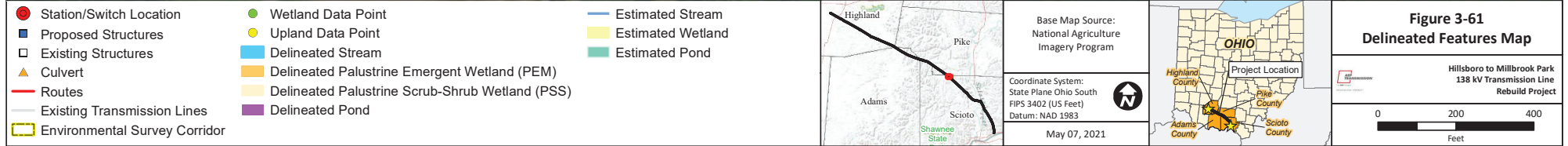


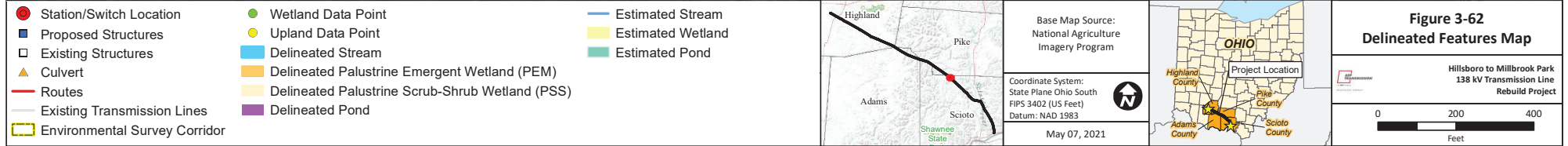


<ul style="list-style-type: none"> <li>● Station/Switch Location</li> <li>■ Proposed Structures</li> <li>□ Existing Structures</li> <li>▲ Culvert</li> <li>— Routes</li> <li>— Existing Transmission Lines</li> <li>▭ Environmental Survey Corridor</li> </ul>	<ul style="list-style-type: none"> <li>● Wetland Data Point</li> <li>● Upland Data Point</li> <li>— Delineated Stream</li> <li>■ Delineated Palustrine Emergent Wetland (PEM)</li> <li>■ Delineated Palustrine Scrub-Shrub Wetland (PSS)</li> <li>■ Delineated Pond</li> </ul>	<ul style="list-style-type: none"> <li>— Estimated Stream</li> <li>▭ Estimated Wetland</li> <li>▭ Estimated Pond</li> </ul>		<p>Base Map Source: National Agriculture Imagery Program</p> <p>Coordinate System: State Plane Ohio South FIPS 3402 (US Feet) Datum: NAD 1983</p> <p>May 07, 2021</p>		<p><b>Figure 3-60</b> <b>Delineated Features Map</b></p> <p>Hillsboro to Millbrook Park 138 kV Transmission Line Rebuild Project</p> <p>0 200 400 Feet</p>
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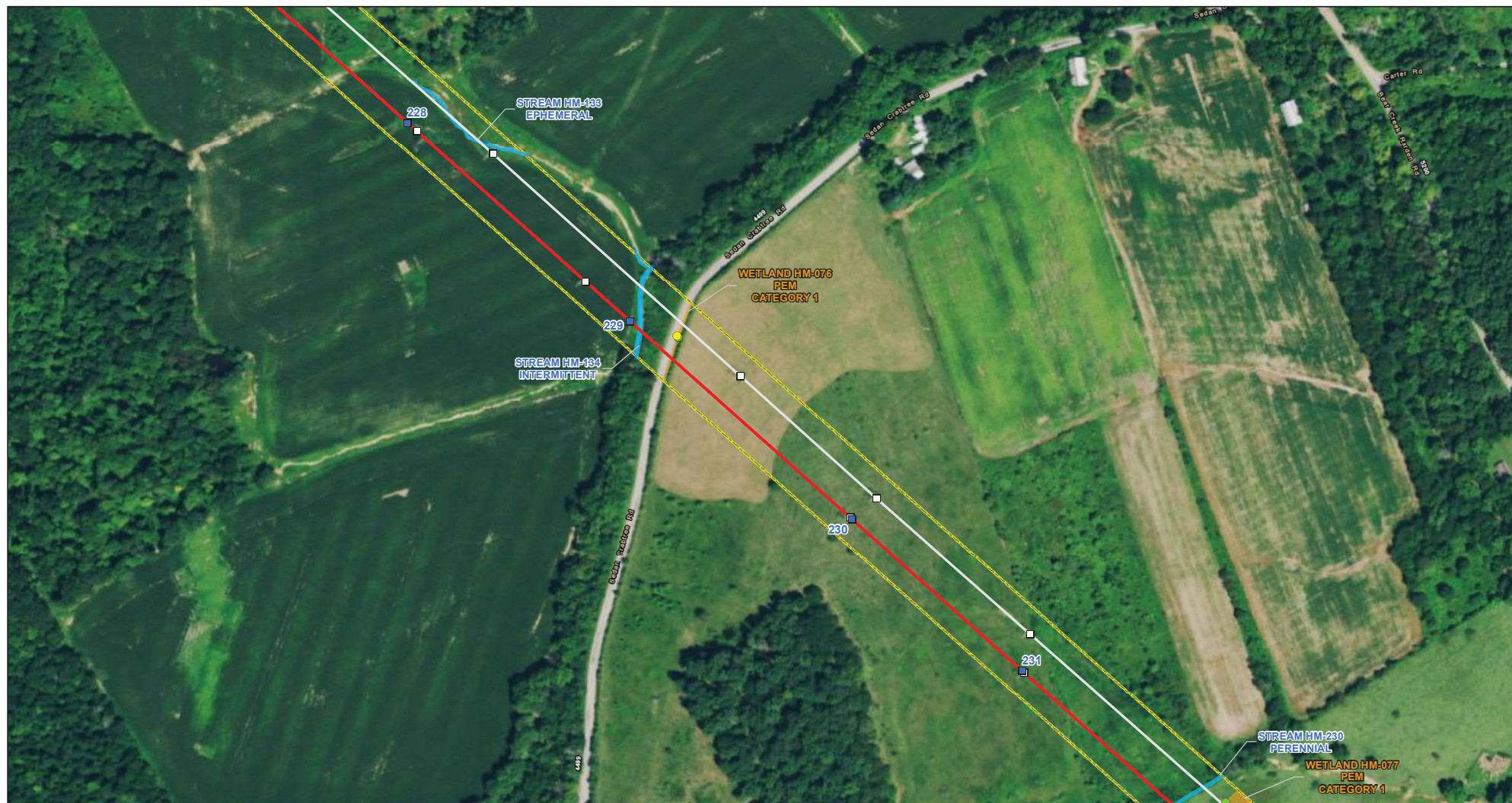






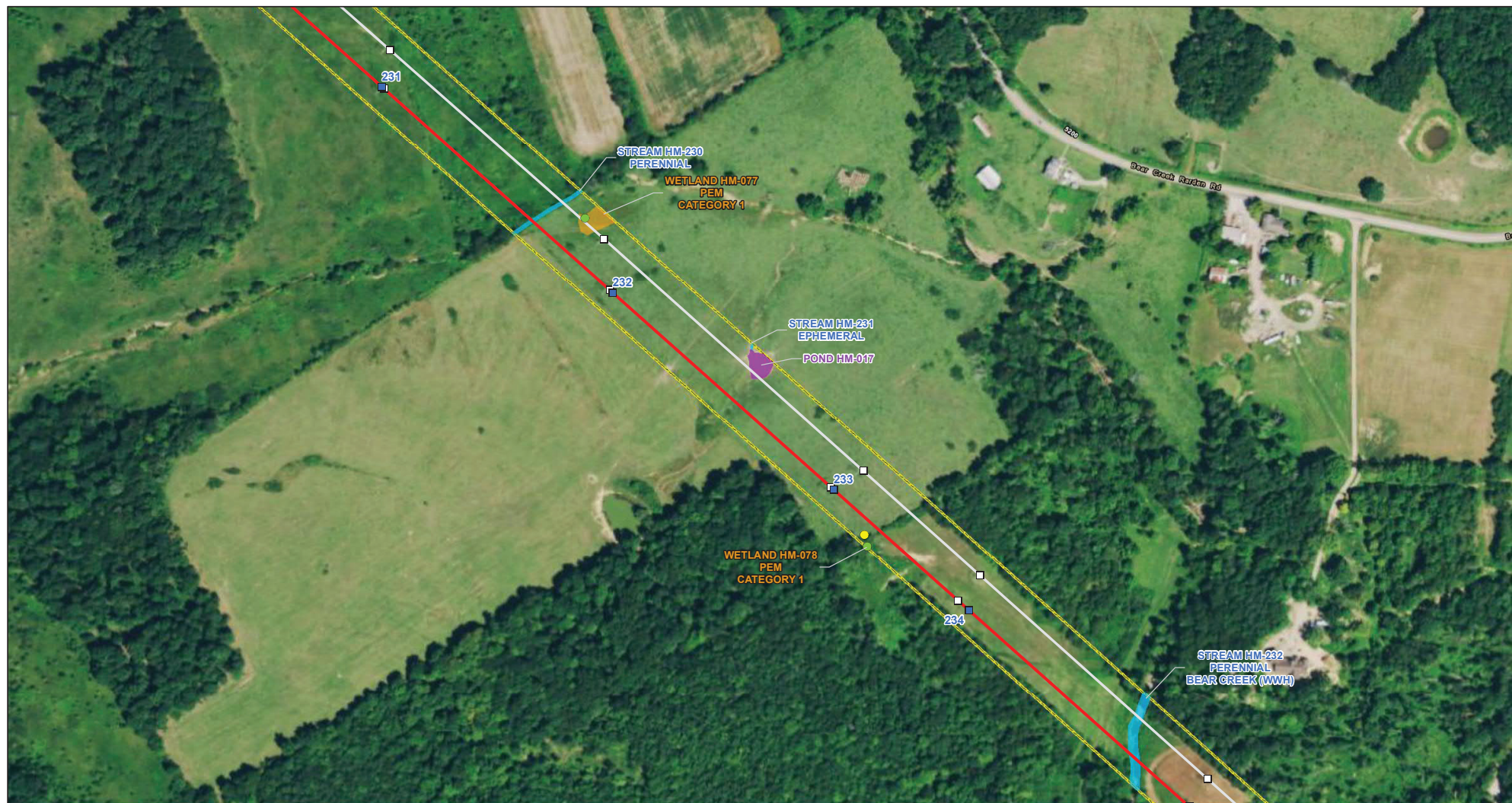






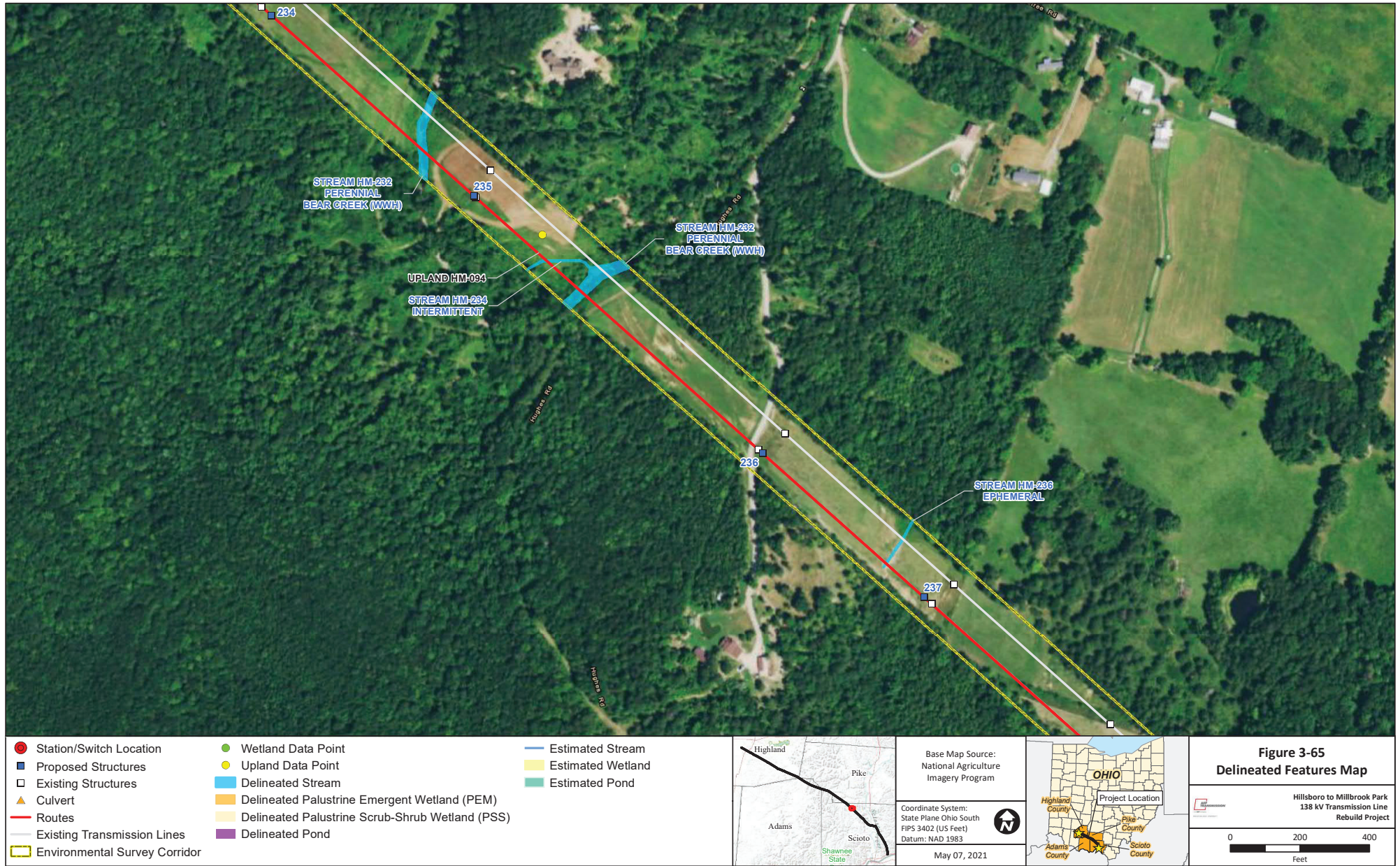
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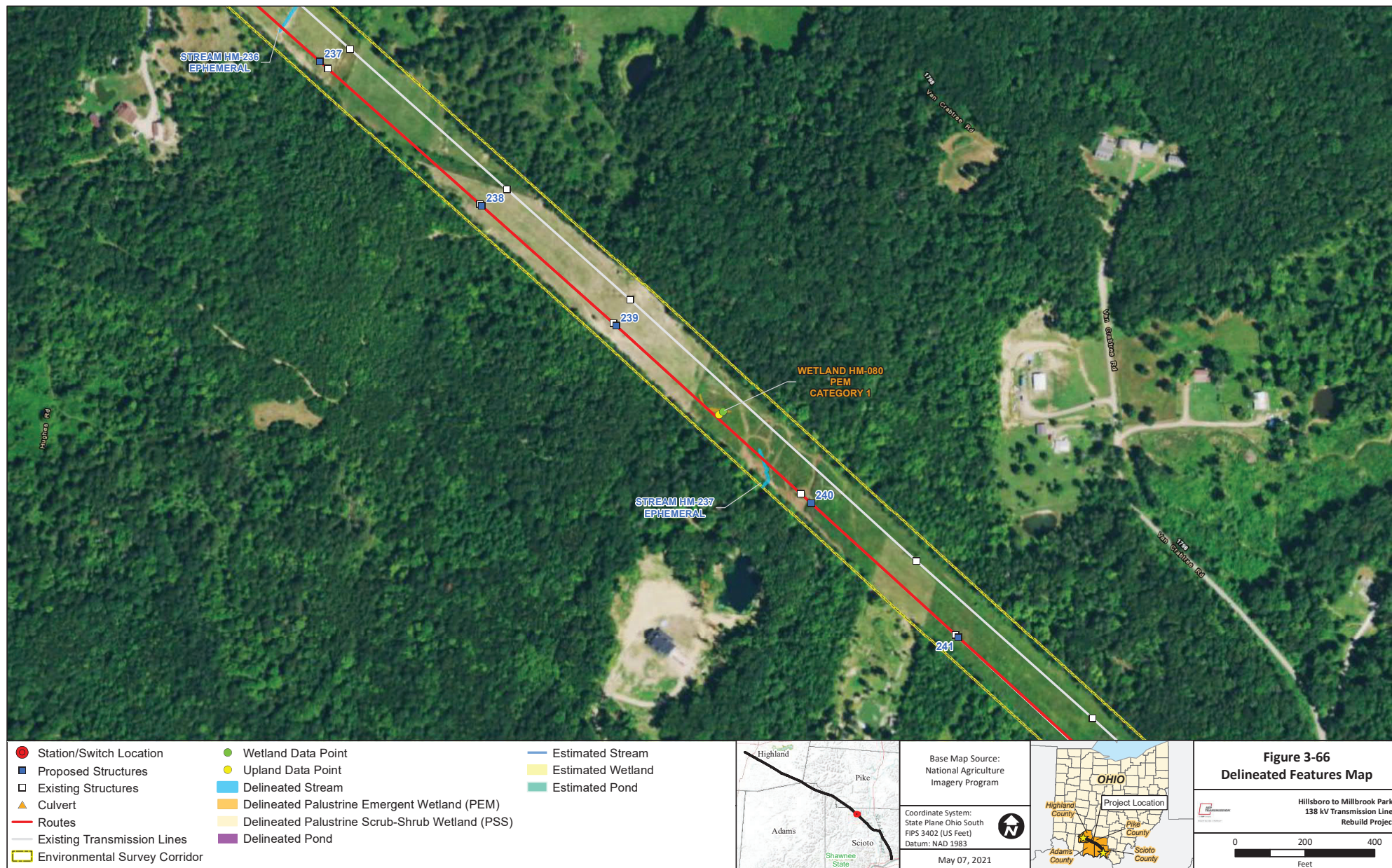


<ul style="list-style-type: none"> <li>● Station/Switch Location</li> <li>■ Proposed Structures</li> <li>□ Existing Structures</li> <li>▲ Culvert</li> <li>— Routes</li> <li>— Existing Transmission Lines</li> <li>▭ Environmental Survey Corridor</li> </ul>	<ul style="list-style-type: none"> <li>● Wetland Data Point</li> <li>● Upland Data Point</li> <li>— Delineated Stream</li> <li>■ Delineated Palustrine Emergent Wetland (PEM)</li> <li>■ Delineated Palustrine Scrub-Shrub Wetland (PSS)</li> <li>■ Delineated Pond</li> </ul>	<ul style="list-style-type: none"> <li>— Estimated Stream</li> <li>▭ Estimated Wetland</li> <li>▭ Estimated Pond</li> </ul>		<p>Base Map Source: National Agriculture Imagery Program</p> <p>Coordinate System: State Plane Ohio South FIPS 3402 (US Feet) Datum: NAD 1983</p> <p>May 07, 2021</p>		<p><b>Figure 3-64</b> <b>Delineated Features Map</b></p> <p>Hillsboro to Millbrook Park 138 kV Transmission Line Rebuild Project</p> <p>0 200 400 Feet</p>
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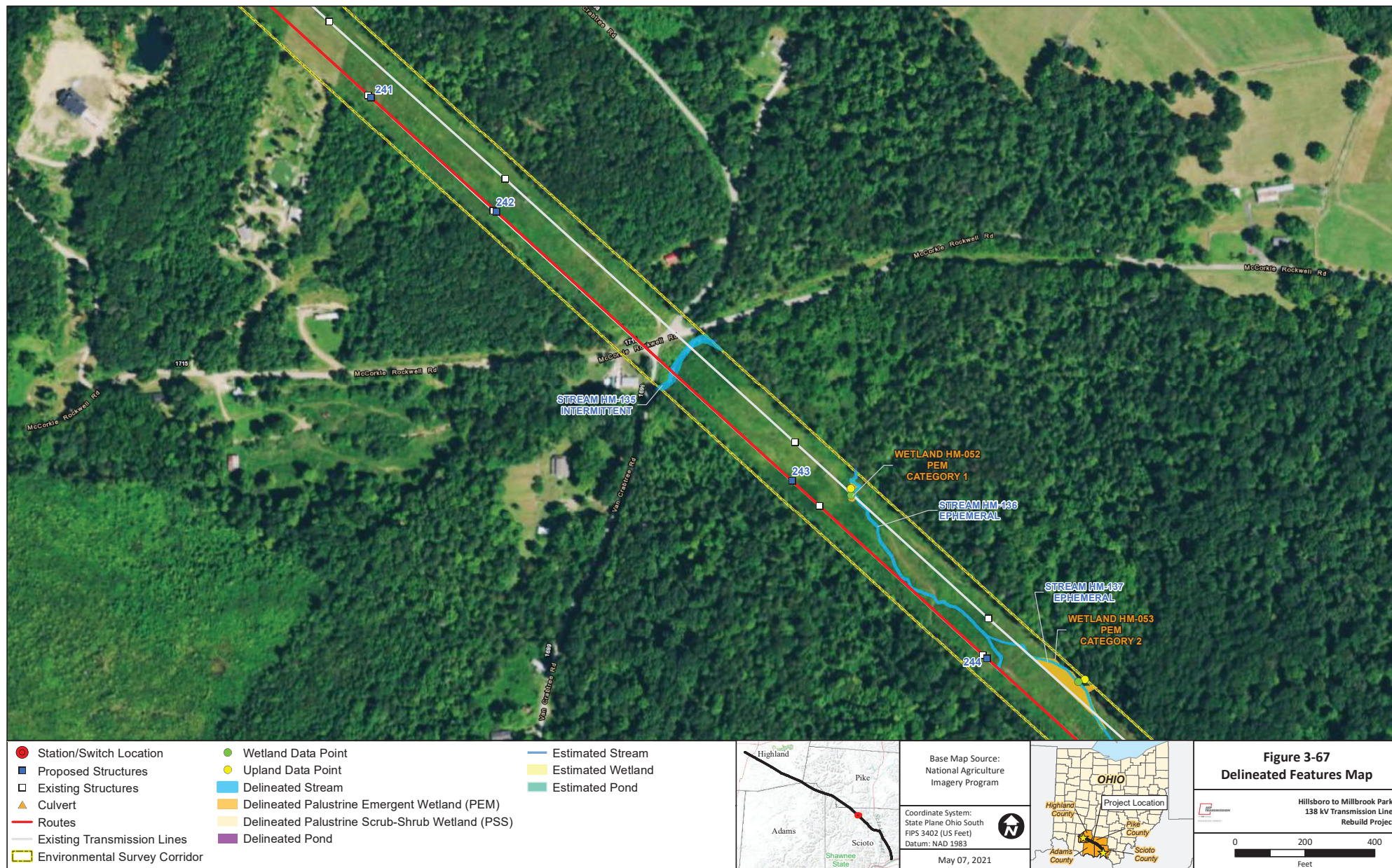








