



BOUNDLESS ENERGY™

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May 29, 2019

Chairman Sam Randazzo
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

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Ohio Power Siting Board
Docketing Division
180 East Broad Street
Columbus, Ohio 43215

**Re: In the Matter of the Application of AEP Ohio Transmission Company, Inc. for Amendment to the Certificate of Environmental Compatibility and Public Need for the Barnesville-Summerfield 138 kV Transmission Line Rebuild Project
Case No. 19-1068-EL-BTA**

Dear Chairman Randazzo,

Attached please find a copy of the Application of AEP Ohio Transmission Company, Inc. for Amendment to the Certificate of Environmental Compatibility and Public Need ("Application") for the above-referenced project. This filing is made pursuant to O.A.C. 4906-5-01, *et seq.* and 4906-2-01, *et seq.*

Filing of this Application is effected electronically pursuant to O.A.C. 4906-2-02(A) and (D). Five printed copies and ten additional electronic copies (CDs) of this filing will also be submitted to the Staff of the Ohio Power Siting Board for its use.

The following information is included pursuant to O.A.C. 4906-2-04(A)(3):

- (a) Applicant:
AEP Ohio Transmission Company, Inc.
c/o American Electric Power
Energy Transmission
700 Morrison Road
Gahanna, Ohio 43220

- (b) Facilities to be Certified:
Barnesville-Summerfield 138 kV Transmission Line Rebuild Project
- (c) Applicant's Authorized Representative with respect to this Application:
David Sanchez
Project Manager
700 Morrison Road
Gahanna, Ohio 43220

If you have any questions, please do not hesitate to contact me.

/s/ Christen M. Blend
Christen M. Blend (0086881)

Counsel for AEP Ohio Transmission Company, Inc.

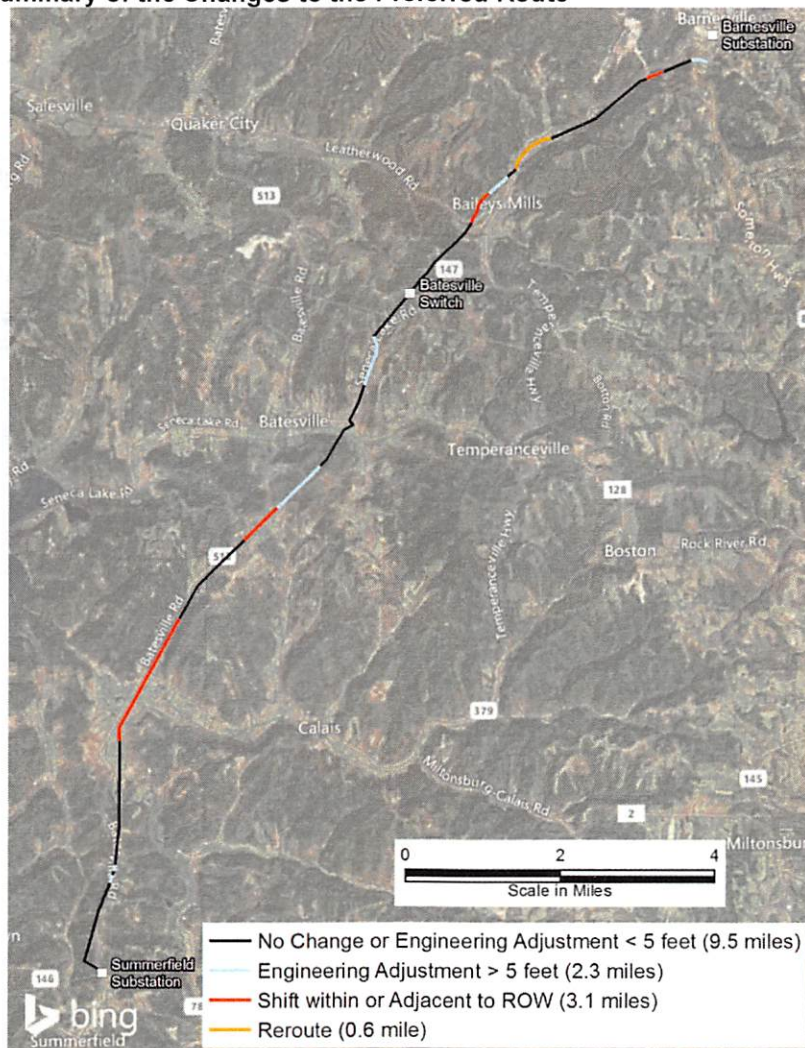
cc: Executive Director and Counsel, c/o Jon Pawley, OPSB Staff

AMENDMENT CHANGE SUMMARY

AEP Ohio Transmission Company, Inc. ("AEP Ohio Transco") submitted a Certificate Application to the Ohio Power Siting Board ("OPSB") on July 1, 2017, for the Barnesville-Summerfield 138 kV Transmission Line Project ("Project") in Case No. 16-0438-EL-BTX. On February 2, 2017, the OPSB issued its Certificate of Environmental Compatibility and Public Need (certificate) for the Preferred Route.

Detailed engineering and property owner negotiations resulted in thirteen areas of change to the OPSB-Approved Route. These changes comprise three categories: (1) seven engineering adjustments; (2) five shifts to rebuild on existing centerline rather than offset, or to the other side of the existing centerline within the existing right-of-way (ROW); and (3) a reroute that deviates from the existing or initially proposed ROW.

Exhibit 1: Summary of the Changes to the Preferred Route



Engineering Adjustments

Seven engineering adjustments totaling 2.3 miles were necessary along the OPSB-approved route. These adjustments are the result of detailed structure placement and engineering through review and modeling of terrain, surveyed property lines and road ROW, and structure and conductor clearances. Proposed structure locations along the sections considered "Engineering Adjustments" are between zero and 75 feet from the OPSB-approved centerline. These engineering adjustments are described below from northeast to southwest.

Exhibit 2: Engineering Adjustment 1

Engineering Adjustment 1 occurs between Structures 11 and 15. The original centerline conflicted with a natural gas pipeline ROW. The newly proposed alignment shifts the OPSB-approved alignment further south at Structure 11 with a maximum adjustment of approximately 75 feet from the OPSB-approved centerline. The remainder of the newly proposed alignment from approximately Structure 12 through Structure 15 shifts the OPSB-approved alignment north. This shift pushes the newly proposed alignment closer to the residences along Sycamore Street; however, no buildings are mapped within the 100-foot ROW. No additional environmental (including tree clearing) or landowner impacts are expected due to Engineering Adjustment 1.

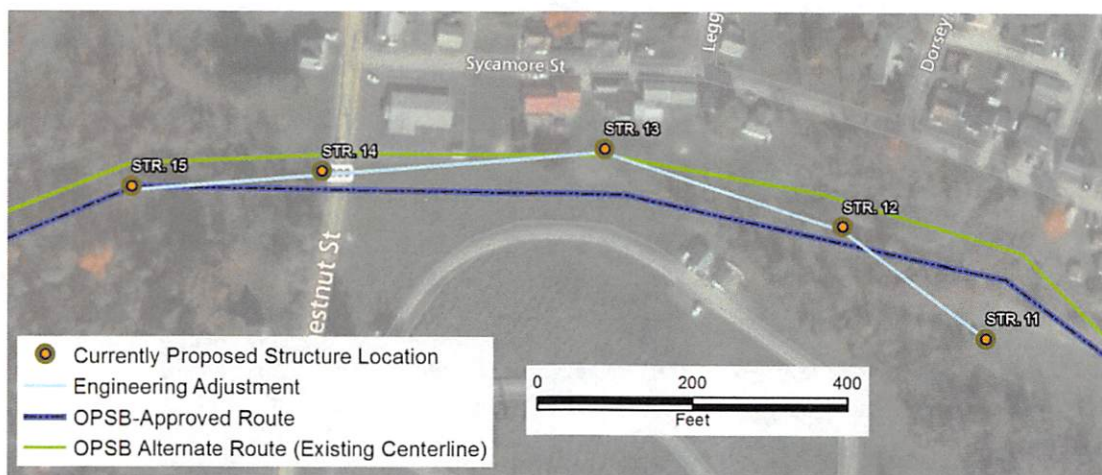


Exhibit 3: Engineering Adjustment 2

Engineering Adjustment 2 occurs between Structures 59 and 62. Pole locations were adjusted slightly based on detailed survey information and to correspond with more significant changes to the north and south. The maximum adjustment from the OPSB-approved centerline is 19 feet at Structure 62. The amended route results in approximately 4.1 acres of tree clearing within the proposed 100-foot ROW. This is slightly more than the 4.0 acres of tree clearing required for the OPSB-approved route. No additional environmental or landowner impacts are expected due to Engineering Adjustment 2.

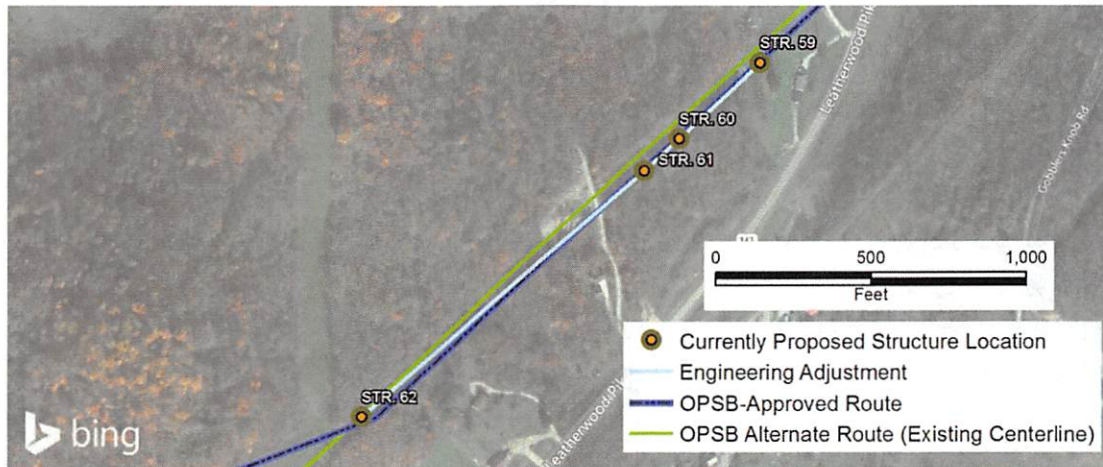


Exhibit 4: Engineering Adjustment 3

Engineering Adjustment 3 occurs between Structures 93 and 104. The centerline was adjusted to improve the clearance to the nearby distribution line and due to the underground utilities within the area. The maximum adjustment from the OPSB-approved centerline is 38 feet at Structure 103. This adjustment has been constructed. No additional environmental (including tree clearing) or landowner impacts resulted due to Engineering Adjustment 3.

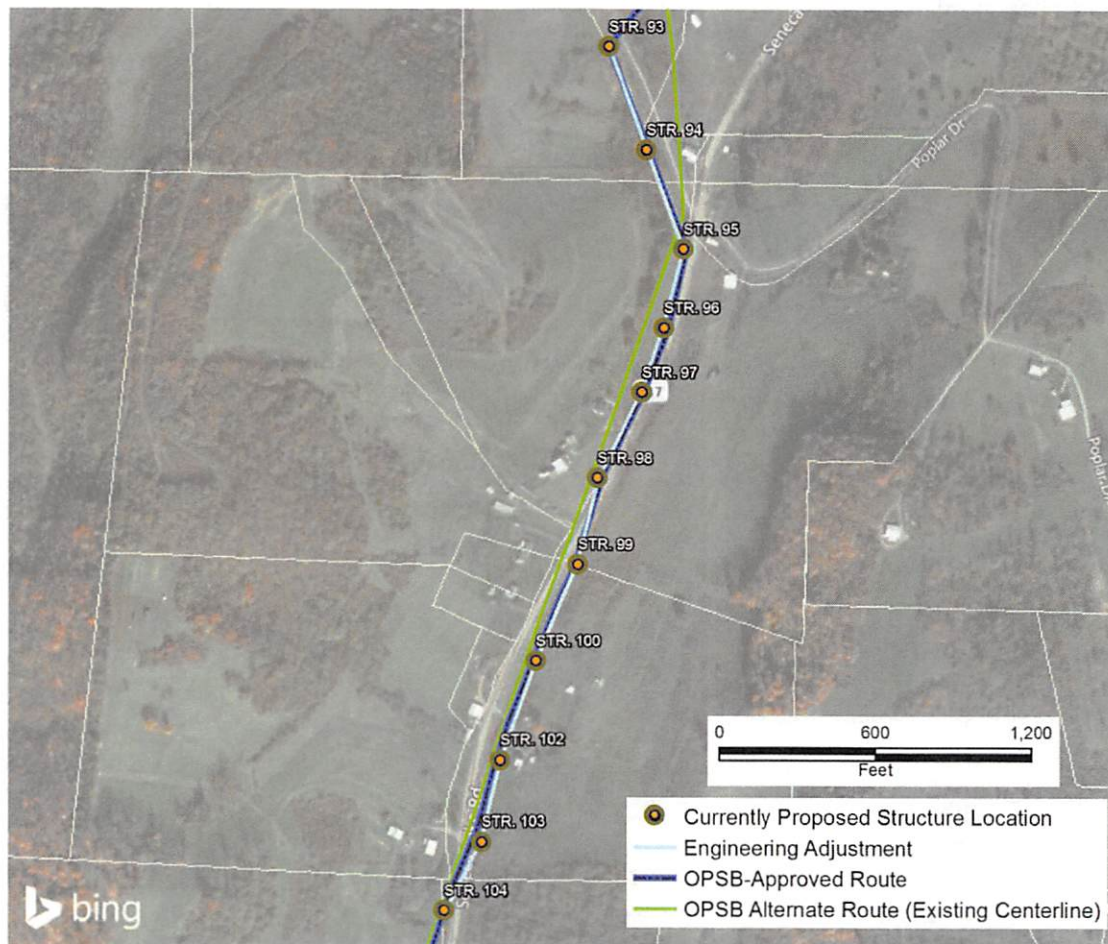


Exhibit 5: Engineering Adjustment 4

Engineering Adjustment 4 occurs between Structures 126 and 132. These pole locations shifted between one and 11 feet as a result of detailed survey information and minor engineering adjustments. This change reduces tree clearing from approximately 5.5 acres to 4.8 acres. This adjustment has been constructed. No additional environmental (including tree clearing) or landowner impacts resulted due to Engineering Adjustment 4.

