



**Dominion
Energy®**

**Application, Appendix,
DEQ Supplement, Routing
Study, Direct Testimony
and Exhibits of Virginia
Electric and Power
Company**

Before the State Corporation
Commission of Virginia

**230 kV Finneywood-Jeffress
Lines and Jeffress Switching
Station Conversion**

Application No. 325

Case No. PUR-2023-00088

Filed: May 24, 2023

Volume 2 of 3

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF
VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC TRANSMISSION FACILITIES

230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion

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Based on consultations with the Department of Environmental Quality ("DEQ"), Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") has developed this DEQ Supplement to facilitate review and analysis of the proposed Project by the DEQ and other relevant agencies.

1. Project Description

At the request of Old Dominion Electric Cooperative (“ODEC”), in order to provide service to Mecklenburg Electric Cooperative’s (“MEC”) delivery point (“DP”) for MEC to provide service to one of its data center customers in Mecklenburg County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation (“NERC”) Reliability Standards, Dominion Energy Virginia proposes in Mecklenburg County, Virginia, to:

- Construct two new approximately 18.3-mile 230 kV single circuit lines on new right-of-way from the future 500-230 kV Finneywood Switching Station (the “Finneywood Station”)¹ to the newly converted Jeffress 230 kV Switching Station, resulting in 230 kV Finneywood-Jeffress Line #2299 and 230 kV Finneywood-Jeffress Line #2302 (the “Finneywood-Jeffress Lines”). The Finneywood-Jeffress Lines will be constructed on new permanent 120-foot-wide right-of-way supported primarily by two side-by-side single circuit weathering steel monopoles.² The Finneywood-Jeffress Lines will be constructed utilizing three-phase twin-bundled 768.2 ACSS/TW type conductor with a summer transfer capability of 1,573 MVA.
- Convert the Company’s future Jeffress 115 kV Switching Station (“Jeffress 115 kV Station”)³ located adjacent to Occoneechee State Park south of Highway 58 near

¹ The Finneywood Station is proposed for State Corporation Commission (“Commission”) approval as part of the Company’s ongoing proceeding in Case No. PUR-2022-00175. See *Application of Virginia Electric and Power Company for Approval and Certification of Electric Transmission Facilities: Butler Farm to Clover 230 kV Line, Butler Farm to Finneywood 230 kV Line and Related Projects*, Case No. PUR-2022-00175 (filed Oct. 21, 2022) (hereinafter, the “Butler Farm Proceeding”). The Company requested a final order by June 1, 2023, in the Butler Farm Proceeding, and proposed an in-service date for the Finneywood Station of July 1, 2025, pending the Commission’s approval in that case. See Attachment I.A.6 to the Appendix. As the energization date occurs after the Company files its Application for this Project, the Company refers to this station as the “future Finneywood Station” for purposes of this Appendix.

² For the majority of the Finneywood-Jeffress Lines, the new conductors will be supported by two single circuit weathering steel monopoles installed side-by-side within the proposed 120-foot-wide right-of-way transmission corridor. The Company is proposing to install two single circuit structures instead of one double circuit structure at the request of MEC’s data center customer. An additional 20 feet of right-of-way (120 feet for two single circuit structures installed side-by-side versus 100 feet for one double circuit structure) is required to install the two single circuit monopoles. The cost differential associated with installing two single circuit structures and the additional 20 feet of right-of-way will be collected from MEC through an excess facilities charge, which also will include charges for additional switching station equipment MEC requested at the converted Jeffress 230 kV Station.

³ The future Jeffress 115 kV Station is being constructed to provide bridging power to MEC’s DP (the “Lakeside DP”) in order for MEC to provide requested service to its data center customer until such time as the proposed Project can be completed. The Company will construct the future Jeffress 115 kV Station by cutting the Company’s existing 115 kV Buggs Island-Chase City Line #36. Note that the Company’s Spanish Grove Switching Station is anticipated to be energized in August 2023, at which time, Line #36 will be renamed Buggs Island-Spanish Grove; however, for ease of reference in the Appendix, it will be referred to simply as Line #36 and Spanish Grove Switching Station will

Clarksville, Virginia, in Mecklenburg County to 230 kV operation (“Jeffress 230 kV Station”).

- Perform minor station-related work at the future Finneywood Station to terminate the new Finneywood-Jeffress Lines.

The Finneywood-Jeffress Lines, the Jeffress 230 kV Station conversion and related station work are collectively referred to as the “Project.”

The Project is necessary to assure that Dominion Energy Virginia can provide requested service to MEC’s Lakeside DP to serve MEC’s data center customer in Mecklenburg County, Virginia (“Lakeside Campus”), to maintain reliable electric service for overall load growth in the Project area, and to comply with mandatory NERC Reliability Standards for transmission facilities and the Company’s mandatory planning criteria (“Planning Criteria”).

The switching station equipment used to interconnect the future Jeffress 115 kV Station with the existing transmission system will be the same as the 230 kV switching station equipment necessary for the conversion of the Jeffress Station to 230 kV. Accordingly, the converted Jeffress 230 kV Station will reuse the initially constructed future Jeffress 115 kV Station equipment with the 230 kV breakers in a half bus arrangement. The conversion will require the installation of an additional 24 arresters, ten 230 kV 4000 ampere (“amp” or “A”) breakers, and twenty 230 kV 4000A switches. The Jeffress 230 kV Station will be designed to provide six 230 kV feeds to serve MEC’s Lakeside DP. The conversion of the station to 230 kV will not require any additional acreage.

For this Project, the Company requested the services of Environmental Resources Management (“ERM”) to help collect information within the study area, identify potential routes, perform a routing analysis comparing the route alternatives, and document the routing efforts in an Environmental Routing Study. After investigating various electrical solutions, the Company determined that two new circuits, located in the same right-of-way are required for the Project.

The Company identified an approximately 18.3-mile overhead proposed route for the Finneywood-Jeffress Lines (“Route 4” or the “Proposed Route”), as well as two overhead alternative routes (“Alternative Route 3” and “Alternative Route 5”), all of which the

appear on maps as a future switching station. To construct the future Jeffress 115 kV Station, the Company will cut Line #36 near Structure #36/1189 and loop two temporary 115 kV single circuit lines approximately 3.0 miles into and out of the future Jeffress 115 kV Station. The future Jeffress 115 kV Switching Station is anticipated to be energized by January 1, 2025 (*i.e.*, after the filing of this Application); accordingly, the Company refers to this station as the “future Jeffress 115 kV Station” for purposes of this Appendix. See Attachment I.A.5 of the Appendix. Once the future Jeffress 115 kV Station is converted from 115 kV to 230 kV as part of the proposed Project, the Company will reconnect Line #36 near Structure #36/1189 and remove the temporary 115 kV lines. See Attachment I.A.7 of the Appendix. The future Jeffress 115 kV Station and related 115 kV temporary lines are not considered a component of the Project; therefore, the associated costs are not included in the total Project costs.

Company is proposing for Commission consideration and notice. Discussion of the Proposed and Alternative Routes, as well as other overhead routes that the Company studied, but ultimately rejected, is provided in Section II of the Appendix and in Sections 2.4 and 2.5 of the Environmental Routing Study included with the Application. A detailed description of each route for the Project is provided below.

Proposed Route (Route 4)

This route would construct two side-by-side overhead single circuit 230 kV lines approximately 18.3 miles from the future Finneywood Station to the converted Jeffress 230 kV Station.

Starting at the future Finneywood Station, the Proposed Route (Route 4) heads northwest for about 0.2 mile to an intersection with the Company's existing right-of-way for Line #556. The route then heads east for about 0.9 mile paralleling the south side of the existing transmission corridor, with a crossing of Highway 49 at approximate milepost ("MP") 1.0. The route next turns south and continues along a greenfield alignment for about 3.4 miles, passing northeast of Chase City. This segment crosses the Company's existing right-of-way for Line #98 at approximate MP 2.1, Highway 47 at approximate MP 4.0, and the Company's existing right-of-way for Line #40 at approximate MP 4.6. After crossing Line #40, the route continues southeast for about 0.5 mile then south/southwest for 1.6 miles, intersecting Country Club Drive at approximate MP 5.2, the Company's existing Line #38 right-of-way at approximate MP 5.7, and Cemetery Road at approximate MP 5.9.

Just south of the crossing of an existing Transcontinental Gas Pipeline Company ("Transco") natural gas pipeline corridor, the route turns and heads south for about 2.1 miles, and then southwest for about 3.4 miles, crossing Parson's Road at MP 8.2, Highway 92 at MP 8.8, and Red Oak Lane at MP 10.9. At this point, the route turns slightly west/southwest for 4.5 miles, intersecting Skipwith Road at approximate MP 13.6 and Townes Road at approximate MP 15.3. The route then turns south for 0.7 mile towards Highway 58 near the unincorporated community of Jeffress. At approximate MP 17.4, the route turns and heads south/southeast for about 0.5 mile, crossing the highway at approximate MP 17.7. The route then turns and continues southwest for about 0.4 mile, terminating at the converted Jeffress 230 kV Station.

Alternative Route 3

This route would construct two side-by-side overhead single circuit 230 kV lines approximately 18.5 miles from the future Finneywood Station to the converted Jeffress 230 kV Station.

Alternative Route 3 follows the same alignment as the Proposed Route for the first 4.7 miles from the future Finneywood Station to a point just south of the Company's existing right-of-way for Line #40. At that point, Alternative Route 3 turns to the southwest (away from the Proposed Route) and continues for 2.2 miles, crossing Country Club Drive at approximate MP 5.1, the Company's existing right-of-way for Lines #38 and

#137 at approximate MP 5.4, Cemetery Road at approximate MP 5.8, and Butchers Creek at approximate MP 6.5.

From there, Alternative Route 3 turns and continues to the west/southwest for about 0.8 mile, crossing Highway 92 at approximate MP 7.2. The route then heads south for about 0.8 mile paralleling the western edge of the Ward Burton Wildlife Foundation Preserve. At approximate MP 8.5, the alignment shifts to the south/southwest and continues for about 4.0 miles, intersecting Esnon Road at approximate MP 9.1 and Red Oak Lane at approximate MP 11.3. The route intersects the Proposed Route at approximate MP 12.5, and from there follows the same alignment as the Proposed Route for the remaining 5.9 miles to the converted Jeffress 230 kV Station.

Alternative Route 5

This route would construct two side-by-side overhead single circuit 230 kV lines approximately 19.2 miles from the future Finneywood Station to the converted Jeffress 230 kV Station.

Alternative Route 5 follows the same alignment as the Proposed Route and then Alternative Route 3 for the first 6.8 miles from the Finneywood Station to a point just east of Highway 92. From there, Alternative Route 5 turns west (away from Alternative Route 3 which heads southwest) to parallel the north side of an existing Transco natural gas pipeline corridor for about 1.1 miles, crossing Highway 92 and the Norfolk Southern Railroad at approximate MPs 7.3 and 7.8, respectively. The route then meanders to the southwest for about 1.6 miles, including a 0.9-mile-long segment adjacent to the north side of Butler Farm Road between approximate MPs 8.6 and 9.5.

At this point, Alternative Route 5 turns south/southwest for 2.9 miles to MP 12.4, intersecting Hilltop Drive at MP 10.1, New Hope Road at MP 11.2, and Hanford Road at MP 12.2. The route then turns slightly to the south/southwest and south/southeast for 2.5 miles, crossing Park Side Road at MP 13.4, Middle School Road at MP 14.7, Wilbourne Road at MP 14.8 and the Norfolk Southern Railroad at MP 14.9. After crossing the railroad, the route turns southwest and parallels the south side of the railroad for 1.6 miles. Alternative Route 5 then turns south for 1.0 mile, crossing Townes Road at MP 16.9. The route intersects Alternative Route 3 at MP 17.6, and from here follows the same alignment as Alternative Route 3 for the remaining 1.6 miles to the converted Jeffress 230 kV Station.

2. Environmental Analysis

The Company solicited comments from all relevant state and local agencies about the proposed Project in letters sent on April 18 and 20, 2023.⁴ Copies of these letters are included as Attachment 2. The DEQ responded to the Company's request for the proposed Project in an email dated May 5, 2023, (see Attachment 2.1) attaching the agency's Scoping Response (see Attachment 2.2).

A. Air Quality

For the Project, the Company will control fugitive dust during construction in accordance with DEQ regulations. During construction, if the weather is dry for an extended period, there will be airborne particles from the use of vehicles and equipment within the right-of-way. However, minimal earth disturbance will take place and vehicle speed, which is often a factor in airborne particulate, will be kept to a minimum. Erosion and sedimentation control is addressed below in Section 2.H. Equipment and vehicles that are powered by gasoline or diesel motors will be used during the construction of the line so there will be exhaust from those motors. Exhaust from those motors will result in minimal air pollution.

Tree clearing would be required for a significant portion of the routes and portions of the 120-foot-wide right-of-way for the Proposed and Alternative Routes. The Company does not expect to burn cleared material, but, if necessary, the Company will coordinate with the responsible locality to obtain permits, comply with any conditions set forth by the locality, or take actions as otherwise set forth in the Company's right-of-way easements. The Company's tree clearing methods are described in Section 2.L.

B. Water Source

(No water source is required for transmission lines so this discussion focuses on waterbodies that will be crossed by the proposed transmission lines.)

On behalf of the Company, ERM identified and mapped waterbodies in the vicinity of the routes using publicly available geographic information system ("GIS") databases, U.S. Geological Survey ("USGS") National Hydrography Dataset ("NHD"), ESRI World Topographic Map (2023), and recent (2021) digital aerial photography. All route alternatives utilize an overhead configuration that would span waterbodies; no transmission structures are planned to be installed within waterbodies. All Proposed and Alternative Routes for the Project, as defined above, cross perennial and intermittent waterbodies (rivers, streams, tributaries, and open water features).

The distance between transmission line structures proposed by Dominion Energy Virginia

⁴ In reviewing the agency letters when preparing the DEQ Supplement, the Company discovered that a letter addressed to the agencies was erroneously dated August 18, 2022. The letter dated August 18, 2022, however, was sent via email with all of the other agency letters on April 20, 2023.

would likely be adequate to span the waterbodies identified along the Proposed and Alternative Routes. Tree clearing would be required within forested riparian areas at these crossing locations. All routes would likely have an effect on surface waters along these routes due to the removal of forested riparian areas adjacent to streams.

According to the U.S. Army Corps of Engineers (“Corps”) documentation, no waters considered navigable under Section 10 of the Rivers and Harbors Act are crossed by the Proposed or Alternative Routes for the Project. Waterbodies in the vicinity of the Project routes are shown on Attachment 2 of the Wetland and Waterbody Desktop Summary for the Project included in Attachment 2.D.1 described below.

Proposed Route (Route 4)

Based on ERM’s review of the data sources described above, the Proposed Route crosses 31 NHD-mapped waterbodies, including 8 perennial waterbodies, 20 intermittent waterbodies, and 3 lakes/ponds. Perennial and named intermittent stream and lake/pond crossings include:

- An unnamed perennial tributary to Finneywood Creek at approximate MP 0.3
- Perennial Horsepen Creek at approximate MP 1.5
- An unnamed perennial tributary to Butcher Creek at approximate MP 7.5
- Perennial Butcher Creek at approximate MP 10.0
- Perennial Rocky Branch between MPs 11.0 and 11.1
- An unnamed perennial tributary to Butcher Creek between MP 11.8 and 11.9
- An unnamed perennial tributary to Butcher Creek at approximate MP 12.8
- Open waterbody features at between MPs 13.6 and 13.7, between MPs 13.8 and 13.9, between MP 14.0 and 14.1, at approximate MP 14.7, and between MPs 15.1 and 15.2
- An intermittent segment of Panhandle Creek between MPs 18.2 and 18.3

Alternative Route 3

Based on ERM’s review of the data sources described above, Alternative Route 3 crosses a total of 37 NHD-mapped waterbodies, including 8 perennial waterbodies, 26 intermittent waterbodies, and 3 lakes/ponds. Crossings of waterbodies for Alternative Route 3 are the same as those described for the Proposed Route from MPs 0.0 to 4.6 and from MP 12.4 to the converted Jeffress 230 kV Station (Alternative Route 3 MP 18.5). Between MPs 4.6 and 12.4, perennial and named intermittent stream and open waterbody feature crossings include:

- Open waterbody features at approximate MPs 5.5 and 5.7
- Perennial Butcher Creek between MPs 6.4 and 6.5

- Unnamed perennial tributaries to Butcher Creek at approximate MP 9.6 and between MPs 10.1 and 10.2
- An unnamed perennial tributary to Rocky Branch between MPs 11.0 and 11.1

Alternative Route 5

Based on ERM's review of the data sources described above, Alternative Route 5 crosses 34 NHD-mapped waterbodies, including 7 perennial waterbodies, 26 intermittent waterbodies, and 1 lake/pond. Crossings of waterbodies are the same as those described for the Proposed Route from MP 0 to 4.6, and from 17.6 to the converted Jeffress 230 kV Station at MP 19.1. Between MPs 4.6 and 19.1, perennial and named intermittent stream and open waterbody feature crossings include:

- Perennial Butcher Creek at approximate MP 6.4
- An open waterbody at approximate MP 8.6
- Unnamed, perennial tributaries to Little Bluestem Creek at approximate MPs 10.5 and 10.6 and at approximate MP 11.0
- An open waterbody feature between MPs 11.1 and 11.2
- Perennial Popes Creek between MPs 13.7 and 13.8
- An intermittent segment of Sandy Creek at approximate MP 16.1
- Perennial Sandy Creek at approximate MP 17.4

During construction, waterbodies will be maintained for proper drainage using culverts and/or other crossing devices, as needed, according to the Company's standard policies. Where clearing of trees and/or woody shrubs is required, clearing within 100 feet of a stream will be conducted by hand. Vegetation will be at or slightly above ground level, and stumps will not be grubbed. To protect waterways from soil erosion and sedimentation during construction, the Company will use sediment barriers along waterways and steep slopes. If a section of line cannot be accessed from existing roads, the Company may need to install a culvert or temporary bridge to cross small streams. In such cases, temporary fill material may be required that would be placed on erosion control fabric and removed when work is completed, returning the surface to original contours.

Section 28.2-1203 of the Code of Virginia recently was amended by the Virginia General Assembly through the passage of House Bill 2181 ("HB 2181"), which was signed into law by Governor Glenn Youngkin, effective July 1, 2023.⁵ With the passage of HB 2181, the Virginia Marine Resources Commission ("VMRC") will no longer have jurisdiction

⁵ See Chapter 258 of the 2023 Session of the Virginia Acts of Assembly (effective July 1, 2023) available at <https://lis.virginia.gov/cgi-bin/legp604.exe?231+ful+CHAP0258>.

over non-tidal waters with a drainage area greater than 5.0 square miles. This permitting authority will be transitioned to the DEQ. The Company is actively monitoring this transition of jurisdiction. To date, no guidance on the DEQ process or on the existing VMRC permits has been released. The Company will actively monitor this regulatory change and pursue the required permits as needed for this Project at the time of permitting.

The Company solicited comments from the Corps and the VMRC regarding the proposed Project on April 20, 2023.

C. Discharge of Cooling Waters

No discharge of cooling waters is associated with the Project.

D. Tidal and Non-tidal Wetlands

No tidal wetlands were identified within the Project study area. Non-tidal wetlands are summarized below.

On behalf of the Company, ERM identified wetlands along the Proposed and Alternative Routes using remote sensing data sources to conduct an offsite desktop wetland delineation. A copy of ERM's Wetland and Waterbody Desktop Summary for the Project is included in Attachment 2.D.1. The sources for this desktop summary include publicly available GIS databases, the National Wetland Inventory ("NWI") Online Maps from the U.S. Fish and Wildlife Service ("USFWS"), the USGS National Hydrography Dataset, soils data from the U.S. Department of Agriculture-Natural Resources Conservation Service Soil Survey Geographic database, ESRI World Topographic Map (2023) National Agricultural Imagery Program Digital Ortho-Rectified Natural Color and Infrared Images, and recent (2021) digital aerial photography.

ERM did not field delineate wetlands along the routes. An infield wetland delineation will be completed for the approved route alignment selected by the Commission upon the Company receiving the final order.

All wetlands will require protective matting to be installed to support construction vehicles, equipment, and materials during construction. While most wetlands are anticipated to be spanned with only temporary construction impacts, permanent impacts would include any necessary structure placement within wetlands and clearing and conversion of forested wetlands to scrub-shrub or emergent types after construction is complete. Vegetation will be permitted to re-establish and maintain right-of-way heights, consistent with open meadow and/or shrub habitat, after construction is completed.

ERM used a stepwise process to identify probable wetland and waterbody areas along the alternative routes as follows:

1. Infrared and natural color aerial photography was used in conjunction with USGS topographic maps, soils maps, and other data sources to identify potential wetland

areas. Boundaries were assigned to the areas that appeared to exhibit wetland signatures based on this review (referred to here as “Interpreted Wetlands”), and a cover type was determined based on aerial photo interpretation.

2. To further determine the probability of a wetland occurring within a given location, polygon shapefiles for Interpreted Wetlands were digitally layered with NWI and NHD mapping and hydric soils information from the Natural Resources Conservation Service (“NRCS”) soil survey database.

3. ERM assigned a probability of wetland occurrence based on the number of overlapping data layers (i.e., indicators of potential wetland presence) in any given area (Table D-1).

Table D-1	
Wetland Probability Criteria	
Probability Class	Criteria
High	Areas where layers of hydric soils, Interpreted Wetlands, and NWI data overlap
Medium/High	Areas where NWI data overlaps hydric soils; or NWI data overlaps Interpreted Wetlands with or without partially hydric soils; or hydric soils overlap Interpreted Wetlands
Medium	Interpreted Wetlands with or without overlap by partially hydric soils
Medium/Low	Hydric soils only; or NWI data with or without overlap by partially hydric soils
Low	Partially hydric soils only
Very Low	Non-hydric soils only

Using the above criteria, wetland and waterbody occurrence probabilities ranging from very low to high were identified for each route, with acres of affected wetland calculated by probability class and cover type. The probability of wetland and waterbody occurrence increases as multiple indicators overlap toward the “high” end of the probability spectrum as shown in Table D-1. The medium to high probability categories were selected as the most reliable representation of in-situ conditions due to overlapping data sets. Results for these wetland probability classes are presented by route below.

The Proposed Route (Route 4) would cross 34.3 acres of wetlands, including:

- 29.5 acres of palustrine forested wetlands
- 1.4 acres of palustrine scrub-shrub wetlands
- 0.9 acre of palustrine emergent wetlands
- 1.4 acres of riverine wetlands

- 1.2 acres of freshwater ponds

Alternative Route 3 would cross 35.9 acres of wetlands, including:

- 31.6 acres of palustrine forested wetlands
- 1.5 acres of palustrine emergent wetlands
- 1.4 acres of riverine wetlands
- 1.3 acres of freshwater ponds

Alternative Route 5 would cross 49.7 acres of wetlands, including:

- 44.1 acres of palustrine forested wetlands
- 0.3 acre of palustrine scrub shrub wetlands
- 2.8 acres of palustrine emergent wetlands
- 1.6 acres of riverine wetlands
- 1.2 acres of freshwater ponds

Prior to construction, the Company will delineate wetlands and other waters of the United States using the *Routine Determination Method*, as outlined in the *1987 Corps of Engineers Wetland Delineation Manual*, and methods described in the *2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (Version 2.0). The Company will obtain any necessary permits for activities that will impact jurisdictional resources.

The Company solicited comments from the Corps and the DEQ Office of Wetlands and Stream Protection (“OWSP”) on April 20, 2023. Dominion Energy Virginia received a response from the DEQ-OWSP on May 8, 2023, and that response is included as Attachment 2.D.2.

E. Floodplains

As depicted on the Federal Emergency Management Agency’s (“FEMA”) online Flood Insurance Rate Maps #51037C0375C and #1111C0225B (effective dates all 7/19/2009), #51117C0060C, #51117C0087C, #51117C0086C, #51117C0070C, #51117C0100C, #51117C0250C, #51117C0210C, #51117C0225C, #51117C0242C, #51117C0400C, #51117C0375C (effective dates all 9/10/2009), and #51083C0500D (effective date 10/15/2009), the Project study area lies within Zone X, areas of minimal flood hazard; Zone AE, base flood elevation and 100-year floodplain; and Zone A, Areas with a 1% annual chance of flooding. Temporary grading and timber mats may be used within the

100-year floodplain during construction. The Company will coordinate with the local floodplain coordinators as required.

F. Solid and Hazardous Waste

Environmentally regulated sites in the study area have been identified using publicly available GIS databases obtained from the U.S. Environmental Protection Agency (“EPA”) and DEQ. These databases provide information about facilities, sites, or places subject to environmental regulation or of environmental interest. These include sites that use and/or store hazardous materials; waste-producing facilities operating under permits from the EPA or other regulatory authorities; Comprehensive Environmental Response, Compensation, and Liability Act (“Superfund”) sites; petroleum storage and petroleum release sites; and solid waste sites. The identification of a site in the databases does not mean that the site necessarily has contaminated soil or groundwater.

A summary of the information from the EPA and DEQ databases within a 1.0-mile buffer of the centerlines of the Project routes is provided in Table F-1 below. The locations of the sites are depicted in Attachment 2.F.1.

TABLE F-1 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Environmental Regulated Facilities and Hazardous Waste / Petroleum Release Sites within 1.0 Mile of the Proposed and Alternative Routes			
Database	Proposed Route	Alternative Route 3	Alternative Route 5
Waste	1	1	1
Toxics	0	0	0
Land	0	0	0
Air	3	2	3
Water	10	15	8
Solid Waste Facilities	1	1	1
Petroleum Facilities	5	5	8
Petroleum Releases	1	4	6
Total ^a	21	28	27
^a Note that a single facility may be associated with multiple environmental permits; as such, the total number reflects the number of permits and releases within the specified distance from the Project.			
Notes Waste (Facilities that handle or generate hazardous wastes) Toxics (Facilities that release toxic substances to the environment) Land (Site cleanup under RCRA, Superfund, or Brownfield programs, and/or DEQ VRP programs) Air (Facilities with a release of pollutants to the air) Water (Facilities that discharge storm or process water to surface water) Solid Waste Facilities (Former and existing landfills) Petroleum Facilities (Regulated petroleum storage)			

To evaluate potential impacts to the routes, ERM further assessed sites within 1,000 feet of the Proposed Route and Alternative Routes (Table F-2).

TABLE F-2 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion			
Environmental Regulated Facilities and Hazardous Waste / Petroleum Release Sites within 1,000 Feet of Finneywood-Jeffress Line Routes			
Database	Proposed Route	Alternative Route 3	Alternative Route 5
Waste	0	0	0
Toxics	0	0	0
Land	0	0	0
Air	0	0	0
Water	2	1	2
Petroleum Facilities	1	1	2
Petroleum Releases	0	0	2
Total ^a	3	2	6
^a	Note that a single facility may be associated with multiple environmental permits; as such, the total number reflects the number of permits and releases within the specified distance from the Project.		
Notes	Waste (Facilities that handle or generate hazardous wastes) Toxics (Facilities that release toxic substances to the environment) Land (Site cleanup under RCRA, Superfund, or Brownfield programs, and/or DEQ VRP programs) Air (Facilities with a release of pollutants to the air) Water (Facilities that discharge storm or process water to surface water) Solid Waste Facilities (Former and existing landfills) Petroleum Facilities (Regulated petroleum storage)		

Based on the EPA's "Cleanups in My Community" database, no Brownfield, Superfund, or Resource Conservation and Recovery Act Corrective Action sites are located within 1.0 mile of the Proposed Route or Alternative Routes based on the most recent available data.