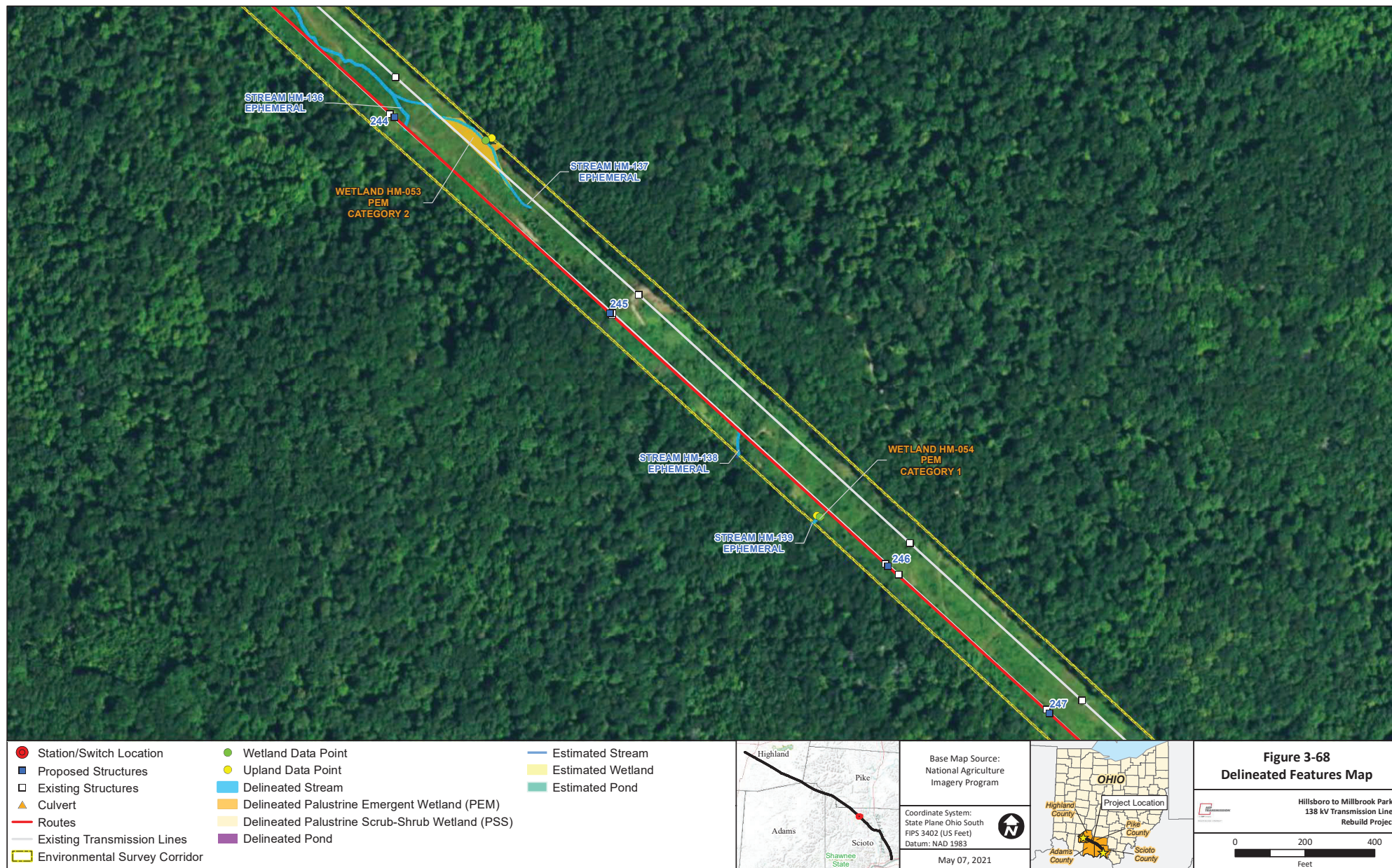




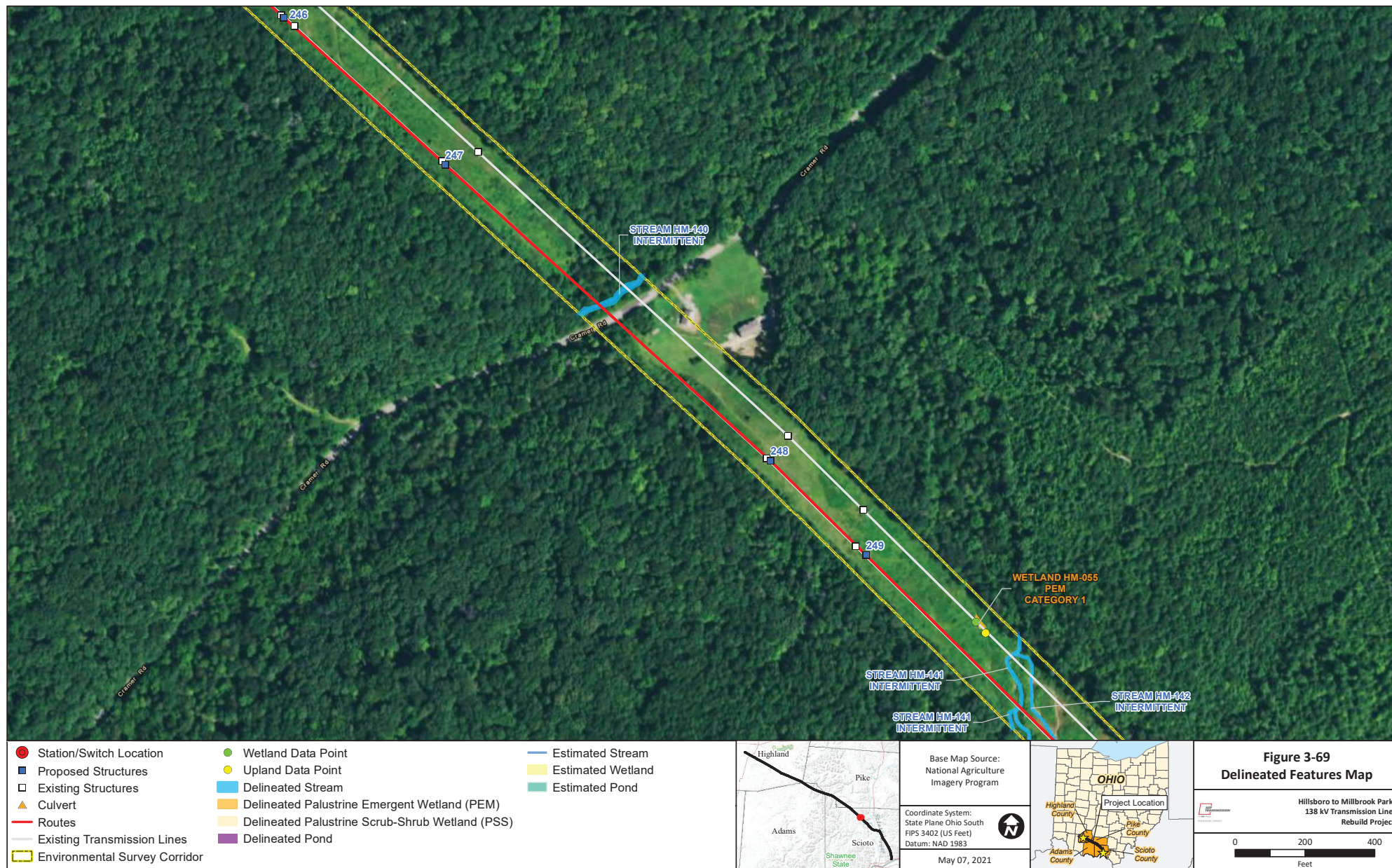
**Figure 3-67  
Delineated Features Map**