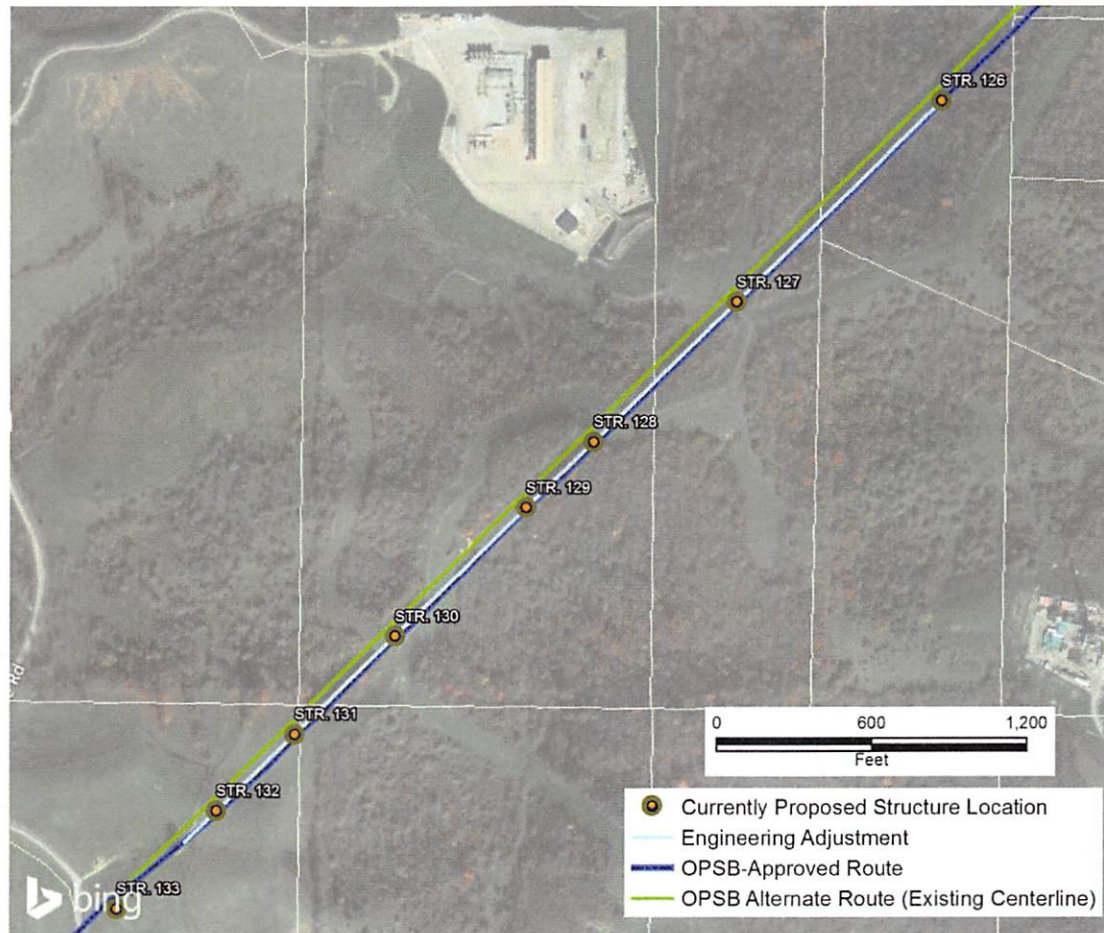


Exhibit 6: Engineering Adjustment 5

Engineering Adjustment 5 occurs between Structures 215 and 217. The centerline was shifted to avoid an existing well head near structure 216. The well head was discovered within this area after the time of application submittal. Structure 216 was adjusted eight feet from the OPSB-approved centerline. This adjustment has been constructed. No additional environmental (including tree clearing) or landowner impacts resulted due to Engineering Adjustment 5.

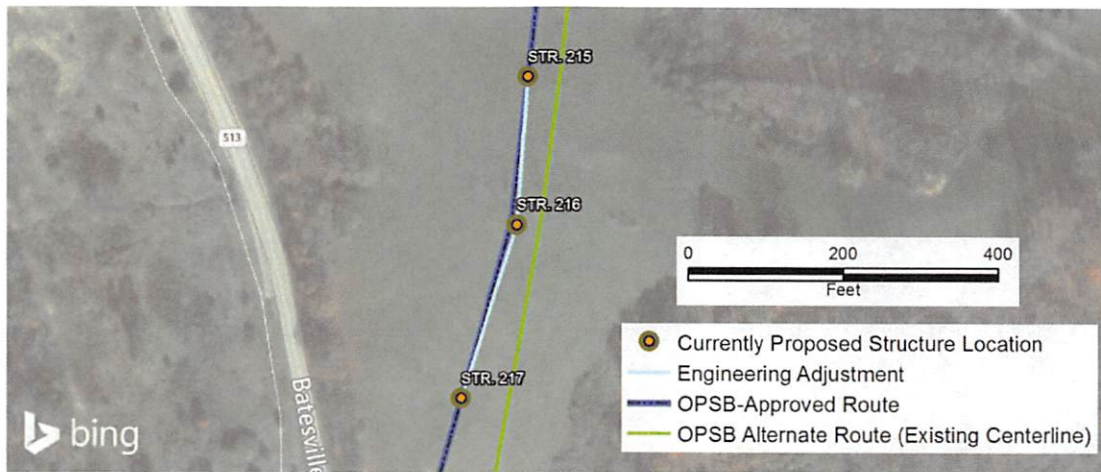


Exhibit 7: Engineering Adjustment 6

Engineering Adjustment 6 occurs between Structures 218 and 220. The centerline was adjusted to avoid a natural gas line near structure 219. The maximum adjustment from the OPSB-approved centerline is 10 feet at Structure 219. This adjustment has been constructed. No additional environmental (including tree clearing) or landowner impacts resulted due to Engineering Adjustment 6.

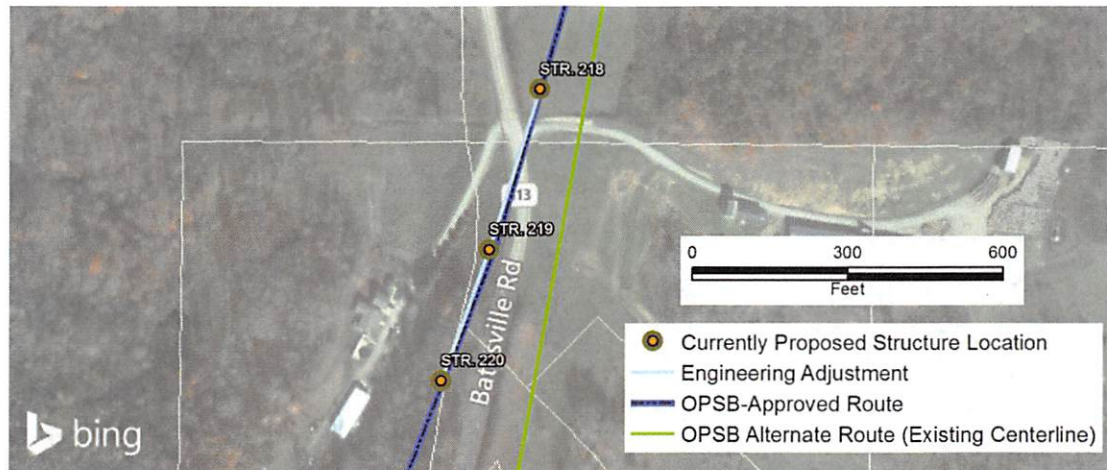
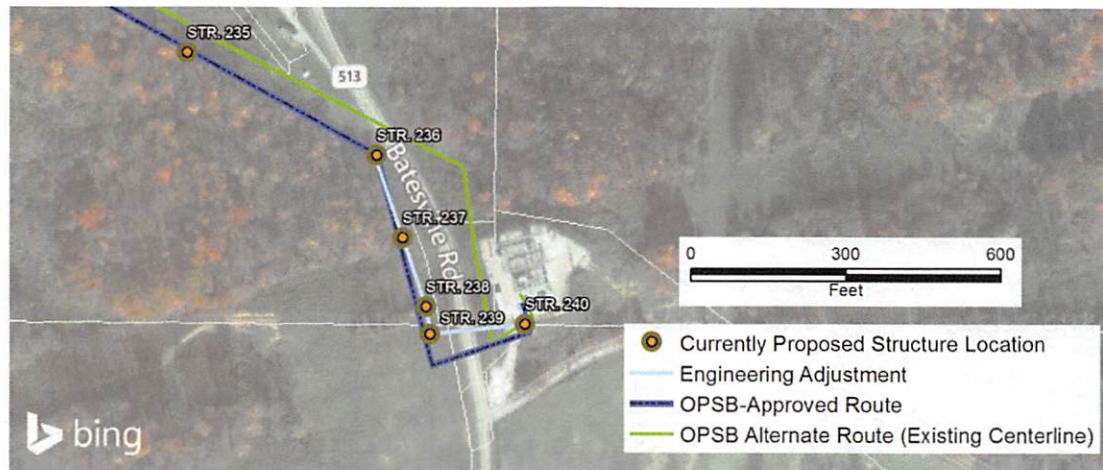


Exhibit 8: Engineering Adjustment 7

Engineering Adjustment 7 occurs between Structures 236 and 240. The centerline was adjusted to improve clearances to the existing power lines within the area. The maximum adjustment from the OPSB-approved centerline is 17 feet at Structure 238. This adjustment has been constructed. No additional environmental (including tree clearing) or landowner impacts resulted due to Engineering Adjustment 7.



Shifts within Existing ROW

Five shifts within the existing ROW are proposed to the OPSB-approved route. These shifts will either move structures back on existing centerline, or to be offset within the existing ROW. These shifts total to 3.1 miles and are the result of either feedback from affected landowners or optimizing the use of AEP Ohio Transco's existing land rights.

Exhibit 9: Shift 1

Shift 1 moves the route to an offset position from the existing line consistent with adjacent sections of the centerline between Structures 22 and 26. At the time of submission of the original application, the property owner within this area had suggested that AEP Ohio Transco rebuild on existing centerline. Since then, a new easement has been secured through coordination with the property owner that will allow for construction clear of the existing centerline. By building offset from the existing centerline, AEP Ohio Transco is able to improve safety during construction by constructing clear of the existing line. Shift 1 would potentially result in approximately 0.9 acre of additional tree clearing on the south side of the amended route, which lies outside of the existing centerline ROW. No additional environmental or landowner impacts are expected due to Shift 1.

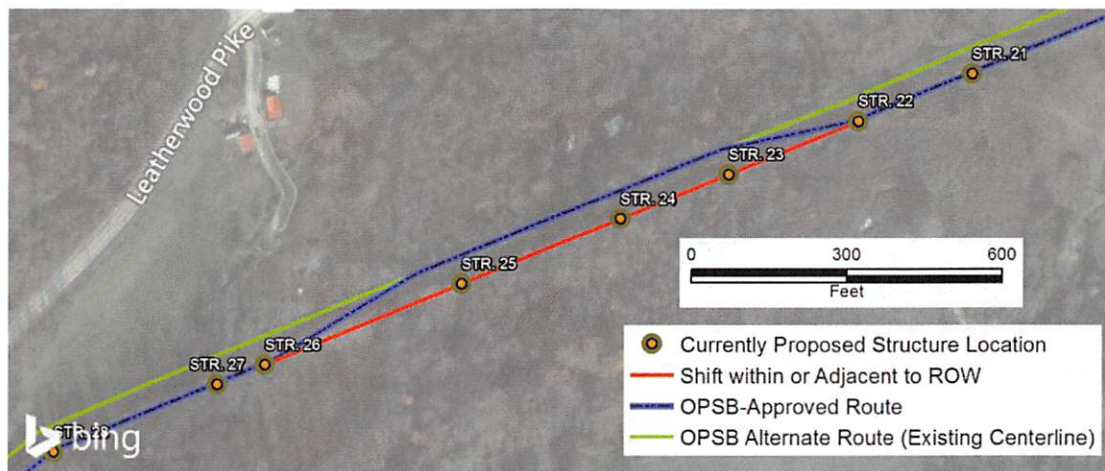


Exhibit 10: Shift 2

Shift 2 is between Structures 62 and 70. Structures 62-63 and 67-69 are proposed to be shifted onto the existing centerline. Between Structures 63 and 67, the proposed route is in between the OPSB approved centerline and the existing centerline. This shift resulted from the discovery of a natural gas pipeline in the area. The reroute avoids the gas pipeline easement. No additional environmental (including tree clearing) or landowner impacts are expected due to Shift 2.

