm.com](http://www.data.geocomm.com); county property parcel data obtained from the Seneca County Auditor, Julie A. Adkings, <http://www.senecacountyauditor.org/>; and field reconnaissance conducted in August 2013.

Land use within the 2,000 foot corridor is primarily agriculture. About 78 percent of the land within the 2,000 foot corridor is agriculture. Residential land use is approximately 13 percent, while forested land accounts for approximately 7 percent, commercial/industrial 1 percent and wetlands 1 percent. Approximately 125 homes were identified within 1,000 feet of the corridor centerline while approximately 2 were identified within 150 feet. Approximately 18 percent of the study corridor is used for commercial or industrial purposes. One cemetery south of US 224 (Ben Franklin Highway) and west of Township Road, approximately 500 feet from the right of way was identified in the study corridor. No churches were noted. One school building, previously part of Clinton public school system was noted. This building has been sold and at the time of the study was not being used. The corridor crosses one active railroad and an older non-active railroad grade. The corridor crosses county and state roads including State Route 18, State Route 100 and US 224 (Benjamin Franklin Highway). None of these roads are divided or limited access.

General land use trends in Seneca County indicates there is a slow conversion of farmland to residential use primarily radiating out from the incorporated areas of Tiffin and Fostoria along with some large lot residential development along major roads throughout the rural areas. Commonwealth reviewed the Seneca County Comprehensive Plan Update, 2001 prepared for the Seneca Regional Planning Commission by Burns, Bertsch & Harris, Inc. and Bennet & Williams Environmental Consultants, Inc. The plan contained comprehensive land use for the county both existing and planned. The findings of the plan are consistent with our field observations of the significant percentage of agricultural land in the two townships and the slow conversion to residential use.

### 3.0 POPULATION DENSITY ESTIMATE

Population density estimates for land within the 2,000 foot wide study corridor were calculated based on percentage of land area and the average persons per household for the County. The study area is approximately 1,740 acres. The total area of Seneca County is 352,650 acres. According to the 2010 U.S. Census, the population of the County was 56,745 for a total population density of 0.17 persons per acre. Estimated population within the project study area based on percentage of land area is approximately 295. Approximately 125 homes were identified within the study area. According to the 2010 U.S. Census, the average household in

Seneca County had 2.47 persons. Estimated population within the project study area based on number of homes along the route is approximately 309. These estimates are limited to the available statistics and generalizations across the County. Census population data is summarized in Table 1.

TABLE 1  
STUDY AREA CENSUS POPULATION ESTIMATES

Government Unit	Percentage corridor	of 2010 Census
Seneca County	100	56,745
Clinton Township		4,109
Eden Township		2,188

Sources: U.S. Census bureau, Census 2010, <http://www.census.gov>

No planned residential developments within the study corridor were discovered as part of this study. It is not expected that the project will significantly impact existing or planned land use within the vicinity of the Project. An existing transmission line is present along the length of this project. With the change in structure types from 2 pole h-frames to single mono-poles the overall footprint impact of the structures is expected to decrease. Being an existing transmission corridor the changes will be primarily construction impacts which will be temporary.

#### 4.0 AGRICULTURAL DISTRICT LAND

Parcels registered in the State were obtained from Commonwealth contacted the Office of the Seneca County Auditor, Julie A. Adkins to request parcels registered in the State of Ohio Agricultural District Land program within the two Townships within the 2,000 foot wide corridor study area. There are 18 parcels within the study area belonging to 8 different owners which are registered with the State of Ohio Agricultural District Land program. In addition much of the study area is actively farmed. Efforts to minimize disturbance during construction will be made. AEP Ohio Transco will compensate property owners for any monetary losses due to the project through the right-of-way settlement in accordance with easement agreements and policy. AEP Ohio Transco has and will continue to work with each owner to avoid and minimize damages to property. The construction, operation and maintenance of this transmission line are not expected to affect the viability of agricultural land with the study area. This project when complete will not require changes in agricultural practices from what they are currently.

#### 5.0 CONCLUSION

No significant impacts to socioeconomic characteristics, land use or agricultural district land are expected in the study area as a result of this project as an electric transmission line currently

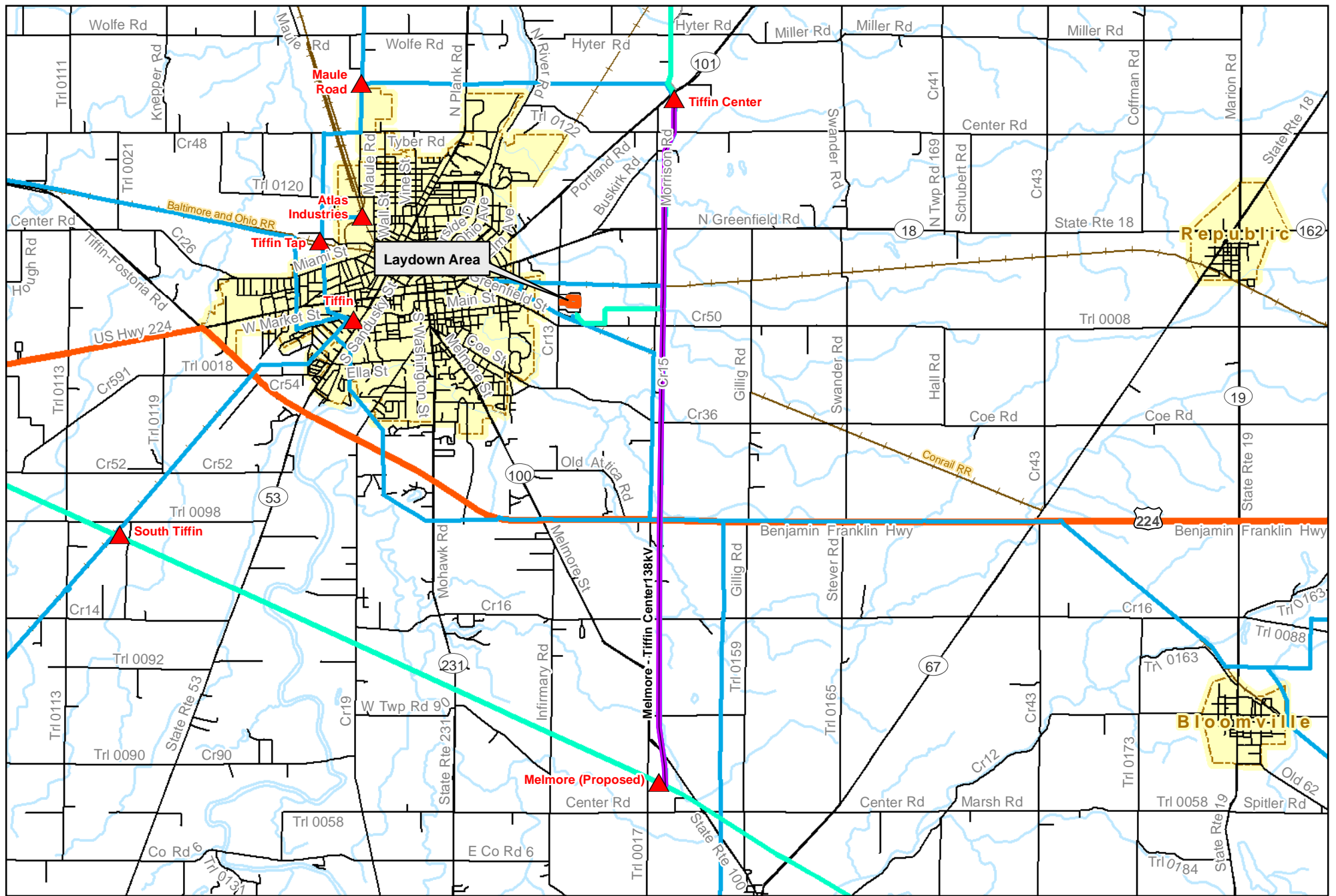
exists. Construction, stringing and reconductoring efforts will cause short-term changes. These changes will be temporary and localized to structure locations and access roads. The project is not expected to impact any future land use any differently or greater than the existing transmission line.

## 6.0 REFERENCES

Adkins, Julie A, Seneca County Auditor, Office of. Email correspondence and on-line property search. Seneca County, Ohio. Retrieved from <http://www.auditor.co.Seneca.oh.us>. Accessed August 21, 2013.

Seneca Regional Planning Commission, Seneca County Comprehensive Plan Update, Seneca County, Ohio. Retrieved from <http://www.senecarpc.org/land-development>. Accessed August 27, 2013.

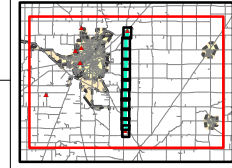
U.S. Census Bureau. Census of Population and Housing, 2010. Washington, D.C. Retrieved from <http://www.census.gov>. Accessed August 27, 2013.



SYM Substation & Transmission Line		SYM Transportation & Hydrology		SYM Boundary & Feature		SYM Land Use/Land Cover		SYM Wetlands	
▲ Substation	Existing 230 kV	Interstate	Open Water	City/Township	Open Water	Palustrine Emergent	Palustrine Emergent	Palustrine Emergent	Palustrine Emergent
● Existing Structure	Existing 345 kV	Highway	Cropland & Pasture	County	Cropland & Pasture	Palustrine Forested	Palustrine Forested	Palustrine Forested	Palustrine Forested
■ Proposed Structure	Existing 500 kV	Railroad	Deciduous Forest	New Entrance	Deciduous Forest	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub
— Existing 69 kV	Existing 765 kV	Major/Local Road	Industrial & Commercial	Map Index	Industrial & Commercial	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom
— Existing 88 kV		River/Stream/Lake/Pond	200' Right of Way	200' Right of Way	200' Right of Way	Lacustrine/Riverine	Lacustrine/Riverine	Lacustrine/Riverine	Lacustrine/Riverine
— Existing 115 kV		Delineated Stream	2,000 ft Corridor	2,000 ft Corridor	2,000 ft Corridor	Delineated Wetland	Delineated Wetland	Delineated Wetland	Delineated Wetland
— Existing 138 kV		Lake (Location Map)	Agriculture District	Agriculture District	Agriculture District				
— Existing 161 kV		Watershed	Contour 20'	Contour 20'	Contour 20'				

AEP Ohio Transmission Company  
**Melmore - Tiffin Center**  
 138 kV Transmission Line  
 Land Use/Land Cover Features  
 Sandusky & Seneca County Ohio

Projected Coordinate System: Ohio State Plane  
 Datum: North American Datum of 1983  
 Projection: Lambert Conformal Conic  
 Zone: North  
 Linear Unit: Feet



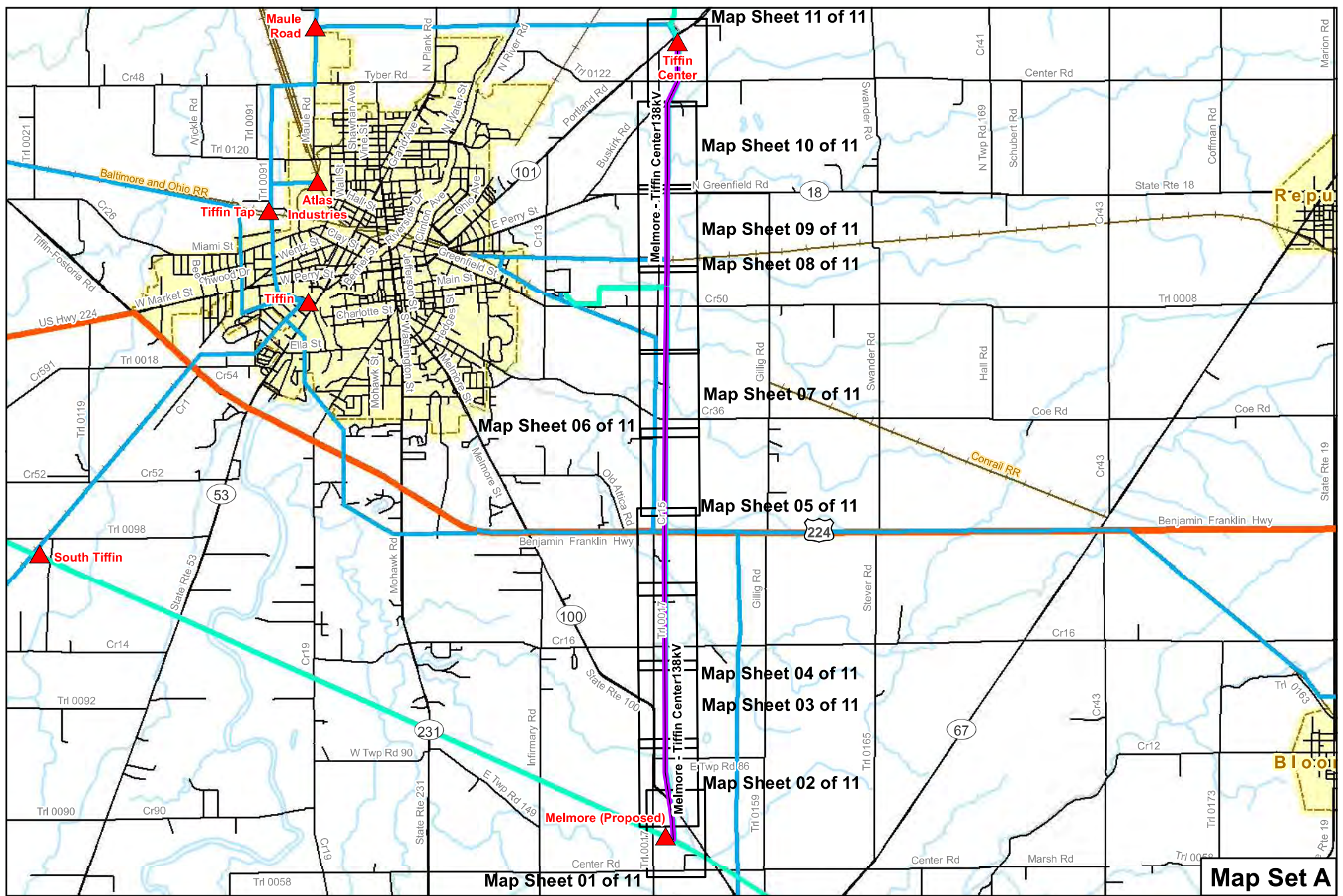
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Location Map with Laydown Area

0 1,750 3,500 Feet

Commonwealth AEP AMERICAN ELECTRIC POWER





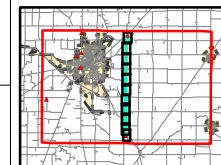
**Map Set A**

SYM Substation & Transmission Line		SYM Transportation & Hydrology		SYM Boundary & Feature		SYM Land Use/Land Cover		SYM Wetlands	
▲ Substation	Existing 230 kV	Interstate	Open Water	City/Township	Open Water	Palustrine Emergent	Palustrine Emergent	Palustrine Emergent	Palustrine Emergent
Existing Structure	Existing 345 kV	Highway	Cropland & Pasture	County	Cropland & Pasture	Palustrine Forested	Palustrine Forested	Palustrine Forested	Palustrine Forested
Proposed Structure	Existing 500 kV	Railroad	Deciduous Forest	New Entrance	Deciduous Forest	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub
Existing 69 kV	Existing 765 kV	Major/Local Road	Industrial & Commercial	Map Index	Industrial & Commercial	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom
Existing 88 kV		River/Stream/Lake/Pond	200' Right of Way	200' Right of Way	200' Right of Way	Lacustrine/Riverine	Lacustrine/Riverine	Lacustrine/Riverine	Lacustrine/Riverine
Existing 115 kV		Delineated Stream	Agriculture District	Agriculture District	Agriculture District	Delineated Wetland	Delineated Wetland	Delineated Wetland	Delineated Wetland
Existing 138 kV		Lake (Location Map)	Contour 20'	Contour 20'	Contour 20'				
Existing 161 kV		Watershed							



**AEP Ohio Transmission Company**  
**Melmore - Tiffin Center**  
**138 kV Transmission Line**  
 Seneca County Ohio

Projected Coordinate System: Ohio State Plane  
 Datum: North American Datum of 1983  
 Projection: Lambert Conformal Conic  
 Zone: North  
 Linear Unit: Feet