Based on a review of sites listed in the EPA and DEQ databases within 1,000 feet of the various route centerlines, ERM did not identify any petroleum release sites located within 1,000 feet of the Proposed Route or Alternative Route 3. Two petroleum release sites were identified within 1,000 feet of Alternative Route 5. The first petroleum release site is located approximately 600 feet from Alternative Route 5; as such, due to the distance from the route, it is not anticipated that the site impacted soil and/or groundwater in the vicinity of the route. The boundary of the second petroleum release site, the Southland Products site, extends to within 200 feet of Alternative Route 5 at about MP 11.2. According to files provided by the DEQ, two gasoline and diesel underground storage tanks at the Southland Products site were removed, and approximately 115 tons of soil were excavated from the tank holds in 2003. Confirmation soil samples collected from the former tank locations did not detect petroleum contamination above DEQ commercial clean-up criteria. DEQ files indicate that impacts to groundwater were unlikely as groundwater was not encountered during tank removal, and petroleum contamination was limited to shallow soils in the immediate area of the former tank holds. Due to the distance from the route and documented site history, it is not anticipated that the petroleum release impacted soil and/or groundwater in the vicinity of the route.

According to DEQ files, the two petroleum release sites identified in Table F-2 are closed. The DEQ deems a petroleum release site closed once there is no further risk to the general

public, although petroleum residue might remain. The risk assessment does not always consider the risk to subsurface utility work nor does it address additional costs associated with managing contaminated soil or groundwater.

Care will be taken to operate and maintain construction equipment to prevent any fuel or oil spills. Any waste created by construction crews will be disposed of in a proper manner and recycled where appropriate. This is further detailed in the Company's stormwater pollution prevention plan, a component of the Virginia Stormwater Management Program, which falls under the purview of the DEQ.

G. Natural Heritage, Threatened and Endangered Species

On behalf of the Company, ERM conducted online database searches for threatened and endangered species in the vicinity of the Project, including the Virginia Department of Conservation and Recreation ("DCR") Natural Heritage Data Explorer ("NHDE"). The NHDE includes Conservation Sites, Stream Conservation Units, General Location Areas for Natural Heritage Resources, and Ecological Cores. ERM also obtained query results from the Virginia Department of Wildlife Resources ("DWR") Fish and Wildlife Information Service ("VaFWIS") and the USFWS Information for Planning and Consultation ("IPaC") System to identify federally and state-listed species that may occur within the study area. Digital data were obtained from the DCR NHDE to identify locations within the study area that potentially support protected species. Results of these queries are provided in Attachment 2.G.1.

To obtain the most current eagle nest data, ERM reviewed the Center for Conservation Biology ("CCB") Virginia Eagle Nest Locator mapping portal, which provides information about the Virginia bald eagle (*Haliaeetus leucocephalus*) population, including the results of the CCB's annual eagle nest survey.

Based on queries of the above referenced sources, three federal and seven state-listed species, which include the three federally-listed species, have the potential to occur within the study area (Table G-1). For additional information, see Section 3.3.4 of the Environmental Routing Study.

TABLE G-1 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion				
Potential Federal and State-Listed Species in the Project Area				
Species	Status	Database	Habitat	Results
Northern long-eared bat (<i>Myotis septentrionalis</i>)	FT, ST	USFWS IPaC, DWR-NLEB Winter Habitat and Roost Tree Map, DWR VaFWIS	Generally associated with old-growth or late successional interior forests. Partially dead or decaying trees are used for breeding, summer day roosting, and foraging. Hibernation occurs primarily in caves, mines, and tunnels.	Summer foraging habitat present, but no hibernacula or roost trees identified within a 0.5-mile radius of the route alternatives.

TABLE G-1 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion				
Potential Federal and State-Listed Species in the Project Area				
Species	Status	Database	Habitat	Results
Tri-colored bat (<i>Perimyotis subflavus</i>)	FP, SE	USFWS IPaC, DWR VaFWIS and DWR Little Brown Bat and Tri-colored Bat Winter Habitat and Roosts Application	Typically roost in trees near forest edges during summer. Hibernate deep in caves or mines in areas with warm, stable temperatures during winter.	Summer foraging habitat present, but no hibernacula or roost trees identified within 0.5 mile radius of the route alternatives.
Atlantic pigtoe (<i>Fusconia masoni</i>)	FT, ST	USFWS IPaC, DWR VaFWIS	Small headwater streams (< 3 feet wide) in the Ridge and Valley and Piedmont physiographic regions downstream to large rivers in the Coastal Plain	VaFWIS Search Report listed as potentially present. No instream work would be performed. No impacts are anticipated if construction methods meet DWR guidelines.
Eastern big-eared bat (<i>Corynorhinus rafinesquii macrotis</i>)	SE	DCR NHDE	Hollow trees or abandoned buildings; mature forests near waterbodies	Predicted suitable habitat indicated by the DCR.
Little brown bat (<i>Myotis lucifugus</i>)	SE	DWR VaFWIS and DWR Little Brown Bat and Tri-colored Bat Winter Habitat and Roosts Application	Roosts in caves, buildings, rocks, trees, under bridges, and in mines and tunnels. Found in all forested regions of the state.	Summer foraging habitat present, but no hibernacula or roost trees identified within 0.5-mile radius of the route alternatives.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	ST	DWR VaFWIS	Open country with scattered shrubs and trees or other tall structures for perching.	Potentially identified within proximity to the project study area and potential suitable habitat present.
Whitemouth shiner (<i>Notropis alborus</i>)	ST	DWR VaFWIS and DCR NHDE	Warm, clear or somewhat turbid, small- to medium-sized creeks	No structures are located in streams or waterways, and no instream work is anticipated.
Federal/State Status: FE Federally listed as endangered FT Federally listed as threatened FP Federally proposed as endangered SE State listed as endangered ST State listed as threatened				

The USFWS IPaC review identified two federally listed species protected under the Endangered Species Act ("ESA") that could potentially occur or has been documented within the study area: Northern long-eared bat (*Myotis septentrionalis*) and Tri-colored bat (*Perimyotis subflavus*). The federally listed Atlantic pigtoe (*Fusconia masoni*) has potential to occur within a 7.75-mile radius of the routes; however, waterbodies known to support habitat for this species were not identified within the rights-of-way for the Proposed and Alternative Routes. Four state-listed species in the study were identified in queries including the Little brown bat (*Myotis lucifugus*), Eastern big-eared bat (*Corynorhinus rafinesquii macrotis*), Loggerhead shrike (*Lanius ludovicianus*), and Whitemouth shiner (*Notropis alborus*).

On behalf of the Company, ERM submitted the Project to the DCR Division of Natural Heritage (“DNH”) for review. The DCR completed its review on March 7, 2023, as discussed in detail below (see [Attachment 2.G.1](#)).

According to its review, DCR DNH concluded that two of the seven federally and state-listed species identified above have been documented by DCR or DWR as having potential habitat in areas immediately adjacent to or crossed by the Proposed Route and Alternative Routes, including for the Eastern big-eared bat and Whitemouth shiner. DCR also found that the Project area intersects multiple Ecological Cores ranging in rank from C2 (very high ecological integrity) to C5 (general ecological integrity). DCR did not identify significant geologic formations, or any State Natural Area Preserves along the Proposed or Alternative Routes.

There are also two SCUs located within the study area – the Allen Creek-Rt 600 SCU and the Bluestone Creek – Devils Creek SCU. These SCUs are described in more detail below.

Allen Creek -Rt. 600 Stream Conservation Unit

Allen Creek -Rt. 600 SCU has been given a biodiversity ranking of B4, which represents a site of moderate biodiversity significance. The natural heritage resource associated with this site is Whitemouth shiner (*Notropis alborus*). Whitemouth shiner inhabits warm, clear or somewhat turbid, small- to medium-sized creeks in the middle and lower Piedmont. This species is currently classified as threatened by the DWR.

None of the Project routes cross the Allen Creek -Rt. 600 SCU.

Bluestone Creek–Devils Creek Stream Conservation Unit

The Bluestone Creek–Devils Creek SCU has been given a biodiversity ranking of B4, which represents a site of moderate biodiversity significance. The natural heritage resources associated with this site are the Roanoke slabshell (*Elliptio roanokensis*). The Roanoke slabshell is a relatively large freshwater mussel species that is typically found in riffle habitats of large rivers.

None of the Project routes cross the Bluestone Creek–Devils Creek SCU.

The study area is not located within an Eagle Concentration Area, and none of the Proposed or Alternative Routes are located within the Primary or Secondary Buffers of any documented eagle nest locations. The nearest Bald eagle nest (CCB ID: ME 1603) is located approximately 2.0 miles southeast of the converted Jeffress 230 kV Station (outside of the study area). No Project facilities are within the 660-foot management buffer for this nest. If any eagle nests are identified within 660 feet of a Project facility, the Company will work with the appropriate jurisdictional agencies to minimize impacts on the species.

A copy of the database search results can be found in [Attachment 2.G.1](#). Construction and maintenance of the new transmission line facilities could have some minor impacts on

wildlife; however, impacts on most species will be short-term in nature and limited to the period of construction.

The Proposed Route (Route 4) has the potential to affect approximately:

- 207.6 acres of forested habitat, which could impact summer habitat for the Northern long-eared bat, Little brown bat, and Tri-colored bat
- 1.3 acres of DCR-predicted suitable habitat for Eastern big-eared bat, all of which is forest
 - 162.8 acres across 14 ecological cores with a DCR ranking of C2 to C5
- 18.9 acres of DCR data-identified riverine wetlands, which could provide stream habitat for Atlantic pigtoe and Whitemouth shiner
- 55.9 acres of agricultural/open land, which could provide habitat for Loggerhead shrike

Alternative Route 3 has the potential to affect approximately:

- 198.8 acres of forested land, which could provide summer habitat for Northern long-eared bat, Little brown bat, and Tri-colored bat
- 1.3 acres of DCR-predicted suitable habitat for Eastern big-eared bat, all of which is forest
- 138.0 acres across 15 ecological cores with a DCR ranking of C2 to C5
- 3.8 acres of DCR data-identified riverine wetlands, which could provide stream habitat for Atlantic pigtoe and Whitemouth shiner
- 67.9 acres of agricultural/open land, which could provide habitat for Loggerhead shrike

Alternative Route 5 has the potential to affect approximately:

- 202.1 acres of forested land, which could provide summer habitat for Northern long-eared bat, Little brown bat, and Tri-colored bat
- 1.3 acres of DCR-predicted suitable habitat for Eastern big-eared bat, all of which is forest
- 123.3 acres across 19 ecological cores with a DCR ranking of C3 to C5
- 3.8 acres of DCR data-identified riverine wetlands, which could provide stream habitat for Atlantic pigtoe and Whitemouth shiner

- 72.6 acres of agricultural/open land, which could provide habitat for Loggerhead shrike

The Company will work with the appropriate jurisdictional agencies to minimize any impacts on SCUs, ecological cores, and protected species during implementation of the Project.

New and updated information is continually added to DCR's Biotics database. The Company shall re-submit Project information and a map for an update on this natural heritage information if the scope of the Project changes and/or six months have passed before this information is utilized.⁶

H. Erosion and Sediment Control

The DEQ approved the Company's *Standards & Specification for Erosion & Sediment Control and Stormwater Management for Construction of Linear Electric Transmission Facilities (TE VEP 8000)*. These specifications are given to the Company's contractors and require erosion and sediment control measures to be in place before construction of the line begins and specifies the requirements for rehabilitation of the right-of-way. A copy of the current DEQ approval letter dated August 13, 2019, is provided as Attachment 2.H.1. According to the approval letter, coverage was effective through August 12, 2020. The Company submitted a renewal application on August 3, 2020, and is awaiting approval.

I. Archaeological, Historic, Scenic, Cultural, or Architectural Resources

ERM conducted a Stage I Pre-Application Analysis ("Stage I Analysis") of potential impacts on cultural resources for the Proposed and Alternative Routes in accordance with the Virginia Department of Historic Resources' ("VDHR") *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (Guidelines) (VDHR 2008). A copy of the Stage I Analysis, which was provided to VDHR on May 18, 2023, is included as Attachment 2.I.1. For each route, the analysis identified and considered previously recorded resources within the following study tiers as specified in the Guidelines:

- National Historic Landmark ("NHL") properties located within a 1.5-mile radius of each route centerline.
- National Register of Historic Places ("NRHP")-listed properties, NHLs, battlefields, and historic landscapes within a 1.0-mile radius of each route centerline.

⁶ The Company updated this commitment consistent with discussions held between Company and DCR representatives on August 23, 2022.

- NRHP-eligible and -listed properties, NHLs, battlefields, and historic landscapes within a 0.5-mile radius of each route centerline.
- Qualifying architectural resources and archaeological sites located within the right-of-way for each alternative route.
- Information on cultural resources within each of these study tiers was obtained from the Virginia Cultural Resource Information System.
- ERM also collected information from the Mecklenburg Virginia Tourism (2023) and Preservation Virginia (2023) to find locally significant resources within a 1.0-mile radius of the center of the right-of-way for the Proposed and Alternative Routes. Two locally significant resources were identified within the relevant study tiers for the various route options during the data collection effort. ERM additionally collected information on battlefields surveyed and assessed by the National Park Service's American Battlefield Protection Program ("ABPP") (NPS 2023). No additional ABPP study areas, core areas, or potential NRHP boundaries for battlefields were identified within the relevant study tiers for the various route options through this source.

Along with a records review carried out for the four tiers as defined by VDHR, ERM also conducted field assessments of the considered aboveground resources for the Proposed and Alternative Routes in accordance with the VDHR Guidelines. Digital photographs of each resource and views to the proposed transmission line were taken. Photo simulations were prepared to assess potential viewshed impacts from construction of the proposed transmission line for each considered resource and relevant route. For previously recorded archaeological sites under consideration, aerial photographs were examined to assess the current land condition and the spatial relationship between the sites and any existing or planned transmission lines.

A summary of the considered resources identified in the vicinity of each route and recommendations concerning the Project effects are provided in the following discussion. The information presented here derives from existing records and does not purport to encompass the entire suite of historic and archaeological resources that may ultimately be affected by the undertaking.

The resources located within the right-of-way of the transmission line routes may be subject to both direct impacts from placement of the transmission line across the property as well as visual impacts from changes to the viewshed introduced by the new transmission infrastructure. Resources in the 0 to 0.5-mile study tier would not be directly impacted but would likely be visually impacted unless topography or vegetation obscures the view from the resource to the transmission line. At a distance over 0.5 mile, it becomes less likely that a resource would be within line-of-sight of the new transmission facilities. Beyond 1.0 mile, it becomes even less likely that a given resource would be within line-of-sight of the Project. However, a full architectural survey (to be completed following the selection

of a route) is necessary to determine which resources would be visually impacted and to survey for additional unrecorded resources.

Because portions of the route alternatives use common alignments, impacts on some resources would be identical regardless of the route option selected for the Project. The nature of those impacts, while estimated in this study with the assistance of photo simulations, would depend on the final Project design in which the exact placement and height of transmission line structures is confirmed. As part of the forthcoming full architectural survey, Project impacts on these and any newly identified resources would be assessed. The study area for the survey would be defined based on the height of the transmission line structures, topography, tree cover, and other factors impacting line-of-sight from resources to the route.

Proposed Route (Route 4)

Five aboveground historic resources were identified within the VDHR study tiers for the Proposed Route (Table I-1). Construction and operation of the facilities would have no impact on three resources (058-0091, 058-0131, and 058-5104), a minimal impact on one resource (058-0281), and a moderate impact on one resource (058-0038).

The Occoneechee Plantation (058-0091) is located approximately 0.46 mile to the southwest of the Proposed Route at approximate MP 18.3. Red Fox Farm (058-0131) is located approximately 0.92 mile to the northwest of the Proposed Route at MP 12.2. The Finchley Rosenwald School (058-5104) is located approximately 0.64 mile to the southeast of the Proposed Route at MP 16.4. All three resources would have no view of the new infrastructure that would be installed along the route due to distance and intervening vegetation. Thus, the route would result in no impact on these resources.

Wilkinson Place/Grovesend (058-0281) is located approximately 0.24 mile to the east of the Proposed Route at MP 18.0. This segment of the route uses a greenfield alignment requiring new right-of-way. Most of the transmission line would be obstructed by the dense vegetation between the resource and the route. The only area where the route might be visible from the resource would be at the resource's western boundary where a narrow, cleared corridor that may be the result of a logging road proceeds west-southwest towards the Proposed Route, but has a slight bend before reaching the route. If the Proposed Route is selected for the Project, the new transmission structures could potentially be visible from the resource's western boundary. All other vantage points within the resource would have no view of the transmission line due to the dense foliage. The addition of the transmission line, which may or may not be visible from the resource, would constitute a very minor change to the existing view given that only one vantage point would have a distant view of the transmission line. By virtue of the possible visibility of the Project from one location within the resource that would add modern infrastructure to a view that currently only contains forest, there would be a minimal impact to this resource from the Proposed Route.

Mistletoe/Mistletoe Castle (058-0038) is located approximately 189 feet to the west of the Proposed Route at MP 17.8. This segment of the route uses a greenfield alignment, requiring new right-of-way. While it is unlikely that the transmission line structures would be visible from the dwelling itself, it may be visible at the easternmost corner of the resource boundary during off-leaf season. This would add a modern element to the entire eastern viewshed; therefore, there would be a moderate impact on this resource from the Proposed Route.

TABLE I-1 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Resources in VDHR Tiers for the Proposed Route				
Buffer (miles)	Considered Resources	VDHR #	Description	Impact
1.0-1.5	National Historic Landmarks	NA	NA	NA
	National Register—Listed	058-0131	Red Fox Farm	None
0.5-1.0	Locally Significant	058-5104	Finchley Rosenwald School	None
	Battlefields	NA	NA	NA
	Historic Landscapes	NA	NA	NA
0.0- 0.5	National Register—Eligible	058-0038	Mistletoe/Mistletoe Castle	Moderate
		058-0281	Wilkinson Place/Grovesend	Minimal
	Locally Significant	058-0091	Occoneechee Plantation	None
0.0 (within right-of-way)	NA	NA	NA	NA

NA = not applicable; VDHR = Virginia Department of Historic Resources

The Stage I Analysis also considered the potential effects to archaeological resources. One archaeological site lies within the new right-of-way associated with the Proposed Route: 44MC0986. It has been formally determined not eligible for listing in the NRHP.

Site 44MC0986 is recorded as a 0.78-acre prehistoric lithic scatter of indeterminate temporal affiliation. The site is crossed by the eastern half of right-of-way along a greenfield alignment of Alternative Route 3. No transmission structures would be placed within the site boundaries.

Alternative Route 3

Five aboveground historic resources were identified within the VDHR study tiers for Alternative Route 3 (Table I-2). The route follows the same alignment and uses the same design as the Proposed Route where it passes near four of the resources.⁷ One resource

⁷ For reference, the resource and correlating nearest MP along Alternative Route 3 is 058-0038 (MP 18.0), 058-0091 (MP 18.5), 058-0281 (MP 18.2), and 058-5104 (MP 16.6).

(058-0131) is located within an area where the Proposed Route and Alternative Route 3 differ. Therefore, impacts on the four other resources (058-0038, 058-0091, 058-0281, and 058-5104) would be the same as described above for the Proposed Route. The route would have no impact on three resources (058-0091, 058-0131, and 058-5104), a minimal impact on one resource (058-0281), and a moderate impact on one resource (058-0038).

The Red Fox Farm (058-0131) is located approximately 0.6 mile to the west of Alternative Route 3 at MP 11.6. The resource would have no view of the new infrastructure installed along the route due to distance and intervening vegetation. Thus, the route would result in no impact on this resource.

TABLE I-2 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Resources in VDHR Tiers for Alternative Route 3				
Buffer (miles)	Considered Resources	VDHR #	Description	Impact
1.0-1.5	National Historic Landmarks	NA	NA	NA
	National Register—Listed	058-0131	Red Fox Farm	None
0.5-1.0	Locally Significant	058-5104	Finchley Rosenwald School	None
	Battlefields	NA	NA	NA
	Historic Landscapes	NA	NA	NA
0.0- 0.5	National Register—Eligible	058-0038	Mistletoe/Mistletoe Castle	Moderate
		058-0281	Wilkinson Place/Grovesend	Minimal
	Locally Significant	058-0091	Occoneechee Plantation	None
0.0 (within right-of-way)	NA	NA	NA	NA

NA = not applicable; VDHR = Virginia Department of Historic Resources

The Stage I Analysis also considered the potential effects to archaeological resources. One archaeological site lies within the new right-of-way associated with Alternative Route 3: 44MC0986. It has been formally determined not eligible for listing in the NRHP and is described above.

Alternative Route 3 follows the same alignment and uses the same design as the Proposed Route (Route 4) where it crosses 44MC0986. Therefore, impacts on this site would be the same as described above for the Proposed Route.

Alternative Route 5

Five aboveground historic resources were identified within the VDHR study tiers for Alternative Route 5 (Table I-3). The route follows the same alignment and uses the same design as the Proposed Route and Alternative Route 3 where they pass near four of the

resources.⁸ One resource (058-0131) is located within an area where the routes differ. Therefore, impacts on the four other resources (058-0038, 058-0091, 058-0281, and 058-5104) would be the same as described above for the Proposed Route. The route would have no impact on three resources (058-0091, 058-0131, and 058-5104), a minimal impact on one resource (058-0281), and a moderate impact on one resource (058-0038).

Red Fox Farm (058-0131) is located approximately 820 feet to the east of Alternative Route 5 at MP 12.7. The resource would have no view of the new infrastructure installed along the route due to dense intervening vegetation. Thus, the route would result in no impact on this resource.

Buffer (miles)	Considered Resources	VDHR #	Description	Impact
1.0-1.5	National Historic Landmarks	NA	NA	NA
0.5-1.0	Locally Significant	058-5104	Finchley Rosenwald School	None
	Battlefields	NA	NA	NA
	Historic Landscapes	NA	NA	NA
	National Register—Listed	058-0131	Red Fox Farm	
0.0-0.5	National Register—Eligible	058-0038	Mistletoe/Mistletoe Castle	Moderate
		058-0281	Wilkinson Place/Grovesend	Minimal
	Locally Significant	058-0091	Occoneechee Plantation	None
0.0 (within right-of-way)	NA	NA	NA	NA

NA = not applicable; VDHR = Virginia Department of Historic Resources

The Stage I Analysis also considered the potential effects to archaeological resources. One archaeological site lies within the new right-of-way associated with Alternative Route 5: 44MC0986. It has been formally determined not eligible for listing in the NRHP and is described above.

Alternative Route 5 follows the same alignment and uses the same design as the Proposed Route (Route 4) and Alternative Route 3 where they cross 44MC0986. Therefore, impacts on this site would be the same as described above for the Proposed Route.

On April 20, 2023, the Company solicited comments from VDHR on the proposed Project. VDHR provided a letter response on May 18, 2023, recommending that Dominion Energy

⁸ The resource and correlating nearest MP along Alternative Route 5 is 058-0038 (MP 18.7), 058-0091 (MP 19.1), 058-0281 (MP 18.8), and 058-5104 (MP 17.7).

Virginia follow the *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia*. See Attachment 2.I.2.

J. Chesapeake Bay Preservation Areas

The Project is not located in a locality subject to the Chesapeake Bay Preservation Act. Construction, installation, operation, and maintenance of electric transmission lines are conditionally exempt from the Chesapeake Bay Act as stated in the exemption for public utilities, railroads, public roads, and facilities in 9 VAC 25-830-150. The Company will meet those conditions.

K. Wildlife Resources

Relevant agency databases were reviewed and requests for comments from the USFWS, and DCR were submitted to determine if the Project has the potential to affect any threatened or endangered species. As discussed in Section 2.G and identified in Attachment 2.G.1, certain federal and state-listed species were identified as potentially occurring in the Project area. The Company will coordinate with the USFWS, DWR, and DCR as appropriate to determine whether additional surveys are necessary and to minimize impacts on wildlife resources.

Based on recommendations by the Virginia Department of Wildlife Resources (“DWR”), the Company will adhere to the TOYRs for cutting trees and vegetations favorable to winged animals from March 15 – November 15. This includes further minimizing potential effects by avoiding trees favorable for bat maternity roosting locations nesting bird habitat, to the extent practicable.

In addition, the Company is actively monitoring the regulatory changes and requirements associated with the Northern long-eared bat (“NLEB”) and how it could potentially impact construction timing associated with time of year restrictions (“TOYRs”). The existing interim guidance from the USFWS for the NLEB expires on March 31, 2024. The Company is also monitoring potential regulatory changes associated with the potential up-listing of the Tri-colored bat. On September 14, 2022, the Tri-colored bat was proposed to be up-listed to Endangered, with an estimated announcement of a final decision within 12 months. Regulatory guidance on the Tri-colored bat will be available upon up-listing. The Company’s construction window described above may require adjustment based upon the regulatory guidance and potential TOYRs associated with these two bat species.

Continuous natural habitats provide refuge for thousands of species of animals and plants, in addition to a variety of recreational opportunities and open space resources for the public. The DCR refers to these habitat types as “ecological cores” due to increased ecological integrity. An ecological core must contain an area of unfragmented natural cover with at least 100 acres of interior habitat. Because the quality of ecological cores varies across different landscapes, the DCR evaluates ecological cores using an Ecological Integrity Score that ranks the relative contribution of different ecosystem services.

Ecological cores are associated with areas of high ecological value. The ecological cores crossed by the Proposed and Alternative Routes are presented in Table K-1. Based on a review of recent aerial imagery (2021) all of the C2 (Very High) and C3 (High) ecological cores crossed by the Proposed and Alternative Routes are comprised mainly of managed timberland and have been impacted by recent logging activities, throughout the last two decades and likely beyond. During the routing process and in particular when routing through ecological cores, crossing of managed timberland was preferred over crossing of mature old growth forest. The selected route will segment portions of the cores crossed; however, the removal of managed timber is not expected to result in high-quality habitat reduction due to the temporary nature of the trees being removed.

Table K-1 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Ecological Cores C3 (high) through C1 (Outstanding) Crossed by the Proposed and Alternative Routes	
Route	Ecological Core Crossed
Proposed Route	▪ C2 – Very High ▪ Core ID 73579: the route would cross this C2 core between MPs 9.2 and 12.3 and between 12.8 and 13.0, north of Wilkerson Road and east of Rocky Mount Road. Historical aerial imagery indicates the core has been significantly altered due to clear cutting over the past two decades. The area west of Highway 92 was cut in 2006, with an even larger area cut in 2022. South of Butcher Creek, a large area was clear-cut in 2020, with an area south of that cut in 2015. Finally, the southern portion of the core was cut in 2020. Aerial imagery indicates the forest within the right-of-way to be managed or replanted timber. ▪ C3 – High ▪ Core ID 71600: the route would cross a C3 core between MPs 1.1 to 2.1, southeast of Highway 49, between Company's existing Lines #556 and #98. Based on historic aerial imagery, approximately 252 acres of this core have been clear-cut in 2006. ▪ Core ID 71424: the route would cross a C3 core between MPs 2.1 to 3.4, southeast of Company's existing Line #98, north of Highway 47. Based on historic aerial imagery, approximately 505 acres on the edges of the core appear to be managed timber, with clear-cutting observed in 2002 in the northern portion and 2019 in the southern portion. ▪ Core ID 72849: the route would cross a C3 core between MPs 5.9 to 6.6, south of Cemetery Road. Historic aerial imagery indicates that the interior section of this core contains approximately 210 acres of clearcutting, with the northern portion clear-cut in 2010 and the southern portion cut in 2018. ▪ Core ID 73149: the route would cross a C3 core between MPs 6.7 to 8.8, east of Highway 92 and west of Hunters Lane. Historic aerial imagery indicates that the interior section of this core is fragmented by approximately 235 acres of clearcutting in the northern portion between 2006 and 2008, the middle portion in 2015 and the southern portion in 2002.