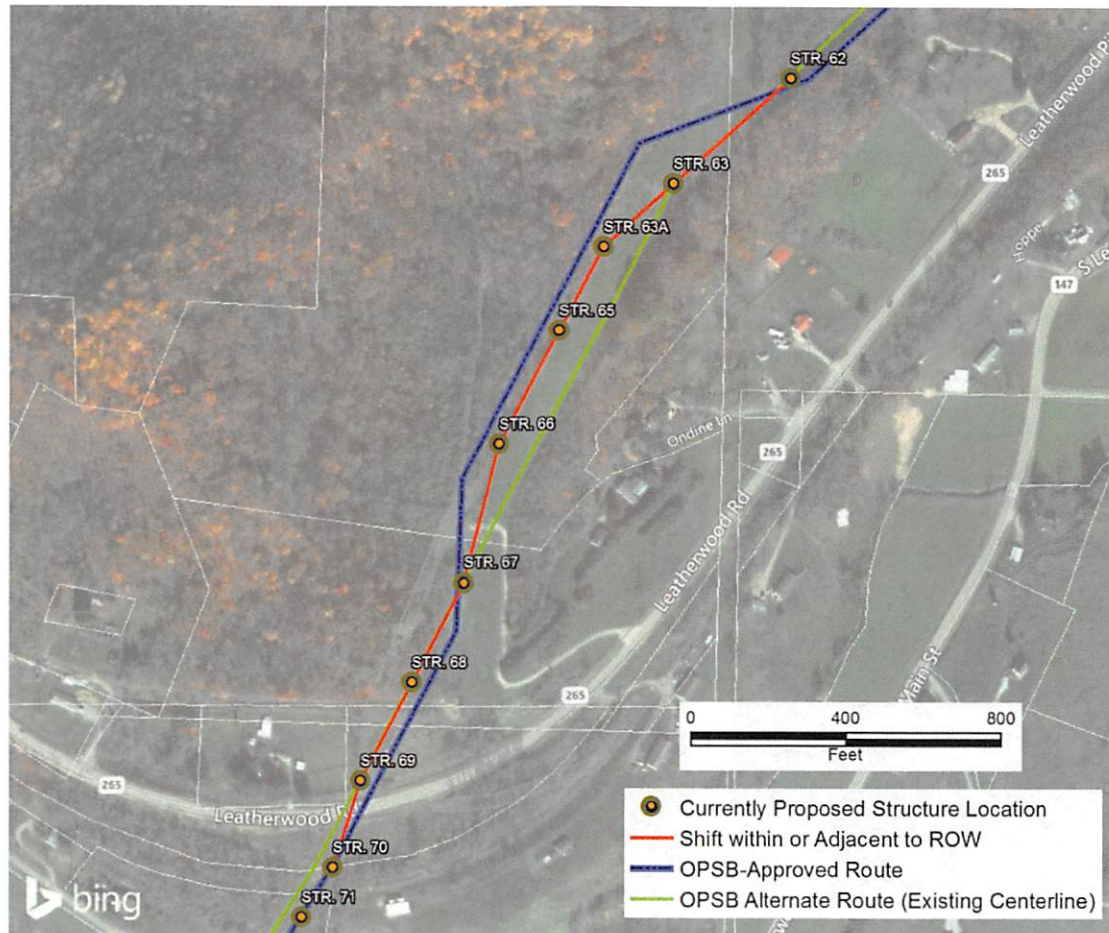


Exhibit 11: Shift 3

Shift 3 adjusts the alignment between Structures 83 and 84 to attach to the existing Batesville Switch. This shift within the existing ROW did not add any additional parcels or landowners. No new environmental impacts are anticipated. No additional pole will be installed as the centerline shift is to attach to the existing Batesville Switch pole. This adjustment has been constructed. No additional environmental (including tree clearing) or landowner impacts resulted due to Shift 3.

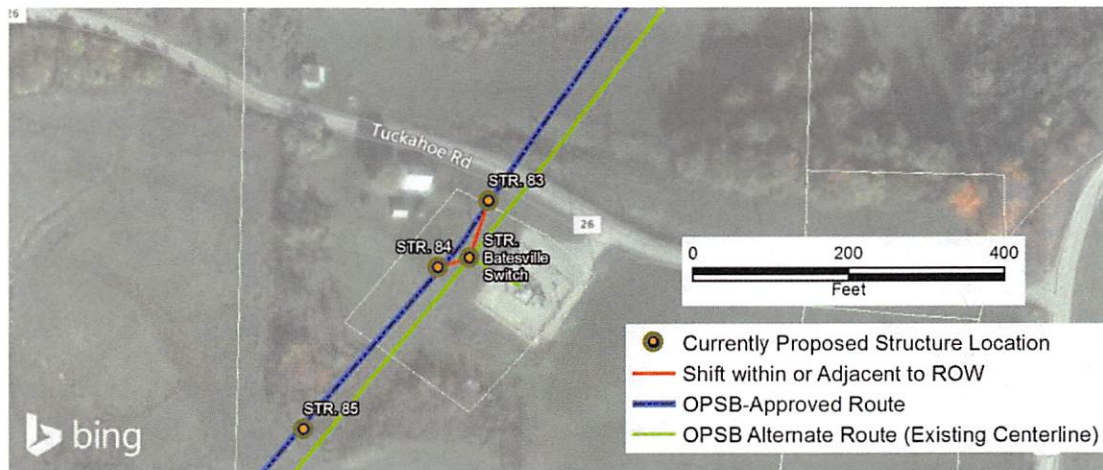


Exhibit 12: Shift 4

Shift 4 moves the route from the existing centerline to offset between Structures 132 and 137. At the time of submission of the original application, the property owner within this area had suggested that AEP Ohio Transco rebuild on existing centerline. Since then, a new easement has been secured through coordination with the property owner that will allow construction clear of the existing centerline. By building offset from the existing centerline, AEP Ohio Transco is able to improve safety during construction. This adjustment has been constructed. No additional environmental (including tree clearing) or landowner impacts resulted due to Shift 4.

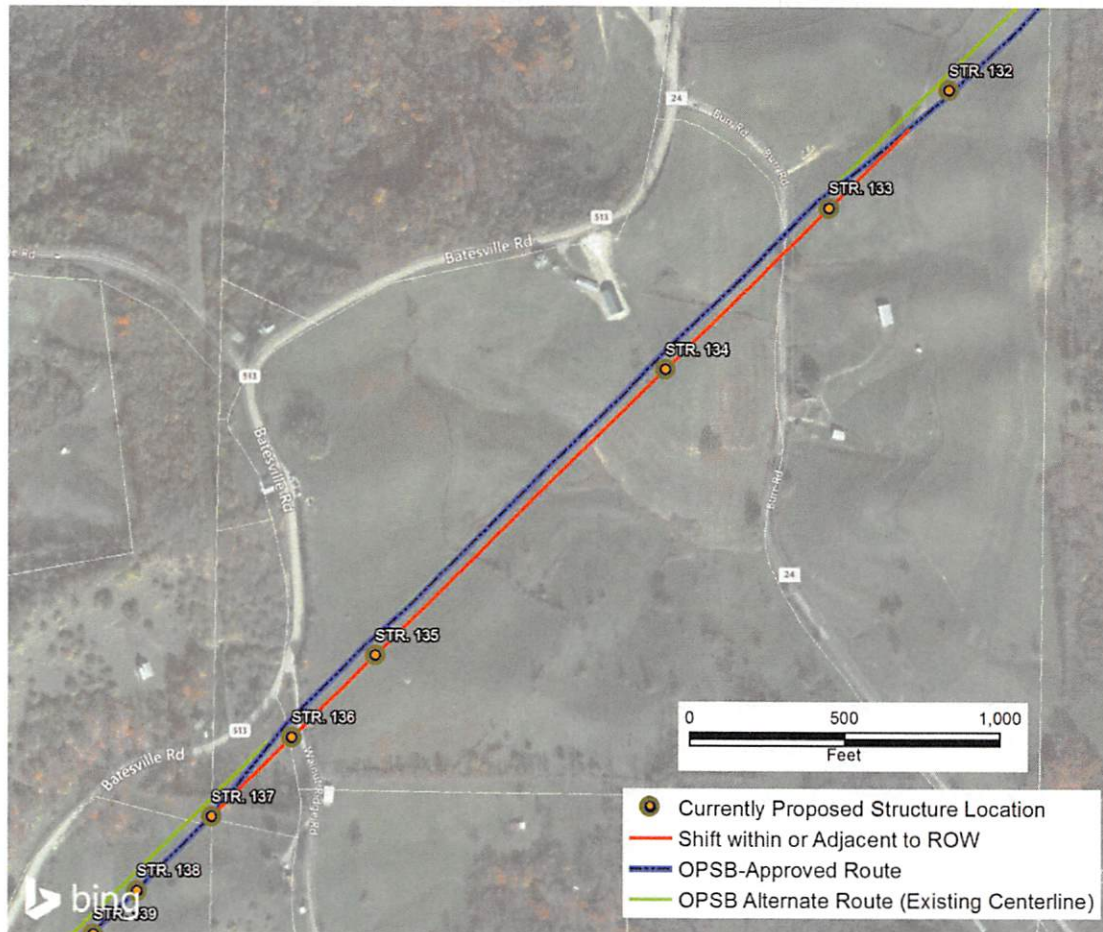
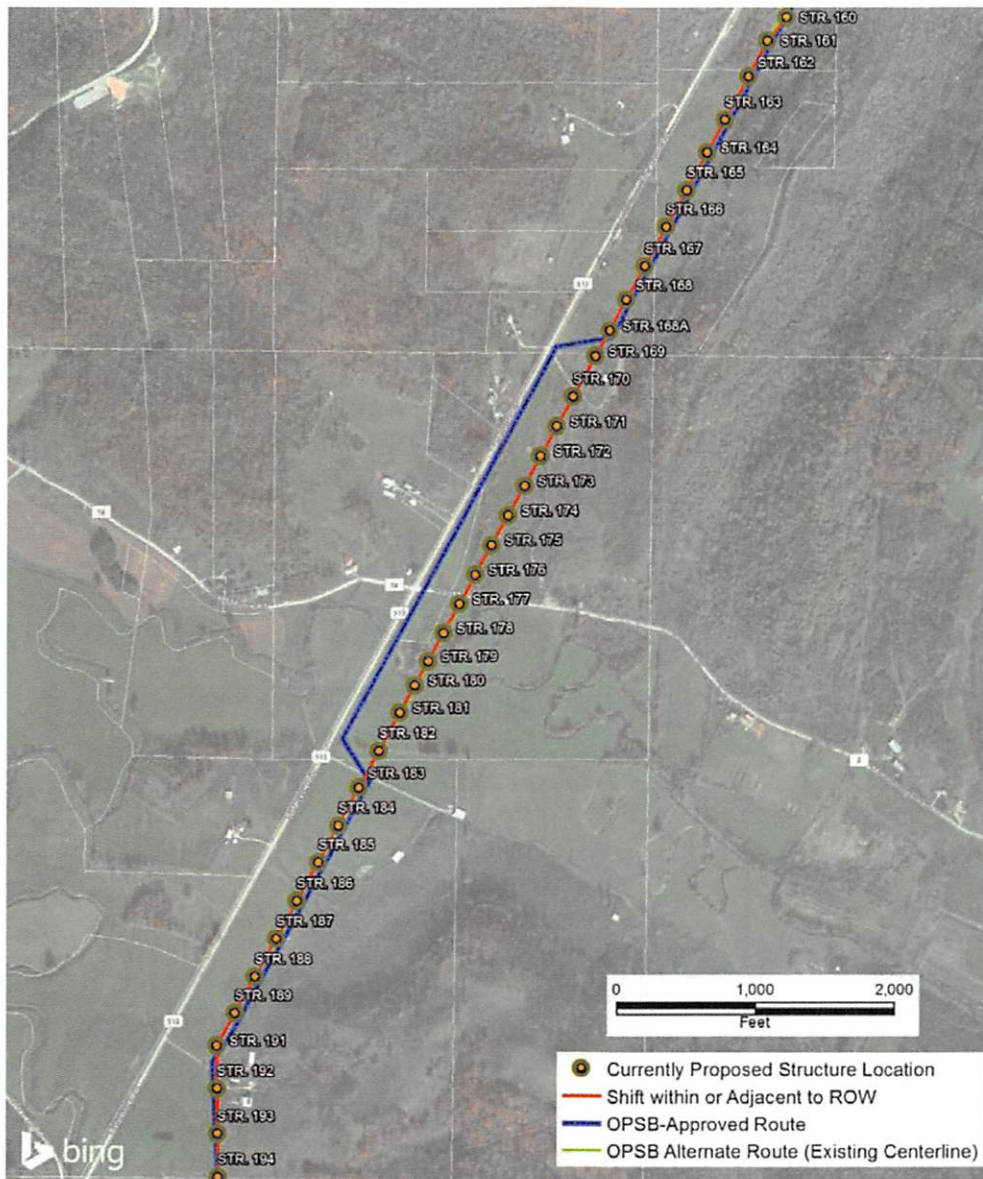


Exhibit 13: Shift 5

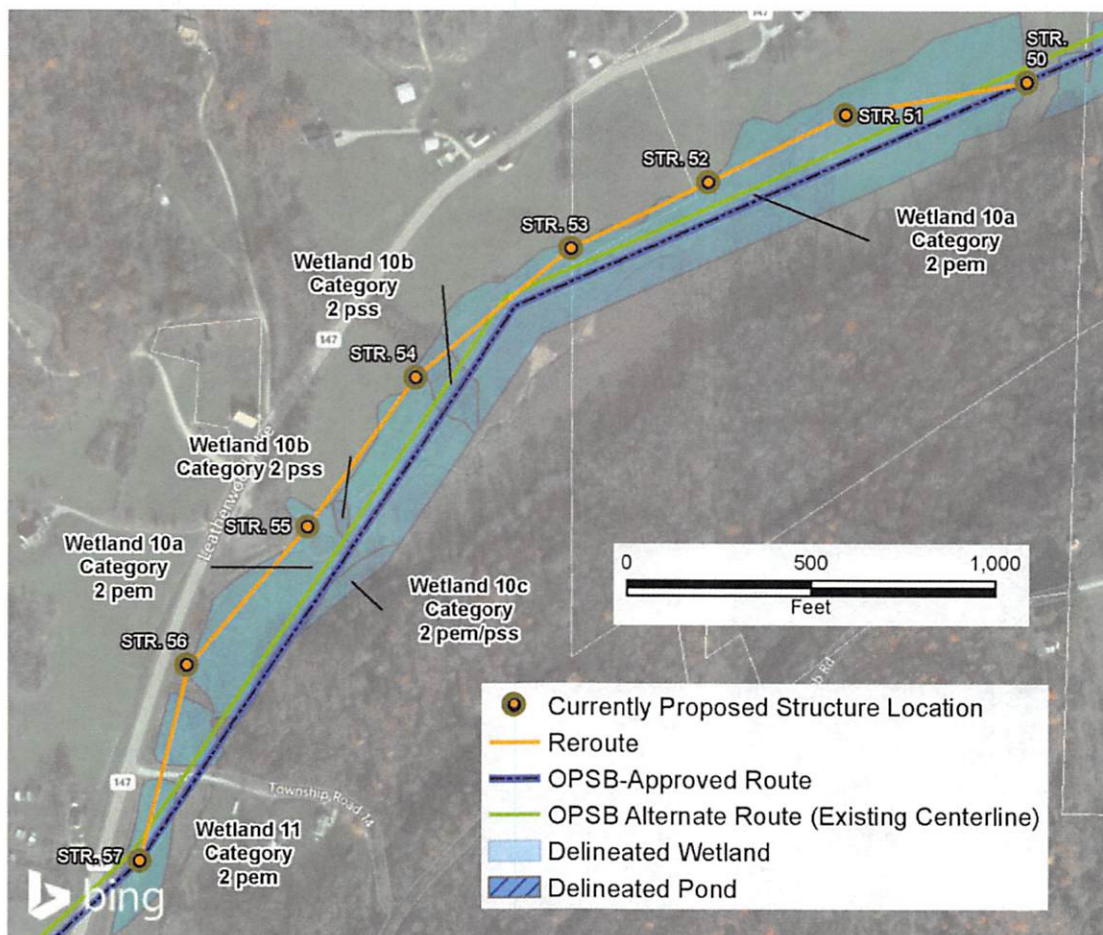
Shift 5 moves the route to the existing centerline between Structures 160 and 194. This shift within the existing ROW did not add any additional parcels or landowners. The shift results in the centerline crossing approximately 200 additional feet of Ohio Rapid Assessment Method (ORAM) Category 1 emergent wetland. However, no disturbance is proposed within the wetland. The centerline was shifted due to the property owner's request. Due to the ability reduce the number of turns and move the proposed centerline further from adjacent residential properties, AEP Ohio Transco decided to shift back to the existing centerline. No additional environmental (including tree clearing) or landowner impacts are expected due to Shift 5.