Hillsboro to Millbrook Park  
138 kV Transmission Line  
Rebuild Project

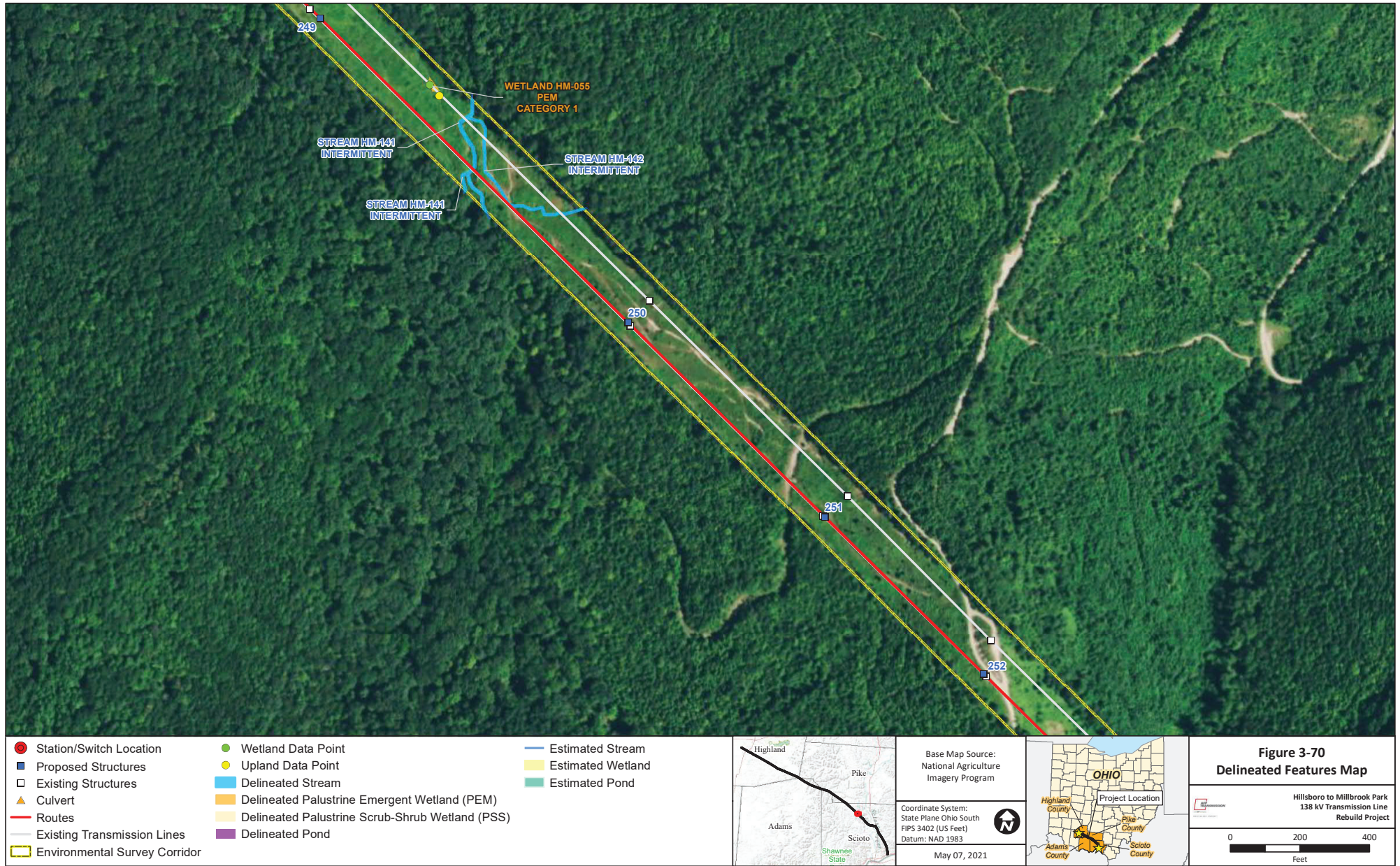




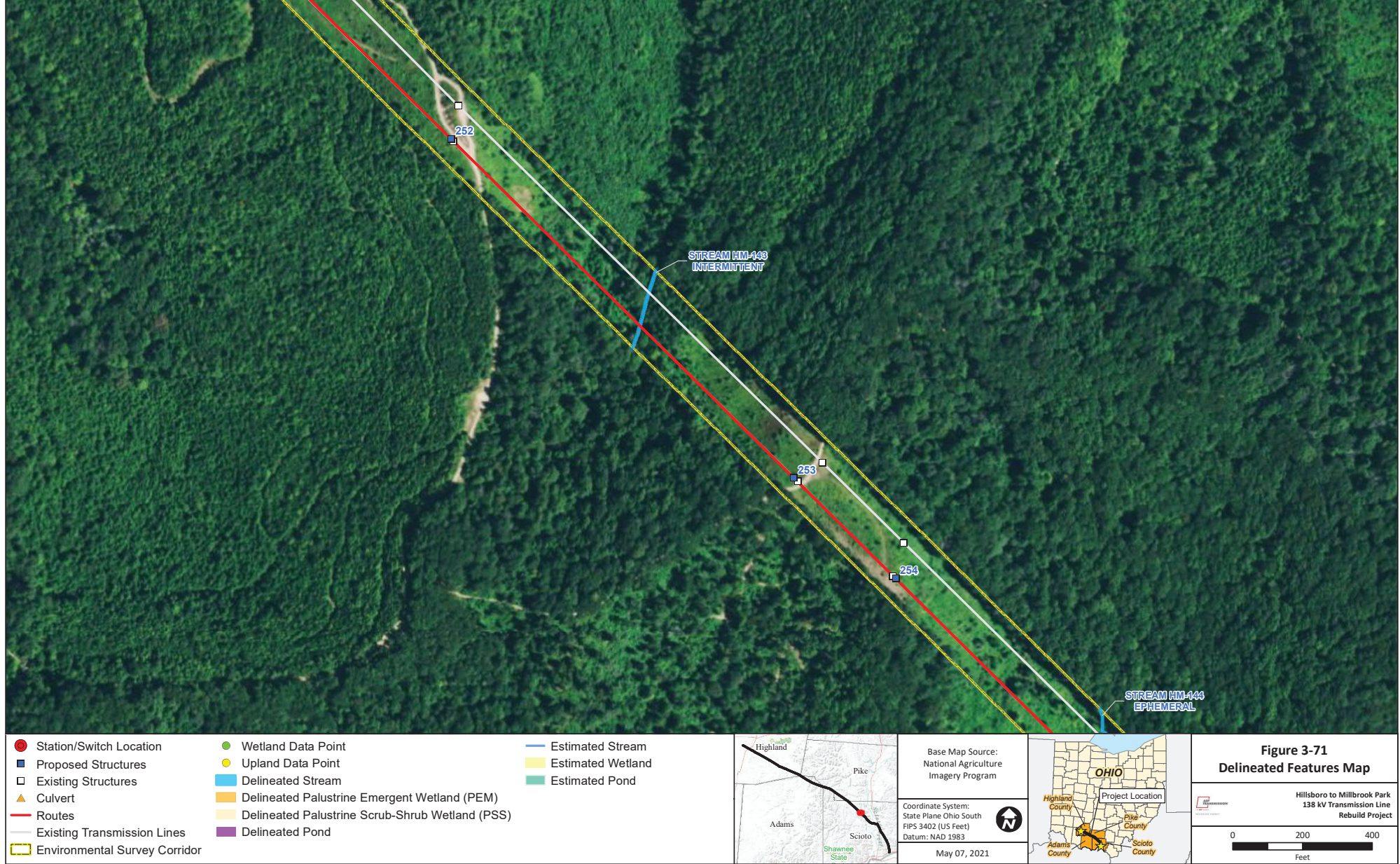










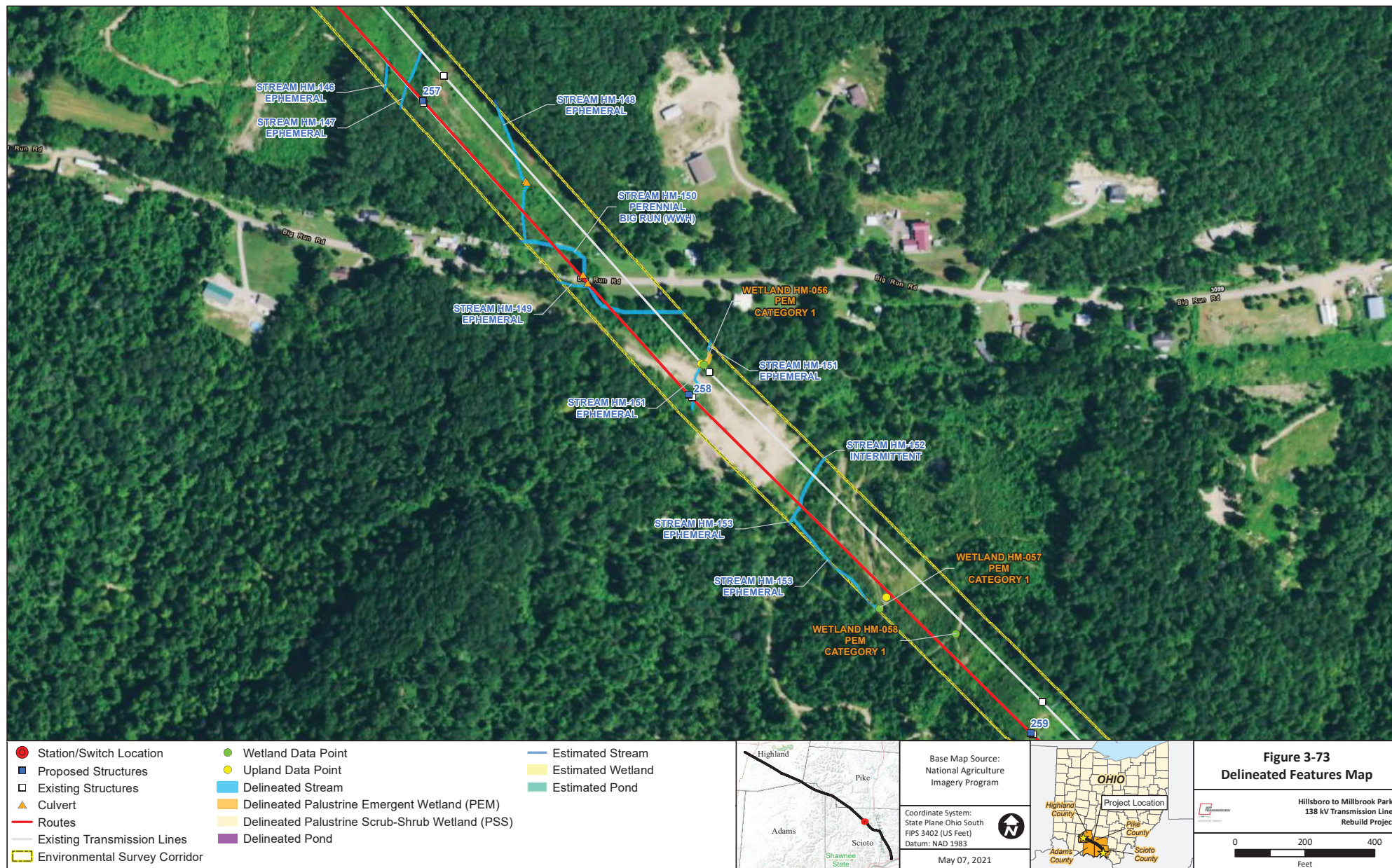




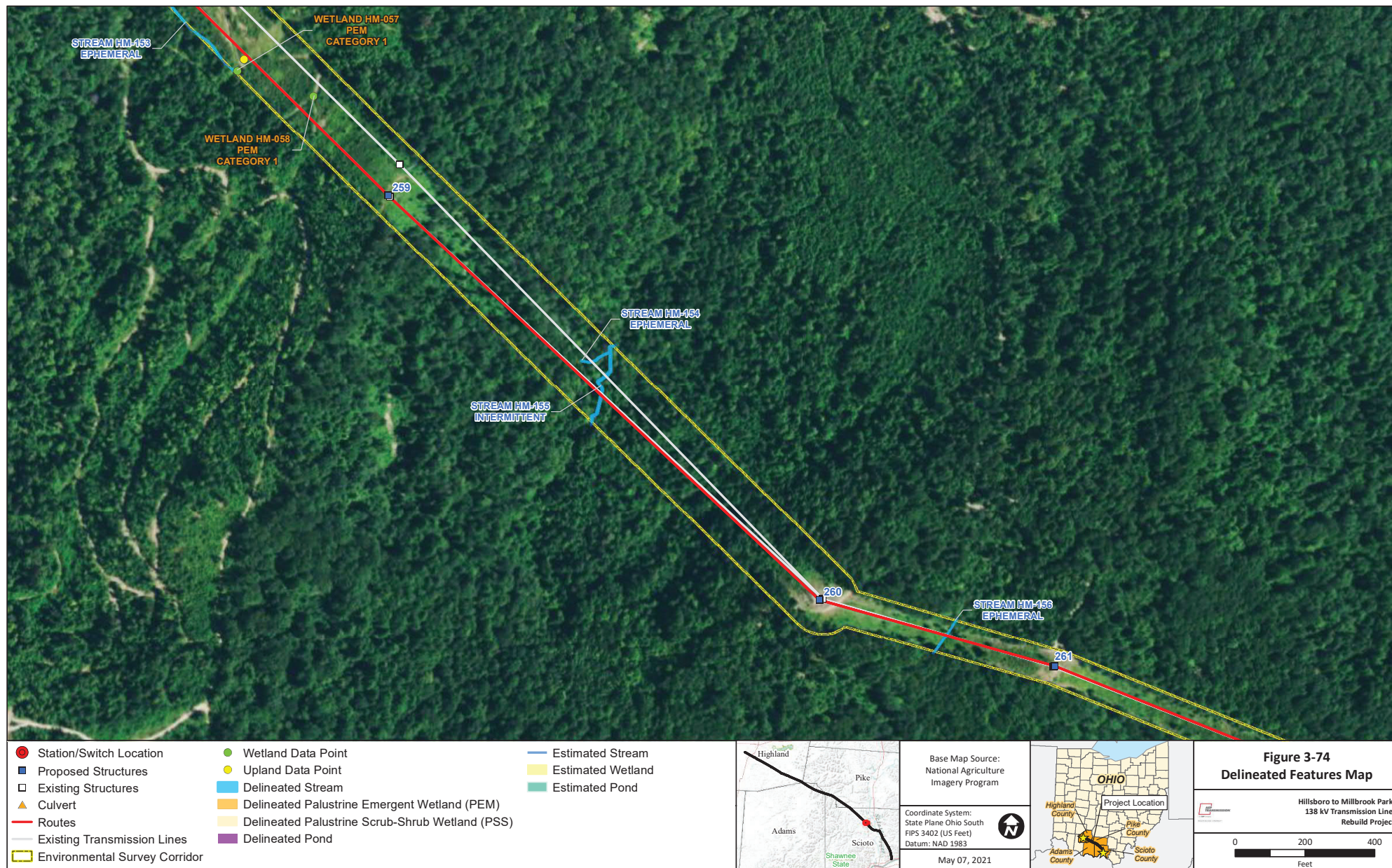


<ul style="list-style-type: none"> <li>● Station/Switch Location</li> <li>■ Proposed Structures</li> <li>□ Existing Structures</li> <li>▲ Culvert</li> <li>— Routes</li> <li>— Existing Transmission Lines</li> <li>▭ Environmental Survey Corridor</li> </ul>	<ul style="list-style-type: none"> <li>● Wetland Data Point</li> <li>● Upland Data Point</li> <li>— Delineated Stream</li> <li>■ Delineated Palustrine Emergent Wetland (PEM)</li> <li>■ Delineated Palustrine Scrub-Shrub Wetland (PSS)</li> <li>■ Delineated Pond</li> </ul>	<ul style="list-style-type: none"> <li>— Estimated Stream</li> <li>▭ Estimated Wetland</li> <li>▭ Estimated Pond</li> </ul>		<p>Base Map Source: National Agriculture Imagery Program</p> <p>Coordinate System: State Plane Ohio South FIPS 3402 (US Feet) Datum: NAD 1983</p> <p>May 07, 2021</p>		<p><b>Figure 3-72</b> <b>Delineated Features Map</b></p> <p>Hillsboro to Millbrook Park 138 kV Transmission Line Rebuild Project</p> <p>0 200 400 Feet</p>
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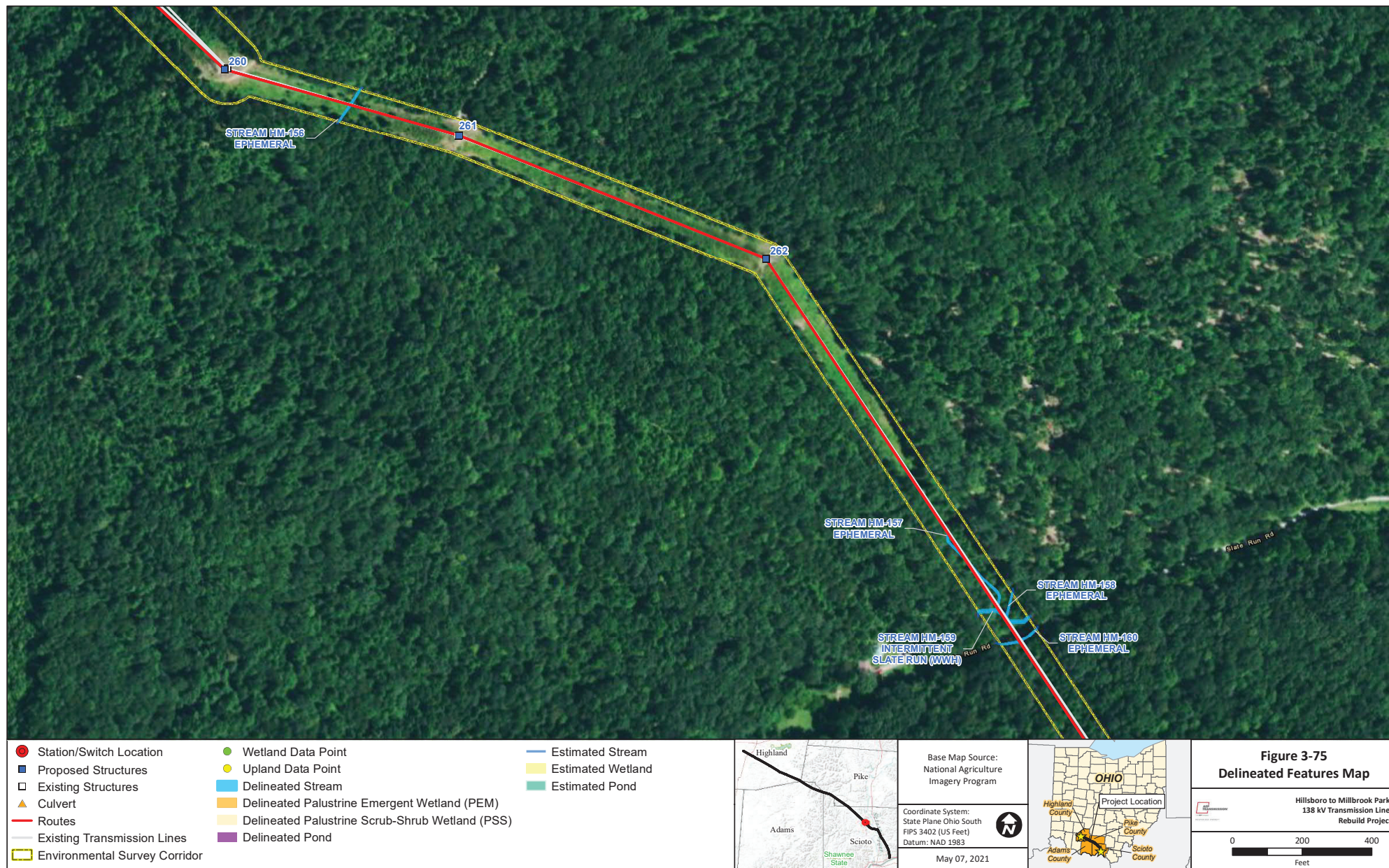








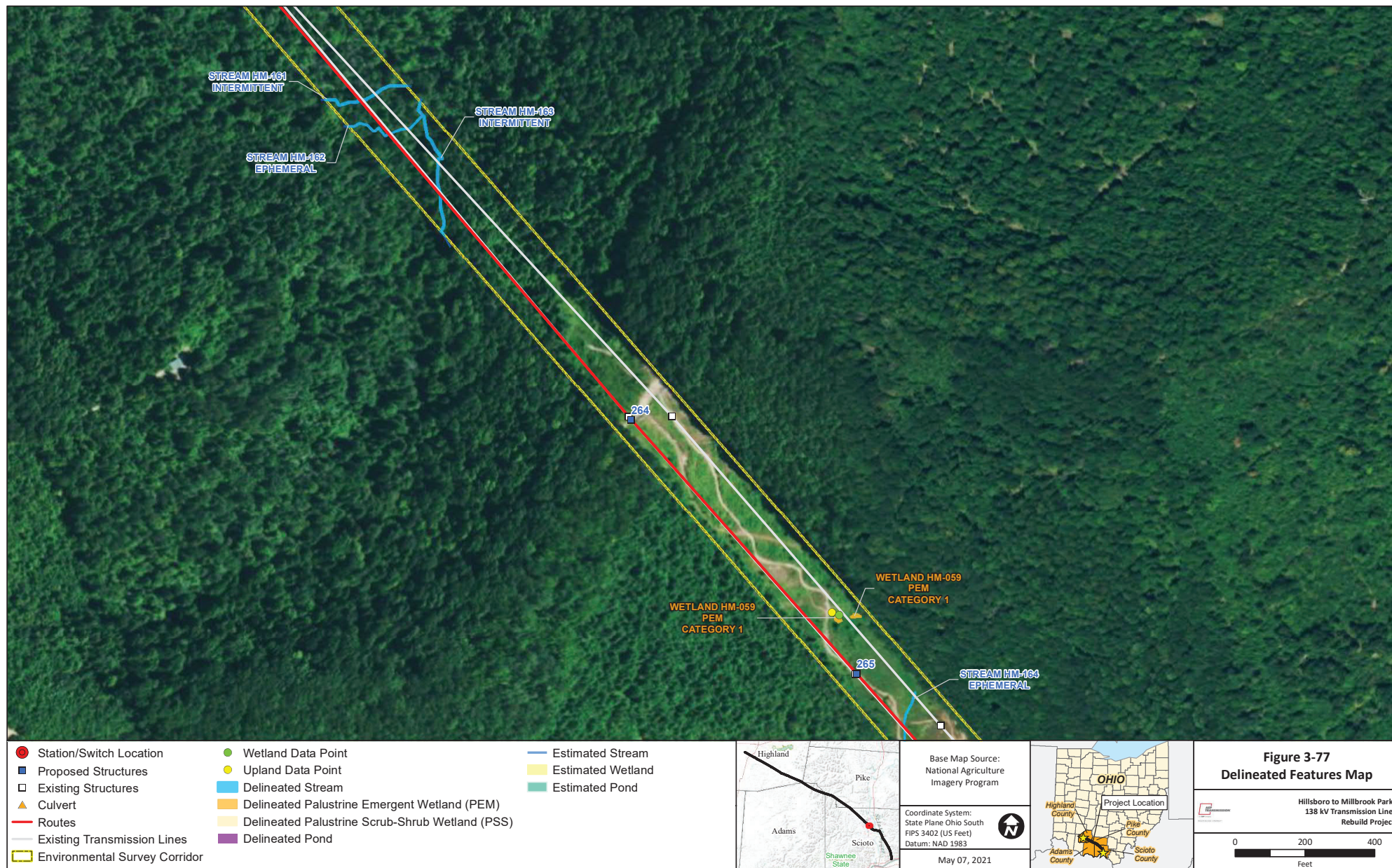




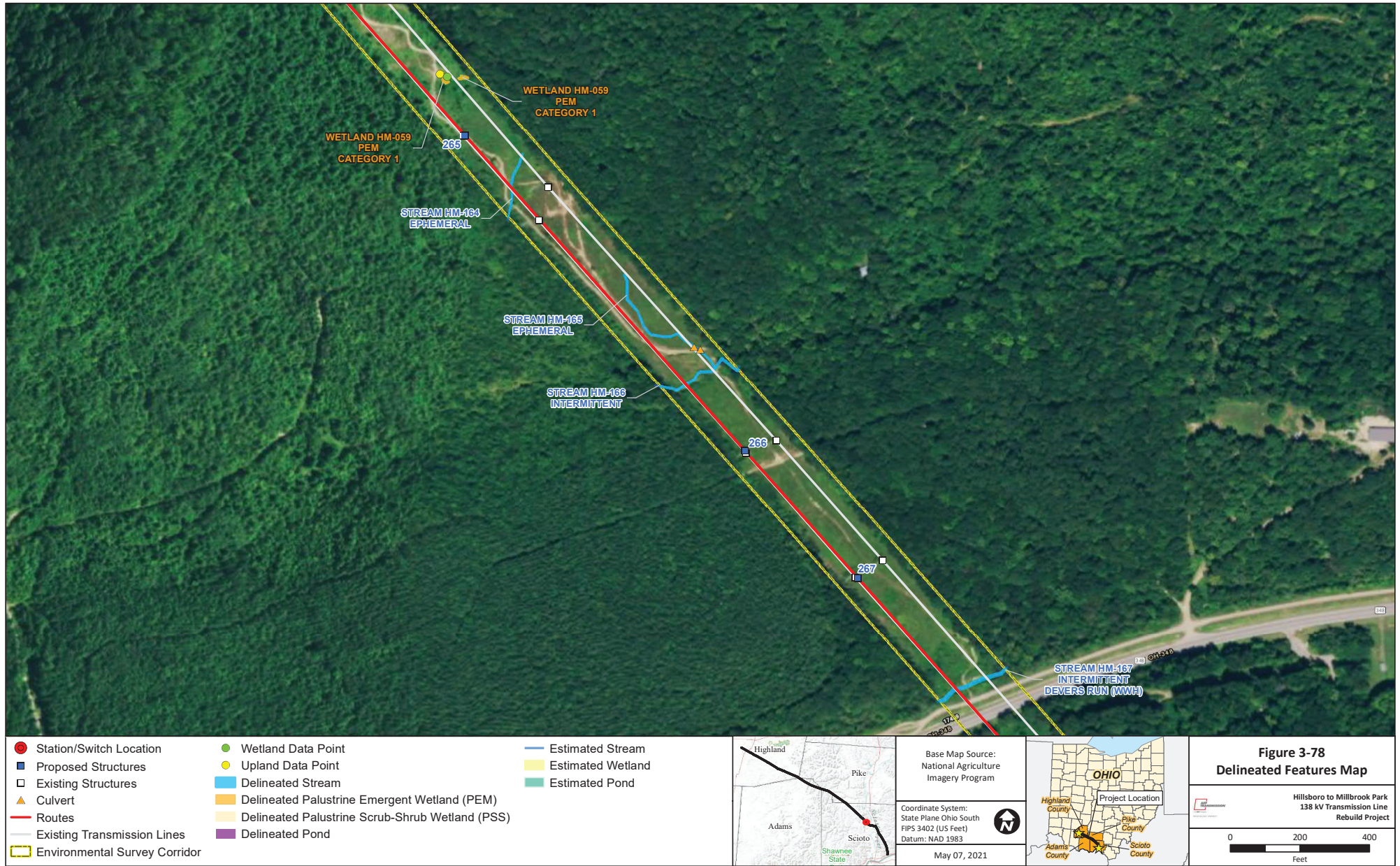




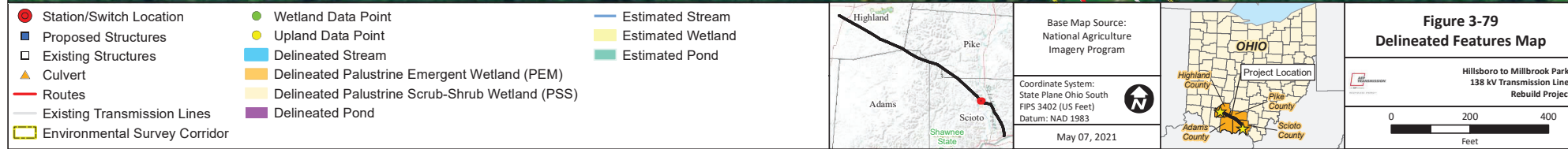
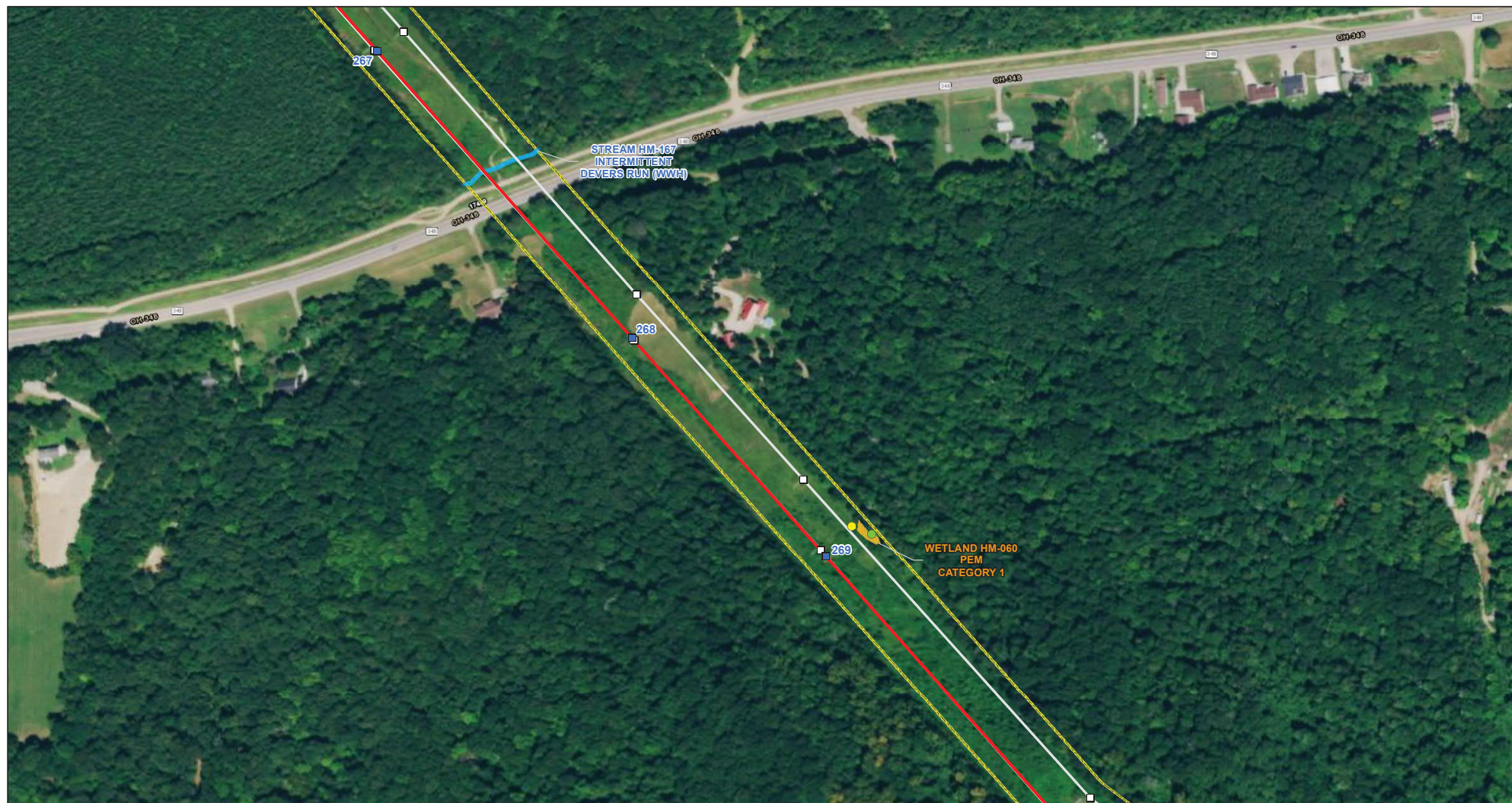