Scale: 1" = 8,000' (1:96,000) Date: 9/4/2013

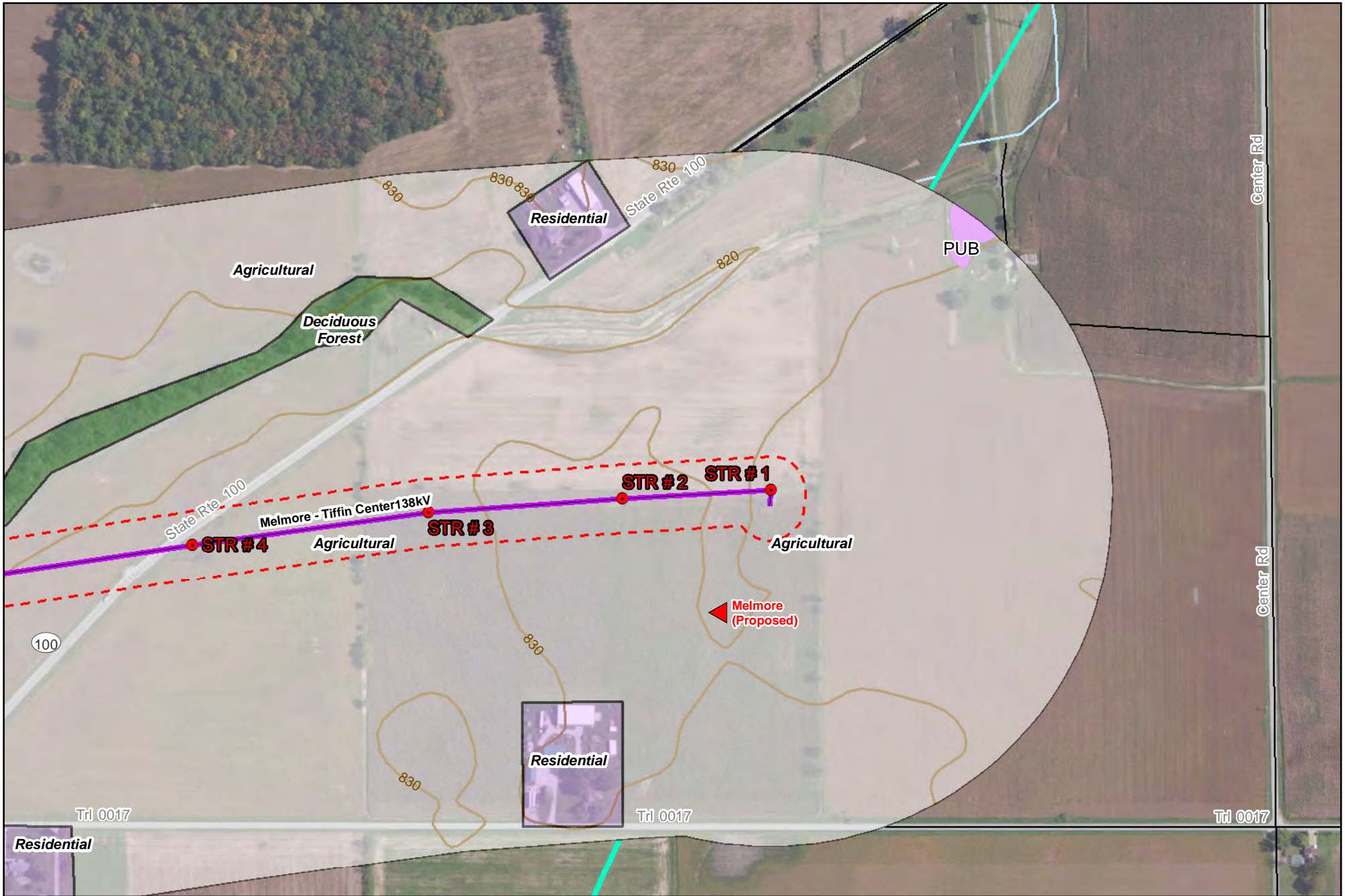
**Location Map**

Land Use with Aerial Base

0 2,000 4,000 Feet

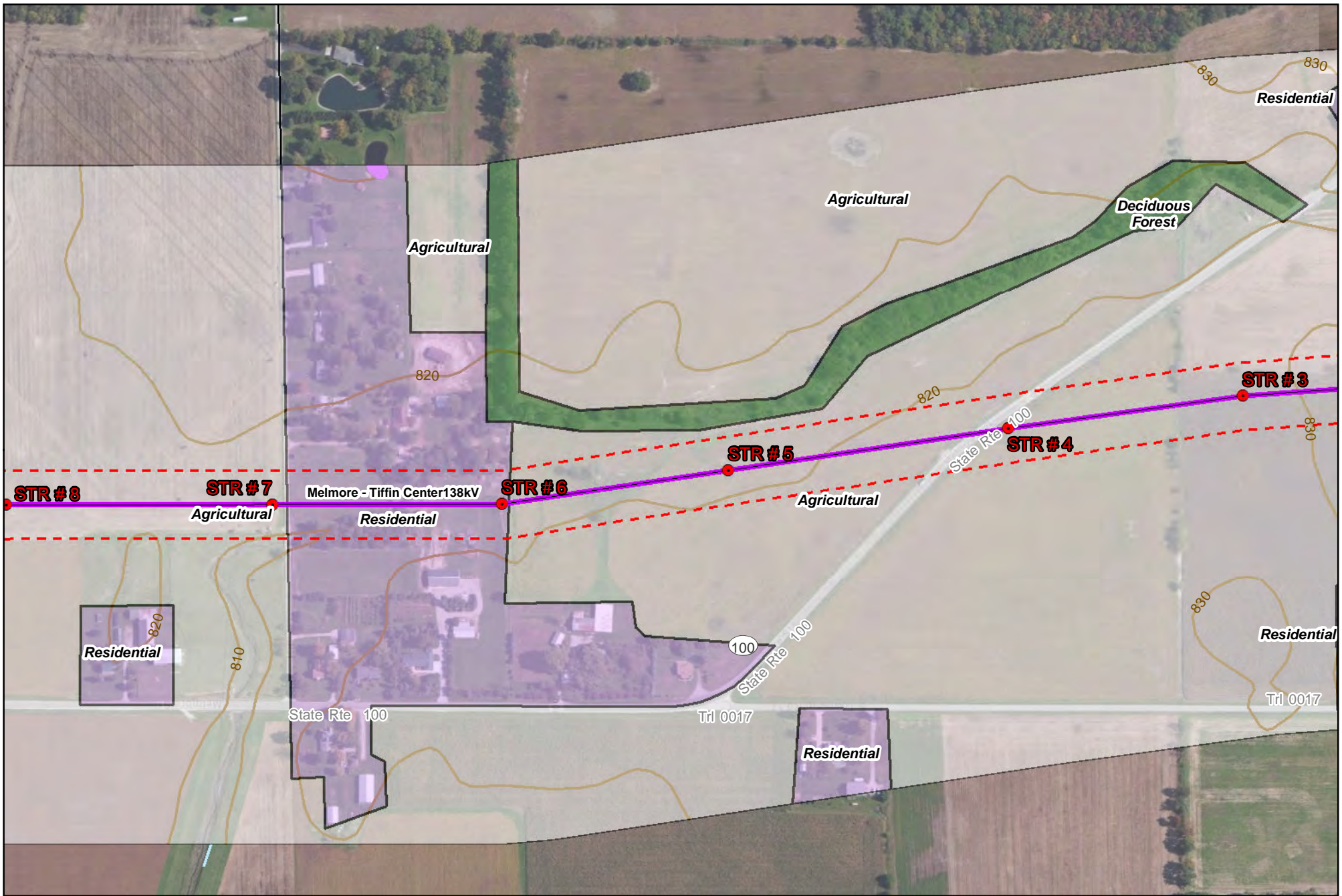
**Commonwealth** **AEP AMERICAN ELECTRIC POWER**





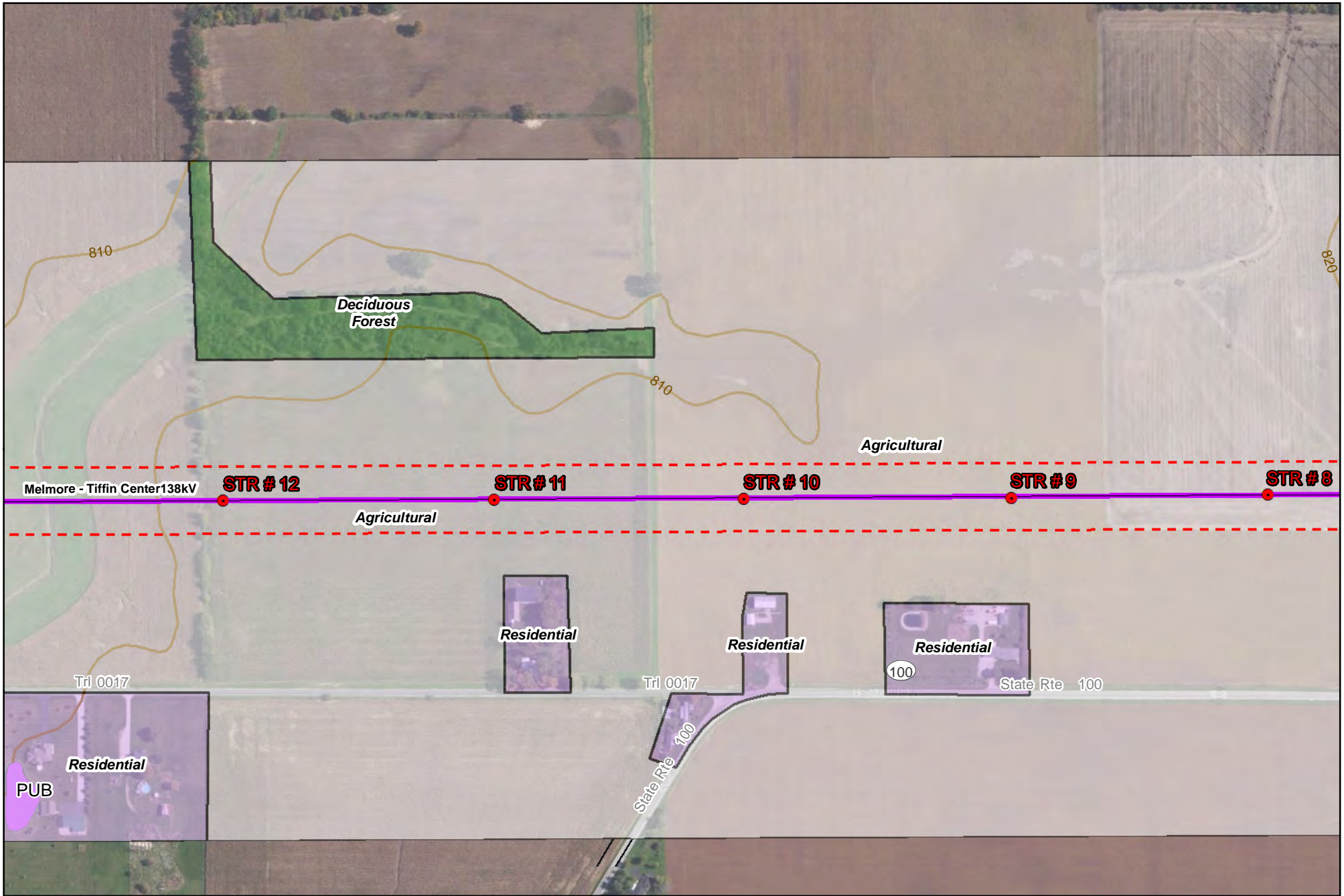
<b>SYM Substation &amp; Transmission Line</b> ▲ Substation ● Existing Structure ■ Proposed Structure — Existing 69 kV — Existing 88 kV — Existing 115 kV — Existing 138 kV — Existing 161 kV — Existing 230 kV — Existing 345 kV — Existing 500 kV — Existing 765 kV	<b>SYM Transportation &amp; Hydrology</b> — Interstate — Highway — Railroad — Major/Local Road — River/Stream/Lake/Pond — Delineated Stream — Lake (Location Map) — Watershed	<b>SYM Boundary &amp; Feature</b> ■ City/Township County ■ New Entrance ■ Map Index ■ 200' Right of Way ■ 2,000 ft Corridor ■ Agriculture District ■ Contour 20'	<b>SYM Land Use/Land Cover</b> ■ Open Water ■ Cropland & Pasture ■ Deciduous Forest ■ Industrial & Commercial ■ Industrial & Transportation ■ Residential ■ Wetland	<b>SYM Wetlands</b> ■ Palustrine Emergent ■ Palustrine Forested ■ Palustrine Scrub/Shrub ■ Palustrine Unconsolidated Bottom ■ Lacustrine/Riverine ■ Delineated Wetland		<b>AEP Ohio Transmission Company</b> <b>Melmore - Tiffin Center</b> <b>138 kV Transmission Line</b> <b>Land Use/LandCover Features</b> <b>Sandusky &amp; Seneca County Ohio</b> Projected Coordinate System: Ohio State Plane Datum: North American Datum of 1983 Projection: Lambert Conformal Conic Zone: North Linear Unit: Feet		Scale: 1" = 500' (1:6,000) Date: 9/3/2013 Map Sheet 01 of 11  
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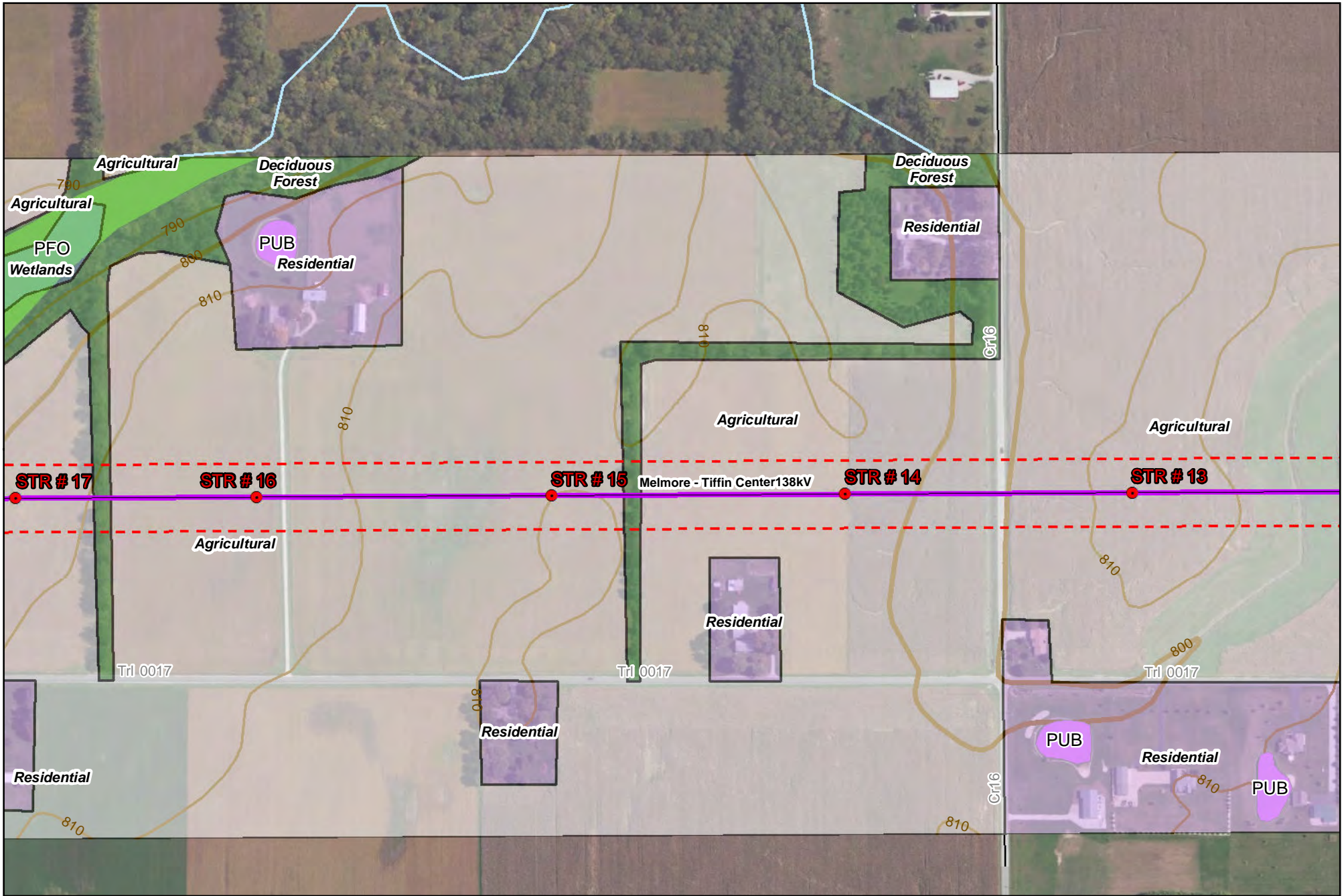
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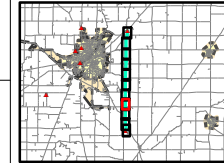
<b>SYM Substation &amp; Transmission Line</b> ● Substation ■ Existing Structure ■ Proposed Structure — Existing 69 kV — Existing 88 kV — Existing 115 kV — Existing 138 kV — Existing 161 kV		<b>SYM Transportation &amp; Hydrology</b> — Interstate — Highway — Railroad — Major/Local Road — River/Stream/Lake/Pond — Delineated Stream — Lake (Location Map) — Watershed		<b>SYM Boundary &amp; Feature</b> ■ City/Township ■ County ■ New Entrance ■ Map Index ■ 200' Right of Way ■ 2,000 ft Corridor ■ Agriculture District ■ Contour 20'		<b>SYM Land Use/Land Cover</b> ■ Open Water ■ Cropland & Pasture ■ Deciduous Forest ■ Industrial & Commercial ■ Industrial & Transportation ■ Residential ■ Wetland		<b>SYM Wetlands</b> ■ Palustrine Emergent ■ Palustrine Forested ■ Palustrine Scrub/Shrub ■ Palustrine Unconsolidated Bottom ■ Lacustrine/Riverine ■ Delineated Wetland		<b>AEP Ohio Transmission Company</b> <b>Melmore - Tiffin Center</b> <b>138 kV Transmission Line</b> <b>Land Use/Land Cover Features</b> Sandusky & Seneca County Ohio Projected Coordinate System: Ohio State Plane Datum: North American Datum of 1983 Projection: Lambert Conformal Conic Zone: North Linear Unit: Feet		Scale: 1" = 500' (1:6,000) Date: 9/3/2013 Map Sheet 03 of 11 0 125 250 Feet 	
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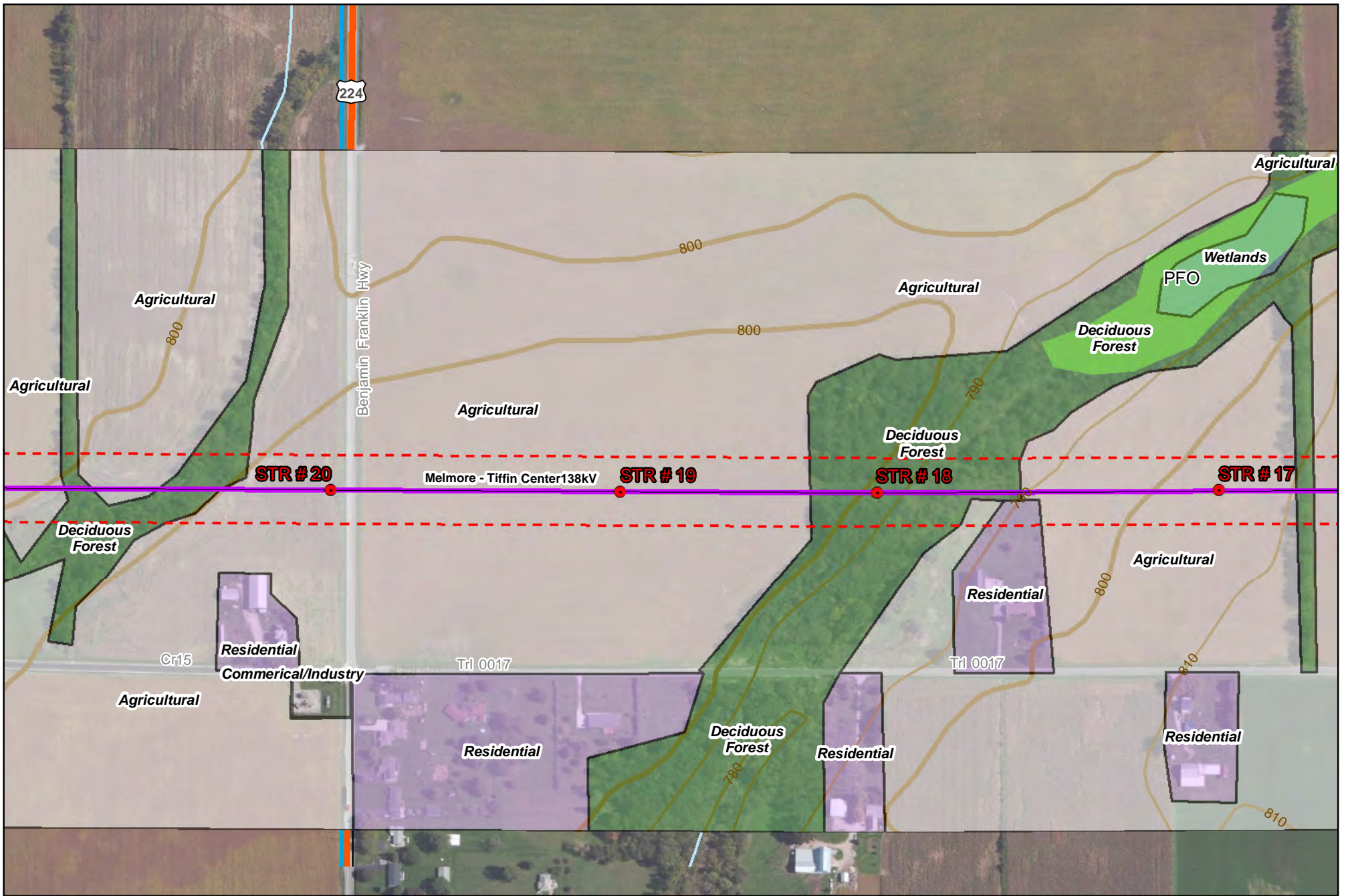