Table K-1
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion
Ecological Cores C3 (high) through C1 (Outstanding) Crossed by the Proposed and Alternative Routes

Route	Ecological Core Crossed
Alternative Route 3	▪ C2 – Very High ▪ Core ID 73579: the route would cross this C2 core between MPs 9.2 and 10.6, east of the intersection of Rocky Mount Road and Skipwith Road and west of Highway 92, between MPs 11.5 and 12.5, north of Wilkerson Road and east of Rocky Mount Road, and between MPs 13.0 and 13.2 north of Wilkerson Road and east of Rocky Mount Road. Historic aerial imagery indicates the interior of the core is partially fragmented by 930 acres of clear cutting including areas in the northern portion clear-cut in 2003 and areas of the southern portion of the crossing cut in 2001 and 2016. ▪ C3 – High ▪ Core ID 71600: the route would cross a C3 core between MPs 1.1 and 2.1 southeast of Highway 49 and northwest of Company’s existing Line #98. Historic aerial imagery indicates that the northern portion of this core was clear cut in 2006. ▪ Core ID 71424: the route would cross a C3 core between MPs 2.1 and 3.4 southeast of existing transmission line #98, north of Highway 47. Historic aerial imagery indicates the northern portion of this core was clear-cut in 2002 and the southern portion clear-cut in 2019, with the core reduced by approximately 505 acres on its edges. ▪ Core ID 72849: the route would cross a C3 core between MPs 5.9 and 6.5, south of the intersection of Cemetery Road and Panther Hollow Lane. Historic aerial imagery indicates that the interior of the core is fragmented by approximately 200 acres of clearcutting, with the northern portion of the core clear-cut in 2001 and the southern portion cut in 2008.
Alternative Route 5	▪ C3 – High ▪ Core ID 71600: the route would cross a C3 core between MPs 1.1 to 2.1, southeast of highway 49 and northwest of Company’s existing Line #98. Historic aerial imagery indicates that the interior of this core is fragmented by approximately 252 acres of clearcutting in 2006. ▪ Core ID 71424: the route would cross a C3 core between MPs 2.1 and 3.4, north of Highway 47, southeast of Company’s existing Line #98. Historic aerial imagery indicates that the northern portion of this core was clear-cut in 2002 with the southern portion cut in 2008 and shows this core to be reduced by approximately 505 acres on its edges. ▪ Core ID 72849: the route would cross a C3 core between MPs 5.9 and 6.6, south of the intersection of Cemetery Road and Panther Hollow Lane. Historic aerial imagery indicates that the northern portion of the core was clear-cut in 2001 and the southern portion cut in 2008.

L. Recreation, Agricultural, and Forest Resources

The Proposed and Alternative Routes for the Project are expected to have minimal, incremental impacts on recreational, agricultural, and forest resources. Opportunities for collocation with the Company's existing electric transmission rights-of-way were considered, where possible, for the routes as a means of avoiding or minimizing impacts on these resources. Where the route crosses agricultural lands, impacts would be limited to structure placement and agricultural activities could resume post construction. Where forested areas are crossed, trees would be removed and vegetation kept to maintained heights within the right-of-way.

The Virginia Agricultural and Forestal Districts Act provides for the creation of conservation districts designed to conserve, protect, and encourage the development and improvement of a locality's agricultural and forested lands. According to the Virginia Department of Forestry, no Virginia Agricultural and Forestal Districts are crossed by the Proposed or Alternative Routes.

Under the Virginia Open-Space Land Act, any public body can acquire title or rights to real property to provide means of preservation of open-space land. Most easements created under the Act are held by the Virginia Outdoors Foundation ("VOF"), but any state agency is authorized to create and hold an open-space easement. Such conservation easements are designed to preserve and protect open space and other resources and must be held for no less than five years in duration but can be held in perpetuity. No easements of this type are crossed by the Proposed or Alternative Routes, however, Alternative Route 5 crosses within about 900 to 1,100 feet east of a VOF easement between MPs 11.9 and 12.5. Due to the distance and forested buffer between the right-of-way and the easement, the easement is not anticipated to be affected by Alternative Route 5. Additionally, between MPs 10.8 and 11.8, Alternative Route 5 crosses three parcels that are under consideration by the VOF for a conservation easement. The Company has been and will continue to be in communication with the VOF regarding these parcels.

The Ward Burton Wildlife Foundation, an organization dedicated to conserving the natural environment and wildlife through conservation and education, holds approximately 800 acres of land in conservation easement west of Esnon Road. Alternative Route 3 is located directly adjacent (within about 40 feet) to the easement boundary between approximate MPs 7.8 and 8.5. Minor visual impacts to areas of the easement immediately adjacent to the route would result from the construction of Alternative Route 3, however, because the easement is composed of entirely forested land, the structures and conductors associated with the Project would not be visible from most of the easement.

The Proposed Route (Route 4) and Alternative Route 5 cross within 0.5 mile of the Ward Burton Wildlife Foundation easement, but due to the distance and vegetative buffer between the easement and rights-of-way, no impacts to the easement are anticipated from these routes.

The Conservation Reserve Enhancement Program (“CREP”) is a water quality partnership effort led by the DCR that aims to improve water quality and wildlife habitat through financial incentives, cost-share, and rental payments to farmers who voluntarily restore riparian forest buffers, grass and shrub buffers, and wetlands. There are no CREP easements crossed by the Proposed or Alternative Routes.

Any tree along the right-of-way that is tall enough to endanger the conductors if it were to break at the stump or uproot and fall directly toward the conductors and exhibits signs or symptoms of disease or structural defect that make it an elevated risk for falling, will be designated as a “danger tree” and may be removed. The Company’s arborist will contact the property owner if possible before any danger trees are cut, except in emergency situations. The Company’s Forestry Coordinator will field inspect the right-of-way and designate any danger trees present. Qualified contractors working in accordance with the Company’s Electric Transmission specifications will perform all danger tree cutting. The Project is expected to have minimal impacts on forest resources.

On April 20, 2023, the Company solicited comments on the proposed Project from DCR, VOF, and Virginia Department of Forestry.

The following is a discussion of the potential Project impacts on recreational, agricultural, and forest resources.

Proposed Route (Route 4)

The Proposed Route crosses 3 recreational resources—Highway 47 Scenic Byway and Tobacco Heritage Trail (MP 4.0), Beaches to Bluegrass Trail (between MP 13.5 and 13.6), East Coast Greenway (MP 15.3)—and is within 500 feet of the Mecklenburg Country Club, John H. Kerr Dam & Reservoir (six locations), and Oconeechee State Park. An assessment of impacts on these resources is provided in the Environmental Routing Study.

NRCS soils data indicates approximately 106.5 acres of the Proposed Route right-of-way are classified as prime farmland and 114.4 acres are classified as farmland of statewide importance. The Proposed Route crosses approximately 22.7 acres of agricultural lands and approximately 207.6 acres of forested lands. Based on a review of historic aerial imagery (Google Earth), most forested lands crossed by the Proposed Route is comprised of managed timber in various stages of regrowth due to recent logging rather than natural or old growth forest.

Alternative Route 3

Alternative Route 3 crosses three recreation areas—Highway 47 Scenic Byway and Tobacco Heritage Trail (MP 4.0), Beaches to Bluegrass Trail (between MP 13.7 and 13.8), East Coast Greenway (MP 15.5)—and is within 500 feet of the Mecklenburg Country Club, John H. Kerr Dam & Reservoir (two locations), and Oconeechee State Park. An assessment of impacts on these resources is provided in the Environmental Routing Study.

NRCS soils data indicates approximately 97.9 acres of the Alternative Route 3 right-of-way are classified as prime farmland and 131.4 acres are classified as farmland of statewide importance. Alternative Route 3 crosses approximately 41.3 acres of agricultural lands and approximately 198.8 acres of forested lands. Based on a review of historic aerial imagery (Google Earth), most forested lands crossed by Alternative Route 3 is comprised of managed timber in various stages of regrowth due to recent logging rather than natural or old growth forest.

Alternative Route 5

Alternative Route 5 crosses 3 recreational resources—Highway 47 Scenic Byway and Tobacco Heritage Trail (MP 4.0), Beaches to Bluegrass Trail (MP 14.8), and the East Coast Greenway (MP 16.9)—and is within 500 feet of the Mecklenburg Country Club, John H. Kerr Dam & Reservoir (two locations), and Oconeechee State Park. An assessment of impacts on these resources is provided in the Environmental Routing Study.

NRCS soils data indicates approximately 115.4 acres of the Alternative Route 5 right-of-way are classified as prime farmland and 125.8 acres are classified as farmland of statewide importance. Alternative Route 5 crosses approximately 39.5 acres of agricultural lands and approximately 202.1 acres of forested lands. Based on a review of historic aerial imagery (Google Earth), most forested lands crossed by Alternative Route 5 is comprised of managed timber in various stages of regrowth due to recent logging rather than natural or old growth forest.

M. Use of Pesticides and Herbicides

Of the techniques available, selective foliar is the preferred method of herbicide application. The Company typically maintains transmission line rights-of-way by means of selective, low-volume applications of EPA-approved, non-restricted use herbicides. The goal of this method is to exclude tall-growing brush species from the right-of-way by establishing early successional plant communities of native grasses, forbs, and low-growing woody vegetation. “Selective” application means the Company sprays only the undesirable plant species (as opposed to broadcast applications). “Low volume” application means the Company uses only the volume of herbicide necessary to remove the selected plant species. The mixture of herbicides used varies from one cycle to the next to avoid the development of resistance by the targeted plants. There are four means of dispersal available to the Company, including by-hand application, backpack, fixed nozzle-radiarc, and aerial. Very little right-of-way maintenance incorporates aerial equipment. The Company uses licensed contractors to perform this work that are either certified applicators or registered technicians in the Commonwealth of Virginia.

DEQ has previously requested that only herbicides approved for aquatic use by the EPA or the USFWS be used in or around any surface water. The Company intends to comply with this request.

Additionally, based on a discussion between Company and DCR DNH representatives in

August 2022, and again in February 2023, the Company is continuing to review its Integrated Vegetation Management Plan (“IVMP”) for application to both woody and herbaceous species, based on the species list available on the DCR website. The Company continues to work to provide DCR an addendum to the IVMP, which further explains how the Company’s operations and maintenance Forestry program addresses invasive species. The Company is actively compiling an addendum draft to provide to DCR for review and continued discussions. Once all discussions are complete and the addendum is final, the Company will report on the results of its communications with DCR in future transmission certificate of public convenience and necessity filings. At this time, the Company anticipates providing a draft of the addendum to DCR during the third quarter of 2023.⁹

N. Geology and Mineral Resources

The study area is located within the Piedmont geologic province, which lies between the mountainous Blue Ridge province to the west and the terraced slopes of the Coastal Plain province to the east. The Piedmont province is characterized by heavily weathered bedrock caused by a humid climate, thick soils, and rolling topography. Consisting of several complex geologic terranes, the Piedmont province contains several rock units separated by faults with varying igneous and metamorphic histories.

Based on review of the Geologic Map of Virginia, the Proposed Route and Alternative Routes 3 and 5, are located within a block of rocks referred to as the accreted Carolina terrane (William and Mary Department of Geology 2023; USGS 2005). Within this accreted terrane, the bedrock underlying the Project area comprises Proterozoic-age volcanic, metamorphosed volcanic, gabbro, and granitic rocks. (William and Mary Department of Geology 2022; USGS 2005).

ERM reviewed publicly available Virginia Energy datasets (2023), USGS topographic quadrangles, and recent (2023) digital aerial imagery to identify mineral resources in the study area. Based on the review, no active mineral resources were identified within 0.25 mile of the Proposed Route or Alternative Routes 3 and 5. The closest active permitted mining site, the BMC Quarry, is located approximately 16.4 miles northwest of MP 0.2 of the Proposed Route and Alternative Routes 3 and 5. The closest mineral occurrence to the Proposed Route and Alternative Route 3 is a clay and shale prospect located approximately 1.5 miles west of MP 7.1 of the Proposed Route and 2.2 miles southeast of MP 6.2 of

⁹ See, *Application of Virginia Electric and Power Company, For approval and certification of electric transmission facilities: 230 kV Line #293 and 115 kV Line #83 Rebuild Project*, Case No. PUR-2021-00272, Final Order at 9-11 (Aug. 31, 2022) (*The Commission agreed with the Chief Hearing Examiner and declined to adopt DCR DNH’s recommendation regarding an invasive species management plan (“ISMP”), but directed the Company to meet with DCR-DNH and to report on the status of the meetings in the Company’s next transmission certificate of public convenience and necessity (“CPCN”) filing*); see also Report of Alexander F. Skirpan, Jr., Chief Hearing Examiner (Jun. 22, 2022) at 22 (*agreeing with the Company that, with its IVMP, the Company should not be required to undergo the additional cost of DCR-DNH’s ISMP; however, recommending that the Company meet with DCR-DNH regarding its IVMP and report the results of the meeting in the next transmission CPCN filing*).

Alternative Route 3. The closest mineral occurrence to Alternative Route 5 is also a clay and shale prospect located approximately 0.7 mile west of MP 16.5 (Virginia Energy 2023).

O. Transportation Infrastructure

Road and Railroad Crossings

Proposed Route (Route 4)

The Proposed Route crosses 12 roads, with Highway 49, Highway 47, Highway 92, and Highway 58 as the major roadways. The remainder of the roads consist of smaller secondary and tertiary roads. No railroads are crossed by the route.

Alternative Route 3

Alternative Route 3 crosses 14 roads, with Highway 49, Highway 47, Highway 92, and Highway 58 as the major roadways. The remainder of the roads consist of smaller secondary and tertiary roads. No railroads are crossed by the route.

Alternative Route 5

Alternative Route 5 crosses 18 roads, with Highway 49, Highway 47, Highway 92, and Highway 58 as the major roadways. The remainder of the roads consist of smaller secondary and tertiary roads. Alternative Route 5 crosses a segment of the Norfolk Southern Railroad south of Chase City at MP 7.8 and again at MP 14.9. After crossing the railroad at MP 14.9, Alternative Route 5 parallels the south side of the railroad from MP 14.9 to 16.6.

Temporary closures of roads and or traffic lanes would be required during construction of the Project. No long-term impacts on roads are anticipated. The Company will comply with the Virginia Department of Transportation (“VDOT”) requirements for access to the rights-of-way from public roads. At the appropriate time, the Company will obtain the necessary VDOT permits as required and comply with permit conditions. The Company will prepare traffic control plans for the counties’ review and approval for all work that may result in temporary road closures.

On April 20, 2023, the Company solicited comments from VDOT on the proposed Project. VDOT responded on April 27, 2023, indicating that the Company is required to have a plan submission for any entrance/work done within the road right-of-way and to have a land use-permit prior to any land disturbing activities in the road right-of-way. This response is included as Attachment 2.O.1.

Airports

The design of the proposed Project must prevent interference with pilots' safe air travel in and out of airports. Such hazard or impediments include interference with navigation and communication equipment and glare from materials and external lights.

The Company reviewed the Federal Aviation Administration's ("FAA") website to identify public use airports, airports operated by a federal agency or the U.S. Department of Defense, airports or heliports with at least one FAA-approved instrument approach procedure, and public use or military airports under construction within 10.0 miles of the Project routes. Based on this review, the following FAA-restricted airport are located within 10.0 miles of the Project routes:

- Hazelswart Airport: 1.4 miles northeast of the Proposed Route and Alternative Routes 3 and 5
- Chase City Municipal Airport, approximately 1.6 miles northwest of Alternative Route 5 and 2.4 miles west/northwest of Alternative Route 3
- Murdocks Flying V Airport: 1.6 miles southeast of the Proposed Route
- Murdock's Holly Bu Airport: 1.7 miles southeast of the Proposed Route
- Lake County Regional Airport: 3.0 miles southwest of the Jeffress Station
- Merifield Airport: 3.3 miles south of the Jeffress Station
- Twin Towers Airport: 3.8 miles west of the Proposed Route

The Company reviewed height limitations associated with FAA-defined imaginary surfaces for all runways associated with the above-mentioned airports to determine whether any of the structure heights associated with each specific structure location would penetrate flight surfaces for any of the runways. The Company conducted a preliminary evaluation of the tower heights and locations using the FAA-defined Civil and Department of Defense Airport Imaginary Surfaces and applying standard GIS tools, including ESRI's ArcMap 3D and Spatial Extension software. The software was used to create and geo-reference the imaginary surfaces in space and in relationship to the proposed structures. The Chase City Municipal Airport is the only airport that had the potential to impose height limitations of the Project facilities. Civil airport imaginary surfaces were established by the FAA with relation to each airport runway and to each runway. The imaginary Part 77 surfaces were developed to prevent existing or proposed objects from extending from the ground into navigable airspace.

At its closest point, Alternative Route 3 would be located within 1.6 miles (8,700 feet) southeast of Runway 18/36 of the Chase City Municipal Airport. The airport surveyed ground elevation is 503 feet above mean sea level ("AMSL"). Based on the above-

mentioned airport study, all Project routes would be located outside of the airport's horizontal surface and approach surface, and there would be no potential impacts to the airport from any of the proposed Project routes.

On April 20, 2023, the Company solicited comments from the Virginia Department of Aviation (the "DOAv") on the proposed Project. DOAv responded on April 24, 2023, indicating a portion of the Project potentially lies within 20,000 linear feet of the Chase City Airport. As such, the Company is required to submit a completed 7460 form to the FAA. The DOAv response is included as Attachment 2.O.2.

P. Drinking Water Wells

As a general matter, water wells within 1,000 feet of the route of the Project may be outside of the transmission line corridor and located on private property. The Company does not have the ability or right to field mark the wells on private property. In August 2021, the Company contacted the Virginia Department of Health ("VDH"), Office of Drinking Water ("ODW") to propose a method of well protection, including plotting and calling out the wells on the Partial Rebuild Project's Erosion and Sediment Control Plan, to which VDH-ODW indicated that the Company's proposed method is reasonable. A copy of that correspondence is included as Attachment 2.P.1. The Company intends to follow this same approach in this proceeding, as it has in other cases, and will coordinate with VDH-ODW, as needed.

In response to the Company's request for comments, Dominion Energy Virginia received an email from VDH-ODW dated May 8, 2023, regarding potential Project impacts to public water distribution systems or sanitary sewage collection systems. A copy of this email is included as Attachment 2.P.2.

Q. Pollution Prevention

Generally, as to pollution prevention, as part of Dominion Energy Virginia's commitment to environmental compliance, the Company has a comprehensive Environmental Management System Manual in place that ensures it is complying with environmental laws and regulations, reducing risk, minimizing adverse environmental impacts, setting environmental goals, and achieving improvements in its environmental performance, consistent with the Company's core values. Accordingly, any recommendation by the DEQ to consider development of an effective environmental management system has already been satisfied.

ATTACHMENTS

Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, VA 23219
DominionEnergy.com



April 18, 2023

BY EMAIL

Ms. Michelle Henicheck
Office of Wetlands and Streams
Department of Environmental Quality
1111 East Main Street, Suite 1400
Richmond, Virginia 23219

RE: Dominion Energy Virginia's Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project, in Mecklenburg County, Virginia.

Dear Ms. Henicheck,

Dominion Energy Virginia (the "Company") is proposing to construct two new 230 kV single circuit lines on new right-of-way from the future 500-230 kV Finneywood Switching Station to the Company's future Jeffress 115 kV Switching Station (the "230 kV Finneywood-Jeffress Lines"), and then to convert the future Jeffress 115 kV Switching Station located adjacent to Occaneechee State Park south of Highway 58 near Clarksville, Virginia, in Mecklenburg County, to 230 kV operation ("Jeffress 230 kV Station") (collectively, the "Project").

The Project is needed to provide service requested by Old Dominion Electric Cooperative, in order to provide service to Mecklenburg Electric Cooperative's ("MEC") delivery point for MEC to provide service to one of its data center customers in Mecklenburg County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation Reliability Standards.

The Company is preparing an application for a Certificate of Public Convenience and Necessity from the State Corporation Commission ("SCC"). Pursuant to the July 2003 Memorandum Wetlands Impact Consultation, Dominion Energy Virginia is sending this letter to initiate consultation with the DEQ prior to filing an application with the SCC.

A wetland delineation has not been conducted at this time. However, Environmental Resources Management conducted a wetland desktop study to identify probable wetlands based on a review of multiple data sources. The tables below provide a summary of the medium to high probability wetlands expected to be present within the proposed Project right-of-way.

Table 1: Summary of the Probabilities of Wetland and Waterbody Occurrence along Project Route Alternatives ^{a, b}

Probability	Total right-of-way Acres ^c	Wetland and Waterbody type (acres)				
		PEM Emergent	PFO Forested	PSS Scrub-shrub	PUB Freshwater pond	Riverine Stream
Alternative Route 3						
High	0.8	NA	0.7	NA	NA	0.1

Dominion Energy Virginia
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Mecklenburg County, Virginia
Page 2 of 4

Probability	Total right-of-way Acres ^c	Wetland and Waterbody type (acres)				
		PEM Emergent	PFO Forested	PSS Scrub-shrub	PUB Freshwater pond	Riverine Stream
Medium/High	10.1	0.3	8.0	0.0	1.1	0.8
Medium	24.9	1.2	22.9	NA	0.3	0.5
Alternative Route 4						
High	0.8	NA	0.7	NA	NA	0.1
Medium/High	9.0	0.3	7.1	0.0	1.1	0.6
Medium	23.3	0.6	21.7	1.4	0.2	0.6
Alternative Route 5						
High	1.7	NA	1.4	NA	NA	0.2
Medium/High	9.6	0.3	8.1	0.0	0.3	0.8
Medium	38.5	2.5	34.6	0.3	0.6	0.6

NA Not applicable due to absence of wetland or waterbody type within the alternative route

a The numbers in this table have been rounded for presentation purposes; as a result, the totals may not reflect the sum of the addends.

b Jeffress Station wetlands and waterbodies are included within each route rather than individually.

c Total acres may not total the sum of wetland and waterbody types. This is due to some of the lower probability rankings not overlapping with NWI or interpreted wetlands, and therefore not having a wetland/waterbody type associated with them.

The full Wetland Desktop Study will be submitted once finalized. Subsequently, a wetland delineation will be conducted and the limits of wetlands of other waters of the United States will be submitted to the U.S. Army Corps of Engineers for confirmation. At this time, in advance of the SCC filing, the Company respectfully requests that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter.

Enclosed is a preliminary Project Overview Map depicting the proposed and alternative routes of the 230 kV Finneywood-Jeffress Lines and overall Project location. All final materials, including maps, will be available in the Company's application filing to the Commission. If you would like to receive a GIS shapefile of the routes to assist in your project review or if you have any questions, please do not hesitate to contact James P. Young at (804) 750-6406 or James.P.Young@dominionenergy.com. The Company appreciates your assistance with this project review and looks forward to any additional information you may have to offer.

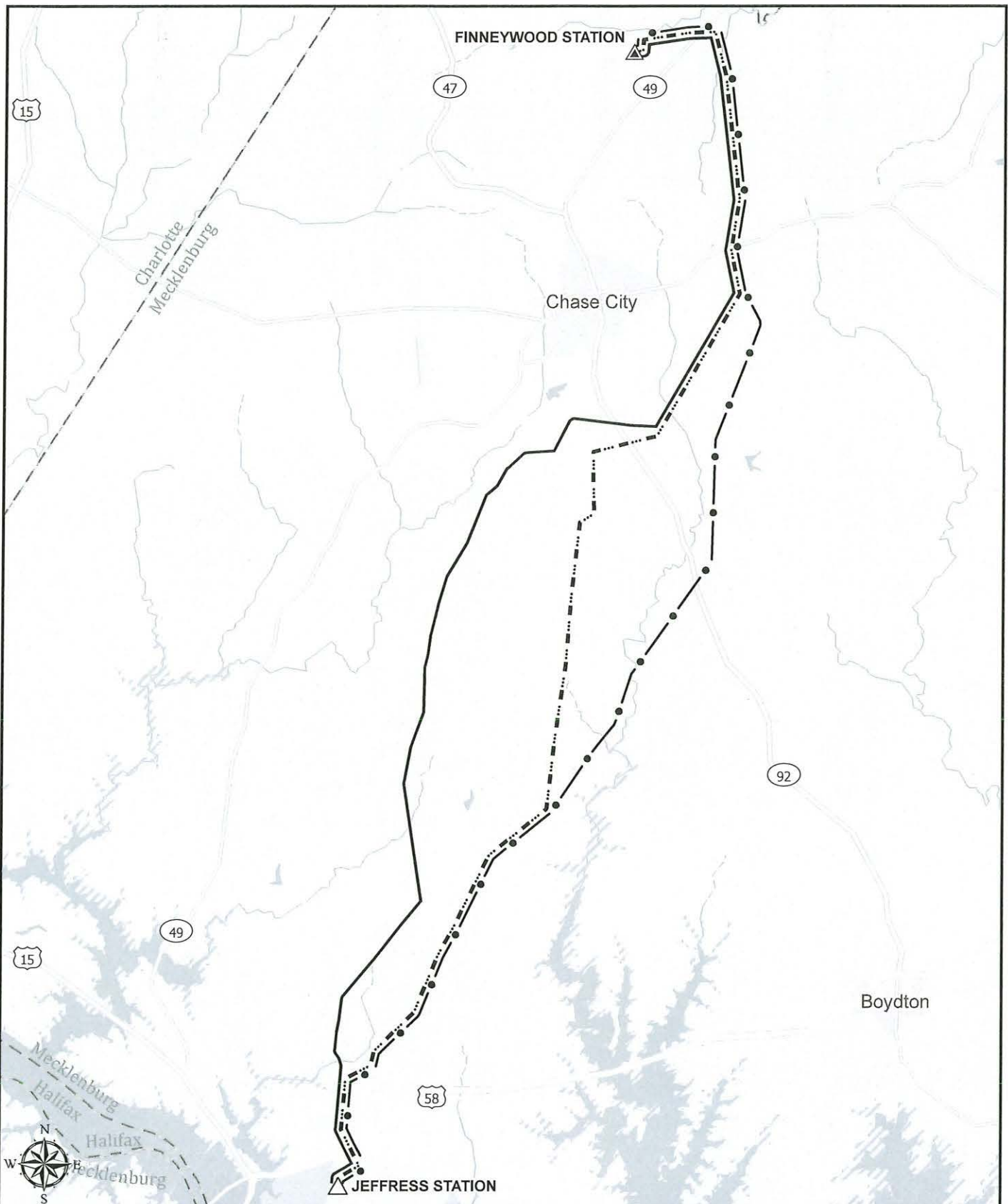
Sincerely,

Dominion Energy Virginia



Elizabeth "Tibby" Hester
Manager, Environmental Services

Attachment: Project Map



- ▲ Future Finneywood Station
- ▲ Substation Proposed for Conversion

- Route Alternative 3
- Route Alternative 4
- Route Alternative 5

1:112,000 0 0.5 1 Miles



Overview Map

230 kV Finneywood-Jeffress Lines and Jeffress Station Conversion Project

Dominion Energy Virginia
Mecklenburg County, Virginia



Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, VA 23219
DominionEnergy.com



August 18, 2022

BY EMAIL

RE: Dominion Energy Virginia's Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project, in Mecklenburg County, Virginia.