Reroute

Exhibit 14: Reroute 1

One reroute of the OPSB-approved route between Structures 50 and 57 was necessary to reduce wetland impacts while continuing to accommodate property owners. AEP Ohio Transco negotiated the placement of the centerline at the edge of the wetland with most poles placed in upland areas. The centerline was shifted to decrease the amount of disturbance to the wetlands. Wetlands 10a, 10b, and 10c are an ORAM Category 2 complex with palustrine emergent (PEM) and palustrine scrub/shrub (PSS) components. Wetland 11 is classified as ORAM Category 2, PEM. No additional environmental (including tree clearing) or landowner impacts are expected due to Reroute 1.



4906-5-02 PROJECT SUMMARY AND APPLICANT INFORMATION**(A) PROJECT SUMMARY AND FACILITY OVERVIEW**

Text provided in the July 1, 2016 Application filing remains unchanged.

(1) General Purpose of the Facility

Text provided in the July 1, 2016 Application filing remains unchanged.

(2) Facility Description

Text provided in the July 1, 2016 Application filing remains unchanged. A revised project overview is provided in Revised Figure 02-1.

(3) Suitability of the Preferred and Alternate Routes

The purpose of the proposed Project is to rebuild and upgrade the existing Barnesville-Summerfield 69 kV line to 138 kV design standards. To meet current 138 kV standards, however, the new line will require a wider 100 foot ROW, which may result in impacts to some areas due to adjacent development. AEP Ohio Transco and its consultant identified potential routing solutions that would have the least overall impacts to local land use and environmental and cultural resources, while adhering to standard design and construction requirements.

Two primary routes were considered for the Project. Both proposed routes would be built within the existing ROW of the Barnesville-Summerfield 69 kV line. The Amended Preferred Route would be constructed primarily within the existing ROW offset by approximately 25 feet to allow for construction while the existing line remains in service. The Amended Preferred Route also includes several deviations from the existing ROW to avoid houses and buildings that would otherwise fall within the newly expanded ROW. In contrast, the Alternate Route focuses exclusively on rebuilding the new line along the existing centerline. The Alternate Route maximizes the use of existing ROW, minimizes the need for additional ROW, but has greater impact on adjacent land uses. The Alternate Route would require a longer construction schedule due to the likely need for multiple phased construction outages to build the line without significant disruptions to the service area. Note, because the Amended Preferred and Alternate routes are both entirely within the existing transmission ROW for the majority of the length of the Project, the only portions of the Amended Preferred Route considered for purposes of the 20% alternative threshold described in Ohio Administrative Code Section 4906-3-05 are those portions of the Amended Preferred Route and the Alternate Route that are outside of the existing ROW.

The Amended Preferred and Alternate Routes are equally suitable for the need of the Project, but differ with respect to their level of reuse of the existing ROW. As described above, the Amended Preferred Route minimizes impacts to adjacent land use and allows for greater service reliability through diversions and offset construction. The Amended Preferred Route slightly reduces land

use impacts by utilizing extended offsets from the standard 25 feet and switching sides of the existing centerline to avoid structures, difficult construction locations due to steep slopes, and in certain cases to address input from property owners. No existing structures are located within the proposed ROW of the Amended Preferred Route. The reduced width of the existing 69 kV ROW (approximately 50 feet) and encroachments over time results in approximately eleven buildings within the 100-foot ROW of the Alternate Route. ~~In addition, three fewer residences are located within 100 feet of the Preferred Route (eight) as compared to the Alternate Route (eleven)~~ Eleven residences are located within 100 feet of both the Amended Preferred Route and the Alternate Route, even though construction along the centerline (i.e., the Alternate Route) would maximize the use of the existing ROW, which is already impacted.

The Barnesville distribution station cannot be readily upgraded to 138/12 kV at its current location because of space limitations. In the future, AEP Ohio Transco plans to construct a new substation with 138/12 kV capability in order to enable the operation of the line at 138 kV. As discussed below, the main difference between the Amended Preferred Route and the Alternate Route is the siting of the facilities necessary to reach the location of the new planned 138/12 kV substation.

(i) Preferred Route

The Amended Preferred Route parallels the existing Barnesville-Summerfield 69 kV line for the majority of its 45.8 15.6-mile length. It will be offset by approximately 25 feet from the existing 69 kV line to ensure safer construction and reliability and to allow the existing line to remain in service during construction of the Project. The Amended Preferred Route will deviate from the existing ROW, heading generally east to the proposed Barnesville distribution station site.

(ii) Alternate Route

Text provided in the July 1, 2016 Application filing remains unchanged.

(4) Project Schedule Summary

~~AEP Ohio Transco plans to start construction of the transmission line in the fall or winter of 2016~~ started construction in March 2017, with an estimated in-service date around ~~fall of 2017~~ February 2020. **Revised Figure 03-1** provides additional details regarding the proposed Project schedule.

(B) APPLICANT INFORMATION

Text provided in the July 1, 2016 Application filing remains unchanged.

4906-5-03 REVIEW OF NEED AND SCHEDULE**(A) JUSTIFICATION OF NEED**

Text provided in the July 1, 2016 Application filing remains unchanged.

(B) REGIONAL EXPANSION PLANS

Text provided in the July 1, 2016 Application filing remains unchanged.

(C) SYSTEM ECONOMY AND RELIABILITY

Text provided in the July 1, 2016 Application filing remains unchanged.

(D) OPTIONS TO ELIMINATE THE NEED FOR THE PROPOSED PROJECT

Text provided in the July 1, 2016 Application filing remains unchanged.

(E) FACILITY SELECTION RATIONALE

Text provided in the July 1, 2016 Application filing remains unchanged.

(F) FACILITY SCHEDULE**(1) Schedule Gantt Chart**

The major scheduled activities associated with the Amended Preferred and Alternate routes are shown in bar chart form on **Revised Figure 03-1**.

(2) Delays

Text provided in the July 1, 2016 Application filing remains unchanged.

4906-5-04 ROUTE ALTERNATIVES ANALYSIS

Text provided in the July 1, 2016 Application filing remains unchanged. **Revised Figures 04-1A and 04-1G** provide constraints maps of the Amended Preferred Route.

4906-5-05 PROJECT DESCRIPTION**(A) DESCRIPTION OF PROJECT AREA****(1) Geography and Topography**

Text provided in the July 1, 2016 Application filing remains unchanged. **Revised Figures 05-1A and 05-1D** provide maps at 1:24,000-scale showing the Amended Preferred Route, Approved Route, and Alternate Route.

(2) Transmission Acreage, Length, and Properties Crossed

The Amended Preferred Route is ~~45.8~~ 15.6 miles in length and crosses approximately ~~407~~ 109 parcels. The Alternate Route is 15.6 miles in length and crosses approximately 116 parcels.

(B) LAYOUT AND CONSTRUCTION

Text provided in the July 1, 2016 Application filing remains unchanged.

(C) TRANSMISSION EQUIPMENT

Text provided in the July 1, 2016 Application filing remains unchanged.

4906-5-06 ECONOMIC IMPACT AND PUBLIC INTERACTION

Text provided in the July 1, 2016 Application filing remains unchanged.

4906-5-07 HEALTH AND SAFETY, LAND USE, AND REGIONAL DEVELOPMENT**(A) HEALTH AND SAFETY**

Text provided in the July 1, 2016 Application filing remains unchanged.

(B) LAND USE**(1) Proposed Routing Alignments and Existing Land Uses**

Maps at 1:12,000-scale, including the area 1,000 feet on either side of the Amended Preferred, Approved, and Alternate Routes are presented as **Revised Figures 04-1A through 04-1G**. These maps include proposed and existing substations, land uses, road names, structures, and incorporated areas and population centers. Identified land use features are described below. **Revised Table 07-6** provides the existing land uses identified within 100 and 1,000 feet of the Preferred and Alternate Routes.

Residential: Residences were estimated based on review of aerial photography and county parcel data.

Amended Preferred Route: Two hundred and ~~twenty-two~~ twenty-one residences were identified within 1,000 feet of the Amended Preferred Route, ~~eight~~ eleven of which are within 100 feet. All of these residences appear to be single-family dwellings.

Alternate Route: Two-hundred twenty-six residences were identified within 1,000 feet of the Alternate Route, eleven of which are within 100 feet. All of these residences appear to be single-family dwellings.

Commercial: One store building was observed approximately 180 feet from the Amended Preferred Route and 110 feet from the Alternate Route within the Village of Barnesville. Other home-based businesses, while not specifically identified, are expected in the area.

Industrial: One apparent quarry was identified along both the Amended Preferred and Alternate Routes. This quarry is crossed by both routes within or adjacent to existing ROW.

Cultural: Data for known cultural resource landmarks were obtained from Ohio Historic Preservation Office's (OHPO) Online Mapping System. Four previously recorded archaeological sites were identified within 1,000 feet of the Amended Preferred and Alternate Routes. These archaeological sites are not within 100 feet. No Ohio Historic Inventory (OHI) structures or National Register Boundaries were identified within 1,000 feet of either route. Six cemeteries were identified within 1,000 feet of the Amended Preferred Route and the Alternate Route. The Amended Preferred and Alternate Routes cross the Village of Barnesville property that includes

Crestview Cemetery near the northern terminus of the project, although no current graves will be located within the proposed ROW. Gravesites are located within 100 feet of the Alternate Route.

In addition to the OHPO data sources above, Weller & Associates conducted a Phase I cultural resources survey for the Amended Preferred and Alternate Routes on behalf of AEP Ohio Transco. The full Phase I report will be provided to OPSB and OHPO under separate cover.

Agricultural: Approximately 46% 36% of the Amended Preferred Route and 47% of the Alternate Route cross agricultural fields. A discussion of Agricultural District Land is provided in Section (C)(7).

Recreational: A Friendship Lodge is located within 100 feet of the Amended Preferred Route in the Village of Barnesville. This facility is located less than 40 feet from the existing 69 kV line and would be at risk for demolition if the Alternate Route is selected. No other recreational areas, such as parks or golf courses, were identified within 1,000 feet of the Amended Preferred or Alternate Routes.

Institutional: No institutional land uses were identified within 1,000 feet of the Preferred or Alternate Routes.

**REVISED TABLE 07-6
SUMMARY OF LAND USE FACTORS OF THE
AMENDED PREFERRED AND ALTERNATE ROUTES**

Route Alternatives			
	Preferred		Alternate
	<u>July 2016</u> (Approved)	<u>February 2019</u> (Amended)	
Length (miles)	15.8	<u>15.6</u>	15.6
% of Length in or Adjacent to Existing Roads Rights-of-way	2.2%	<u>5.1%</u>	2.9%
% of Length in or Adjacent to Existing Transmission Line Rights-of-way	89%	<u>92%</u>	99%
Features within 100 feet of Route Alternatives			
Threatened and Endangered Species	0	<u>0</u>	0
Previously Recorded Historic Structures (OHI)	0	<u>0</u>	0
Previously Recorded Archaeological Sites	0	<u>0</u>	0
National Register of Historic Places (NRHP) Sites	0	<u>0</u>	0
Residences	8	<u>11</u>	11

Route Alternatives			
	Preferred		Alternate
Other sensitive land uses**	2	<u>2</u>	<u>2</u>
Features within 1,000 feet of Route Alternatives			
Threatened and Endangered Species	0	<u>0</u>	0
Historic Structures (OHI)	0	<u>0</u>	0
Archaeological Sites	4	<u>4</u>	4
NRHP Sites	0	<u>0</u>	0
Residences	222	<u>221</u>	226
Other sensitive land uses**	6	<u>6</u>	7

* Other sensitive land uses include airports, parks, State forests, golf courses, schools, hospitals, churches, conservation districts, and cemeteries.

(2) Impact of Construction

Text provided in the July 1, 2016 Application filing remains unchanged.

Residential: Parcel number ~~41-00017-000~~ 010021071000, located at ~~33962 Leatherwood Pike~~ 57116 Seneca Lake Road and owned by ~~Benny L. and Patsy L. Ankrom~~ Steven and Beverly Gray, appears to be the closest residence to the Amended Preferred Route at approximately ~~75~~ 55 feet from the proposed centerline. It is not anticipated that construction of the Amended Preferred Route will require the removal of any residential structures, and no individuals are expected to be required to relocate.

Parcel number 010050086002, located at 33962 Leatherwood Pike and owned by Steven H. and Beverly A. Gray, appears to be the closest residence to the Alternate Route at approximately 40 feet from the centerline. This structure would be at risk of needing to be removed if the Alternate Route is selected. A full engineering and ROW evaluation will be completed if the Alternate Route is selected to determine the need to remove the residence.