SYM Substation & Transmission Line		SYM Transportation & Hydrology		SYM Boundary & Feature		SYM Land Use/Land Cover		SYM Wetlands	
● Substation	Existing 230 kV	Interstate	City/Township County	City/Township County	Open Water	Palustrine Emergent		Palustrine Emergent	
● Existing Structure	Existing 345 kV	Highway	New Entrance	New Entrance	Cropland & Pasture	Palustrine Forested		Palustrine Forested	
● Proposed Structure	Existing 500 kV	Railroad	Map Index	Map Index	Deciduous Forest	Palustrine Scrub/Shrub	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Scale: 1" = 500' (1:6,000) Map Sheet 04 of 11 
Existing 69 kV	Existing 765 kV	Major/Local Road	200' Right of Way	200' Right of Way	Industrial & Commercial	Palustrine Unconsolidated Bottom	Lacustrine/Riverine	Lacustrine/Riverine	
Existing 88 kV		River/Stream/Lake/Pond	Agriculture District Contour 20'	Agriculture District Contour 20'	Transportation Residential		Delineated Wetland	Delineated Wetland	Date: 9/3/2013 Commonwealth 
Existing 115 kV		Delineated Stream			Wetland				
Existing 138 kV		Lake (Location Map)							
Existing 161 kV		Watershed							

AEP Ohio Transmission Company  
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 138 kV Transmission Line  
 Land Use/LandCover Features  
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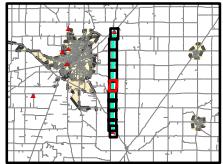
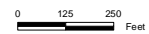





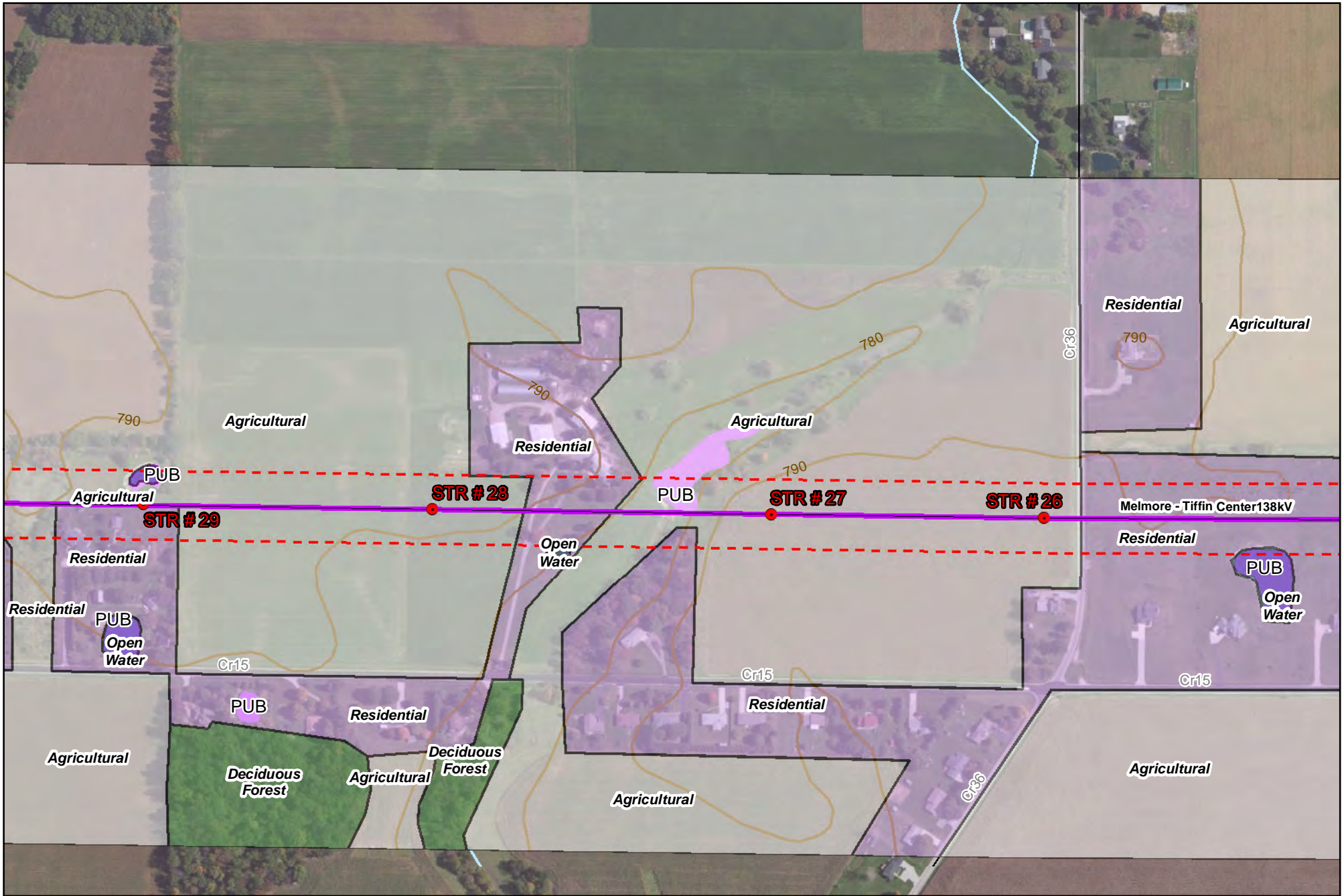
<b>SYM Substation &amp; Transmission Line</b> <ul style="list-style-type: none"> <li>Substation</li> <li>Existing Structure</li> <li>Proposed Structure</li> <li>Existing 69 kV</li> <li>Existing 88 kV</li> <li>Existing 115 kV</li> <li>Existing 138 kV</li> <li>Existing 161 kV</li> <li>Existing 230 kV</li> <li>Existing 345 kV</li> <li>Existing 500 kV</li> <li>Existing 765 kV</li> </ul>	<b>SYM Transportation &amp; Hydrology</b> <ul style="list-style-type: none"> <li>Interstate</li> <li>Highway</li> <li>Railroad</li> <li>Major/Local Road</li> <li>River/Stream/Lake/Pond</li> <li>Delineated Stream</li> <li>Lake (Location Map)</li> <li>Watershed</li> </ul>	<b>SYM Boundary &amp; Feature</b> <ul style="list-style-type: none"> <li>City/Township County</li> <li>New Entrance</li> <li>Map Index</li> <li>200' Right of Way</li> <li>2,000 ft Corridor</li> <li>Agriculture District</li> <li>Contour 20'</li> </ul>	<b>SYM Land Use/Land Cover</b> <ul style="list-style-type: none"> <li>Open Water</li> <li>Cropland &amp; Pasture</li> <li>Deciduous Forest</li> <li>Industrial &amp; Commercial</li> <li>Industrial &amp; Transportation</li> <li>Residential</li> <li>Wetland</li> </ul>	<b>SYM Wetlands</b> <ul style="list-style-type: none"> <li>Palustrine Emergent</li> <li>Palustrine Forested</li> <li>Palustrine Scrub/Shrub</li> <li>Palustrine Unconsolidated Bottom</li> <li>Lacustrine/Riverine</li> <li>Delineated Wetland</li> </ul>		<p>AEP Ohio Transmission Company  Melmore - Tiffin Center  138 kV Transmission Line  <b>Land Use/Land Cover Features</b>  Sandusky &amp; Seneca County Ohio</p> <p>Projected Coordinate System: Ohio State Plane  Datum: North American Datum of 1983  Projection: Lambert Conformal Conic  Zone: North  Linear Unit: Feet</p>		<p>Scale: 1" = 500' (1:6,000)</p> <p>Date: 9/3/2013</p> <p>Map Sheet 05 of 11</p> <p>0 125 250 Feet</p> <p>Commonwealth of Ohio  AEP AMERICAN ELECTRIC POWER</p>
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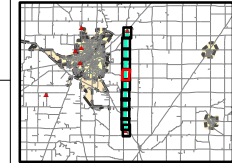
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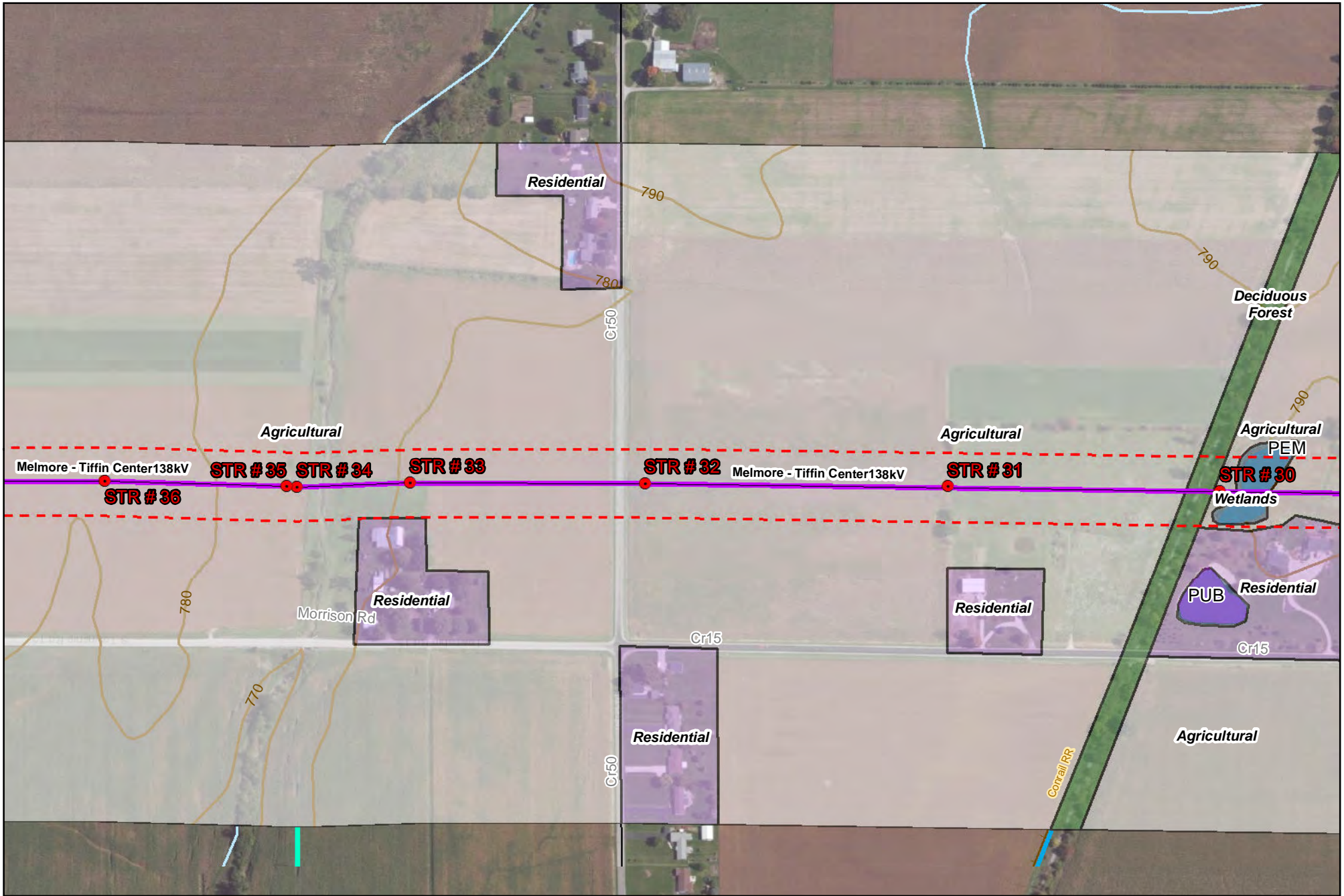


SYM Substation & Transmission Line		SYM Transportation & Hydrology		SYM Boundary & Feature		SYM Land Use/Land Cover		SYM Wetlands		<div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></di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AEP Ohio Transmission Company  
Melmore - Tiffin Center  
138 kV Transmission Line  
Land Use/Land Cover Features  
Sandusky & Seneca County Ohio

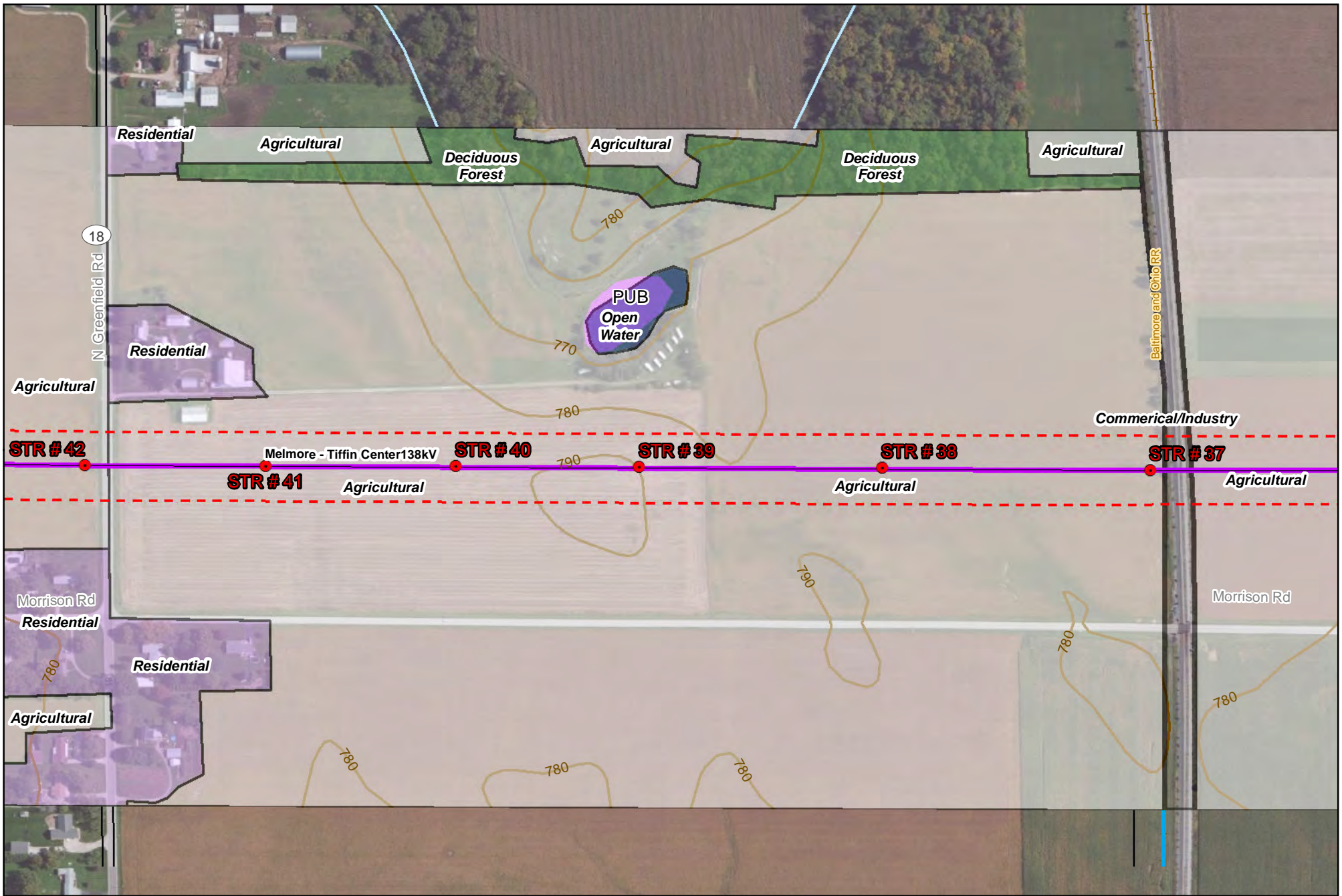







<b>SYM Substation &amp; Transmission Line</b> <ul style="list-style-type: none"> <li>Substation</li> <li>Existing Structure</li> <li>Proposed Structure</li> <li>Existing 69 kV</li> <li>Existing 88 kV</li> <li>Existing 115 kV</li> <li>Existing 138 kV</li> <li>Existing 161 kV</li> <li>Existing 230 kV</li> <li>Existing 345 kV</li> <li>Existing 500 kV</li> <li>Existing 765 kV</li> </ul>	<b>SYM Transportation &amp; Hydrology</b> <ul style="list-style-type: none"> <li>Interstate</li> <li>Highway</li> <li>Railroad</li> <li>Major/Local Road</li> <li>River/Stream/Lake/Pond</li> <li>Delineated Stream</li> <li>Lake (Location Map)</li> <li>Watershed</li> </ul>	<b>SYM Boundary &amp; Feature</b> <ul style="list-style-type: none"> <li>City/Township County</li> <li>New Entrance</li> <li>Map Index</li> <li>200' Right of Way</li> <li>2,000 ft Corridor</li> <li>Agriculture District</li> <li>Contour 20'</li> </ul>	<b>SYM Land Use/Land Cover</b> <ul style="list-style-type: none"> <li>Open Water</li> <li>Cropland &amp; Pasture</li> <li>Deciduous Forest</li> <li>Industrial &amp; Commercial</li> <li>Industrial &amp; Transportation</li> <li>Residential</li> <li>Wetland</li> </ul>	<b>SYM Wetlands</b> <ul style="list-style-type: none"> <li>Palustrine Emergent</li> <li>Palustrine Forested</li> <li>Palustrine Scrub/Shrub</li> <li>Palustrine Unconsolidated Bottom</li> <li>Lacustrine/Riverine</li> <li>Delineated Wetland</li> </ul>		<p>AEP Ohio Transmission Company  <b>Melmore - Tiffin Center</b>  <b>138 kV Transmission Line</b>  <b>Land Use/Land Cover Features</b>  Sandusky &amp; Seneca County Ohio</p> <p>Projected Coordinate System: Ohio State Plane  Datum: North American Datum of 1983  Projection: Lambert Conformal Conic  Zone: North  Linear Unit: Feet</p>		<p>Scale: 1" = 500' (1:6,000)</p> <p>Date: 9/3/2013</p> <p>Map Sheet 08 of 11</p> <p>0 125 250 Feet</p> <p>Commonwealth of Ohio  <b>AEP AMERICAN ELECTRIC POWER</b></p>
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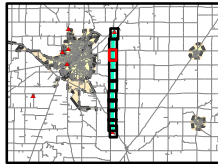
SYM Substation & Transmission Line		SYM Transportation & Hydrology		SYM Boundary & Feature		SYM Land Use/Land Cover		SYM Wetlands	
● Substation	— Existing 230 kV	— Interstate	— City/Township County	— Open Water	— Palustrine Emergent	— Existing 345 kV	— Cropland & Pasture	— Palustrine Forested	— Palustrine Emergent
— Proposed Structure	— Existing 500 kV	— Railroad	— New Entrance	— Deciduous Forest	— Palustrine Scrub/Shrub	— Existing 88 kV	— Industrial & Commercial	— Palustrine Unconsolidated Bottom	— Palustrine Scrub/Shrub
— Existing 69 kV	— Existing 765 kV	— Major/Local Road	— 200' Right of Way	— Industrial & Commercial	— Palustrine Unconsolidated Bottom	— Existing 115 kV	— Transportation	— Lacustrine/Riverine	— Palustrine Unconsolidated Bottom
— Existing 138 kV		— River/Stream/Lake/Pond	— Map Index	— Residential	— Wetland	— Existing 161 kV		— Delineated Wetland	— Delineated Wetland
		— Delineated Stream	— Agriculture District Contour 20'						
		— Lake (Location Map)							
		— Watershed							



