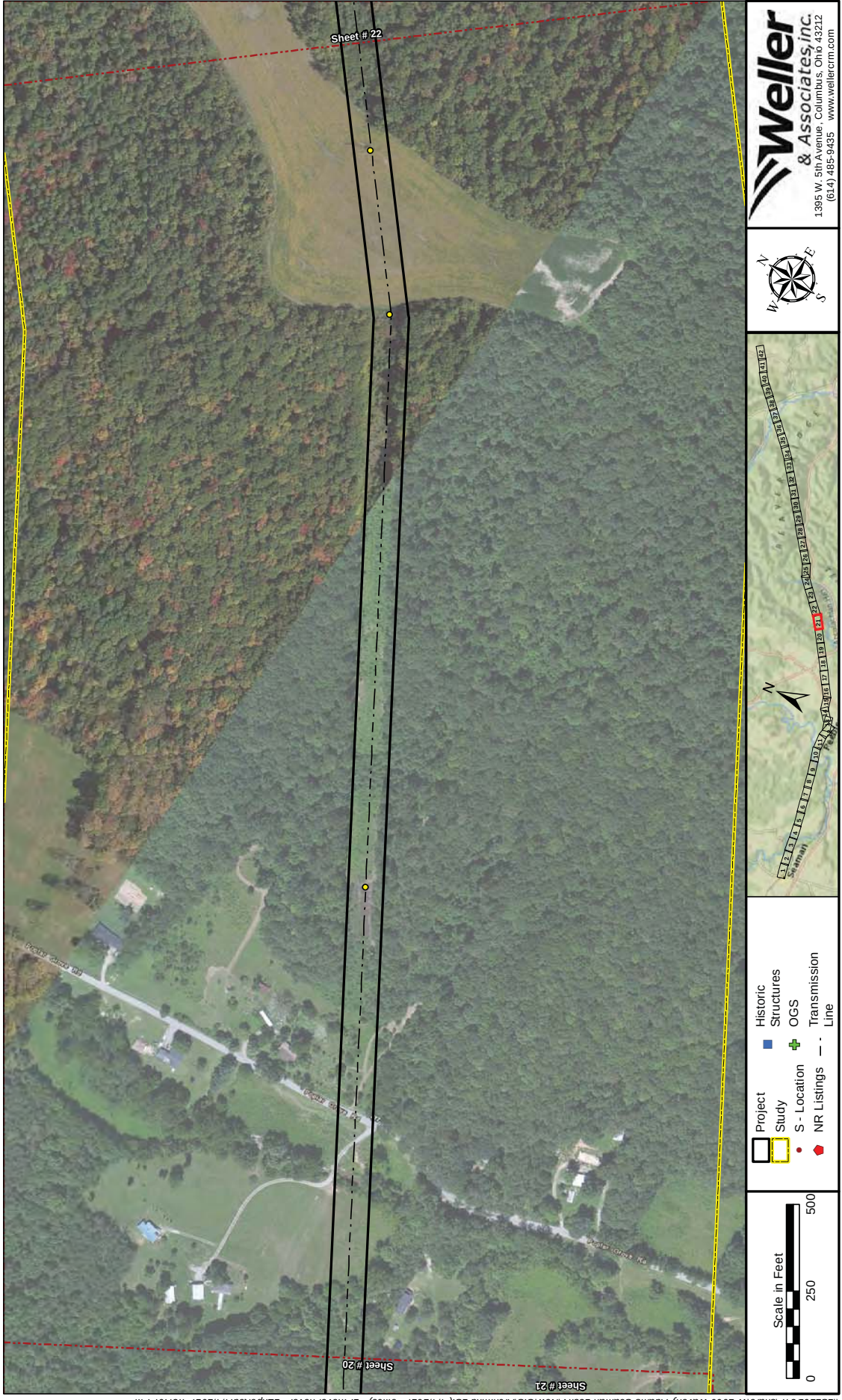
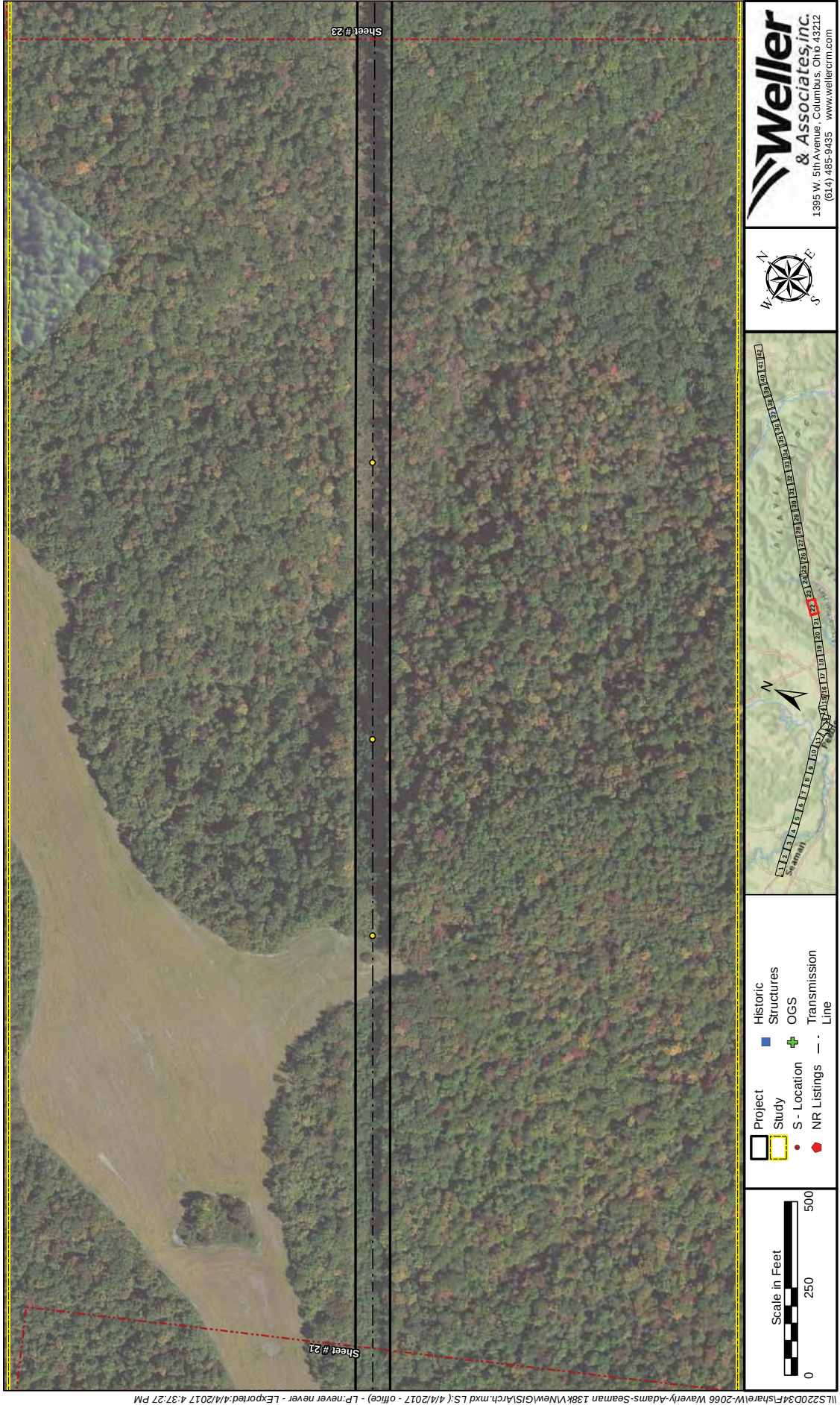




Appendix B, Map 21



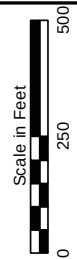
Appendix B, Map 22



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|---------------------------------------|---------------------|
| ☐ Project | Historic Structures |
| ☐ Study | OGS |
| ☐ S - Location | Transmission Line |
| ☐ NR Listings | |



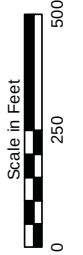
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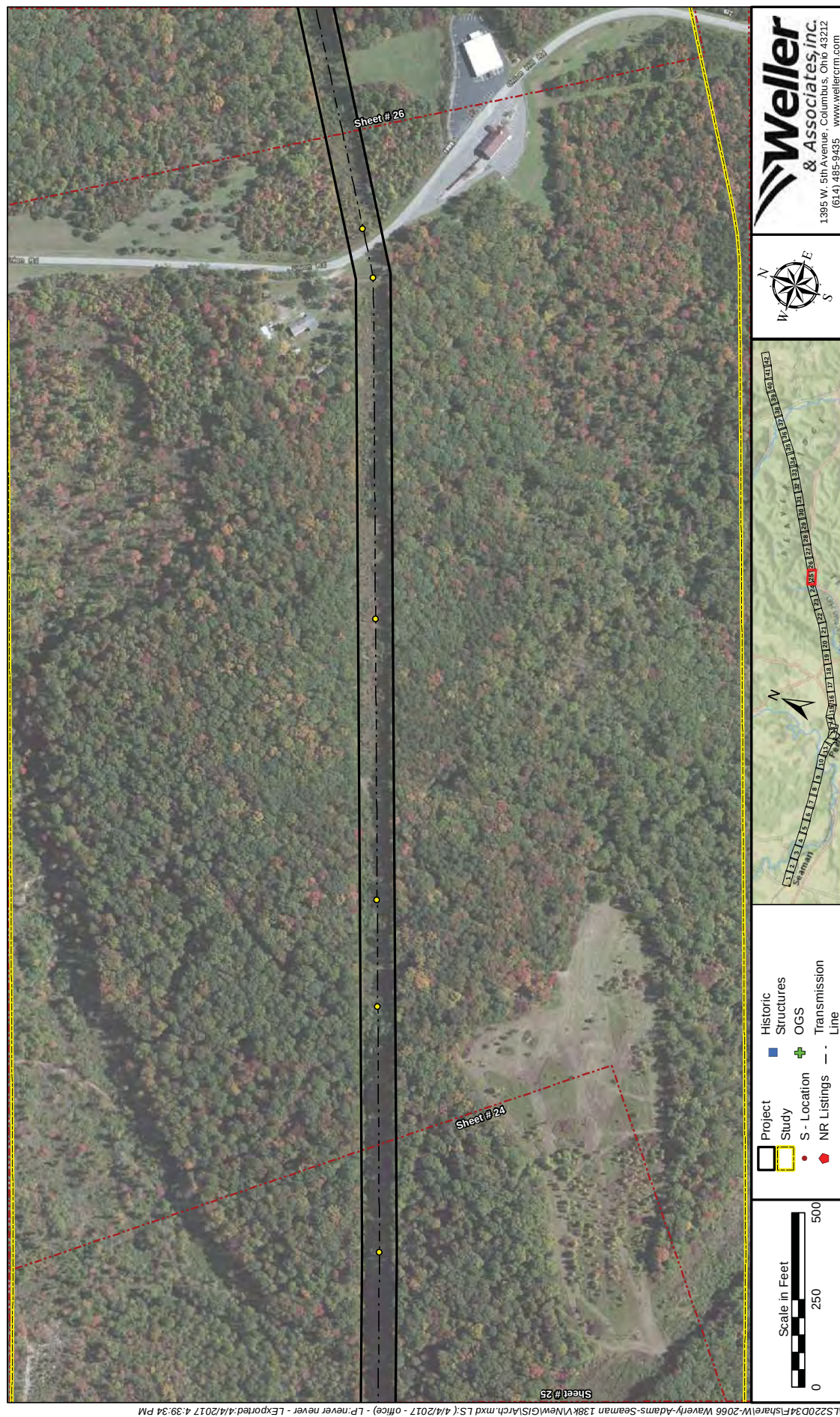
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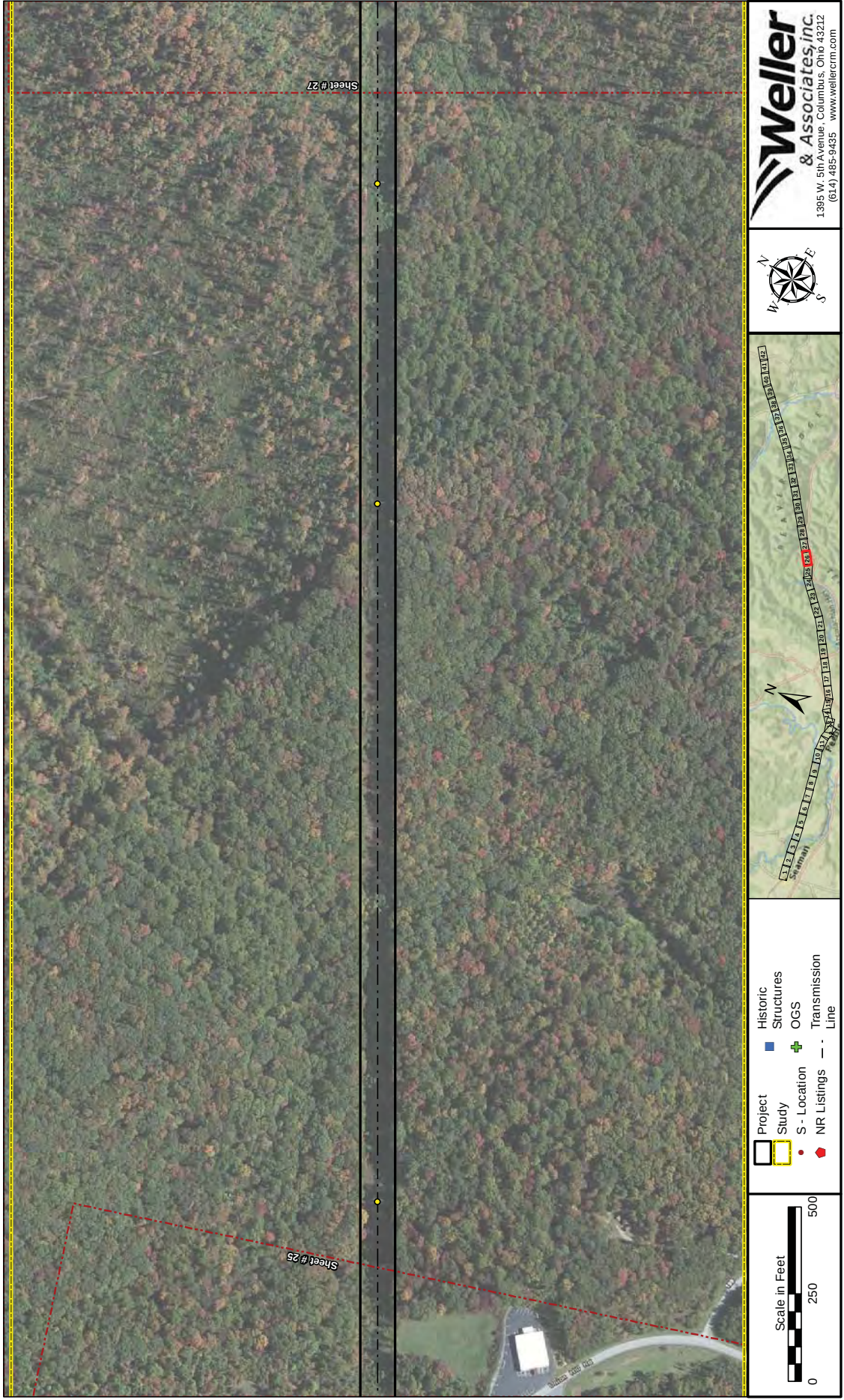


Project Study
 Historic Structures
 S - Location
 NR Listings
 OGS
 Transmission Line