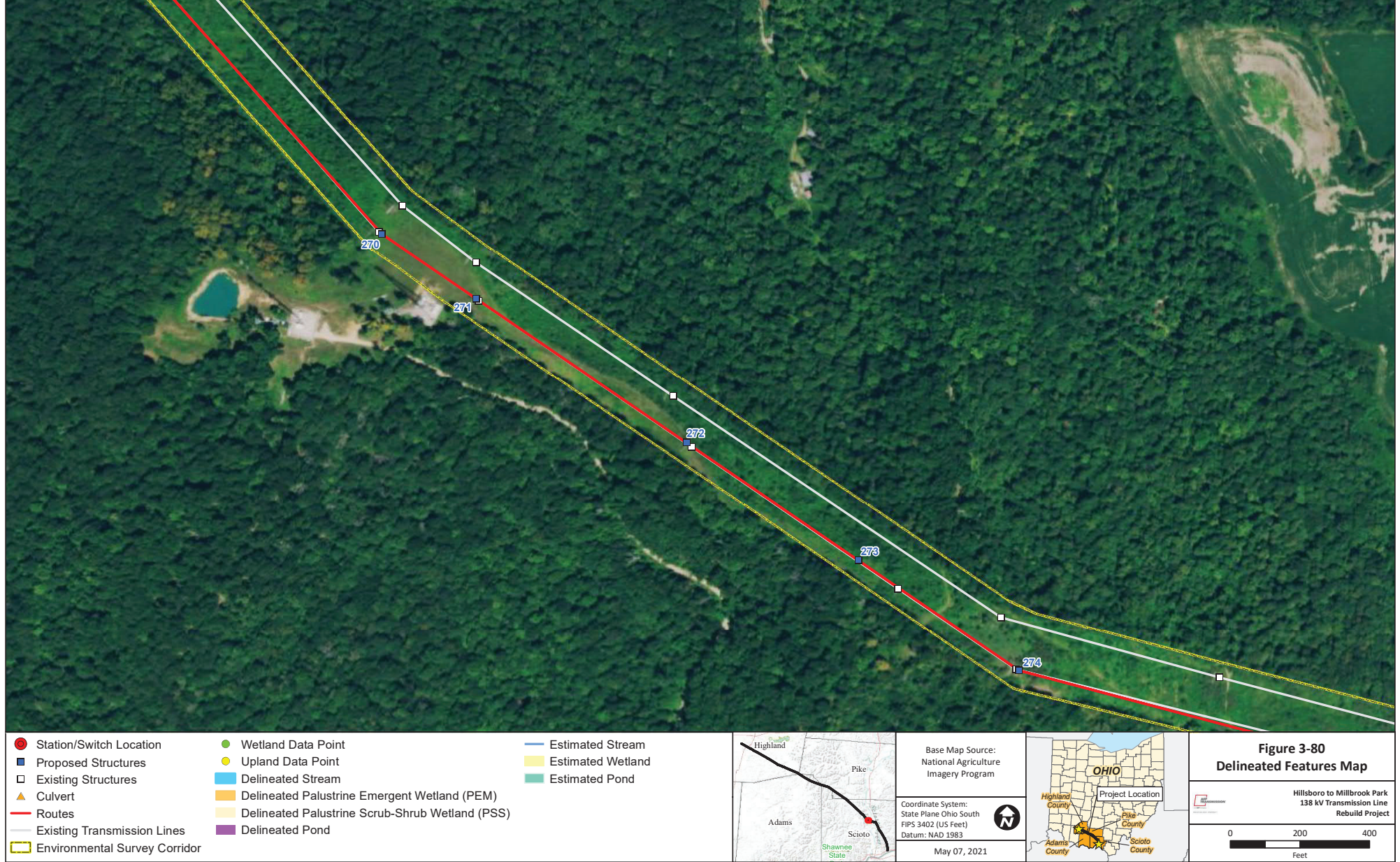




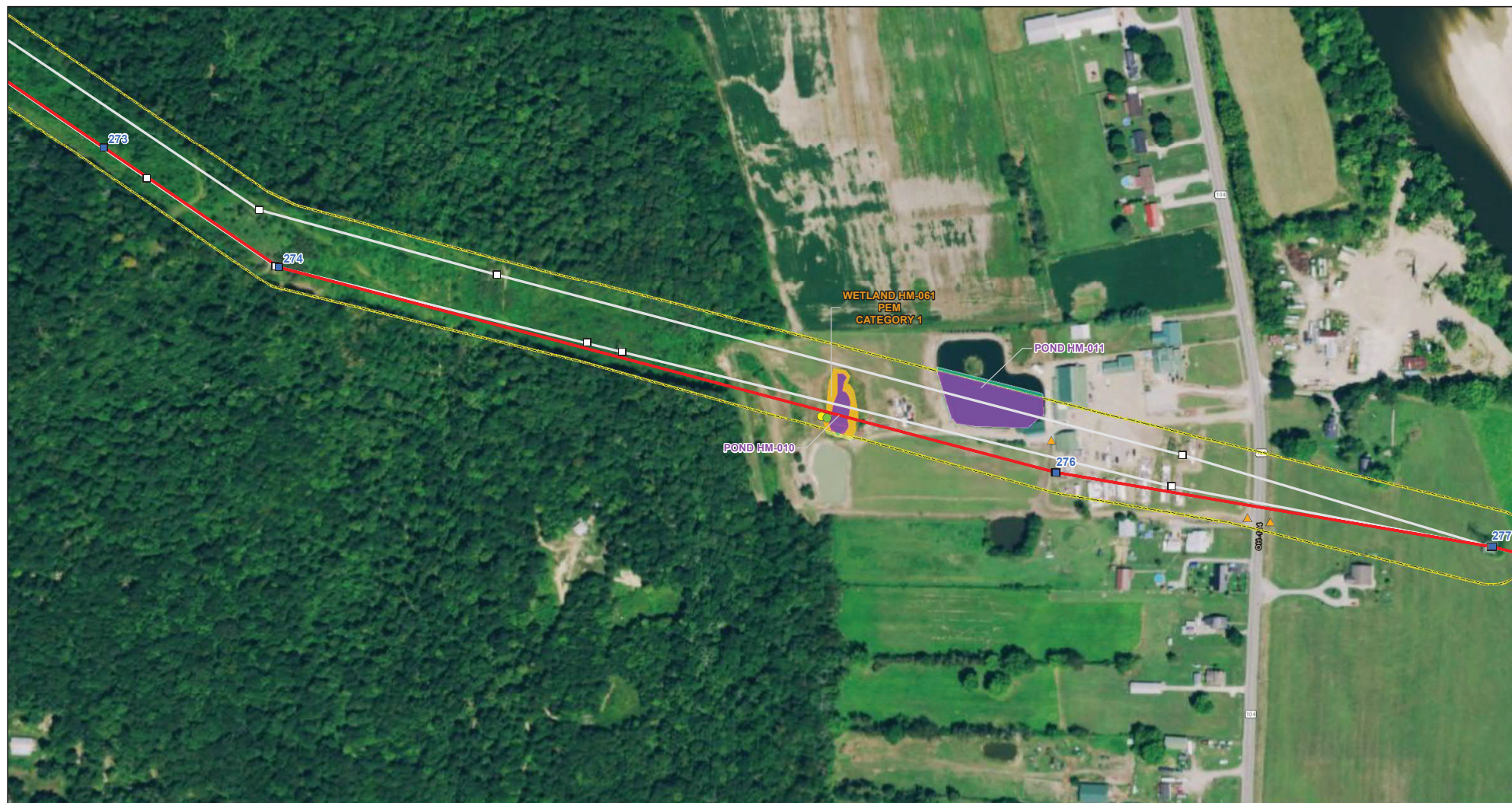






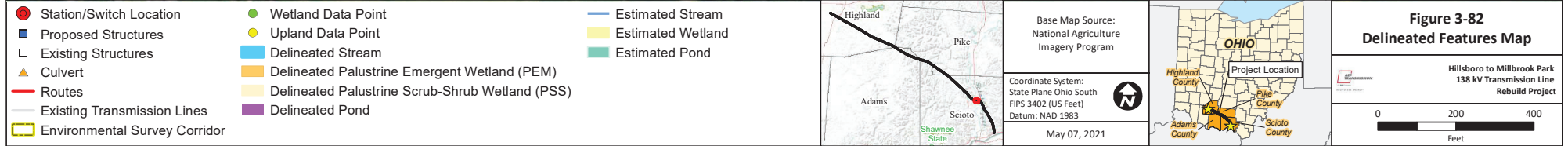
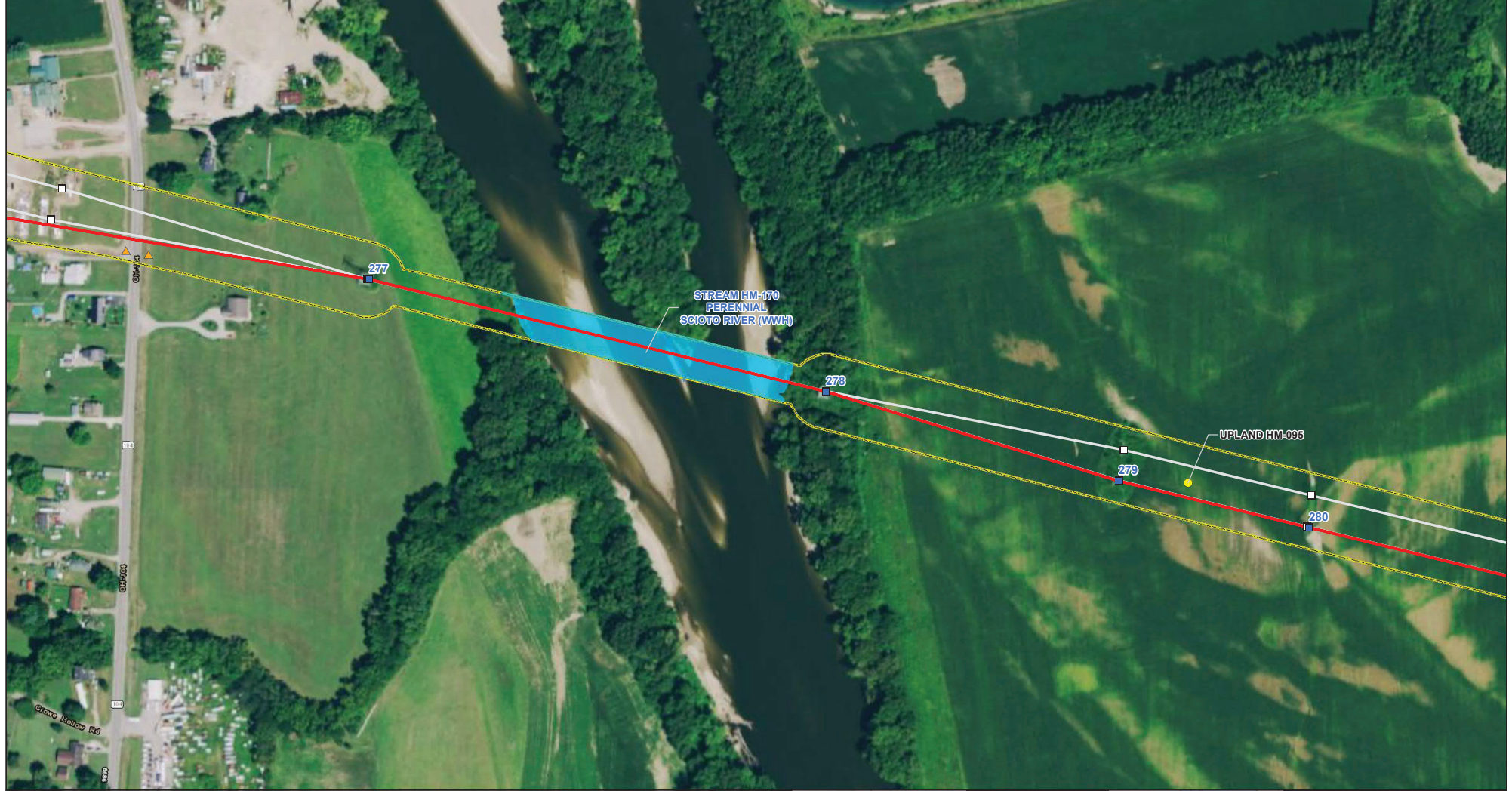




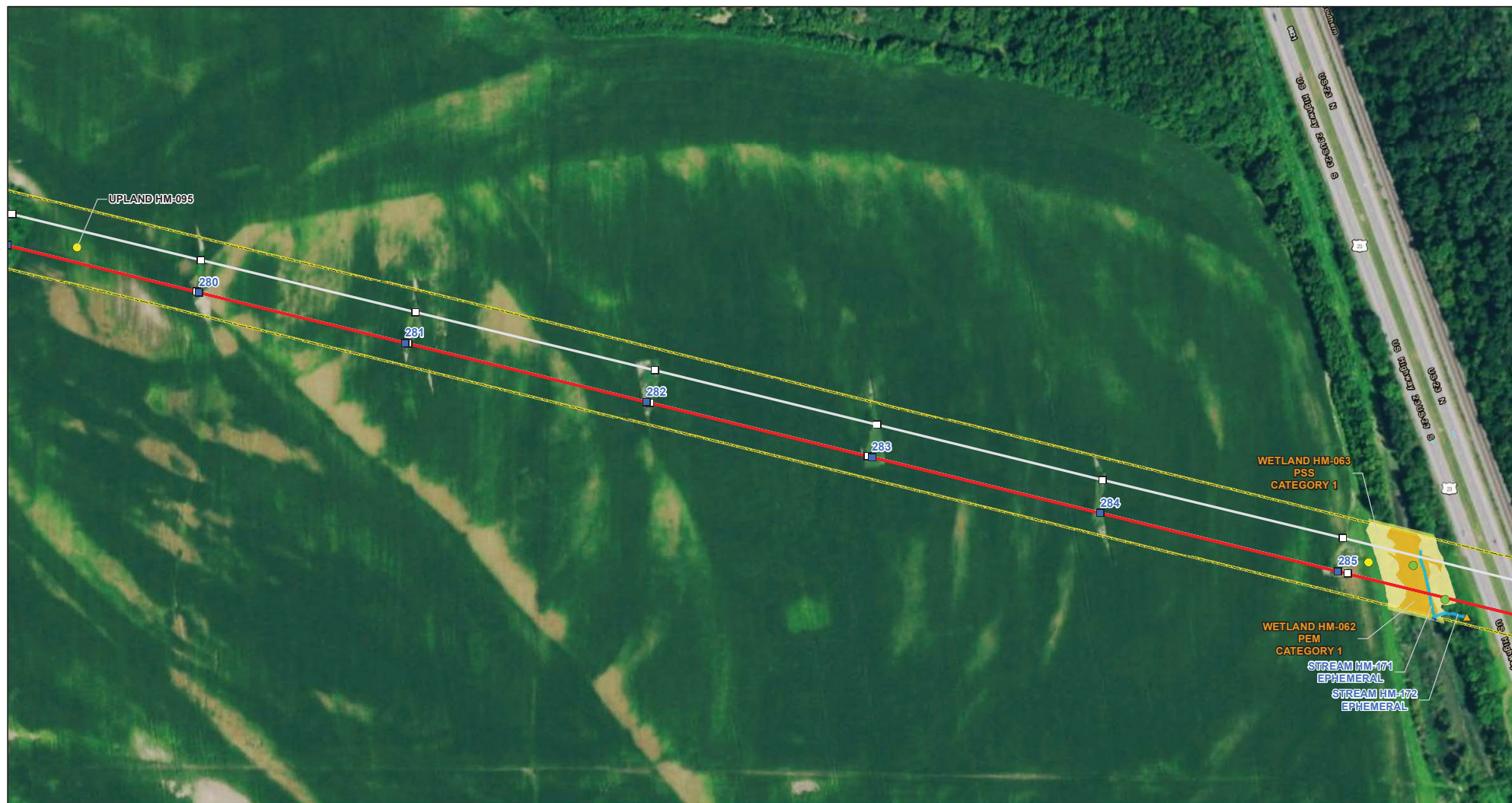


<ul style="list-style-type: none"> <li>● Station/Switch Location</li> <li>■ Proposed Structures</li> <li>□ Existing Structures</li> <li>▲ Culvert</li> <li>— Routes</li> <li>— Existing Transmission Lines</li> <li>▭ Environmental Survey Corridor</li> </ul>	<ul style="list-style-type: none"> <li>● Wetland Data Point</li> <li>● Upland Data Point</li> <li>▭ Delineated Stream</li> <li>▭ Delineated Palustrine Emergent Wetland (PEM)</li> <li>▭ Delineated Palustrine Scrub-Shrub Wetland (PSS)</li> <li>▭ Delineated Pond</li> </ul>	<ul style="list-style-type: none"> <li>— Estimated Stream</li> <li>▭ Estimated Wetland</li> <li>▭ Estimated Pond</li> </ul>		<p>Base Map Source: National Agriculture Imagery Program</p> <p>Coordinate System: State Plane Ohio South FIPS 3402 (US Feet) Datum: NAD 1983</p> <p>May 07, 2021</p>		<p><b>Figure 3-81 Delineated Features Map</b></p> <p>Hillsboro to Millbrook Park 138 kV Transmission Line Rebuild Project</p> <p>0 200 400 Feet</p>
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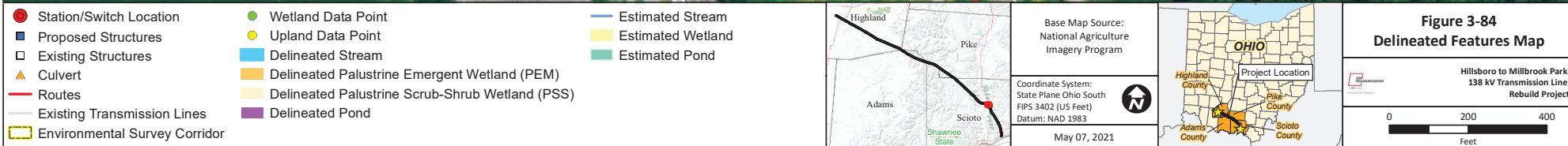
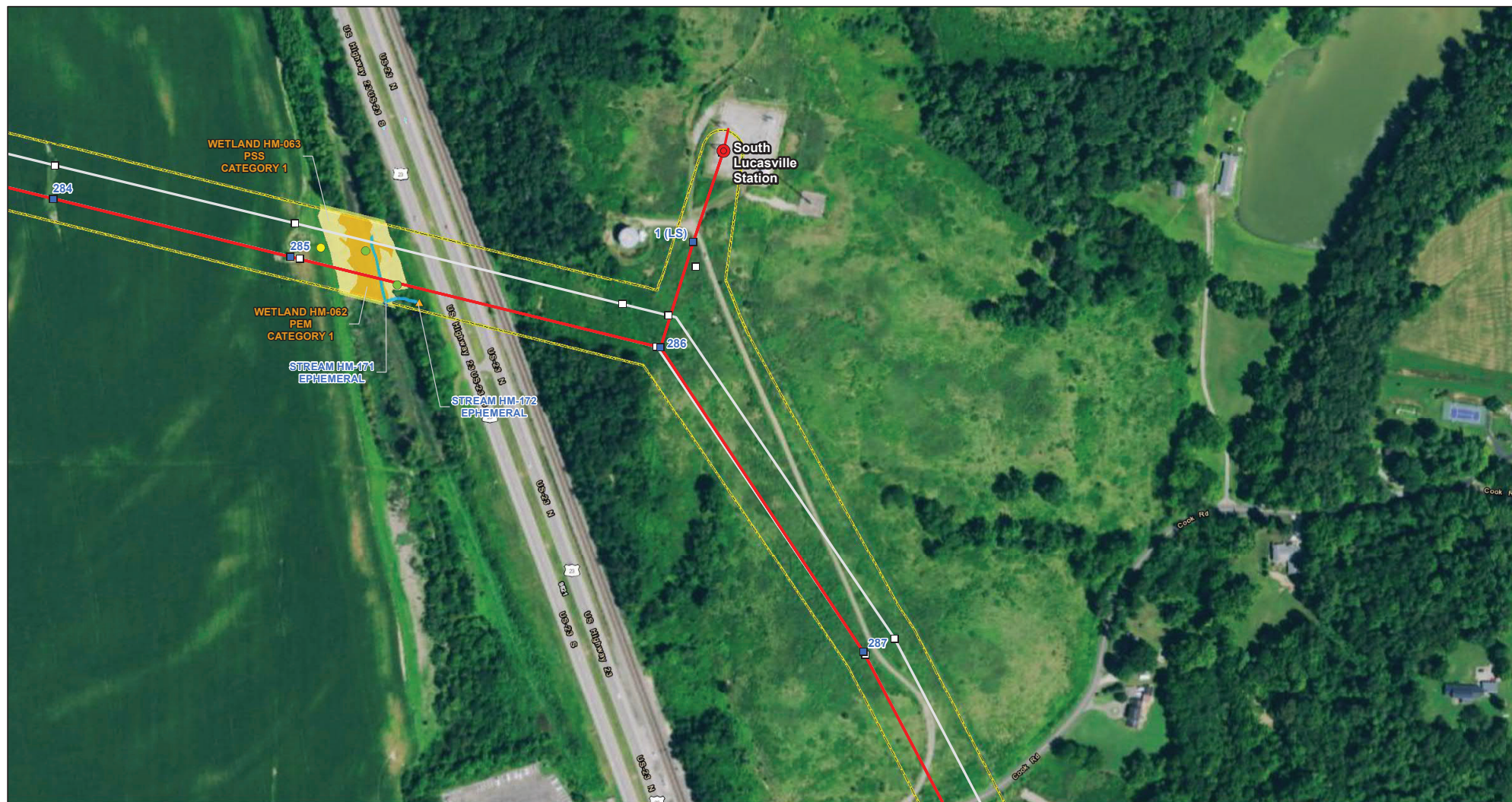