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**AEP Ohio Transmission Company**  
**Melmore - Tiffin Center**  
**138 kV Transmission Line**  
**Land Use/Land Cover Features**  
**Sandusky & Seneca County Ohio**

Projected Coordinate System: Ohio State Plane  
Datum: North American Datum of 1983  
Projection: Lambert Conformal Conic  
Zone: North  
Linear Unit: Feet



Scale: 1" = 500' (1:6,000)

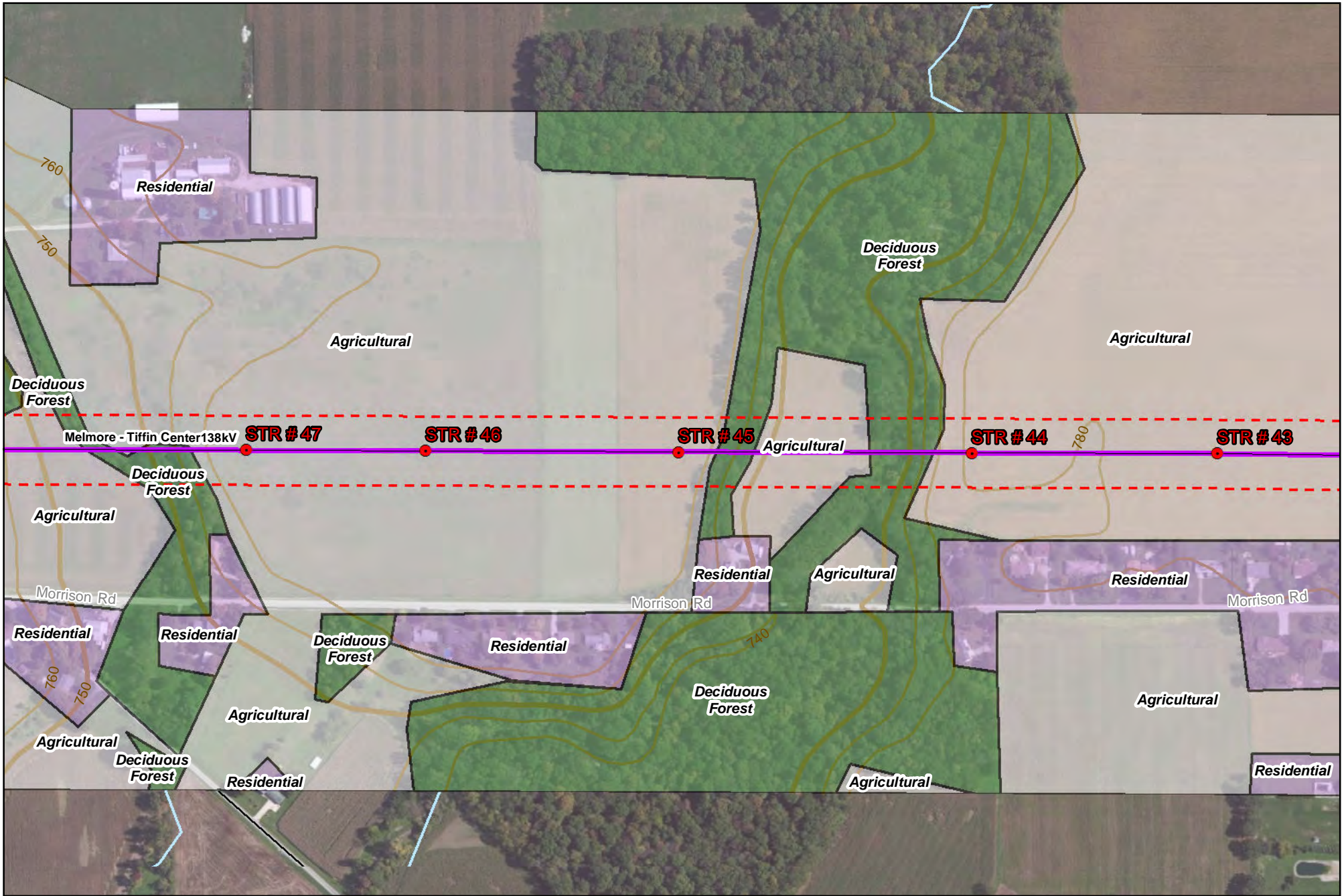
Map Sheet 09 of 11

0 125 250 Feet

**Commonwealth** **AEP AMERICAN ELECTRIC POWER**

Date: 9/3/2013



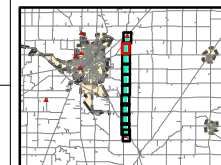


SYM	Substation & Transmission Line	SYM	Transportation & Hydrology	SYM	Boundary & Feature	SYM	Land Use/Land Cover	SYM	Wetlands
●	Substation	—	Interstate	□	City/Township County	□	Open Water	■	Palustrine Emergent
—	Existing Structure	—	Highway	□	New Entrance	■	Cropland & Pasture	■	Palustrine Forested
—	Proposed Structure	—	Railroad	□	Map Index	■	Deciduous Forest	■	Palustrine Scrub/Shrub
—	Existing 69 kV	—	Major/Local Road	□	200' Right of Way	■	Industrial & Commercial	■	Palustrine Unconsolidated Bottom
—	Existing 88 kV	—	River/Stream/Lake/Pond	□	2,000 ft Corridor	■	Transportation	■	Lacustrine/Riverine
—	Existing 115 kV	—	Delineated Stream	□	Agriculture District	■	Residential	■	Delineated Wetland
—	Existing 138 kV	—	Lake (Location Map)	□	Contour 20'	■	Wetland		
—	Existing 161 kV	—	Watershed						



AEP Ohio Transmission Company  
**Melmore - Tiffin Center**  
**138 kV Transmission Line**  
**Land Use/Land Cover Features**  
 Sandusky & Seneca County Ohio

Projected Coordinate System: Ohio State Plane  
 Datum: North American Datum of 1983  
 Projection: Lambert Conformal Conic  
 Zone: North  
 Linear Unit: Feet



Scale: 1" = 500' (1:6,000)

Date: 9/3/2013

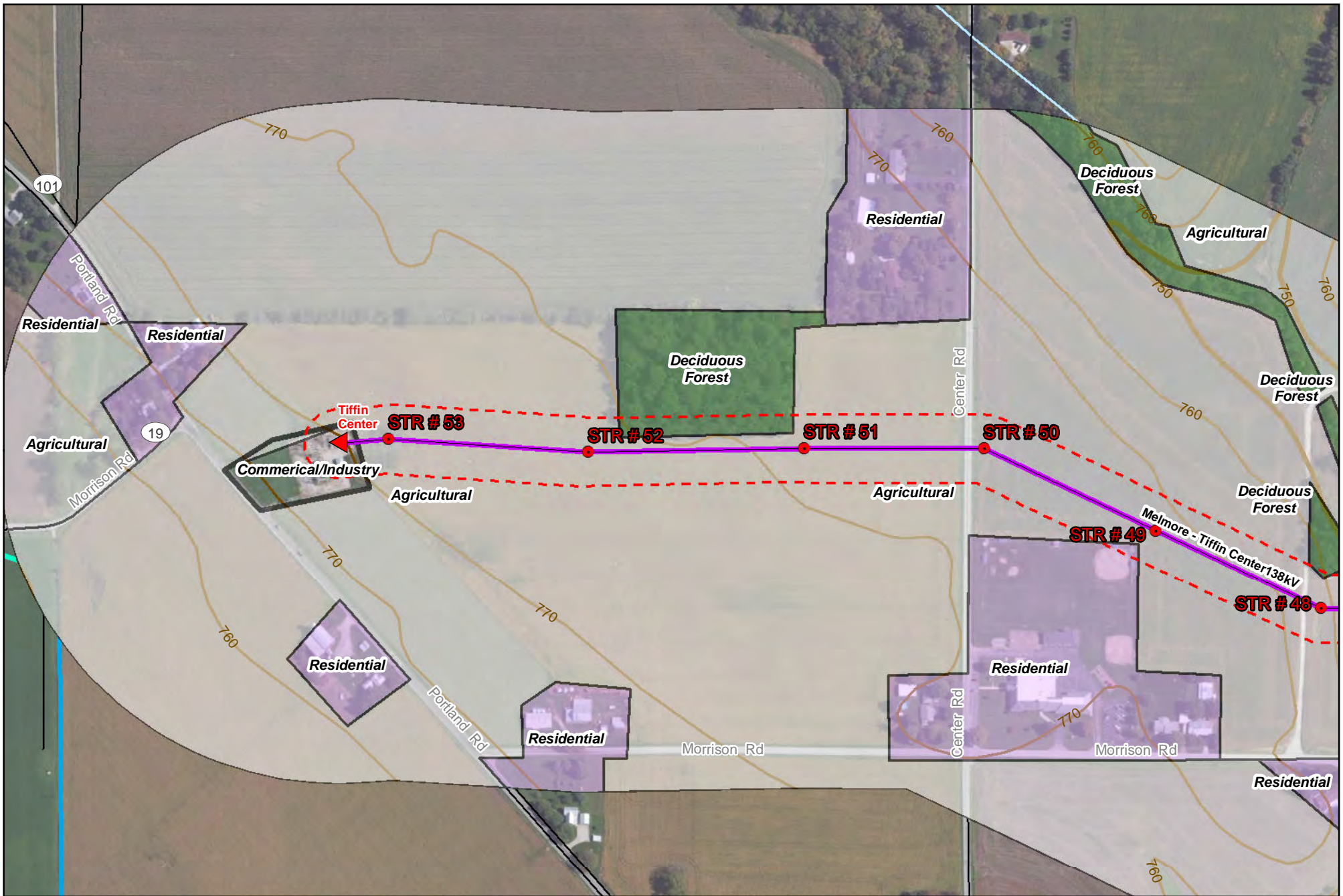
Map Sheet 10 of 11

0 125 250 Feet

Commonwealth

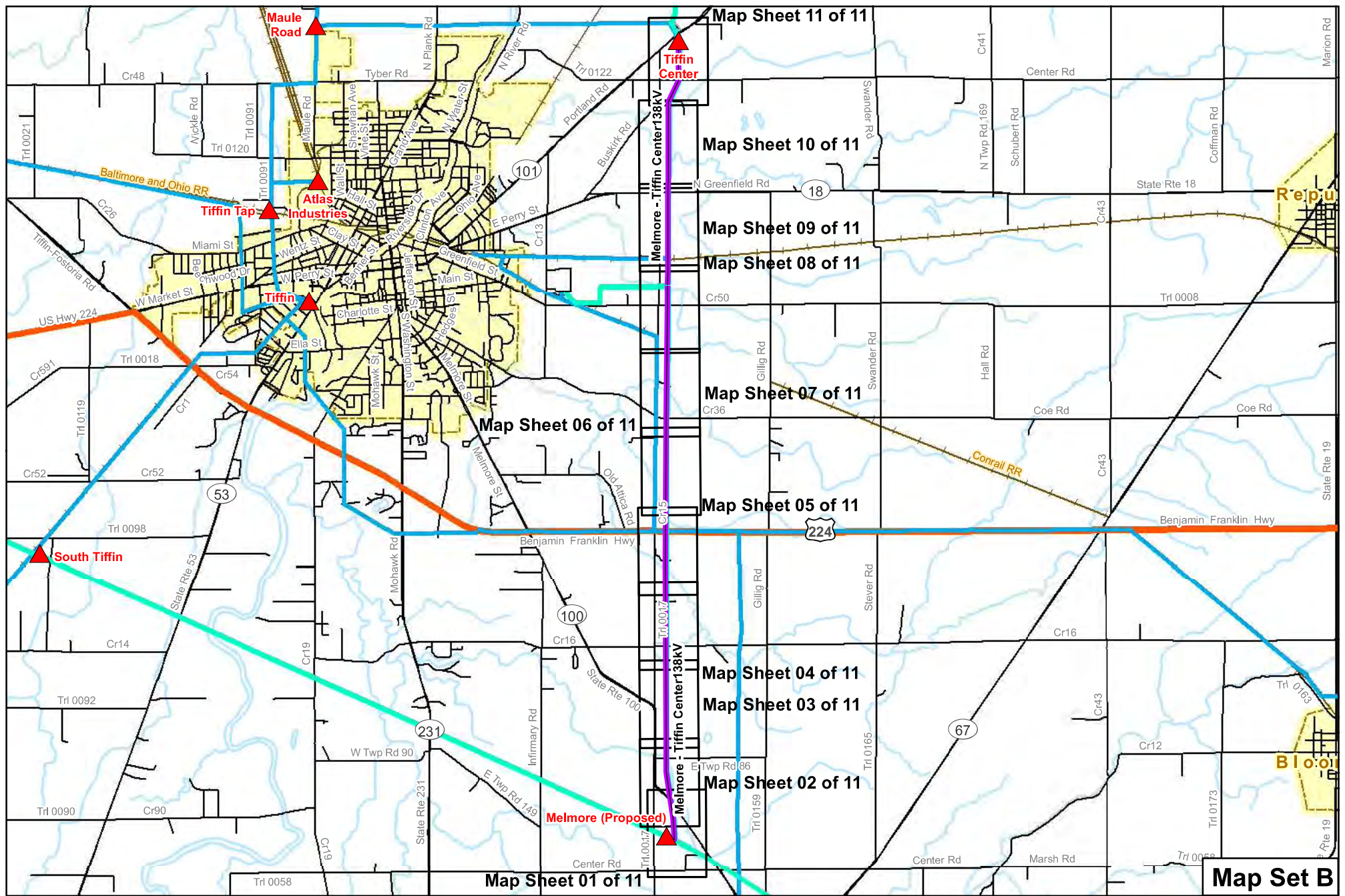
AEP AMERICAN ELECTRIC POWER





<b>SYM Substation &amp; Transmission Line</b> <ul style="list-style-type: none"> <li>Substation</li> <li>Existing Structure</li> <li>Proposed Structure</li> <li>Existing 69 kV</li> <li>Existing 88 kV</li> <li>Existing 115 kV</li> <li>Existing 138 kV</li> <li>Existing 161 kV</li> <li>Existing 230 kV</li> <li>Existing 345 kV</li> <li>Existing 500 kV</li> <li>Existing 765 kV</li> </ul>	<b>SYM Transportation &amp; Hydrology</b> <ul style="list-style-type: none"> <li>Interstate</li> <li>Highway</li> <li>Railroad</li> <li>Major/Local Road</li> <li>River/Stream/Lake/Pond</li> <li>Delineated Stream</li> <li>Lake (Location Map)</li> <li>Watershed</li> </ul>	<b>SYM Boundary &amp; Feature</b> <ul style="list-style-type: none"> <li>City/Township County</li> <li>New Entrance</li> <li>Map Index</li> <li>200' Right of Way</li> <li>2,000 ft Corridor</li> <li>Agriculture District</li> <li>Contour 20'</li> </ul>	<b>SYM Land Use/Land Cover</b> <ul style="list-style-type: none"> <li>Open Water</li> <li>Cropland &amp; Pasture</li> <li>Deciduous Forest</li> <li>Industrial &amp; Commercial</li> <li>Industrial &amp; Transportation</li> <li>Residential</li> <li>Wetland</li> </ul>	<b>SYM Wetlands</b> <ul style="list-style-type: none"> <li>Palustrine Emergent</li> <li>Palustrine Forested</li> <li>Palustrine Scrub/Shrub</li> <li>Palustrine Unconsolidated Bottom</li> <li>Lacustrine/Riverine</li> <li>Delineated Wetland</li> </ul>		<p>AEP Ohio Transmission Company  Melmore - Tiffin Center  138 kV Transmission Line  Land Use/Land Cover Features  Sandusky &amp; Seneca County Ohio</p> <p>Projected Coordinate System: Ohio State Plane  Datum: North American Datum of 1983  Projection: Lambert Conformal Conic  Zone: North  Linear Unit: Feet</p>		<p>Scale: 1" = 500' (1:6,000)</p> <p>Date: 9/3/2013</p> <p>Map Sheet 11 of 11</p> <p>0 125 250 Feet</p> <p>Commonwealth AEP AMERICAN ELECTRIC POWER</p>
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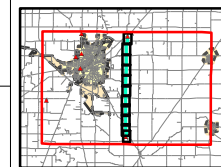


SYM Substation & Transmission Line		SYM Transportation & Hydrology		SYM Boundary & Feature		SYM Land Use/Land Cover		SYM Wetlands	
▲ Substation	Existing 230 kV	Interstate	Open Water	City/Township	Open Water	Palustrine Emergent	Palustrine Emergent	Palustrine Emergent	Palustrine Emergent
Existing Structure	Existing 345 kV	Highway	Cropland & Pasture	County	Cropland & Pasture	Palustrine Forested	Palustrine Forested	Palustrine Forested	Palustrine Forested
Proposed Structure	Existing 500 kV	Railroad	Deciduous Forest	New Entrance	Deciduous Forest	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub
Existing 69 kV	Existing 765 kV	Major/Local Road	Industrial & Commercial	Map Index	Industrial & Commercial	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom
Existing 88 kV		River/Stream/Lake/Pond	200' Right of Way	200' Right of Way	200' Right of Way	Lacustrine/Riverine	Lacustrine/Riverine	Lacustrine/Riverine	Lacustrine/Riverine
Existing 115 kV		Delineated Stream	Agriculture District	Agriculture District	Agriculture District	Delineated Wetland	Delineated Wetland	Delineated Wetland	Delineated Wetland
Existing 138 kV		Lake (Location Map)	Contour 20'	Contour 20'	Contour 20'				
Existing 161 kV		Watershed							



AEP Ohio Transmission Company  
**Melmore - Tiffin Center**  
**138 kV Transmission Line**  
 Seneca County Ohio

Projected Coordinate System: Ohio State Plane  
 Datum: North American Datum of 1983  
 Projection: Lambert Conformal Conic  
 Zone: North  
 Linear Unit: Feet