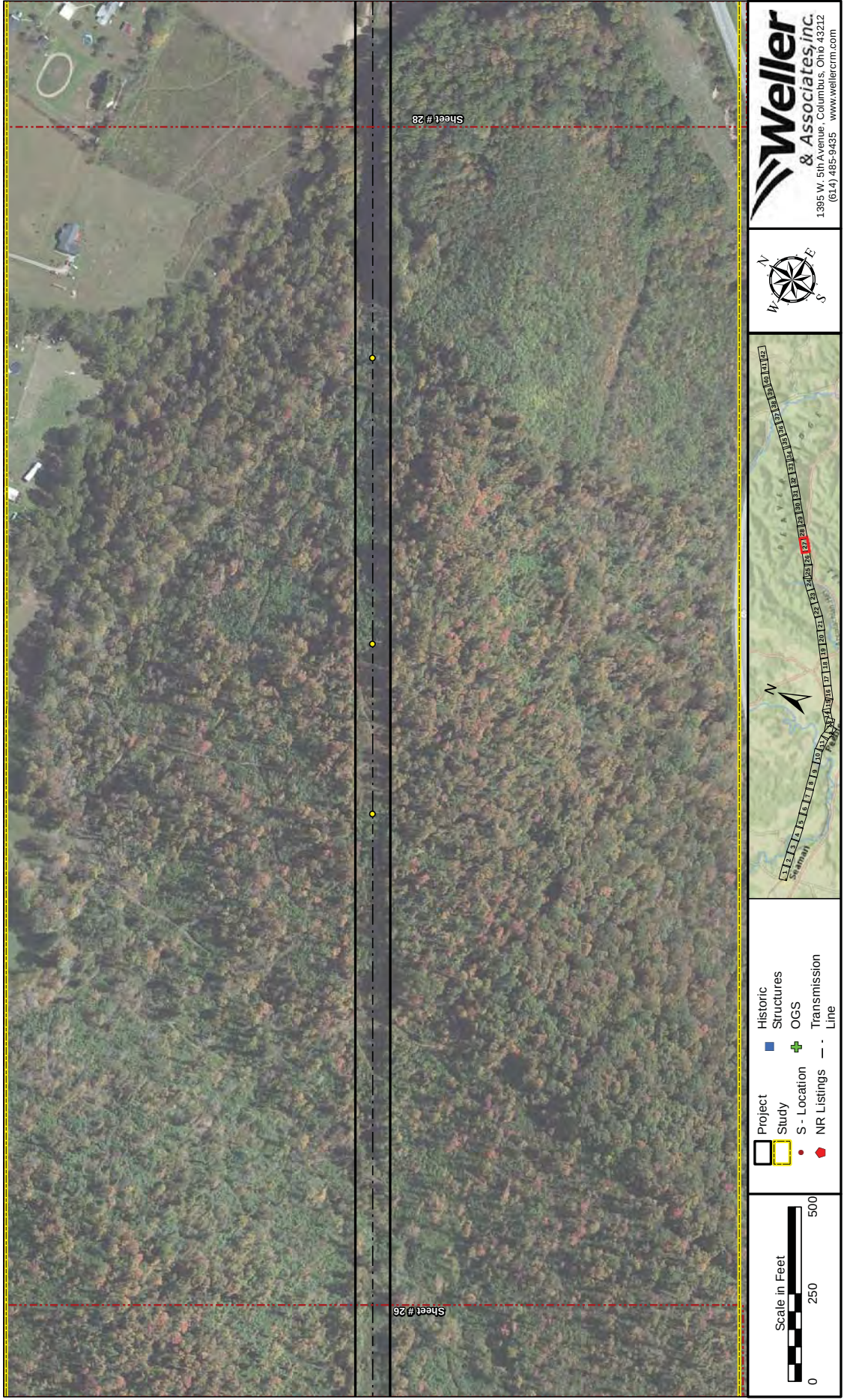
Appendix B, Map 24



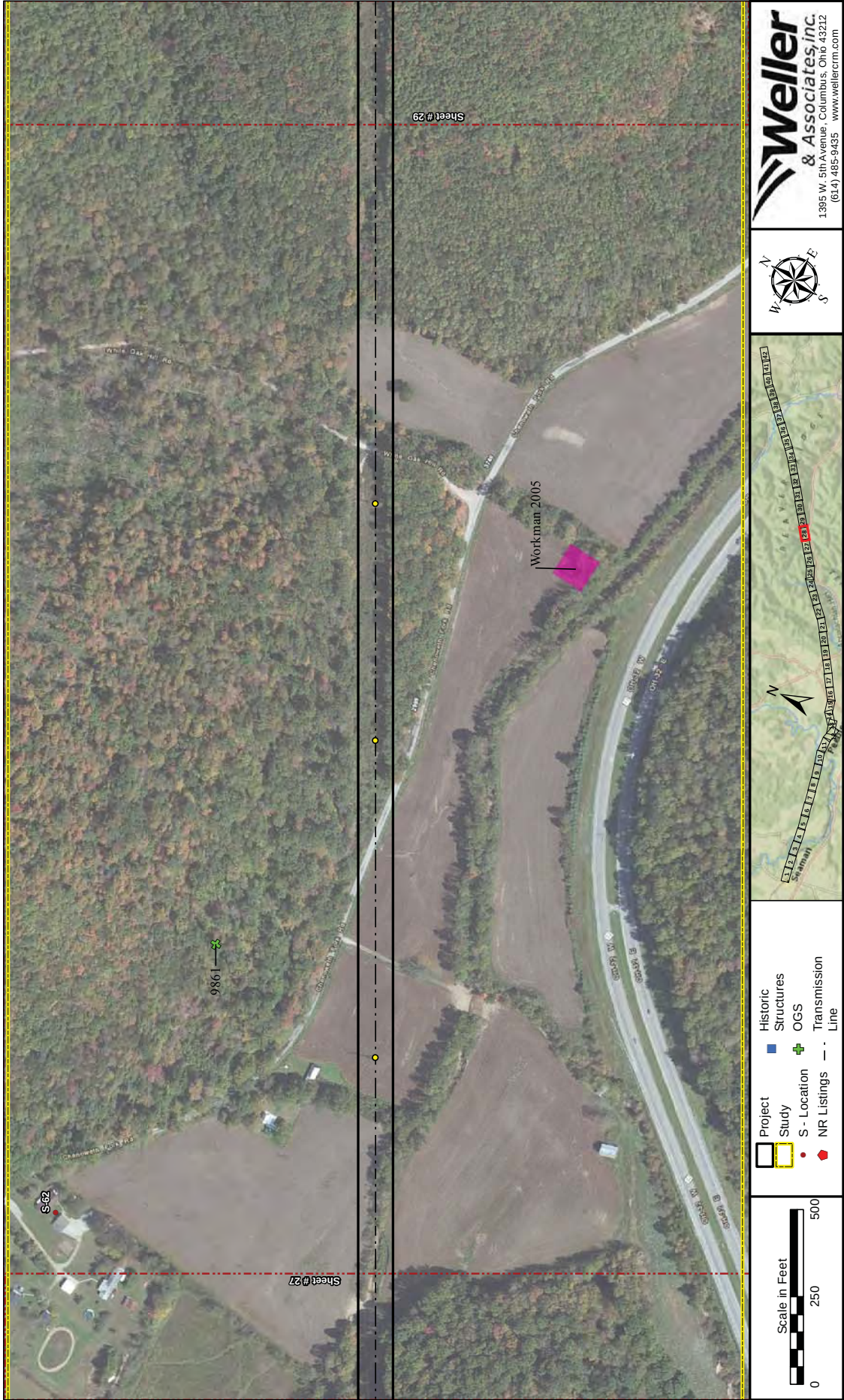


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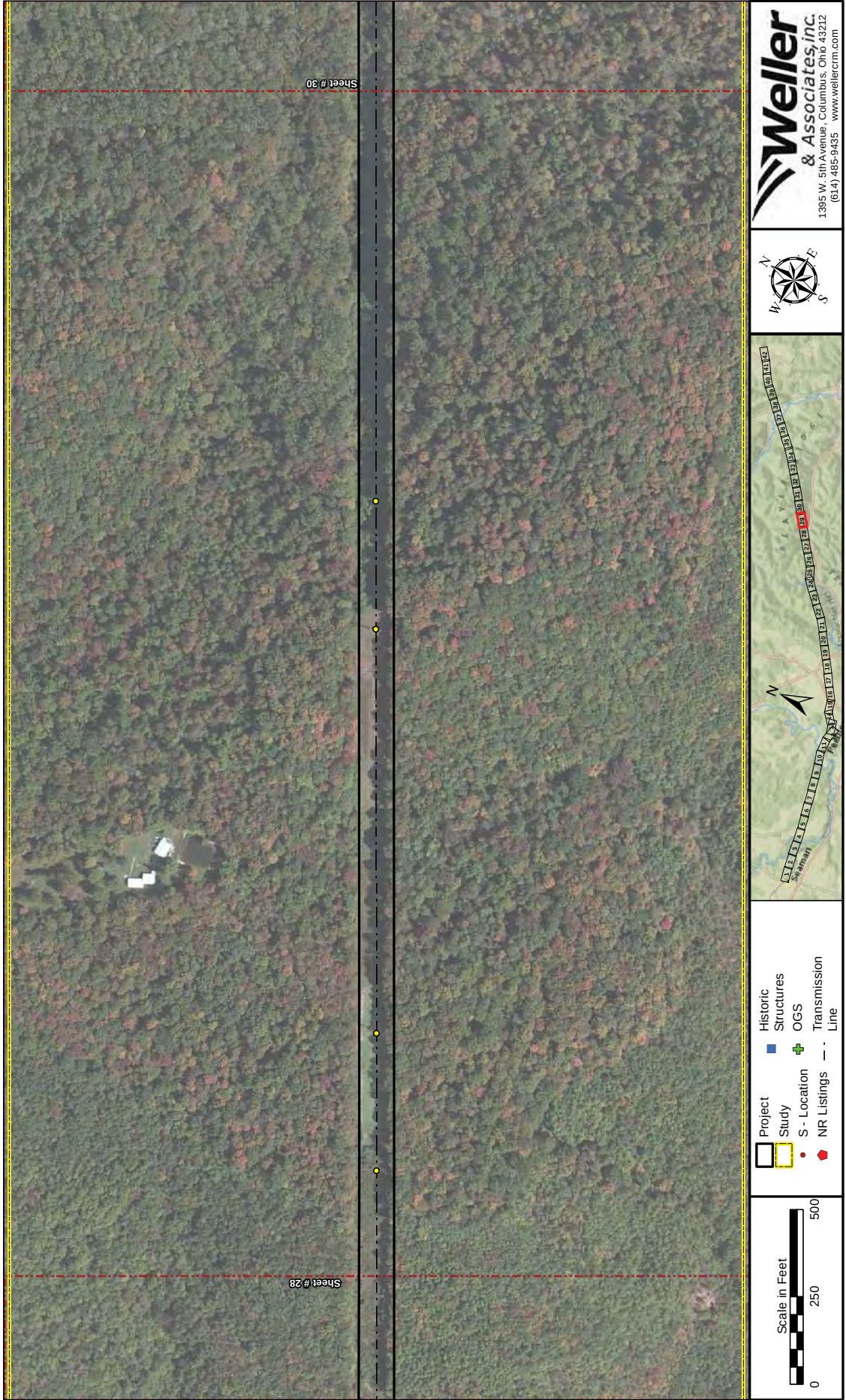
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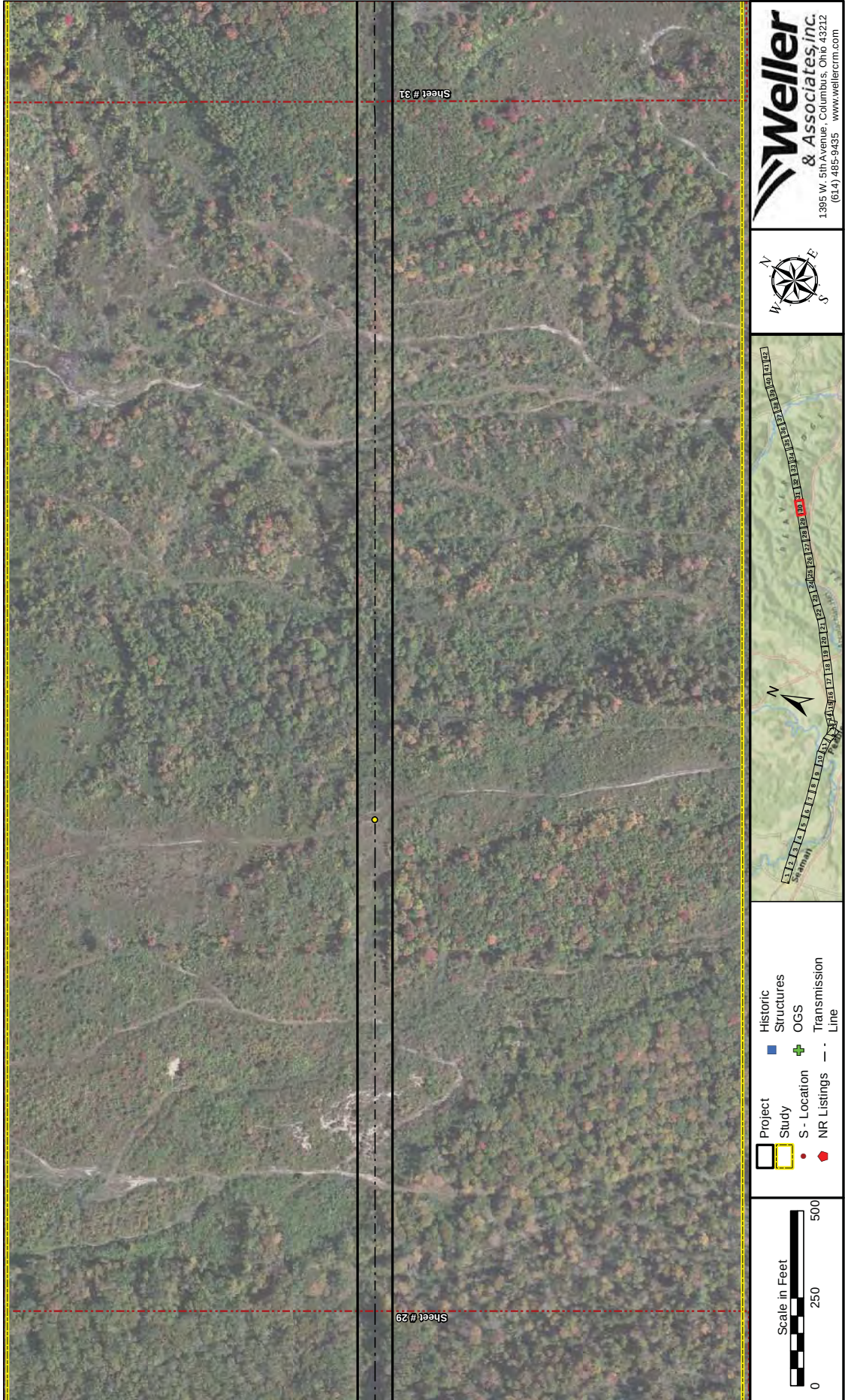
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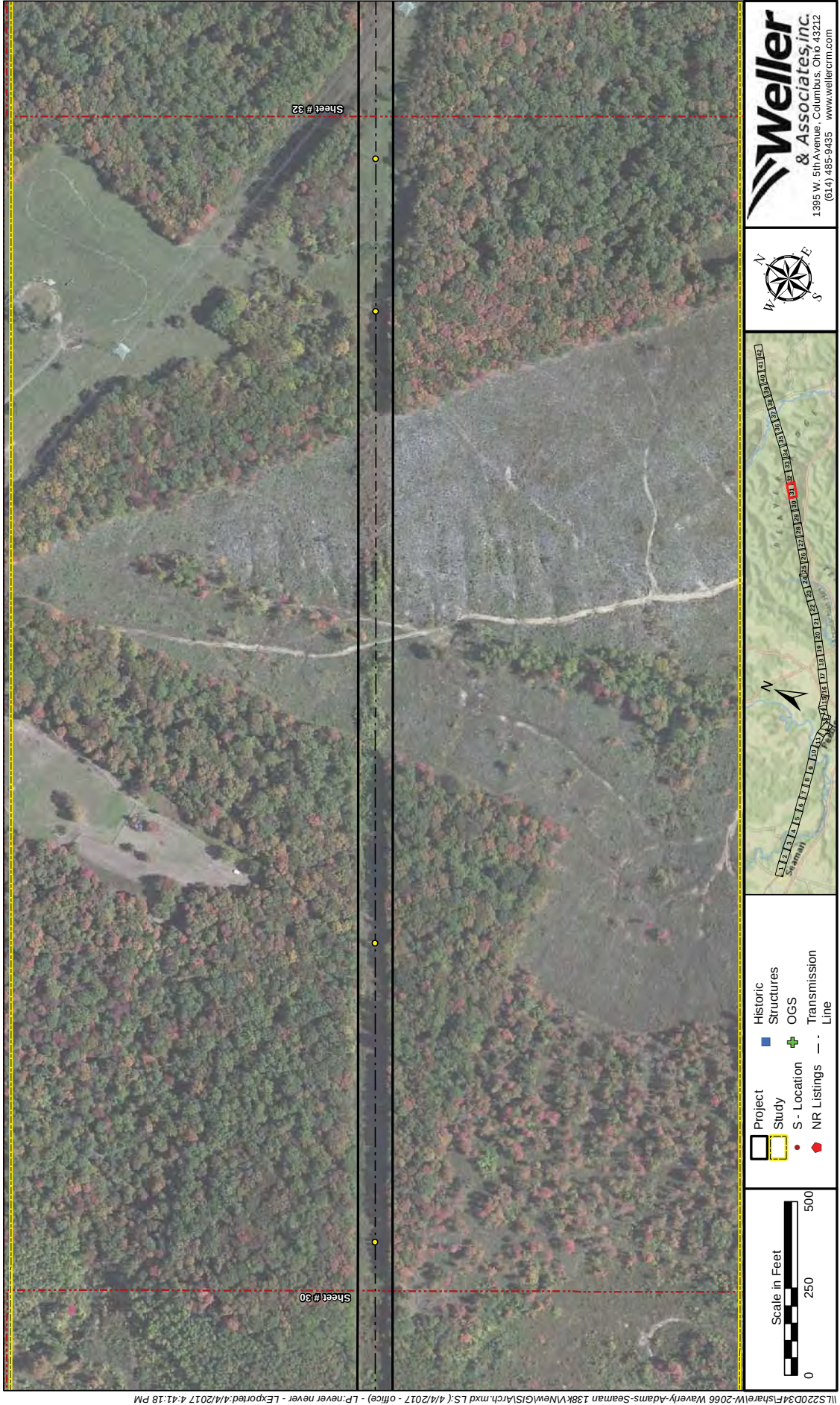
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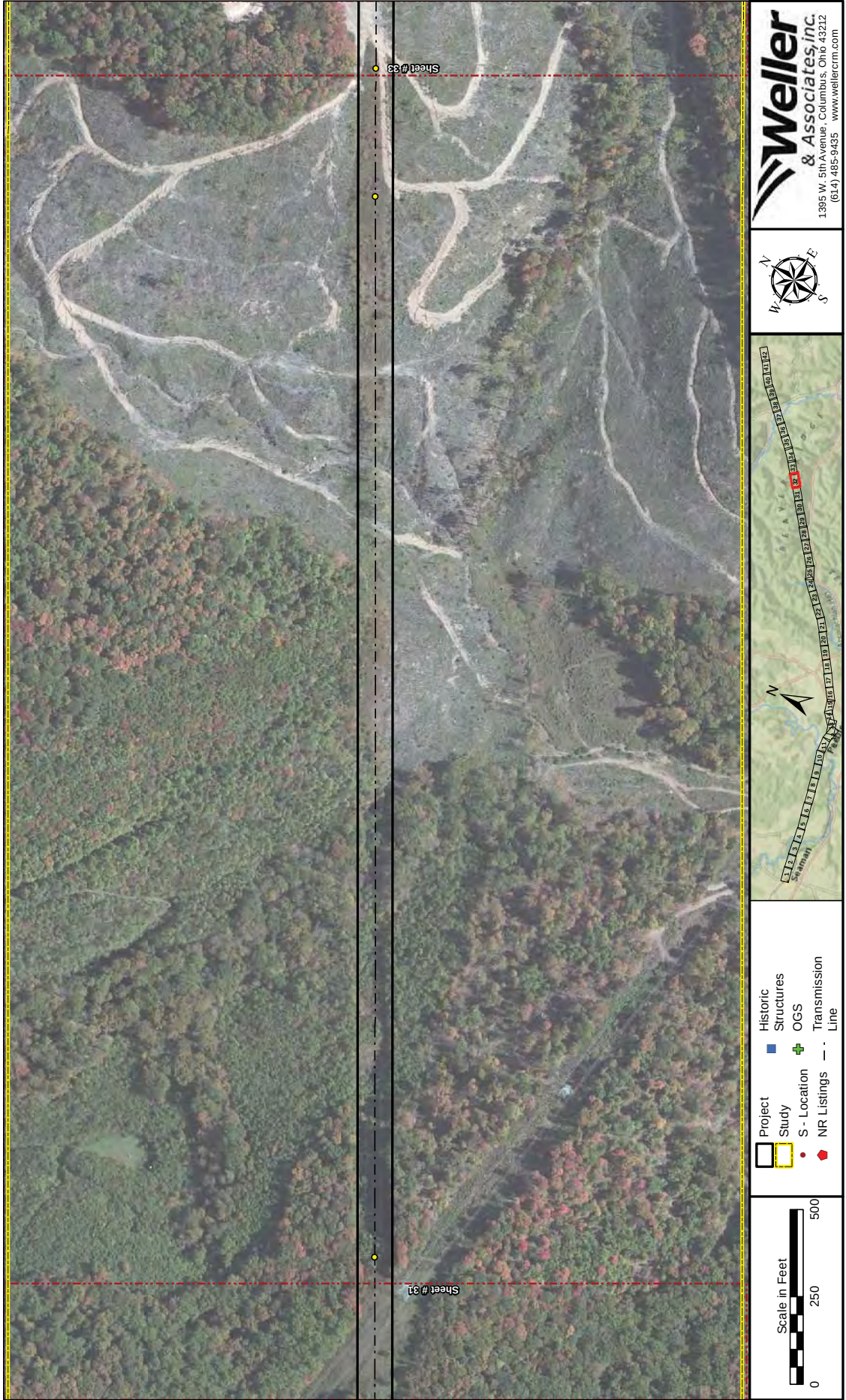


Appendix B, Map 30



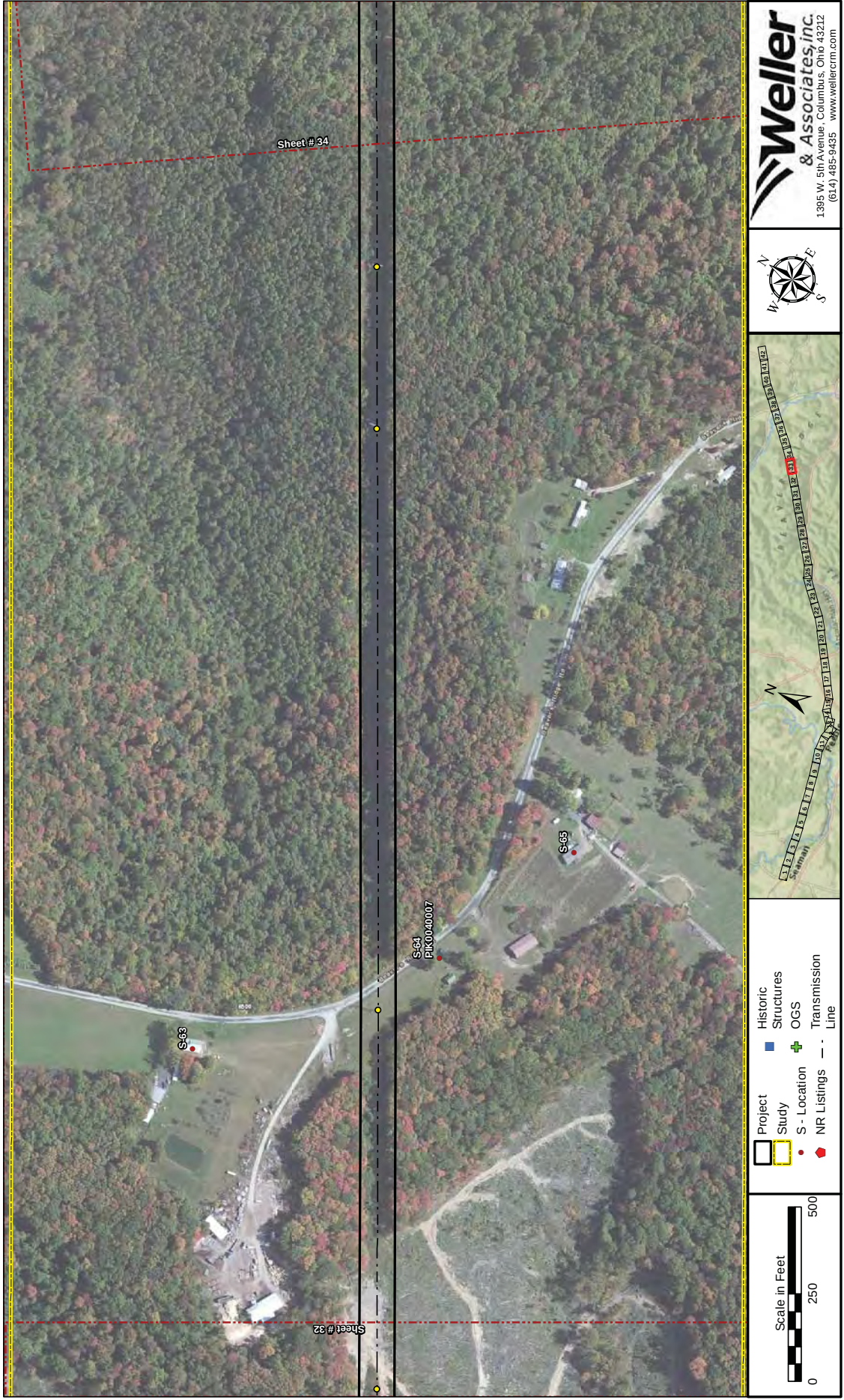
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Appendix B, Map 31



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Appendix B, Map 32



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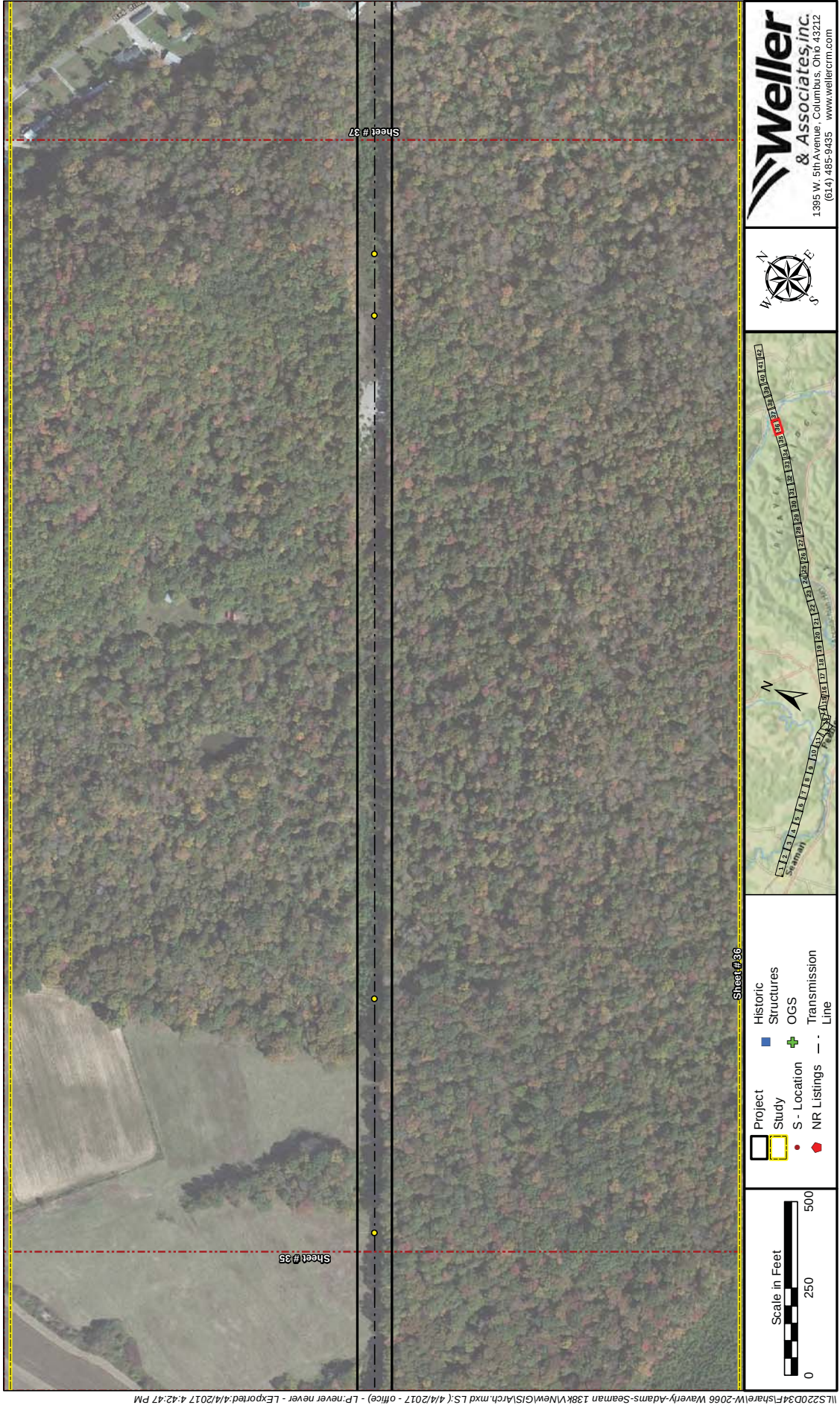
Appendix B, Map 33