To Whom it may Concern,

Dominion Energy Virginia (the "Company") is proposing to construct two new 230 kV single circuit lines on new right-of-way from the future 500-230 kV Finneywood Switching Station to the Company's future Jeffress 115 kV Switching Station (the "230 kV Finneywood-Jeffress Lines"), and then to convert the future Jeffress 115 kV Switching Station located adjacent to Oconeechee State Park south of Highway 58 near Clarksville, Virginia, in Mecklenburg County, to 230 kV operation ("Jeffress 230 kV Station") (collectively, the "Project").

The Project is needed to provide service requested by Old Dominion Electric Cooperative, in order to provide service to Mecklenburg Electric Cooperative's ("MEC") delivery point for MEC to provide service to one of its data center customers in Mecklenburg County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation Reliability Standards.

The Company is preparing an application for a Certificate of Public Convenience and Necessity from the State Corporation Commission ("SCC"). Pursuant to the July 2003 Memorandum Wetlands Impact Consultation, Dominion Energy Virginia is sending this letter to initiate consultation with the DEQ prior to filing an application with the SCC.

Enclosed is a Project Overview Map depicting the proposed and alternative routes and Project location. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact James P. Young at (804) 750-6406 or james.p.young@dominionenergy.com.

We appreciate your assistance with this project review and look forward to any additional information you may have to offer.

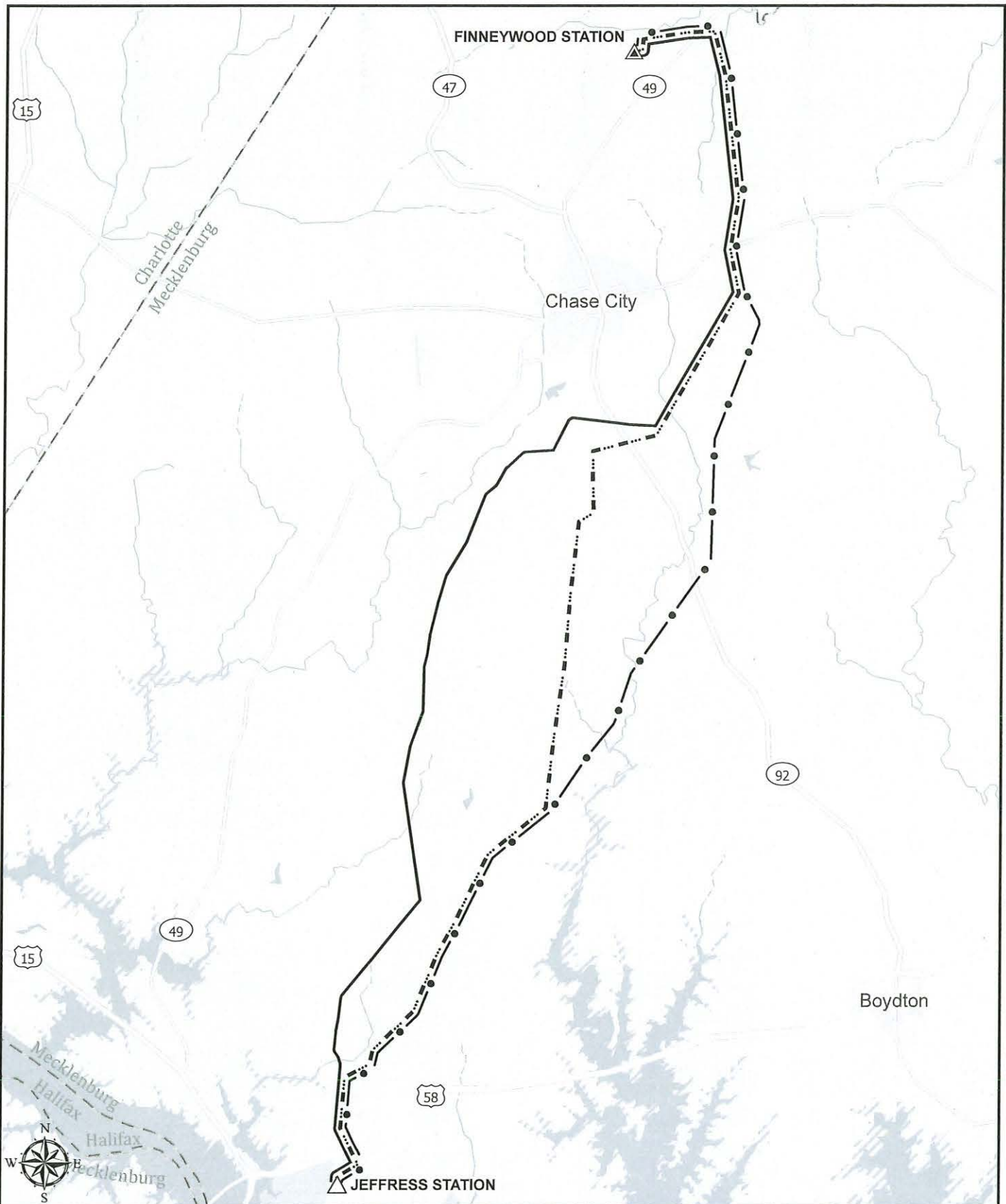
Sincerely,

Dominion Energy Virginia

A handwritten signature in black ink, appearing to read "Elizabeth Hester", written in a cursive style.

Elizabeth "Tibby" Hester
Manager, Environmental Services

Attachment: Project Notice Map



- ▲ Future Finneywood Station
- ▲ Substation Proposed for Conversion

- Route Alternative 3
- Route Alternative 4
- Route Alternative 5

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Overview Map
230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion Project

Dominion Energy Virginia
 Mecklenburg County, Virginia



Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, VA 23219
DominionEnergy.com



April 20, 2023

BY EMAIL

Mr. Roger Kirchen
Department of Historic Resources
Review and Compliance Division
2801 Kensington Avenue
Richmond, Virginia 23221

RE: Dominion Energy Virginia's Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project, in Mecklenburg County, Virginia.

Dear Mr. Kirchen,

Dominion Energy Virginia (the "Company") is proposing to construct two new 230 kV single circuit lines on new right-of-way from the future 500-230 kV Finneywood Switching Station to the Company's future Jeffress 115 kV Switching Station (the "230 kV Finneywood-Jeffress Lines"), and then to convert the future Jeffress 115 kV Switching Station located adjacent to Ocooneechee State Park south of Highway 58 near Clarksville, Virginia, in Mecklenburg County, to 230 kV operation ("Jeffress 230 kV Station") (collectively, the "Project").

The Project is needed to provide service requested by Old Dominion Electric Cooperative, in order to provide service to Mecklenburg Electric Cooperative's ("MEC") delivery point for MEC to provide service to one of its data center customers in Mecklenburg County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation Reliability Standards.

The Company is preparing an application for a Certificate of Public Convenience and Necessity ("CPCN") from the State Corporation Commission ("SCC"). At this time, in advance of filing an application for a CPCN from the SCC, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter.

Enclosed is a preliminary Project Overview Map depicting the proposed and alternative routes of the 230 kV Finneywood-Jeffress Lines and overall Project location. All final materials, including maps, will be available in the Company's application filing to the Commission. If you would like to receive a GIS shapefile of the routes to assist in your project review or if you have any questions, please do not hesitate to me at (804) 239-6450 or Charles.H.Weil@dominionenergy.com. The Company appreciates your assistance with this project review and looks forward to any additional information you may have to offer.

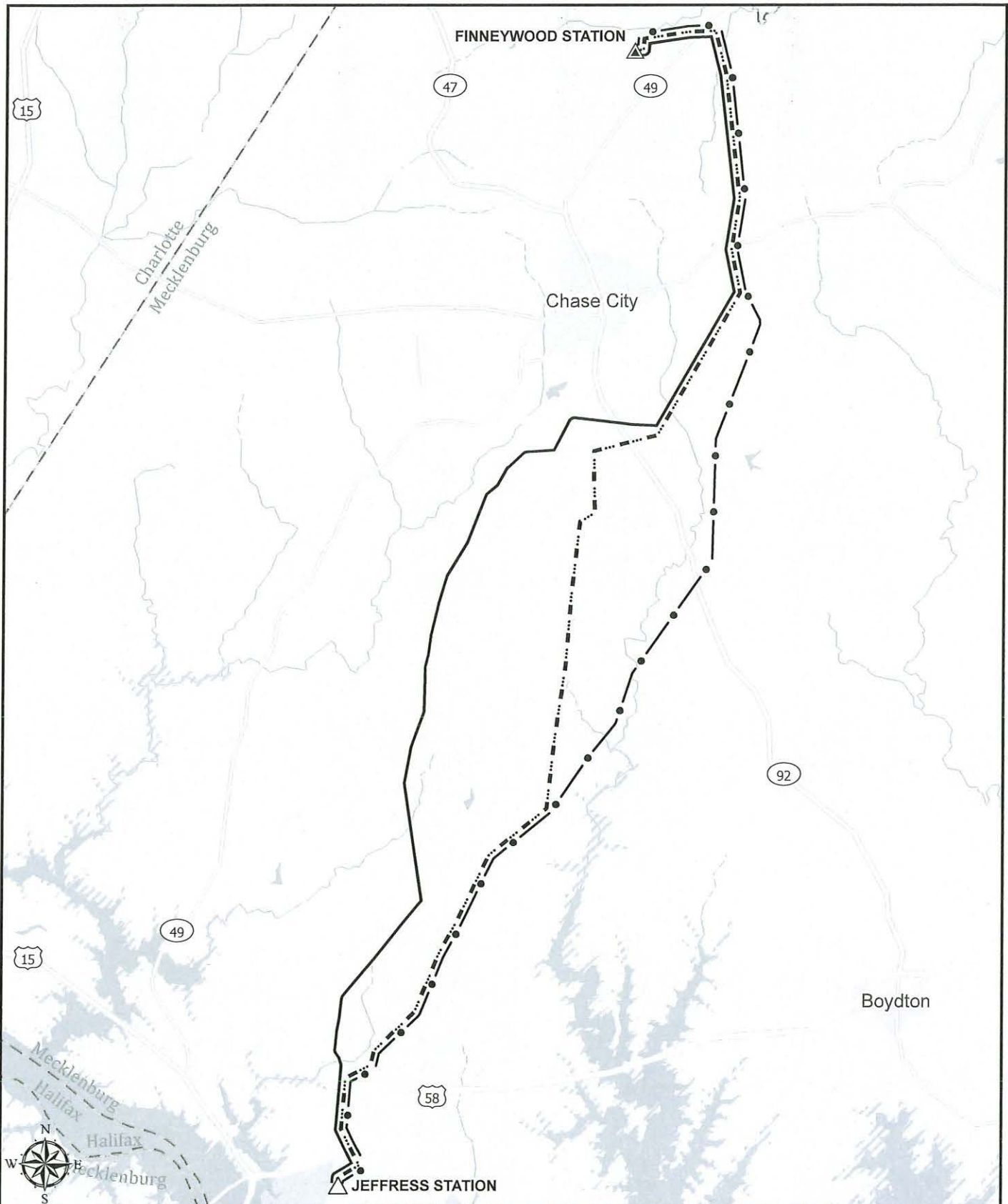
Sincerely,

Dominion Energy Virginia

A handwritten signature in black ink, appearing to read "Charles H. Weil".

Charles H. Weil, PE
Engineer III
Siting and Permitting Group

Attachment: Project Map



▲ Future Finneywood Station △ Substation Proposed for Conversion	--- Route Alternative 3 —●— Route Alternative 4 — Route Alternative 5	Overview Map 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project Dominion Energy Virginia Mecklenburg County, Virginia 1:112,000 0 0.5 1 Miles ERM	Dominion Energy DRAWN BY: Nicole.Dunn
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MPLS M:\Clients\ID-FIDOM\Finneywood_Jeffress_ArcGIS\SCC_Appendix_DOM_F2J_SCC_Appendix.aprx\Attachment Overview Map | REVISED: 04/04/2023 | SCALE: 1:112,000

Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, VA 23219
DominionEnergy.com



April 20, 2023

BY EMAIL

Mr. Scott Denny
Virginia Department of Aviation
Airport Services Division
5702 Gulfstream Road
Richmond, Virginia 23250

RE: Dominion Energy Virginia's Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project, in Mecklenburg County, Virginia.

Dear Mr. Denny,

Dominion Energy Virginia (the "Company") is proposing to construct two new 230 kV single circuit lines on new right-of-way from the future 500-230 kV Finneywood Switching Station to the Company's future Jeffress 115 kV Switching Station (the "230 kV Finneywood-Jeffress Lines"), and then to convert the future Jeffress 115 kV Switching Station located adjacent to Oconeechee State Park south of Highway 58 near Clarksville, Virginia, in Mecklenburg County, to 230 kV operation ("Jeffress 230 kV Station") (collectively, the "Project").

The Project is needed to provide service requested by Old Dominion Electric Cooperative, in order to provide service to Mecklenburg Electric Cooperative's ("MEC") delivery point for MEC to provide service to one of its data center customers in Mecklenburg County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation Reliability Standards.

The Company is preparing an application for a Certificate of Public Convenience and Necessity ("CPCN") from the State Corporation Commission ("SCC"). At this time, in advance of filing an application for a CPCN from the SCC, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter.

Enclosed is a preliminary Project Overview Map depicting the proposed and alternative routes of the 230 kV Finneywood-Jeffress Lines and overall Project location. All final materials, including maps, will be available in the Company's application filing to the Commission. If you would like to receive a GIS shapefile of the routes to assist in your project review or if you have any questions, please do not hesitate to me at (804) 239-6450 or Charles.H.Weil@dominionenergy.com. The Company appreciates your assistance with this project review and looks forward to any additional information you may have to offer.

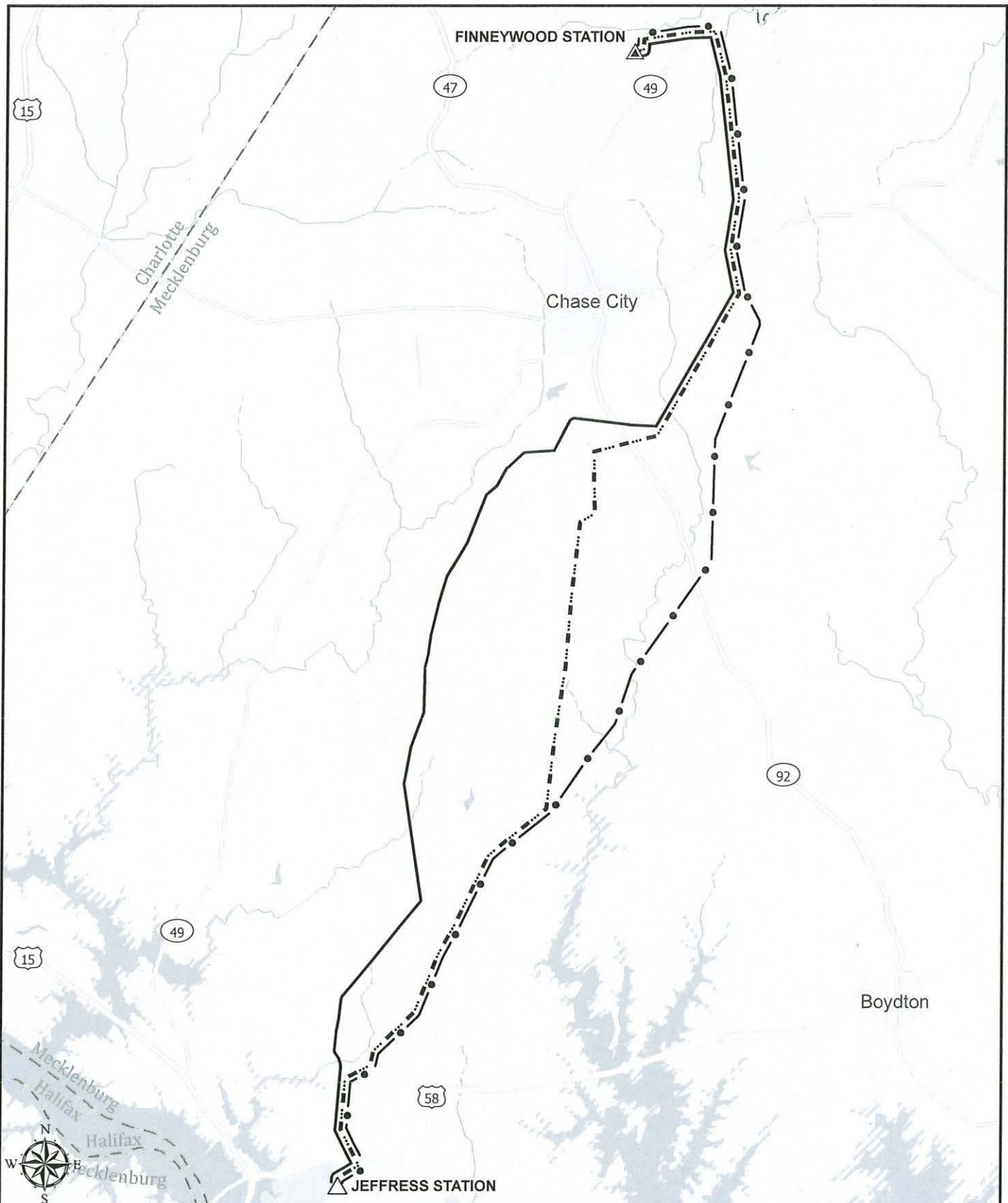
Sincerely,

Dominion Energy Virginia

A handwritten signature in black ink, appearing to read 'Charles H. Weil', written over a white background.

Charles H. Weil, PE
Engineer III
Siting and Permitting Group

Attachment: Project Map



- ▲ Future Finneywood Station
- ▲ Substation Proposed for Conversion

- Route Alternative 3
- Route Alternative 4
- Route Alternative 5

1:112,000 0 0.5 1 Miles



Overview Map

230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project

Dominion Energy Virginia
Mecklenburg County, Virginia



Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, VA 23219
DominionEnergy.com



April 20, 2023

BY EMAIL

Mr. Tommy Johnson
Residency Administrator
Virginia Department of Transportation
1013 West Atlantic St.
P.O. Box 249
South Hill, Virginia 23970

RE: Dominion Energy Virginia's Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project, in Mecklenburg County, Virginia.

Dear Mr. Johnson,

Dominion Energy Virginia (the "Company") is proposing to construct two new 230 kV single circuit lines on new right-of-way from the future 500-230 kV Finneywood Switching Station to the Company's future Jeffress 115 kV Switching Station (the "230 kV Finneywood-Jeffress Lines"), and then to convert the future Jeffress 115 kV Switching Station located adjacent to Occaneechee State Park south of Highway 58 near Clarksville, Virginia, in Mecklenburg County, to 230 kV operation ("Jeffress 230 kV Station") (collectively, the "Project").

The Project is needed to provide service requested by Old Dominion Electric Cooperative, in order to provide service to Mecklenburg Electric Cooperative's ("MEC") delivery point for MEC to provide service to one of its data center customers in Mecklenburg County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation Reliability Standards.

The Company is preparing an application for a Certificate of Public Convenience and Necessity ("CPCN") from the State Corporation Commission ("SCC"). At this time, in advance of filing an application for a CPCN from the SCC, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter.

Enclosed is a preliminary Project Overview Map depicting the proposed and alternative routes of the 230 kV Finneywood-Jeffress Lines and overall Project location. All final materials, including maps, will be available in the Company's application filing to the Commission. If you would like to receive a GIS shapefile of the routes to assist in your project review or if you have any questions, please do not hesitate to me at (804) 239-6450 or Charles.H.Weil@dominionenergy.com. The Company appreciates your assistance with this project review and looks forward to any additional information you may have to offer.

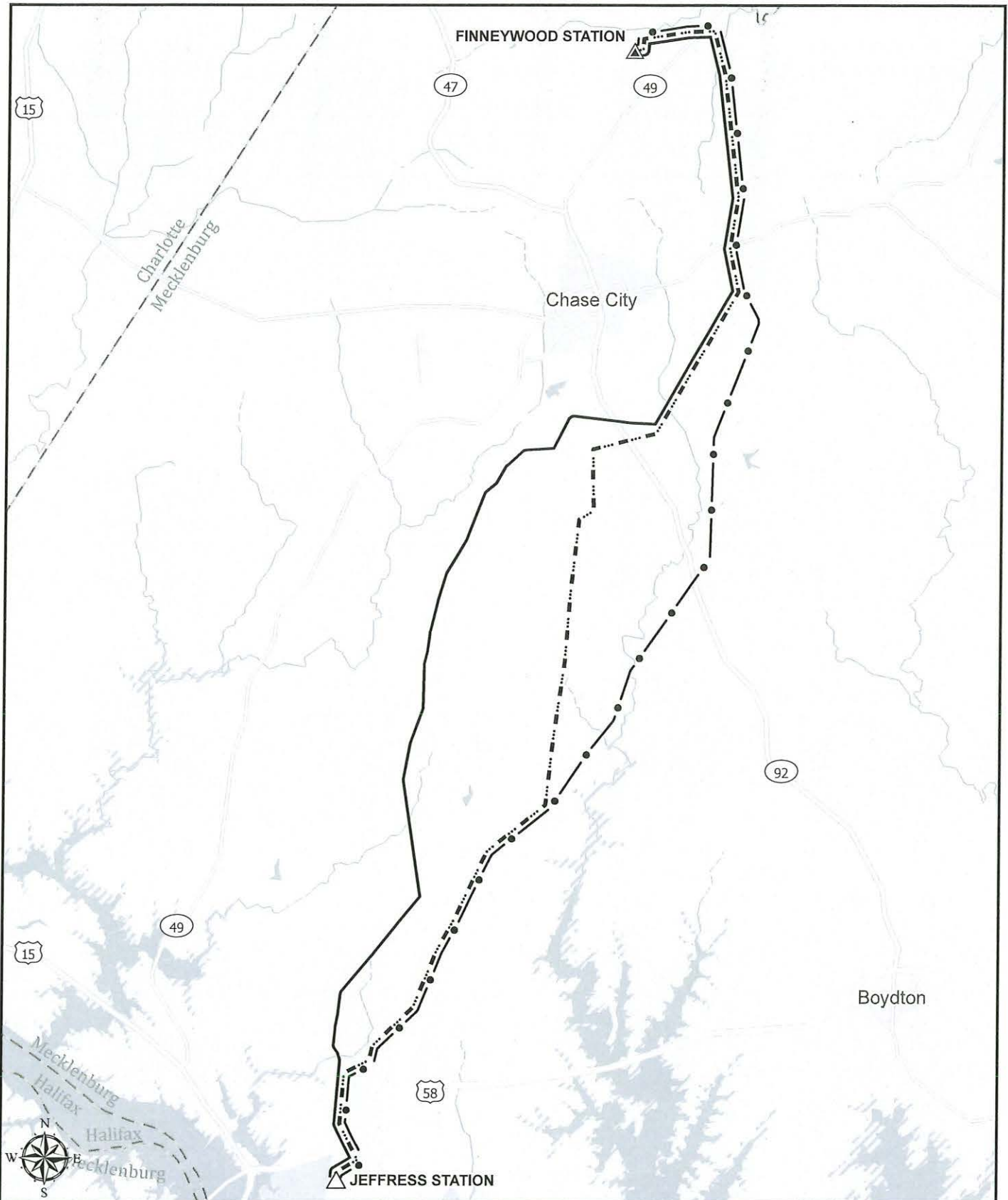
Sincerely,

Dominion Energy Virginia

A handwritten signature in black ink, appearing to read "Charles H. Weil".

Charles H. Weil, PE
Engineer III
Siting and Permitting Group

Attachment: Project Map



- | | |
|--------------------------------------|-------------------------|
| ▲ Future Finneywood Station | --- Route Alternative 3 |
| △ Substation Proposed for Conversion | -●- Route Alternative 4 |
| | — Route Alternative 5 |

1:112,000 0 0.5 1 Miles



Overview Map
230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion Project

Dominion Energy Virginia
Mecklenburg County, Virginia



Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, VA 23219
DominionEnergy.com



April 20, 2023

BY EMAIL

Ms. Martha Little
Virginia Outdoors Foundation
600 East Main Street, Suite 402
Richmond, Virginia 23219

RE: Dominion Energy Virginia's Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project, in Mecklenburg County, Virginia.

Dear Ms. Little,

Dominion Energy Virginia (the "Company") is proposing to construct two new 230 kV single circuit lines on new right-of-way from the future 500-230 kV Finneywood Switching Station to the Company's future Jeffress 115 kV Switching Station (the "230 kV Finneywood-Jeffress Lines"), and then to convert the future Jeffress 115 kV Switching Station located adjacent to Oconeechee State Park south of Highway 58 near Clarksville, Virginia, in Mecklenburg County, to 230 kV operation ("Jeffress 230 kV Station") (collectively, the "Project").

The Project is needed to provide service requested by Old Dominion Electric Cooperative, in order to provide service to Mecklenburg Electric Cooperative's ("MEC") delivery point for MEC to provide service to one of its data center customers in Mecklenburg County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation Reliability Standards.

The Company is preparing an application for a Certificate of Public Convenience and Necessity ("CPCN") from the State Corporation Commission ("SCC"). At this time, in advance of filing an application for a CPCN from the SCC, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter.

Enclosed is a preliminary Project Overview Map depicting the proposed and alternative routes of the 230 kV Finneywood-Jeffress Lines and overall Project location. All final materials, including maps, will be available in the Company's application filing to the Commission. If you would like to receive a GIS shapefile of the routes to assist in your project review or if you have any questions, please do not hesitate to me at (804) 239-6450 or Charles.H.Weil@dominionenergy.com. The Company appreciates your assistance with this project review and looks forward to any additional information you may have to offer.