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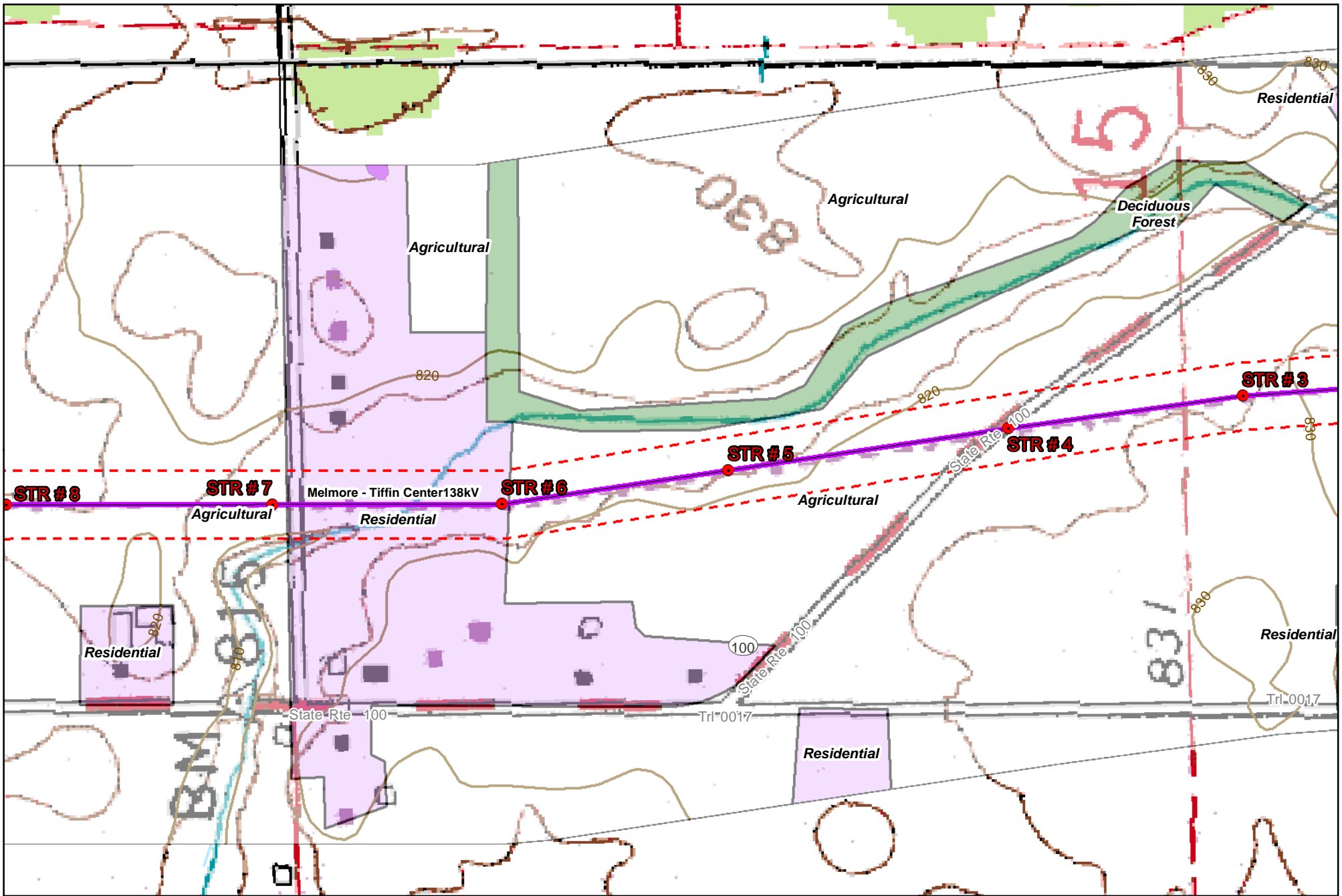
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 Land Use with USGS  
 Quad, Map as Base


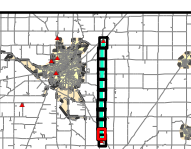
0 2,000 4,000 Feet

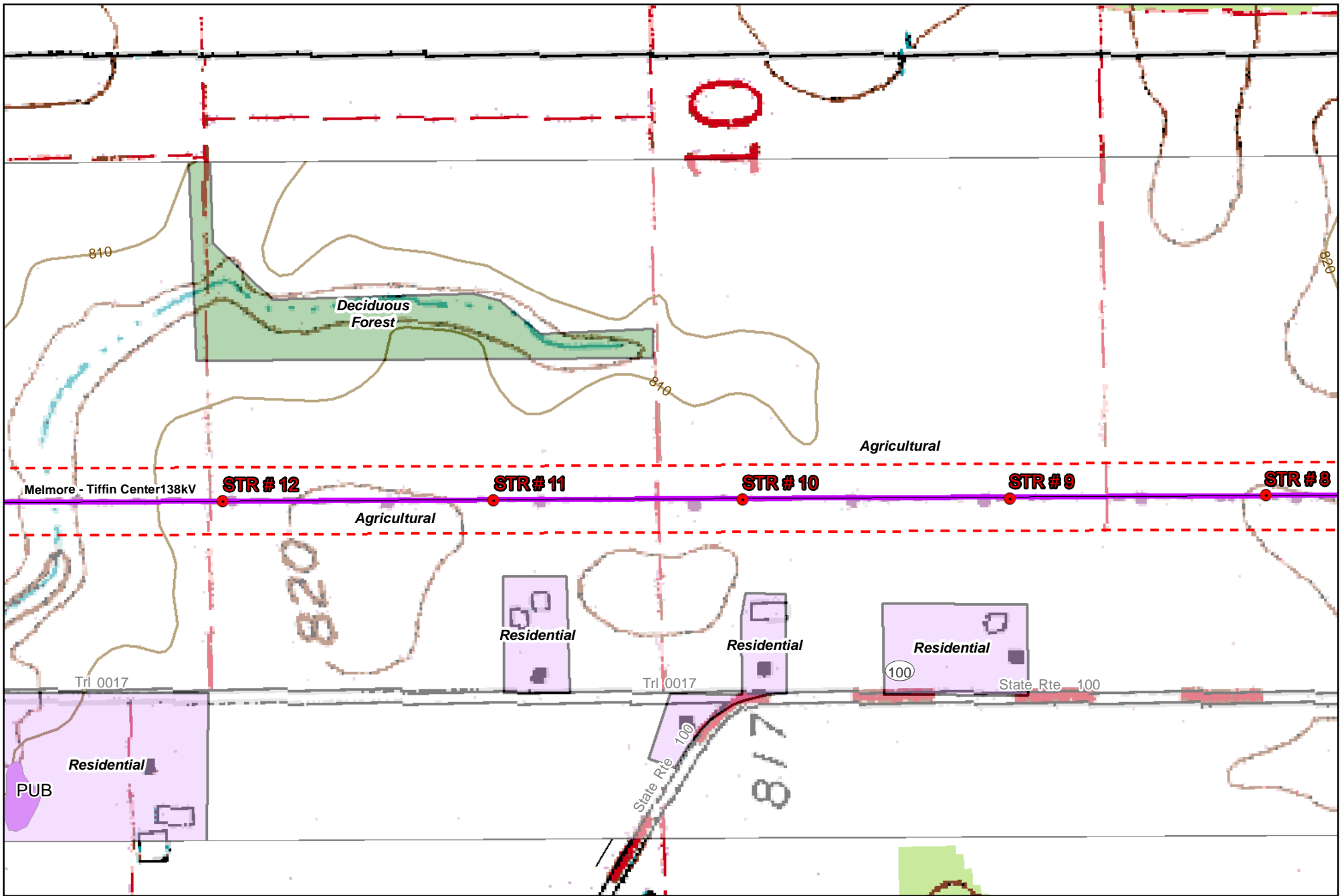
**Commonwealth** **AEP AMERICAN ELECTRIC POWER**


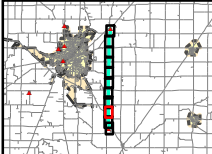


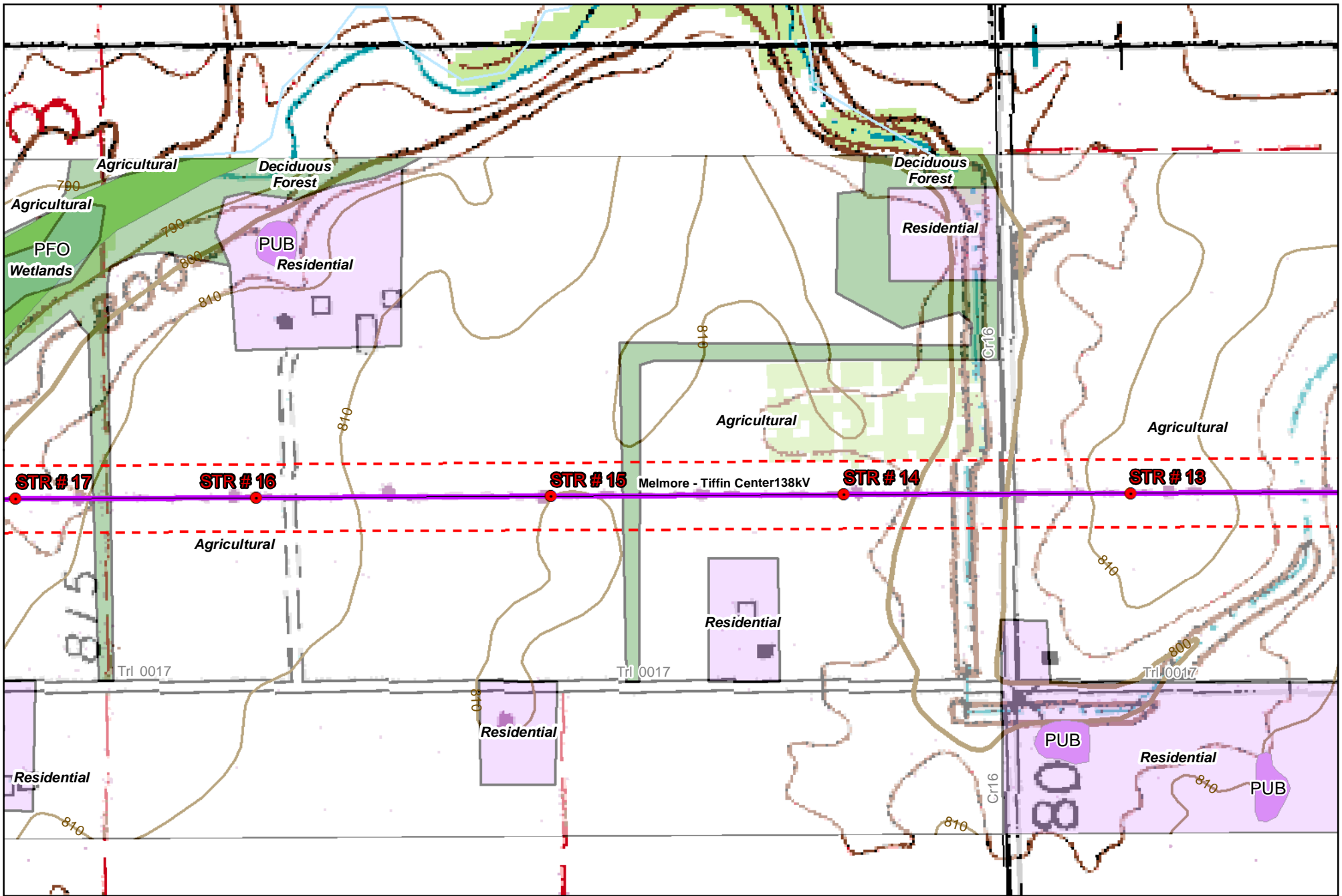




<b>SYM Substation &amp; Transmission Line</b> <ul style="list-style-type: none"> <li>Substation</li> <li>Existing Structure</li> <li>Proposed Structure</li> <li>Existing 69 kV</li> <li>Existing 88 kV</li> <li>Existing 115 kV</li> <li>Existing 138 kV</li> <li>Existing 161 kV</li> </ul>	<b>SYM Transportation &amp; Hydrology</b> <ul style="list-style-type: none"> <li>Interstate</li> <li>Highway</li> <li>Railroad</li> <li>Major/Local Road</li> <li>River/Stream/Lake/Pond</li> <li>Delineated Stream</li> <li>Lake (Location Map)</li> <li>Watershed</li> </ul>	<b>SYM Boundary &amp; Feature</b> <ul style="list-style-type: none"> <li>City/Township County</li> <li>New Entrance</li> <li>Map Index</li> <li>200' Right of Way</li> <li>2,000 ft Corridor</li> <li>Agriculture District</li> <li>Contour 20'</li> </ul>	<b>SYM Land Use/Land Cover</b> <ul style="list-style-type: none"> <li>Open Water</li> <li>Cropland &amp; Pasture</li> <li>Deciduous Forest</li> <li>Industrial &amp; Commercial</li> <li>Industrial &amp; Transportation</li> <li>Residential</li> <li>Wetland</li> </ul>	<b>SYM Wetlands</b> <ul style="list-style-type: none"> <li>Palustrine Emergent</li> <li>Palustrine Forested</li> <li>Palustrine Scrub/Shrub</li> <li>Palustrine Unconsolidated Bottom</li> <li>Lacustrine/Riverine</li> <li>Delineated Wetland</li> </ul>		<p>AEP Ohio Transmission Company  <b>Melmore - Tiffin Center</b>  <b>138 kV Transmission Line</b>  <b>Land Use/LandCover Features</b>  Sandusky &amp; Seneca County Ohio</p> <p>Projected Coordinate System: Ohio State Plane  Datum: North American Datum of 1983  Projection: Lambert Conformal Conic  Zone: North  Linear Unit: Feet</p>		<p>Scale: 1" = 500' (1:6,000)</p> <p>Date: 9/3/2013</p> <p>Map Sheet 02 of 11</p> <p>0 125 250 Feet</p> <p>Commonwealth AEP AMERICAN ELECTRIC POWER</p>
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SYM Substation & Transmission Line		SYM Transportation & Hydrology		SYM Boundary & Feature		SYM Land Use/Land Cover		SYM Wetlands			<div><div>AEP Ohio Transmission Company</div><div>Melmore - Tiffin Center</div><div>138 kV Transmission Line</div><div>Land Use/Land Cover Features</div><div>Sandusky &amp; Seneca County Ohio</div></div> <div><div>Projected Coordinate System: Ohio State Plane</div><div>Datum: North American Datum of 1983</div><div>Projection: Lambert Conformal Conic</div><div>Zone: North</div><div>Linear Unit: Feet</div></div>		Scale: 1" = 500' (1:6,000)		Date: 9/3/2013
								Map Sheet 03 of 11					<div><div>0125250</div><div>Feet</div></div>		
<div><div>▲ Substation</div><div>● Existing Structure</div><div>■ Proposed Structure</div><div>— Existing 69 kV</div><div>— Existing 88 kV</div><div>— Existing 115 kV</div><div>— Existing 138 kV</div><div>— Existing 161 kV</div></div>	<div><div>— Existing 230 kV</div><div>— Existing 345 kV</div><div>— Existing 500 kV</div><div>— Existing 765 kV</div></div>	<div><div>— Interstate</div><div>— Highway</div><div>— Railroad</div><div>— Major/Local Road</div><div>— River/Stream/Lake/Pond</div><div>— Delineated Stream</div><div>— Lake (Location Map)</div><div>— Watershed</div></div>	<div><div>— City/Township County</div><div>— New Entrance</div><div>— Map Index</div><div>— 200' Right of Way</div><div>— 2,000 ft Corridor</div><div>— Agriculture District</div><div>— Contour 20'</div></div>	<div><div>— Open Water</div><div>— Cropland &amp; Pasture</div><div>— Deciduous Forest</div><div>— Industrial &amp; Commercial</div><div>— Industrial &amp; Transportation</div><div>— Residential</div><div>— Wetland</div></div>	<div><div>— Palustrine Emergent</div><div>— Palustrine Forested</div><div>— Palustrine Scrub/Shrub</div><div>— Palustrine Unconsolidated Bottom</div><div>— Lacustrine/Riverine</div><div>— Delineated Wetland</div></div>										

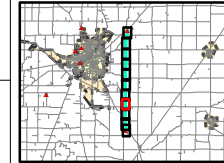


SYM Substation & Transmission Line		SYM Transportation & Hydrology		SYM Boundary & Feature		SYM Land Use/Land Cover		SYM Wetlands	
● Substation	Existing 230 kV	Interstate	City/Township County	Open Water	Palustrine Emergent	Palustrine Emergent	Palustrine Emergent	Palustrine Emergent	Palustrine Emergent
— Existing Structure	Existing 345 kV	Highway	New Entrance	Cropland & Pasture	Palustrine Forested	Palustrine Forested	Palustrine Forested	Palustrine Forested	Palustrine Forested
— Proposed Structure	Existing 500 kV	Railroad	Map Index	Deciduous Forest	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub
— Existing 69 kV	Existing 765 kV	Major/Local Road	200' Right of Way	Industrial & Commercial	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom
— Existing 88 kV		River/Stream/Lake/Pond	Agriculture District Contour 20'	Industrial & Transportation	Lacustrine/Riverine	Lacustrine/Riverine	Lacustrine/Riverine	Lacustrine/Riverine	Lacustrine/Riverine
— Existing 115 kV		Delineated Stream		Residential	Delineated Wetland	Delineated Wetland	Delineated Wetland	Delineated Wetland	Delineated Wetland
— Existing 138 kV		Lake (Location Map)		Wetland					
— Existing 161 kV		Watershed							



AEP Ohio Transmission Company  
**Melmore - Tiffin Center**  
**138 kV Transmission Line**  
**Land Use/Land Cover Features**  
 Sandusky & Seneca County Ohio

Projected Coordinate System: Ohio State Plane  
 Datum: North American Datum of 1983  
 Projection: Lambert Conformal Conic  
 Zone: North  
 Linear Unit: Feet



Scale: 1" = 500' (1:6,000)

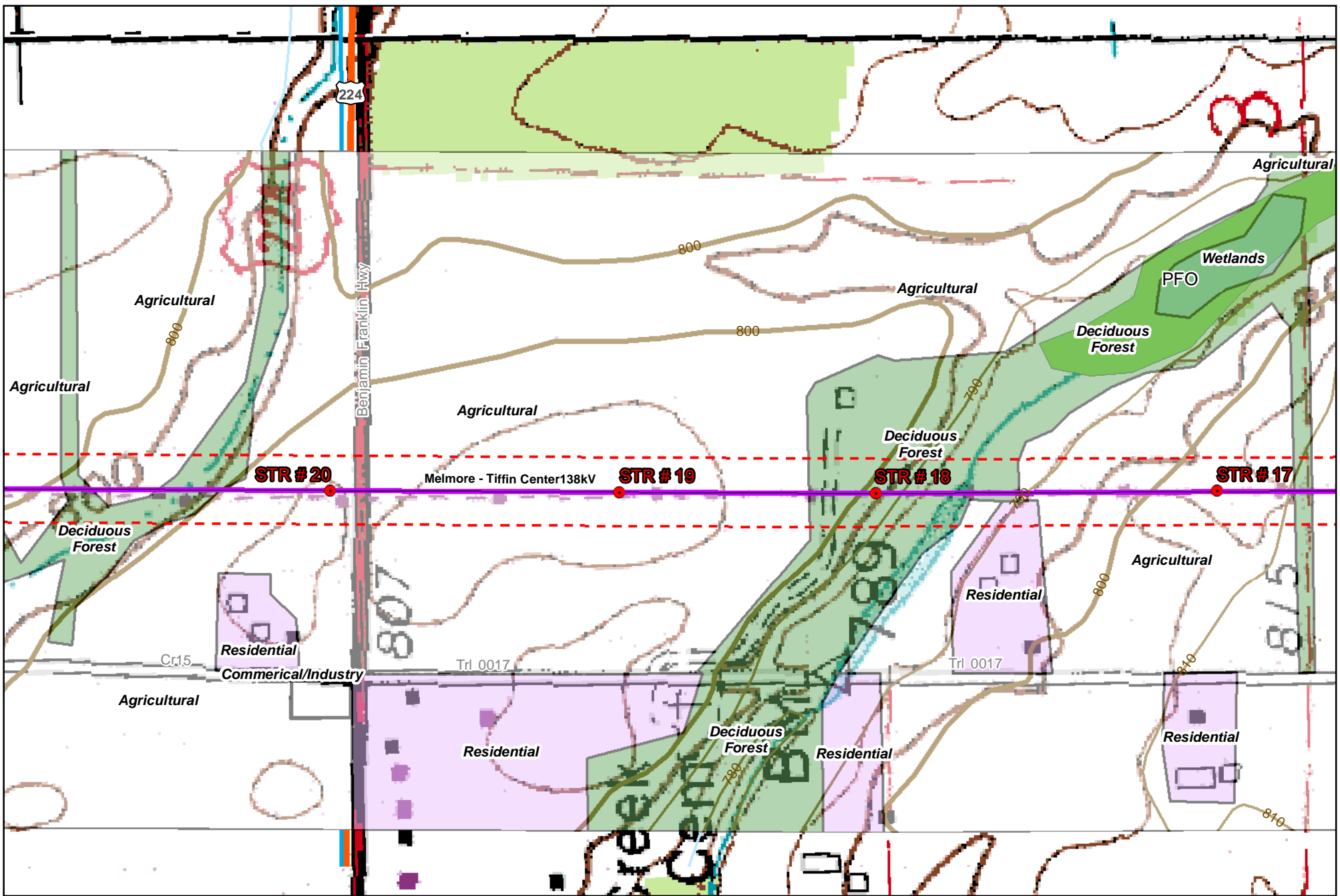
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Map Sheet 04 of 11