Appendix B, Map 34



Appendix B, Map 35



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Appendix B, Map 36



Scale in Feet

Legend

 Project	■ Historic Structures
 Study	+ OGS
● S - Location	— · — Transmission Line
◆ NR Listings	

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Scale in Feet

	Project		Historic Structures
	Study		OGS
	S - Location		Transmission Line
	NR Listings		

Appendix B, Map 38

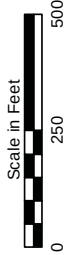


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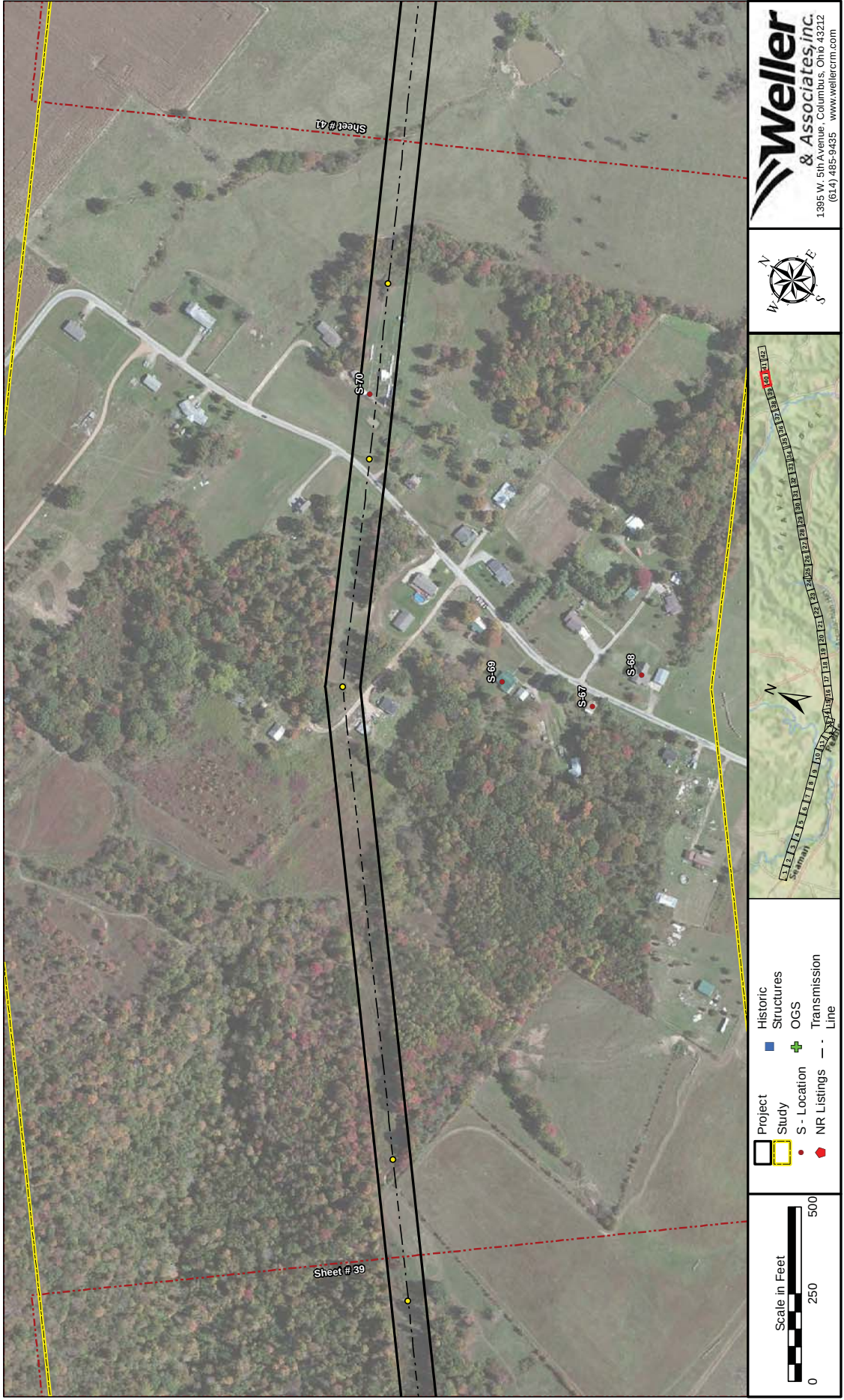
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- | | |
|--|--|
| ☐ Project Study | ☐ Historic Structures |
| ☐ S-Location | ☐ OGS |
| ☐ NR Listings | ☐ Transmission Line |

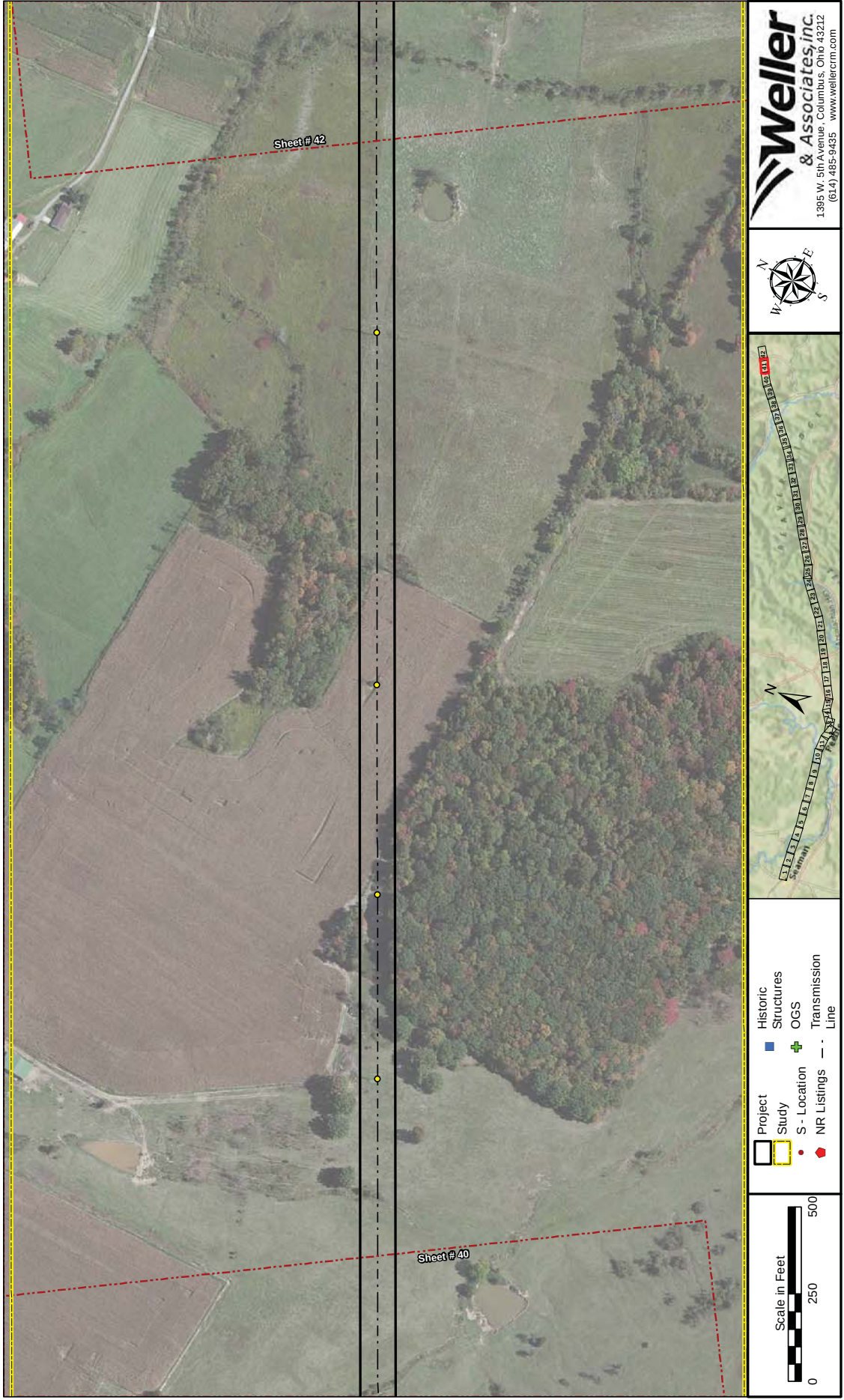


Appendix B, Map 39



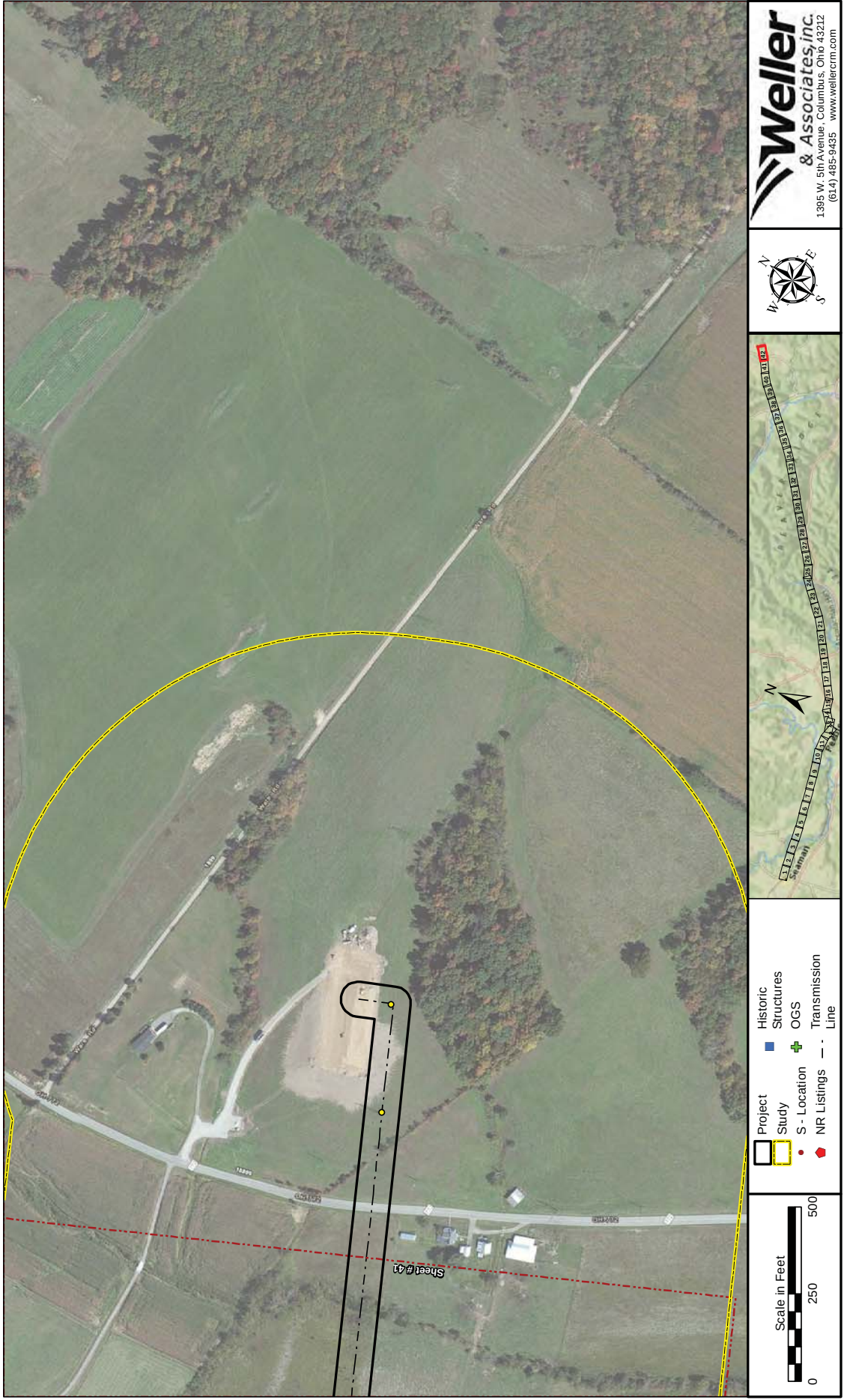
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Appendix B, Map 40



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Appendix B, Map 41



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LETTER OF NOTIFICATION FOR WARE ROAD-SEAMAN 138 KV TRANSMISSION LINE PROJECT

Appendix C Ecological Resources Inventory Report
May 5, 2017

Appendix C Ecological Resources Inventory Report

**Ware Road - Seaman 138 kV
Transmission Line Project, Adams
County and Pike County, Ohio**

**Ecological Resources Inventory
Report**



Prepared for:
AEP Ohio Transmission Company, Inc.
700 Morrison Road
Gahanna, Ohio 43230

Prepared by:

Stantec Consulting Services Inc.
11687 Lebanon Road
Cincinnati, Ohio 45241

April 5, 2017

WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE PROJECT, ADAMS COUNTY AND PIKE COUNTY, OHIO

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WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE PROJECT, ADAMS COUNTY AND PIKE COUNTY, OHIO

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WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE PROJECT, ADAMS COUNTY AND PIKE COUNTY, OHIO

1.0 Introduction

AEP Ohio Transmission Company, Inc. (AEP) is proposing to rebuild approximately 32.8 miles of the Ware Road-Seaman 138 kV electric transmission line in Adams County and Pike County, Ohio (Figure 1, Appendix A). The Project will include a rebuild/upgrade of the transmission line within existing AEP right-of-way (ROW) and construction of the associated access roads needed to perform the line rebuild/upgrade activities (Figure 1, Appendix A). The existing ROW, including workspaces surrounding each structure, and the proposed access roads were surveyed for wetlands, waterbodies, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services Inc. (Stantec) biologists on December 7-13, 2016, and March 28-29, 2017. The approximate locations of features located up to 50 feet outside of the existing ROW and access road survey corridors were also recorded during the field surveys, where landowner access was permitted. However, no data forms were collected on features that did not extend into the ROW or access road survey corridors. These features are shown on the Figure 2 maps in Appendix A as “approximate” wetlands, waterways (streams), open waters, and upland drainage features.

2.0 Methods

2.1 WETLAND DELINEATION

Prior to completing the field surveys, a desktop review of the Project area was conducted using U.S. Geological Survey (USGS) topographic mapping, National Wetlands Inventory (NWI) maps, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil surveys, and aerial imagery mapping. Stantec completed a wetland delineation study in accordance with the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (Version 2.0) (USACE 2012). Wetland categories were classified using the Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 (Mack 2001).

2.2 STREAM DELINEATION

Streams that demonstrated a continuously defined channel (bed and bank), ordinary high water mark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project area, per the protocols outlined in the USACE's *Guidance on Ordinary High Water Mark Identification* (Regulatory Guidance Letter, No. 05-05) (USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definitions in the Federal Register/Vol. 67, No. 10 (USACE 2002). Functional assessment of streams within the Project area was based on completion of the Ohio Environmental Protection Agency's (OEPA) Headwater Habitat Evaluation Index (HHEI; OEPA 2012) and/or Qualitative Habitat Evaluation Index (QHEI; OEPA 2006). The centerline of each waterway (stream) was identified and surveyed using a handheld sub-meter accuracy GPS unit and mapped with GIS software. Additionally, the locations of ponds/open

WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE PROJECT, ADAMS COUNTY AND PIKE COUNTY, OHIO

water features and upland drainage features (which lacked a continuously defined bed and bank/OHWM) identified within the Project area were also recorded with a sub-meter accuracy GPS unit during the field surveys.

2.3 RARE SPECIES

Prior to conducting the field surveys, Stantec contacted the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) for information regarding rare, threatened, or endangered species and their habitats of concern within the vicinity of the Project area (Appendix B – Agency Correspondence). To assess potential impacts to rare, threatened, or endangered species, Stantec scientists conducted a pedestrian reconnaissance of the proposed Project area, collected information on existing habitats within the Project area, and assessed the potential for these habitats to be used by these species.

WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE PROJECT, ADAMS COUNTY AND PIKE COUNTY, OHIO

3.0 Results

3.1 TERRESTRIAL HABITAT

Stantec completed field surveys within the Project area on December 7-13, 2016 and March 28-29, 2017, for wetlands, waterbodies, and threatened and endangered species or their habitats. Figure 2 (Appendix A) shows the wetlands and waterbodies identified by Stantec within the Project area, as well as the locations of upland drainage features identified within the Project area. Figure 3 (Appendix A) shows the habitats and locations of any identified rare, threatened or endangered species habitat observed within the Project area during the rare, threatened, and endangered species habitat assessment surveys. Representative photographs of the wetlands, streams, upland drainage features, and other habitats identified within the Project area are included in Appendix C of this report (photo locations are shown on Figures 2 and 3, Appendix A). Completed wetland determination, ORAM, QHEI, and HHEI data forms are included in Appendix D.

Table 1. Vegetation Communities and Land Cover Found within the Ware Road-Seaman 138 kV Transmission Line Project Area, Adams County and Pike County, Ohio

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
Agricultural Field	Extreme Disturbance/Ruderal Community (dominated by planted non-native row crop species, opportunistic invaders, or native highly tolerant taxa).	No	83.5
Hay Field	Extreme Disturbance/Ruderal Community (dominated by planted non-native herbaceous species, opportunistic invaders, and/or native highly tolerant taxa).	No	25.8
Pasture	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders and/or native highly tolerant taxa).	No	31.8
New Field	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders or native highly tolerant taxa).	No	5.3
Old Field	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders and/or native highly tolerant taxa).	No	138.2
Residential Lawn	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non-	No	17.6

WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE PROJECT, ADAMS COUNTY AND PIKE COUNTY, OHIO

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
	native species, and/or native highly tolerant taxa).		
Existing Roadway	Extreme Disturbance/existing gravel or paved road.	No	2.9
Fallow Field	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders and/or native highly tolerant taxa).	No	0.3
Early Successional Deciduous Forest	Moderate Disturbance/Natural Community (dominated by native woody and herbaceous species and/or opportunistic invaders).	No	1.3
Early Successional Deciduous/Coniferous Forest	Moderate Disturbance/Natural Community (dominated by native woody and herbaceous species and/or opportunistic invaders).	No	26.7
Early Successional Riparian Forest	Moderate Disturbance/Natural Community (dominated by native woody and herbaceous species and/or opportunistic invaders).	No	1.5
Industrial	Extreme Disturbance/ Ruderal Community (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa).	No	3.9
Mixed Early Successional/Second Growth Riparian Forest	Moderate Disturbance/Natural Community (dominated by native woody species and/or opportunistic invaders).	No	2.4
Mixed Early Successional/Second Growth Deciduous Forest	Moderate Disturbance/Natural Community (dominated by native woody species and/or opportunistic invaders).	No	23.5
Second Growth Deciduous Forest	Moderate Disturbance/Natural Community (dominated by native woody species and/or opportunistic invaders).	No	10.0
Palustrine Emergent Wetland	Moderate Disturbance/Natural Community (Dominated by native herbaceous species and/or opportunistic invaders).	No	0.2

WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE PROJECT, ADAMS COUNTY AND PIKE COUNTY, OHIO

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
Palustrine Forested Wetland	Moderate Disturbance/Natural Community (dominated by native herbaceous species, native woody species, and/or opportunistic invaders). Common plant species included black willow (<i>Salix nigra</i>) and floating pondweed (<i>Potomageton natans</i>).	No	0.01
Total			374.9

3.2 WETLANDS

Stantec completed field surveys within the Project area on December 7-13, 2016 and March 28-29, 2017, for wetlands and waterbodies. Figure 2 (Appendix A) shows the wetlands identified by Stantec within the Project area. Representative photographs of the wetlands identified within the Project area are included in Appendix C of this report (photo locations are shown on Figure 2, Appendix A). Completed wetland determination and ORAM data forms are included in Appendix D. Information regarding the Cowardin classification and ORAM categories of wetlands identified within the Project area is provided in Table 2.