It is expected that some incremental increase in noise will be audible during some portions of construction of the new transmission line. However, the current ambient noise levels associated with local roads and the distance to the residences are expected to mitigate overall noise impacts during construction. Duration of construction at any one location along the routes is also expected to be short.

Commercial: No adverse impacts to commercial land uses are anticipated as a result of the Project.

Industrial: No adverse impacts to industrial land uses are anticipated as a result of the Project.

Cultural: Based on the preliminary results of the Phase I conducted on behalf of AEP Ohio Transco by Weller & Associates, impacts to cultural land use areas associated with construction of the Amended Preferred and Alternate Routes are not anticipated. The full Phase I report will be provided to OPSB and OHPO under separate cover.

Agricultural: The likely impacts of the proposed Project on agricultural land use associated with construction activities primarily occur in the ROW of the transmission line and include potential damage to current crops, disturbance of underground field drainage systems, compaction of soils and resulting reduction of productivity, and to a lesser extent, disruption of plow patterns, and creation of areas for weeds and other non-crops to grow.

Recreational: A Friendship Lodge is located less than 40 feet from the existing 69 kV line and would be at risk for demolition if the Alternate Route is selected. No adverse impacts to recreational land uses are anticipated as a result of the Amended Preferred Route.

Institutional: No adverse impacts to institutional land uses are anticipated as a result of the Project.

(3) Structures

Text provided in the July 1, 2016 Application filing remains unchanged.

(a) Structures within 200 feet of Proposed ROW:

Amended Preferred Route: ~~One hundred fifty-nine~~ One hundred fifty-two structures were identified within 200 feet of the proposed ROW of the Preferred Route, between five and 199 feet away. These structures include 55 single-family residences, 95 outbuildings, one commercial building, and a Friendship Lodge. None of these structures would be located within the 100-foot ROW.

Alternate Route: One hundred seventy-one structures were identified within 200 feet of the proposed ROW of the Alternate Route, between 0 and 199 feet away. These structures include 62 single-family residences, 107 outbuildings, one commercial building, and a Friendship Lodge. Eleven of these structures (two single-family residences, the Friendship Lodge, and 8 outbuildings) were identified within the 100-foot ROW of the Alternate Route. Five of the outbuildings, one residence, and the Friendship Lodge are located within 40 feet.

(b) Structures to be destroyed, acquired, or removed and owner compensation:

Text provided in the July 1, 2016 Application filing remains unchanged.

(c) Mitigation Procedures to minimize impact to structures near the facility:

Text provided in the July 1, 2016 Application filing remains unchanged.

(C) AGRICULTURAL LAND USE AND DISTRICTS

Text provided in the July 1, 2016 Application filing remains unchanged. Revised Figures 07-1A and 07-1G show agricultural land along the Preferred Route.

(D) REGIONAL LAND USE PLANS

Text provided in the July 1, 2016 Application filing remains unchanged.

(E) CULTURAL IMPACTS OF THE PROPOSED PROJECT

Text provided in the July 1, 2016 Application filing remains unchanged.

4906-5-08 ECOLOGICAL INFORMATION AND COMPLIANCE WITH PERMITTING REQUIREMENTS**(A) ECOLOGICAL MAP**

A map at a scale of 1:24,000 illustrating areas within 1,000 feet of the Amended Preferred and Alternate Routes is presented as **Revised Figures 05-1A and 05-1D**. The proposed route alignments, including proposed turning points, are presented for the Amended Preferred and Alternate Routes in **Revised Figures 05-1A and 05-1D**.

More detailed maps at 1:12,000-scale depicting delineated features, survey corridor, lakes, ponds, reservoirs, highly erodible soils, slopes of 12 percent or greater, wildlife areas, nature preserves, conservations areas, and proposed ROW are provided as **Revised Figures 08-1A through 08-1P** for the Amended Preferred Route.

(B) FIELD SURVEY REPORT FOR VEGETATION AND SURFACE WATERS

In December 2014, and March and April 2016, AEP Ohio Transco consultants conducted a field survey of the project 200-foot wide survey corridor of the Preferred and Alternate Routes. Field surveys to capture the Amended Preferred Route were completed in March 2017, February 2018, and March 2018. No additional delineated features were identified during the additional field surveys along the Amended Preferred Route survey corridor. The purpose of the field survey was to assess whether wetlands and other "waters of the U.S." exist within the project survey corridors. During the field survey, the physical boundaries of observed water features were recorded using sub-decimeter accurate Trimble Global Positioning System (GPS) units. The GPS data was imported into ArcMap GIS software, where the data was then reviewed and edited for accuracy.

Prior to conducting field surveys, digital and published county Natural Resources Conservation Service (NRCS) soil surveys, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps, and U.S. Geological Survey (USGS) 7.5-minute topographic maps were reviewed as an exercise to identify the occurrence and location of potential wetland areas.

(1) Vegetative Communities, Wetlands, and Streams in Study Area

(a) *Woody and Herbaceous Vegetation Land:* Woody and herbaceous vegetation were identified along the proposed routes during the field reconnaissance. The Amended Preferred and Alternate Routes are bordered for portions of their lengths by old field, pasture, scrub-shrub, young to mature woodland forests, residential landscaped areas, stream/wetland areas, and urban areas. A variety of woody and herbaceous lands, as described below, are present within the proposed ROW of the Amended Preferred and Alternate Routes. Habitat descriptions, applicable to both the Amended Preferred and Alternate Routes, and details on the expected impacts of construction are provided below. Vegetated land cover can be seen visually from aerial photography provided on **Revised Figures 04-1A and 04-1G**.

Old Field: Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey corridor of the Project in the form of successional old-field communities. These communities are the earliest stages of recolonization by plants following disturbance. This community type is typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed, in which case they remain as old fields. The old-field areas within the study corridors and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs. Approximately ~~13.5~~ 13.9 acres (7%) of the Amended Preferred Route and 11.7 acres (6%) of the Alternate Route contain old fields.

Pasture: Pasture for cattle and hay fields were observed in various portions of the study area. Pasture areas within the study corridors and adjacent areas are frequently mowed and grazed areas of grasses and forbs. Approximately ~~90.9~~ 82.0 acres (48% ~~44~~%) of the Amended Preferred Route and 94.6 acres (50%) of the Alternate Route contain pasture and hayfields.

Scrub-Shrub: Scrub-shrub habitats represent the successional stage between old-field and second growth forest, and often emerge in recently harvested forests responding to the lightness of the removed canopy. Dominant species consist of herbaceous communities similar to that of old field habitat with a few woody species, to a community dominated by forest herbs and woody species. Portions of the existing ROW are dominated by scrub/shrub habitat. Approximately ~~17.6~~ 21.5 acres (9% ~~11~~%) of the Amended Preferred Route and 30.1 acres (16%) of the Alternate Route contains scrub-shrub habitat.

Agricultural land: Agricultural land consisting of a fruit tree orchard and corn fields were present along the Preferred and Alternate Routes. Approximately 0.1 acre (<1%) of the Preferred Route and 1.25 acres (1%) of the Alternate Route contain agricultural land not used for pasture or hay fields.

Oak-Hickory and Successional Hardwood Woodlands: Oak-Hickory and successional mixed hardwood woodlands are present along the Preferred and Alternate Routes. Woody species dominating these areas included red oak (*Quercus rubra*), white oak (*Quercus alba*), sugar maple (*Acer saccharum*), red maple (*Acer rubrum*), box elder (*Acer negundo*), American Beech (*Fagus grandifolia*), shagbark hickory (*Carya ovata*), and black walnut (*Juglans nigra*). The dominant shrub-layer species included spicebush (*Lindera benzoin*), poison ivy (*Toxicodendron radicans*), honeysuckle (*Lonicera japonica*), and blackberry (*Rubus occidentalis*). Approximately ~~51.6~~ 48.0 acres (27% ~~25~~%) of woodland forest are present along the Amended Preferred Route. Approximately 30.9 acres (16%) of woodland forest are present along the Alternate Route. Based on the 100-foot ROW, the acreages of forested areas would be cleared along the Amended Preferred and Alternate Routes.

Landscaped Areas: Landscaped areas, including residential properties and commercial properties, were observed within the Project vicinity. These landscaped areas within the study corridor and adjacent areas are frequently mowed of grasses and forbs. Approximately ~~8~~ 7.1 acres (4%) and 10.4 acres (5%) of landscaped areas are located along both the Amended Preferred and Alternate Routes, respectively.

Streams and Wetlands: Streams and wetlands were observed both within and beyond the survey corridor for the Project. Detailed stream and wetland descriptions and expected impacts are provided in **Revised Tables 08-1 through 08-6**.

Urban: Text provided in the July 1, 2016 Application filing remains unchanged.

No wildlife areas, nature preserves, or publicly identified conservation areas are crossed by the proposed Amended Preferred and Alternate Routes. On December 1, 2014, the Ohio Department of Natural Resources (ODNR) Division of Water (DOW) replied to an e-mailed request for Ohio Natural Heritage Database (ONHD) records of wildlife areas, nature preserves, and conservations areas. ODNR-DOW identified the location of an approximately 15-acre mixed mesophytic forest that is located approximately 230-feet from the Amended Preferred Route. The agency also reported the location of the approximately 7,644-acre Seneca Lake, operated by Muskingham Watershed Conservancy District, within the one mile of the project area.

(b) Wetlands: Wetlands are defined as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation (hydrophytic) typically adapted for life in saturated (hydric) soil conditions.

To identify whether wetlands exist along the Preferred and Alternate Routes, wetland criteria, as established by United States Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual (1987 Manual) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Regional Supplement)* were evaluated. A desktop study of available resources was reviewed prior to the field wetland delineation of the Project area. USFWS NWI maps and NRCS soil surveys and hydric soil lists for Tuscarawas County and Harrison County, Ohio were reviewed for areas within 1,000 feet of the Amended Preferred and Alternate Routes. NWI areas are shown on **Revised Figures 08-1A through 08-1P** for the Amended Preferred Route.

The Ohio Rapid Assessment Method (ORAM) was developed to determine the relative ecological quality and level of disturbance of a particular wetland. Wetlands are scored on the basis of hydrology, upland buffer, habitat alteration, special wetland communities, and vegetation communities. Each of these subject areas is further divided into subcategories under ORAM v5.0, resulting in a score that describes the wetland using a range from 0 (low quality and high disturbance) to 100 (high quality and low disturbance). Wetlands scored from 0 to 29.9 are grouped into "Category 1", 30 to 59.9 are "Category 2" and 60 to 100 are "Category 3". Transitional zones exist between "Categories 1 and 2" from 30 to 34.9 and between "Categories 2 and 3" from 60 to 64.9. However, according to the Ohio Environmental Protection Agency (OEPA), if the wetland score falls into the transitional range, it must be given the higher Category unless scientific data can prove it should be in a lower category (Mack 2001).

~~Thirty-seven~~ Thirty-three wetlands were identified within the survey corridor along the Amended Preferred Route, with a total of ~~49.13~~ 17.32 acres within the survey corridor and ~~9.92~~ 9.59 acres

within the proposed ROW. Twenty of these wetlands are crossed by the Amended Preferred Route centerline, for a total length of 4,389 4,265 linear feet. Thirty-seven wetlands were identified within the 200-foot survey corridor along the Alternate Route, with a total of 17.72 acres within the survey corridor and 10.73 acres within the proposed ROW. Sixteen of these wetlands are crossed by the Alternate Route centerline for a total length of 4,698 linear feet. Field delineated wetlands within the survey corridor are mapped on **Revised Figures 08-1A through 08-1P** for the Preferred Route and are summarized in **Revised Table 08-1**.

**REVISED TABLE 08-1
DELINEATED WETLANDS WITHIN THE AMENDED
PREFERRED ROUTE SURVEY CORRIDOR**

Wetland Name	Route	Figure	Cowardin Wetland Type ^a	ORAM Score	ORAM Category	Length Crossed by Centerline (feet) ^b	Acreage within Survey Corridor	Acreage within Proposed Maintained Right-of-way ^c
Wetland 01	Preferred	08-1B	PEM	20.5	Category 1	NC	<u>0.08</u> <u>0.07</u>	<u>0.02</u> <u>0</u>
Wetland 02	Preferred	08-1B	PEM	37	Category 2	<u>36</u> <u>31</u>	0.15	0.11
Wetland 03	Preferred	08-1B	PEM	24.5	Category 1	NC	0.10	<u>0.02</u> <u>0.03</u>
Wetland 04	Preferred	08-1B	PEM	32.5	Category 2	<u>95</u> <u>82</u>	0.36	<u>0.20</u> <u>0.19</u>
Wetland 05	Preferred	08-1B	PEM	20	Category 1	NC	<u>0.11</u> <u>0.10</u>	<0.01
Wetland 06	Preferred	08-1B,C	PEM	20	Category 1	NC	<u>0.06</u> <u>0.05</u>	<0.01
Wetland 08	Preferred	08-1C,D	PEM	23	Category 1	<u>11</u> <u>10</u>	0.10	0.02
Wetland 09	Preferred	08-1C	PEM	29.5	Category 1	327	1.29	0.71
Wetland 10a	Preferred	08-1C,D	PEM	33.5	Category 2	<u>2664</u> <u>2,458</u>	<u>11.43</u> <u>9.46</u>	<u>5.91</u> <u>5.31</u>
Wetland 10b	Preferred	08-1D	PSS	33.5	Category 2	<u>127</u> <u>103</u>	<u>0.54</u> <u>0.42</u>	<u>0.29</u> <u>0.23</u>
Wetland 10c	Preferred	08-1D	PEM/PSS	33.5	Category 2	NC	0.30	0.15
Wetland 11a	Preferred	08-1D	PEM	35.5	Category 2	<u>230</u> <u>291</u>	<u>0.64</u> <u>0.89</u>	<u>0.48</u> <u>0.61</u>
Wetland 11b	Preferred	08-1D	PEM/PFO	35.5	Category 2	NC	0.24	0.04
Wetland 12	Preferred	08-1D	PEM	<u>24.5</u>	<u>Category 1</u>	<u>NC</u>	<u>0.02</u>	<u>0.02</u>
Wetland 14	Preferred	08-1E,F	PEM	18	Category 1	14	0.03	0.02
Wetland 15	Preferred	08-1E,F	PEM	34	Category 2	NC	0.03	0.01
Wetland 16	Preferred	08-1E,F	PEM	41	Category 2	NC	0.00	0
Wetland 18	Preferred	08-1G	PEM	23.5	Category 1	NC	0.02	<0.01
Wetland 19	Preferred	08-1G	PEM	23.5	Category 1	NC	0.00	0
Wetland 22	Preferred	08-1H	PEM	19.5	Category 1	NC	<u>0.23</u> <u>0.21</u>	0.03
Wetland 23a	Preferred	08-1H	PEM	20.5	Category 1	37	<u>0.02</u> <u>0.08</u>	<u>0.02</u> <u>0.06</u>
Wetland 23b	Preferred	08-1H	PEM	20.5	Category 1	8	0.06	0.04
Wetland 24	Preferred	08-1H,I	PEM	22.5	Category 1	<u>7</u> <u>8</u>	<u>0.02</u> <u>0.03</u>	0.01
Wetland 26	Preferred	08-1I	PEM	41	Category 2	NC	0.02	0.01