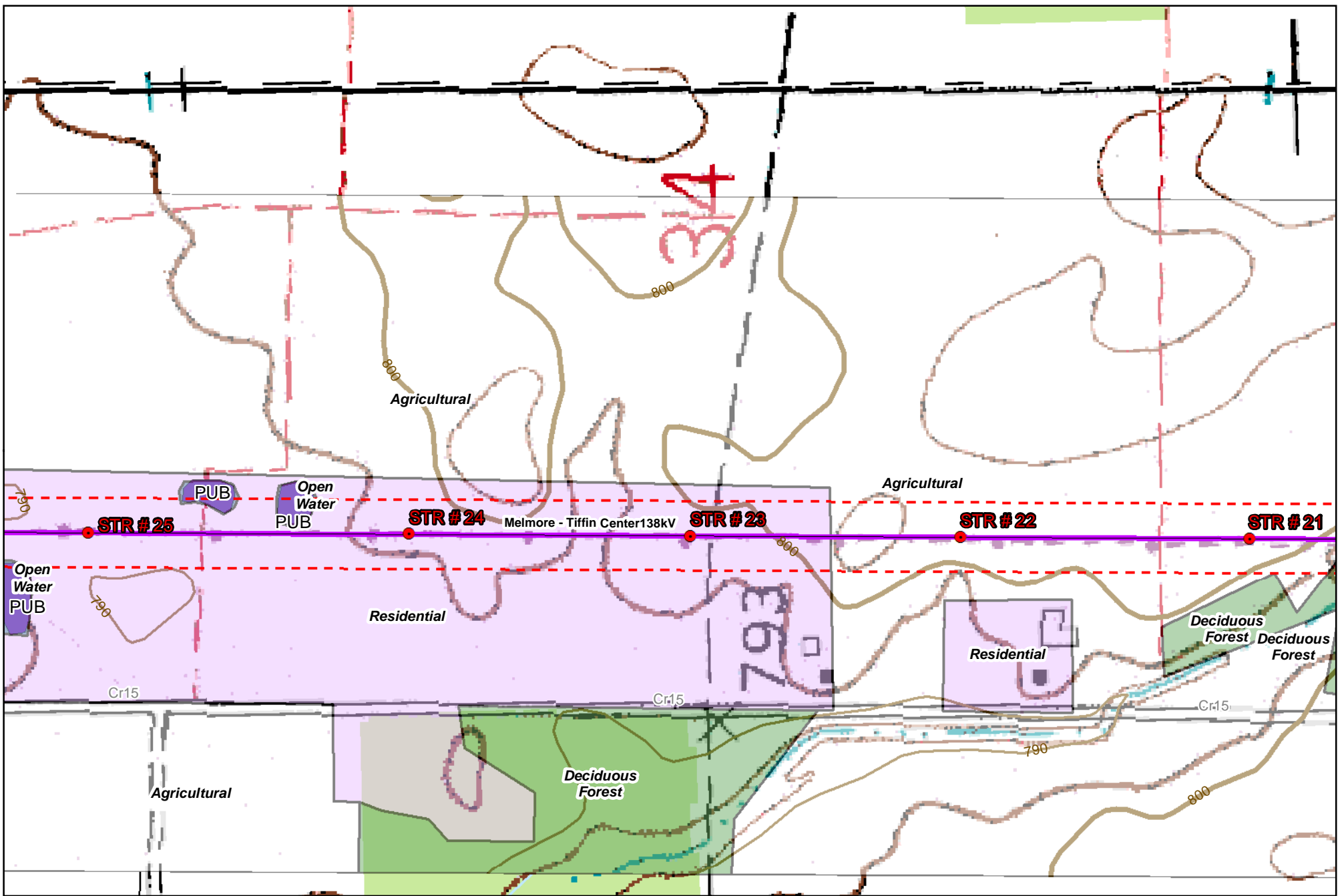
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Commonwealth

AEP AMERICAN ELECTRIC POWER

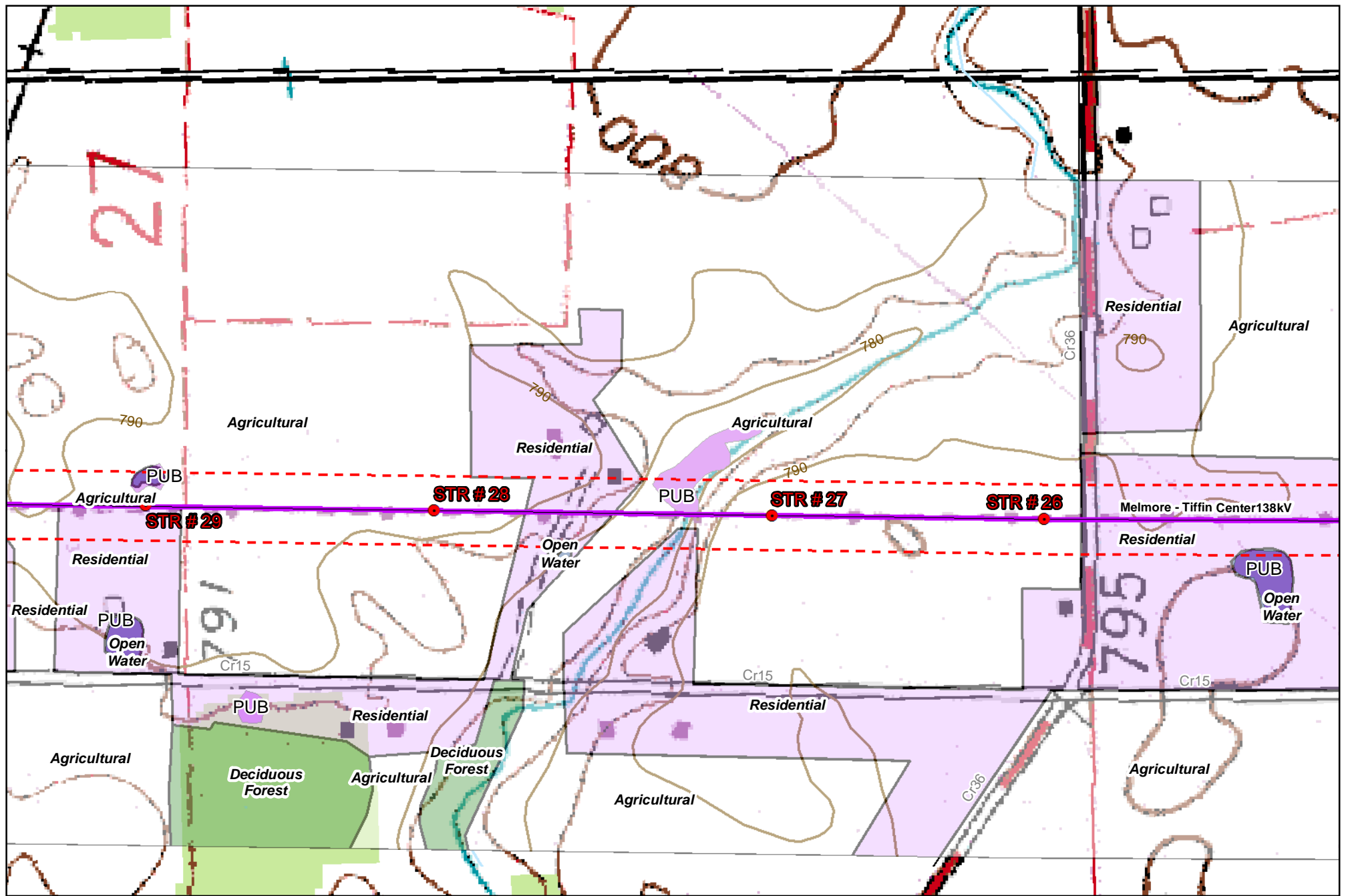


<b>SYM Substation &amp; Transmission Line</b> ● Substation ■ Existing Structure ■ Proposed Structure — Existing 69 kV — Existing 88 kV — Existing 115 kV — Existing 138 kV — Existing 161 kV — Existing 230 kV — Existing 345 kV — Existing 500 kV — Existing 765 kV	<b>SYM Transportation &amp; Hydrology</b> — Interstate — Highway — Railroad — Major/Local Road — River/Stream/Lake/Pond — Delineated Stream — Lake (Location Map) — Watershed	<b>SYM Boundary &amp; Feature</b> ■ City/Township ■ County ■ New Entrance ■ Map Index ■ 200' Right of Way ■ 2,000 ft Corridor ■ Agriculture District ■ Contour 20'	<b>SYM Land Use/Land Cover</b> ■ Open Water ■ Cropland & Pasture ■ Deciduous Forest ■ Industrial & Commercial ■ Industrial & Transportation ■ Residential ■ Wetland	<b>SYM Wetlands</b> ■ Palustrine Emergent ■ Palustrine Forested ■ Palustrine Scrub/Shrub ■ Palustrine Unconsolidated Bottom ■ Lacustrine/Riverine ■ Delineated Wetland	<div style="text-align: center;"> </div>	<b>AEP Ohio Transmission Company</b> <b>Melmore - Tiffin Center</b> <b>138 kV Transmission Line</b> <b>Land Use/Land Cover Features</b> <b>Sandusky &amp; Seneca County Ohio</b> Projected Coordinate System: Ohio State Plane Datum: North American Datum of 1983 Projection: Lambert Conformal Conic Zone: North Linear Unit: Feet	<div style="text-align: center;"> </div>	Scale: 1" = 500' (1:6,000) Date: 9/3/2013 Map Sheet 05 of 11 <div style="text-align: center;"> </div>	<div style="display: flex; justify-content: space-around;"> </div>
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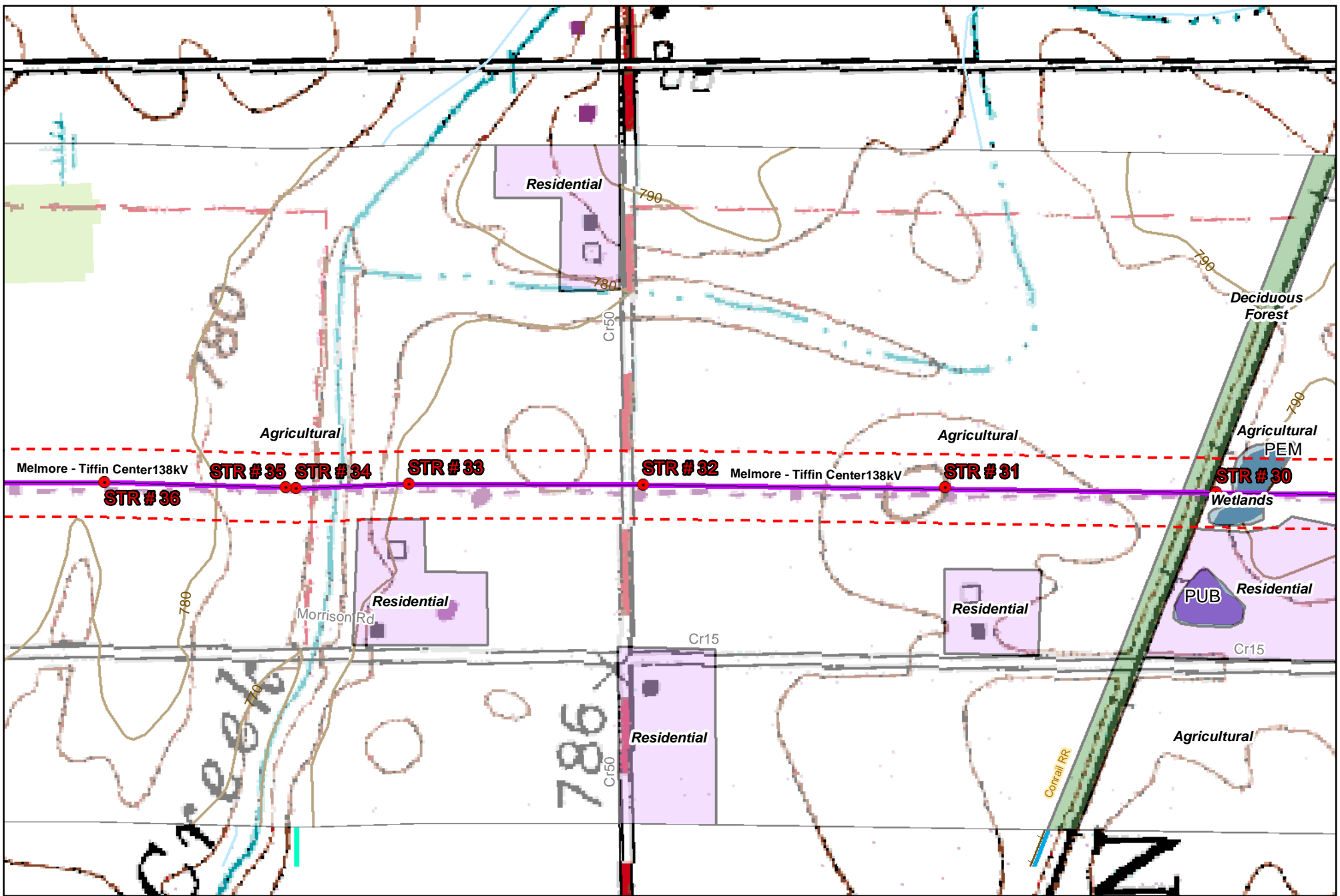


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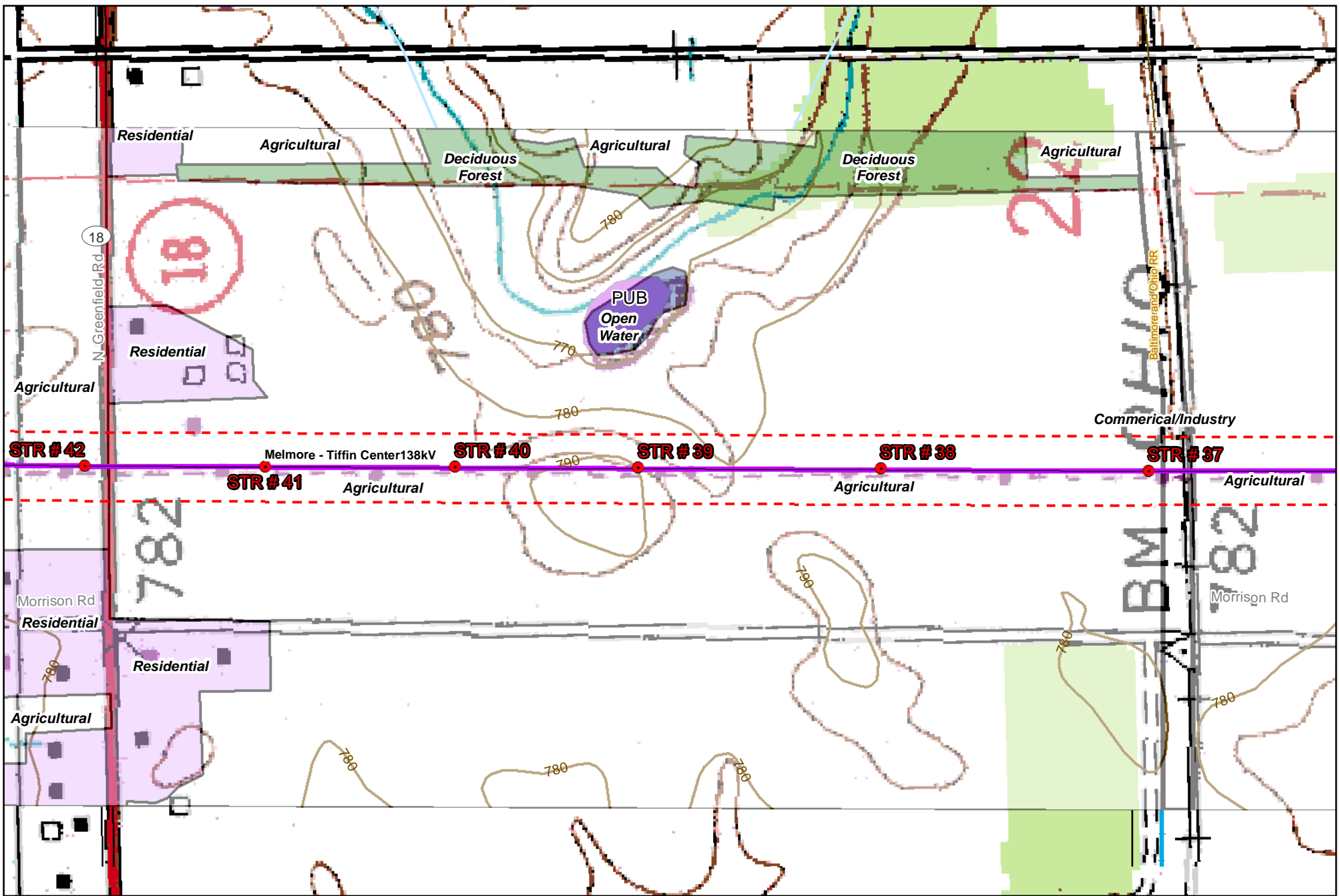