Table 2. Summary of Wetland Resources Found within the Ware Road-Seaman 138 kV Transmission Line Project Area, Adams County and Pike County, Ohio

Wetland Name	Figure 2 Photo Location ¹	Isolated?	Wetland Classification ²	ORAM Score ⁵	ORAM Category ⁵	Delineated Area (acres) within Project Area
Wetland 1	17	Yes	PEM ³	28	1	0.03
Wetland 2	40	No	PEM ³	30	1	0.03
Wetland 3	52	No	PEM ³	42	2	0.07 ⁶
Wetland 4	59	No	PEM ³	43	2	0.02
Wetland 5	65	Yes	PEM ³	23	1	0.01
Wetland 6	70	No	PEM ³	22	1	0.03
Wetland 7	103	No	PEM ³	32	2	0.03

WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE PROJECT, ADAMS COUNTY AND PIKE COUNTY, OHIO

Wetland Name	Figure 2 Photo Location ¹	Isolated?	Wetland Classification ²	ORAM Score ⁵	ORAM Category ⁵	Delineated Area (acres) within Project Area
Wetland 8	104	No	PEM ³	21	1	0.02
Wetland 9	105	No	PFO ⁴	56	2	0.01
Wetland 10	111	No	PEM ³	36.5	2	0.001
TOTAL						0.26
¹ Figure 2 and Appendix C – Representative Photographs						
² Wetland classification is based on Cowardin et al. (1979).						
³ PEM = Palustrine Emergent Wetland						
⁴ PFO = Palustrine Forested						
⁵ ORAM Score and Category are based on the Ohio Rapid Assessment Method for Wetlands v. 5.0 (Mack 2001).						
⁶ This acreage is all PEM wetland; PFO portion of wetland is located outside of existing ROW.						

3.3 WATERBODIES

Stantec completed field surveys within the Project area on December 7-13, 2016 and March 28-29, 2017, for waterbodies. Figure 2 (Appendix A) shows the waterbodies (streams and open water features) identified by Stantec within the Project area, as well as the locations of upland drainage features identified within the Project area. Representative photographs of the streams, open waters, and upland drainage features identified within the Project area are included in Appendix C of this report (photo locations are shown on Figure 2, Appendix A). Completed QHEI and HHEI data forms for streams identified in the Project area are included in Appendix D. Information regarding the streams identified within the Project area is provided in Table 3.

Table 3. Summary of Stream Resources Found within the Ware Road-Seaman 138 kV Transmission Line Project Area, Adams County and Pike County, Ohio

Stream Name	Photo Location ¹	Receiving Waters	Stream Flow Regime ²	Stream Evaluation Method	Stream Evaluation Score	Approximate OHWM Width (feet) ³	Delineated Length (feet) within Project Area
Stream 1	2	Ohio Brush Creek	Ephemeral	HHEI	42	1	127
Stream 2 (West Fork)	4	Ohio Brush Creek	Intermittent	QHEI	51	20	137

WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE PROJECT, ADAMS COUNTY AND PIKE COUNTY, OHIO

Stream Name	Photo Location¹	Receiving Waters	Stream Flow Regime²	Stream Evaluation Method	Stream Evaluation Score	Approximate OHWM Width (feet)³	Delineated Length (feet) within Project Area
Ohio Brush Creek)							
Stream 3 (West Fork Ohio Brush Creek)	5	Ohio Brush Creek	Ephemeral	QHEI	51	90	115
Stream 4 (West Fork Ohio Brush Creek)	6	Ohio River	Perennial	QHEI	64	85	117
Stream 5 (George's Creek)	7	Ohio Brush Creek	Perennial	QHEI	83	95	137
Stream 6	8	Ohio Brush Creek	Intermittent	HHEI	83	8	101
Stream 7	9	Ohio Brush Creek	Intermittent	HHEI	88	5	117
Stream 8	10	Ohio Brush Creek	Perennial	HHEI	59	3.5	128
Stream 9 (Big Run)	11	Ohio Brush Creek	Perennial	HHEI	83	38	102
Stream 10	12	Ohio Brush Creek	Ephemeral	HHEI	57	6	104
Stream 11	13	Ohio Brush Creek	Perennial	HHEI	81	30	102
Stream 12	14	West Fork Ohio Brush Creek	Intermittent	HHEI	46	7	101
Stream 13	15	West Fork Ohio Brush Creek	Ephemeral	HHEI	53	5	125
Stream 14	16	West Fork Ohio Brush Creek	Perennial	HHEI	64	3	116
Stream 15	18	West Fork Ohio Brush Creek	Ephemeral	HHEI	21	1.5	43
Stream 16	19	West Fork Ohio Brush Creek	Perennial	HHEI	80	10	105
Stream 17	20	West Fork Ohio Brush Creek	Ephemeral	HHEI	15	4	31
Stream 18 (Ohio Brush Creek)	21	Ohio Brush Creek	Perennial	QHEI	60	88	131

WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE PROJECT, ADAMS COUNTY AND PIKE COUNTY, OHIO

Stream Name	Photo Location ¹	Receiving Waters	Stream Flow Regime ²	Stream Evaluation Method	Stream Evaluation Score	Approximate OHWM Width (feet) ³	Delineated Length (feet) within Project Area
Stream 19	22	Ohio Brush Creek	Ephemeral	HHEI	19	2	165
Stream 20	23	Ohio Brush Creek	Intermittent	HHEI	43	1.4	121
Stream 21	24	Ohio Brush Creek	Intermittent	HHEI	61	7	148
Stream 22	25	Ohio Brush Creek	Intermittent	HHEI	53	2.5	310
Stream 23	26	Ohio Brush Creek	Perennial	HHEI	73	6	103
Stream 24	27	Ohio Brush Creek	Ephemeral	HHEI	17	2	642
Stream 25	31	Scioto Brush Creek	Ephemeral	HHEI	11	0.8	130
Stream 26	32	Scioto Brush Creek	Perennial	HHEI	76	4	675
	36			HHEI	91	10	
	38			HHEI	81	8	
Stream 27	33	Scioto Brush Creek	Ephemeral	HHEI	38	2	122
Stream 28	34	Scioto Brush Creek	Ephemeral	HHEI	43	3	163
Stream 29	37	Scioto Brush Creek	Ephemeral	HHEI	10	0.5	126
Stream 30	39	Scioto Brush Creek	Perennial	HHEI	66	6	23
Stream 31	41	Scioto Brush Creek	Perennial	HHEI	61	7	129
Stream 32	43	Scioto Brush Creek	Intermittent	HHEI	44	2	213
Stream 33	44	Scioto Brush Creek	Ephemeral	HHEI	26	2	261
Stream 34	46	Scioto Brush Creek	Ephemeral	HHEI	38	3	189
Stream 35	47	Scioto Brush Creek	Intermittent	HHEI	55	5	123
Stream 36	48	Scioto Brush Creek	Ephemeral	HHEI	13	0.8	66
Stream 37	49	Scioto Brush Creek	Intermittent	HHEI	73	9	112
Stream 38	50	Scioto Brush Creek	Intermittent	HHEI	74	8	193
Stream 39	51	Scioto Brush Creek	Intermittent	HHEI	77	8.5	123

WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE PROJECT, ADAMS COUNTY AND PIKE COUNTY, OHIO

Stream Name	Photo Location¹	Receiving Waters	Stream Flow Regime²	Stream Evaluation Method	Stream Evaluation Score	Approximate OHWM Width (feet)³	Delineated Length (feet) within Project Area
Stream 40 (Scioto Brush Creek)	53	Scioto River	Perennial	QHEI	58.5	16.7	113
Stream 41	54	Scioto Brush Creek	Intermittent	HHEI	40	3.8	166
Stream 42	56	Scioto Brush Creek	Ephemeral	HHEI	17	1.4	104
Stream 43	57	Scioto Brush Creek	Ephemeral	HHEI	48	9	115
Stream 44	58	Scioto Brush Creek	Intermittent	HHEI	49	10	163
Stream 45 (Chenoweth Fork)	60	Scioto Brush Creek	Perennial	QHEI	49.5	20	526
Stream 46	61	Scioto Brush Creek	Intermittent	HHEI	88	12	109
Stream 47	62	Chenoweth Fork	Ephemeral	HHEI	15	1	18
Stream 48	63	Chenoweth Fork	Intermittent	HHEI	50	7	142
Stream 49	64	Chenoweth Fork	Intermittent	HHEI	68	10	102
Stream 50	66	Chenoweth Fork	Perennial	HHEI	77	6	107
Stream 51	67	Chenoweth Fork	Ephemeral	HHEI	29	3	102
Stream 52	68	Chenoweth Fork	Intermittent	HHEI	92	18	183
Stream 53	69	Chenoweth Fork	Ephemeral	HHEI	67	30	133
Stream 54	71	Lick Run	Ephemeral	HHEI	45	4	112
Stream 55	72	Lick Run	Ephemeral	HHEI	51	8	148
Stream 56	73	Sunfish Creek	Intermittent	HHEI	46	4	102
Stream 57	74	Sunfish Creek	Intermittent	HHEI	50	6	169
Stream 58	75	Sunfish Creek	Ephemeral	HHEI	19	1	101
Stream 59	76	Sunfish Creek	Ephemeral	HHEI	19	1	104
Stream 60	77	Sunfish Creek	Intermittent	HHEI	24	1	109
Stream 61	78	Sunfish Creek	Ephemeral	HHEI	15	1.2	134
Stream 62	79	Morgan Fork	Perennial	QHEI	47	25	144

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Stream Name	Photo Location¹	Receiving Waters	Stream Flow Regime²	Stream Evaluation Method	Stream Evaluation Score	Approximate OHWM Width (feet)³	Delineated Length (feet) within Project Area
Stream 63	80	Morgan Fork	Perennial	QHEI	53	30	102
Stream 64	82	Sunfish Creek	Intermittent	HHEI	16	2	109
Stream 65	85	Sunfish Creek	Ephemeral	HHEI	18	1.2	166
Stream 66 (Leeth Creek)	86	Morgan Fork	Perennial	QHEI	53.5	24	113
Stream 67	87	Leeth Creek	Ephemeral	HHEI	18	1.5	145
Stream 68	88	Leeth Creek	Intermittent	HHEI	40	1.8	112
Stream 69	90	No Name Creek	Intermittent	HHEI	28	1	117
Stream 70 (No Name Creek)	91	Scioto River	Perennial	QHEI	44	7	104
Stream 71	92	No Name Creek	Ephemeral	HHEI	41	3	31
Stream 72	96	Ohio Brush Creek	Ephemeral	HHEI	30	1	31
Stream 73	97	Scioto Brush Creek	Ephemeral	HHEI	18	1.5	31
Stream 74	98	Scioto Brush Creek	Perennial	QHEI	49.5	10	31
Stream 75	99	Scioto Brush Creek	Intermittent	HHEI	73	4	61
Stream 76	100	Scioto Brush Creek	Intermittent	HHEI	35	1.5	19
Stream 77 (Betty's Creek)	101	Scioto Brush Creek	Perennial	QHEI	64.5	15	239
Stream 78	106	Scioto Brush Creek	Intermittent	HHEI	44	4.1	61
Stream 79	107	Scioto Brush Creek	Intermittent	HHEI	30	3	30
Stream 80	108	Sunfish Creek	Ephemeral	HHEI	23	3	48
Stream 81	109	Chenoweth Fork	Ephemeral	HHEI	26	1.5	14
Stream 82	110	Sunfish Creek	Intermittent	HHEI	38	0.7	25
Stream 83	114	Sunfish Creek	Intermittent	HHEI	54	5	30

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Stream Name	Photo Location¹	Receiving Waters	Stream Flow Regime²	Stream Evaluation Method	Stream Evaluation Score	Approximate OHWM Width (feet)³	Delineated Length (feet) within Project Area
Stream 84	115	Sunfish Creek	Intermittent	HHEI	49	3	270
Stream 85	116	No Name Creek	Intermittent	HHEI	43	3	61
TOTAL							11,232
¹ Figure 2 and Appendix C – Representative Photographs							
² Stream classification is based on Federal Register/Vol. 67, No. 10 (USACE 2002)							
³ OHWM = Ordinary High Water Mark							

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3.4 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Table 4. Summary of Potential Ohio State-Listed Species within the Ware Road-Seaman 138 kV Transmission Line Rebuild Project Area, Adams County and Pike County, Ohio

Common Name	Scientific Name	State ¹ Listing	Known to Occur Within Pike County? ²	Known to Occur Within Adams County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Insects									
Regal Frillary	<i>Speyeria idalia</i>	E	No	Yes	No	Occurs in tallgrass prairie remnants and other open sites including damp meadows, marshes, wet fields, and pastures (Lotts and Naberhaus 2016).	Yes	Some potentially suitable habitat (old field, emergent wetland, pasture) was observed within the Project area. This species is not known to occur within a one mile radius of the Project area. Therefore, impacts to this species are possible but not anticipated.	No comments received.
Uhler's Sundragon	<i>Helocordulia uhleri</i>	E	No	Yes	No	This species needs clean, small to medium, rocky forest streams with gravelly and/or sandy substrate and flowing water. They can be found in sunny clearings and forest edges near their streams (Mumroe 2012).	Yes	Some potentially suitable habitat was observed within the Project area. This species is not known to occur within a one mile radius of the Project area. Therefore, impacts to this species are possible but not anticipated.	No comments received.
The Pink Streak	<i>Faronta rubripennis</i>	T	No	Yes	No	This species is found mainly in more or less natural sandy grassy situations such as prairies and dunes. It has been suggested that this species may be associated with <i>Sorghastrum nutans</i> in Ohio (NatureServe 2017).	No	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Kramer's Cave Beetle	<i>Pseudoanophthalmus krameri</i>	E	No	No	No	Occur in twilight zone or deeper in or on moist soil, often near streams or drip areas (NatureServe 2017).	No	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated.	This species is only found in caves. Therefore, this project is not likely to have an impact on this species.
Ohio Cave Beetle	<i>Pseudoanophthalmus ohioensis</i>	E	No	No	No	Occur in twilight zone of caves (or deeper) on moist soil; often near streams or drip areas (NatureServe 2017).	No	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Birds									
Loggerhead Shrike	<i>Lanius ludovicianus</i>	E	No	Yes	No	Breeding habitats for the loggerhead shrike are open country with scattered trees and shrubs, savanna, desert scrub and, occasionally, open woodland (NatureServe 2017)	Yes	Potentially suitable habitat for this species was observed within portions of the Project area (pastures, old fields, openings in early successional forest). However, according to the ODNR Division of Wildlife State Listed Species by County	No comments received.

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Common Name	Scientific Name	State ¹ Listing	Known to Occur Within Pike County? ²	Known to Occur Within Adams County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Lark Sparrow	<i>Chondestes grammacus</i>	E	No	No	No	This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. (ODNR 2017b)	Yes	(ODNR 2017a), the species is not known to occur within Pike County, and was last recorded in 1990 within Adams County. Therefore, impacts to this species are possible but are not anticipated.	If habitat for this species will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 to June 30. If this habitat will not be impacted, the project is not likely to impact this species.
Fishes									
Shorthead Gar	<i>Lepisosteus platostomus</i>	E	Yes	Yes	No	Habitat includes large weedy lakes and reservoirs, backwaters and quiet pools of medium to large rivers, stagnant ponds, sloughs, canals, brackish waters of coastal inlets, occasionally coastal marine waters; often near vegetation or close to submerged or overhanging objects by day. Young tend to occupy shallows, larger individuals in deeper water. Spawning occurs over weed beds of shallow waters in rivers, usually in grass and weeds in shoal water in lakes; or near stone piles of railroad bridges, in nests of smallmouth bass, or over gravel bars (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact this species or other aquatic species.
Popeye Shiner	<i>Notropis atherinoides</i>	E	Yes	Yes	No	Habitat includes warm, relatively clear flowing waters of large creeks and small to medium rivers; these shiners are closely associated with gravel substrate; typically, they occur in runs, backwaters near appreciable current, and the head of pools (NatureServe 2017).	No	Some potentially suitable habitat (perennial streams) was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact this species or other aquatic species.
American Eel	<i>Anguilla rostrata</i>	T	No	Yes	No	The American eel may be found at times in any perennial stream in Ohio and in Lake Erie. They appear most often in moderate or large rivers with continuous flow and moderately clear water. While in fresh water, eels are secretive and hide in deep pools around cover, sometimes burying themselves during the day and coming out to feed at night, preferably on fish or crayfish (ODNR 2017b).	Yes	Some potentially suitable habitat (perennial streams) was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact this species or other aquatic species.

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Common Name	Scientific Name	State ¹ Listing	Known to Occur Within Pike County? ²	Known to Occur Within Adams County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Channel Darter	<i>Percina copelandi</i>	E	No	Yes	No	Habitat includes warm, low, and moderate gradient rivers and large creeks in areas of moderate current. This darter usually is found over sand and gravel substrates; it prefers clear water and silt-free bottoms (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact this species or other aquatic species.
River Darter	<i>Percina shumardi</i>	T	Yes	Yes	No	Large rivers and lower part of tributaries; deep chutes and riffles where current is swift and bottom is coarse gravel or rock (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact this species or other aquatic species.
Goldeye	<i>Hiodon alosoides</i>	E	Yes	No	No	Habitat includes quiet turbid water of medium to large lowland rivers, small lakes, ponds, fringe wetlands and muddy shallows of larger lakes. Occurs in shallow firm-bottomed sites in river pools or backwaters or over gravel shoals in tributary streams (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact this species or other aquatic species.
Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	E	Yes	No	No	Deep channels and embayments of large turbid rivers; often over sand mixed with gravel or mud in areas with strong current (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact this species or other aquatic species.
Blue Sucker	<i>Cyprinus elongatus</i>	T	Yes	No	No	Habitat includes the largest rivers and lower portions of major tributaries. Usually occurs in channels and flowing pools with moderate current (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact this species or other aquatic species.
Tippecanoe Darter	<i>Etheostoma tippecanoe</i>	T	Yes	No	No	This fish prefers medium to large streams in the Ohio River drainage system and are found in riffles of moderate current with substrate of gravel or cobble sized rocks (ODNR 2017b).	No	Some potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact this species or other aquatic species.
Bigeye Shiner	<i>Notropis boops</i>	T	Yes	No	Yes	Flowing pools of moderately clear creeks and small to medium rivers with large permanent pools over bottom of clear sand, gravel, or rock. Often at stream margin in beds of emergent vegetation (NatureServe 2017).	No	Some potentially suitable habitat was observed within the Project area. However, no in-water work in perennial	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to aquatic species and

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Common Name	Scientific Name	State ¹ Listing	Known to Occur Within Pike County? ²	Known to Occur Within Adams County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
								streams is proposed by AEP. Therefore, no impacts are anticipated.	their habitat. If no in-water work is proposed, this project is not likely to impact this species or other aquatic species.
Reptiles									
Timber Rattlesnake	<i>Crotalus horridus horridus</i>	E	Yes	Yes	No	In the central Midwest, optimum habitat is a high, dry ridge with oak-hickory forest interspersed with open areas. Hibernacula are typically located in a rocky area where underground crevices provide retreats for overwintering, such as a fissure in a ledge, a crevice between ledge and ground, and fallen rock associated or unassociated with cliffs (NatureServe 2017).	Yes	Suitable potentially suitable habitat for this species was observed within the Project area. However, this species is not known to occur within the Project area or a one-mile radius of it. Therefore, impacts to this species may occur but are not anticipated.	ODNR recommends that a survey be conducted to determine if suitable habitat exists at the project site. If suitable habitat is present, the ODNR recommends that a presence/absence survey be conducted or an avoidance/minimize plan be developed and implemented by an approved herpetologist to ensure any timber rattlesnakes that are utilizing the area are not impacted by the project.
Spotted Turtle	<i>Clemmys guttata</i>	T	No	Yes	No	Spotted turtles inhabit mostly unpolluted, shallow bodies of water with a soft bottom and aquatic vegetation, such as small marshes, marshy pastures, bogs, fens, woodland streams, swamps, small ponds, vernal pools, and lake margins: in some areas they occur in brackish tidal streams (NatureServe 2017).	Yes	Some potentially suitable habitat was observed within the Project area. However, this species is not known to occur within the Project area or a one-mile radius of it and no in-water work is proposed by AEP for this project. Therefore, no impacts are anticipated.	No comments received.
Mussels									
Fanshell	<i>Cyprogenia stegaria</i>	E	Yes	Yes	No	Medium to large streams and rivers with moderate to strong current in coarse sand and gravel and depth ranging from shallow to deep (NatureServe 2017).	Yes	Some potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Butterfly	<i>Ellipsaria lineolata</i>	E	No	Yes	No	This mussel prefers stable substrate containing rock, gravel, and sand in swift currents of large rivers (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.

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Common Name	Scientific Name	State ¹ Listing	Known to Occur Within Pike County? ²	Known to Occur Within Adams County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Elephant-ear	<i>Elliptio crassidens</i>	E	No	Yes	No	An inhabitant of channels in large creeks to rivers with moderate to swift currents, primarily on sand and limestone or rock substrates (NatureServe 2017).	Yes	Some potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Snuffbox	<i>Epioblasma triquetra</i>	E	Yes	Yes	No	Occurs in medium-sized streams to large rivers, generally on mud, rocky, gravel, or sand substrates in flowing water. Often deeply buried in substrate and overlooked by collectors (NatureServe 2017). Snuffbox is commonly found buried in the substrate. It is found in a wide range of particle sized substrates; however, swift shallow riffles with sand and gravel are where it is typically found (Parmalee and Bogan 1998; Watters et al. 2009).	Yes	Some potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Ebonyshell	<i>Fusconaia ebena</i>	E	Yes	Yes	No	Inhabits large rivers and prefers swift water and stable sand or gravel shoals. Coarse sand and gravel substrate provides the most suitable habitat. It can occur at depths of 10-15 feet with current associated (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Long-solid	<i>Fusconaia maculata maculata</i>	E	No	Yes	No	This mussel is found in the gravel substrates of shoals and riffles of large rivers, as well as impounded areas (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Sharp-ridged Pocketbook	<i>Lampsilis ovata</i>	E	Yes	Yes	No	Very generalized in habitat preference, adapting well to both impoundment situations as well as free-flowing, shallow rivers. Usually found in moderate to strong current, it can survive in standing water. The most suitable substrate consists of a mixture of gravel and coarse sand mixed with some silt or mud (NatureServe 2017).	Yes	Some suitable habitat was observed within the Project area, however, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no

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Common Name	Scientific Name	State ¹ Listing	Known to Occur Within Pike County? ²	Known to Occur Within Adams County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
									mussels are present or no mussel impacts will occur.
Pink Mucket	<i>Lampsilis abrupta</i>	E	No	Yes	No	Large rivers in habitats ranging from silt to boulders, but apparently more commonly from gravel and cobble. Collected from shallow and deep water with current velocity ranging from zero to swift, but never standing pools of water (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Yellow Sandshell	<i>Lampsilis teres</i>	E	Yes	Yes	No	Occurs in medium-sized creeks to large rivers, often in slower current areas of stream borders having sand as primary substrate as well as mud gravel and silt (NatureServe 2017).	No	Some potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Washboard	<i>Megalania nervosa</i>	E	Yes	Yes	No	This species is typically a large river species, living in the main channel and in some of the overbank areas of reservoirs, but in some instances it may also become established in medium-sized and even small rivers. It is found in areas with a slow current with muddy to coarse gravel substrates (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Sheepnose	<i>Plethobasus cyphus</i>	E	Yes	Yes	No	Usually found in large rivers in current on mud, sand, or gravel bottoms at depth of 1-2 meters or more (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.