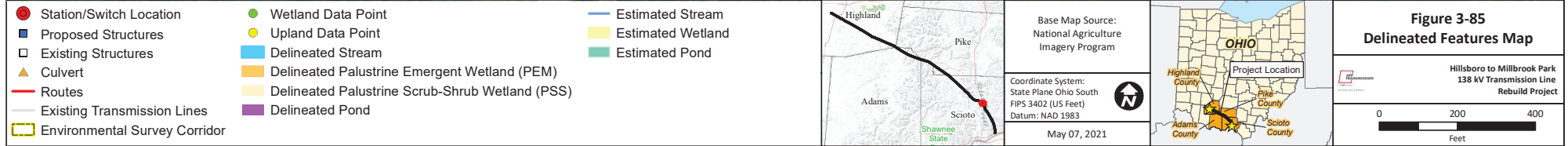
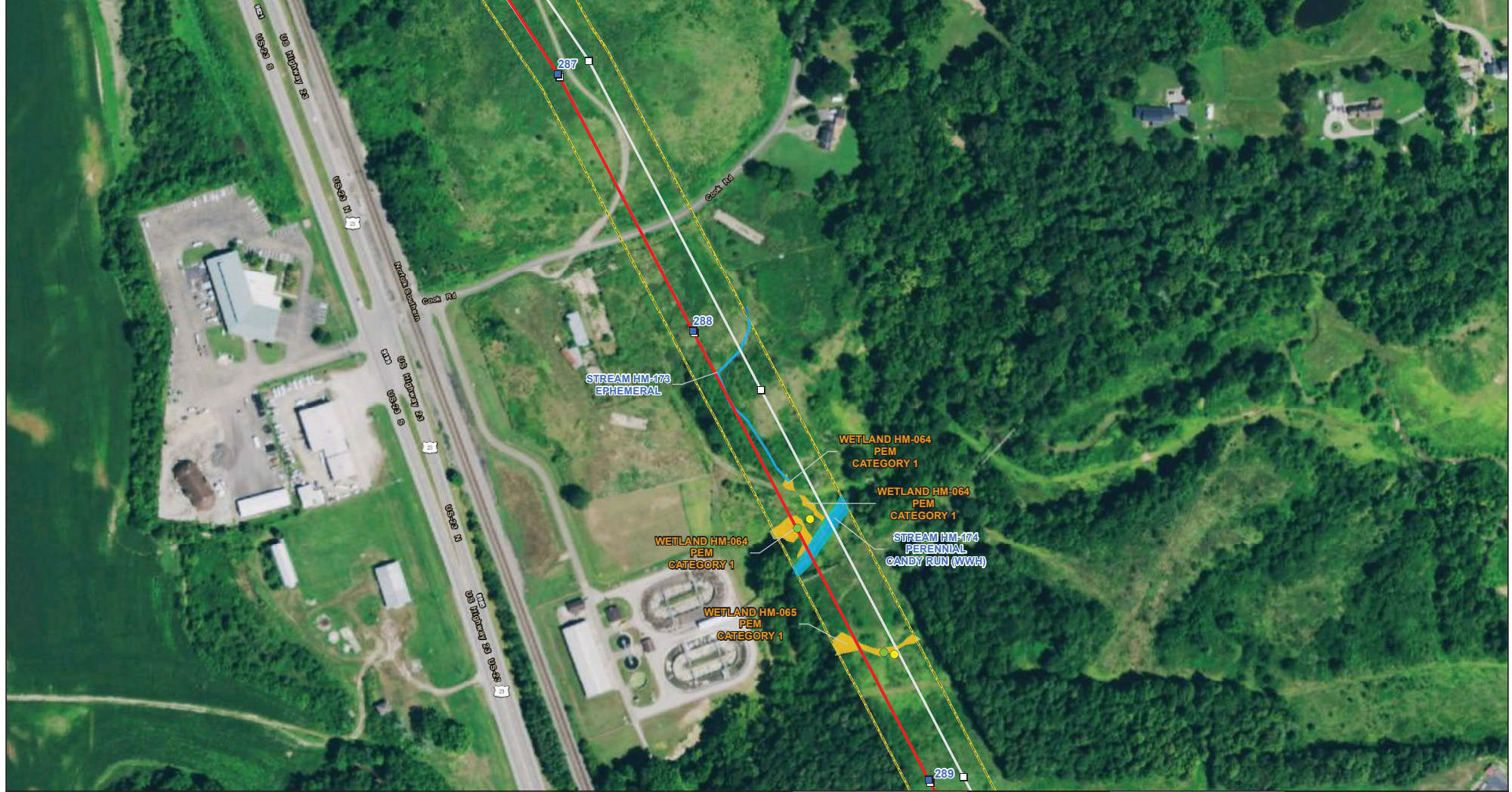


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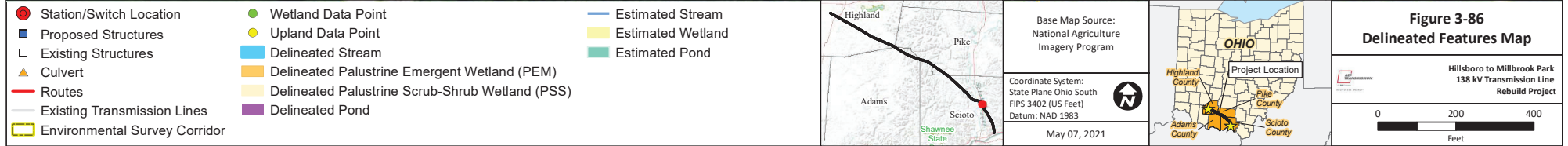




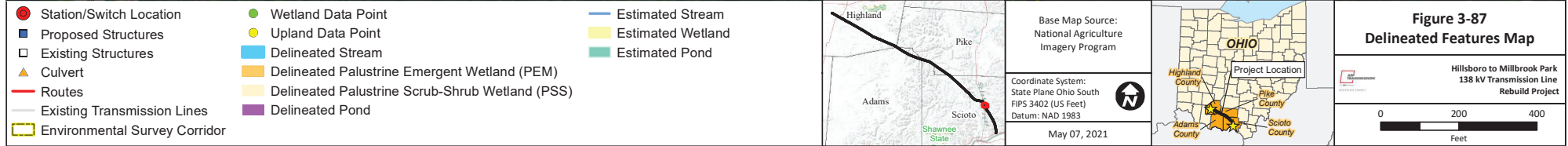
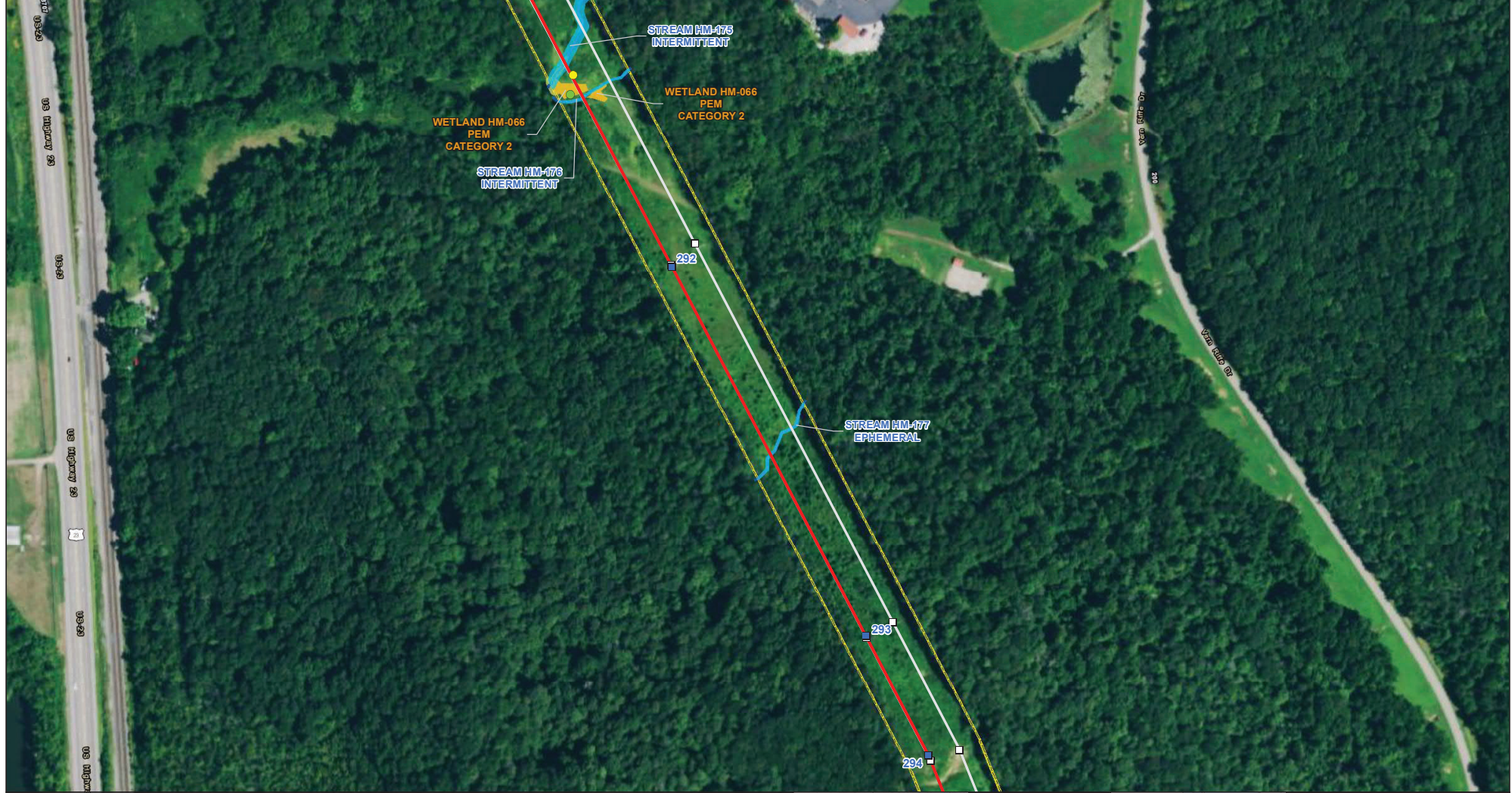








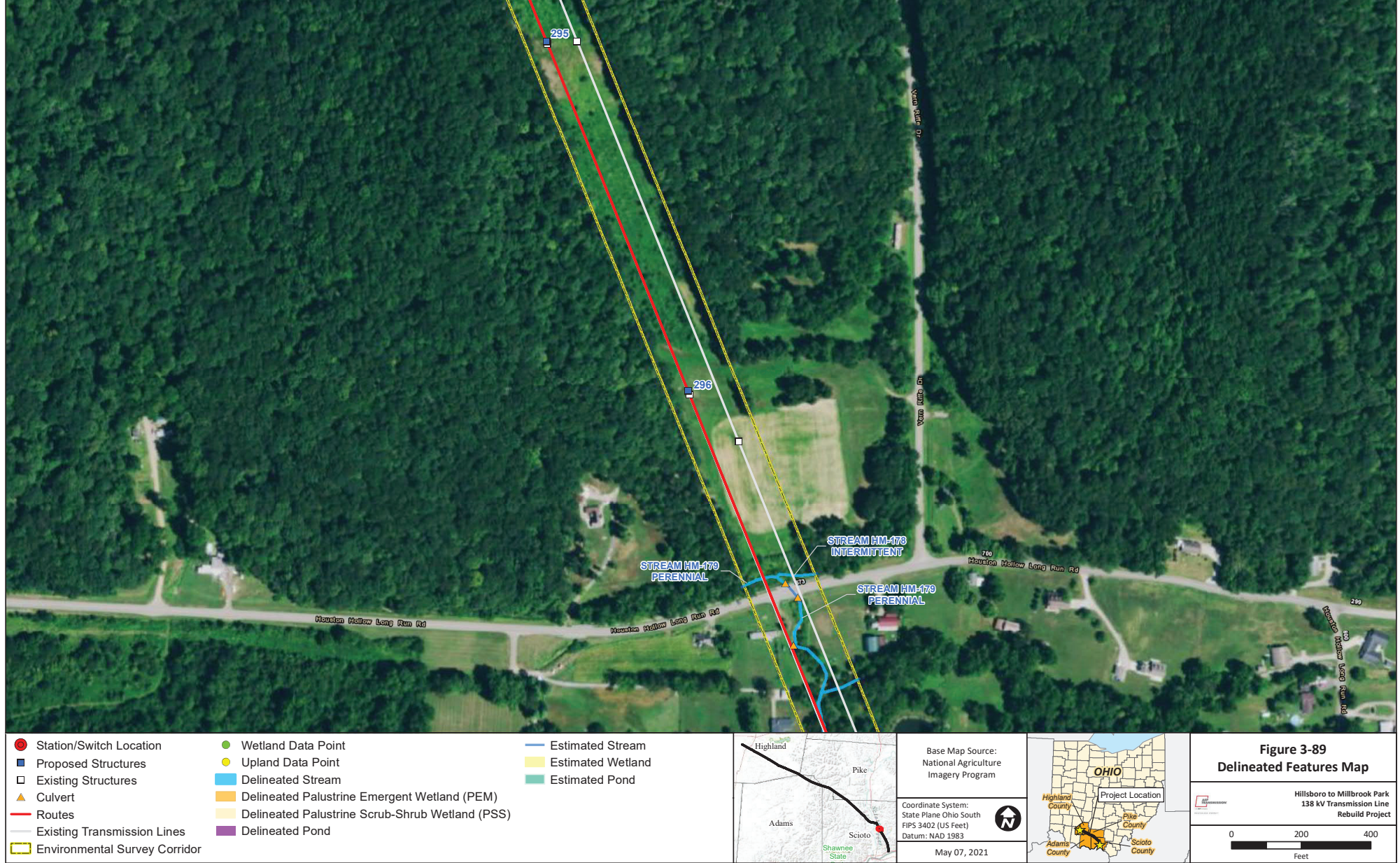




















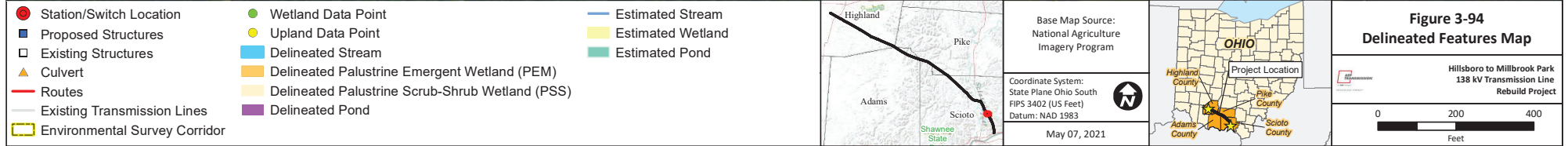




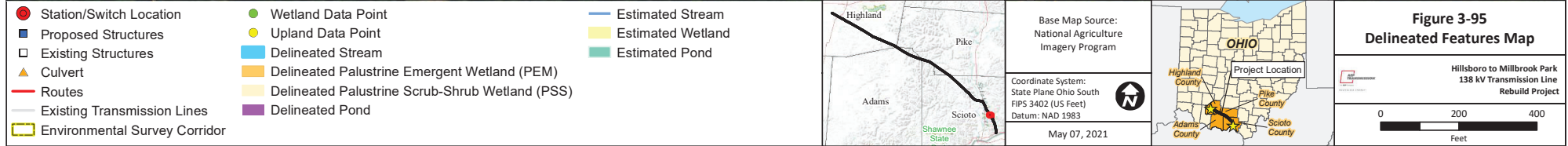
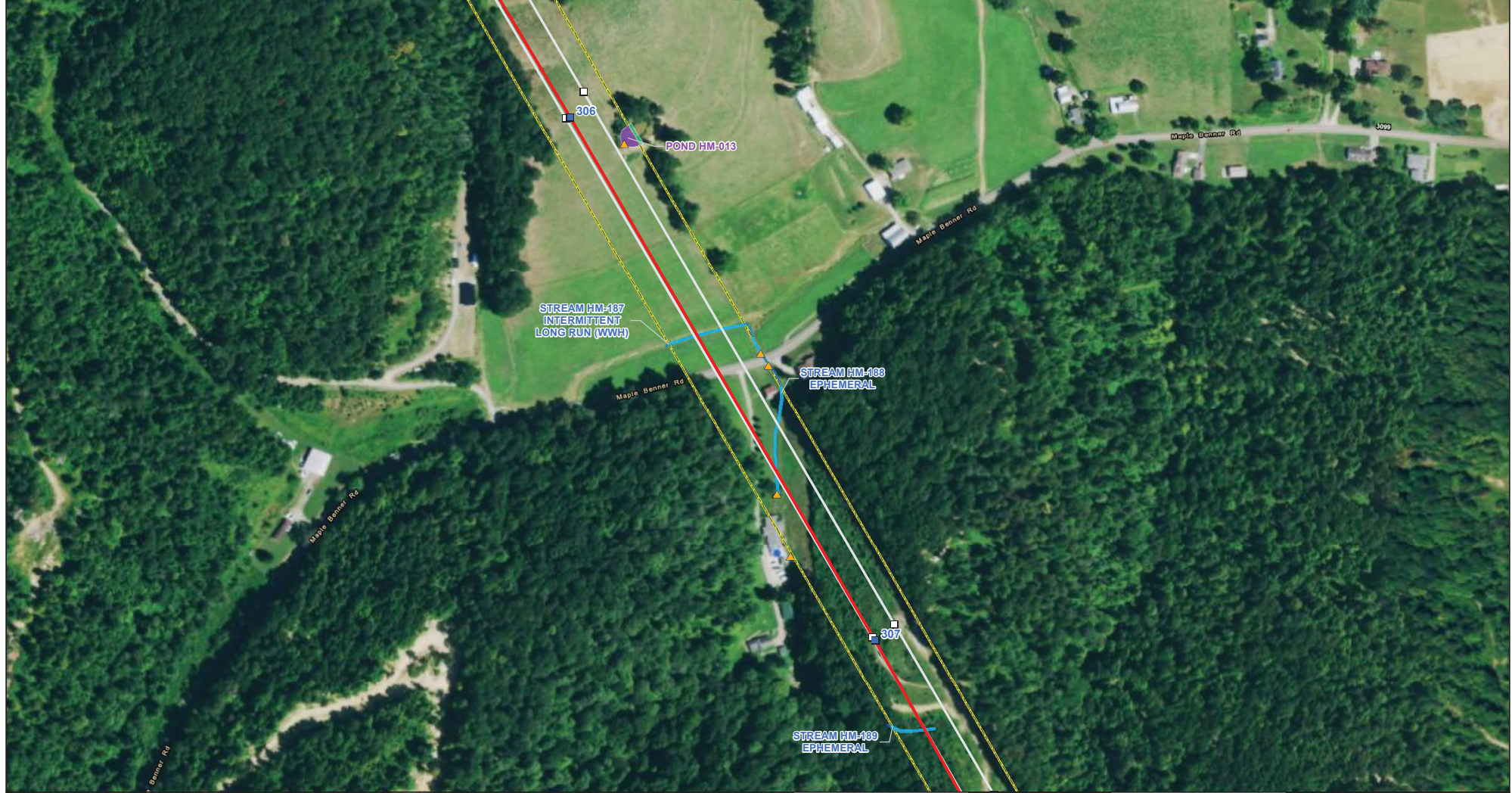