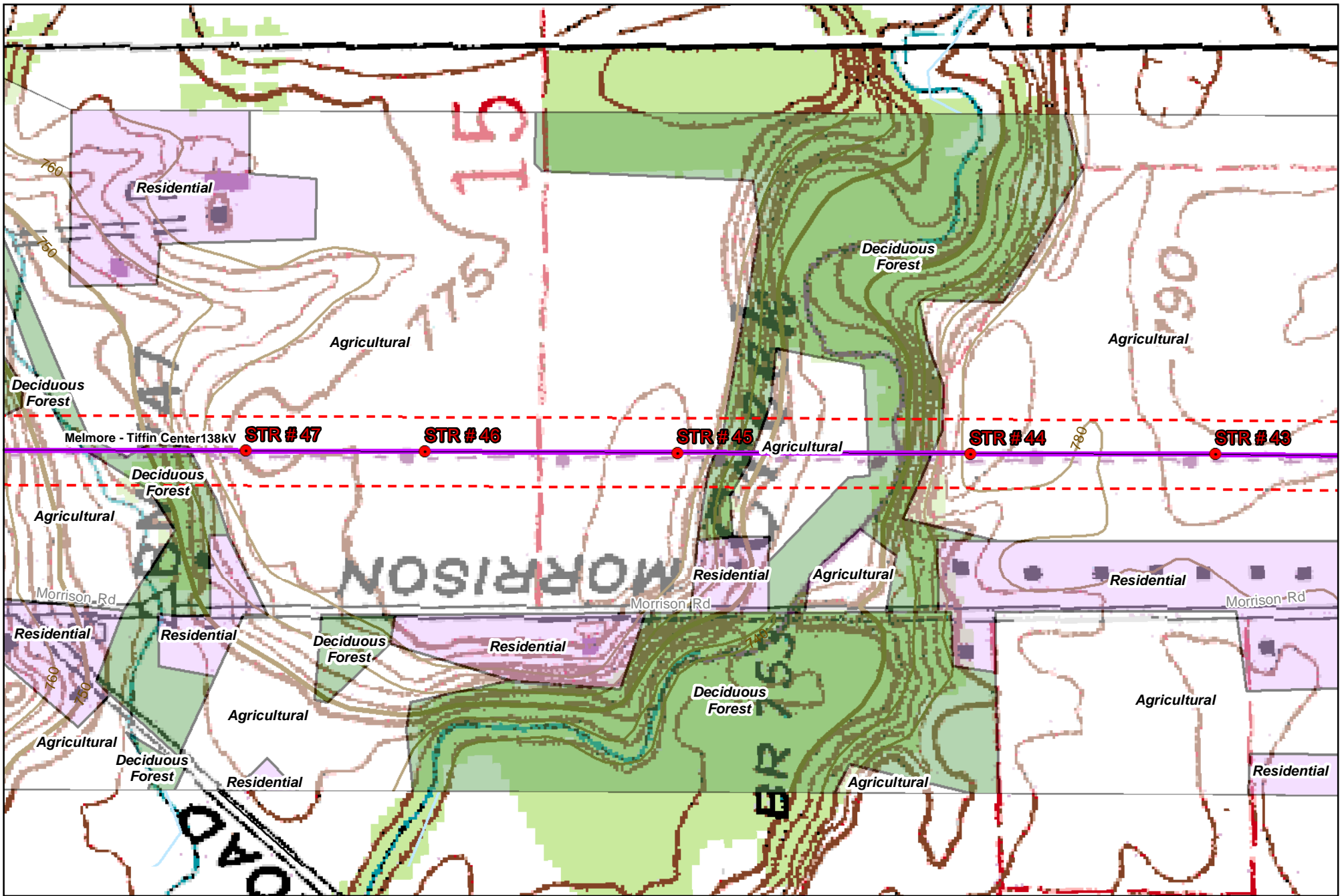
<b>SYM Substation &amp; Transmission Line</b> <ul style="list-style-type: none"> <li>Substation</li> <li>Existing Structure</li> <li>Proposed Structure</li> <li>Existing 69 kV</li> <li>Existing 88 kV</li> <li>Existing 115 kV</li> <li>Existing 138 kV</li> <li>Existing 161 kV</li> <li>Existing 230 kV</li> <li>Existing 345 kV</li> <li>Existing 500 kV</li> <li>Existing 765 kV</li> </ul>	<b>SYM Transportation &amp; Hydrology</b> <ul style="list-style-type: none"> <li>Interstate</li> <li>Highway</li> <li>Railroad</li> <li>Major/Local Road</li> <li>River/Stream/Lake/Pond</li> <li>Delineated Stream</li> <li>Lake (Location Map)</li> <li>Watershed</li> </ul>	<b>SYM Boundary &amp; Feature</b> <ul style="list-style-type: none"> <li>City/Township County</li> <li>New Entrance</li> <li>Map Index</li> <li>200' Right of Way</li> <li>2,000 ft Corridor</li> <li>Agriculture District</li> <li>Contour 20'</li> </ul>	<b>SYM Land Use/Land Cover</b> <ul style="list-style-type: none"> <li>Open Water</li> <li>Cropland &amp; Pasture</li> <li>Deciduous Forest</li> <li>Industrial &amp; Commercial</li> <li>Industrial &amp; Transportation</li> <li>Residential</li> <li>Wetland</li> </ul>	<b>SYM Wetlands</b> <ul style="list-style-type: none"> <li>Palustrine Emergent</li> <li>Palustrine Forested</li> <li>Palustrine Scrub/Shrub</li> <li>Palustrine Unconsolidated Bottom</li> <li>Lacustrine/Riverine</li> <li>Delineated Wetland</li> </ul>		<p>AEP Ohio Transmission Company  <b>Melmore - Tiffin Center</b>  <b>138 kV Transmission Line</b>  <b>Land Use/Land Cover Features</b>  Sandusky &amp; Seneca County Ohio</p> <p>Projected Coordinate System: Ohio State Plane  Datum: North American Datum of 1983  Projection: Lambert Conformal Conic  Zone: North  Linear Unit: Feet</p>		<p>Scale: 1" = 500' (1:6,000)</p> <p>Date: 9/3/2013</p> <p>Map Sheet 07 of 11</p> <p>0 125 250 Feet</p> <p>Commonwealth  AEP AMERICAN ELECTRIC POWER</p>
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<b>SYM Substation &amp; Transmission Line</b> <ul style="list-style-type: none"> <li>Substation</li> <li>Existing Structure</li> <li>Proposed Structure</li> <li>Existing 69 kV</li> <li>Existing 88 kV</li> <li>Existing 115 kV</li> <li>Existing 138 kV</li> <li>Existing 161 kV</li> <li>Existing 230 kV</li> <li>Existing 345 kV</li> <li>Existing 500 kV</li> <li>Existing 765 kV</li> </ul>	<b>SYM Transportation &amp; Hydrology</b> <ul style="list-style-type: none"> <li>Interstate</li> <li>Highway</li> <li>Railroad</li> <li>Major/Local Road</li> <li>River/Stream/Lake/Pond</li> <li>Delineated Stream</li> <li>Lake (Location Map)</li> <li>Watershed</li> </ul>	<b>SYM Boundary &amp; Feature</b> <ul style="list-style-type: none"> <li>City/Township County</li> <li>New Entrance</li> <li>Map Index</li> <li>200' Right of Way</li> <li>2,000 ft Corridor</li> <li>Agriculture District</li> <li>Contour 20'</li> </ul>	<b>SYM Land Use/Land Cover</b> <ul style="list-style-type: none"> <li>Open Water</li> <li>Cropland &amp; Pasture</li> <li>Deciduous Forest</li> <li>Industrial &amp; Commercial</li> <li>Industrial &amp; Transportation</li> <li>Residential</li> <li>Wetland</li> </ul>	<b>SYM Wetlands</b> <ul style="list-style-type: none"> <li>Palustrine Emergent</li> <li>Palustrine Forested</li> <li>Palustrine Scrub/Shrub</li> <li>Palustrine Unconsolidated Bottom</li> <li>Lacustrine/Riverine</li> <li>Delineated Wetland</li> </ul>		<p>AEP Ohio Transmission Company  Melmore - Tiffin Center  138 kV Transmission Line  Land Use/Land Cover Features  Sandusky &amp; Seneca County Ohio</p> <p>Projected Coordinate System: Ohio State Plane  Datum: North American Datum of 1983  Projection: Lambert Conformal Conic  Zone: North  Linear Unit: Feet</p>		<p>Scale: 1" = 500' (1:6,000)</p> <p>Date: 9/3/2013</p> <p>Map Sheet 08 of 11</p> <p>0 125 250 Feet</p> <p>Commonwealth of Ohio  AEP AMERICAN ELECTRIC POWER</p>
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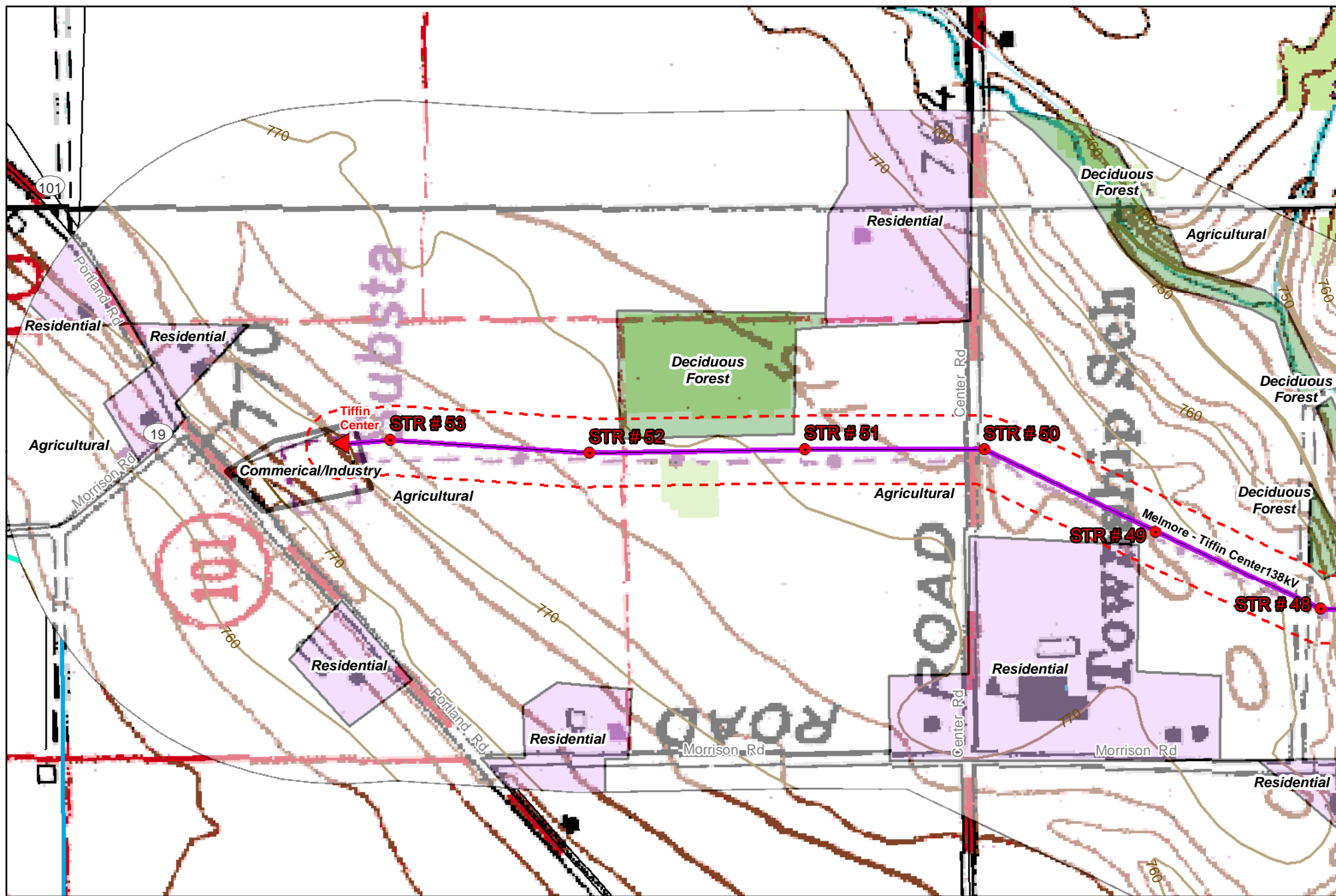


<b>SYM Substation &amp; Transmission Line</b> ● Substation — Existing Structure — Proposed Structure — Existing 69 kV — Existing 88 kV — Existing 115 kV — Existing 138 kV — Existing 161 kV — Existing 230 kV — Existing 345 kV — Existing 500 kV — Existing 765 kV	<b>SYM Transportation &amp; Hydrology</b> — Interstate — Highway — Railroad — Major/Local Road — River/Stream/Lake/Pond — Delineated Stream — Lake (Location Map) — Watershed	<b>SYM Boundary &amp; Feature</b> — City/Township County — New Entrance — Map Index — 200' Right of Way — 2,000 ft Corridor — Agriculture District — Contour 20'	<b>SYM Land Use/Land Cover</b> — Open Water — Cropland & Pasture — Deciduous Forest — Industrial & Commercial — Transportation — Residential — Wetland	<b>SYM Wetlands</b> — Palustrine Emergent — Palustrine Forested — Palustrine Scrub/Shrub — Palustrine Unconsolidated Bottom — Lacustrine/Riverine — Delineated Wetland		<b>AEP Ohio Transmission Company</b> <b>Melmore - Tiffin Center</b> <b>138 kV Transmission Line</b> <b>Land Use/Land Cover Features</b> Sandusky & Seneca County Ohio Projected Coordinate System: Ohio State Plane Datum: North American Datum of 1983 Projection: Lambert Conformal Conic Zone: North Linear Unit: Feet		Scale: 1" = 500' (1:6,000) Date: 9/3/2013 Map Sheet 09 of 11  
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<b>SYM Substation &amp; Transmission Line</b> <ul style="list-style-type: none"> <li>Substation</li> <li>Existing Structure</li> <li>Proposed Structure</li> <li>Existing 69 kV</li> <li>Existing 88 kV</li> <li>Existing 115 kV</li> <li>Existing 138 kV</li> <li>Existing 161 kV</li> </ul>	<b>SYM Transportation &amp; Hydrology</b> <ul style="list-style-type: none"> <li>Interstate</li> <li>Highway</li> <li>Railroad</li> <li>Major/Local Road</li> <li>River/Stream/Lake/Pond</li> <li>Delineated Stream</li> <li>Lake (Location Map)</li> <li>Watershed</li> </ul>	<b>SYM Boundary &amp; Feature</b> <ul style="list-style-type: none"> <li>City/Township County</li> <li>New Entrance</li> <li>Map Index</li> <li>200' Right of Way</li> <li>2,000 ft Corridor</li> <li>Agriculture District</li> <li>Contour 20'</li> </ul>	<b>SYM Land Use/Land Cover</b> <ul style="list-style-type: none"> <li>Open Water</li> <li>Cropland &amp; Pasture</li> <li>Deciduous Forest</li> <li>Industrial &amp; Commercial</li> <li>Industrial &amp; Transportation</li> <li>Residential</li> <li>Wetland</li> </ul>	<b>SYM Wetlands</b> <ul style="list-style-type: none"> <li>Palustrine Emergent</li> <li>Palustrine Forested</li> <li>Palustrine Scrub/Shrub</li> <li>Palustrine Unconsolidated Bottom</li> <li>Lacustrine/Riverine</li> <li>Delineated Wetland</li> </ul>		<p>AEP Ohio Transmission Company  Melmore - Tiffin Center  138 kV Transmission Line  Land Use/Land Cover Features  Sandusky &amp; Seneca County Ohio</p> <p>Projected Coordinate System: Ohio State Plane  Datum: North American Datum of 1983  Projection: Lambert Conformal Conic  Zone: North  Linear Unit: Feet</p>		<p>Scale: 1" = 500' (1:6,000)</p> <p>Date: 9/3/2013</p> <p>Map Sheet 10 of 11</p> <p>0 125 250 Feet</p> <p>Commonwealth of Ohio  AEP AMERICAN ELECTRIC POWER</p>
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# **ENDANGERED SPECIES REVIEW REPORT**

## **FREMONT AREA IMPROVEMENT PROJECT**

### **MELMORE – TIFFIN CENTER 138kV TRANSMISSION LINE**

#### **SENECA COUNTY, OHIO**

*Prepared for:*



*American Electric Power  
700 Morrison Rd.  
Gahanna, OH 43230*

*Prepared by:*



*Commonwealth Associates, Inc.  
2700 W. Argyle St.  
Jackson, MI 49202*

*Report Date: October 2013*



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## FIGURES

(Follows text)

Figure 1	Location Map
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## APPENDIX

(Follows figures)

Appendix A	Agency Responses
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## 1.0 PROJECT DESCRIPTION

AEP Ohio Transco is proposing to rebuild and add a second circuit to a 138kV transmission line in the Fremont, Ohio area. Specifically this line is the Melmore – Tiffin Center Line (fka the Tiffin Center Extension Line). A new substation, Melmore, will be constructed at the intersection of the Tiffin Center Extension and the Howard – Fostoria 138kV line.

The project is located in Seneca County, Ohio, as shown on Figure 1.

As part of the Ohio Power Siting Board (OPSB) Letter of Notification (LON) requirements, AEP is required to describe the environmental impacts of the proposed project, as stated in Ohio Administrative Code (OAC) Rule 4906-11-01(E)(1). This rule states:

*(E) Environmental data. Describe the environmental impacts of the proposed project. This description shall include the following information:*

- (1) A description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the area likely to be disturbed by the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.*

AEP Ohio Transco retained Commonwealth Associates, Inc. (Commonwealth) to conduct a threatened and endangered species review within the area crossed by the proposed project and a field review of the existing and proposed right of way (approximately 100 feet in width). Commonwealth's findings are documented in this report, which will be used to assist the OPSB in evaluation of the project and to assist AEP Ohio Transco's efforts to avoid impacts to threatened and endangered species potentially present in the project area.

## 2.0 METHODS

Commonwealth began this survey by a review of online data from the State of Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS). In addition, Commonwealth submitted a request to the ODNR Biodiversity Database of GIS records of species of concern in proximity to the project. The GIS shapefiles were added to the project GIS maps as an overlay where they were in proximity to the project area.

Coordination letters soliciting comments on the Fremont Area Improvements which include this project and the Tiffin Center – Fremont Center project to the north were submitted to the ODNR and USFWS. Copies of responses from these agencies are included as Appendix A.

Information on these species was reviewed to ascertain habitat types these species are known to utilize. This information was used during photo interpretation and in-the-field review to assess the potential of these species in or near the project area.

### 3.0 RESULTS

Commonwealth environmental planner Doug Longpre, and engineering technician Cassandra Kussow, along with Tim Walters, Ph.D., of EnviroScience, Inc., conducted a habitat suitability review in conjunction with the review of access for construction and stream and wetland review conducted August and September 2013.

#### 3.1 State Species of Concern

TABLE 1  
STATE LISTED SPECIES THAT COULD INHABIT PROJECT AREA  
IN SENECA COUNTY, OHIO

Scientific Name	Common Name	Category	Status
<i>Sistrurus catenatus</i>	Eastern Massasauga	Snake	State Endangered

Review of the ODNR Natural Heritage Database did not identify any species of concern in the project area for Seneca County. The ODNR did identify that the county is within the historic range of the Eastern Massasauga Rattlesnake.

In the spring these snakes use open shallow wetlands or shrub swamps and adjacent uplands. In the summer months they are more likely to be found in the adjacent upland open shrub forests and are known to be observed in open fields, grassy meadows or farmed areas seeking the warmth of sunny spots (sunning). Suitable wetland habitat was not noted in the project area. Construction is proposed during the early spring when the snakes are not likely to be found in open fields, grassy meadows or farmed areas. Furthermore, once the project is complete, there will be little change to the existing habitat features. The ODNR concurs that due to the lack of records in the area, the type of habitat being affected, and the type of work proposed, this project is not likely to impact this species.