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Common Name	Scientific Name	State ¹ Listing	Known to Occur Within Pike County? ²	Known to Occur Within Adams County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Clubshell	<i>Pleurobema clava</i>	E	Yes	Yes	No	The clubshell is found in small to medium rivers, but occasionally found in large rivers, especially those having large shoal areas. It is generally found in clean, coarse sand and gravel in runs, often just downstream of a riffle and cannot tolerate mud or slackwater conditions (USFWS 1994). (Badra 2001) found the clubshell in gravel/sand substrate, runs having laminar flow (0.06-0.25 m/sec) within small to medium sized streams (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Ohio Pigtoe	<i>Pleurobema cordatum</i>	E	Yes	Yes	No	This mussel prefers strong currents of large rivers with substrates of sand and gravel, though is somewhat tolerant of lentic systems (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Pyramid Pigtoe	<i>Pleurobema rubrum</i>	E	No	Yes	No	This mussel is a riffle and shoal species that prefers the swift currents of coarse gravel, sand, and mud substrates within medium to large rivers (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Rabbitsfoot	<i>Quadrula cylindrica cylindrica</i>	E	Yes	Yes	No	Typical habitat for this species is small to medium rivers with moderate to swift currents, and in smaller streams it inhabits bars or gravel and cobble close to the fast current. Rabbitsfoot are also found in medium to large rivers in sand and gravel (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.

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Common Name	Scientific Name	State ¹ Listing	Known to Occur Within Pike County? ²	Known to Occur Within Adams County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Monkeyface	<i>Quadrula metanevra</i>	E	Yes	Yes	No	This is a species of medium to large rivers typically found in runs with a substrate of mixed sand or gravel (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Wartyback	<i>Quadrula nodulata</i>	E	No	Yes	No	This species can occur in medium to large rivers at depths of up to 15-18 feet on a sand and mud substrate (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Rayed Bean	<i>Villosa fabalis</i>	E	Yes	Yes	No	Habitat includes gravel or sandy substrate, especially in areas of thick roots of aquatic plants, increase substrate stability (NatureServe 2017, Parmalee and Bogan 1998). Rayed bean can be associated with shoal or riffle areas, and in shallow, wave-washed areas of glacial lakes. It is generally found in smaller, headwater creeks, but sometimes in larger rivers and open-water bodies. It can occur in shallow riffles or in lakes with water depths up to four feet. It has been found in riffles, generally in vegetation, and deeply buried in sand and gravel bound together by roots (Parmalee and Bogan 1998).	Yes	Some potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Black Sandshell	<i>Ligumia recta</i>	T	Yes	Yes	No	Typically found in medium-sized to large rivers in locations with strong current and substrates of coarse sand and gravel with cobbles in water depths from several inches to six feet or more (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Threehorn Wartyback	<i>Obliquaria reflexa</i>	T	Yes	Yes	No	This species is typical of the large rivers where there is moderately strong current and a stable substrate composed of gravel, sand, and mud (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be

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Common Name	Scientific Name	State ¹ Listing	Known to Occur Within Pike County? ²	Known to Occur Within Adams County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Fawnsfoot	<i>Truncilla donaciformis</i>	T	Yes	Yes	No	This species occurs in both large and medium-sized rivers at normal depths varying from less than three feet up to 15 to 18 feet in big rivers such as the Tennessee. A substrate of either sand or mud is suitable and although it is typically found in moderate current, it can adapt to a lake or embayment environment lacking current (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Northern Riffleshell	<i>Epioblasma torulosa rangiana</i>	E	Yes	No	No	This species inhabits riffles in small to large streams with swift current and a substrate of firmly packed fine gravel and sand (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	This project must not impact mussels (listed and non-listed) at the project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur.
Mammals									
Indiana Bat	<i>Myotis sodalis</i>	Et ¹	Yes	Yes	No	The Indiana bat is likely distributed over the entire State of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas. Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007a; USFWS 2015). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).	Yes	No suitable winter hibernacula were observed in the Project area. However, suitable summer roost habitat was observed in the Project area. AEP intends to avoid areas with summer roost habitat to the extent possible. AEP will determine if any summer tree clearing is necessary in areas containing suitable roost habitat and will proceed accordingly.	If suitable habitat occurs within the project area, ODNR recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, ODNR recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, ODNR recommends a net survey be conducted between June 1 and August 15, prior to any cutting.
Allegheny Woodrat	<i>Neotoma magister</i>	E	No	Yes	No	Typical habitat consists of rocky cliffs and slopes (NatureServe 2017).	No	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Eastern Harvest Mouse	<i>Reithrodontomys humulis</i>	T	Yes	Yes	No	Prefers old fields, marshes, and wet meadows. Climbs among herbaceous vegetation. Nests are placed in tangled vegetation under debris or above ground (NatureServe 2017).	Yes	Suitable habitat for this species was observed within the Project area. Therefore, impacts may occur.	No comments received.

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Common Name	Scientific Name	State ¹ Listing	Known to Occur Within Pike County? ²	Known to Occur Within Adams County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Black Bear	<i>Ursus americanus</i>	E	Yes	Yes	No	Black bears inhabit forests and nearby openings, including forested wetlands. When inactive, they occupy dens under fallen trees at ground-level or above-ground tree cavities or hollow logs, underground cave-like sites, or the ground surface in dense cover (NatureServe 2017).	Yes	Suitable habitat was observed within the Project area, but due to the mobility of this species, impacts are not anticipated.	Due to the mobility of this species, this project is not likely to impact this species.
Amphibians									
Green Salamander	<i>Aneides aeneus</i>	E	No	Yes	No	The green salamander typically utilizes the damp crevices of shaded rock outcroppings and ledges. Also, occurs less frequently nearby under the loose bark of fallen trees, and the damp ground under fallen trees (NatureServe 2017).	Yes	Some suitable habitat for this species was observed within the Project area. However, these areas will not be impacted by construction activities. Therefore, impacts to this species are not anticipated.	No comments received.
Cave Salamander	<i>Eurycea lucifuga</i>	E	No	Yes	No	The cave salamander regularly uses cave habitats but is not limited to them. The salamander utilizes fissures in layers of limestone, sink holes, springs, cisterns, and springhouses as well as other outlets from subterranean water courses. Cave salamanders also occur under rocks and logs in forests as much as a mile away from the nearest cave (Pflingstein 2013).	No	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Eastern Spadefoot	<i>Scaphiopus holbrookii</i>	E	Yes	No	No	Eastern spadefoots occur in or near floodplain areas along major river corridors, within areas of sandy, gravelly, or soft, light soils in wooded or unwooded terrain. On land, they range up to at least several hundred meters from breeding sites. When inactive, they remain burrowed in the ground. Eggs and larvae develop in temporary pools formed by heavy rains. Breeding sites include temporary pools and areas flooded by heavy rains (NatureServe 2017).	Yes	No suitable habitat for this species was observed in the Project area. Therefore, no impacts to this species are anticipated.	ODNR recommends that a habitat suitability survey be conducted by an approved herpetologist to determine if suitable habitat is present along the project route. If suitable habitat is found to be present, ODNR recommends that a presence/absence survey be conducted, or an avoidance/minimization plan be developed and implemented by an approved herpetologist.
Midland Mud Salamander	<i>Pseudotriton montanus diastictus</i>	T	Yes	Yes	No	Muddy springs, slow floodplain streams, and swamps along slow streams; backwater ponds and marshes created by beaver activity (NatureServe 2017).	Yes	No suitable habitat was observed within the Project area and no in-water work is proposed by AEP. Therefore, no impacts are anticipated.	No comments received.
Eastern Hellbender	<i>Cryptobranchus alleganiensis alleganiensis</i>	E	Yes	No	No	Found in mostly unglaciated Ohio and prefer large, swift flowing streams where they hide under larger rocks (ODNR 2017b).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	No comments received.
Plants									

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Common Name	Scientific Name	State ¹ Listing	Known to Occur Within Pike County? ²	Known to Occur Within Adams County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Scaly Blazing-star	<i>Liatris squarrosa</i>	P	No	Yes	Yes	Found in dry prairie sites with poor soil or sand on oak ridges, also found on Great Lakes Dunes (ODNR 2017c).	Yes	This species is known to occur at one location adjacent to (but not within) the Project area and some suitable habitat was observed within the Project area. Therefore, impacts may occur.	No comments received.
Wall-rue	<i>Asplenium ruta-muraria</i>	T	Yes	Yes	Yes	Wall-rue is found on dry to moist calcareous rock exposures. It is rarely found in full sun (ODNR 2017c).	Yes	Some suitable habitat for this species was observed within the Project area. Therefore, impacts may occur.	No comments received.
Walter's Violet	<i>Viola walteri</i>	T	No	Yes	Yes	Walter's violet is found in open woods and on rocky ledges, usually in calcareous substrates; frequently collected on dolomite outcrops and promontories (ODNR 2017c).	No	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Arbor Vitae	<i>Thuja occidentalis</i>	P	No	Yes	Yes	Arbor vitae occurs in open to semi-open habitats on calcareous substrates; cliffs, limestone ledges, uplands, and fens (ODNR 2017c).	Yes	Some suitable habitat for this species was observed within the Project area. Therefore, impacts may occur.	No comments received.
Wedge-leaved Whitlow-grass	<i>Draba cuneifolia</i>	T	Yes	Yes	Yes	Occurs in dry, open situations, usually in sandy areas or calcareous cliff tops and prairies (ODNR 2017c).	Yes	Some suitable habitat for this species was observed within the Project area. Therefore, impacts may occur.	No comments received.
Carolina Willowgrass	<i>Draba reptans</i>	T	No	Yes	Yes	Occurs in dry, open situations, usually in sandy soil: ledges, fields, pastures, dunes, waste places, and roadsides (ODNR 2017c).	Yes	Some suitable habitat for this species was observed within the Project area. Therefore, impacts may occur.	No comments received.
Early Buttercup	<i>Ranunculus fascicularis</i>	T	No	Yes	Yes	Occurs in calcareous soils of prairies, pastures, and dry, open woods; also on calcareous rock outcrops (ODNR 2017c).	Yes	Some suitable habitat for this species was observed within the Project area. Therefore, impacts may occur.	No comments received.
Narrow-leaved Toothwort	<i>Cardamine dissecta</i>	P	No	Yes	Yes	Rich to disturbed woods and wooded stream terraces (ODNR 2017c).	Yes	Suitable habitat for this species was observed in the Project area. Therefore, impacts to this species may occur.	No comments received.
Wherry's Catchfly	<i>Silene caroliniana</i> ssp. <i>wherryi</i>	T	Yes	Yes	Yes	Occurs in rocky upland woods of calcareous region; also tolerant of slightly acidic soil conditions (ODNR 2017c).	Yes	Some suitable habitat for this species was observed within the Project area. Therefore, impacts may occur.	No comments received.
Tennessee Pondweed	<i>Potamogeton tennesseensis</i>	T	Yes	Yes	Yes	Still or flowing water (ODNR 2017c).	Yes	Some suitable habitat for this species was observed within the Project area. Therefore, impacts may occur.	No comments received.

¹E=Endangered; T=Threatened; SOC=Species of Concern; P=Potentially Threatened
²According to Ohio Department of Natural Resources, State Listed Wildlife Species by County (ODNR 2017a).
³According to Ohio Natural Heritage Program (Appendix B).

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Table 5. Summary of Potential Federally-Listed Species within the Ware Road-Seaman 138 kV Transmission Line Rebuild Project Area, Pike County and Adams County, Ohio

Common Name	Scientific Name	Federal Listing ¹	Known to Pike County?	Known to Adams County?	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	USFWS Comments/ Recommendations
Mammals								
					The Indiana bat is likely distributed over the entire State of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas; Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007a; USFWS 2015b). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).			
Indiana Bat	<i>Myotis sodalis</i>	E ¹	Yes	Yes		Yes	No suitable winter hibernacula were observed in the Project area. However, suitable summer roost habitat was observed in the Project area. AEP intends to avoid areas with summer roost habitat to the extent possible. AEP will determine if any summer tree clearing is necessary in areas containing suitable roost habitat and will proceed accordingly.	The USFWS response letter (Appendix B) indicated that, due to the project type, size, and location, if caves and mines (potential bat hibernacula) will not be disturbed and seasonal tree cutting (clearing of trees ≥3 inches' diameter of breast height between October 1 and March 31) to avoid impacts to Indiana bats is implemented, they do not anticipate adverse effects to this species.
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	T ¹	Yes	Yes	The northern long-eared bat is found throughout Ohio. This species generally forages in forested habitat and openings in forested habitat and utilizes cracks, cavities, and loose bark within live and dead trees, as well as buildings as roosting habitat (Brack et al. 2010; USFWS 2016). The species utilizes caves and abandoned mines as winter hibernacula. Various sized caves are used providing they have a constant temperature, high humidity, and little to no air current (Brack et al. 2010).	Yes	No suitable winter hibernacula were observed in the Project area. However, suitable summer roost habitat was observed in the Project area. AEP intends to avoid areas with summer roost habitat to the extent possible. AEP will determine if any summer tree clearing is necessary in areas containing suitable roost habitat and will proceed accordingly.	If no caves or abandoned mines may be disturbed and tree removal is unavoidable, seasonal tree cutting (clearing of trees ≥3 inches' diameter of breast height between October 1 and March 31) is recommended. Following this seasonal tree clearing recommendation should ensure that no adverse effects to the northern long-eared bat will occur. Incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule.
Mussels								
Clubshell	<i>Pleurobema clava</i>	E	Yes	Yes	The clubshell is found in small to medium rivers, but occasionally found in large rivers, especially those having large shoal areas. It is generally found in clean, coarse sand and gravel in runs, often just downstream of a riffle and cannot tolerate mud or slackwater conditions (USFWS 1994). (Badra 2001) found the clubshell in gravel/sand substrate, runs having laminar flow (0.06-0.25 m/sec) within small to medium sized streams (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	Due to the project type, size, and location, USFWS does not anticipate adverse effects to any other federally listed species.
Northern Riffleshell	<i>Epioblasma torulosa rangiana</i>	E	Yes	No	This species inhabits riffles in small to large streams with swift current and a substrate of firmly packed fine gravel and sand (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	Due to the project type, size, and location, USFWS does not anticipate adverse effects to any other federally listed species.
Fanshell	<i>Cyprogenia stegaria</i>	E	Yes	Yes	Medium to large streams and rivers with moderate to strong current in coarse sand and gravel and depth ranging from shallow to deep (NatureServe 2017).	No	Some potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	Due to the project type, size, and location, USFWS does not anticipate adverse effects to any other federally listed species.
Pink Mucket	<i>Lampsilis abrupta</i>	E	No	Yes	Large rivers in habitats ranging from silt to boulders, but apparently more commonly from gravel and cobble. Collected from shallow and deep water with current velocity ranging from zero to swift, but never standing pools of water (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	Due to the project type, size, and location, USFWS does not anticipate adverse effects to any other federally listed species.

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Common Name	Scientific Name	Federal Listing ¹	Known to Pike County?	Known to Adams County?	Habitat/Preference	Potential Habitat Observed in Project Area?	Impact Assessment	USFWS Comments/ Recommendations
Rayed Bean	<i>Villosa fabalis</i>	E	Yes	Yes	Habitat includes gravel or sandy substrate, especially in areas of thick roots of aquatic plants, increase substrate stability (NatureServe 2017, Parmalee and Bogan 1998). Rayed bean can be associated with shoal or riffle areas, and in shallow, wave-washed areas of glacial lakes. It is generally found in smaller, headwater creeks, but sometimes in larger rivers and open-water bodies. It can occur in shallow riffles or in lakes with water depths up to four feet. It has been found in riffles, generally in vegetation, and deeply buried in sand and gravel bound together by roots (Parmalee and Bogan 1998).	Yes	Some potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	Due to the project type, size, and location, USFWS does not anticipate adverse effects to any other federally listed species.
Sheepnose	<i>Plethobasus cyphus</i>	E	Yes	Yes	Usually found in large rivers in current on mud, sand, or gravel bottoms at depth of 1-2 meters or more (NatureServe 2017).	No	No suitable habitat was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	Due to the project type, size, and location, USFWS does not anticipate adverse effects to any other federally listed species.
Snuffbox	<i>Epioblasma triquetra</i>	E	Yes	Yes	Occurs in medium-sized streams to large rivers, generally on mud, rocky, gravel, or sand substrates in flowing water. This species is often deeply buried in substrate and overlooked by collectors (NatureServe 2017). It is found in a wide range of particle sized substrates. However, swift shallow riffles with sand and gravel are where it is typically found (Parmalee and Bogan 1998; Watters et al. 2009).	Yes	Some suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, no impacts are anticipated.	Due to the project type, size, and location, USFWS does not anticipate adverse effects to any other federally listed species.
Plants								
Running Buffalo Clover	<i>Trifolium stoloniferum</i>	E	No	Yes	Running buffalo clover's habitat most commonly is mesic woodlands in partial to filtered sunlight, where there is a pattern of moderate periodic disturbance for a prolonged period, such as mowing, trampling, or grazing. It utilizes a variety of disturbed woodland habitats, floodplains, streambanks, grazed woodlots, cemeteries, lawns, old logging roads, and jeep trails (USFWS 2007b).	Yes	Suitable habitat for this species was observed within portions of the Adams County portion of the Project area. It is not currently known to occur in Pike County (USFWS 2015a). Therefore, impacts to this species may occur. AEP will determine if any areas with suitable habitat will be impacted by the Project and will proceed accordingly.	If suitable habitat is present, USFWS recommends surveys for this species be conducted by a trained biologist in May or June when the plant is in flower. The survey must be coordinated with USFWS in advance.

¹E=Endangered; T=Threatened; SO C=Species of Concern
²According to USFWS (2015a).

4.0 Conclusions and Recommendations

Stantec conducted a wetland and waterbodies delineation and a preliminary habitat assessment for threatened and endangered species or their habitats within the Project area from December 7-13, 2016 and March 28-29, 2017. During the field surveys, eight palustrine emergent wetlands totaling approximately 0.17 acres, one palustrine forested wetland totaling approximately 0.01 acres, and one palustrine emergent/palustrine forested wetland totaling approximately 0.07 acres were identified within the Project area. See Table 2 for more information regarding the wetland classifications and ORAM categories for wetlands identified within the Project area. Thirty-two ephemeral streams totaling approximately 3,946 linear feet in length, 32 intermittent stream totaling approximately 3,939 linear feet in length, and 21 perennial streams totaling approximately 3,347 linear feet in length were delineated within the Project area. Perennial streams included West Fork Ohio Brush Creek, George's Creek, Big Run, Ohio Brush Creek Scioto Brush Creek, Chenoweth Fork, Leeth Creek, No Name Creek, and Betty's Creek. See Table 3 for more information regarding the streams identified within the Project area.

The information provided by Stantec regarding wetland and stream boundaries is based on an analysis of the wetland and upland conditions present within the Project area at the time of the fieldwork. The delineations were performed by experienced and qualified professionals using regulatory agency-accepted practices and sound professional judgment.

Table 4 provides summary information for all state-listed species known to occur within Adams and Pike Counties. A technical assistance/environmental review request letter was sent to ODNR-Office of Real Estate. The ODNR -Office of Real Estate response letter (Appendix B) indicates that the Project area is located within range of the following state-listed endangered and/or threatened species: Indiana bat, timber rattlesnake, eastern spadefoot toad, lark sparrow, Kramer's cave beetle, black bear, 17 mussel species, and 10 fish species.

If suitable Indiana bat roost habitat occurs within the Project area, ODNR recommends trees be conserved. If suitable habitat occurs in the Project area and trees must be cut, ODNR recommends cutting occur between October 1 and March 31. If suitable trees must be cut during summer months, ODNR recommends a net survey be conducted between June 1 and August 15, prior to any cutting. If no tree removal is proposed, this project is not likely to impact this species. No suitable winter hibernacula were observed in the Project area. However, suitable summer roost habitat was observed in the Project area. AEP intends to avoid areas with summer roost habitat to the extent possible. AEP will determine if any summer tree clearing is necessary in areas containing suitable roost habitat and will proceed accordingly.

According to ODNR, this project must not impact mussels (listed and non-listed) at the Project site. If in-water work is planned in any stream that meets the criteria described in the Ohio Mussel Survey Protocol (ODNR and USFWS 2016), ODNR recommends information be provided that indicates no mussels are present or no mussel impacts will occur. ODNR also recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to aquatic species and their habitat.

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If no in-water work is proposed, the project is not likely to impact listed mussel and fish species. Suitable habitat for several mussel and fish species does occur in the Project area. No in-water work is proposed by AEP in perennial streams. Therefore, no impacts are anticipated to state-listed mussel and fish species.