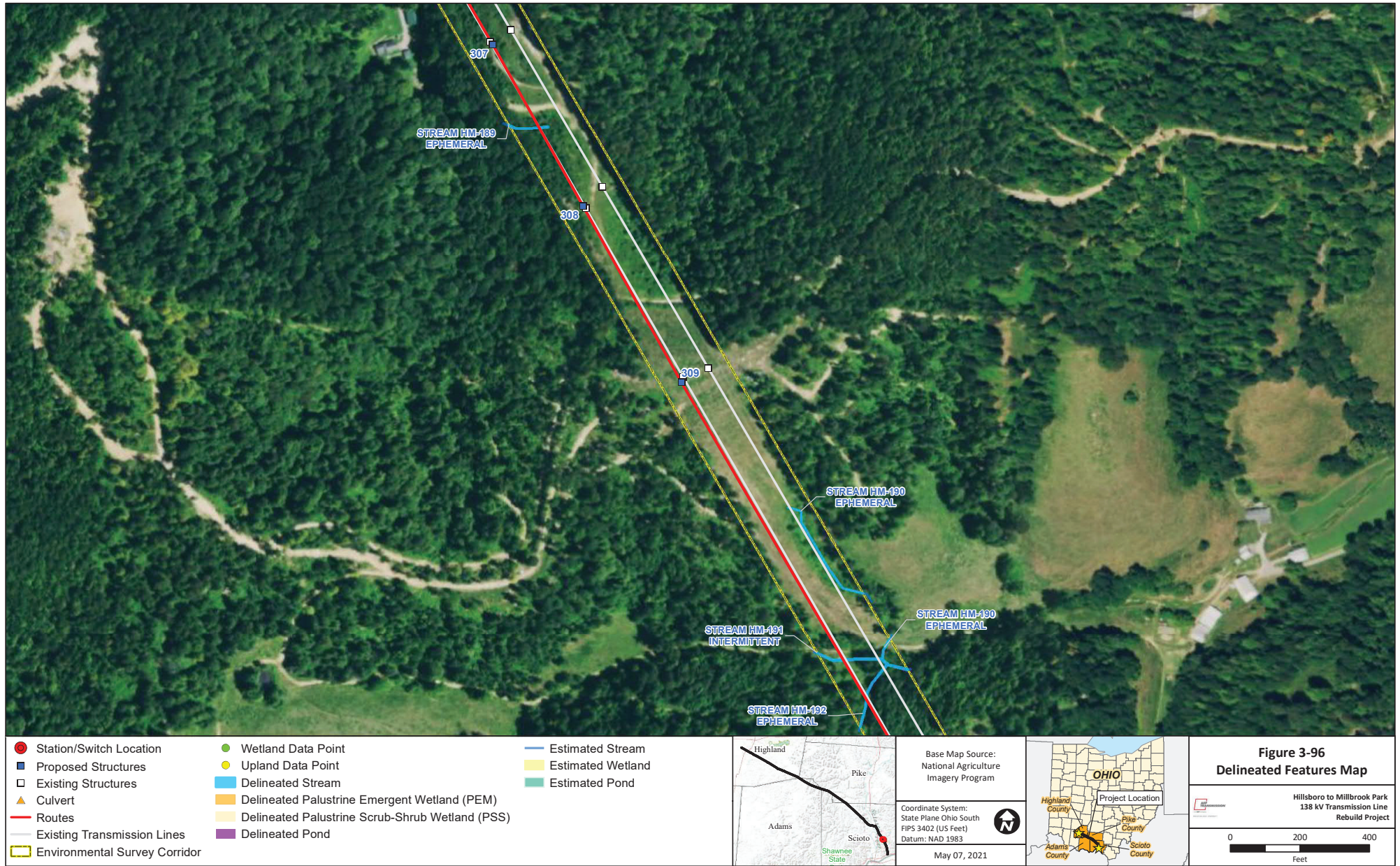




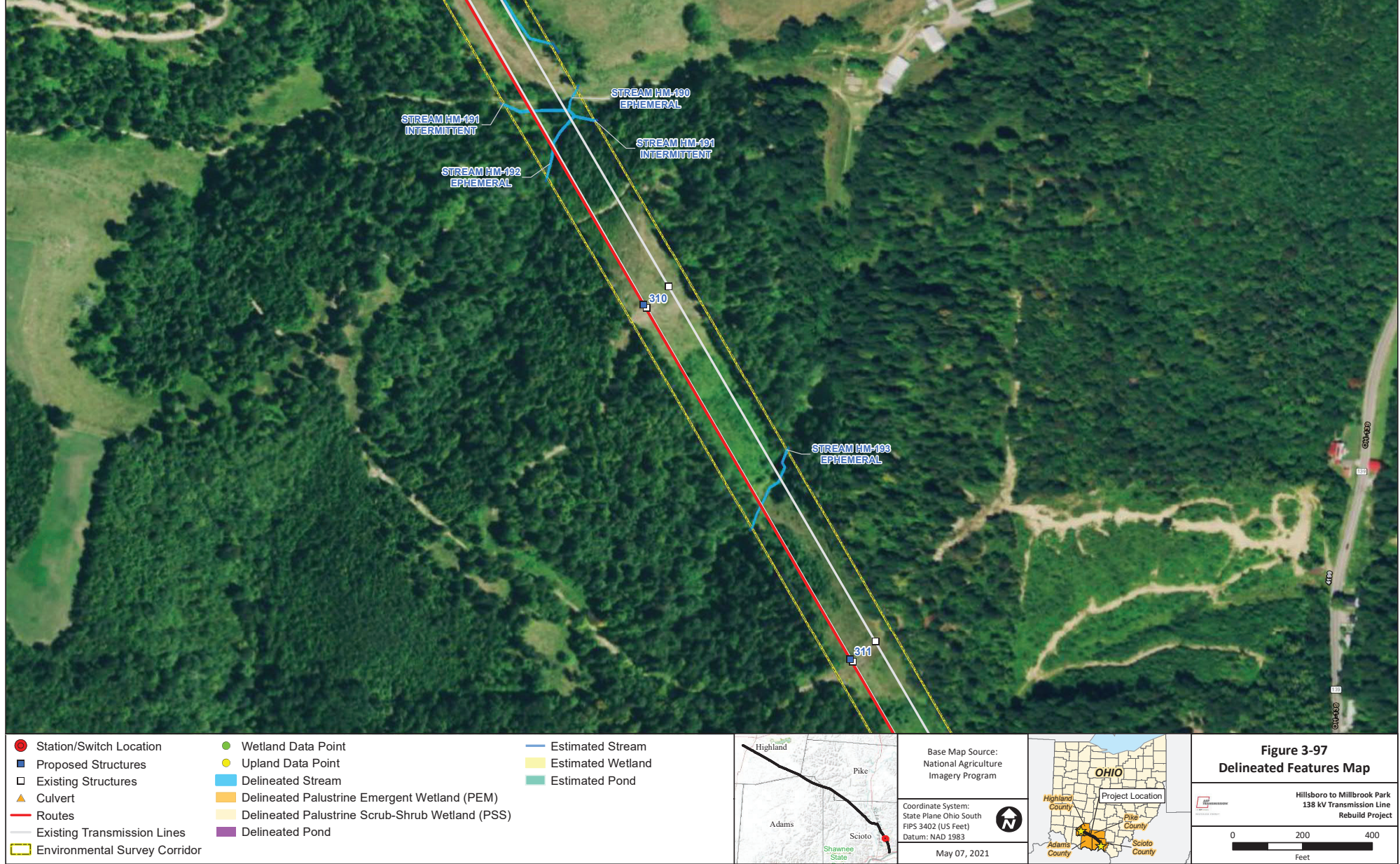








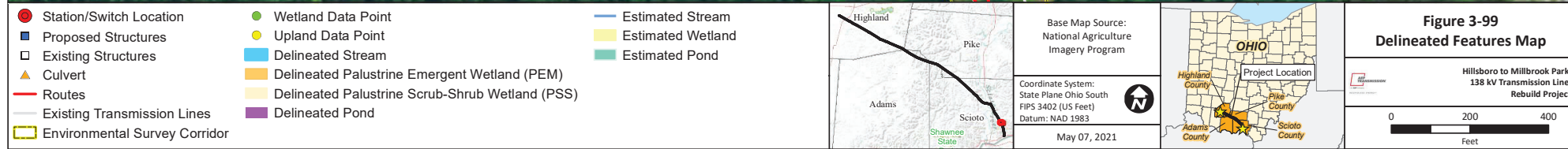
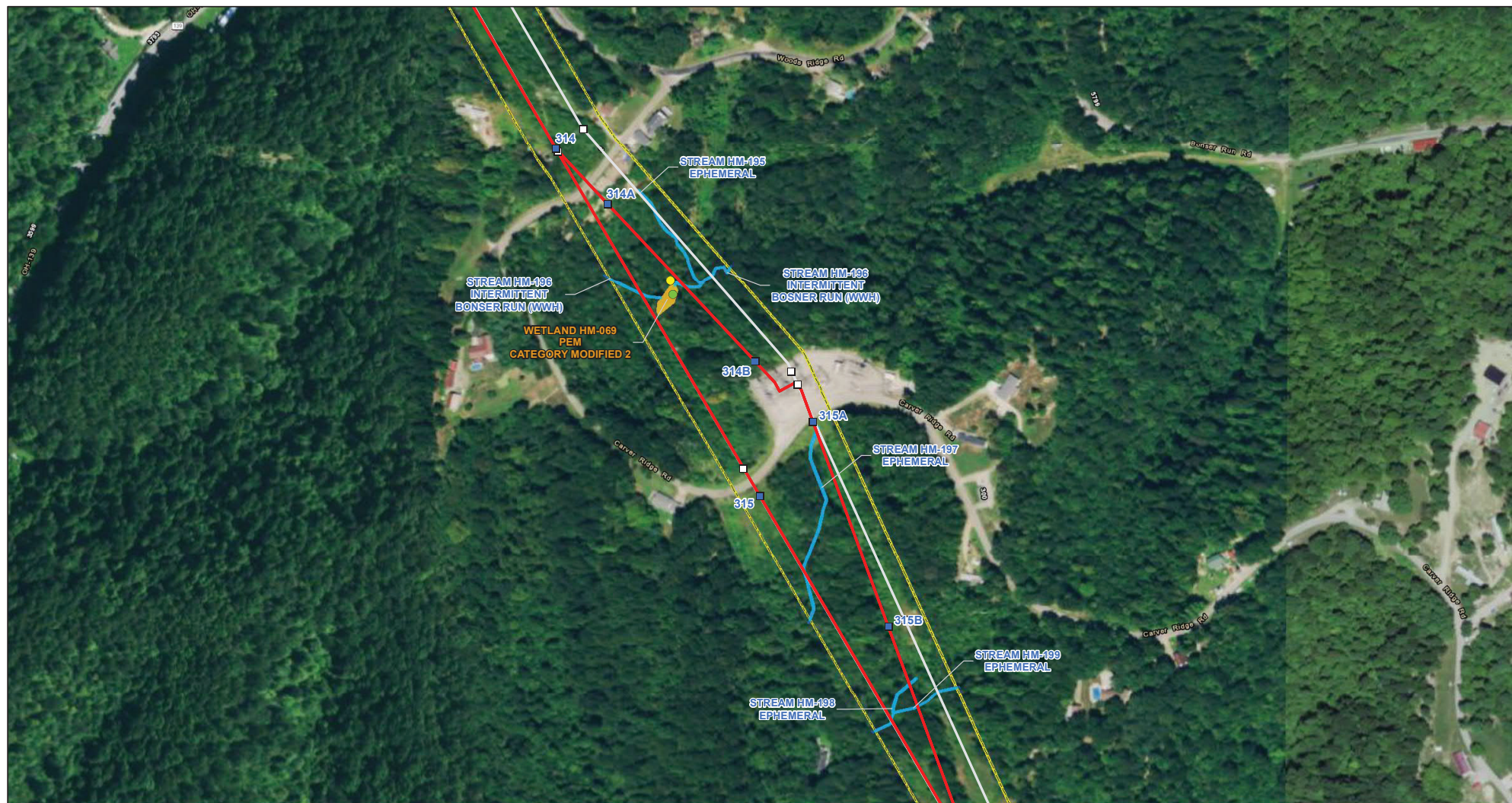




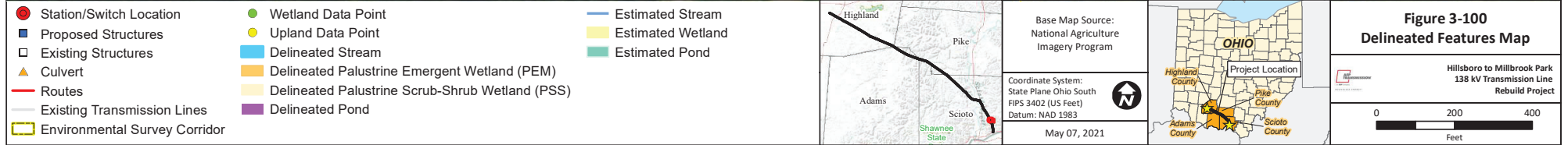




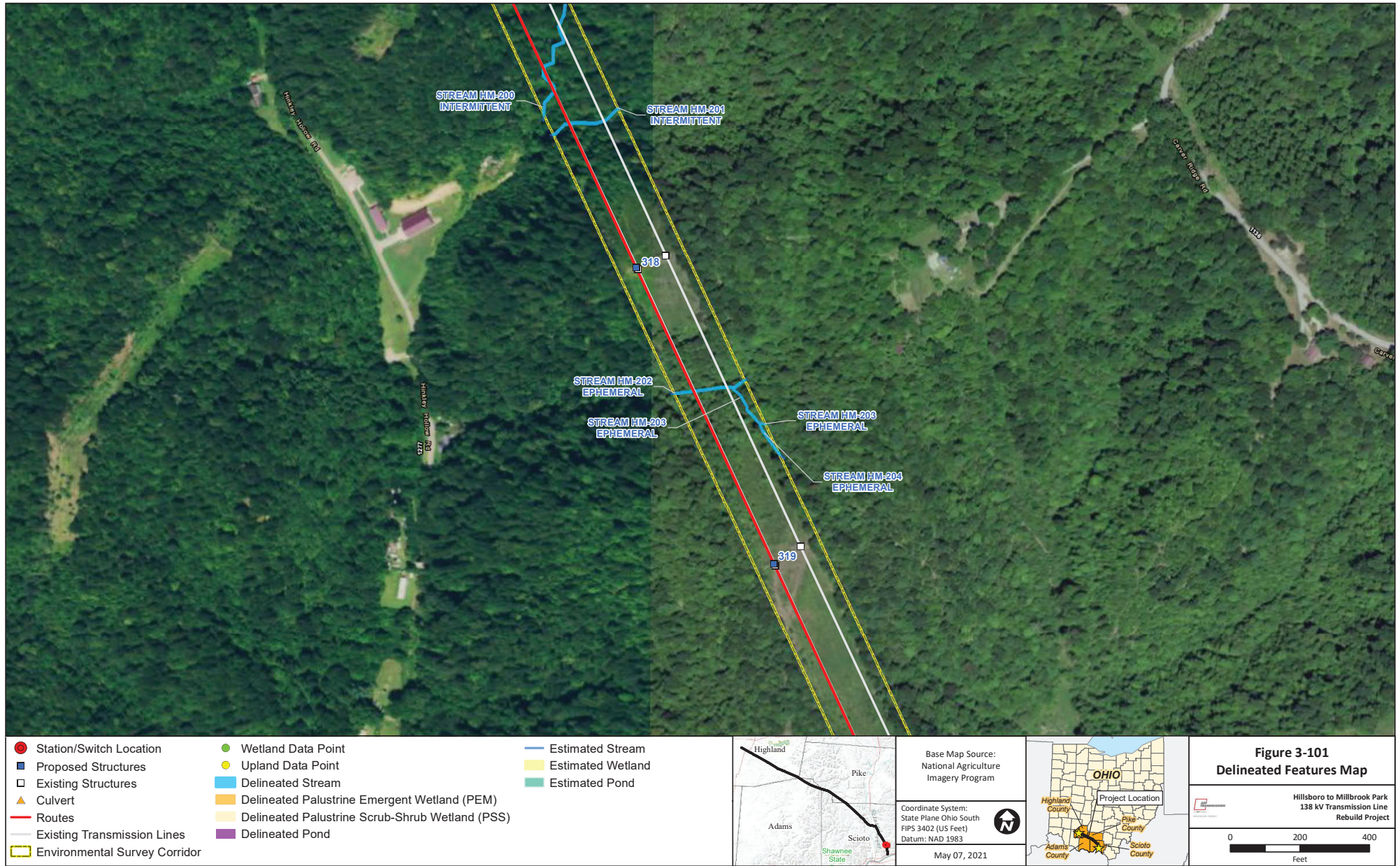




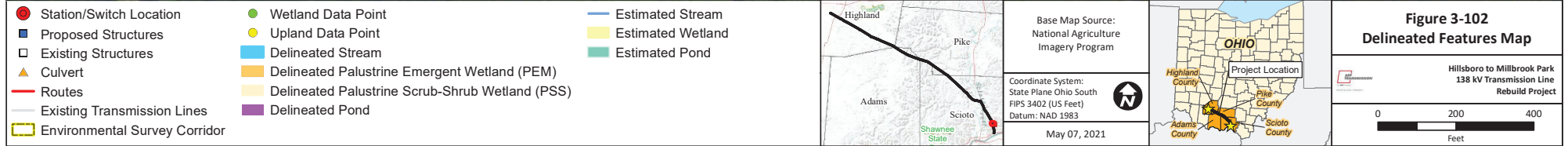




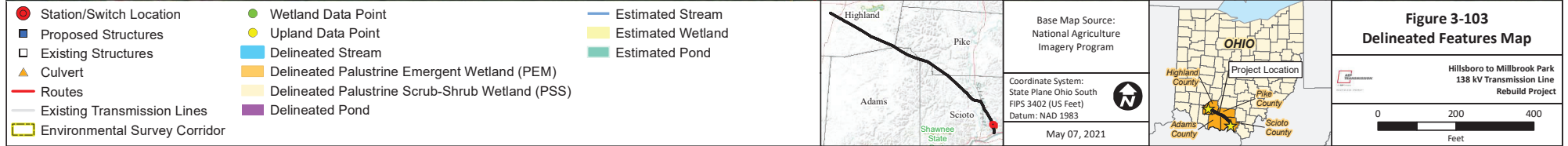
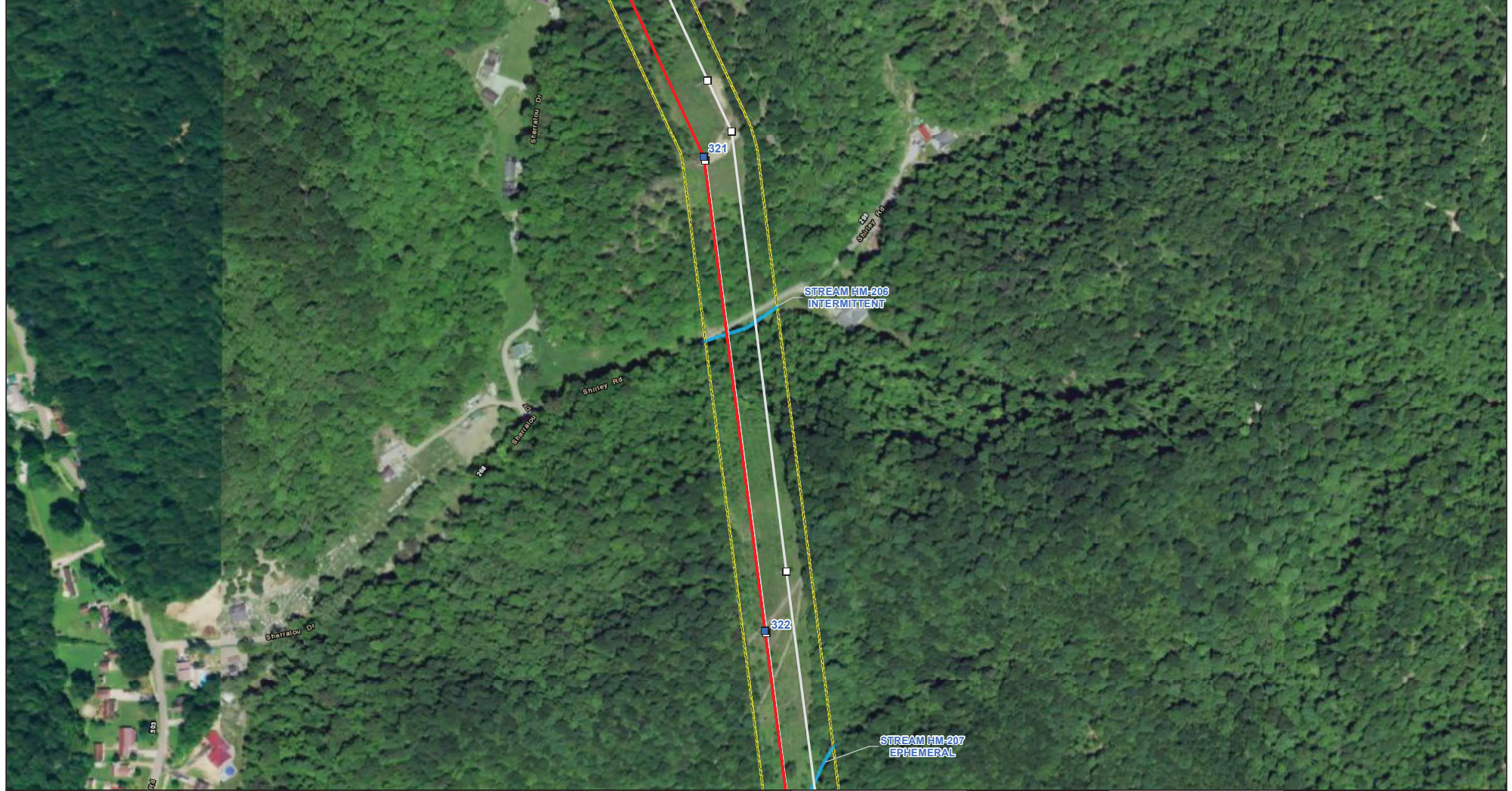