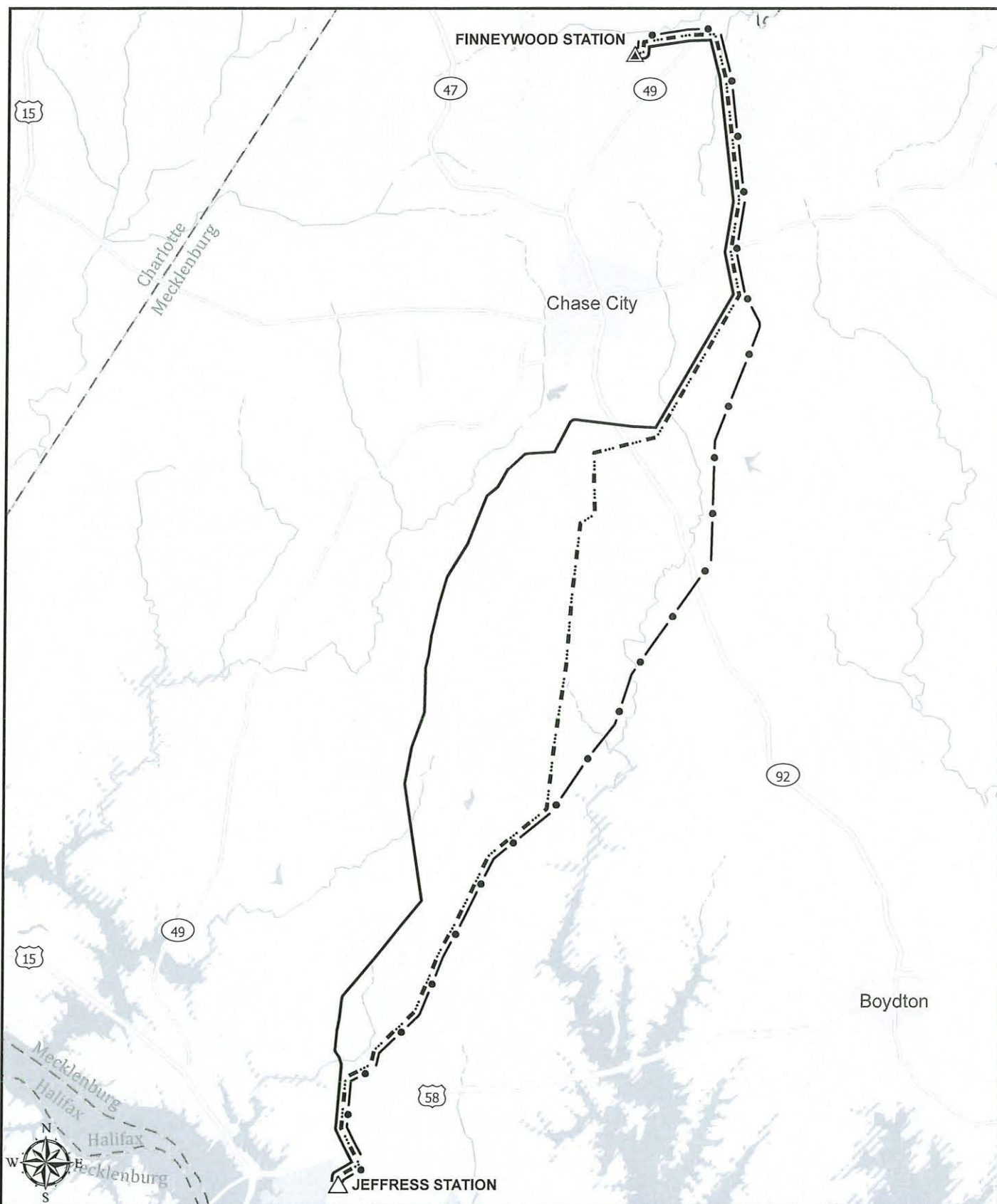
Sincerely,

Dominion Energy Virginia

A handwritten signature in black ink, appearing to read "Charles H. Weil".

Charles H. Weil, PE
Engineer III
Siting and Permitting Group

Attachment: Project Map



- ▲ Future Finneywood Station
- ▲ Substation Proposed for Conversion

- Route Alternative 3
- Route Alternative 4
- Route Alternative 5

1:112,000 0 0.5 1 Miles



Overview Map

230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project

Dominion Energy Virginia
Mecklenburg County, Virginia



Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, VA 23219
DominionEnergy.com



April 20, 2023

Mr. H. Wayne Carter, III
Mecklenburg County Administrator
P.O. Box 307
Boydton, Virginia 23917

RE: Dominion Energy Virginia's Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project, in Mecklenburg County, Virginia. Notice Pursuant to Va. Code § 15.2-2202 E

Dear Mr. Carter,

Dominion Energy Virginia (the "Company") is proposing to construct two new 230 kV single circuit lines on new right-of-way from the future 500-230 kV Finneywood Switching Station to the Company's future Jeffress 115 kV Switching Station (the "230 kV Finneywood-Jeffress Lines"), and then to convert the future Jeffress 115 kV Switching Station located adjacent to Occoneechee State Park south of Highway 58 near Clarksville, Virginia, in Mecklenburg County, to 230 kV operation ("Jeffress 230 kV Station") (collectively, the "Project").

The Project is needed to provide service requested by Old Dominion Electric Cooperative, in order to provide service to Mecklenburg Electric Cooperative's ("MEC") delivery point for MEC to provide service to one of its data center customers in Mecklenburg County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation Reliability Standards.

The Company is preparing an application for a Certificate of Public Convenience and Necessity from the Virginia State Corporation Commission ("SCC"). Pursuant to Va. Code § 15.2-2202, the Company is writing to notify you of the proposed Project in advance of this SCC filing. We respectfully request that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter.

Enclosed is a preliminary Project Overview Map depicting the proposed and alternative routes of the 230 kV Finneywood-Jeffress Lines and overall Project location. All final materials, including maps, will be available in the Company's application filing to the Commission. If you would like to receive a GIS shapefile of the routes to assist in your project review or if you have any questions, please do not hesitate to me at (804) 239-6450 or Charles.H.Weil@dominionenergy.com. The Company appreciates your assistance with this project review and looks forward to any additional information you may have to offer.

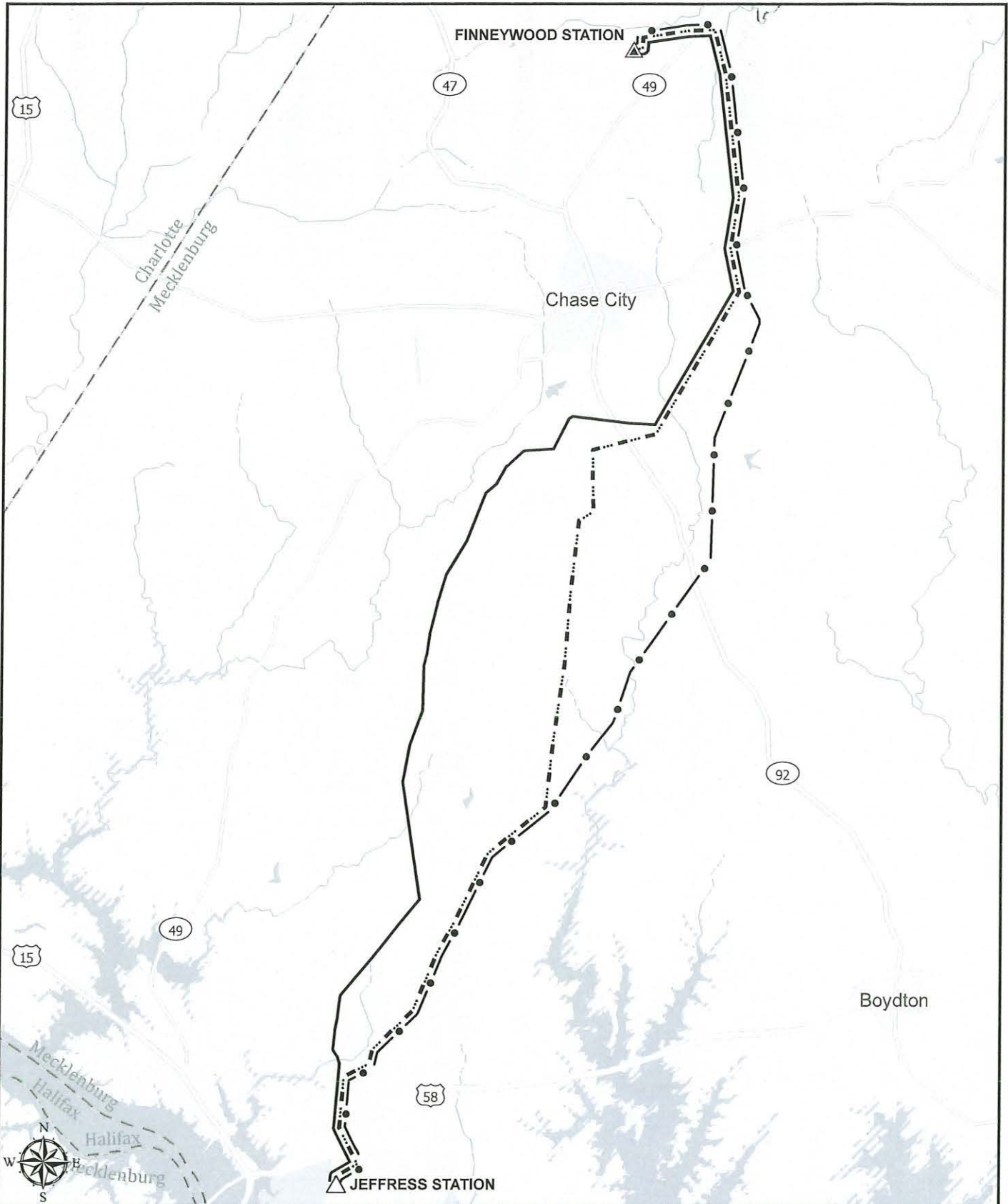
Sincerely,

Dominion Energy Virginia

A handwritten signature in black ink, appearing to read "Charles H. Weil".

Charles H. Weil, PE
Engineer III
Siting and Permitting Group

Attachment: Project Map



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Overview Map

230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project

Dominion Energy Virginia
Mecklenburg County, Virginia



James P Young (Services - 6)

From: Fulcher, Valerie (DEQ) <Valerie.Fulcher@deq.virginia.gov>
Sent: Friday, May 5, 2023 2:35 PM
To: dgif-ESS Projects (DWR); Tignor, Keith (VDACS); DCR-PRR Environmental Review (DCR); odwreview (VDH); Churchill, Nikolas (DEQ); Ballou, Thomas (DEQ); Gavan, Larry (DEQ); West, Kelley (DEQ); Kirchen, Roger (DHR); Spears, David (Energy); ImpactReview (impactreview@vof.org); Carter III, H. Wayne; dgoshney@southsidepdc.org (dgoshney@southsidepdc.org); Henicheck, Michelle (DEQ)
Cc: James P Young (Services - 6)
Subject: [EXTERNAL] NEW SCOPING Finneywood-Jeffress Lines and Jeffress Switching Station Conversion
Attachments: Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Scoping Response.pdf; DOM_F2J_ROW_20230411.zip; Attachment Overview Map.pdf; Agency Letter - ToWhomit mayconcern (Jeffress) - signed- Flat.pdf

CAUTION! This message was NOT SENT from DOMINION ENERGY

Are you expecting this message to your DE email? Suspicious? Use PhishAlarm to report the message. Open a browser and type in the name of the trusted website instead of clicking on links. DO NOT click links or open attachments until you verify with the sender using a known-good phone number. Never provide your DE password.

Good afternoon—attached is a **request for scoping comments** on the following:

Dominion Energy Virginia's Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project - Mecklenburg County, VA

If you choose to make comments, please send them directly to the project sponsor (james.p.young@dominionenergy.com) and copy the DEQ Office of Environmental Impact Review: eir@deq.virginia.gov. We will coordinate a review when the environmental document is completed.

DEQ-OEIR's scoping response is also attached.

If you have any questions regarding this request, please email our office at eir@deq.virginia.gov.

Valerie

Valerie A. Fulcher, CAP, OM, Admin/Data Coordinator Senior
Department of Environmental Quality
Environmental Enhancement - Office of Environmental Impact Review
1111 East Main Street
Richmond, VA 23219
NEW PHONE NUMBER: 804-659-1550
Email: Valerie.Fulcher@deq.virginia.gov
<https://www.deq.virginia.gov/permits-regulations/environmental-impact-review>

For program updates and public notices please subscribe to Constant

Contact: <https://lp.constantcontact.com/su/MVcCump/EIR>



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219

P.O. Box 1105, Richmond, Virginia 23218

(800) 592-5482 FAX (804) 698-4178

www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director
(804) 698-4020

May 5, 2023

James P. Young
Environmental Specialist III
Dominion Energy Environmental Services
120 Tredegar Street
Richmond, VA 23219

RE: Dominion Energy Virginia's Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project - Mecklenburg County, VA

Dear Mr. Young:

This letter is in response to the scoping request for the above-referenced project.

As you may know, the Department of Environmental Quality, through its Office of Environmental Impact Review (DEQ-OEIR), is responsible for coordinating Virginia's review of environmental impacts for electric power generating projects and power line projects in conjunction with the licensing process of the State Corporation Commission.

DOCUMENT SUBMISSIONS

In order to ensure an effective coordinated review of the environmental impact analysis may be sent directly to OEIR. We request that you submit one electronic to eir@deq.virginia.gov (25 MB maximum) or make the documents available for download at a website, file transfer protocol (ftp) site or the VITA LFT file share system (Requires an "invitation" for access. An invitation request should be sent to eir@deq.virginia.gov). The required "Wetlands Impact Consultation" can be sent directly to Michelle Henicheck at michelle.henicheck@deq.virginia.gov or at the address above.

ENVIRONMENTAL REVIEW UNDER VIRGINIA CODE 56-46.1

While this Office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments concerning the preparation of the environmental impact analysis document. Accordingly, we have coordinated your request with the following state agencies and those localities and Planning District Commissions, including but not limited to:

Department of Environmental Quality:

- DEQ Regional Office
 - Air Division
 - Office of Wetlands and Stream Protection
 - Office of Local Government Programs
 - Division of Land Protection and Revitalization
 - Office of Stormwater Management
- Department of Conservation and Recreation
 Department of Health
 Department of Agriculture and Consumer Services
 Department of Wildlife Resources
 Virginia Marine Resources Commission
 Department of Historic Resources
 Department of Mines, Minerals, and Energy
 Department of Forestry
 Department of Transportation

DATA BASE ASSISTANCE

Below is a list of databases that may assist you in the preparation of a NEPA document:

- DEQ Online Database: Virginia Environmental Geographic Information Systems

Information on Permitted Solid Waste Management Facilities, Impaired Waters, Petroleum Releases, Registered Petroleum Facilities, Permitted Discharge (Virginia Pollution Discharge Elimination System Permits) Facilities, Resource Conservation and Recovery Act (RCRA) Sites, Water Monitoring Stations, National Wetlands Inventory:

- www.deq.virginia.gov/ConnectWithDEQ/VEGIS.aspx

- DEQ Virginia Coastal Geospatial and Educational Mapping System (GEMS)

Virginia's coastal resource data and maps; coastal laws and policies; facts on coastal resource values; and direct links to collaborating agencies responsible for current data:

- <http://128.172.160.131/gems2/>

- MARCO Mid-Atlantic Ocean Data Portal

The Mid-Atlantic Ocean Data Portal is a publicly available online toolkit and resource center that consolidates available data and enables users to visualize and analyze ocean resources and human use information such as fishing grounds, recreational areas, shipping lanes, habitat areas, and energy sites, among others.

<http://portal.midatlanticocean.org/visualize/#x=-73.24&y=38.93&z=7&logo=true&controls=true&basemap=Ocean&tab=data&legends=false&layers=true>

- DHR Data Sharing System.

Survey records in the DHR inventory:

- www.dhr.virginia.gov/archives/data_sharing_sys.htm
- DCR Natural Heritage Search
Produces lists of resources that occur in specific counties, watersheds or physiographic regions:
 - www.dcr.virginia.gov/natural_heritage/dbsearchtool.shtml
- Wetland Condition Assessment Tool (WetCAT)
 - <https://www.deq.virginia.gov/water/wetlands-streams/wetcat>
- DWR Fish and Wildlife Information Service
Information about Virginia's Wildlife resources:
 - <http://vafwis.org/fwis/>
- Total Maximum Daily Loads Approved Reports
 - <https://www.deq.virginia.gov/programs/water/waterqualityinformationtmdls/tmdl/tmdldevelopment/approvedtmdlreports.aspx>
- Virginia Outdoors Foundation: Identify VOF-protected land
 - <http://vof.maps.arcgis.com/home/index.html>
- Environmental Protection Agency (EPA) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Database: Superfund Information Systems
Information on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL:
 - www.epa.gov/superfund/sites/cursites/index.htm
- EPA RCRAInfo Search
Information on hazardous waste facilities:
 - www.epa.gov/enviro/facts/rcrainfo/search.html
- Total Maximum Daily Loads Approved Reports
 - <https://www.deq.virginia.gov/programs/water/waterqualityinformationtmdls/tmdl/tmdldevelopment/approvedtmdlreports.aspx>
- EPA Envirofacts Database
EPA Environmental Information, including EPA-Regulated Facilities and Toxics Release Inventory Reports:
 - www.epa.gov/enviro/index.html
- EPA NEPAAssist Database
Facilitates the environmental review process and project planning:

<http://nepaassisttool.epa.gov/nepaassist/entry.aspx>

If you have questions about the environmental review process, please feel free to contact me (telephone (804) 659-1915 or e-mail bettina.rayfield@deq.virginia.gov).

I hope this information is helpful to you.

Sincerely,

A handwritten signature in black ink, appearing to read "Bettina Rayfield". The signature is fluid and cursive, with the first name "Bettina" and last name "Rayfield" clearly distinguishable.

Bettina Rayfield, Program Manager
Environmental Impact Review and
Long-Range Priorities

May 24, 2023

Ms. Bettina Rayfield, Manager
Virginia Department of Environmental Quality
Office of Environmental Impact Review
P.O. Box 1105
Richmond, Virginia 23218

Subject: Wetland and Waterbody Desktop Summary
Finneywood-Jeffress 230 kV Transmission Line Project (New SCC Filing)

Dear Ms. Rayfield:

Environmental Resources Management, Inc. ("ERM"), on behalf of Virginia Electric and Power Company (herein referred to as Dominion Energy Virginia, Dominion, or the Company), conducted a desktop wetland and waterbody review of publicly available information for the proposed Finneywood-Jeffress 230 kilovolt (kV) Transmission Line Project (Project) located in Mecklenburg County, Virginia. A field delineation was not performed as part of this analysis and would be required to verify the accuracy and extent of aquatic resource boundaries. Upon review and approval of the SCC, the Company will complete a field wetland delineation of the approved route upon receipt of a final order. Attachment 1 depicts the general location of the proposed Project, and Attachment 2 presents the wetland boundaries that were identified as part of the desktop review.

Dominion Energy Virginia is filing an application with the Virginia State Corporation Commission (SCC) to:

- Construct two new 230 kV single circuit lines on new right-of-way from the Finneywood Switching Station (Finneywood Station) to the Jeffress 230 kV Switching Station (Jeffress Station).
- Convert the Company's future Jeffress 115 kV Switching Station located adjacent to Occaneechee State Park south of Highway 58 near Clarksville, Virginia, in Mecklenburg County to 230 kV operation.

There is an immediate need for the Project to (1) provide service to a new delivery point to Old Dominion Electric Cooperative on behalf of Mecklenburg Electric Cooperative, for Mecklenburg Electric Cooperative to provide service to one of its data center customers; (2) maintain reliable service for the overall growth in the area; and (3) comply with mandatory North American Electric Reliability Corporation Reliability Standards. The Company considered the facilities required to construct and operate the Project, the length of new rights-of-way that will be required, the amount of existing development in each area, the potential for environmental impacts on communities, and the relative cost of the Project.

The purpose of this desktop analysis was to identify and evaluate potential impacts of the Project on wetlands and waterbodies (streams, creeks, runs, and open water features). In accordance with Virginia Department of Environmental Quality (VDEQ) and the SCC's Memorandum of Agreement, the evaluation was conducted using various data sets that may indicate wetland location and type. The information summarized in this report is being submitted to the VDEQ as part of the VDEQ Wetland Impacts Consultation.

As mentioned above, this assessment did not include the field investigations required for wetland delineations in accordance with the *Corps of Engineers Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0)* (Environmental Laboratory 1987, 1912).

Project Study Area and Potential Routes

A study area was developed encompassing an area containing the Project origin and termination points for the facilities (i.e., the two stations), as well as an area broad enough to allow for the identification of reasonable route alternatives meeting the Project's objectives. Additionally, and to the extent practicable, the limits of the study area were defined by reference to easily distinguished landmarks such as roads or other features.

The Project study area is essentially rectangular and lies within the rural setting of southern Virginia in Mecklenburg, Charlotte, and Lunenburg Counties. The study area also includes the towns of Chase City to the north and Boydton to the southeast, as well as several unincorporated communities.

The Project study area's western boundary begins approximately 1.2 miles west of the unincorporated area of Philbeck Crossroads, extending south for 14.7 miles. The southern boundary follows the northern shore of the John H. Kerr Reservoir to the southeast until a point where it turns directly east, about 1 mile south of the Jeffress Station. The southern boundary extends 11 miles east from the western boundary to the eastern boundary, which is just east of the town of Boydton, extending north from the southern boundary about 17.2 miles to the northern boundary. The Project study area's northern boundary is located 1.3 miles north of the Finneywood Station, extending west from the eastern boundary about 11 miles to the western boundary. The limits of the study area are shown in Attachment 1.

Multiple potential routes were identified for the Project, of which three were deemed feasible for construction and are described below

Proposed Route Alternatives

Route Alternative 3

Starting at the Finneywood Station, Route Alternative 3 heads northwest for about 0.2 mile to an intersection with the Company's existing right-of-way for Line #556. The route then heads east for about 0.9 mile paralleling the south side of the existing transmission corridor, with a crossing of Highway 49 at approximate milepost (MP) 1.0. The route then turns south and continues along a greenfield alignment for about 3.4 miles, passing northeast of Chase City. This segment crosses the Company's existing right-of-way for Line #98 at approximate MP 2.1, Highway 47 at approximate MP 4.0, and the Company's existing right-of-way for Line #40 at approximate MP 4.6. After crossing Line #40, the route turns to the southwest and continues for 2.2 miles, crossing Country Club Drive at approximate MP 5.1, the Company's existing right-of-way for Lines #38 and #137 at approximate MP 5.4, Cemetery Road at approximate MP 5.8, and Butchers Creek at approximate MP 6.5.

At this point, Route Alternative 3 turns and continues to the southwest for about 0.8 mile, crossing Highway 92 at approximate MP 7.1. The route then heads south for about 0.8 mile paralleling the western edge of a Ward Burton Wildlife Foundation Preserve parcel. At approximate MP 8.5, the alignment shifts to the south/southwest and continues for about 4 miles, intersecting Esnon Road at approximate MP 9.1 and Red Oak Lane at approximate MP 11.3. From there, the route heads southwest for 4.5 miles, intersecting Skipwith Road at approximate MP 13.8 and Townes Road at approximate MP 15.5. The route then turns south for about 0.7 mile towards Highway 58 near Jeffress. At approximate MP 17.6, the

route turns and heads south/southeast for about 0.5 mile, crossing Highway 58 at approximate MP 17.9. The route then turns and continues southwest for about 0.4 mile, terminating at the Jeffress Station.

Route Alternative 3 measures approximately 18.5 miles in length.

Route Alternative 4

Route Alternative 4 follows the same alignment as Route Alternative 3 for the first 4.7 miles from the Finneywood Station to a point just south of Dominion's existing right-of-way for Line #40. At that point, the route continues to the southeast for about 0.4 mile then south/southwest for 1.6 miles, intersecting Country Club Drive at approximate MP 5.2, Dominion's existing Line #38 right-of-way at approximate MP 5.7, and Cemetery Road at approximate MP 5.9. Just south of the crossing of an existing Transcontinental Gas Pipe Line Company, LLC (Transco) natural gas pipeline right-of-way, the route turns and heads south for about 2.1 miles then southwest for about 3.4 miles, crossing Parson's Road at MP 8.2, Highway 92 at MP 8.8, and Red Oak Lane at MP 10.9. The route intersects Route Alternative 3 at approximate MP 12.2, and from here follows the same alignment as Route Alternative 3 for the remaining 5.9 miles to the Jeffress Station.

Route Alternative 4 measures approximately 18.3 miles in length.

Route Alternative 5

Route Alternative 5 follows the same alignment as Route Alternative 3 for the first 6.8 miles from the Finneywood Station south to a point east of Highway 92. From there, Route Alternative 5 turns west (away from Route Alternative 3, which heads southwest) to parallel the north side of the existing Transco pipeline right-of-way for about 1.1 miles, crossing Highway 92 and the Norfolk-Southern Railroad at approximate MPs 7.3 and 7.8, respectively. The route then meanders to the southwest for about 1.6 miles, including an approximately 1.1-mile-long segment adjacent to the north side of Butler Farm Road between about MPs 8.4 and 9.5.

The route next turns and heads south/southwest for about 2.9 miles to approximate MP 12.4, intersecting Hilltop Drive near MP 10.1, New Hope Road near MP 11.2, and Hanford Road near MP 12.2. The route then turns slightly to the south/southwest then south/southeast for about 2.5 miles, crossing Park Side Road at approximate MP 13.4, Middle School Road at about MP 14.7, Wilbourne Road at approximate MP 14.8, and the Norfolk Southern Railroad at near MP 14.9. After crossing the railroad, the route turns southwest and parallels the south side of the tracks for another approximately 1.6 miles. The route then turns south for about 1.0 mile, crossing Towns Road at approximate MP 16.9. The route intersects Route Alternative 3 near MP 17.6, and from there follows the same alignment as Route Alternative 3 for the remaining 1.6 miles to the Jeffress Station.

Route Alternative 5 measures approximately 19.2 miles in length.

Desktop Evaluation Methodology

The area of effect considered for this study consists of the proposed rights-of-way identified above within which the electric transmission lines would be constructed and operated. Data sources used for this review include the following, each of which is described briefly below:

- National Agricultural Imagery Program (NAIP) Natural Color Images, Virginia, 1-meter pixel resolution, photo date 2020 (NAIP 2020b);
- NAIP Imagery: Color Infrared NAIP Infrared Images, Virginia, 1-meter pixel resolution, photo date 2020 (NAIP 2020a);

- Current aerial imagery taken in February 2023 (Planet Imagery 2023)
- ESRI World Topographic Map, multiple scales (ESRI et al. 2023);
- U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) mapping (2022) (USFWS 2022);
- U.S. Department of Agriculture-Natural Resources Conservation Service Soil Survey Geographic (SSURGO) database (USDA-NRCS 2023); and
- U.S. Geological Survey National Hydrography Dataset (NHD) (USGS 2022).

Natural Color and Infrared Aerial Photography

Recent (2018 to 2020) natural color aerial photography was used to provide a visual overview of the Project area and to assist in evaluating current conditions. Infrared aerial photography was used to identify the potential presence of wetlands based on signatures associated with the levels of reflectance (ESRI 2022). For example, areas that are inundated with water appear very dark (almost black) due to the low level of reflectance in the infrared spectrum. The presence of these dark colors can be used as a potential indicator of hydric or inundated soils that are likely associated with wetlands (NAIP 2020a, 2020b).

Topographic Maps

Recent ESRI world topographic maps show the topography of the area as well as other important landscape features such as forest cover, development, buildings, agricultural areas, streams, lakes, and wetlands (ESRI et al. 2023).

National Wetlands Inventory Mapping

NWI maps provide the boundaries and classifications of potential wetland areas as mapped by the U.S. Fish and Wildlife Service (USFWS 2022). However, NWI data is based primarily on aerial photo interpretations with limited ground-truthing and may represent incorrect boundaries or wetland cover types. NWI data can be unreliable in some areas, especially in forested landscapes when aerial photography is used as the major data source. The classifications of the majority of the NWI polygons in the study area appear to be accurate based on a review of the cover types observed in the aerial photography. However, in areas where there was an obvious discrepancy between the NWI classification and the aerial photography, ERM modified the classification to more accurately reflect current conditions. To acknowledge ERM's adjustment of NWI classifications where appropriate, all of the wetland types referenced in this assessment are referred to as "assigned wetland cover types" regardless of whether the cover type was actually modified from the NWI classification.

USDA-NRCS Soils Data

Soils in the study area were identified and assessed using the SSURGO database, which is a digital version of the original county soil surveys (NRCS 2023). The attribute data within the SSURGO database provides the proportionate extent of the component soils and their properties (e.g., hydric rating) for each soil map unit. The soils in the study area were grouped into three categories based on the hydric rating of the component soils within each map unit: hydric, partially hydric, and non-hydric. Hydric soils were defined as those where the major component soils—and minor components in some cases—are designated as hydric. Hydric components in these map units account for more than 80 percent of the map unit. Partially hydric soils include map units that only contain minor component soils that are designated as hydric. The partially hydric map units in the Project area contain 10 percent or less hydric soils. The

remaining map units do not contain any component soils that are designated as hydric. Areas mapped as hydric or partially hydric have a higher probability of containing wetlands than areas with no hydric soils.