**REVISED TABLE 08-1
DELINEATED WETLANDS WITHIN THE AMENDED
PREFERRED ROUTE SURVEY CORRIDOR**

Wetland Name	Route	Figure	Cowardin Wetland Type ^a	ORAM Score	ORAM Category	Length Crossed by Centerline (feet) ^b	Acreage within Survey Corridor	Acreage within Proposed Maintained Right-of-way ^c
Wetland 27	Preferred	08-1I	PEM	42	Category 2	28	0.02	0.02
Wetland 28	Preferred	08-1J	PEM	20	Category 1	NC	0.02 0.03	0 0.02
Wetland 29	Preferred	08-1J,K	PEM	35.5	Category 2	164 67	0.36-0.46	0.25-0.23
Wetland 30	Preferred	08-1K	PEM	23	Category 1	NC	0.01	0
Wetland 31	Preferred	08-1K	PEM	22	Category 1	45 42	0.03	0.03
Wetland 32	Preferred	08-1K,L	PEM	18.5	Category 1	44 12	0.09	0.05
Wetland 33a	Preferred	08-1M	PSS PEM	21.5	Category 1	NC 289	0.01-1.22	<0.01-0.66
Wetland 33b	Preferred	08-1M,L,N	PEM	21.5	Category 1	90	0.62	0.25
Wetland 34	Preferred	08-1N	PEM	18	Category 1	NC 20	0.21-0.17	0.13-0.17
Wetland 35	Preferred	08-1N	PEM	20	Category 1	147 144	0.38-0.35	0.31-0.30
Wetland 36	Preferred	08-1N	PEM	25.5	Category 1	49 13	0.04	0.04
Wetland 37a	Preferred	08-1N,O	PEM	26.5	Category 1	277 282	1.42-1.44	0.66-0.67
Wetland 37b	Preferred	08-1N,O	PEM	26.5	Category 1	NC	0.07	0
Wetland 38	Preferred	08-1P	PEM	24	Category 1	51 7	0.03	0.03

Cowardin Wetland Type^a: PEM = palustrine emergent, PSS = palustrine scrub/shrub, PFO = palustrine forested, POW = palustrine open water

Linear Feet Crossed by Centerline (feet)^b: NC = Not Crossed by proposed centerline

Acreage within Proposed Maintained ROW^c: "0" indicates the wetland is not within proposed ROW

**TABLE 08-2
DELINEATED WETLANDS WITHIN THE
ALTERNATE ROUTE SURVEY CORRIDOR**

Wetland Name	Route	Figure	Cowardin Wetland Type ^a	ORAM Score	ORAM Category	Length Crossed by Centerline (feet) ^b	Acreage within 300-foot Survey Corridor	Acreage within Proposed Maintained Right-of-way ^c
Wetland 01	Alternate	08-1R	PEM	20.5	Category 1	NC	0.08	0.07
Wetland 02	Alternate	08-1R	PEM	37	Category 2	NC	0.13	0.03
Wetland 03	Alternate	08-1R	PEM	24.5	Category 1	NC	0.03	0
Wetland 04	Alternate	08-1R	PEM	32.5	Category 2	187	0.37	0.34
Wetland 05	Alternate	08-1R	PEM	20	Category 1	NC	0.17	0.08
Wetland 06	Alternate	08-1R,S	PEM	20	Category 1	1	0.06	0.05

TABLE 08-2
DELINEATED WETLANDS WITHIN THE
ALTERNATE ROUTE SURVEY CORRIDOR

Wetland Name	Route	Figure	Cowardin Wetland Type ^a	ORAM Score	ORAM Category	Length Crossed by Centerline (feet) ^b	Acreage within 300-foot Survey Corridor	Acreage within Proposed Maintained Right-of-way ^c
Wetland 08	Alternate	08-1S	PEM	23	Category 1	11	0.12	0.07
Wetland 09	Alternate	08-1S,T	PEM	29.5	Category 1	268	1.01	0.61
Wetland 10a	Alternate	08-1S,T	PEM	33.5	Category 2	2882	10.46	6.41
Wetland 10b	Alternate	08-1T	PSS	33.5	Category 2	139	0.59	0.33
Wetland 10c	Alternate	08-1T	PEM/PSS	33.5	Category 2	NC	0.23	0.03
Wetland 11a	Alternate	08-1T	PEM	35.5	Category 2	234	0.65	0.46
Wetland 11b	Alternate	08-1T	PEM/PFO	35.5	Category 2	NC	0.10	<0.01
Wetland 12	Alternate	08-1T,U,V	PEM	24.5	Category 1	NC	0.02	0.02
Wetland 14	Alternate	08-1U,V	PEM	18	Category 1	NC	0.02	0.01
Wetland 15	Alternate	08-1U,V	PEM	34	Category 2	36	0.03	0.03
Wetland 17	Alternate	08-1W	PEM	19	Category 1	NC	0.02	0
Wetland 18	Alternate	08-1W	PEM	23.5	Category 1	NC	0.02	0.02
Wetland 19	Alternate	08-1W	PEM	23.5	Category 1	NC	0.01	0
Wetland 22	Alternate	08-1X	PEM	19.5	Category 1	NC	0.04	0
Wetland 23a	Alternate	08-1X	PEM	20.5	Category 1	NC	0.02	0.02
Wetland 23b	Alternate	08-1X	PEM	20.5	Category 1	NC	0.04	0.01
Wetland 24	Alternate	08-1Y	PEM	22.5	Category 1	7	0.02	0.02
Wetland 25	Alternate	08-1Y	PEM	18	Category 1	NC	0.03	0.02
Wetland 26	Alternate	08-1Y	PEM	41	Category 2	31	0.02	0.02
Wetland 27	Alternate	08-1Y	PEM	42	Category 2	NC	0.02	0.02
Wetland 28	Alternate	08-1Z	PEM	20	Category 1	NC	0.02	0
Wetland 29	Alternate	08-1Z,AA	PEM	35.5	Category 2	189	0.35	0.24
Wetland 30	Alternate	08-1AA	PEM	23	Category 1	NC	0.01	0.01
Wetland 31	Alternate	08-1AA	PEM	22	Category 1	NC	0.03	0.02
Wetland 32	Alternate	08-1AA,B	PEM	18.5	Category 1	290	0.08	0.06
Wetland 33b	Alternate	08-1BB,C	PEM	21.5	Category 1	9	1.23	0.66
Wetland 34	Alternate	08-1DD	PEM	18	Category 1	29	0.21	0.21

TABLE 08-2
DELINEATED WETLANDS WITHIN THE
ALTERNATE ROUTE SURVEY CORRIDOR

Wetland Name	Route	Figure	Cowardin Wetland Type ^a	ORAM Score	ORAM Category	Length Crossed by Centerline (feet) ^b	Acreage within 300-foot Survey Corridor	Acreage within Proposed Maintained Right-of-way ^c
Wetland 35	Alternate	08-1DD	PEM	20	Category 1	145	0.37	0.30
Wetland 36	Alternate	08-1DD	PEM	25.5	Category 1	NC	0.04	<0.01
Wetland 37a	Alternate	08-1DD, E	PEM	26.5	Category 1	239	1.04	0.57
Wetland 38	Alternate	08-1FF	PEM	24	Category 1	NC	<0.01	0

Cowardin Wetland Type^a: PEM = palustrine emergent, PSS = palustrine scrub/shrub, PFO = palustrine forested, POW = palustrine open water

Linear Feet Crossed by Centerline (feet)^b: NC = Not Crossed by proposed centerline

Acreage within Proposed Maintained ROW^c: "0" indicates the wetland is not within proposed ROW

(c) **Streams and Drainage Channels:** Stream evaluations were conducted for the survey corridor of the Amended Preferred Route, Alternate Route, and access roads. Representative photographs collected during the 2018 survey are provided in **Appendix 08-1 for Streams 81 and 83**. Streams that drain areas greater than one square mile were assessed using the OEPA's Qualitative Habitat Evaluation Index (QHEI) method. Within the QHEI scoring convention, streams are classified based on their drainage area. QHEI streams that drain an area greater than 20 square miles are classified as "large streams", and streams that drain an area less than 20 square miles are classified as "headwater streams." QHEI-classified streams then receive a narrative rating based upon their score. The narrative rating gives a general indication of aquatic assemblages that may be found at any given site. Five narrative ratings scale the 100 point scoring system. Very poor streams have a QHEI score less than 30. Poor streams have a QHEI score between 30 and 42. Fair streams have a QHEI score between 43 and 54. Good streams have a QHEI score between 55 and 69. Streams that have a QHEI score greater than or equal to 70 are classified as excellent.

QHEI evaluations were conducted on seven streams in the survey corridor, with all seven streams crossing both the Amended Preferred Route and Alternate Route. The evaluations were conducted at or near the proposed transmission line crossing of each stream. These streams were identified using USGS topographic maps, aerial photography, and field reconnaissance.

Streams with a drainage basin less than one square mile were evaluated using the Ohio EPA's Headwater Habitat Evaluation Index (HHEI) method. The HHEI is a rapid field assessment method for physical habitat that can be used to appraise the biological potential of most Primary Headwater Habitat (PHWH) streams. Headwater streams are typically considered to be first- and second-order streams, meaning streams that have no upstream tributaries (or "branches") and

those that have only first-order tributaries, respectively. Headwater streams are scored on the basis of channel substrate composition, bankfull width, and maximum pool depth. Assessed areas result in a score (0 to 100) that is converted to a specific PHWH stream class. Streams that are scored from 0 to 29.9 are typically grouped into "Class 1 PHWH Streams", 30 to 69.9 are "Class 2 PHWH Streams", and 70 to 100 are "Class 3 PHWH Streams". There is flexibility and some "gray areas" in the scoring system; a stream can score relatively high, but actually belong in a lower class, and vice-versa. Evidence of anthropogenic alterations to the natural channel will result in a "Modified" qualifier for the stream.

HHEI evaluations were conducted on a total of 68 streams in the survey corridors, with ~~67~~ 68 along the Amended Preferred Route corridor and 63 along the Alternate Route corridor. The evaluations were conducted at or near the proposed transmission line crossing of each stream.

~~Delineated streams are shown on Figures 08-1A through 08-1FF. Revised Figures 08-1A through 08-1P show streams along the Amended Preferred Route. Copies of the QHEI and HHEI evaluation forms for the streams assessed within 100 feet of the routes are included in Appendix 08-3. Copies of the HHEI evaluation forms for the new streams (Streams 81 and 83) assessed within 100 feet of the Amended Preferred Route during the 2018 field survey are included in Appendix 08-3. Revised Table 08-3 lists the attributes of each delineated stream within the Amended Preferred Route and access road survey areas, including QHEI or HHEI score where appropriate, flow regime, bankfull width, stream length within the survey corridor, and stream length within the proposed maintained ROW, respectively.~~

Seventy-four streams were identified within the survey corridor along the Amended Preferred Route, with a total of ~~28,268~~ 28,073 linear feet within the survey corridor and ~~46,308~~ 15,548 linear feet within the proposed maintained ROW. ~~Fifty-two~~ Fifty-three of these streams are crossed by the Amended Preferred Route centerline.

Seventy streams were identified within the 200-foot survey corridor of the Alternate Route with a total of 22,672 linear feet within the survey corridor and 12,024 linear feet within the proposed maintained ROW. Forty-three of these streams are crossed by the Alternate Route centerline.