#### 3.2 Federal Species of Concern

TABLE 2  
FEDERALLY LISTED SPECIES THAT COULD INHABIT PROJECT AREA  
IN SENECA COUNTY, OHIO

Scientific Name	Common Name	Category	Status
<i>Myotis sodalis</i>	Indiana Bat	Mammal	State & Federally Endangered
<i>Villosa fabalis</i>	Rayed Bean	Mussel	State & Federally Endangered
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Bird	Recovery

**Indiana Bat:** The Indiana bat, a known inhabitant of Ohio, has a presumed presence in Seneca County. The bat utilizes dead or dying trees with exfoliating bark for cover, roosts, and breeding/nursery activities during the warmer months of the year. Males generally spend the summer alone or in small groups. The females may form nursery colonies of 100 or more. During the colder winter months, the bat migrates to southern Indiana and northern Kentucky to hibernate and is not present in the project area at that time.

Dead or dying trees will be utilized by the Indiana bat for only several breeding seasons at most, as the dying process will eventually take these trees down. They will be replaced in the future by other currently healthy trees. The existing maintained right of way is approximately 50 feet. Adding a second circuit will require increasing the right of way to 100 feet. Field reconnaissance shows that there are woods adjacent to the cleared corridor; any clearing would be performed in the winter months between late October and April. There are or will be dead or dying trees immediately adjacent to the new wider right of way. Therefore, we concluded that the project as proposed “is not likely to adversely affect” any Indiana bats that may be in the area.

**Rayed Bean:** Correspondence from the ODNR noted the possibility of Rayed Bean mussels being located in the Sandusky River, Sugar Creek, and Morrison Creek although no specimens have been recorded. This line does cross Morrison Creek. The Sandusky River and Sugar Creek crossings are on the Tiffin Center - Fremont Center project to the north. As no in-water work is proposed, it is unlikely any mussels will be impacted.

**Bald Eagle:** Based on our review of the USFWS website, Bald Eagle was identified as a federally protected species in both Seneca and Sandusky Counties. Although this species is in recovery, it is also protected under the Bald and Golden Eagle Protection Act. Bald eagles live along the Atlantic and Pacific Ocean, the great lakes and other major lakes and rivers. Their preferred nesting site is one where water with ample food (fish) is located within two miles of the nest. The eagle nest noted in the ODNR review is in Sandusky County near the Tiffin Center – Fremont line, north of this project. Section 16 of Ballville Township is approximately 16 miles north of the Tiffin Center Substation. The Sandusky River is within 2 miles of the Melmore – Tiffin Center line at the north end of the line. The river bears west away from the line to the south. The area between the river and the north end of the line is the outskirts of the City of Tiffin with residential and other developed areas along the river. It is unlikely that this would be a preferred nesting area for Bald Eagles.

AEP has adopted an Avian Protection Plan (APP) with the intent to decrease the incidence of bird interactions, prohibit bird take, and to help conserve North American bird species. AEP’s APP is based on the Avian Protection Plan Guidelines developed by the Edison Electric Institute Avian Power Line Interaction Committee (APLIC) and the USFWS. Suggested Practices for Avian Protection on Power Lines: State of the Art in 2006, Edison Electric Institute, APLIC, and the California Energy Commission.

The following APLIC criteria are to be incorporated into the design and location of the line:

- The phase to phase separation of the line a minimum of 60 inches with similar separation between the shielding wire and the conductors.
- No cross arms or platforms to encourage perching or nesting.
- No Guy wiring.
- Utilization of existing utility corridor, no new fragmented woodland habitat.

#### 4.0 SUMMARY

AEP Ohio Transco retained Commonwealth to conduct a threatened and endangered species review within areas crossed by the proposed project and a field review within the existing maintained right of way (approximately 200 feet). This report will be used by AEP Ohio Transco to assist in efforts to avoid impacts to threatened and endangered species potentially present in the study area during construction activities.

No state species of concern or signs of these species, and no unique habitats were observed within or directly adjacent to the right of way during the field review. The ODNR Biodiversity Database did not reveal any species near the project area and one species in the area (within approximately half a mile). The county is within the historic range of the Massasauga Rattlesnake but presence or impact to the species is not anticipated. Therefore, it is unlikely any state species of concern will be impacted by the proposed project.

This project is located in an area with a presumed presence of the Indiana bat, a federally listed endangered species. As tree clearing will be conducted during the winter when the bats will not be in the area, it is unlikely there will be adverse impact to any bats that may be in the area at other times of the year. The project is located within the range of the Bald Eagle, a federal species in recovery and protected under the Bald and Golden Eagle Protection Act. Although this project is not in close proximity to where they have been observed and their preferred nesting habitat is not present, the design and operation of this line will follow APLIC Suggested Practices for Avian Protection on Power Lines and AEP's Avian Protection Plan.

#### 5.0 CONCLUSION

Based on the nature and design features of the project, review of available current literature, review of federal and state records of species of concern, contact with the USFWS and the ODNR, and field observation conducted in August and September, 2013, it is not expected that federal or state species of concern will be impacted by the project as currently planned.



## 6.0 REFERENCES

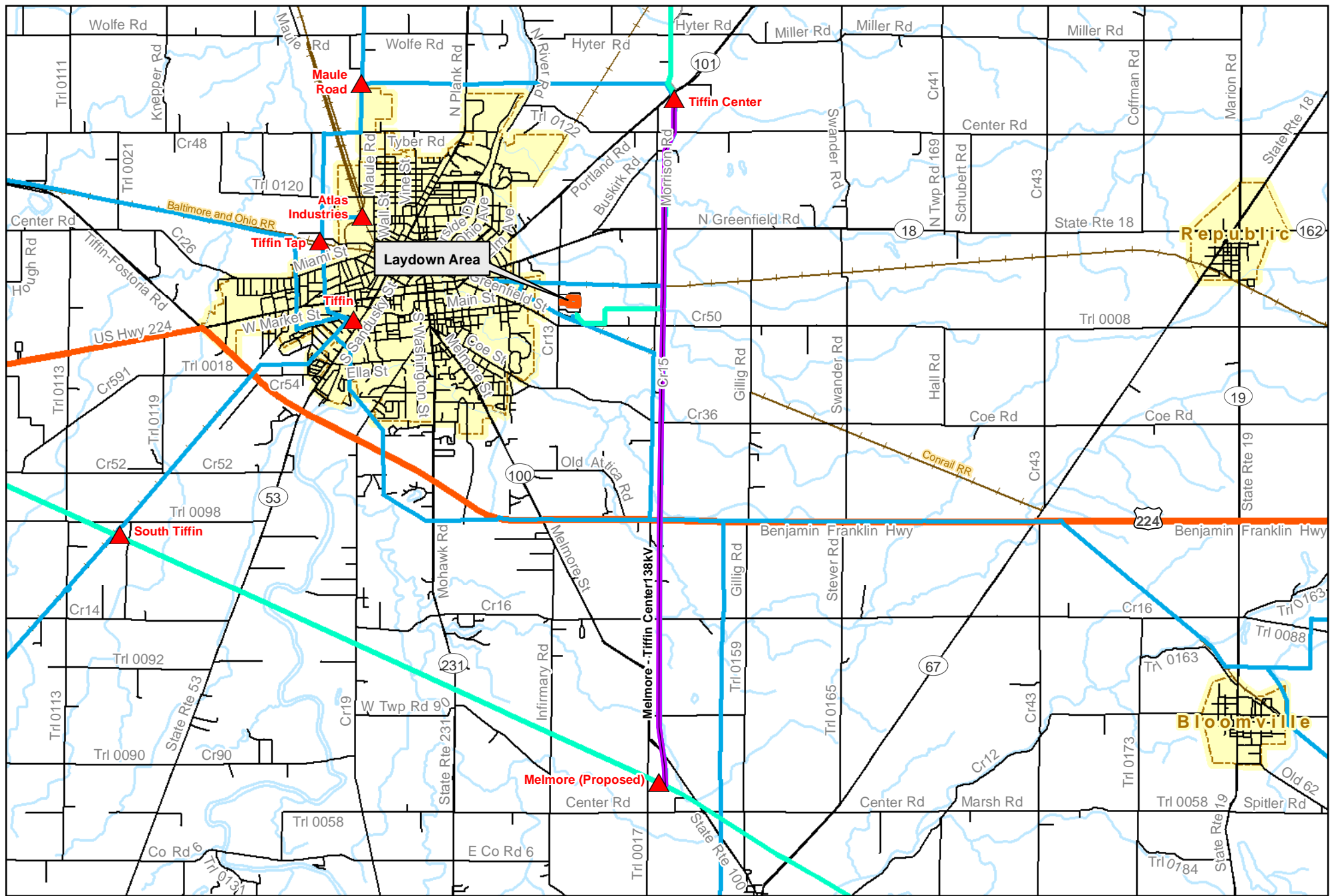
American Electric Power. Avian Protection Plan (APP). August 2012.

Edison Electric Institute's Avian Power Line Interaction Committee (APLIC) and U.S. Fish and Wildlife Service (USFWS). Avian Protection Plan (APP) Guidelines. April 2005.

Michigan Department of Natural Resources. Eastern Massasauga Rattlesnake (*Sistrurus catenatus catenatus*). Retrieved from <https://www.michigan.gov/dnr>. Accessed October 17, 2013.

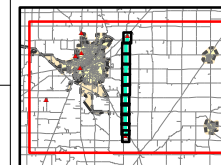
U.S. Fish & Wildlife Service. Endangered Species Fact Sheet, Indiana Bat (*Myotis solalis*). Retrieved from <http://www.fws.gov/midwest/endangered/mammals>. Accessed February 21, 2013.

U.S. Fish & Wildlife Service. Post-delisting Monitoring Plan for the Bald Eagle. Retrieved from [http://www.fws.gov/midwest/eagle/protect/FinalBAEA\\_PDMPlan.html](http://www.fws.gov/midwest/eagle/protect/FinalBAEA_PDMPlan.html). Accessed August 19, 2013.



SYM Substation & Transmission Line		SYM Transportation & Hydrology		SYM Boundary & Feature		SYM Land Use/Land Cover		SYM Wetlands	
▲ Substation	Existing 230 kV	Interstate	Open Water	City/Township	Open Water	Palustrine Emergent	Palustrine Emergent	Palustrine Emergent	Palustrine Emergent
● Existing Structure	Existing 345 kV	Highway	Cropland & Pasture	County	Cropland & Pasture	Palustrine Forested	Palustrine Forested	Palustrine Forested	Palustrine Forested
■ Proposed Structure	Existing 500 kV	Railroad	Deciduous Forest	New Entrance	Deciduous Forest	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub	Palustrine Scrub/Shrub
— Existing 69 kV	Existing 765 kV	Major/Local Road	Industrial & Commercial	Map Index	Industrial & Commercial	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom	Palustrine Unconsolidated Bottom
— Existing 88 kV		River/Stream/Lake/Pond	200' Right of Way	200' Right of Way	200' Right of Way	Lacustrine/Riverine	Lacustrine/Riverine	Lacustrine/Riverine	Lacustrine/Riverine
— Existing 115 kV		Delineated Stream	2,000 ft Corridor	2,000 ft Corridor	2,000 ft Corridor	Delineated Wetland	Delineated Wetland	Delineated Wetland	Delineated Wetland
— Existing 138 kV		Lake (Location Map)	Agriculture District	Agriculture District	Agriculture District				
— Existing 161 kV		Watershed	Contour 20'	Contour 20'	Contour 20'				

AEP Ohio Transmission Company  
**Melmore - Tiffin Center**  
 138 kV Transmission Line  
 Land Use/Land Cover Features  
 Sandusky & Seneca County Ohio  
 Projected Coordinate System: Ohio State Plane  
 Datum: North American Datum of 1983  
 Projection: Lambert Conformal Conic  
 Zone: North  
 Linear Unit: Feet



Scale: 1" = 1,000' (1:12,000) Date: 9/3/2013

Location Map with Laydown Area

0 1,750 3,500 Feet

Commonwealth AEP AMERICAN ELECTRIC POWER

# United States Department of the Interior

## FISH AND WILDLIFE SERVICE



Ecological Services  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / FAX (614) 416-8994

August 8, 2013

CAI Engineering  
Attn: Ann Stevens  
P.O. Box 1124  
Jackson, MI 49204

TAILS# 03E15000-2013-TA-1326

Re: AEP – Tiffin Center 69kV Extension, Fremont, Seneca and Sandusky Counties in Ohio

Dear Ms. Stevens

We have received your recent correspondence requesting information about the subject proposal. There are no Federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you in fulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The Service recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

**ENDANGERED SPECIES COMMENTS:** All projects in the State of Ohio lie within the range of the **Indiana bat** (*Myotis sodalis*), a federally listed endangered species. Since first listed as endangered in 1967, their population has declined by nearly 60%. Several factors have contributed to the decline of the Indiana bat, including the loss and degradation of suitable hibernacula, human disturbance during hibernation, pesticides, and the loss and degradation of forested habitat, particularly stands of large, mature trees. Fragmentation of forest habitat may also contribute to declines. During winter, Indiana bats hibernate in caves and abandoned mines. Summer habitat requirements for the species are not well defined but the following are considered important:

- (1) dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas;
- (2) live trees (such as shagbark hickory and oaks) which have exfoliating bark;
- (3) stream corridors, riparian areas, and upland woodlots which provide forage sites.

Should habitat exhibiting the characteristics described above be present at the proposed project site, we recommend that they, as well as surrounding trees, be saved wherever possible. However, if these trees cannot be avoided, they should only be cut between October 1 and March 31. If implementation of the

seasonal tree cutting restriction is not possible, summer surveys should be conducted to document the presence or likely absence of the Indiana bat within the project area during the summer. The survey must be conducted by an approved surveyor and be designed and conducted in coordination with the Endangered Species Coordinator for this office. Summer surveys must be conducted between May 15 and August 15, when the presence of maternity colonies of Indiana bats could be detected.

If there is a Federal nexus for the project (e.g., Federal funding provided, Federal permits required to construct), no tree clearing on any portion of the parcel should occur until consultation under section 7 of the ESA, between the Service and the Federal action agency, is completed. We recommend that the Federal action agency submit a determination of effects to this office, relative to the Indiana bat, for our review and concurrence.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

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 Endangered Species Act of 1973 (ESA), as amended, and are consistent with the intent of the National Environmental Policy Act of 1969 and the U. S. Fish and Wildlife Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Sincerely,



Mary Knapp, Ph.D.  
Field Supervisor



# Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

## Ohio Division of Wildlife

Scott Zody, Chief  
2045 Morse Rd., Bldg. G  
Columbus, OH 43229-6693

July 16, 2013

Ann Stevens  
Commonwealth Associates, Inc.  
2700 West Argyle Street  
Jackson, MI 49202

Dear Ms. Stevens

I have reviewed the Natural Heritage Database for the Fremont Area Improvements Project area, including a one mile radius, in Seneca and Sandusky Counties, Ohio. We have records for rare species, managed areas and scenic rivers in your project area. I am attaching a shape file for the 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 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, FE = federal endangered, FT = federal threatened, FPE = federal potentially endangered, FC = federal candidate and FSC = federal species of concern, F = federal listing only. This data may not be published or distributed beyond the scope of the project description on the data request form without prior written permission of the Natural Heritage Program. I have also attached a shape file for managed areas that include state wildlife areas, nature preserves, parks and forests, national wildlife refuges, county metro parks, as well as sites owned by non-profit groups. 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. I have also attached a shape file showing a state designated scenic river.

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. Although we inventory all types of plant communities, we only maintain records on the highest quality areas.

This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does 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.

Please contact me at 614-265-6452 if I can be of further assistance.

Sincerely,

A handwritten signature in blue ink that reads "Greg Schneider".

Greg Schneider, Administrator  
Ohio Natural Heritage Program





# Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

## Office of Real Estate

*Paul R. Baldrige, Chief*

2045 Morse Road – Bldg. E-2

Columbus, OH 43229

Phone: (614) 265-6649

Fax: (614) 267-4764

August 20, 2013

Commonwealth Associates, Inc.  
2700 West Argyle Street  
Jackson, MI 49204

**Attn:** Ann M. Stevens

**Re:** 13-387 Fremont Area Improvements Transmission Line Project

**Project:** The project involves upgrades to AEP's electrical transmission facilities, including upgrading the existing Tiffin Center 69 kV extension transmission line and the existing Tiffin Center-Fremont Center 69 kV transmission to double circuit 138 kV transmission lines.

**Location:** These improvements will be made in Eden, Clinton, and Pleasant Townships within Seneca County and Ballville Township in Sandusky County.

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 ODNR Natural Heritage Database has a record for a nesting bald eagle (*Haliaeetus leucocephalus*), federal species of concern, within a wood lot in section 16, Ballville Township, Sandusky County.

The bald eagle is no longer a state or federally listed endangered or threatened species. However, it is still federally protected under the Bald and Golden Eagle Protection Act. The USFWS should be consulted for guidance for reducing impacts to this nest.

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BaldEagle/NationalBaldEagleManagementGuidelines.pdf> and/or,

<http://www.fws.gov/midwest/eagle/guidelines/index.html>.

### Sandusky and Seneca Counties

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 laciniosa*), 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 project is within the range of the rayed bean (*Villosa fabalis*), a state endangered and federal endangered mussel species. The project must not have an impact on freshwater native mussels in the area. This project crosses the Sandusky River, Sugar Creek, and Morrison Creek. These three streams have been classified as group one streams within the Ohio Mussel Survey Protocol. Surveys and other information regarding the location of mussels in Ohio are limited. This includes information regarding the possibility of mussels being located in these three streams. Therefore, the possibility of mussels within the area of the project cannot be eliminated. If there is no in-water work planned, this project is not likely to impact these species. However, if mussels are encountered during the project, work should immediately be stopped and John Navarro of the DOW should be contacted at (614) 265-6346.

The project is within the historic range of the Eastern massasauga (*Sistrurus catenatus*), a state endangered and a federal candidate snake species. Due to the lack of records in the area, the type of habitat being affected, and the type of work proposed, this project is not likely to impact this species.

### Sandusky County

The project is within the range of the piping plover (*Charadrius melodus*), a state and federally endangered bird species, and the Kirtland's warbler (*Setophaga kirtlandii*), a state and federally endangered species. These species do not nest in the state but only utilize stopover habitat as they migrate through the region. Therefore, the project is not likely to have an impact on these species.

The project is within the range of the Western banded killifish (*Fundulus diaphanous menona*), a state endangered species. The DOW recommends no in-water work in perennial WWH streams from April 15 to June 30 to reduce impacts to aquatic species and their habitat.

The project is within the range of the bobcat (*Lynx rufus*), a state endangered species. Due to the mobility of this species, the project is not likely to have an impact on this species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. Due to the location, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the king rail (*Rallus elegans*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Unlike other rails, this species is often rather bold, venturing beyond the dense confines of cattails and other marsh vegetation where they can be readily observed. Due to the location, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the Northern harrier (*Circus cyaneus*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. Due to the location, and the type of work proposed, this project is not likely to impact this species.

The ODNR Natural Heritage Database has no other records for rare or endangered species at this project site. We are unaware of any 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 does not provide a complete survey of Ohio wildlife, 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.

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.

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

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

**Commission of Ohio Docketing Information System on**

**10/29/2013 11:30:55 AM**

**in**

**Case No(s). 13-2009-EL-BLN**

Summary: Letter of Notification Part 3 of 3- Melmore-Tiffin Center 138k V line Improvement Project electronically filed by Mr. Yazen Alami on behalf of AEP Ohio Transmission Company