ODNR recommends habitat surveys for timber rattlesnake and eastern spadefoot toad be performed by an approved herpetologist. If suitable habitat is found to be present, then ODNR recommends a presence/absence survey be conducted or an avoidance/minimization plan be developed and implemented. Suitable habitat for lark sparrow and black bear were observed within the Project area. ODNR recommends that if suitable lark sparrow habitat will be impacted by the Project, construction should be avoided during the May 1 to June 30 nesting period. According to ODNR, due to the mobility of black bear, the Project will not impact this species. No suitable habitat for Kramer's cave beetle occurs within the Project area. Therefore, per ODNR, the Project is not likely to impact this species.

According to correspondence received from ODNR - Ohio Natural Heritage Program (ONHP) (Appendix B) the following species are known to occur within a one-mile radius of the Project area; scaly blazing-star, wall-rue, Walter's violet, arbor vitae, wedge-leaved Whitlow-grass, Carolina Whitlow-grass, early buttercup, narrow-leaved toothwort, Wherry's catchfly, bigeye shiner and Tennessee pondweed. None of the known locations occur within the Project area, though a known occurrence of scaly blazing-star is located adjacent to the Project area. Potentially suitable habitat for some of these species was observed in the Project area. Therefore, impacts to these species may occur. See Table 4 for more information.

The ODNR-ONHP also lists the Tranquility Wildlife Area, the Chalet Nivale/Bacon Flats (Highlands Nature Sanctuary), an Appalachian Highway Cliffs Conservation Site, Brush Creek State Forest, a mussel bed, a cave or cavern and a natural bridge or arch within a one-mile radius of the Project area. Brush Creek State Forest is the only feature that occurs within the Project area (Appendix B). The ODNR-ONHP is unaware of any scenic rivers, state nature preserves or parks or national wildlife refuges, parks, or forests within a one-mile radius of the Project area (Appendix B).

A technical assistance request letter was also submitted to the USFWS. The USFWS response letter states that there are no federal wilderness areas, wildlife refuges, or designated critical habitat within the vicinity of the Project area (Appendix B). The USFWS recommends that impacts to wetlands and other water resources be avoided or minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The Project area includes potential roosting and foraging habitat for the federally endangered Indiana bat and federally threatened northern long-eared bat and is in the range of these species in Ohio (USFWS; Appendix B). Should the project site contain trees ≥ 3 inches dbh, the USFWS recommends trees be saved whenever possible. If any caves or abandoned mines may be disturbed, further coordination is requested. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, USFWS recommends that removal of trees ≥ 3 inches dbh only occur between October 1 and March 31 to avoid adverse effects to this species. If

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implementation of seasonal tree clearing is not possible, USFWS recommends summer presence/absence surveys be conducted between June 1 and August 15.

In addition, the USFWS stated that the Project lies within the range of the federally-endangered running buffalo clover. If suitable habitat is present, USFWS recommends surveys for this species be conducted by a trained biologist in May or June when the plant is in flower. The survey must be coordinated with USFWS in advance. AEP will determine if any areas with potentially suitable habitat for this species will be impacted by the Project and will proceed accordingly.

Due to the project type, size, and location, USFWS does not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species.

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5.0 References

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**WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE REBUILD PROJECT, ADAMS COUNTY
AND PIKE COUNTY, OHIO**

Appendix A Figures

A.1 FIGURE 1 – PROJECT LOCATION MAP

Figure No.

1

Project Location Map

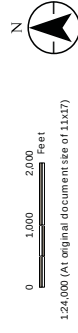
Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Log Sheet

Adams and Pike Counties, Ohio

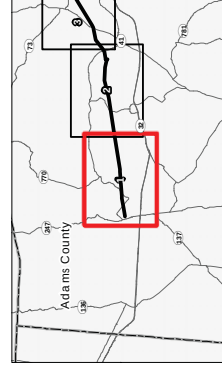
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Prepared by JH on 2017-03-16
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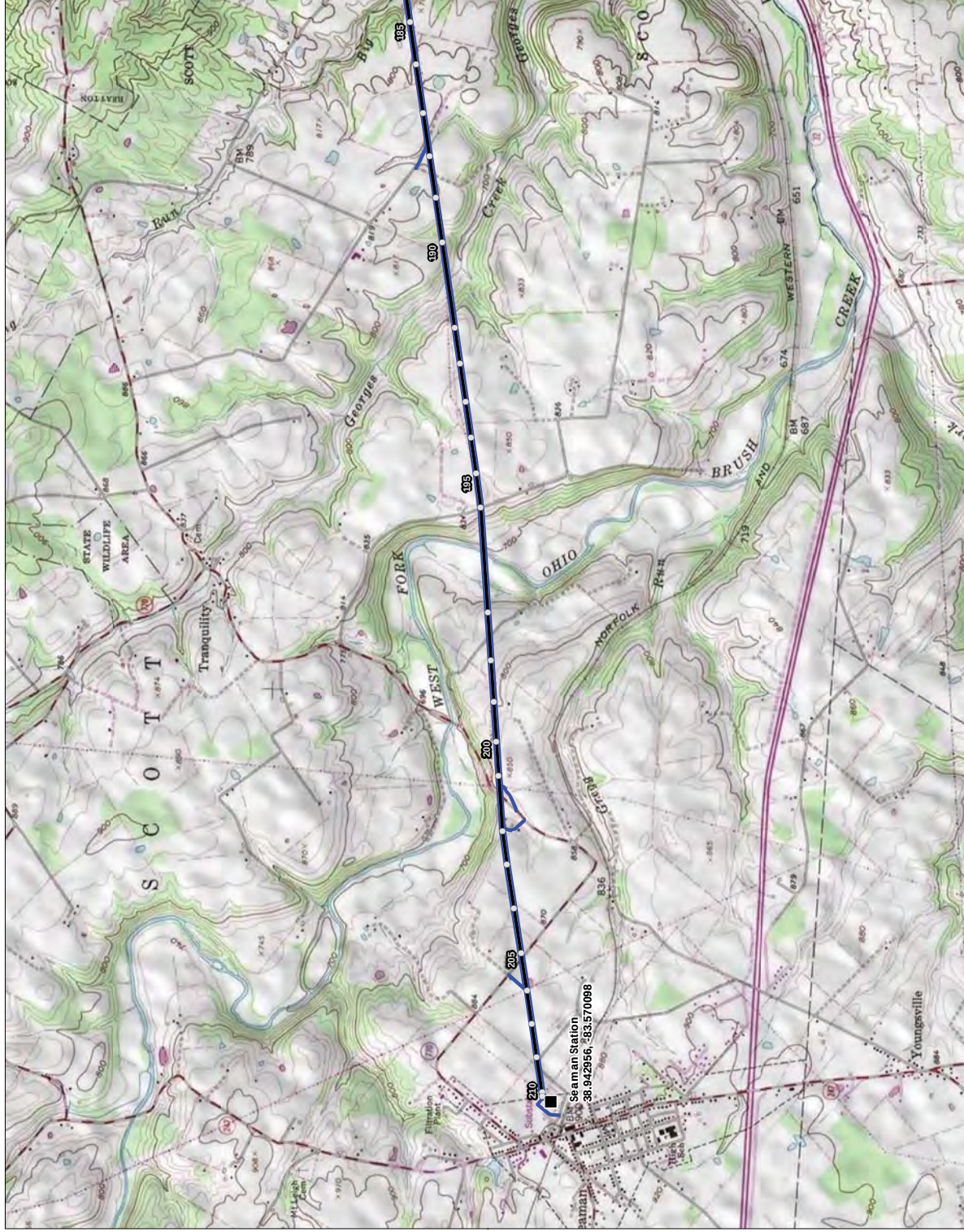
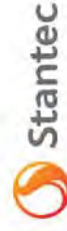
Legend

- AEP Substation
- Structure to be Replaced
- ~ 138kV Transmission Line
- Project Area (100' ROW and 30' Access Roads)



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, NADS
3. Background: USGS 7.5 Topographic Quadrangles: Byington, Ohio (294) & Jaybird, Ohio (294)



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Figure No.

1

Project Location Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location

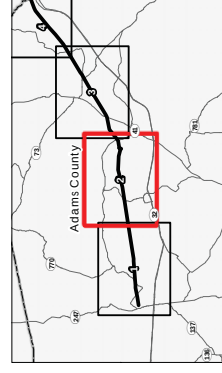
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Adams and Pike Counties, Ohio
Independent Review by DS on 2017-04-07



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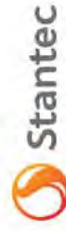
Legend

- AEP Substation
- Structure to be Replaced
- ~ 138kV Transmission Line
- Project Area (100' ROW and 30' Access Roads)



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, NADS
3. Background: USGS 7.5' Topographic Quadrangles: Blyington, Ohio (297) & Jayland, Ohio (297)



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Figure No.

1

Title

Project Location Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Log Sheet

Adams and Pike Counties, Ohio

Prepared by JH on 2017-03-15

Technical Review by NH on 2017-03-15

Independent Review by DS on 2017-04-07

130705660

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0 1,000 2,000 Feet

N

Legend

■ AEP Substation

○ Structure to be Replaced

~ 138kV Transmission Line

□ Project Area (100' ROW and 30' Access Roads)



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, NADS
3. Background: USGS 7.5' Topographic Quadrangles: Byington, Ohio (2474) & Jayland, Ohio (2474)

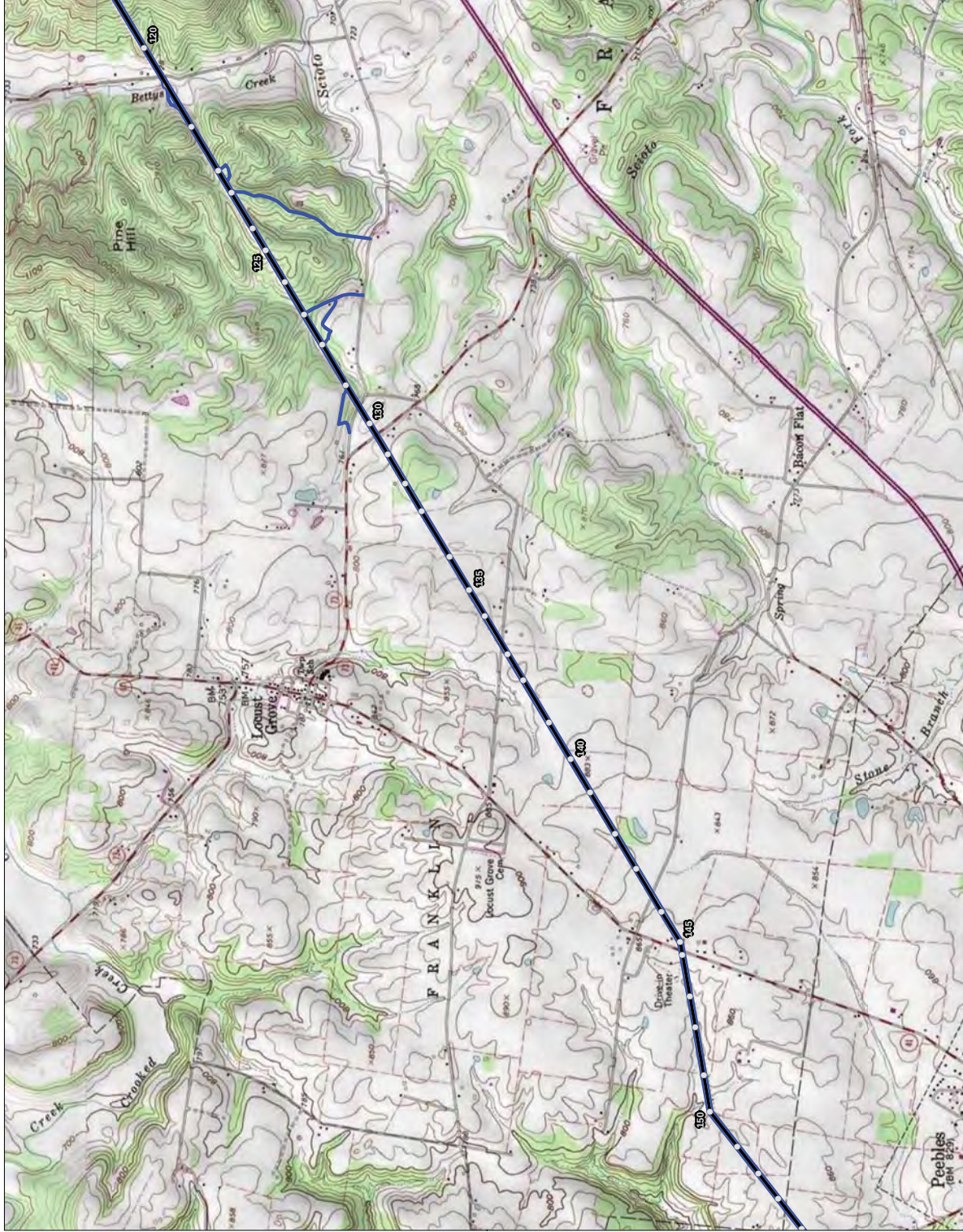
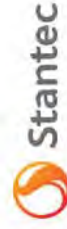


Figure No.

1

Title

Project Location Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

PROJECT LOG #3400

Adams and Pike Counties, Ohio

Prepared by JH on 2017-05-15

Independent Review by JG on 2017-05-07

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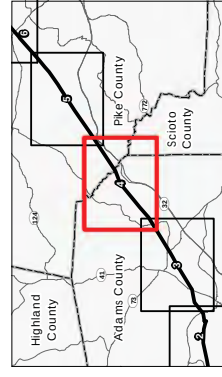
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■ AEP Substation

○ Structure to be Replaced

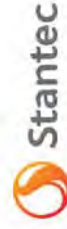
~ 138kV Transmission Line

□ Project Area (100' ROW and 30' Access Roads)



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, NADs
3. Background: USGS 7.5 Topographic Quadrangles: Blyington, Ohio (2974) & Jaybird, Ohio (2974)



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Figure No.

1

Title

Project Location Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Log Sheet

Adams and Pike Counties, Ohio

Prepared by JH on 2017-03-16

Technical Review by NH on 2017-03-16

Independent Review by DS on 2017-04-07

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Legend

■ AEP Substation

○ Structure to be Replaced

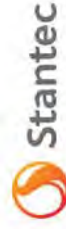
~ 138kV Transmission Line

□ Project Area (100' ROW and 30' Access Roads)



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, NADs
3. Background: USGS 7.5 Topographic Quadrangles: Byington, Ohio (2974) & Jaybird, Ohio (2974)



Page 5 of 6



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Figure No.

1

Title

Project Location Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location

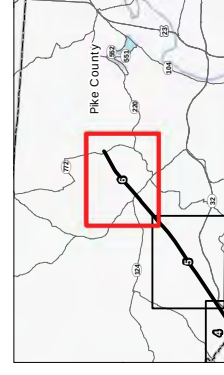
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Adams and Pike Counties, Ohio
Independent Review by DS on 2017-04-07



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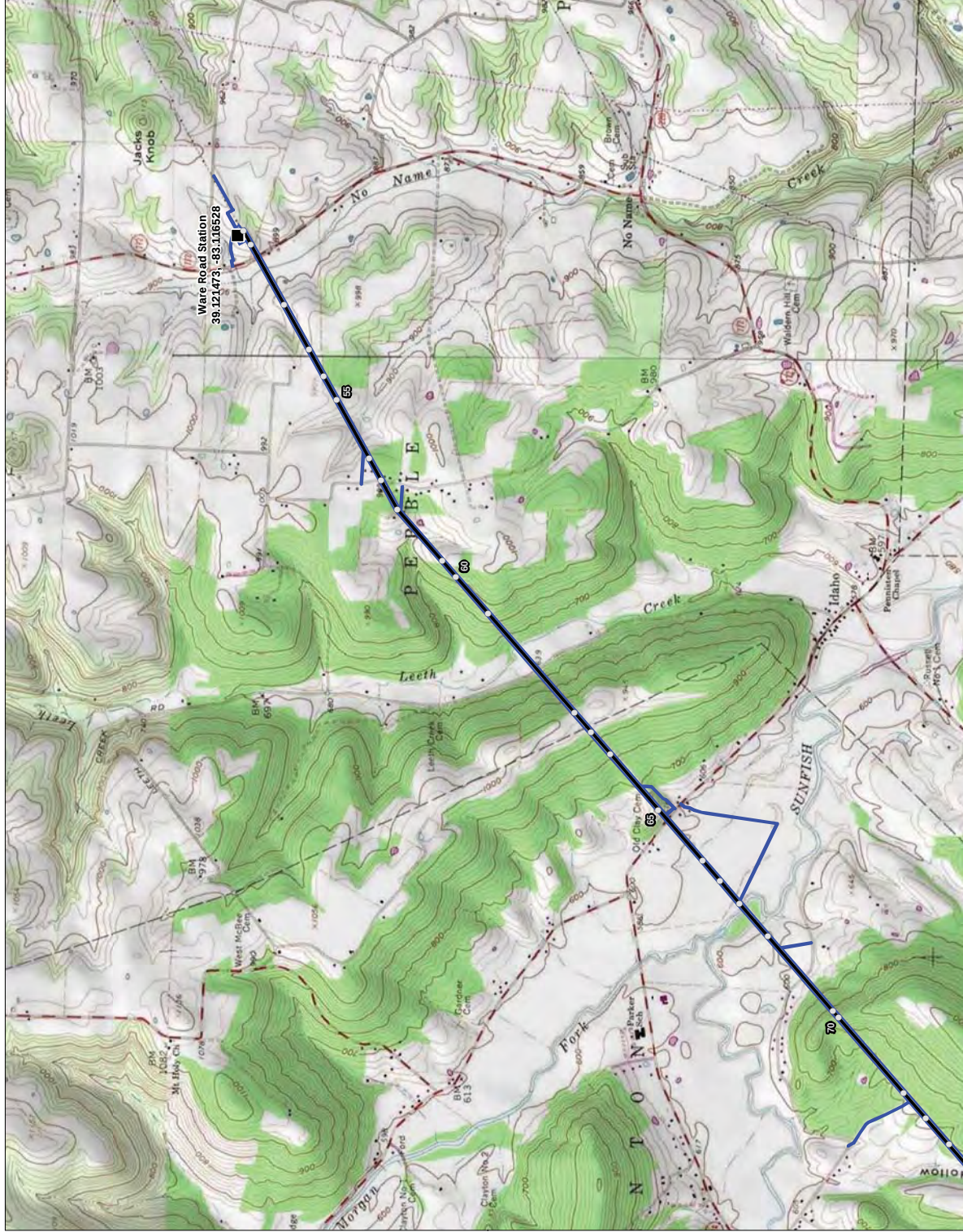
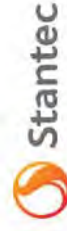
Legend

- AEP Substation
- Structure to be Replaced
- ~ 138kV Transmission Line
- Project Area (100' ROW and 30' Access Roads)



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, NADS
3. Background: USGS 7.5 Topographic Quadrangles Byington, Ohio (2474) & Jaybird, Ohio (2374)



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**WARE ROAD - SEAMAN 138 KV TRANSMISSION LINE REBUILD PROJECT, ADAMS COUNTY
AND PIKE COUNTY, OHIO**

A.2 FIGURE 2 – WETLAND AND WATERBODY DELINEATION MAP

Figure No. 2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

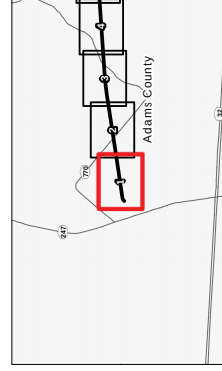
Technical Review by NRI on 2017-09-14

Independent Review by US on 2017-06-07



Legend

- AEP Substation
- Structure to be Replaced
- 138KV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
- Wetland Determination Sample Point
- ▲ Existing Culvert
- Photo Location
- Upland Drainage Feature
- Approximate Upland Drainage Feature
- Field Delineated Waterway
- Approximate Waterway
- Field Delineated Waterway Area
- Field Delineated Open Water
- Approximate Open Water
- Field Delineated Emergent Wetland
- Field Delineated Forested Wetland
- Approximate Wetland



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRIP
3. Orthophotography 2015 NALP



Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

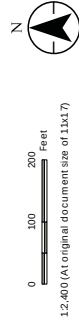
Adams and Pike Counties, Ohio

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Prepared by JH on 2017-09-14

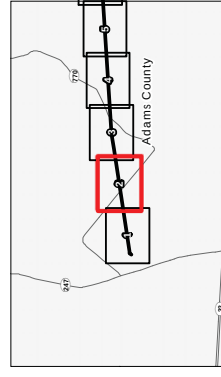
Technical Review by NH on 2017-09-14

Independent Review by JS on 2017-09-07



Legend

- AEP Substation
- Structure to be Replaced
- ~ 138KV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
- Wetland Determination Sample Point
- ▲ Existing Culvert
- Photo Location
- ~ Upland Drainage Feature
- ~ Approximate Upland Drainage Feature
- ~ Field Delineated Waterway
- ~ Approximate Waterway
- ~ Field Delineated Waterway Area
- ~ Field Delineated Open Water
- ~ Approximate Open Water
- ~ Field Delineated Emergent Wetland
- ~ Field Delineated Forested Wetland
- ~ Approximate Wetland



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRP
3. Orthophotography 2015 NAD

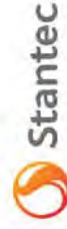


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

13070-0862

Technical Review by NAE on 2017-08-14

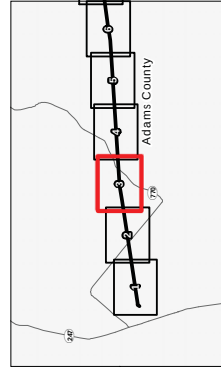
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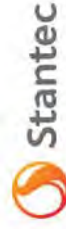
Legend

- AEP Substation
- Structure to be Replaced
- ~ 138kV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
- Wetland Determination Sample Point
- ▲ Existing Culvert
- Photo Location
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- ~ Approximate Upland Drainage Feature
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- ~ Field Delineated Waterway Area
- ~ Field Delineated Open Water
- ~ Approximate Open Water
- ~ Field Delineated Emergent Wetland
- ~ Field Delineated Forested Wetland
- ~ Approximate Wetland