REVISED TABLE 08-3
 DELINEATED STREAMS WITHIN AMENDED PREFERRED ROUTE SURVEY CORRIDOR

Stream Report Name	Route	Figure	Flow Regime	Bankfull Width (feet)	Maximum Pool Depth (in)	Form ^a	Score	Class/ Narrative Rating	Crossed by Centerline	Length (feet) within Survey Corridor	Length (feet) within Proposed Maintained Right-of-way (100 feet) ^b
Stream 01	Preferred	08-1A	Intermittent	2.5	2	HHEI	18	Modified Class 1	Yes No	414 405	266 237
Stream 02	Preferred	08-1A	Ephemeral	2	1.5	HHEI	30	Modified Class 2	No	71	0 1
Stream 05	Preferred	08-1B	Perennial	3	2	HHEI	34	Modified Class 2	Yes	234 230	100
Stream 06	Preferred	08-1B	Ephemeral	5	0	HHEI	27	Modified Class 1	Yes	448 164	63 106
Stream 07	Preferred	08-1B,C	Perennial	6.5	24	QHEI	42.5	Fair Warmwater	Yes	3644 4,160	2924 3,243
Stream 09	Preferred	08-1C,D	Perennial	16	34	QHEI	51.5	Fair Warmwater	Yes	3470 3,094	4726 1,487
Stream 10	Preferred	08-1C	Ephemeral	2	0.5	HHEI	11	Modified Class 1	Yes	439 137	67 65
Stream 11	Preferred	08-1C	Ephemeral	1.5	1	HHEI	21	Modified Class 1	No	92	42 15
Stream 12	Preferred	08-1C	Ephemeral	1.5	2	HHEI	18	Modified Class 1	Yes	222 219	437 138
Stream 13	Preferred	08-1C,D	Intermittent	2.5	12	HHEI	38	Modified Class 2	Yes	228 225	111
Stream 14	Preferred	08-1D	Intermittent	2.5	4	HHEI	43	Modified Class 2	Yes	235 204	404 101
Stream 15	Preferred	08-1D	Ephemeral	1	1	HHEI	15	Modified Class 1	No Yes	88 148	35 95
Stream 16	Preferred	08-1D,E,F	Ephemeral	2	0.5	HHEI	18	Modified Class 1	Yes	234 223	126
Stream 17	Preferred	08-1D	Ephemeral	2	0.5	HHEI	19	Modified Class 1	No	457 146	79 67
Stream 18	Preferred	08-1E,F	Ephemeral	3	1	HHEI	43	Class 2	Yes	207 196	404 102
Stream 19	Preferred	08-1E,F	Ephemeral	3	1	HHEI	24	Class 1	Yes	255 256	474 206
Stream 20	Preferred	08-1E,F	Perennial	6	18	QHEI	48	Fair Warmwater	Yes	245 243	142
Stream 22	Preferred	08-1E,F	Ephemeral	1	1	HHEI	27	Modified Class 1	Yes	215	109
Stream 23	Preferred	08-1E,F	Ephemeral	1.5	0	HHEI	19	Modified Class 1	Yes	548 551	244 208
Stream 24	Preferred	08-1E,F,G	Ephemeral	2.5	0	HHEI	38	Class 2	Yes	355 353	230 215
Stream 25	Preferred	08-1E,F,G	Ephemeral	2	0	HHEI	12	Class 1	No	314 291	3 0
Stream 26	Preferred	08-1E,F,G	Ephemeral	2	0	HHEI	22	Modified Class 1	Yes	207	443 116
Stream 27	Preferred	08-1E,F,G	Ephemeral	4	0.5	HHEI	36	Class 2	Yes	304 299	153
Stream 28	Preferred	08-1E,F,G	Ephemeral	2	0	HHEI	23	Class 2	No	14	0

Stream 29	Preferred	08-1E,F,G	Ephemeral	1.5	0	HHEI	18	Class 1	Yes	155	405 <u>106</u>
Stream 30	Preferred	08-1G	Intermittent	3	3	HHEI	48	Modified Class 2	Yes	674 <u>675</u>	329 <u>316</u>
Stream 31	Preferred	08-1G	Intermittent	2	1.5	HHEI	27	Modified Class 1	Yes	437 <u>138</u>	86
Stream 32	Preferred	08-1G	Ephemeral	1	1	HHEI	28	Modified Class 1	Yes	197	197
Stream 33	Preferred	08-1G	Intermittent	1.5	1.5	HHEI	27	Modified Class 1	Yes	248 <u>250</u>	483 <u>185</u>
Stream 34	Preferred	08-1G	Ephemeral	1.5	0	HHEI	14	Modified Class 1	No	7 <u>11</u>	0
Stream 35	Preferred	08-1G	Ephemeral	0.5	0	HHEI	15	Modified Class 1	No	68	68
Stream 36	Preferred	08-1G	Ephemeral	0.5	0	HHEI	26	Modified Class 1	No	364	245 <u>225</u>
Stream 37	Preferred	08-1G	Intermittent	3	3	HHEI	30	Modified Class 2	No	248 <u>244</u>	0
Stream 38	Preferred	08-1G,H	Intermittent	1.5	1	HHEI	23	Modified Class 1	Yes	346 <u>311</u>	436 <u>134</u>
Stream 39	Preferred	08-1G,H	Intermittent	3.5	2	HHEI	33	Modified Class 2	Yes	245 <u>243</u>	116
Stream 40	Preferred	08-1G,H	Intermittent	2.5	1.5	HHEI	24	Modified Class 1	Yes	474 <u>175</u>	405 <u>106</u>
Stream 42	Preferred	08-1H	Intermittent	2.9	1	HHEI	17	Modified Class 1	Yes	100	83 <u>73</u>
Stream 43	Preferred	08-1H	Ephemeral	1.5	1	HHEI	21	Modified Class 1	Yes	204 <u>288</u>	114
Stream 44	Preferred	08-1H,I	Perennial	3	24	QHEI	53.5	Fair Warmwater	Yes	4235 <u>4,654</u>	2470
Stream 45	Preferred	08-1H	Intermittent	1.5	1	HHEI	23	Modified Class 1	Yes	70	68 <u>58</u>
Stream 46	Preferred	08-1H	Intermittent	1.5	3	HHEI	30	Modified Class 2	Yes	422 <u>121</u>	71 <u>69</u>
Stream 47	Preferred	08-1H	Ephemeral	1	1	HHEI	22	Modified Class 1	No	29	29 <u>28</u>
Stream 48	Preferred	08-1I	Intermittent	1	1	HHEI	37	Modified Class 2	Yes	474 <u>172</u>	104
Stream 49	Preferred	08-1I	Ephemeral	1	0	HHEI	12	Modified Class 1	Yes	220 <u>216</u>	107
Stream 50	Preferred	08-1I	Ephemeral	1	0	HHEI	15	Modified Class 1	No	64 <u>63</u>	4 <u>6</u>
Stream 51	Preferred	08-1I	Ephemeral	1	0	HHEI	14	Modified Class 1	No	424 <u>123</u>	62 <u>66</u>
Stream 52	Preferred	08-1I	Intermittent	1	1	HHEI	15	Modified Class 1	Yes	272 <u>298</u>	466 <u>157</u>
Stream 53	Preferred	08-1I	Perennial	20	48	QHEI	46	Fair Warmwater	Yes	229 <u>224</u>	125
Stream 54	Preferred	08-1I	Ephemeral	1	0	HHEI	10	Modified Class 1	No	40	2
Stream 55	Preferred	08-1I	Ephemeral	4	0	HHEI	32	Modified Class 2	Yes	334 <u>329</u>	468 <u>169</u>
Stream 56	Preferred	08-1I	Ephemeral	1.5	0	HHEI	14	Modified Class 1	Yes	424 <u>123</u>	72
Stream 57	Preferred	08-1I,J	Ephemeral	1.5	0	HHEI	11	Modified Class 1	No	44 <u>20</u>	0
Stream 58	Preferred	08-1I,J	Ephemeral	1.5	0	HHEI	13	Modified Class 1	Yes	339 <u>350</u>	263 <u>266</u>
Stream 59	Preferred	08-1J,K	Intermittent	2	2	HHEI	17	Modified Class 1	Yes	164	454 <u>164</u>

Stream 60	Preferred	08-1K	Intermittent	3	14	HHEI	47	Modified Class 2	Yes	1383 <u>1,369</u>	820 <u>833</u>
Stream 61	Preferred	08-1K	Ephemeral	3	1	HHEI	23	Modified Class 1	No	82 <u>80</u>	34 <u>33</u>
Stream 62	Preferred	08-1K	Ephemeral	1	0	HHEI	12	Modified Class 1	Yes	129	115 <u>117</u>
Stream 63	Preferred	08-1K,L	Intermittent	2	3	HHEI	47	Modified Class 2	Yes	209 <u>202</u>	100
Stream 66	Preferred	08-1K,L	Intermittent	1	2	HHEI	27	Modified Class 1	Yes	205	102
Stream 67	Preferred	08-1K,L	Intermittent	4	2	HHEI	35	Modified Class 2	Yes	245 <u>219</u>	405 <u>104</u>
Stream 68	Preferred	08-1L	Ephemeral	2.5	0	HHEI	23	Modified Class 1	Yes	247 <u>218</u>	100
Stream 69	Preferred	08-1M	Intermittent	5	9	HHEI	62	Modified Class 2	Yes	609 <u>661</u>	244 <u>223</u>
Stream 70	Preferred	08-1M	Perennial	22	48	QHEI	49.5	Fair Warmwater	Yes	234 <u>283</u>	448 <u>117</u>
Stream 74	Preferred	08-1M	Ephemeral	2	0	HHEI	44	Modified Class 1	No	303	303
Stream 72	Preferred	08-1M,N	Ephemeral	2.5	6	HHEI	39	Modified Class 2	No	839	766
Stream 73	Preferred	08-1N	Ephemeral	2	2	HHEI	16	Modified Class 1	Yes	463 <u>154</u>	104
Stream 74	Preferred	08-1N	Perennial	25	48	QHEI	59	Fair Warmwater	Yes	808 <u>776</u>	444 <u>442</u>
Stream 75a	Preferred	08-1N,O	Ephemeral	2	2	HHEI	24	Modified Class 1	No	445 <u>109</u>	0
Stream 75b	Preferred	08-1N,O	Ephemeral	2	1	HHEI	18	Modified Class 1	No	493 <u>191</u>	43 <u>10</u>
Stream 76	Preferred	08-1N,O	Ephemeral	1	3	HHEI	27	Modified Class 1	No	472 <u>163</u>	0
Stream 77	Preferred	08-1P	Ephemeral	1	0	HHEI	15	Class 1	No	409 <u>100</u>	39 <u>36</u>
Stream 78	Preferred	08-1P	Intermittent	2	2.5	HHEI	36	Modified Class 2	Yes	304 <u>297</u>	437 <u>136</u>
Stream 79	Preferred	08-1P	Intermittent	1.5	1	HHEI	20	Modified Class 1	Yes	225 <u>223</u>	113
Stream 80	Preferred	08-1P	Ephemeral	1	0.25	HHEI	19	Modified Class 1	Yes	88	88
Stream 81	Preferred	08-1D	Ephemeral	2	2	HHEI	29	Modified Class 1	Yes	213	158
Stream 83	sPreferred	08-1J	Ephemeral	1	1	HHEI	26	Modified Class 1	No	35	0

Form Used*: QHEI = Qualitative Habitat Evaluation Index, HHEI = Headwater Habitat Evaluation Index
 Linear Feet Crossed by Centerline (feet)*: NC = Not Crossed by proposed centerline
 Linear Feet within Proposed Maintained ROW*: "0" indicates the stream is not within proposed ROW

TABLE 08-4
STREAMS WITHIN 100 FEET OF THE ALTERNATE ROUTE

Stream Report Name	Route	Figure	Flow Regime	Bankfull Width (feet)	Maximum Pool Depth (in)	Form ^a	Score	Class/ Narrative Rating	Crossed by Centerline	Length (feet) within 200-foot Survey Corridor	Length (feet) within Proposed Maintained Right-of-way (100 feet) ^b
Stream 01	Alternate	08-1Q	Intermittent	2.5	2	HHEI	18	Modified Class 1	No	251	104
Stream 02	Alternate	08-1Q	Ephemeral	2	1.5	HHEI	30	Modified Class 2	No	82	49
Stream 05	Alternate	08-1R	Perennial	3	2	HHEI	34	Modified Class 2	Yes	227	153
Stream 06	Alternate	08-1R	Ephemeral	5	0	HHEI	27	Modified Class 1	Yes	107	51
Stream 07	Alternate	08-1R,S	Perennial	6.5	24	QHEI	42.5	Fair Warmwater	Yes	3532	2351
Stream 08	Alternate	08-1R	Intermittent	2	3	HHEI	30	Modified Class 2	No	36	0
Stream 09	Alternate	08-1S,T	Perennial	16	34	QHEI	51.5	Fair Warmwater	Yes	2823	875
Stream 10	Alternate	08-1S	Ephemeral	2	0.5	HHEI	11	Modified Class 1	Yes	139	116
Stream 11	Alternate	08-1S	Ephemeral	1.5	1	HHEI	21	Modified Class 1	No	41	0
Stream 12	Alternate	08-1S	Ephemeral	1.5	2	HHEI	18	Modified Class 1	Yes	228	121
Stream 13	Alternate	08-1S,T	Intermittent	2.5	12	HHEI	38	Modified Class 2	Yes	212	108
Stream 14	Alternate	08-1T	Intermittent	2.5	4	HHEI	43	Modified Class 2	Yes	187	101
Stream 15	Alternate	08-1T	Ephemeral	1	1	HHEI	15	Modified Class 1	No	88	65
Stream 16	Alternate	08-1T,U,V	Ephemeral	2	0.5	HHEI	18	Modified Class 1	Yes	258	114
Stream 17	Alternate	08-1T	Ephemeral	2	0.5	HHEI	19	Modified Class 1	No	90	5
Stream 18	Alternate	08-1T,U,V	Ephemeral	3	1	HHEI	43	Class 2	Yes	170	101
Stream 19	Alternate	08-1T,U,V	Ephemeral	3	1	HHEI	24	Class 1	Yes	256	156
Stream 20	Alternate	08-1U,V	Perennial	6	18	QHEI	48	Fair Warmwater	Yes	238	116
Stream 22	Alternate	08-1U,V	Ephemeral	1	1	HHEI	27	Modified Class 1	Yes	225	109