National Hydrography Dataset

The NHD dataset contains features such as lakes, ponds, streams, rivers, and canals (USGS 2022). The waterbodies mapped by the NHD appeared generally consistent with those visible on the U.S. Geological Survey maps and aerial photography.

Probability Analysis

ERM used a stepwise process to identify probable wetland areas along the proposed routes, as follows:

1. Infrared and natural color aerial photography was used in conjunction with topographic maps and soils maps to identify potential wetland areas. Boundaries were assigned to the areas that appeared to exhibit wetland signatures based on this review and a cover type was determined based on aerial photo interpretation. For the purpose of the study, these areas are referred to as Interpreted Wetlands.
2. To further determine the probability of a wetland occurring within a given location, the Interpreted Wetland polygon shapefiles were digitally layered with the NWI mapping and soils information from the SSURGO database.
3. The probability of a wetland occurring was assigned based on the number of overlapping data layers (i.e., indicators of potential wetland presence) that occurred in a particular area.

The criteria assigned to each probability are outlined in Table 1.

Table 1: Criteria Used to Rank the Probability of Wetland Occurrence

Probability	Criteria
High	Areas where layers of hydric soils, Interpreted Wetlands, and NWI data overlap
Medium/High	NWI data overlaps hydric soils; or NWI data overlaps Interpreted Wetlands with or without partially hydric soils; or Hydric soils overlap Interpreted Wetlands
Medium	Interpreted Wetlands with or without overlap by partially hydric soils
Medium/Low	Hydric soils only; or NWI data with or without overlap by partially hydric soils
Low	Partially hydric soils only
Very Low	Non-hydric soils only

NWI = National Wetlands Inventory

Wetland and Waterbody Crossings

The desktop analysis provides a probability of wetlands and waterbody occurrence within each route. As stated above, field delineations were not performed and would be required to verify the accuracy and extent of aquatic resource boundaries. A range of wetland occurrence probabilities are reported by this study from very low to high. The probability of wetland occurrence increases as multiple indicators begin to overlap towards the high end of the spectrum. The medium, medium-high and high probability category are the most reliable representation of *in-situ* conditions due to overlapping data sets, and these

categories are reported in the summary below as a percentage of the total acreage of each route.
 Attachment 2 depicts the interpreted wetlands displayed on color base map images.

Results

Results of the probability analysis are presented in Table 2. Summaries are provided in the sections following the table.

Table 2: Summary of the Probabilities of Wetland and Waterbody Occurrence along Project Route Alternatives ^{a, b}

Probability	Total within Right-of-Way (acres) ^c	Wetland and Waterbody Type (acres)				
		PEM	PFO	PSS	PUB	Riverine Stream
Route Alternative 3						
High	0.8	NA	0.7	NA	NA	0.1
Medium/High	10.1	0.3	8.0	0.0	1.1	0.8
Medium	24.9	1.2	22.9	NA	0.3	0.5
Medium/Low	1.9	0.3	1.0	0.2	0.3	0.2
Low	63.8	NA	NA	NA	NA	NA
Very Low	167.9	NA	NA	NA	NA	NA
Route Alternative 4						
High	0.8	NA	0.7	NA	NA	0.1
Medium/High	9.0	0.3	7.1	0.0	1.1	0.6
Medium	24.5	0.6	21.7	1.4	0.2	0.6
Medium/Low	2.2	NA	1.5	0.1	0.4	0.2
Low	54.6	NA	NA	NA	NA	NA
Very Low	175.4	NA	NA	NA	NA	NA
Route Alternative 5						
High	1.7	NA	1.4	NA	NA	0.2
Medium/High	9.6	0.3	8.1	0.0	0.3	0.8
Medium	38.5	2.5	34.6	0.3	0.6	0.6
Medium/Low	2.0	NA	0.9	0.1	NA	0.0
Low	90.9	NA	NA	NA	NA	NA
Very Low	136.6	NA	NA	NA	NA	NA

NA = Not applicable due to absence of wetland or waterbody type within the alternative route; PEM = palustrine emergent; PFO = palustrine forested; PSS = palustrine scrub-shrub; PUB = Palustrine Unconsolidated Bottom

^a Numbers in this table have been rounded for presentation purposes; as a result, the totals may not reflect the sum of the addends.

^b Based on the desktop analysis and review of the data sources described above, no wetlands or waterbodies are within the Jeffress Station footprint.

^c Total acres may not total the sum of wetland and waterbody types because some of the lower probability rankings do not overlap with NWI or interpreted wetlands and therefore do not have a wetland/waterbody type associated with them.

Wetland Crossings

Route Alternative 3

The length of the corridor for Route Alternative 3 is approximately 18.3 miles and encompasses a total of approximately 269.5 acres. Based on the methodology discussed above, the right-of-way footprint will encompass approximately 13.3 percent (35.9 acres) of land with a medium or higher probability of containing wetlands and waterbodies.

Route Alternative 4

The length of the corridor for Route Alternative 4 is approximately 18.5 miles and encompasses a total of approximately 266.5 acres. Based on the methodology discussed above, the right-of-way footprint will encompass approximately 12.9 percent (34.3 acres) of land with a medium or higher probability of containing wetlands and waterbodies.

Route Alternative 5

The length of the corridor for Route Alternative 5 is approximately 19.2 miles and encompasses a total of approximately 279.1 acres. Based on the methodology discussed above, the right-of-way footprint will encompass approximately 17.8 percent (49.7 acres) of land with a medium or higher probability of containing wetlands and waterbodies.

Waterbody Crossings

ERM identified and mapped waterbodies in the study area using similar publicly available Geographic Information System databases as those used to identify and map wetlands. All of the route alternatives cross perennial and intermittent streams and open waterbody features.

Route Alternative 3

Based on the NHD and the wetland desktop delineation methodology described above, there are a total of 37 waterbody crossings within the Route Alternative 3 right-of-way, including 8 perennial waterbodies, 26 intermittent waterbodies, and 3 lakes/ponds. Based on ERM's desktop wetland and waterbody analysis, the Route Alternative 3 right-of-way encompasses approximately 1.4 acres of riverine waterbodies and 1.3 acres of open water. Named waterbodies crossed by the right-of-way identified in the desktop review include Horsepen Creek, Butcher Creek, Panhandle Creek, and five open waterbody features.

Route Alternative 4

There are a total of 31 NHD-mapped waterbody crossings within the Route Alternative 4 right-of-way, including 8 perennial waterbodies, 20 intermittent waterbodies, and 3 lakes/ponds. Based on ERM's desktop wetland and waterbody analysis, the Route Alternative 4 right-of-way encompasses approximately 1.4 acres of riverine waterbodies and 1.2 acres of open water. Named waterbodies crossed by the right-of-way identified in the desktop review include Horsepen Creek, Butcher Creek, Rocky Branch, Panhandle Creek, and five open waterbody features.

Route Alternative 5

Based on the NHD and the wetland desktop delineation methodology described above, there are a total of 34 waterbody crossings within the Route Alternative 5 right-of-way, including 7 perennial waterbodies, 26 intermittent waterbodies, and 1 lake/pond. Based on ERM's desktop wetland and waterbody analysis, the Route Alternative 5 right-of-way encompasses approximately 1.6 acres of riverine waterbodies and 0.9 acres of open water. Named waterbodies crossed by the right-of-way identified in the desktop review

include Horsepen Creek, Butcher Creek, Popes Creek, Sandy Creek (two crossings), and two open waterbody features.

Project Impacts

Avoiding or minimizing new impacts on wetlands and streams was among the criteria Dominion Energy Virginia used in developing routes for the Project. To minimize impacts on wetland areas and streams, the transmission lines have been designed to span or avoid wetlands where possible. Most of the wetlands in the area are associated with streams and rivers, and it is anticipated that these features can be spanned, keeping structure locations outside of wetlands to the extent practicable.

Where the removal of trees or shrubby vegetation occurs within wetlands, Dominion Energy Virginia would use the least intrusive method reasonably possible to clear the corridor. Hand-cutting of vegetation would be conducted, where needed, to avoid and minimize impacts on streams and/or wetlands. There would be no change in contours or redirection of water flow, and the amount of spoil from foundation installation and structure placement would be minimal. Excess soil in wetlands generated through foundation construction would be removed from the wetland.

Mats would be used for construction equipment to travel over wetlands, as appropriate. Due to the absence of an existing right-of-way in most areas along the routes, new temporary access roads may be necessary. Additionally, if a route section cannot be accessed from existing roads, Dominion may need to install a culvert, ford, or temporary bridge along the right-of-way to cross small streams, where present. In such cases, temporary fill material in wetlands adjacent to the crossings may be required. This fill would be placed on erosion control fabric and removed when work is completed, returning ground elevations to original contours. Potential direct impacts on wetlands associated with construction would be temporary in nature.

Where tree clearing within wetlands is necessary, forested wetlands would be permanently converted to scrub-shrub or emergent type wetlands after construction. Wetlands—and in particular forested wetlands—provide functions such as peak flood flow reduction, nutrient and sediment capture, filtration of pollutants to adjacent waterbodies, and diversity of habitat. The conversion of forested wetlands may reduce or eliminate some of these functions. Required tree removal adjacent to waterbodies would reduce riparian buffer functions such as stream bank stabilization and erosion control, nutrient and sediment filtration, floodwater storage and peak flow reduction, and water temperature modification from shading. Vegetation within the right-of-way would be allowed to return to maintained grasses and shrubs after construction, which would provide some filtration stabilization to help protect waterbodies from pollutants. Within the stream buffers (100 feet), all trees will be hand felled with stumps left in place to reduce the potential for erosion. Shrubs and trees with a diameter at breast height of less than 3 inches will be left in place unless it impedes temporary access where they would be cut, leaving roots in place to naturally regenerate.

Summary

This *Wetland and Waterbody Desktop Summary* report was prepared in accordance with the Memorandum of Agreement between the VDEQ and the Virginia SCC for purposes of initiating a Wetlands Impact Consultation. A formal onsite wetland delineation was not conducted as part of this review. In addition, there is a Project website where the SCC application will be available after filing, as well as maps and discussions about the Project. It can be accessed by going to:

<https://www.dominionenergy.com/projects-and-facilities/electric-projects/power-line-projects/jeffress>.

If you have any questions regarding this wetland assessment, please contact me at 612-347-7178 or by email at mariah.weitzenkamp@erm.com.

Sincerely,

Mariah Weitzenkamp
Environmental Resources Management

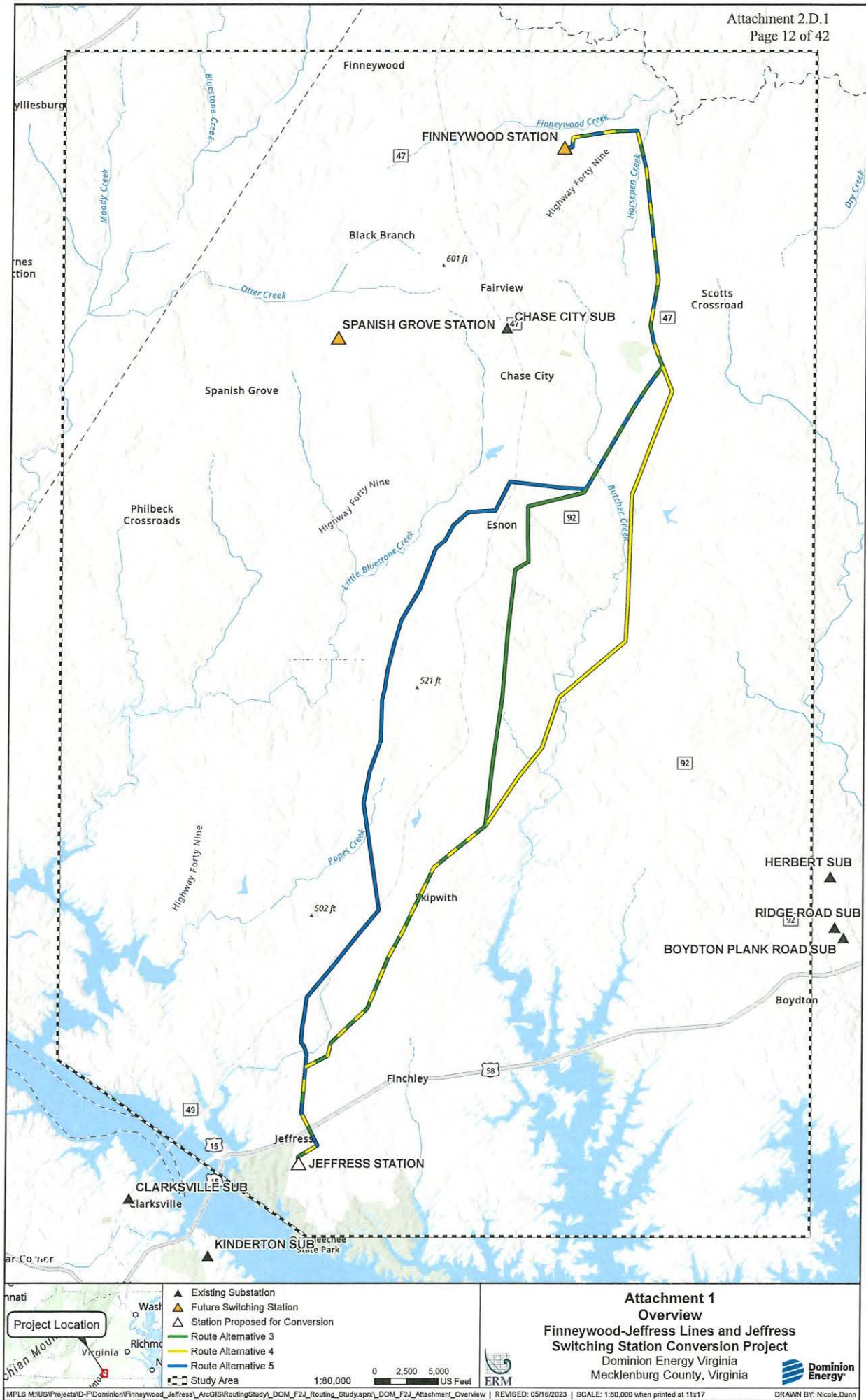
cc: Laura Meadows, Dominion Energy Virginia
James Young, Dominion Energy Virginia

Enclosures: Attachments 1 and 2

References

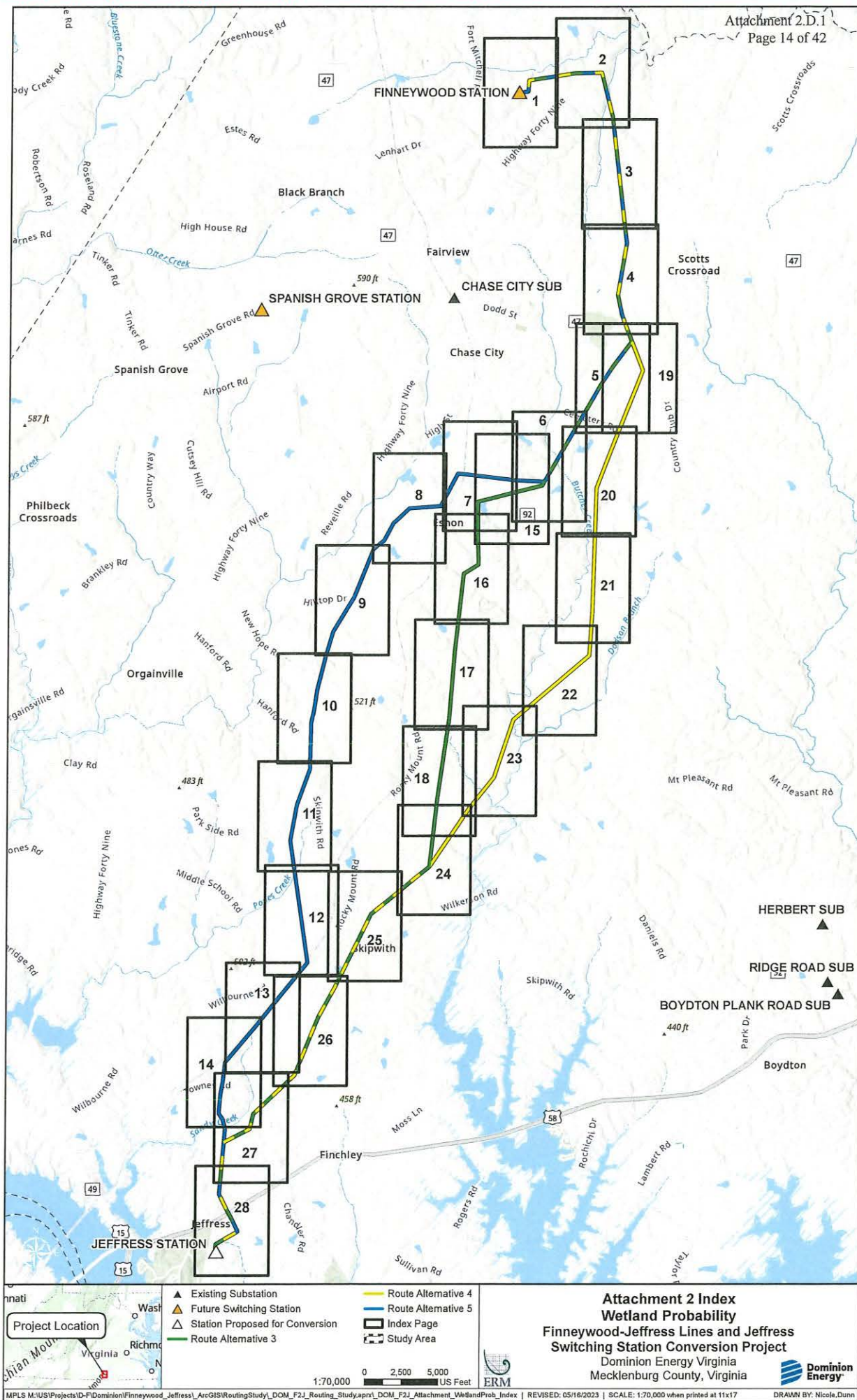
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ATTACHMENT 1 OVERVIEW



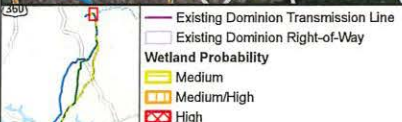
ATTACHMENT 2 WETLAND PROBABILITY

The wetlands and waterbodies depicted on this map are an estimate of possible wetland and waterbody extent based on desktop data review only, and are subject to change in extent and location based on actual field delineation of wetlands and waterbodies





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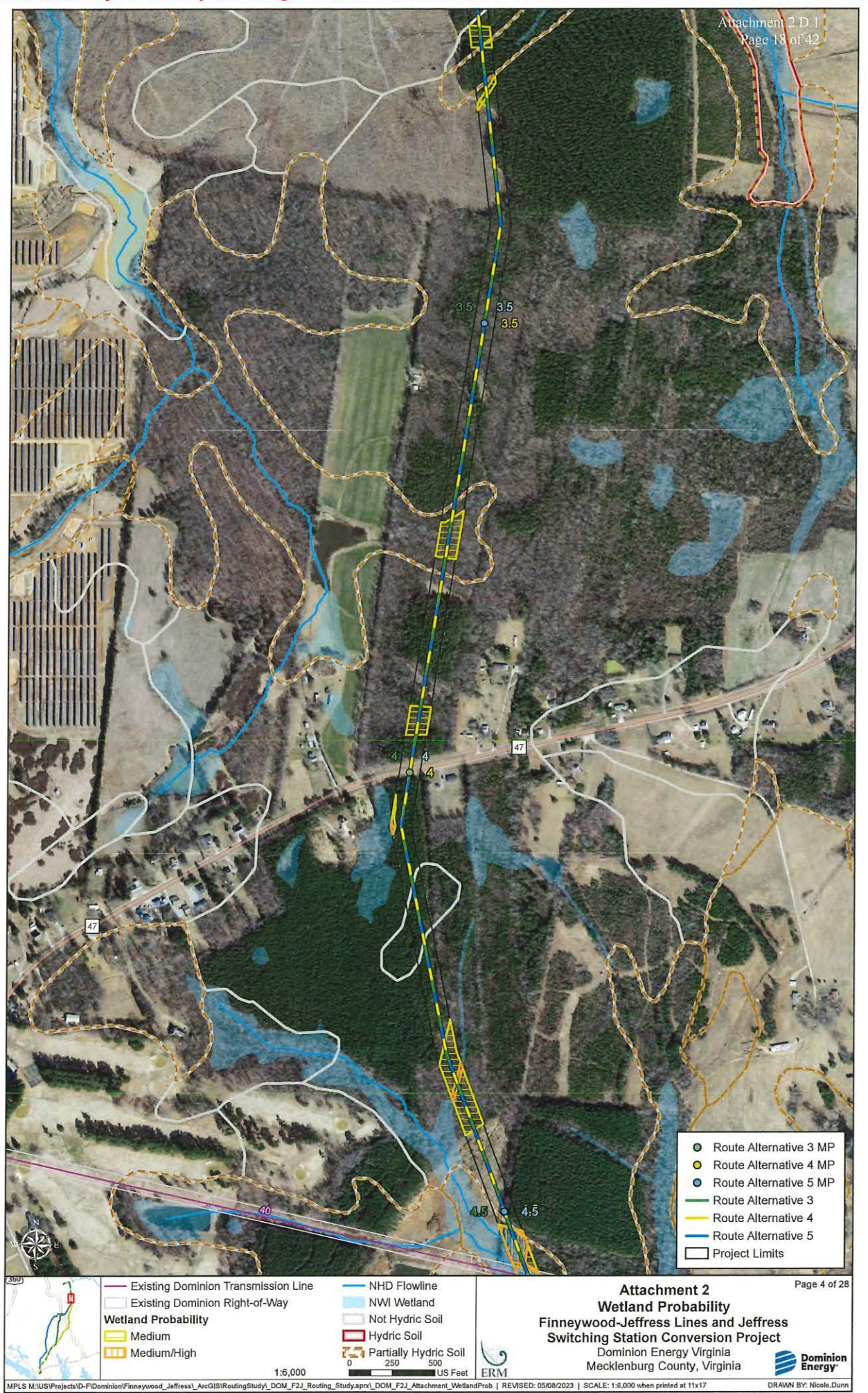
Attachment 2
Wetland Probability
Finneywood-Jeffress Lines and Jeffress
Switching Station Conversion Project
 Dominion Energy Virginia
 Mecklenburg County, Virginia

Dominion Energy

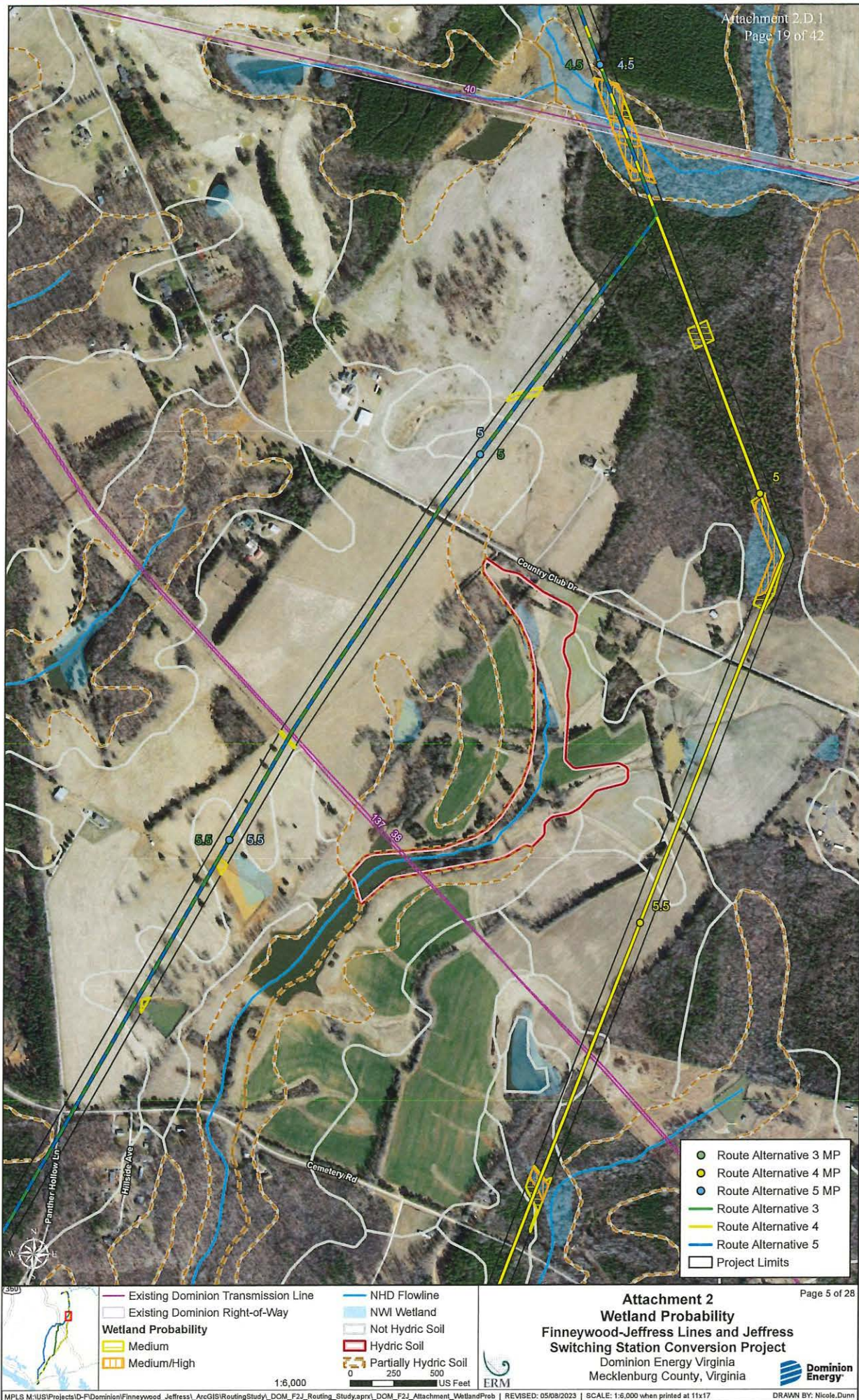
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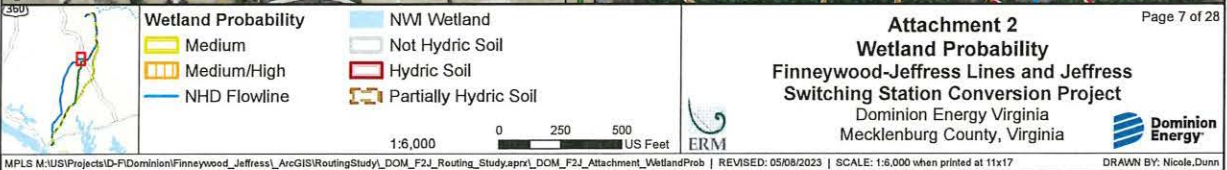
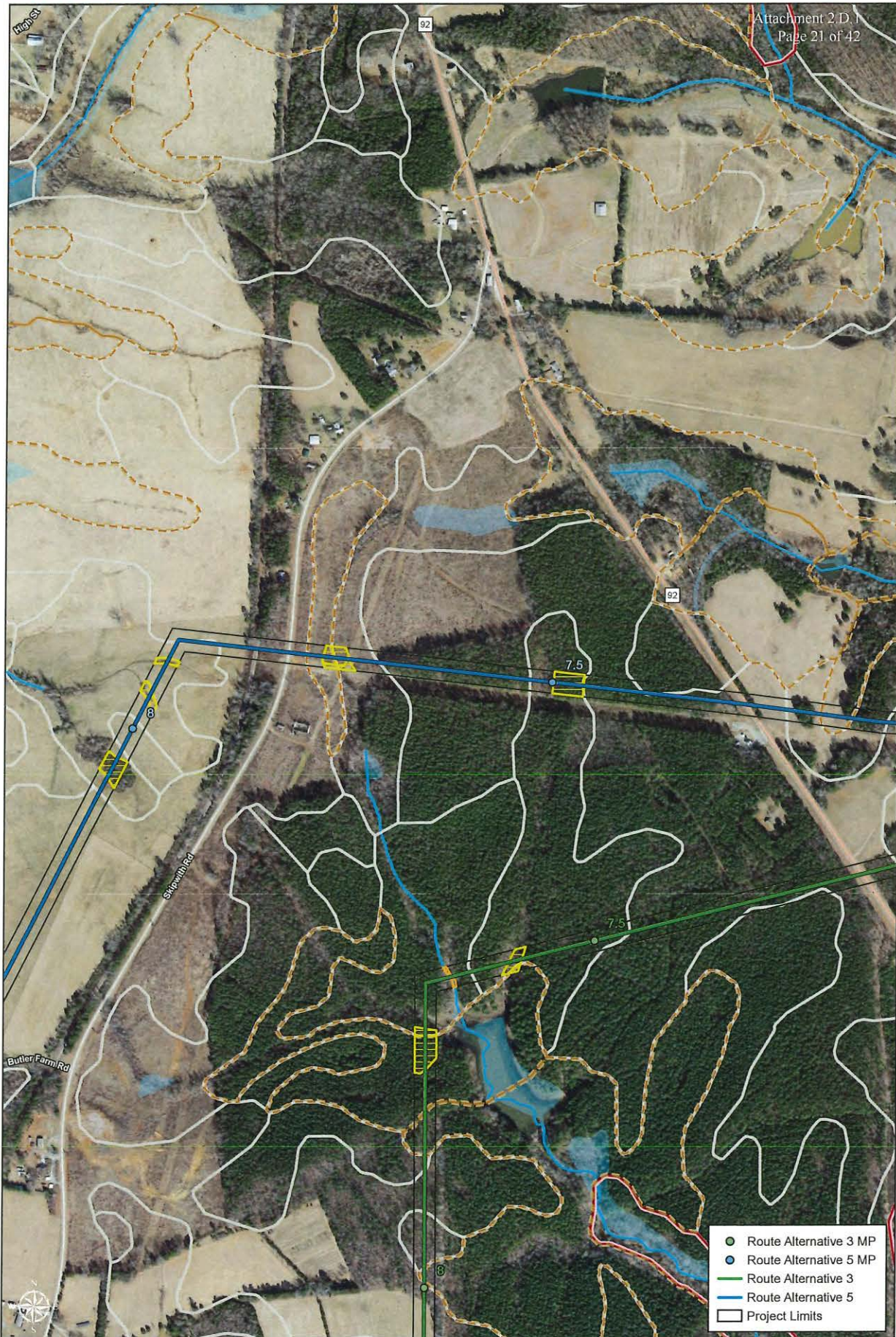
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Attachment 2.D.1
Page 26 of 42