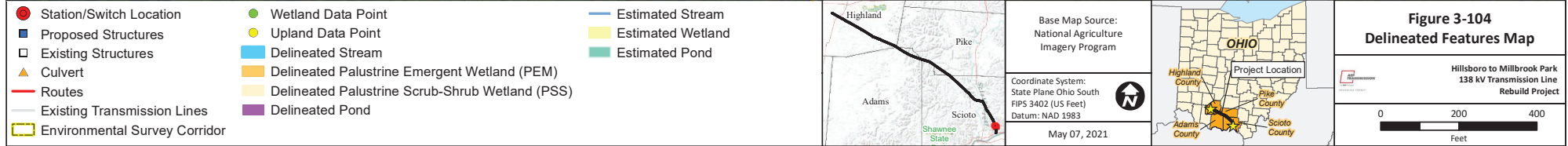




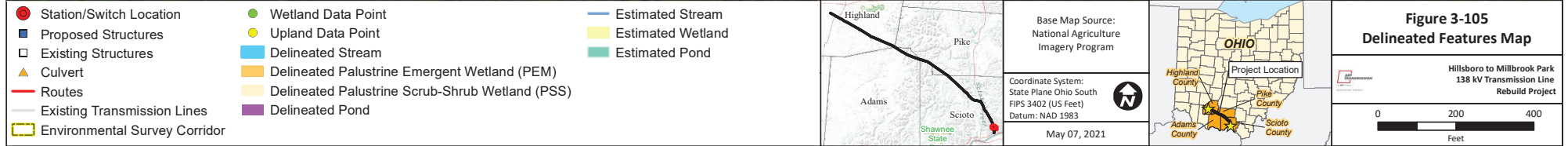




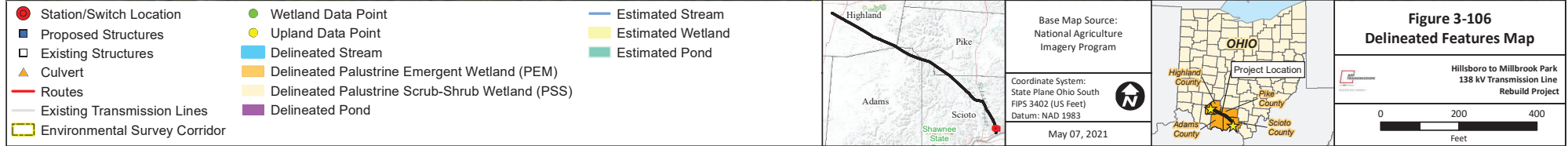




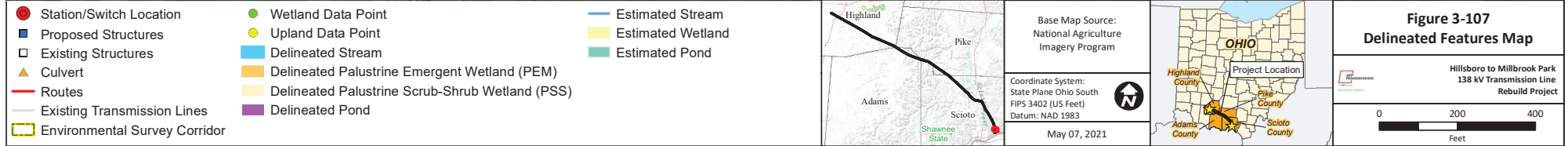




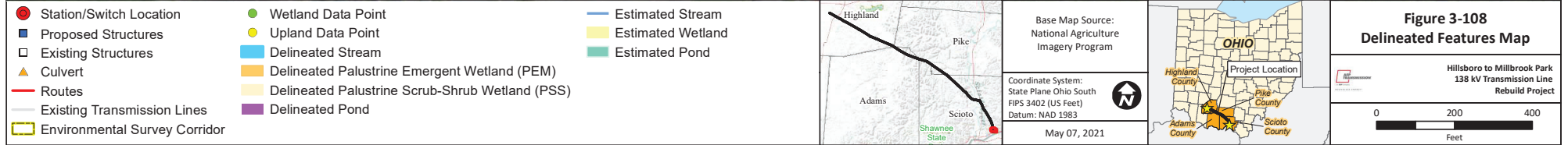
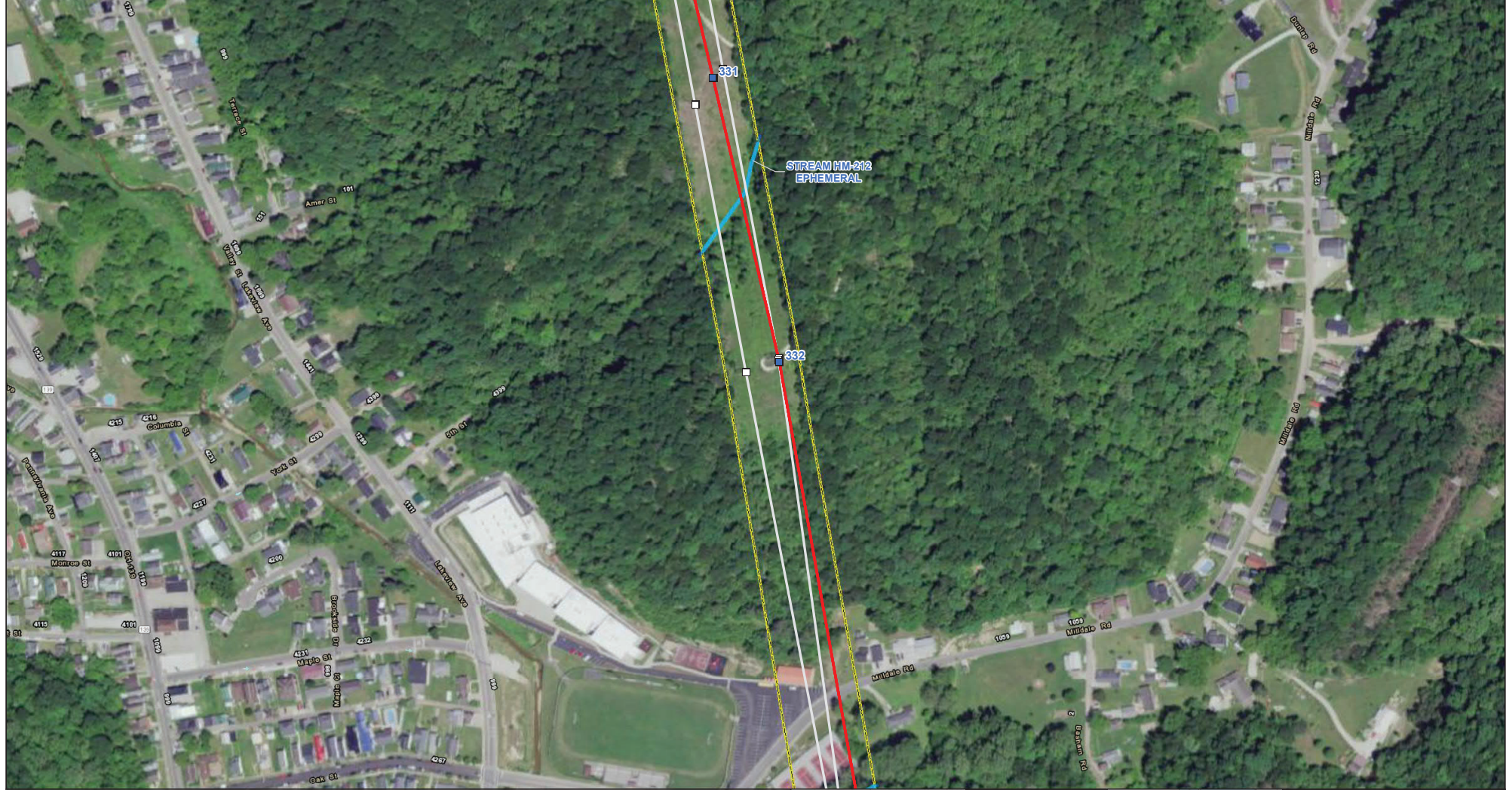








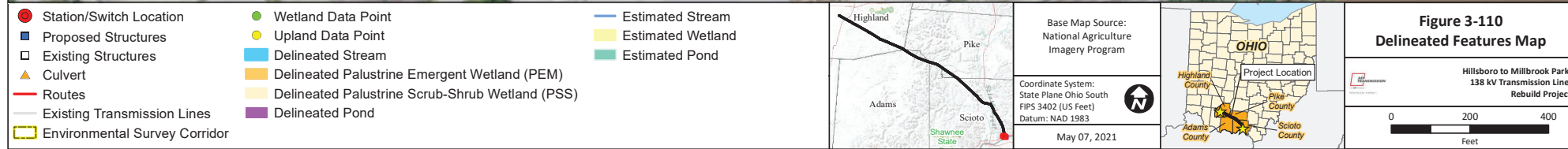














**Appendix A**  
**U.S. Army Corps of Engineers (USACE) Wetland**  
**Determination Forms – Midwest and Eastern**  
**Mountains & Piedmont Regions**

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# WETLAND DETERMINATION DATA FORM – Midwest Region

**Project/Site:** AEP Hillsboro to Millbrook Park      **City/County:** \_\_\_\_\_      **Highland**      **Sampling Date:** 09/16/2019  
**Applicant/Owner:** AEP      **State:** OH      **Sampling Point:** Wetland HM-001  
**Investigator(s):** MJA, SAH      **Section, Township, Range:** Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 9087  
**Landform (hillslope, terrace, etc.):** Hillside      **Local relief (concave, convex, none):** Rolling  
**Slope (%):** 5      **Lat:** 39.17219      **Long:** \_\_\_\_\_      **-83.6751589383334**      **Datum:** \_\_\_\_\_      **WGS 84**  
**Soil Map Unit Name:** Jonesboro-Rossmoyne silt loams, 2 to 6 percent slopes      **NWI classification:** N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology ☒ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

**Remarks:**  
 PEM hillside seep wetland. Soils are very dark--organic material likely masking redox concentrations. Very strong vegetation and hydrology indicators confirm wetland status.

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
1. _____	_____	_____	_____	3 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: 3 (B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	0	= Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
Sapling/Shrub Stratum (Plot size: 15')	8	Y	FACW	Prevalence Index worksheet: Total % Cover of: Multiply by:
1. Fraxinus pennsylvanica	_____	_____	_____	OBL species 115 x 1 = 115
2. _____	_____	_____	_____	FACW species 53 x 2 = 106
3. _____	_____	_____	_____	FAC species 0 x 3 = 0
4. _____	_____	_____	_____	FACU species 0 x 4 = 0
5. _____	_____	_____	_____	UPL species 0 x 5 = 0
Herb Stratum (Plot size: 5')	8	= Total Cover		Column Totals: 168 (A) 221 (B)
1. Leersia oryzoides	60	Y	OBL	Prevalence Index = B/A = 1.32
2. Impatiens capensis	45	Y	FACW	Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≥3.0 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Lobelia siphilitica	5	N	OBL	
4. Carex lurida	30	N	OBL	
5. Acorus americanus	20	N	OBL	
6. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: 30')	160	= Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	0	= Total Cover		

**Remarks:** (Include photo numbers here or on a separate sheet.)



## SOIL

Sampling Point: Wetland 11M-001**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 2	10YR 2/2	100	/			Silt	Organic
2 - 10	10YR 2/1	100	/			Silt	Organic
10 - 16	2.5Y 4/1	98	10YR 4/6	2	C	M	Restrictive gravel layer at 16 in.
-							
-							
-							
-							
-							

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:****Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input checked="" type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):** YesType: Gravel  
Depth (inches): 16Hydric Soil Present? Yes ☒ No ☐

Remarks:

Very dark soils. Organic material likely masking redox concentrations in the upper 10 inches.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required: check all that apply)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>6.00</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0.00</u>
Saturation Present? (include capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0.00</u>

Wetland Hydrology Present? Yes ☒ No ☐

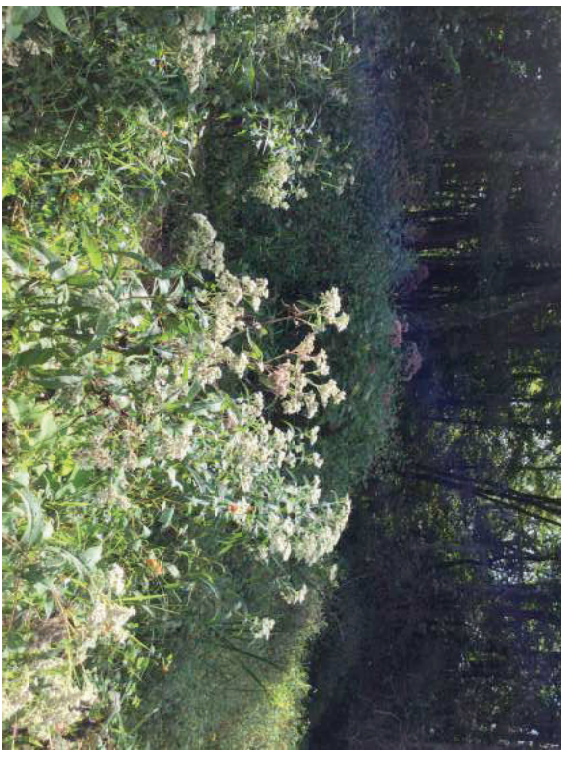
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:





North



South



East



West







# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: AEP Hillsboro to Millbrook Park City/County: \_\_\_\_\_ Highland 09/17/2019  
 Applicant/Owner: AEP State: OH Sampling Point: Wetland HM-002  
 Investigator(s): MJA, SAH Section, Township, Range: Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 2511  
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat: 39.16556 Long: \_\_\_\_\_ -83.65913537/566666 Datum: \_\_\_\_\_ WGS 84  
 Soil Map Unit Name: Hickory silt loam, Illinoian Till Plain, 12 to 18 percent slopes, eroded NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____		
Wetland Hydrology Present?	Yes <u>X</u> No _____		

Remarks: \_\_\_\_\_

Data point for Wetland HM-002 (W-MJA-091719-01). This is a PEM situated under the T-Line ROW, surrounded by young forest and shrub/scrub.

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
1. _____	_____	_____	_____	_____ 2 _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ 2 _____ (B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ 100.00 _____ (A/B)
Sapling/Shrub Stratum (Plot size: <u>15'</u> )	_____ 0 _____ = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____		
1. _____	_____	_____	_____	OBL species _____ 90 _____ x 1 = _____ 90
2. _____	_____	_____	_____	FACW species _____ 37 _____ x 2 = _____ 74
3. _____	_____	_____	_____	FAC species _____ 0 _____ x 3 = _____ 0
4. _____	_____	_____	_____	FACU species _____ 0 _____ x 4 = _____ 0
5. _____	_____	_____	_____	UPL species _____ 0 _____ x 5 = _____ 0
Herb Stratum (Plot size: <u>5'</u> )	_____ 0 _____ = Total Cover	Column Totals: _____ 127 (A) _____ 164 (B)	Prevalence Index = B/A = _____ 1.29	
1. <u>Impatiens capensis</u>	20	N	FACW	Hydrophytic Vegetation Indicators: X <u>1</u> - Rapid Test for Hydrophytic Vegetation X <u>2</u> - Dominance Test is >50% X <u>3</u> - Prevalence Index is >3.0' 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Dichanthelium clandestinum</u>	5	N	FACW	
3. <u>Onoclea sensibilis</u>	1	N	FACW	
4. <u>Carex lurida</u>	30	Y	OBL	
5. <u>Pilea pumila</u>	8	N	FACW	
6. <u>Symphytichum novae-angliae</u>	3	N	FACW	
7. <u>Leersia oryzoides</u>	60	Y	OBL	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>30'</u> )	_____ 127 _____ = Total Cover			
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	

Remarks: (Include photo numbers here or on a separate sheet.)



SOIL

Sampling Point: Wetland 11M-002

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 10	10YR 4/2	85	5YR 4/6	15	C	PL	Silty loam Prominent Redox Concentrations
10 - 18	2.5Y 5/2	75	5YR 4/6	25	C	PL	Clay loam Prominent Redox Concentrations
-							
-							
-							
-							
-							
-							
-							
-							

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): No

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Remarks:

Hydric Soil Present? Yes ☒ No \_\_\_\_\_

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_

Saturation Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_

(include capillary fringe)

Wetland Hydrology Present? Yes ☒ No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:





North



South



East



West





Soil Profile



## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: AEP Hillsporo to Millbrook Park	City/County: Highland	Sampling Date: 09/18/2019
Applicant/Owner: AEP	State: OH	Sampling Point: Wetland HM-003
Investigator(s): MJA, SAH	Section, Township, Range: Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 2511	
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none):	Rolling
Slope (%): 10	Lat: 39.16048	Long: -83.64724102633333
Soil Map Unit Name: Hickory silt loam, 18 to 25 percent slopes, moderately eroded	NWI classification: N/A	Datum: WGS 84
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> significantly disturbed?	Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Are Vegetation <input type="checkbox"/> Soil <input checked="" type="checkbox"/> or Hydrology <input type="checkbox"/> naturally problematic?	(If needed, explain any answers in Remarks.)	
<b>SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.</b>		
Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		
Data point for W-MJA-091819-01, PSS hillside seep wetland. Soils are very dark--organic material likely masking redox concentrations. Very strong vegetation and hydrology indicators confirm wetland status		

**VEGETATION** – Use scientific names of plants.

Tree Stratum (Plot size: 30')				Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1.							Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)			
2.							Total Number of Dominant Species Across All Strata: 2 (B)			
3.							Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)			
4.										
5.										
Sapling/Shrub Stratum (Plot size: 15')				0	= Total Cover					
1.	Salix sericea			45	Y	OBL	Prevalence Index worksheet:			
2.							Total % Cover of:	Multiply by:		
3.							OBL species 143	x 1 =	143	
4.							FACW species 5	x 2 =	10	
5.							FAC species 0	x 3 =	0	
							FACU species 0	x 4 =	0	
							UPL species 0	x 5 =	0	
Herb Stratum (Plot size: 5')				45	= Total Cover			Column Totals:	148 (A)	153 (B)
1.	Carex lurida			65	Y	OBL	Prevalence Index = B/A = 1.03			
2.	Caltha palustris			20	N	OBL				
3.	Eupatorium perfoliatum			10	N	OBL				
4.	Schoenoplectus tabernaemontani			3	N	OBL				
5.	Symphoricarpon novae-angliae			5	N	FACW				
6.										
7.										
8.										
9.										
10.										
Woody Vine Stratum (Plot size: 30')				103	= Total Cover					
1.										
2.										
				0	= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)							Hydrophytic Vegetation Present? Yes X No			



Sampling Point: Wetland HM-003

Sampling Point: Wetland HM-003

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)						
Depth (inches)	Matrix Color (moist)	%	Redox Features		Texture	Remarks
			Color (moist)	%		
0 - 6	10YR 2/1	100	/		Silt	Some grit
6 - 18	10YR 3/1	100	/		Silt	Some grit
-						
-						
-						
-						
-						
-						
-						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						
<sup>2</sup> Location: PL=Pore Lining, M=Matrix.						
<b>Hydric Soil Indicators:</b>						
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sandy Gleyed Matrix (S4)	<input type="checkbox"/>	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sandy Redox (S5)	<input type="checkbox"/>	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stripped Matrix (S6)	<input type="checkbox"/>	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loamy Mucky Mineral (F1)	<input type="checkbox"/>	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input checked="" type="checkbox"/>	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Depleted Matrix (F3)		<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<b>Restrictive Layer (if observed):</b> No						
Type: _____ Depth (inches): _____					Hydric Soil Present?    Yes <input checked="" type="checkbox"/> No _____	
Remarks: Very dark soils. Organic material likely masking redox concentrations.						

---

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	Water-Stained Leaves (B9)	<input type="checkbox"/>
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/>	Other (Explain in Remarks)	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="10.00"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0.00"/>
Saturation Present?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0.00"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
Hillside seep.			





North



South



East



West





Soil Profile



# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: AEP Hillsboro to Millbrook Park	City/County: Highland	Sampling Date: 09/18/2019
Applicant/Owner: AEP	State: OH	Sampling Point: Wetland HM-004
Investigator(s): MJA, SAH	Section, Township, Range: Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 2511	
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): Rolling	
Slope (%): 3 Lat: 39.15955	Long: -83.64549560350001	Datum: WGS 84
Soil Map Unit Name: Negley loam, 6 to 12 percent slopes	NWI classification: N/A	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation <input type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Are Vegetation <input type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)		

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Remarks:

Data point for W-MJA-091819-02. A PEM hillside seep wetland. The soils were very dark--organic material may be masking redox features.

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
1. _____	_____	_____	_____	2 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: 2 (B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
Sapling/Shrub Stratum (Plot size: 15')	0 = Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 139 x 1 = 139 FACW species 0 x 2 = 0 FAC species 20 x 3 = 60 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 159 (A) 199 (B) Prevalence Index = B/A = 1.25
Herb Stratum (Plot size: 5')	0 = Total Cover			Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is >3.0' 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. Pedicularis lanceolata	15	N	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. Solidago patula	5	N	OBL	
3. Eupatorium perfoliatum	20	N	OBL	
4. Scirpus atrovirens	40	Y	OBL	
5. Carex lurida	55	Y	OBL	
6. Leersia oryzoides	15	N	OBL	
7. Minulus ringens	3	N	OBL	
8. Schoenoplectus tabernaemontani	1	N	OBL	
9. Typha latifolia	3	N	OBL	
10. Juncus tenuis	20	N	FAC	
Woody Vine Stratum (Plot size: 30')	159 = Total Cover			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____			
2. _____	0 = Total Cover			

Remarks: (Include photo numbers here or on a separate sheet.)



## SOIL

Sampling Point: Wetland 1HM-004

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 18	10YR 2/1	100				Silt	Organic, some grit
-							
-							
-							
-							
-							
-							
-							
-							

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input checked="" type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): No

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes X No \_\_\_\_\_

## Remarks:

Very dark. Organic material may be masking redox features.

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

## Field Observations:

Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): _____	
Water Table Present?	Yes <u>X</u> No _____	Depth (inches): <u>8.00</u>	
Saturation Present? (include capillary fringe)	Yes <u>X</u> No _____	Depth (inches): <u>0.00</u>	Wetland Hydrology Present? Yes <u>X</u> No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

Hillside seep.





North



South



East



West





Soil Profile



# WETLAND DETERMINATION DATA FORM – Midwest Region

**Project/Site:** AEP Hillsboro to Millbrook Park **City/County:** Highland **Sampling Date:** 09/19/2019  
**Applicant/Owner:** AEP **State:** OH **Sampling Point:** Wetland HM-005  
**Investigator(s):** MJA, SAH **Section, Township, Range:** Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 2512  
**Landform (hillslope, terrace, etc.):** Foothlope **Local relief (concave, convex, none):** Concave  
**Slope (%):** 2 **Lat:** 39.15649625 **Long:** -83.6384312608333 **Datum:** WGS 84  
**Soil Map Unit Name:** Negley loam, 18 to 25 percent slopes **NWI classification:** N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Remarks: PEM with water coming from stream and hillside seep

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
1. _____	_____	_____	_____	3 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: 3 (B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: 15')	0 = Total Cover	_____	_____	
1. Salix sericea	8	Y	OBL	Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Herb Stratum (Plot size: 5')	8 = Total Cover	_____	_____	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 118 x 1 = 118 FACW species 21 x 2 = 42 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 139 (A) 160 (B)
1. Leersia oryzoides	55	Y	OBL	
2. Carex lurida	30	Y	OBL	
3. Carex tribuloides	10	N	OBL	
4. Scirpus atrovirens	20	N	OBL	
5. Impatiens capensis	15	N	FACW	Prevalence Index = B/A = 1.15 <b>Hydrophytic Vegetation Indicators:</b> X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≥3.0' 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. Carex vulpinoidea	5	N	FACW	
7. Eupatorium perfoliatum	3	N	OBL	
8. Onoclea sensibilis	1	N	FACW	
9. _____	_____	_____	_____	
10. _____	139 = Total Cover	_____	_____	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 30')	_____	_____	_____	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
_____	0 = Total Cover	_____	_____	

Remarks: (Include photo numbers here or on a separate sheet.)



## SOIL

Sampling Point: Wetland 11M-005

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 4	10YR 3/2	95	5YR 4/4	5	C	M	Silty loam Prominent Redox Concentrations
4 - 18	10YR 5/2	60	10YR 5/6	40	C	M	Clay loam Prominent Redox Concentrations
-							
-							
-							
-							
-							
-							
-							
-							
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.							
<b>Hydric Soil Indicators:</b>						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators:</b>							
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.							
<b>Restrictive Layer (if observed):</b> No							
Type: _____							
Depth (inches): _____							
Remarks:						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

## HYDROLOGY

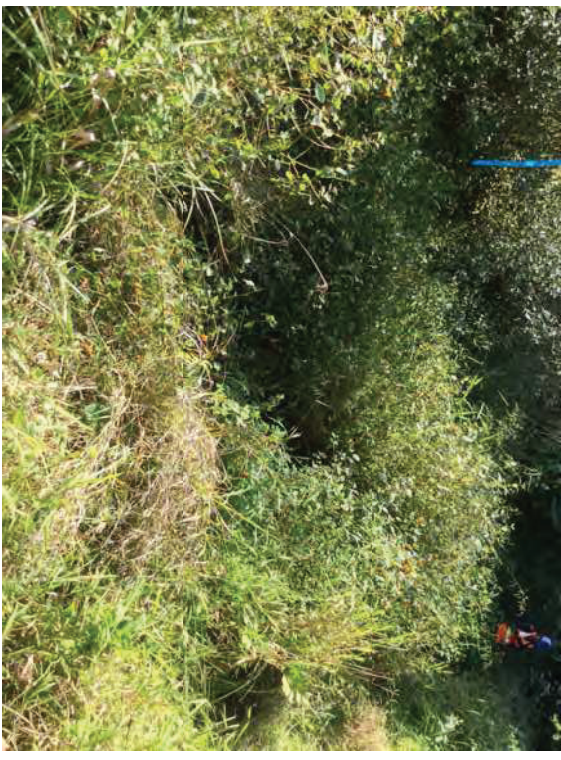
Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/>
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/> Gauge or Well Data (D9)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/>	<input type="checkbox"/> Other (Explain in Remarks)	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>12.00</u>	
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0.00</u>	
Saturation Present? (include capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0.00</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			





North



South



East



West





Soil Profile



# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: AEP Hillsboro to Millbrook Park City/County: Highland Sampling Date: 09/19/2019  
 Applicant/Owner: AEP State: OH Sampling Point: Wetland HM-006  
 Investigator(s): MJA, SAH Section, Township, Range: Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 4217  
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat: 39.1513492188 Long: -83.62633588766666 Datum: WGS 84  
 Soil Map Unit Name: Otwell silt loam, 25 to 35 percent slopes NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes      No X  
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u>    </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>X</u> No <u>    </u>		
Wetland Hydrology Present?	Yes <u>X</u> No <u>    </u>		

Remarks:     

Data point for W-MJA-091919-02. A PEM wetland in hayfield.