Stream 23	Alternate	08-1U,V	Ephemeral	1.5	0	HHEI	19	Modified Class 1	Yes	442	367
Stream 24	Alternate	08-1U,V,W	Ephemeral	2.5	0	HHEI	38	Class 2	Yes	306	36
Stream 25	Alternate	08-1U,V,W	Ephemeral	2	0	HHEI	12	Class 1	No	31	0
Stream 26	Alternate	08-1U,V,W	Ephemeral	2	0	HHEI	22	Modified Class 1	Yes	182	49
Stream 27	Alternate	08-1U,V,W	Ephemeral	4	0.5	HHEI	36	Class 2	Yes	222	121
Stream 29	Alternate	08-1U,V,W	Ephemeral	1.5	0	HHEI	18	Class 1	Yes	139	83
Stream 30	Alternate	08-1W	Intermittent	3	3	HHEI	48	Modified Class 2	Yes	454	211
Stream 31	Alternate	08-1W	Intermittent	2	1.5	HHEI	27	Modified Class 1	Yes	168	102
Stream 32	Alternate	08-1W	Ephemeral	1	1	HHEI	28	Modified Class 1	Yes	197	65
Stream 33	Alternate	08-1W	Intermittent	1.5	1.5	HHEI	27	Modified Class 1	Yes	296	179
Stream 34	Alternate	08-1W	Ephemeral	1.5	0	HHEI	14	Modified Class 1	No	74	0
Stream 35	Alternate	08-1W	Ephemeral	0.5	0	HHEI	15	Modified Class 1	No	68	10
Stream 36	Alternate	08-1W	Ephemeral	0.5	0	HHEI	26	Modified Class 1	No	267	0
Stream 37	Alternate	08-1W	Intermittent	3	3	HHEI	30	Modified Class 2	No	22	0
Stream 38	Alternate	08-1W,X	Intermittent	1.5	1	HHEI	23	Modified Class 1	Yes	264	154
Stream 39	Alternate	08-1W,X	Intermittent	3.5	2	HHEI	33	Modified Class 2	Yes	227	111
Stream 40	Alternate	08-1W,X	Intermittent	2.5	1.5	HHEI	24	Modified Class 1	Yes	207	105
Stream 42	Alternate	08-1X	Intermittent	2.9	1	HHEI	17	Modified Class 1	No	20	0
Stream 44	Alternate	08-1X,Y	Perennial	3	24	QHEI	53.5	Fair Warmwater	Yes	3047	2040
Stream 45	Alternate	08-1X	Intermittent	1.5	1	HHEI	23	Modified Class 1	No	68	17
Stream 46	Alternate	08-1X	Intermittent	1.5	3	HHEI	30	Modified Class 2	Yes	147	101
Stream 47	Alternate	08-1X	Ephemeral	1	1	HHEI	22	Modified Class 1	No	29	29
Stream 48	Alternate	08-1Y	Intermittent	1	1	HHEI	37	Modified Class 2	Yes	138	86
Stream 49	Alternate	08-1Y	Ephemeral	1	0	HHEI	12	Modified Class 1	Yes	191	113
Stream 50	Alternate	08-1Y	Ephemeral	1	0	HHEI	15	Modified Class 1	No	28	0
Stream 51	Alternate	08-1Y	Ephemeral	1	0	HHEI	14	Modified Class 1	No	88	12
Stream 52	Alternate	08-1Y	Intermittent	1	1	HHEI	15	Modified Class 1	No	127	0

Stream 53	Alternate	08-1Y	Perennial	20	48	QHEI	46	Fair Warmwater	No	195	115
Stream 54	Alternate	08-1Y	Ephemeral	1	0	HHEI	10	Modified Class 1	No	40	40
Stream 55	Alternate	08-1Y	Ephemeral	4	0	HHEI	32	Modified Class 2	Yes	260	139
Stream 56	Alternate	08-1Y	Ephemeral	1.5	0	HHEI	14	Modified Class 1	Yes	124	108
Stream 57	Alternate	08-1Y,Z	Ephemeral	1.5	0	HHEI	11	Modified Class 1	No	38	13
Stream 58	Alternate	08-1Y,Z	Ephemeral	1.5	0	HHEI	13	Modified Class 1	No	354	202
Stream 59	Alternate	08-1Z,AA	Intermittent	2	2	HHEI	17	Modified Class 1	Yes	164	146
Stream 60	Alternate	08-1AA	Intermittent	3	14	HHEI	47	Modified Class 2	Yes	1218	649
Stream 61	Alternate	08-1AA	Ephemeral	3	1	HHEI	23	Modified Class 1	No	47	0
Stream 62	Alternate	08-1AA	Ephemeral	1	0	HHEI	12	Modified Class 1	Yes	129	77
Stream 63	Alternate	08-1AA,BB	Intermittent	2	3	HHEI	47	Modified Class 2	Yes	183	101
Stream 66	Alternate	08-1AA,BB	Intermittent	1	2	HHEI	27	Modified Class 1	Yes	178	104
Stream 67	Alternate	08-1AA,BB	Intermittent	4	2	HHEI	35	Modified Class 2	Yes	177	125
Stream 68	Alternate	08-1BB	Ephemeral	2.5	0	HHEI	23	Modified Class 1	Yes	167	100
Stream 69	Alternate	08-1CC	Intermittent	5	9	HHEI	62	Modified Class 2	No	671	184
Stream 70	Alternate	08-1CC	Perennial	22	48	QHEI	49.5	Fair Warmwater	No	357	116
Stream 73	Alternate	08-1DD	Ephemeral	2'	2	HHEI	16	Modified Class 1	Yes	152	99
Stream 74	Alternate	08-1DD	Perennial	25	48	QHEI	59	Fair Warmwater	Yes	731	452
Stream 75b	Alternate	08-1DD,EE	Ephemeral	2	1.5	HHEI	18	Modified Class 1	No	90	58
Stream 76	Alternate	08-1DD,EE	Ephemeral	1	3	HHEI	27	Modified Class 1	No	200	168
Stream 77	Alternate	08-1FF	Ephemeral	1	0	HHEI	15	Class 1	No	39	0
Stream 78	Alternate	08-1FF	Intermittent	2	2.5	HHEI	36	Modified Class 2	Yes	250	162
Stream 79	Alternate	08-1FF	Intermittent	1.5	1	HHEI	20	Modified Class 1	Yes	181	115
Stream 80	Alternate	08-1FF	Ephemeral	1	0.25	HHEI	19	Modified Class 1	Yes	88	61

Form Used^a : QHEI = Qualitative Habitat Evaluation Index, HHEI = Headwater Habitat Evaluation Index

Length within Proposed Maintained ROW^b : "0" indicates the wetland is not within proposed ROW

(d) **Lakes, Ponds, and Reservoirs:** No major lakes or reservoirs were observed along the survey corridor of the Amended Preferred or Alternate Routes, although the Amended Preferred and Alternate Routes cross the flood control pool area of Senecaville Lake. Aerial photography suggests that 21 ponds are located within 1,000 feet of the routes. ~~Two~~ One of these ponds (Pond 2) ~~were~~ was confirmed within 100 feet of the Amended Preferred and ~~two ponds~~ (Pond 1 and Pond 2) ~~were confirmed within 100 feet of the~~ Alternate Route during the field reconnaissance. Seneca Lake is located approximately 0.5-mile northwest of the Amended Preferred Route. Locations of ponds within 1,000 feet of the Amended Preferred Route and delineated ponds within 100 feet are identified on **Revised Figures 08-1A through 08-1P**.

Impacts to ponds and lakes are not anticipated by the construction, operation or maintenance of the proposed transmission line. Best Management Practices, including utilization of silt fencing, will be used as appropriate during construction to minimize runoff siltation.

(2) Delineation Result Mapping

Field delineated streams and wetlands within the survey corridor and proposed ROW are mapped on **Revised Figures 08-1A through 08-1P** for the Amended Preferred Route are summarized in **Revised Tables 08-1 and 08-3**, as discussed in Section 4906-5-08(B)(1).

(3) Probable Impact of Construction on Vegetation, Surface Waters, and Wetlands

(a) **Vegetation:** The potential impacts on woody and herbaceous vegetation along the Amended Preferred and Alternate Routes will be limited to clearing within the proposed transmission line ROW and potentially along access roads. However where required, trees adjacent to the proposed transmission line ROW that are dead, dying, diseased, leaning, significantly encroaching or prone to failure, may require clearing to allow for safe operation of the transmission line. Construction impacts to agricultural land within the existing transmission ROW is expected to be temporary in nature and limited to vehicle access and temporary lay down activities.

Approximately 50 feet of clearing on either side of the centerline will be required to be maintained along either the Amended Preferred or Alternate Route. Open areas were crossed when possible in the design of the facility. However, some forested areas will also need to be cleared. The Amended Preferred Route will require approximately ~~54.6~~ 48.0 acres of forest clearing, and the Alternate Route will require approximately 30.9 acres of forest clearing.

Clearing of potential Indiana bat roost trees, if any, will be restricted to occur only within the period from October 1st through March 31st to avoid any potential impact to summer tree-roosting bats. All vegetative waste (such as tree limbs and trunks) which is generated during the construction phase will be wind-rowed or chipped and disposed of appropriately.

(b) **Streams:** Text provided in the July 1, 2016 Application filing remains unchanged.

(c) **Wetlands:** Wetlands identified during the ecological survey are described in Revised Tables 08-1 and 08-2. New transmission line structure locations were selected to avoid wetland areas to the extent practical. Disturbance of soils in wetland areas during construction will be minimized. No fill material is planned to be placed in any wetland area along the Amended Preferred or Alternate Routes. Based on current design, it is anticipated that 44 6 structures will be placed in wetlands along the Amended Preferred Route. ~~Nine~~ Four of the structures will be placed within Wetland 10~~a~~, while one structure will be placed within Wetland 11, and one structure will be placed within Wetland 37 33. These areas contain existing single pole structures supporting the 69 kV line. Engineering constraints in the area eliminate the ability to avoid placing poles in the wetland without a major re-route that would likely require clearing new right-of-way where none currently exists. Where pole locations are within a wetland, they will be accessed using construction matting. No excavation other than the boring of a hole will be performed within the wetland. No fill will be placed in the wetlands. Wetland areas will be clearly staked prior to the commencement of any clearing in order to minimize incidental vehicle impacts. Other than the pole locations discussed, operation of heavy mechanized equipment is not planned within any identified wetland areas, although some construction equipment will need to cross wetland areas. Woody vegetation in wetlands will be hand-cut by chain saws, hydro-axes, or other non-mechanized techniques. When necessary rubber-wheeled vehicles, or vehicles equipped with go tracks, will be used to remove vegetation debris.

Construction access for clearing activities and installing the transmission line poles has been planned to minimize wetland crossings to the extent practical. Construction matting and other best management practices will be deployed to minimize these temporary disturbances, where found to be necessary. Where available, existing and regularly maintained access paths will be utilized during construction to minimize impacts to wetlands.

Care will be taken where wetlands are located to avoid or minimize filling and sedimentation, which could occur as a result of construction activities. Selective clearing will be required to remove woody vegetation in wetlands that might impede construction or interfere with operation of the transmission line.

Best Management Practices such as utilization of silt fences and construction matting will be implemented as required during construction to control sedimentation. Sedimentation potential at wetlands should be minimal due to the structure placement and the fact that construction equipment will only cross wetlands if necessary, and do so using construction matting.

(4) Probable Impact of Operation and Maintenance on Vegetation, Surface Waters, and Wetlands

Text provided in the July 1, 2016 Application filing remains unchanged.

(5) Mitigation Procedures

Text provided in the July 1, 2016 Application filing remains unchanged.

(C) **LITERATURE SURVEY OF THE PLANT AND ANIMAL LIFE POTENTIALLY AFFECTED BY THE FACILITY**

Text provided in the July 1, 2016 Application filing remains unchanged.

(D) **SITE GEOLOGY**

(1) **Local Geology**

Text provided in the July 1, 2016 Application filing remains unchanged.

(2) **Slopes and Soil Suitability for Foundation Construction**

Maps of slopes exceeding 12 percent (as estimated based on soil series maps) are provided on **Revised Figures 08-1A through 08-1P**. Approximately ~~44.5~~ 11.4 miles of the Amended Preferred and Alternate Routes (70-75%) cross areas mapped with slopes greater than 12 percent. In general, transmission line poles will be placed on the ridge tops to allow spanning of stream valleys and reduce the possibility that the line will interfere with vegetation where terrain is challenging. Poles will be placed on stable ridge tops rather than more unstable steep slopes, where feasible. Slope and soil mechanics will be carefully considered in the decision making process where access roads must be improved or constructed. In these areas, soils with the lowest slope and erosion characteristics will be used to construct access roads to the transmission pole locations.

During construction, AEP Ohio Transco will implement a Storm Water Pollution Prevention Plan (SWPPP) and associated BMPs as necessary to control erosion and sedimentation in areas with slopes exceeding 12 percent. Once construction is complete, soils will be revegetated and stabilized. As a result, no erosional impacts resulting from construction on slopes exceeding 12 percent are expected.

Soil associations that will be crossed by the Amended Preferred and Alternate Routes are shown on **Revised Figures 04-1A through 04-1G**. These soil associations include: Westmoreland-Dekalb-Wellston (OH122), Morristown-Lowell-Westmoreland (OH120), Elba-Guersey-Berks (OH147), Vandalia-Guernsey-Elba (OH149), and Lowell-Gilpin-Upshur (OH150) (U.S. Department of Agriculture [USDA], 1990). No soil conditions were found that would potentially limit construction of the proposed project.

To obtain further site-specific details on the suitability of the soils for foundation construction, AEP Ohio Transco will conduct detailed engineering design and geotechnical soil borings. Engineering design and geotechnical test drilling will likely be completed soon after the Project is certificated by OPSB and engineering plans and boring logs will be provided to the staff shortly thereafter.

At a minimum, geotechnical soil borings will provide the following information to be utilized for structure placement and foundation design engineering, as needed:

- (1) Subsurface Soil Properties
- (2) Static Water Level

- (3) Rock Quality Description
- (4) Percent Recovery
- (5) Depth and Description of Bedrock Contact

AEP Ohio Transco anticipates that foundations will only be required at some angle structures that will be ultimately determined during the engineering design. When required, foundations will be engineered based on the results of geotechnical soil boring and laboratory test results to ensure they are sited in locations considered suitable based on soil and rock properties and surface slope.

Once the transmission line is in place, disturbed areas will be stabilized and re-vegetated. No impacts or erosion hazards are expected. Maintenance activities that involve excavation around poles are anticipated to be extremely rare, but in these cases, standard measures will be implemented to prevent soil erosion and run off into any nearby streams and wetlands.

No special mitigation procedures are anticipated beyond standard erosion prevention measures which take place during any construction activity. BMPs consisting mainly of silt fences will be used when construction takes place adjacent to drainage channels, streams, and wetlands. A SWPPP will be generated for the certificated route and meeting the requirements of OEPA Permit No. OHC000005 will be followed for erosion and sedimentation control.

(E) ENVIRONMENTAL AND AVIATION COMPLIANCE INFORMATION

Text provided in the July 1, 2016 Application filing remains unchanged.

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Case No(s). 19-1068-EL-BTA

Summary: Application -In the Matter of the Application of AEP Ohio Transmission Company, Inc. for Amendment to the Certificate of Environmental Compatibility and Public Need for the Barnesville-Summerfield 138 kV Transmission Line Rebuild Project electronically filed by Ms. Christen M. Blend on behalf of AEP Ohio Transmission Company, Inc.