Attachment 2
Wetland Probability
Finneywood-Jeffress Lines and Jeffress
Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

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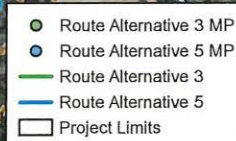




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Page 29 of 42

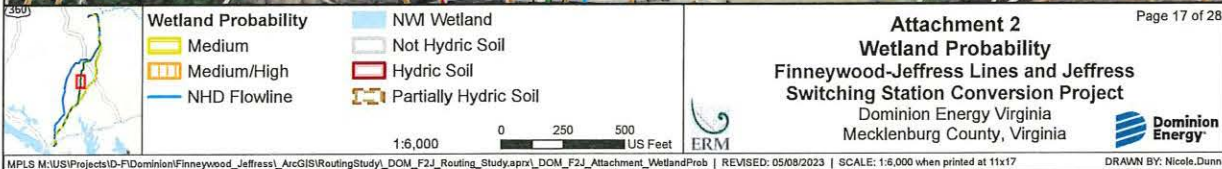


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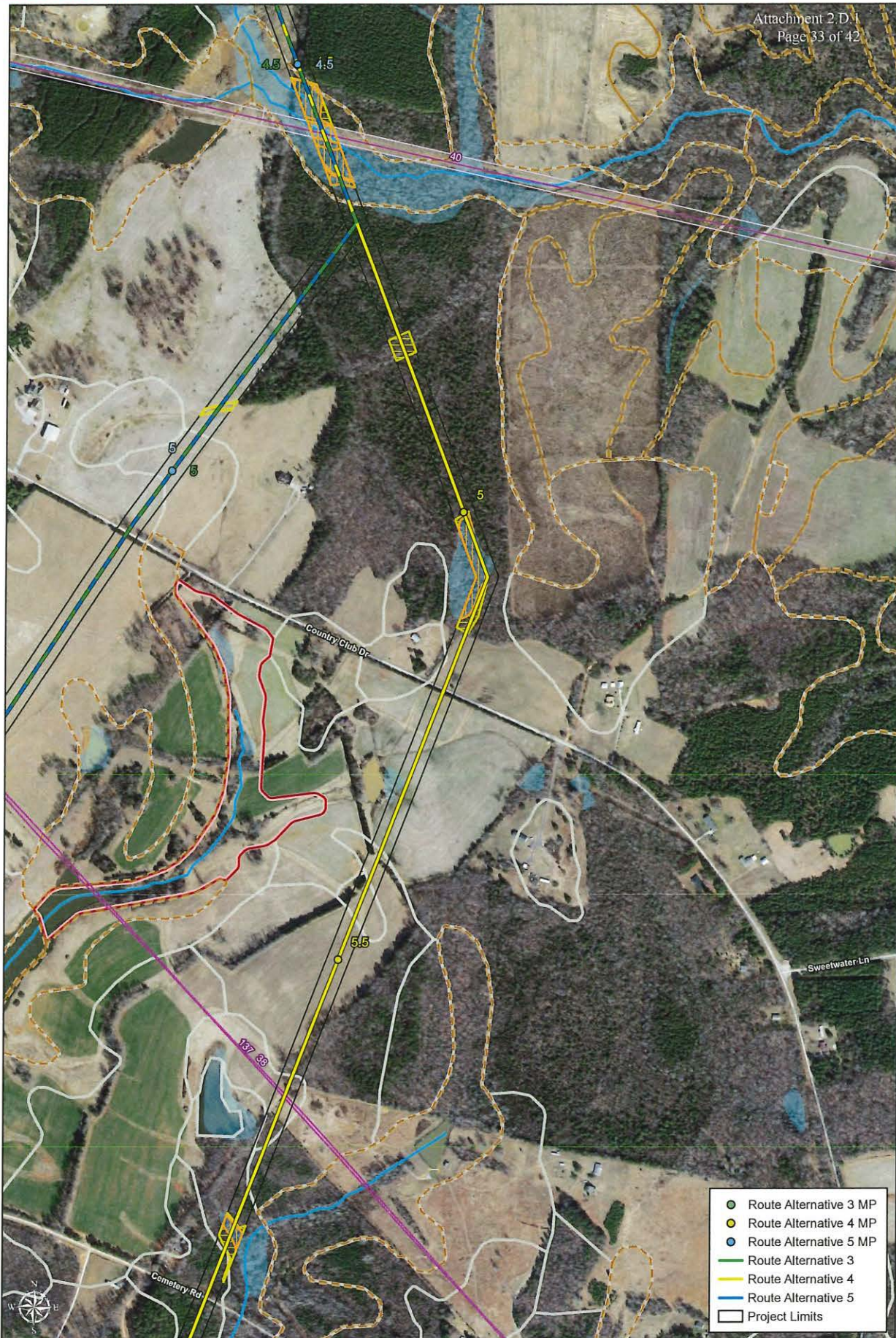


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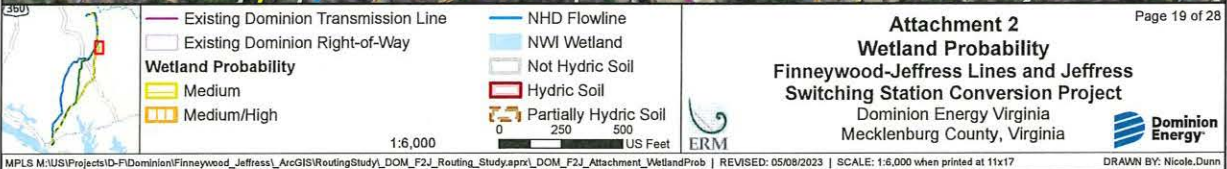


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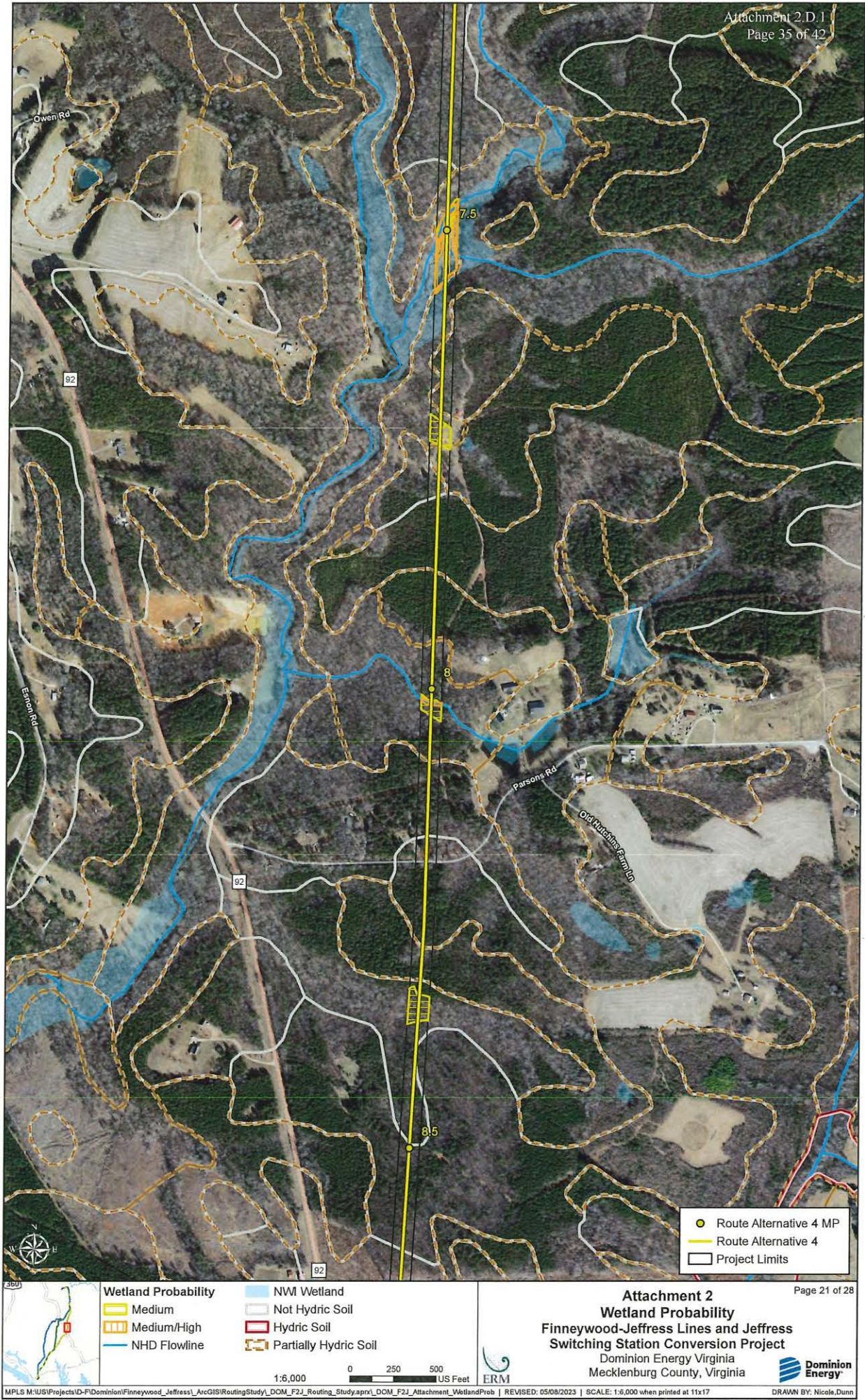
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Page 33 of 42



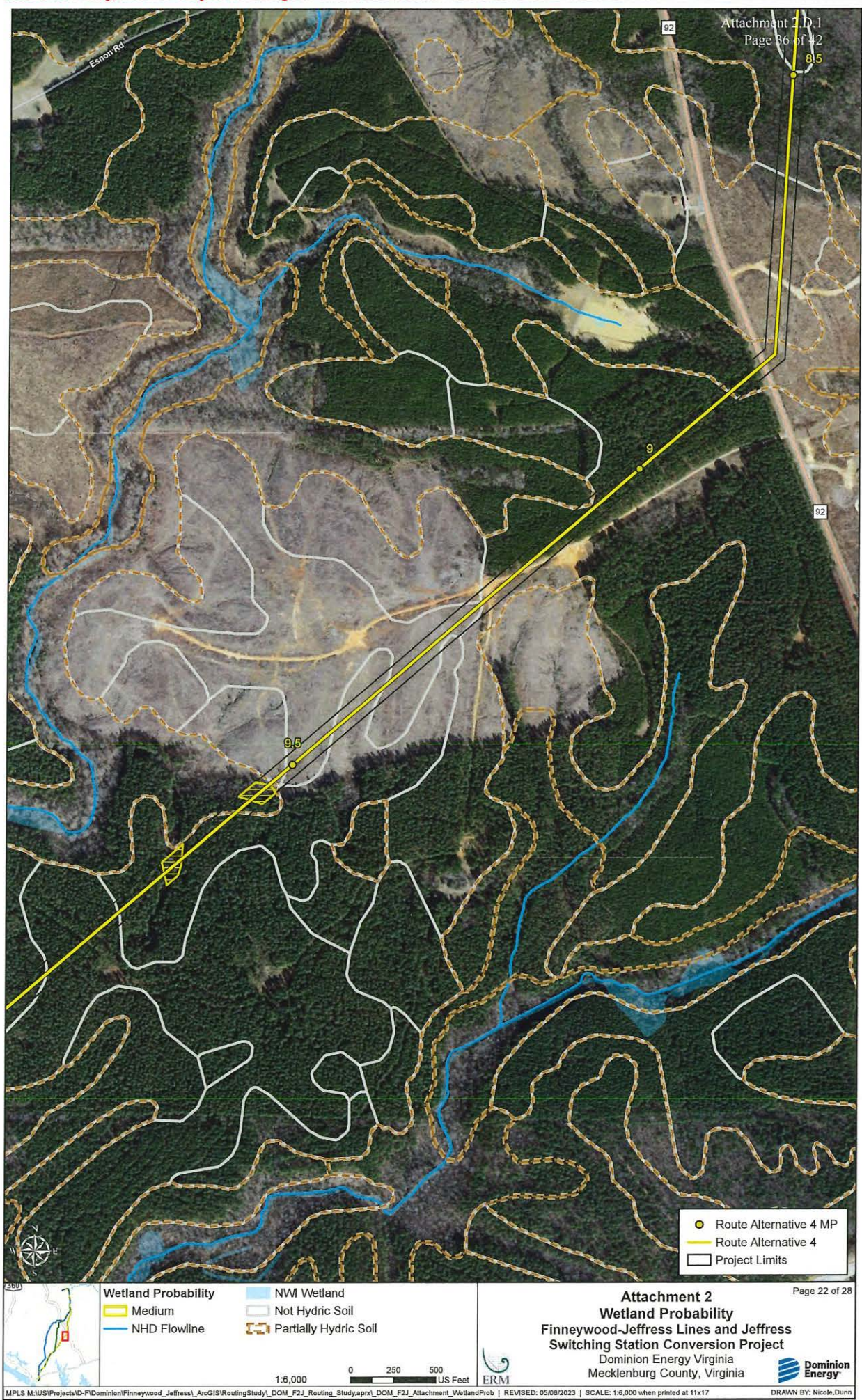
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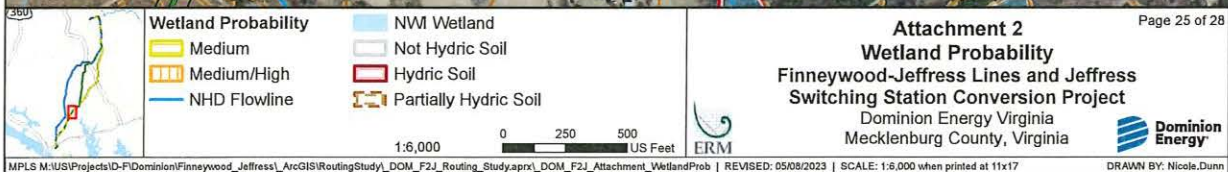
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Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director
(804) 698-4020

May 8, 2023

James P. Young
Environmental Specialist III
Dominion Energy Environmental Services
120 Tredegar Street
Richmond, VA 23219

RE: Dominion Energy Virginia's Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project - Mecklenburg County, VA

Dear Mr. Young:

In accordance with the Department of Environmental Quality-State Corporation Commission *Memorandum of Agreement Regarding Wetland Impact Consultation* (July 2003), we have reviewed the information submitted by Dominion Energy Virginia (Dominion). Dominion proposes to construct two new 230 kV single circuit lines on new right-of-way from the future 500-230 kV Finneywood Switching Station to the Company's future Jeffress 115 kV Switching Station (the 230 kV Finneywood-Jeffress Lines), and then to convert the future Jeffress 115 kV Switching Station located adjacent to Occaneechee State Park south of Highway 58 near Clarksville, Virginia, in Mecklenburg County, to 230 kV operation (Jeffress 230 kV Station) (collectively, the Project).

Summary of Findings

A wetland delineation has not been conducted at this time. However, Environmental Resources Management conducted a wetland desktop study to identify probable wetlands based on a review of multiple data sources. The tables below provide a summary of the medium to high probability wetlands expected to be present within the proposed Project right-of-way.

Table 1: Summary of the Probabilities of Wetland and Waterbody Occurrence along Project Route Alternatives a, b

Probability	Total right-of-way Acres c	Wetland and Waterbody type (acres)				
		PEM Emergent	PFO Forested	PSS Scrub-shrub	PUB Freshwater pond	Riverine Stream
Alternative Route 3						
High	0.8	NA	0.7	NA	NA	0.1

Probability	Total right-of-way Acres c	Wetland and Waterbody type (acres)				
		PEM Emergent	PFO Forested	PSS Scrub-shrub	PUB Freshwater pond	Riverine Stream
Medium/High	10.1	0.3	8.0	0.0	1.1	0.8
Medium	24.9	1.2	22.9	NA	0.3	0.5
Alternative Route 4						
High	0.8	NA	0.7	NA	NA	0.1
Medium/High	9.0	0.3	7.1	0.0	1.1	0.6
Medium	23.3	0.6	21.7	1.4	0.2	0.6
Alternative Route 5						
High	1.7	NA	1.4	NA	NA	0.2
Medium/High	9.6	0.3	8.1	0.0	0.3	0.8
Medium	38.5	2.5	34.6	0.3	0.6	0.6

NA Not applicable due to absence of wetland or waterbody type within the alternative route

a The numbers in this table have been rounded for presentation purposes; as a result, the totals may not reflect the sum of the addends.

b Jeffress Station wetlands and waterbodies are included within each route rather than individually.

c Total acres may not total the sum of wetland and waterbody types. This is due to some of the lower probability rankings not overlapping with NWI or interpreted wetlands, and therefore not having a wetland/waterbody type associated with them.

Water Quality and Wetlands. Measures such as but not limited to Best Management Practices (BMPs) must be taken to avoid and minimize impacts to surface waters during construction activities, including potential water quality impacts resulting from construction site runoff. The disturbance of land and surface waters, which include wetlands, open water, and streams, may require prior approval by DEQ; the U.S. Army Corps of Engineers; the Virginia Marine Resources Commission (VMRC); and/or local government wetlands boards (generally in the northern and piedmont regions of Virginia). The Army Corps of Engineers and DEQ work in conjunction to provide official confirmation of whether there are federal and/or state jurisdictional surface waters that may be impacted by the proposed project. VMRC provides its own review to determine its agency jurisdiction. Review of National Wetland Inventory maps or topographic maps for locating wetlands, open waters, or streams may not be sufficient; there may need to be a site-specific review by a qualified professional. If construction activities will occur in or along any streams (perennial, intermittent, or ephemeral), open water or wetlands, the applicant should contact the DEQ-VWP manager at our Piedmont Regional Office to determine the need for any permits prior to commencing work that could impact surface waters. DEQ's permit need decisions neither replace nor supersede requirements set forth by other local, state, federal, and Tribal laws, nor eliminate the need to obtain additional permits, approvals, consultations, or authorizations as required by law before proposed activities may commence.

Recommendations and Potential Permits

DEQ offers the following recommendations:

1. Prior to commencing project work, all surface waters on the project site should be delineated by a qualified professional and verified by the U.S. Army Corps of Engineers (the Corps) for federal jurisdictional waters and by DEQ for state jurisdictional waters.
2. Wetland and stream impacts should be avoided and minimized to the maximum extent practicable.
3. If the scope of the project changes, additional review will be necessary by one or more offices in the Commonwealth's Secretariat of Natural Resources and/or the Corps.
4. At a minimum, any required compensation for impacts to State Waters, including the compensation for permanent conversion of forested wetlands to emergent wetlands, should be in accordance with all

- applicable state regulations and laws. Consider mitigating impacts to forested or converted wetlands by establishing new forested wetlands within the impacted watershed.
5. Any temporary impacts to surface waters associated with this project should be restored to pre-existing conditions.
 6. No activity may substantially disrupt the movement of aquatic life indigenous to the water body, including those species, which normally migrate through the area, unless the primary purpose of the activity is to impound water. Culverts placed in streams must be installed to maintain low flow conditions. No activity may cause more than minimal adverse effect on navigation. Furthermore the activity must not impede the passage of normal or expected high flows and the structure or discharge must withstand expected high flows.
 7. Erosion and sedimentation controls should be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. These controls should be placed prior to clearing and grading and maintained in good working order to minimize impacts to state waters. These controls should remain in place until the area is stabilized and should then be removed. Any exposed slopes and streambanks should be stabilized immediately upon completion of work in each permitted area. All denuded areas should be properly stabilized in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992.
 8. No machinery may enter surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage.
 9. Heavy equipment in temporarily impacted surface waters should be placed on mats, geotextile fabric, or other suitable material, to minimize soil disturbance to the maximum extent practicable. Equipment and materials should be removed immediately upon completion of work.
 10. Activities should be conducted in accordance with any Time-of-Year restriction(s) as recommended by the Department of Game and Inland Fisheries, the Department of Conservation and Recreation, or the Virginia Marine Resources Commission. The permittee should retain a copy of the agency correspondence concerning the Time-of-Year restriction(s), or the lack thereof, for the duration of the construction phase of the project.
 11. All construction, construction access, and demolition activities associated with this project should be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage. Wet, excess, or waste concrete should be prohibited from entering surface waters.
 12. Herbicides used in or around any surface water should be approved for aquatic use by the United States Environmental Protection Agency (EPA) or the U.S. Fish & Wildlife Service. These herbicides should be applied according to label directions by a licensed herbicide applicator. A non-petroleum based surfactant should be used in or around any surface waters.

Permits:

Based on DEQ's review of the information provided by Dominion dated April 18, 2023, the proposed project may require a Virginia Water Protection (VWP) individual permit or general permit coverage. The applicant may submit a Joint Permit Application (JPA) in accordance with form instructions for further evaluation and final permit need determination by DEQ.

Should you have any questions, please don't hesitate to contact me at 804-965-4329 or at michelle.henicheck@deq.virginia.gov.