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, USGS, USGS, OGRP
3. Orthophotography: 2015 NAE



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Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

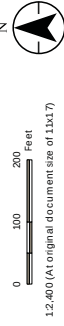
Adams and Pike Counties, Ohio

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Prepared by JLN on 2017-03-14

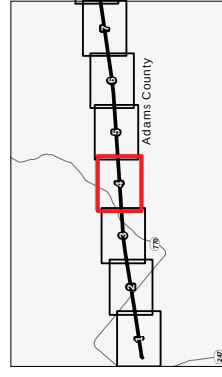
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Independent Review by JDS on 2017-04-07



Legend

- AEP Substation
- Structure to be Replaced
- ~ 138KV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
- Wetland Determination Sample Point
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Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRIP
3. Orthophotography 2015 NAD

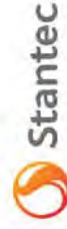


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

Technical Review by NRI on 2017-08-14

Independent Review by US on 2017-06-07

130704662

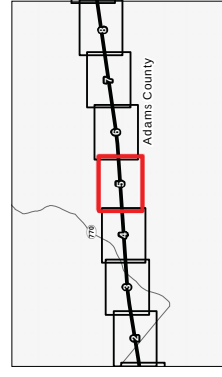
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Legend

- AEP Substation
- Structure to be Replaced
- 138KV Transmission Line
- Access Road
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- Approximate Wetland



Notes

- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
- Data Sources include: Stantec, AEP, FEMA, USGS, OGRP
- Orthophotography 2015 NAI

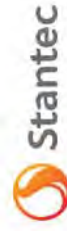


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

13070-060

Prepared by JH on 2017-03-14

Technical Review by NH on 2017-04-03

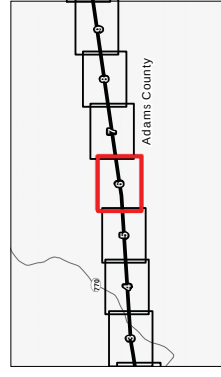
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Legend

- AEP Substation
- Structure to be Replaced
- 138KV Transmission Line
- Access Road
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Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
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3. Orthophotography 2015 NAD

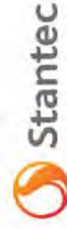


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

13070-060

Prepared by JH on 2017-09-14

Technical Review by NH on 2017-09-14

Independent Review by JG on 2017-09-07

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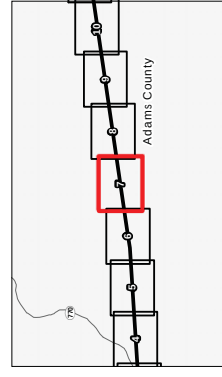
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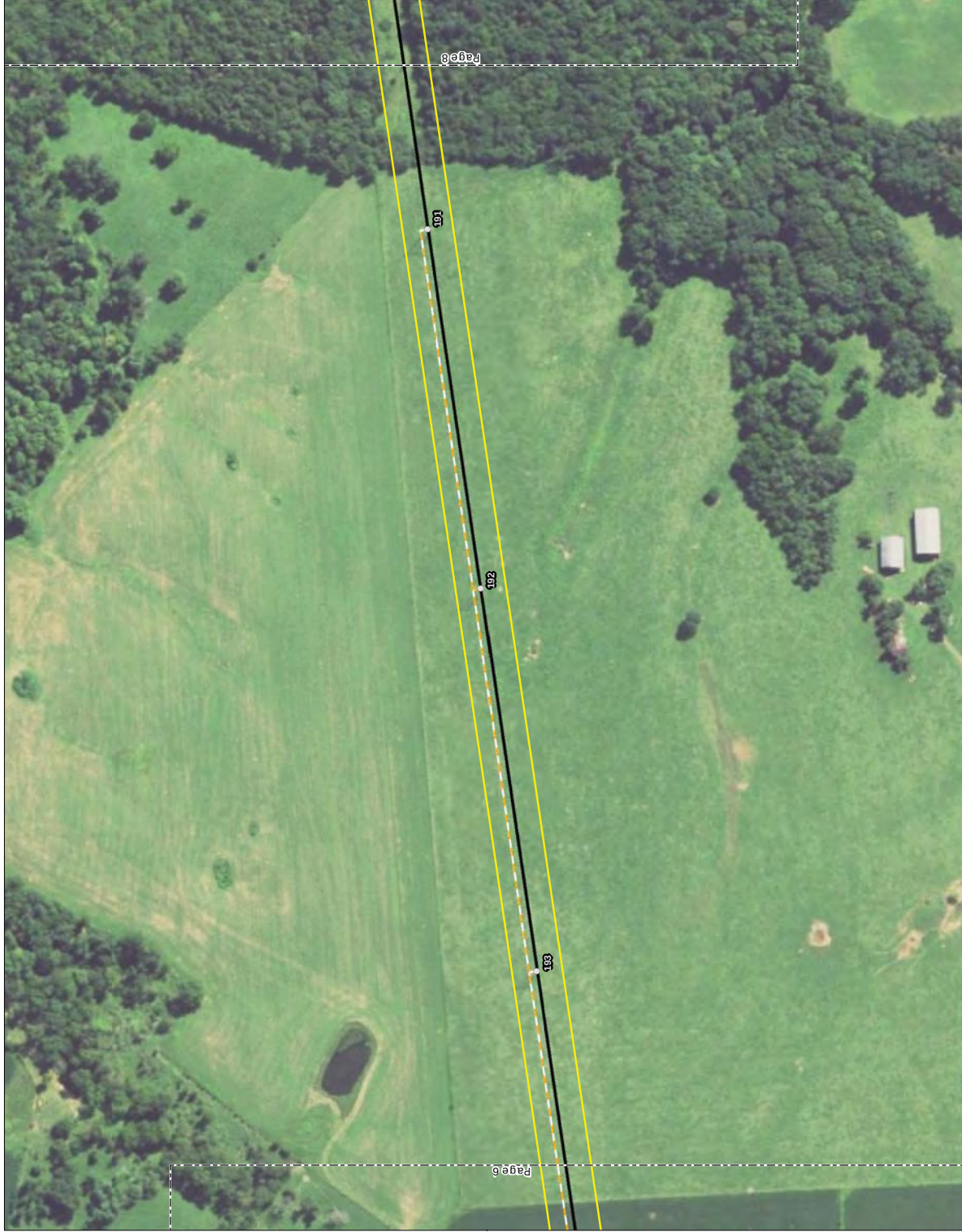
Legend

- AEP Substation
- Structure to be Replaced
- ~ 138KV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
- Wetland Determination Sample Point
- ▲ Existing Culvert
- Photo Location
- ~ Upland Drainage Feature
- ~ Approximate Upland Drainage Feature
- ~ Field Delineated Waterway
- ~ Approximate Waterway
- ~ Field Delineated Waterway Area
- ~ Field Delineated Open Water
- ~ Approximate Open Water
- ~ Field Delineated Emergent Wetland
- ~ Field Delineated Forested Wetland
- ~ Approximate Wetland



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, USGS, OGRP
3. Orthophotography 2015 NALP



Wetland and Waterbody Delineation Map

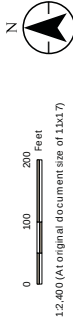
Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location

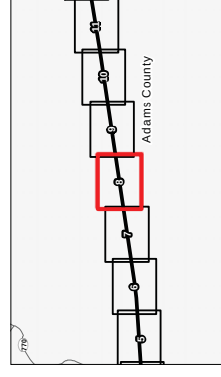
Adams and Pike Counties, Ohio

193704860



Legend

- | | | | |
|--|--|--|----------------------------------|
| | AEP Substation | | |
| | Structure to be Replaced | | |
| | 138kV Transmission Line | | Field Delimited Waterway Area |
| | Access Road | | Water |
| | Project Area (100' ROW and 30' Access Roads) | | Approximate Open Water |
| | Weiland Determination Sample Point | | Field Delimited Emergent Wetland |
| | Existing Culvert | | Field Delimited Forested Wetland |
| | Photo Location | | Approximate Wetland |
| | Upland Drainage Feature | | |
| | Approximate Upland Drainage Feature | | |
| | Field Delimited Waterway | | |
| | Approximate Waterway | | |



Notes

- NOTES**
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources include: Stantec, AEP, FEMA, NADS, USGS, OGRIP
 3. Orthophotography: 2015 NAIP

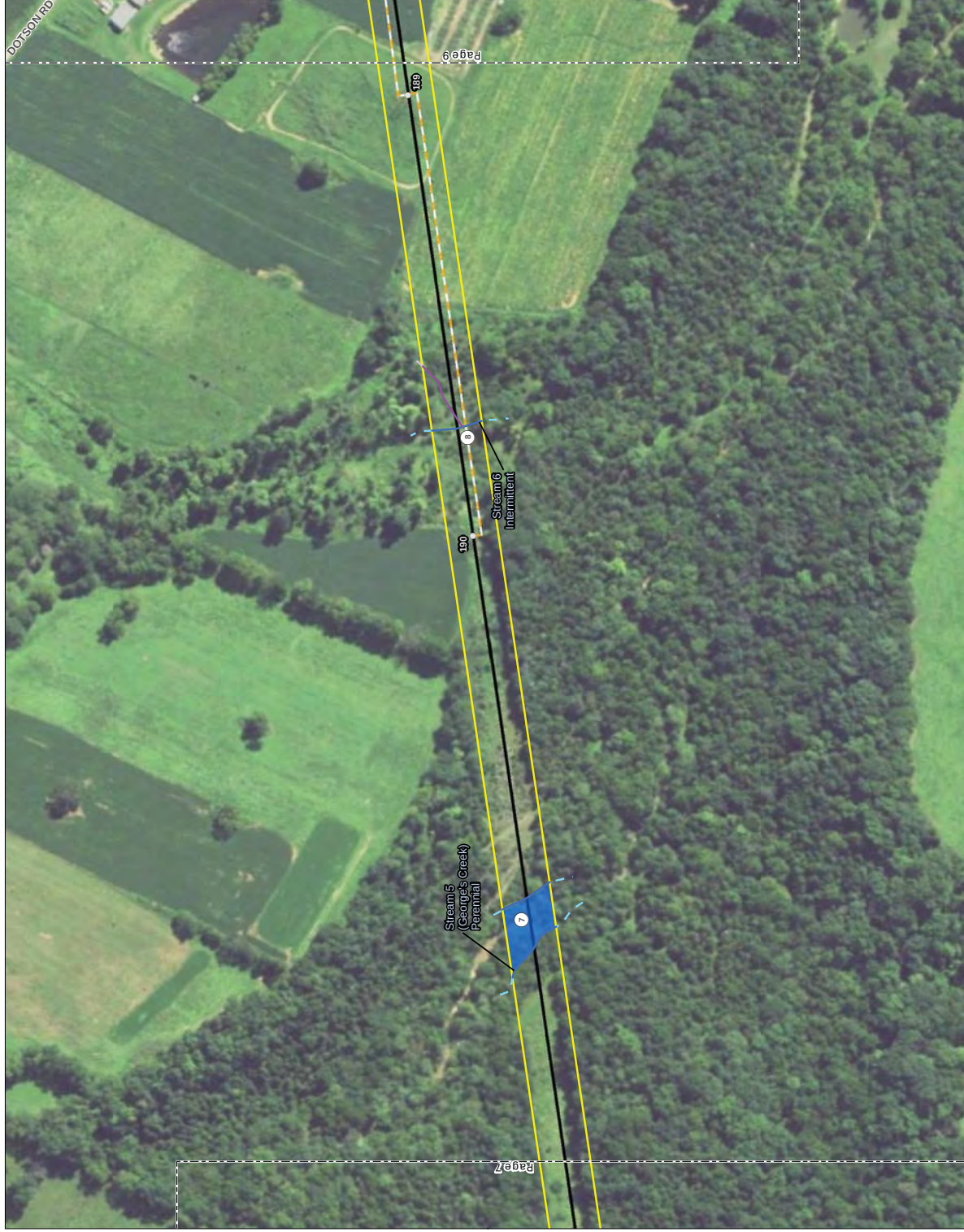
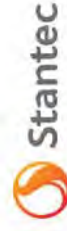


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

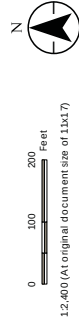
Adams and Pike Counties, Ohio

13070-0862

Prepared by JLT on 2017-09-14

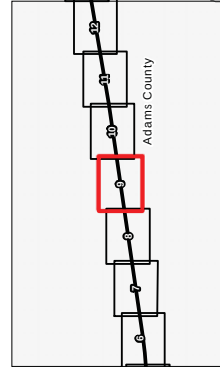
Technical Review by NH on 2017-09-14

Independent Review by JSC on 2017-06-07



Legend

- AEP Substation
- Structure to be Replaced
- ~ 138KV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
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Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, USGS, OGRP
3. Orthophotography 2015 NADP

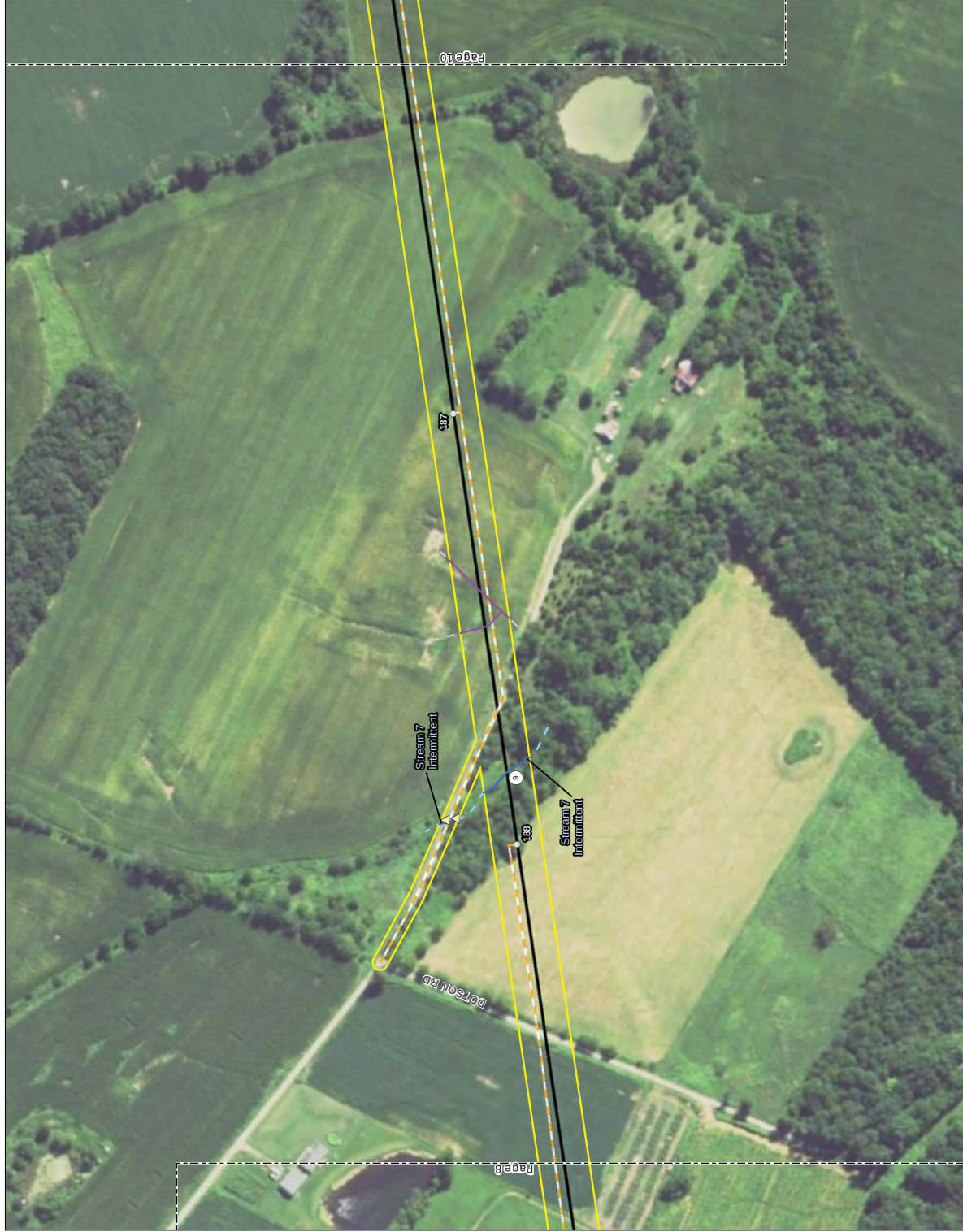


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

130706862

Prepared by JLN on 2017-08-14

Technical Review by NH on 2017-08-03

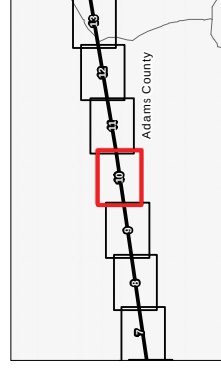
Independent Review by JDS on 2017-06-07



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Legend

- AEP Substation
- Structure to be Replaced
- ~ 138KV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
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Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRP
3. Orthophotography 2015 NALP

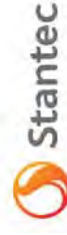


Figure No.

2

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

13070-0602

Prepared by JH on 2017-03-14

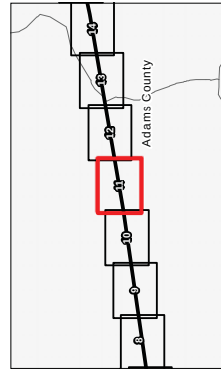
Technical Review by NH on 2017-03-14

Independent Review by DS on 2017-04-07



Legend

- AEP Substation
- Structure to be Replaced
- ~ 138KV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
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Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRP
3. Orthophotography 2015 NAD

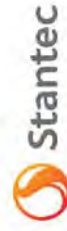


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

130706862

Prepared by JH on 2017-09-14

Technical Review by NH on 2017-09-03

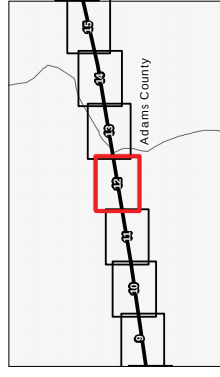
Independent Review by DS on 2017-06-07



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Legend

- AEP Substation
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- Access Road
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Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRP
3. Orthophotography 2015 NADP



Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

PROJECT LOCATION

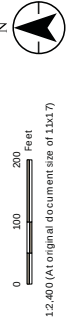
Adams and Pike Counties, Ohio

13870-0662

Prepared by JH on 2017-09-14

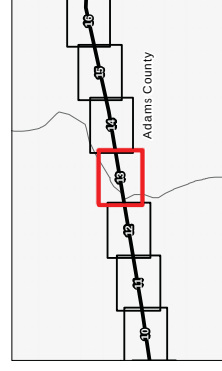
Technical Review by NH on 2017-09-03

Independent Review by JG on 2017-06-07



Legend

- AEP Substation
- Structure to be Replaced
- ~ 138KV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
- Wetland Determination Sample Point
- ▲ Existing Culvert
- Photo Location
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- ~ Approximate Waterway
- ~ Field Delineated Waterway Area
- ~ Field Delineated Open Water
- ~ Approximate Open Water
- ~ Field Delineated Emergent Wetland
- ~ Field Delineated Forested Wetland
- ~ Approximate Wetland



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, USGS, OGRIP
3. Orthophotography 2015 NIP



Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

PROJECT LOCATION

Adams and Pike Counties, Ohio

130705862

Technical Review by NRI on 2017-08-14

Independent Review by US on 2017-06-07

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Legend

AEP Substation

Structure to be Replaced

138kV Transmission Line

Access Road

Project Area (100' ROW and 30' Access Roads)

Wetland Determination

Sample Point

Existing Culvert

Photo Location

Upland Drainage Feature

Approximate Upland Drainage Feature

Field Delineated Waterway

Approximate Waterway

Field Delineated Waterway Area

Field Delineated Open Water

Approximate Open Water

Field Delineated Emergent Wetland

Field Delineated Forested Wetland

Approximate Wetland

Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet

2. Data Sources include: Stantec, AEP, FEMA, USGS, USGS, OGRP

3. Orthophotography 2015 NALP

Adams County

Stantec

Page 14 of 70



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Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