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>1</u> (A)
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>0</u>	<u>    </u>	<u>    </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
Sapling/Shrub Stratum (Plot size: <u>15'</u> )	<u>0</u>	= Total Cover		
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	Prevalence Index worksheet: Total % Cover of: <u>    </u> Multiply by: <u>    </u> OBL species <u>101</u> x 1 = <u>101</u> FACW species <u>25</u> x 2 = <u>50</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>126</u> (A) <u>151</u> (B) Prevalence Index = B/A = <u>1.20</u>
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
Herb Stratum (Plot size: <u>5'</u> )	<u>0</u>	= Total Cover		
1. <u>Leersia oryzoides</u>	<u>90</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≥3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <u>    </u>
2. <u>Symphoricarum novae-angliae</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>Impatiens capensis</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
4. <u>Eupatorium perfoliatum</u>	<u>3</u>	<u>N</u>	<u>OBL</u>	
5. <u>Persicaria sagittata</u>	<u>8</u>	<u>N</u>	<u>OBL</u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
9. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
10. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
Woody Vine Stratum (Plot size: <u>30'</u> )	<u>126</u>	= Total Cover		
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u>
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
Remarks: (Include photo numbers here or on a separate sheet.)				



## SOIL

Sampling Point: Wetland 11M-006**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 6	10YR 3/2	90	5YR 4/6	10	C	PL	Silty loam Prominent Redox Concentrations
0 - 18	10YR 4/1	85	10YR 5/6	15	C	PL	Clay loam Prominent Redox Concentrations
-							
-							
-							
-							
-							
-							
-							
-							

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):** No

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No \_\_\_\_\_

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required: check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Secondary Indicators (minimum of two required)

<b>Field Observations:</b>	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____
Saturation Present? (include capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 6.00
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks:





North



South



East



West





Soil Profile



# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: AEP Hillsboro to Millbrook Park City/County: \_\_\_\_\_ Highland Sampling Date: 09/19/2019  
 Applicant/Owner: AEP State: OH Wetland H/M-007  
 Investigator(s): MJA, SAH Section, Township, Range: \_\_\_\_\_ Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 4217  
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat: 39.1506720312 Long: \_\_\_\_\_ -83.62460673666668 Datum: \_\_\_\_\_ WGS 84  
 Soil Map Unit Name: Otwell silt loam, 25 to 35 percent slopes NWI classification: \_\_\_\_\_ N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No X  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____		
Wetland Hydrology Present?	Yes <u>X</u> No _____		

Remarks: \_\_\_\_\_

Data point for W-MJA-091919-03. PEM wetland in hayfield.

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
1. _____	_____	_____	_____	_____ 1 _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ 1 _____ (B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ 100.00 _____ (A/B)
Sapling/Shrub Stratum (Plot size: <u>15'</u> )	_____ 0 _____ = Total Cover	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
1. _____	_____	_____	_____	OBL species _____ 105 x 1 = _____ 105
2. _____	_____	_____	_____	FACW species _____ 10 x 2 = _____ 20
3. _____	_____	_____	_____	FAC species _____ 0 x 3 = _____ 0
4. _____	_____	_____	_____	FACU species _____ 0 x 4 = _____ 0
5. _____	_____	_____	_____	UPL species _____ 0 x 5 = _____ 0
Herb Stratum (Plot size: <u>5'</u> )	_____ 0 _____ = Total Cover	_____	_____	Column Totals: _____ 115 (A) _____ 125 (B)
1. <u>Leersia oryzoides</u>	95	Y	OBL	Prevalence Index = B/A = _____ 1.09
2. <u>Persicaria sagittata</u>	10	N	OBL	Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. <u>Impatiens capensis</u>	10	N	FACW	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>30'</u> )	_____ 115 _____ = Total Cover	_____	_____	
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
Remarks: (Include photo numbers here or on a separate sheet.)				



## SOIL

Sampling Point: Wetland 1HA-007**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 4	10YR 4/2	85	5YR 4/6	15	C	PL	Loam Prominent Redox Concentrations
4 - 10	10YR 4/2	70	5YR 4/6	30	C	PL	Loam Prominent Redox Concentrations
10 - 18	10YR 4/1	70	5YR 4/6	30	C	PL	Clay loam Prominent Redox Concentrations
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:****Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):** No

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required: check all that apply)

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_

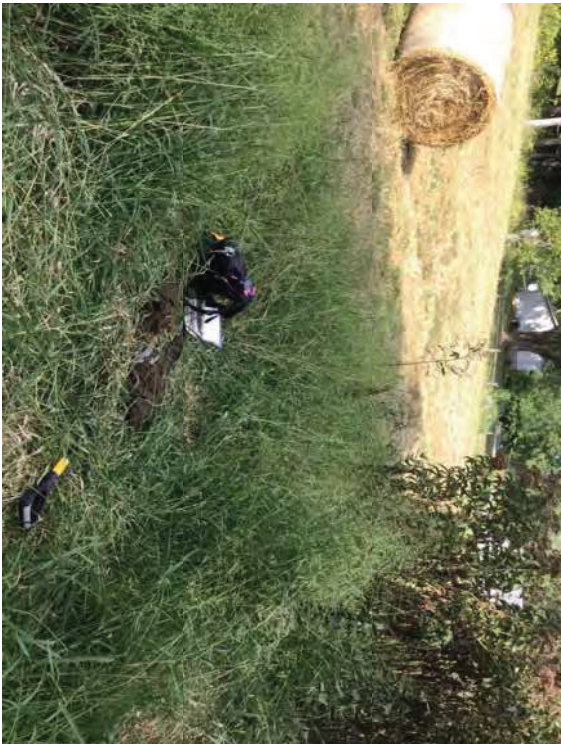
(include capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:





North



South



East



West





Soil Profile



# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: AEP Hillsboro to Millbrook Park	City/County: _____	Highland	Sampling Date: 09/20/2019
Applicant/Owner: AEP	State: OH	Sampling Point: Wetland HM-008	
Investigator(s): MJA, SAH	Section, Township, Range: _____	Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 4217	
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): Concave		
Slope (%): 1 Lat: 39.1501270432	Long: _____	-83.6234244879	Datum: WGS 84
Soil Map Unit Name: Otwell silt loam, 12 to 18 percent slopes, moderately eroded	NWI classification: N/A		

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Remarks: Roadsides PEM under T-line. Ephemeral stream flows into wetland from east, loses definition (i.e., "sheds"), and regains definition at outflow (to the west).

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
1. _____	_____	_____	_____	2 (A)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: 15')	0 = Total Cover			
1. Salix nigra	5	Y	OBL	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Herb Stratum (Plot size: 5')	5 = Total Cover			
1. Typha latifolia	20	N	OBL	
2. Leersia oryzoides	60	Y	OBL	
3. Eupatorium perfoliatum	10	N	OBL	
4. Symphyotrichum novae-angliae	8	N	FACW	
5. Impatiens capensis	5	N	FACW	
6. Agrimonia parviflora	1	N	FACW	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: 30')	107 = Total Cover			
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Remarks: (Include photo numbers here or on a separate sheet.)	0 = Total Cover			

<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species 95 x 1 = 95 FACW species 14 x 2 = 28 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 112 (A) 123 (B) Prevalence Index = B/A = 1.10	<b>Hydrophytic Vegetation Indicators:</b> X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≥3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
--	--

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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## SOIL

Sampling Point: Wetland 11M-008**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 8	10YR 4/2	85	2.5YR 3/6	15	C	PL	Silt loam Prominent redox concentrations
8 - 18	2.5Y 3/1	80	2.5YR 3/6	20	C	PL	Clay loam Prominent redox concentrations
-							
-							
-							
-							
-							
-							
-							
-							

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):** No

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes   X   No \_\_\_\_\_

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required: check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Secondary Indicators (minimum of two required)

<b>Field Observations:</b>	
Surface Water Present?	Yes _____ No <u>  X  </u> Depth (inches): _____
Water Table Present?	Yes _____ No <u>  X  </u> Depth (inches): _____
Saturation Present? (include capillary fringe)	Yes <u>  X  </u> No _____ Depth (inches): <u>  3.00  </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____

Remarks:





North



South



East



West





Soil Profile



# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: AEP Hillsboro to Millbrook Park City/County: Highland Sampling Date: 09/20/2019  
 Applicant/Owner: AEP State: Sampling Point: Wetland H1M-009  
 Investigator(s): MJA, SAH Section, Township, Range: Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 4217  
 Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): Rolling  
 Slope (%): 3 Lat: 39.1478033334 Long: -83.61759306716668 Datum: WGS 84  
 Soil Map Unit Name: Otwell silt loam, 18 to 25 percent slopes, moderately eroded NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Remarks:  
 Wetland point for W-MJA-092019-02, a PEM/Hillside Seep.

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
1. _____	_____	_____	_____	_____ 2 _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ 2 _____ (B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: 15')	0	= Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Herb Stratum (Plot size: 5')	0	= Total Cover		OBL species 141 x 1 = 141
1. Typha latifolia	30	N	OBL	FACW species 20 x 2 = 40
2. Carex lurida	50	Y	OBL	FAC species 0 x 3 = 0
3. Juncus effusus	40	Y	OBL	FACU species 0 x 4 = 0
4. Scirpus atrovirens	15	N	OBL	UPL species 0 x 5 = 0
5. Eupatorium perfoliatum	3	N	OBL	Column Totals: 161 (A) 181 (B)
6. Impatiens capensis	20	N	FACW	Prevalence Index = B/A = 1.12
7. Minulus ringens	3	N	OBL	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	161	= Total Cover		Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30')	_____	= Total Cover		
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Remarks: (Include photo numbers here or on a separate sheet.)	0	= Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



## SOIL

Sampling Point: Wetland 11M-009**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			Loc <sup>2</sup>
0 - 3	10YR 4/2	90	10YR 4/6	10	C	M	Silt	Prominent Redox Concentrations
3 - 16	2.5Y 3/1	80	5YR 4/6	20	C	PL	Clay Loam	Prominent Redox Concentrations
16 - 18	2.5Y 4/3	90	10YR 4/6	10	C	PL	Sandy Loam	Prominent Redox Concentrations
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):** No

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required: check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Secondary Indicators (minimum of two required)

Field Observations:	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____
Saturation Present? (include capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____

**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:





North



South



East



West





Soil Profile



# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: AEP Hillsboro to Millbrook Park City/County: \_\_\_\_\_ Highland Sampling Date: 09/20/2019  
 Applicant/Owner: AEP State: OH Sampling Point: Wetland HM-010  
 Investigator(s): MJA, SAH Section, Township, Range: Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 4217  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat: 39.14725 Long: \_\_\_\_\_ -83.61654113649999 Datum: \_\_\_\_\_ WGS 84  
 Soil Map Unit Name: Hickory clay loam, 12 to 18 percent slopes, severely eroded NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____		
Wetland Hydrology Present?	Yes <u>X</u> No _____		

Remarks: \_\_\_\_\_

PEM wetland with scattered pockets of standing water and relatively high species diversity. Drains into pond (outside of survey corridor).

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
1. _____	_____	_____	_____	_____ 2 _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ 2 _____ (B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ 100.00 _____ (A/B)
Sapling/Shrub Stratum (Plot size: <u>15'</u> )	_____ 0 _____ = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____		
1. _____	_____	_____	_____	OBL species _____ 113 _____ x 1 = _____ 113
2. _____	_____	_____	_____	FACW species _____ 36 _____ x 2 = _____ 72
3. _____	_____	_____	_____	FAC species _____ 0 _____ x 3 = _____ 0
4. _____	_____	_____	_____	FACU species _____ 0 _____ x 4 = _____ 0
5. _____	_____	_____	_____	UPL species _____ 0 _____ x 5 = _____ 0
Herb Stratum (Plot size: <u>5'</u> )	_____ 0 _____ = Total Cover	Column Totals: _____ 149 (A) _____ 185 (B)	Prevalence Index = B/A = _____ 1.24	
1. Juncus effusus	55	Y	OBL	Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is >3.0 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. Impatiens capensis	18	N	FACW	
3. Carex lurida	25	Y	OBL	
4. Leersia oryzoides	15	N	OBL	
5. Minulus ringens	5	N	OBL	
6. Typha latifolia	10	N	OBL	
7. Onoclea sensibilis	10	N	FACW	
8. Bidens frondosa	3	N	FACW	
9. Eupatorium perfoliatum	3	N	OBL	
10. Dichanthelium clandestinum	5	N	FACW	
Woody Vine Stratum (Plot size: <u>30'</u> )	_____ 149 _____ = Total Cover			
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
Remarks: (Include photo numbers here or on a separate sheet.)				



## SOIL

Sampling Point: Wetland HMA-010

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 3	10YR 4/2	90	10YR 4/6	10	C	PL	Silt Loam Prominent Redox Concentrations
3 - 10	10YR 4/1	85	5YR 4/6	15	C	PL	Silt Loam Prominent Redox Concentrations
10 - 18	2.5Y 4/3	80	10YR 4/6	20	C	M	Sandy Loam Prominent Redox Concentrations
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): No

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Remarks: \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)

- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)

## Field Observations:

- Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_
- Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_
- Saturation Present? Yes ☒ No ☐ Depth (inches): 10

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Scattered pockets of standing water in wetland.





North



South



East



West





Soil Profile



# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: AEP Hillsboro to Millbrook Park	City/County: Highland	Sampling Date: 09/20/2019
Applicant/Owner: AEP	State: OH	Sampling Point: Wetland HM-011
Investigator(s): MJA, SAH	Section, Township, Range: Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 4217	
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): Concave	
Slope (%): 3 Lat: 39.14675	Long: -83.61508030499999	WGS 84
Soil Map Unit Name: Hickory clay loam, 12 to 18 percent slopes, severely eroded	NWI classification: N/A	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)		

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks:

PEM wetland with scattered pockets of standing water and relatively high species diversity. Drains into ephemeral stream.

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
1. _____	_____	_____	_____	3 (A)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: 15')	0 = Total Cover			
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Herb Stratum (Plot size: 5')	0 = Total Cover			
1. Carex lurida	20	Y	OBL	
2. Typha latifolia	15	N	OBL	
3. Eupatorium perfoliatum	18	N	OBL	
4. Impatiens capensis	10	N	FACW	
5. Acorus americanus	25	Y	OBL	
6. Scirpus atrovirens	35	Y	OBL	
7. Minulus ringens	8	N	OBL	
8. Persicaria sagittata	5	N	OBL	
9. Schoenoplectus tabernaemontani	1	N	OBL	
10. _____	137 = Total Cover			
Woody Vine Stratum (Plot size: 30')	_____			
1. _____	_____			
2. _____	0 = Total Cover			

Remarks: (Include photo numbers here or on a separate sheet.)

<b>Hydrophytic Vegetation Present?</b>	<b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>
--	---

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Indicators:**

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☒ 3 - Prevalence Index is  $\geq 3.0^1$

☐ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Prevalence Index = B/A = 1.07

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species 127	x 1 = 127
FACW species 10	x 2 = 20
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 137 (A)	147 (B)



## SOIL

Sampling Point: Wetland 1M-O11**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 6	10YR 4/2	90	10YR 4/6	10	C	PL	Silt Loam Prominent Redox Concentrations
6 - 18	10YR 4/2	85	10YR 4/6	15	C	PL	Sandy Loam Prominent Redox Concentrations
-							
-							
-							
-							
-							
-							
-							
-							

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):** No

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No \_\_\_\_\_

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required: check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Secondary Indicators (minimum of two required)

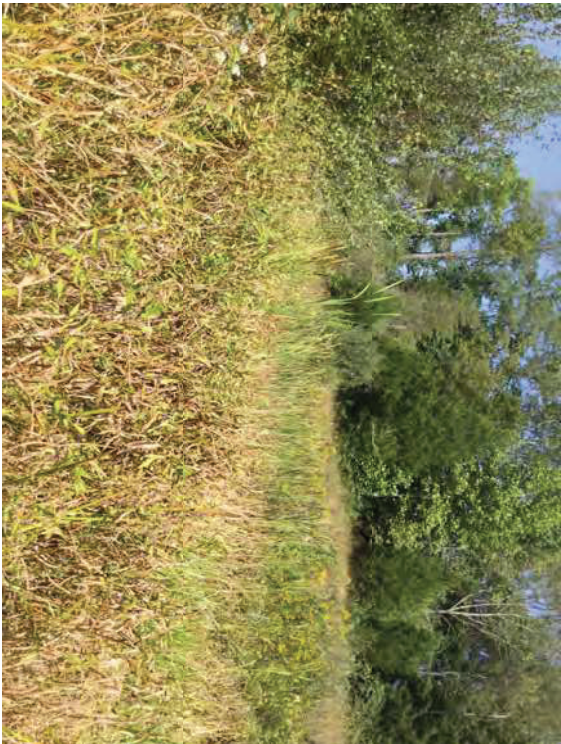
<b>Field Observations:</b>	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____
Saturation Present? (include capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u>

Wetland Hydrology Present? Yes ☒ No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:





North



South



East



West





Soil Profile



# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: AEP Hillsboro to Millbrook Park City/County: \_\_\_\_\_ Highland \_\_\_\_\_ Sampling Date: 09/23/2019  
 Applicant/Owner: AEP State: OH Sampling Point: Wetland H1M-012  
 Investigator(s): SAH, RW Section, Township, Range: \_\_\_\_\_ Ohio Surveys VIRGINIA MILITARY DISTRICT OH93Highland Lot 2769  
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat: 39.12807 Long: \_\_\_\_\_ -83.57032 Datum: \_\_\_\_\_ WGS 84  
 Soil Map Unit Name: Opequon stony silt loam, 18 to 35 percent slopes, moderately eroded NWI classification: R4SBC  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil ✓, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil ✓, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____		
Wetland Hydrology Present?	Yes <u>X</u> No _____		

Remarks: Palustrine emergent wetland, located in active cow pasture. Soils compacted and rutted.

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
1. _____	_____	_____	_____	_____ 1 _____ (A)
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
Sapling/Shrub Stratum (Plot size: <u>15'</u> )	0 = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____		
1. _____	_____	_____	_____	OBL species _____ 100 x 1 = _____ 100
2. _____	_____	_____	_____	FACW species _____ 0 x 2 = _____ 0
3. _____	_____	_____	_____	FAC species _____ 0 x 3 = _____ 0
4. _____	_____	_____	_____	FACU species _____ 0 x 4 = _____ 0
5. _____	_____	_____	_____	UPL species _____ 0 x 5 = _____ 0
Herb Stratum (Plot size: <u>5'</u> )	0 = Total Cover	Column Totals: _____ 100 (A) _____ 90 (B)	Prevalence Index = B/A = _____ 1	
1. <u>Persicaria hydropiper</u>	5	N	OBL	<b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation¹ (Explain)
2. <u>Juncus effusus</u>	85	Y	OBL	
3. <u>Carex sp.</u>	10	N	OBL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>30'</u> )	100 = Total Cover			
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. _____	_____	_____	_____	
Remarks: (Include photo numbers here or on a separate sheet.)				
Carex sp. given OBL indicator, as plant exhibits characteristics of common wetland plant but could not identify species as inflorescence was missing.				



Sampling Point: Wetland HM-012

Welland HM-012

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix Color (moist)	%	Redox Features		Texture	Remarks	
			Color (moist)	%			Type <sup>1</sup>
0 - 4	10YR 3/2	90	10YR 3/6	10	C	M	Silly clay loam
4 - 12	10YR 4/2	90	10YR 3/6	10	C	C, PL	Silly clay loam
-							
-							
-							
-							
-							
-							
-							
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.							
<sup>2</sup> Location: PL=Pore Lining, M=Matrix.							
<b>Hydric Soil Indicators:</b>							
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Restrictive Layer (if observed):</b> No							
Type: _____							
Depth (inches): _____							
Remarks: _____							
<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required, check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/>	<input type="checkbox"/> Other (Explain in Remarks)	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	
(includes capillary fringe)			<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Microtopographic relief			





North  
Photo taken 01-15-2020



South  
Photo taken 01-15-2020



East  
Photo taken 01-15-2020



West  
Photo taken 01-15-2020







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

**Commission of Ohio Docketing Information System on**

**5/11/2021 5:23:39 PM**

**in**

**Case No(s). 21-0268-EL-BLN**

Summary: Notice Notice Hillsboro-Millbrook 138 kV Line Rebuild Project Part 4 electronically filed by Tanner Wolfram on behalf of AEP Ohio Transmission Company, Inc.