Technical Review by NRP on 2017-09-14

Independent Review by JPS on 2017-06-07

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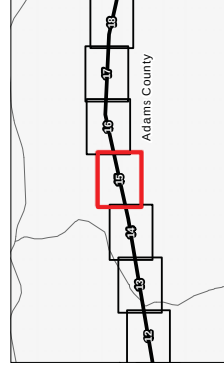
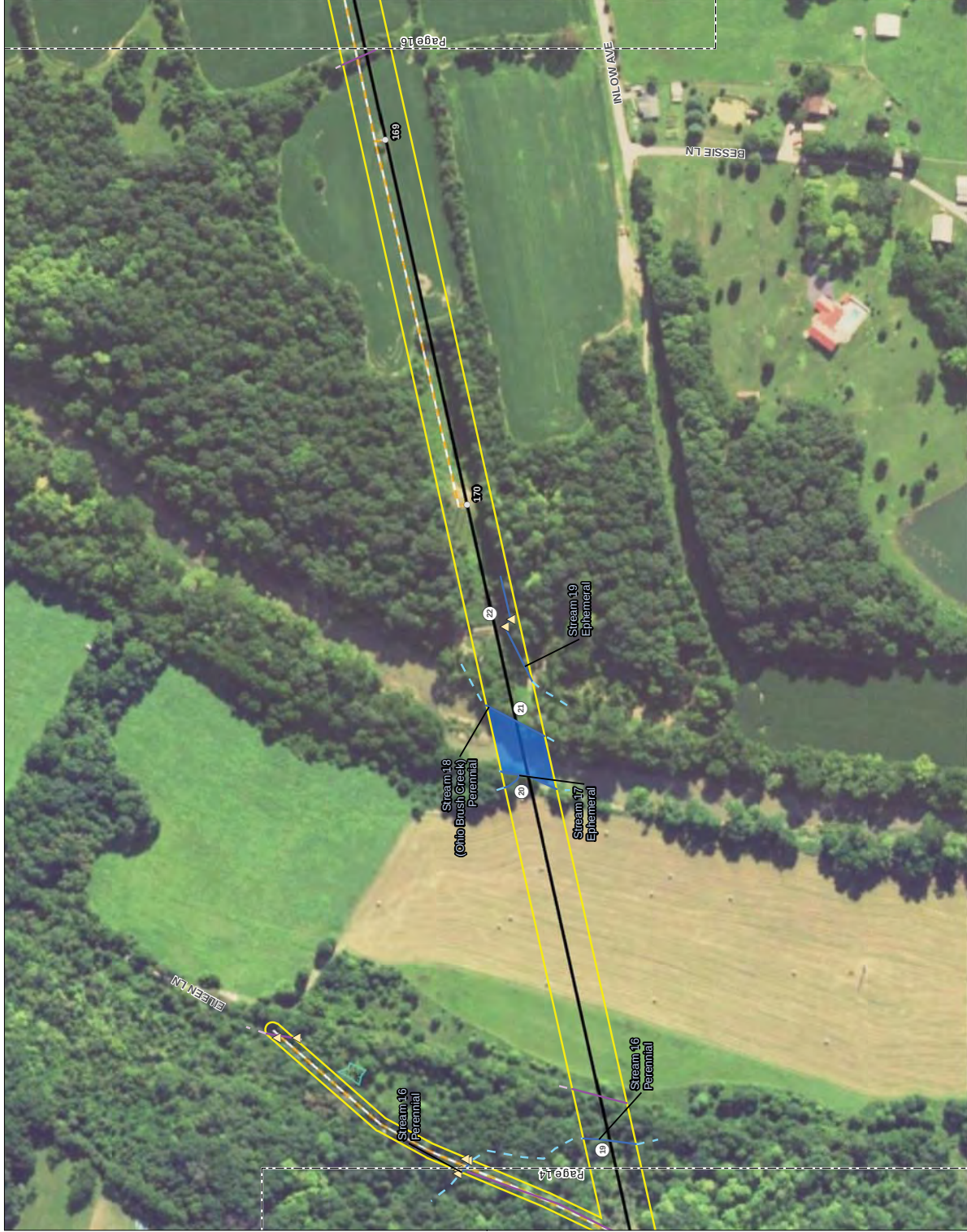
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3. Orthophotography 2015 NAD

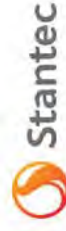


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Title

Wetland and Waterbody Delineation Map

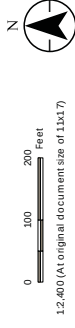
Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location

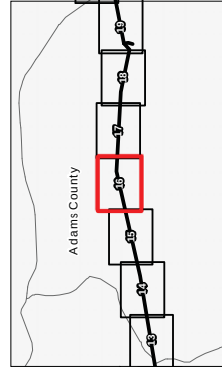
Adams and Pike Counties, Ohio

13070-0862
Prepared by JLN on 2017-09-14
Technical Review by NH on 2017-09-14
Independent Review by JSC on 2017-09-07



Legend

- AEP Substation
- Structure to be Replaced
- ~ 138kV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
- Wetland Determination Sample Point
- ▲ Existing Culvert
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Notes

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2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRP
3. Orthophotography 2015 NADP

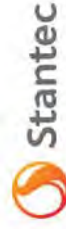


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

130706862

Technical Review by JH on 2017-08-14

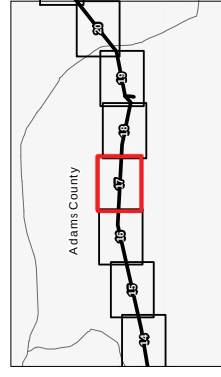
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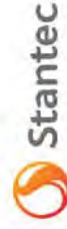
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3. Orthophotography 2015 NADP



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Figure No.

2

Title

Wetland and Waterbody Delineation Map

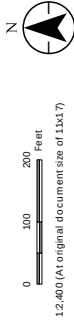
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AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

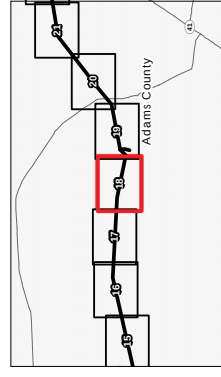
Adams and Pike Counties, Ohio

13070-0602
Prepared by JH on 2017-08-14
Technical Review by NH on 2017-08-14
Independent Review by JS on 2017-08-07



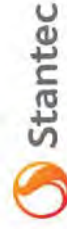
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3. Orthophotography 2015 NAD



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Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

13070682

Prepared by JH on 2017-09-14

Technical Review by NH on 2017-09-03

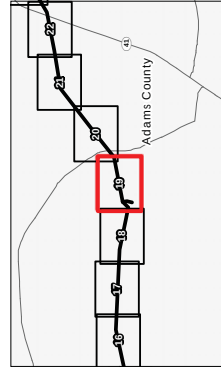
Independent Review by DS on 2017-06-07



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Legend

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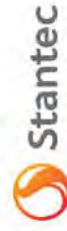


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location

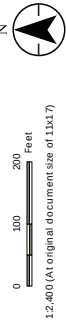
Adams and Pike Counties, Ohio

130706862

Prepared by JLI on 2017-09-14

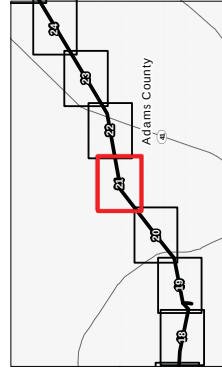
Technical Review by NH on 2017-09-03

Independent Review by DS on 2017-06-07



Legend

- AEP Substation
- Structure to be Replaced
- 138kV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
- Wetland Determination Sample Point
- ▲ Existing Culvert
- Photo Location
- Upland Drainage Feature
- Approximate Upland Drainage Feature
- Field Delineated Waterway
- Approximate Waterway
- Field Delineated Waterway Area
- Field Delineated Open Water
- Approximate Open Water
- Field Delineated Emergent Wetland
- Field Delineated Forested Wetland
- Approximate Wetland



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, USGS, OGRS
3. Orthophotography: 2015 NALP

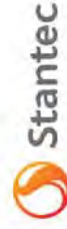


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

130706862

Prepared by JH on 2017-09-14

Technical Review by NH on 2017-09-14

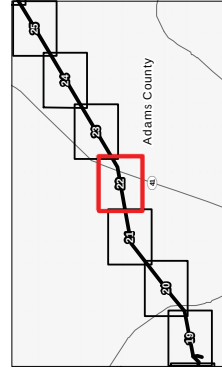
Independent Review by DS on 2017-09-07



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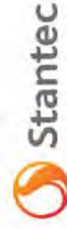
Legend

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Notes

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3. Orthophotography 2015 NAD



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Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

13070860

Prepared by JH on 2017-08-14

Technical Review by NH on 2017-08-03

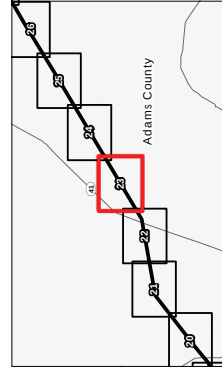
Independent Review by DS on 2017-06-07



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- AEP Substation
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Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRP
3. Orthophotography 2015 NAD

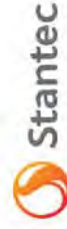


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

130705662

Prepared by JLN on 2017-08-14

Technical Review by NIN on 2017-08-14

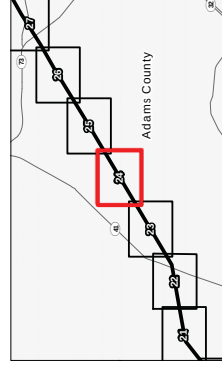
Independent Review by JDS on 2017-08-07



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Legend

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Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRIP
3. Orthophotography 2015 NADP

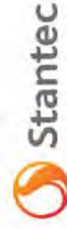


Figure No.

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Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

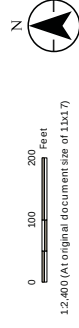
Adams and Pike Counties, Ohio

13070682

Prepared by JH on 2017-03-14

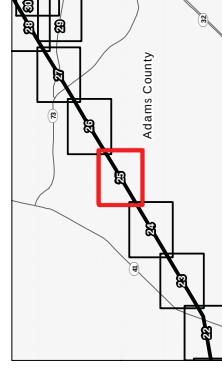
Technical Review by NH on 2017-04-03

Independent Review by DS on 2017-04-07



Legend

- AEP Substation
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- Access Road
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Notes

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2. Data Sources include: Stantec, AEP, FEMA, USGS, OGRS
3. Orthophotography 2015 NALP

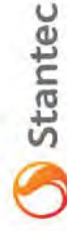


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

130705662

Prepared by JLN on 2017-03-14

Technical Review by NLR on 2017-04-03

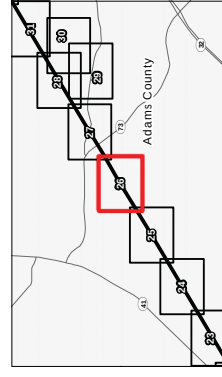
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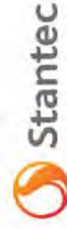
Legend

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Notes

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2. Data Sources include: Stantec, AEP, FEMA, USGS, OGRIP
3. Orthophotography 2015 NAD



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Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

Prepared by JH on 2017-08-14

Technical Review by NH on 2017-08-14

Independent Review by DS on 2017-08-07

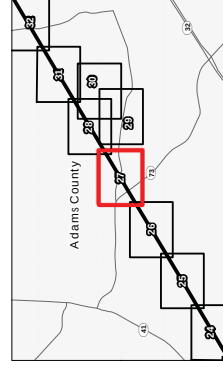
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Legend

- AEP Substation
- Structure to be Replaced
- ~ 138kV Transmission Line
- Access Road
- Project Area (100' ROW and 30' Access Roads)
- Wetland Determination Sample Point
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- ~ Field Delineated Open Water
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- ~ Field Delineated Forested Wetland
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Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRS
3. Orthophotography 2015 NAD

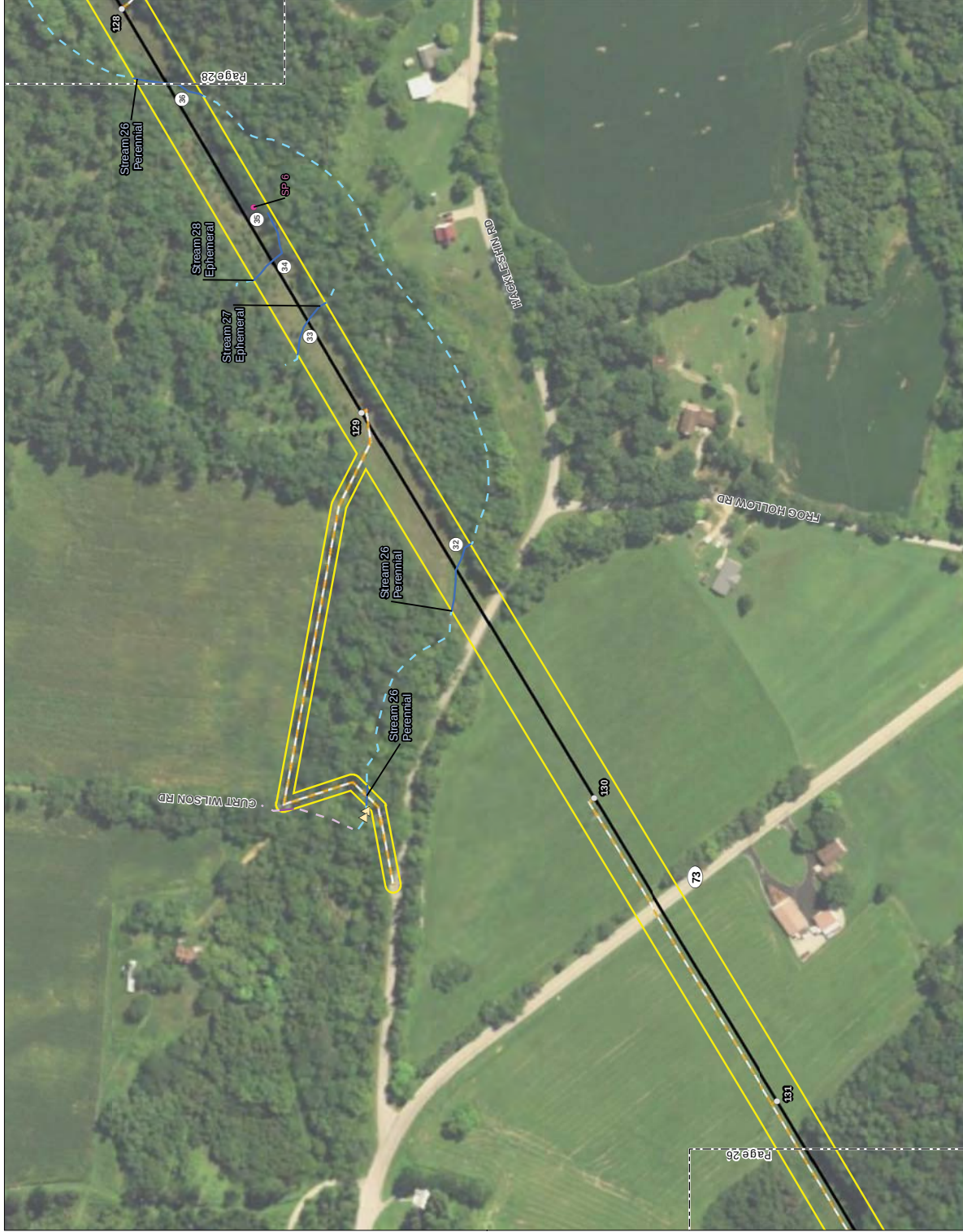
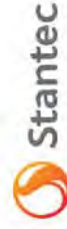


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

PROJECT LOG SHEET

Adams and Pike Counties, Ohio

Technical Review by NHI on 2017-08-14

Independent Review by JGS on 2017-06-07

13070-0860

Prepared by JGS on 2017-08-14

Technical Review by NHI on 2017-08-14

Independent Review by JGS on 2017-06-07

12,400 (At original document size of 11x17)

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Legend

AEP Substation

Structure to be Replaced

138KV Transmission Line

Access Road

Project Area (100' ROW and 30' Access Roads)

Wetland Determination

Sample Point

Existing Culvert

Photo Location

Upland Drainage Feature

Approximate Upland Drainage Feature

Field Delineated Waterway

Approximate Waterway

Field Delineated Waterway Area

Field Delineated Open Water

Approximate Open Water

Field Delineated Emergent Wetland

Field Delineated Forested Wetland

Approximate Wetland

Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet

2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRP

3. Orthophotography 2015 NALP

Adams County

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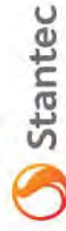


Figure No.

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Title

Wetland and Waterbody Delineation Map

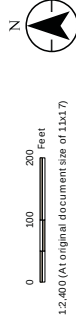
Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location

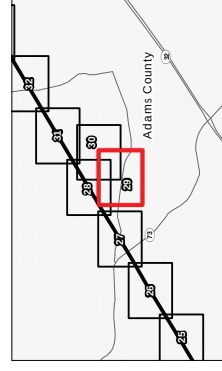
Adams and Pike Counties, Ohio

13070-060
Prepared by JLI on 2017-03-14
Technical Review by NH on 2017-03-14
Independent Review by JDS on 2017-04-07



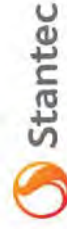
Legend

- AEP Substation
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Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources include: Stantec, AEP, FEMA, NAD83, USGS, OGRP
3. Orthophotography 2015 NADP



Wetland and Waterbody Delineation Map

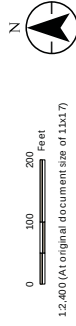
Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location
Adams and Pike Counties, Ohio

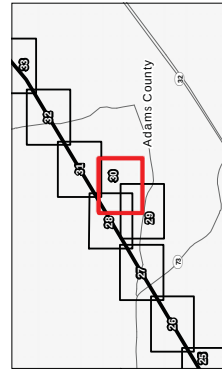
Prepared by J.H. on 2017-03-14
Technical Review by NN on 2017-04-03
Independent Review by DG on 2017-04-07

193704860



Legend

-
- Legend:
- AEP Substation
 - Structure to be Replaced
 - ⚡ 138kV Transmission Line
 - 🛣️ Access Road
 - 📐 Project Area (100' ROW and 30' Access Roads)
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Notes

- NOTES**
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources include: Stantec, AEP, FEMA, NADS, USGS, OGRIP
 3. Orthophotography: 2015 NAIP

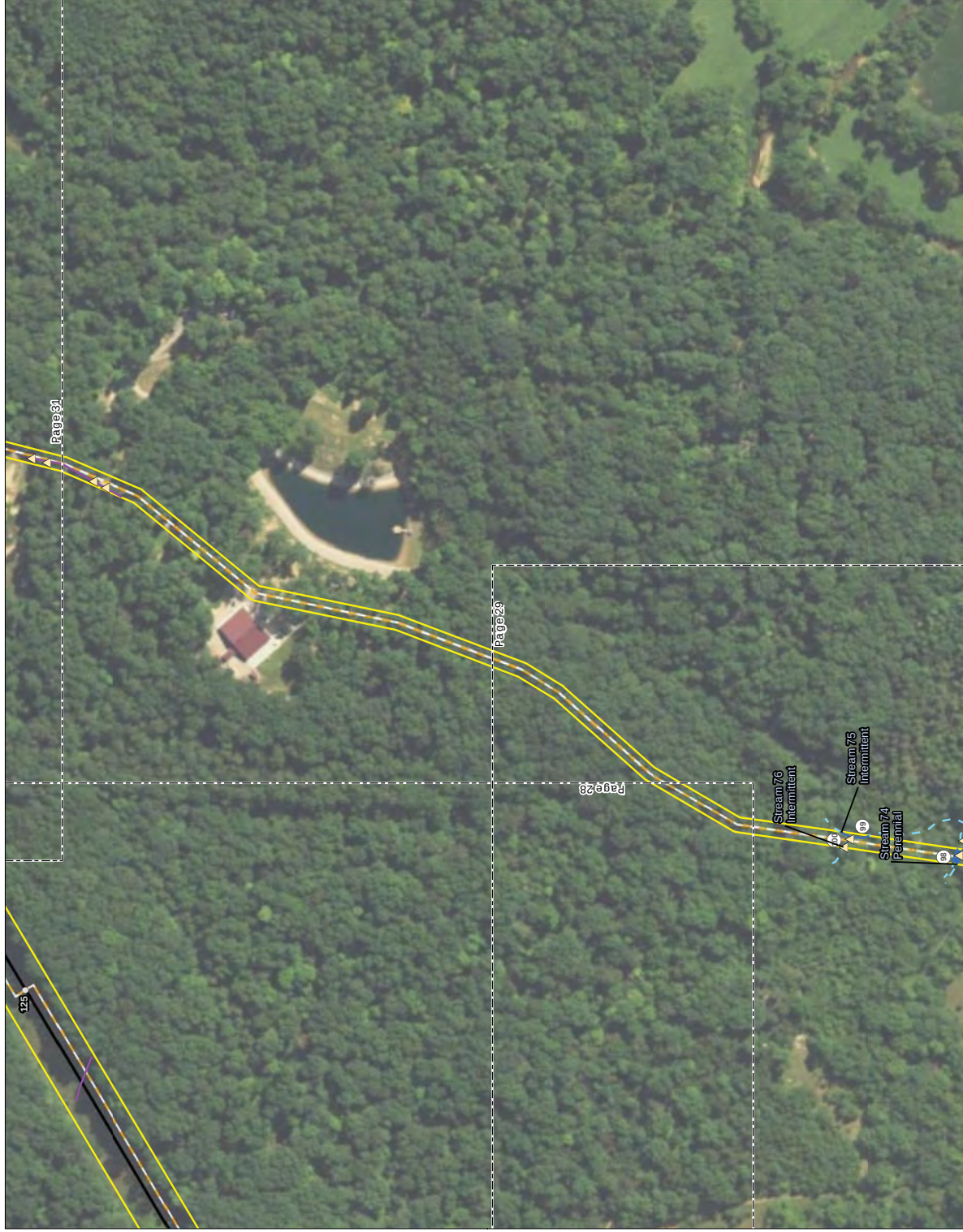
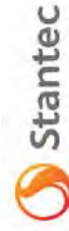


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138kV Transmission Line Project

Project Location

Adams and Pike Counties, Ohio

Technical Review by N/A on 2017-09-14

Independent Review by JG on 2017-06-07

13070-0602

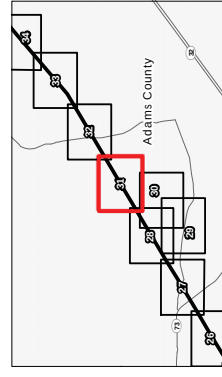
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0 100 200 Feet

N

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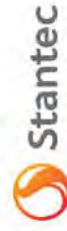


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project

AEP Ohio Transmission Company, Inc.
Ware Road-Seaman
138KV Transmission Line Project

PROJECT LOCATION

Adams and Pike Counties, Ohio

Technical Review by NAE on 2017-08-14

Independent Review by JSC on 2017-06-07

13070-0602

Prepared by JSC on 2017-08-14

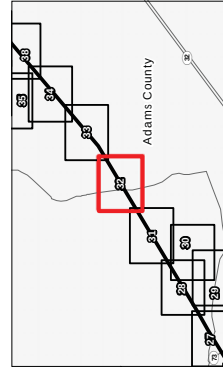
Technical Review by NAE on 2017-08-14

Independent Review by JSC on 2017-06-07



Legend

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3. Orthophotography 2015 NAE



This foregoing document was electronically filed with the Public Utilities

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5/5/2017 1:44:53 PM

in

Case No(s). 17-0813-EL-BLN

Summary: Letter of Notification electronically filed by Mr. Hector Garcia on behalf of AEP Ohio Transmission Company