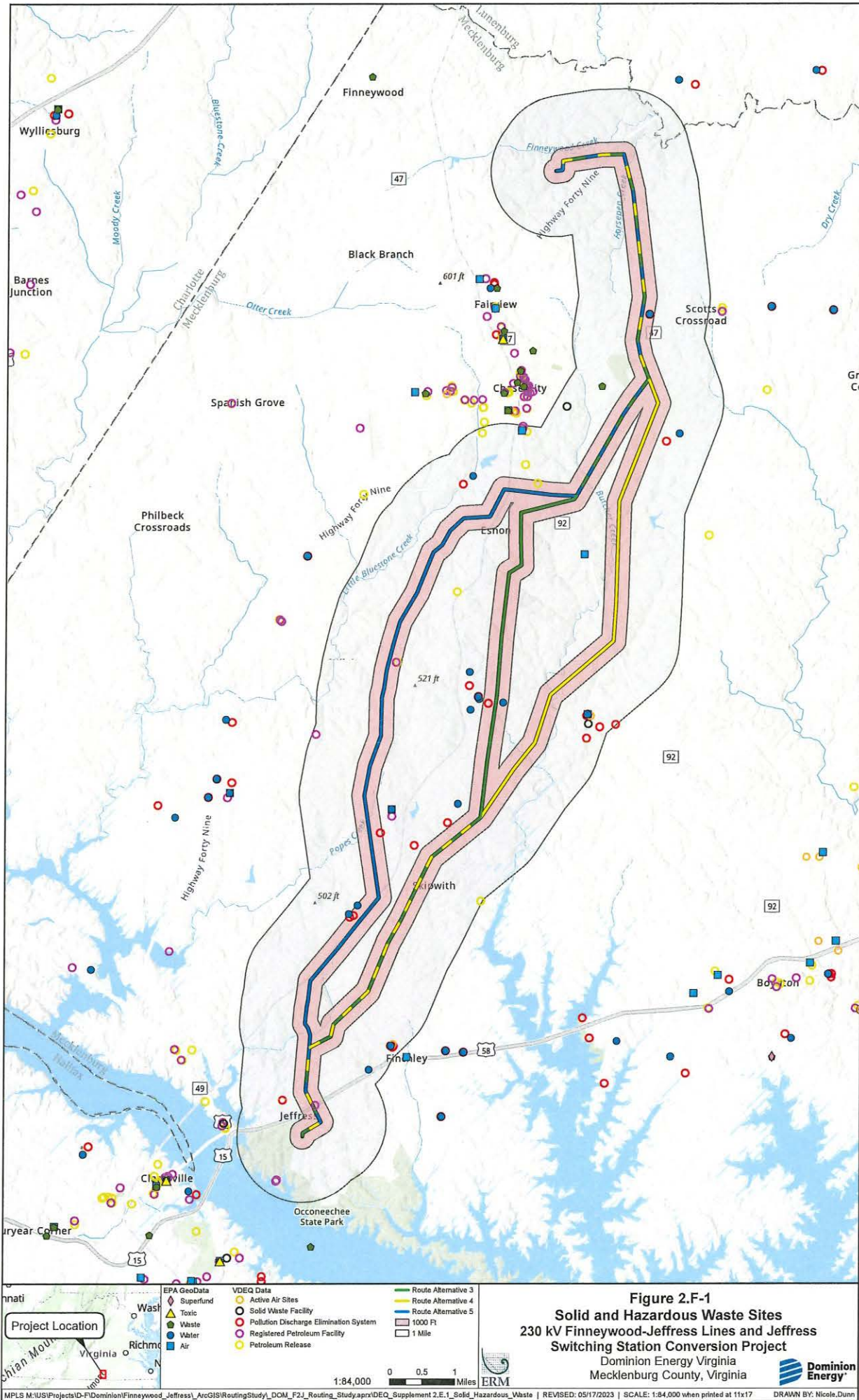
Sincerely,

Michelle Henicheck

Michelle Henicheck, PWS

Senior Wetland Ecologist
Office of Wetlands & Stream Protection

Cc: Bryan Jones, DEQ- PRO
Bettina Rayfield, DEQ - Office of Environmental Review





United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032



In Reply Refer To:
Project Code: 2022-0084016
Project Name: Finneywood to Jeffress

May 08, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Code in the header of this

letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office

6669 Short Lane

Gloucester, VA 23061-4410

(804) 693-6694

PROJECT SUMMARY

Project Code: 2022-0084016

Project Name: Finneywood to Jeffress

Project Type: Transmission Line - New Constr - Above Ground

Project Description: This query is part of a pre-permitting routing study for potential overhead powerline routes.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.787419799999995,-78.48372513205403,14z>



Counties: Charlotte , Lunenburg , and Mecklenburg counties, Virginia

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

CLAMS

NAME	STATUS
Atlantic Pigtoe <i>Fusconaia masoni</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5164	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\)](#) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20

NAME	BREEDING SEASON
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

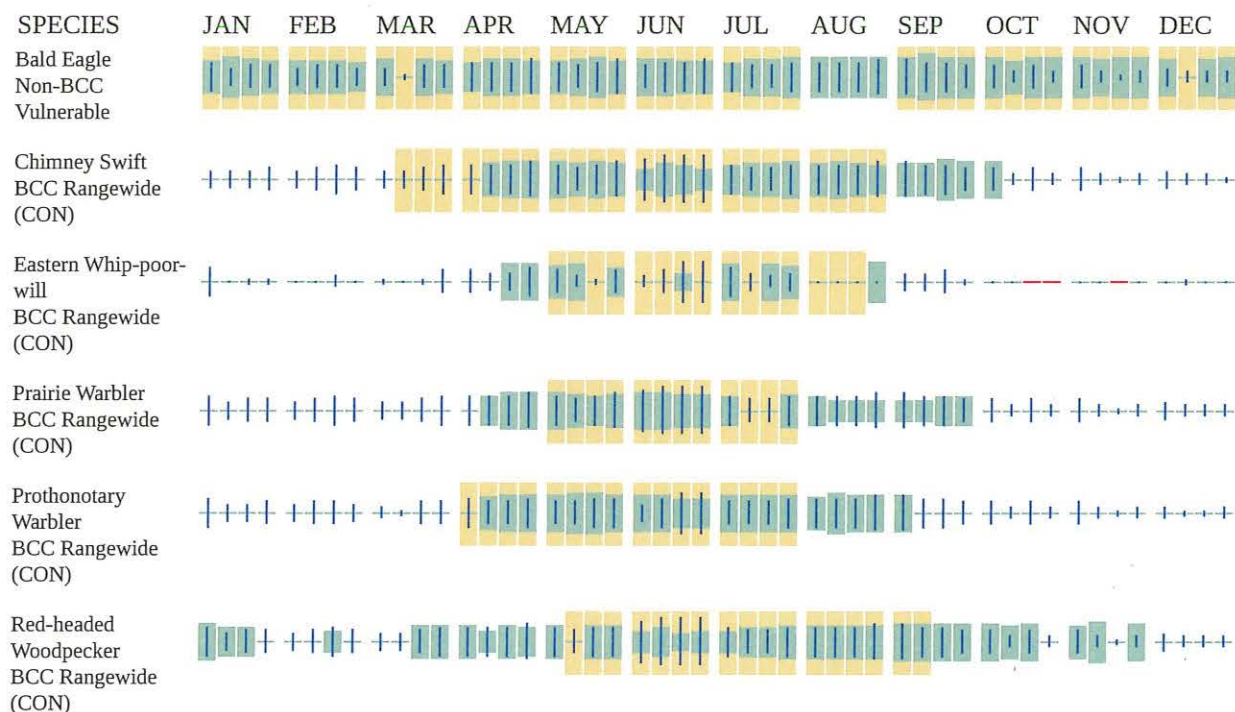
- ### Breeding Season (🟡)

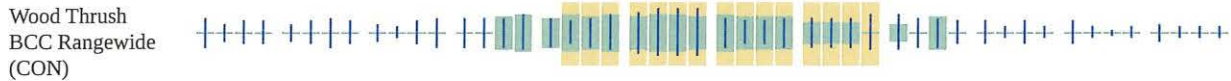
Survey Effort (I)

No Data (—)

Survey Timeframe

■ probability of presence ■ breeding season | survey effort — no data





Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

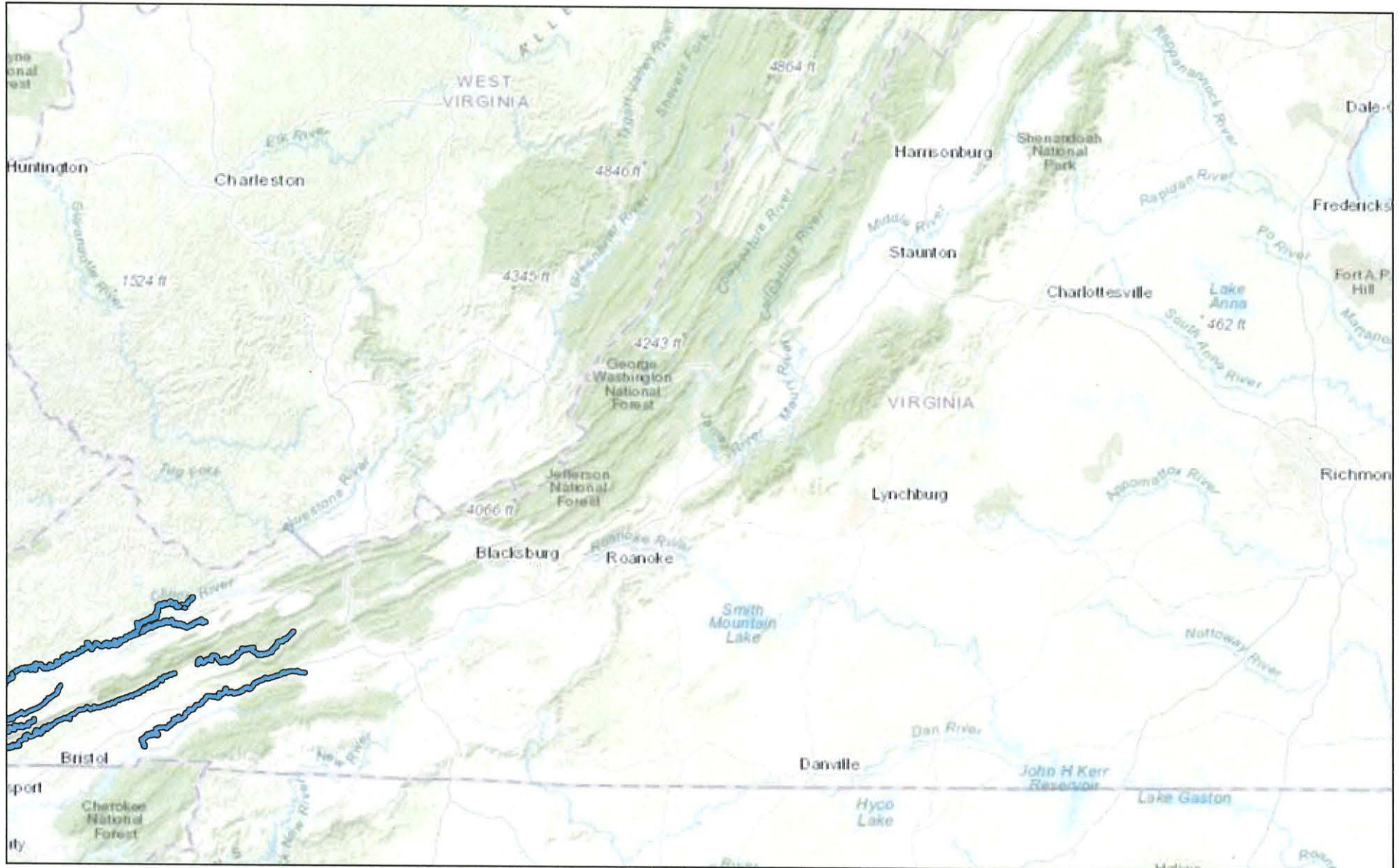
Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

IPAC USER CONTACT INFORMATION

Agency: ERM Group
Name: Kathlynn Lewis
Address: 919 E. Main St.
Address Line 2: Suite 1701
City: Richmond
State: VA
Zip: 23219
Email: kathlynn.lewis@erm.com
Phone: 8047837556

Critical Habitat in Virginia



April 24, 2023

Virginia Critical Habitat (published)

1:2,311,162
0 15 30 60 mi
0 25 50 100 km
Esri, HERE, Garmin, FAO, USGS, EPA, NPS

Travis A. Voyles
Acting Secretary of Natural and Historic Resources

Matthew S. Wells
Director

Andrew W. Smith
Chief Deputy Director



COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Darryl Glover
Deputy Director for
Dam Safety,
Floodplain Management and
Soil and Water Conservation

Laura Ellis
Deputy Director for
Administration and Finance

March 7, 2023

Kathlynn Lewis
Environmental Resources Management, Inc.
919 E. Main Street, Suite 1701
Richmond, VA 23219

Re: 0624580, Finneywood to Jeffress

Dear Ms. Lewis:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the Butcher Creek Rt. 688 Bridge Conservation Site, the Cedar Grove Church Flatwoods Conservation Site, and the Middle Meherrin Ponds – Powerline Conservation Site are located within the project area. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Butcher Creek Rt. 688 Bridge Conservation Site has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resource of concern at this site is:

Cicindela trifasciata

A Tiger Beetle

G5/S1/NL/NL

This rare tiger beetle has a broad range, from southern California to central Chile and from Virginia south to Venezuela (NatureServe, 2009). In Virginia, it is known from the southern coastal plain and piedmont. It has a dark brown – blackish dorsal surface with a greenish hue (Knisely and Schulz, 1997). The dorsal surface is covered with shallow green punctures. The ventral surface of the thorax is coppery and the abdomen is metallic blue or greenish-blue (Knisely and Schulz, 1997). This tiger beetle occurs in a wide variety of water-edge habitats, including mudflats or swales in coastal areas, tidal estuaries, marshes and bays, and pond, river and stream edges (Knisely and Schultz, 1997). Threats to this and other tiger beetles include habitat destruction from development or conversion to agricultural or timber operations.

According to the information in our files, the Cedar Grove Church Flatwoods Conservation Site is located within the project area, including a 100 foot buffer. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources

600 East Main Street, 24th Floor | Richmond, Virginia 23219 | 804-786-6124

**State Parks • Soil and Water Conservation • Outdoor Recreation Planning
Natural Heritage • Dam Safety and Floodplain Management • Land Conservation**

and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Cedar Grove Church Flatwoods Conservation Site has been assigned a biodiversity rank of B2, which represents a site of very high significance. The natural heritage resources associated with this site are:

	Southern Piedmont Hardpan Forest	G2G3/S2/NL/NL
<i>Isoetes hyemalis</i>	Winter Quillwort	G2G3/S2/SOC/NL
<i>Marshallia obovata</i> var. <i>obovata</i>	Piedmont Barbara's-buttons	G4G5T3T5/S1/NL/NL

Piedmont Hardpan Forests are deciduous and mixed forests that occupy gentle to flat Piedmont uplands and ancient, never-flooded stream terraces with impermeable clay subsoils. On high bedrock terraces of the Potomac Gorge in northern Virginia and occasionally elsewhere, flat-lying bedrock underlying shallow soil acts as a surrogate "hardpan" and supports similar vegetation. Piedmont Hardpan Forests occur from Virginia south to Georgia. Sites are usually underlain either by mafic rocks such as diabase or by acidic slates. Surficial soils are silt or clay loams, with an abrupt transition to heavy, plastic clay hardpans at depths of 23 to 38 cm (9 to 15 in). These shrink-swell clay soils pond water for brief or, at a few sites, prolonged periods during rainy weather, but tend to be very hard and dry during significant portions of the growing season. Post oak (*Quercus stellata*) is the most typical overstory tree, growing in nearly pure stands or in variable mixtures with pignut hickory (*Carya glabra*), southern shagbark hickory (*Carya carolinae-septentrionalis*, only in Halifax County), white oak (*Quercus alba*), blackjack oak (*Quercus marilandica*), Virginia pine (*Pinus virginiana*), and white ash (*Fraxinus americana*).

The winter quillwort is a globally rare perennial species from a family of plants referred to as one of the "fern allies". Long, grass-like hollow leaves with expanded bases grow in a spiral arrangement from a flattened stem buried just under the surface (Gleason and Cronquist 1991). Virginia occurrences of this quillwort species have been documented in the southern Piedmont and Coastal Plain in small, sluggish intermittent streams within bottomland forests, in periodically flooded swales within a swamp forest, and in upland depressions. Quillworts generally cannot be identified to species in the field. Mature megaspores, the larger of the two types of reproductive structures produced at the base of the leaves, must be collected and are then usually sent to an expert who can examine the megaspores with a microscope to determine the species. Surveys for this species should be conducted in June and July when there is the best chance of collection of mature megaspores. Please note that this species is currently classified as a species of concern by the United States Fish and Wildlife Service (USFWS); however this designation has no official legal status.

Piedmont Barbara's-buttons, a state rare perennial herb, typically inhabits clay flats, open grassy areas, forest edges, and wooded areas with open canopies (Radford et. al., 1968; Weakley, in prep.). It has also been documented in such disturbed areas as powerline rights-of-way (TNC, 1996). Piedmont Barbara's-buttons blooms from late April through early June and ranges from south central Virginia through southwest Georgia (Weakley, in prep.).

The Middle Meherrin Ponds – Powerline Conservation Site has been given a biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resource of concern at this site is:

<i>Sporobolus junceus</i>	Purple Dropseed	G5/S1/NL/NL
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Purple dropseed is a perennial that occurs in sandhills and other dry, open areas. This plant species blooms from September through October and is found from southeast Virginia through Florida and west to southeast Texas

(Weakley, in prep.). Purple dropseed has been documented in disturbed areas, such as powerline right-of-ways and along railroad tracks.

DCR recommends the avoidance of the Butcher Creek Rt. 688 Bridge, the Cedar Grove Church Flatwoods and the Middle Meherrin Ponds – Powerline Conservation Sites and the associated natural heritage resources.

In addition, the Allen Creek – Rt. 600 Stream Conservation Unit (SCU) and Bluestone Creek – Devils Creek SCU are located within the project site. SCUs identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are also given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain. The Allen Creek – Rt. 600 SCU and Bluestone Creek – Devils Creek SCU have both been given a biodiversity ranking of B4, which represents sites of moderate significance. The natural heritage resource associated with the Allen Creek – Rt. 600 SCU is:

Notropis alborus

Whitemouth shiner

G4/S1/NL/LT

The Whitemouth shiner is known from the Roanoke River drainage in Virginia and from other Atlantic Slope drainages in North Carolina and South Carolina (NatureServe, 2009). It inhabits warm, clear or somewhat turbid, small to medium sized creeks in the middle and lower Piedmont. This species may be found in shallow, small pools and in deep and shallow portions of long pools, in places having a silt, sand, and bedrock substrate. Impoundment, channelization, siltation, and agricultural runoff are threats to the habitat of the Whitemouth shiner (Burkhead and Jenkins, 1991). Please note that this species is currently classified as threatened by the Virginia Department of Wildlife Resources (VDWR).

The natural heritage resource associated with the Bluestone Creek – Devils Creek SCU is:

Elliptio roanokensis

Roanoke slabshell

G3/S2/NL/NL

The Roanoke slabshell is a relatively large freshwater mussel species that is typically found in riffle habitats of large rivers. This species probably is rather sessile with only limited movement in the substrate. Passive downstream movement may occur when mussels are displaced from the substrate during floods. The Roanoke slabshell is most closely associated with large Atlantic slope rivers from the Savannah River Basin to the Chowan River Basin (NatureServe, 2009). Tributary creeks and rivers occasionally provide significant habitat. The best populations occur where anadromous fish (probable primary fish hosts) have access to lotic habitats. Small or declining populations may be found above dams and their associated reservoirs which serve as barriers to anadromous fish. Presently, this species is usually found in near-shore trough habitats in sand/gravel substrates. It may also be found in more coarse substrates. The species was probably an abundant, dominant mussel within its historical range during past centuries, but its populations are now significantly reduced due to factors such as pollution, siltation, and the creation of reservoirs along rivers.

Considered good indicators of the health of aquatic ecosystems, freshwater mussels are dependent on good water quality, good physical habitat conditions, and an environment that will support populations of host fish species (Williams et al., 1993). Because mussels are sedentary organisms, they are sensitive to water quality degradation related to increased sedimentation and pollution. They are also sensitive to habitat destruction through dam construction, channelization, and dredging, and the invasion of exotic mollusk species.

Furthermore, Allen Creek, Bluestone Creek, and Butcher Creek have been designated by the VDWR as “Threatened and Endangered Species Waters” for the Whitemouth shiner.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations. Due to the legal status of the Whitemouth shiner, DCR also recommends

coordination with Virginia's regulatory authority for the management and protection of this species, the VDWR, to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

According to predicted suitable habitat modeling, there is also potential for Eastern big-eared bat (*Corynorhinus rafinesquii macrotis*, G3G4T3/S2/NL/LE) to occur in the project area if suitable habitat exists on site. The Eastern big-eared bat is named for its enormous ears twice the length of its head, is extremely rare in Virginia and is currently known only from the southeastern portion of the state. Although widespread throughout the southeast, they are never found in large numbers. These bats roost singly or in small groups in hollow trees or abandoned buildings. They forage only after dark primarily in mature forests of both upland and lowland areas along permanent bodies of water (NatureServe, 2009). The details of this bat's feeding behavior and much of its natural history remain a mystery. Lack of information regarding the ecology of the Eastern big-eared bat, and their sensitivity to disturbance, make them particularly vulnerable to destruction of roost sites and feeding areas where their presence goes undetected (Handley and Schwab 1991, Harvey 1992).

Threats to this species include forest destruction, particularly hollow tree removal, decreasing availability of abandoned buildings, and possibly, insecticides. Please note that this species is currently classified as endangered by the Virginia Department of Wildlife Resources (VDWR).

DCR recommends avoiding tree removal in bottomland habitats along the Meherrin River, Finneywood Creek, and Horsepen Creek and assessing any large potential roost trees and/or abandoned structures on the property for bat presence/absence. DCR also recommends coordination with DWR if removal of potential roost habitat for the Eastern big-eared bat becomes necessary to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

According to a DCR botanist's review, potential may exist for additional populations of Piedmont Barbara's-buttons and other rare plants if suitable habitat exists within the study area. Also according to DCR predicted suitable habitat models and a DCR zoologist's review, potential may also exist for the Whitemouth shiner and Loggerhead shrike (*Lanius ludovicianus*, G4/S1B,S2N/NL/LT) in the study area. Therefore, DCR recommends further coordination with this office once the proposed alignments have been refined to determine if a survey for these species is warranted.

In addition, the proposed project will impact Ecological Cores (**C2, C3, C4, and C5**) as identified in the Virginia Natural Landscape Assessment (<https://www.dcr.virginia.gov/natural-heritage/vaconvisvnl>). Mapped cores in the project area can be viewed via the Virginia Natural Heritage Data Explorer, available here: <http://vanhde.org/content/map>.

Ecological Cores are areas of at least 100 acres of continuous interior, natural cover that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune, and beach habitats. Interior core areas begin 100 meters inside core edges and continue to the deepest parts of cores. Cores also provide the natural, economic, and quality of life benefits of open space, recreation, thermal moderation, water quality (including drinking water recharge and protection, and erosion prevention), and air quality (including sequestration of carbon, absorption of gaseous pollutants, and production of oxygen). Cores are ranked from C1 to C5 (C5 being the least significant) using nine prioritization criteria, including the habitats of natural heritage resources they contain.

Impacts to cores occur when their natural cover is partially or completely converted permanently to developed land uses. Habitat conversion to development causes reductions in ecosystem processes, native biodiversity, and habitat quality due to habitat loss; less viable plant and animal populations; increased predation; and increased introduction and establishment of invasive species.

DCR recommends avoidance of impacts to cores. When avoidance cannot be achieved, DCR recommends minimizing the area of impacts overall and concentrating the impacted area at the edges of cores, so that the most interior remains intact.

The proposed project will impact one or more cores with very high (C2) to outstanding (C1) ecological integrity. Further investigation of these impacts is recommended and DCR-DNH can conduct a formal impact analysis upon request. This analysis would estimate impacts to cores and habitat fragments, providing an estimate of the total acreage of direct and indirect impacts of the project. For more information about the analysis and service charges, please contact Joe Weber, DCR Chief of Biodiversity Information and Conservation Tools at Joseph.Weber@dcr.virginia.gov.

DCR recommends the development and implementation of an invasive species plan to be included as part of the maintenance practices for the right-of-ways (ROWs). The invasive species plan should include an invasive species inventory for the project area based on the current DCR Invasive Species List (<http://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf>) and methods for treating the invasives. DCR also recommends the ROW restoration and maintenance practices planned include appropriate revegetation using native species in a mix of grasses and forbs, robust monitoring and an adaptive management plan to provide guidance if initial revegetation efforts are unsuccessful or if invasive species outbreaks occur.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

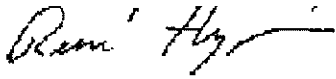
A fee of \$1300 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24th Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

The U.S. Fish and Wildlife Service (USFWS) utilizes an online project review process (<https://www.fws.gov/office/virginia-ecological-services/virginia-field-office-online-review-process>) to facilitate compliance with the Endangered Species Act (16 U.S.C. 1531-1544, 87 Stat. 884) (ESA), as amended. The process enables users to 1) follow step-by-step guidance; 2) access information that will allow them to identify threatened and endangered species, designated critical habitat, and other Federal trust resources that may be affected by their project; and 3) accurately reach determinations regarding the potential effects of their project on these resources as required under the ESA. If you have questions regarding the online review process, please contact Rachel Case at rachel_case@fws.gov.

The Virginia Department of Wildlife Resources (VDWR) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Amy Martin at 804-367-2211 or amy.martin@dwr.virginia.gov.

Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on this project.

Sincerely,



S. René Hypes
Natural Heritage Project Review Coordinator

Cc: Amy Martin, VDWR

Literature Cited

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VaFWIS - Department of Game and Inland Fisheries

36.74479 -78.47932
is the Search Point

Search Point

- ☒ Change to "clicked" map point
☐ Fixed at 36.74479 -78.47932

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the Search Point

Show Search Area

☒ Yes ☐ No

7.75 Search distance miles radius

Search Point is at map center

Base Map [Choices](#)

Topography

Map Overlay [Choices](#)

Current List: Position, Search

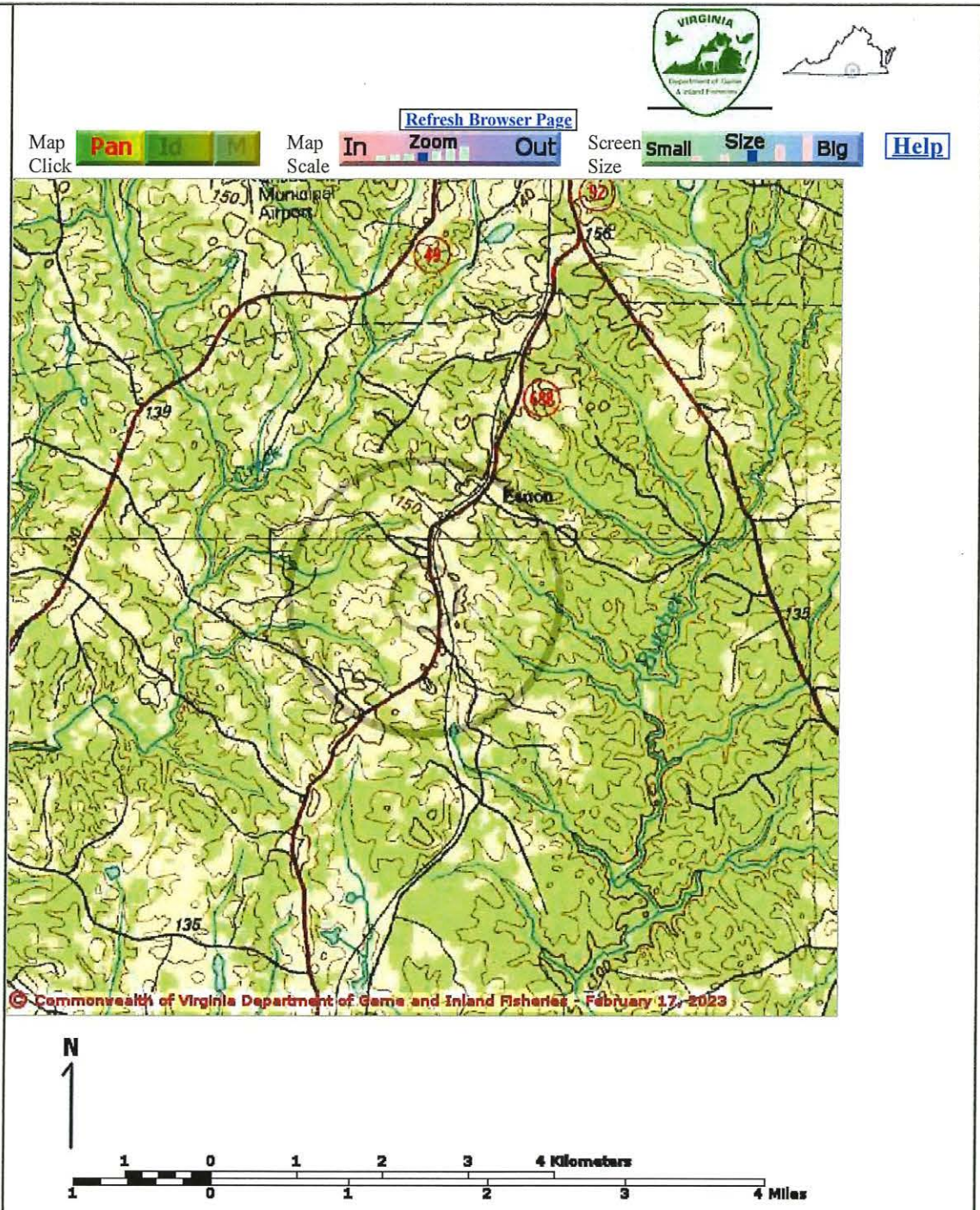
Map Overlay Legend



Position Rings
1 mile and 1/4 mile at the Search Point



7.75 mile radius Search Area



Point of Search 36.74479 -78.47932

Map Location 36.74479 -78.47932

Select **Coordinate System**: ☐ Degrees, Minutes, Seconds Latitude - Longitude
☒ Decimal Degrees Latitude - Longitude
☐ Meters UTM NAD83 East North Zone
☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft.terraserver-usa.com for details)

Map projection is UTM Zone 17 NAD 1983 with left 720248 and top 4074324. Pixel size is 16 meters. Coordinates displayed are decimal Degrees North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

Topographic maps and Black and white aerial photography for year 1990+-
are from the United States Department of the Interior, United States Geological Survey.
Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia
Geographic Information Network.
Shaded topographic maps are from TOPO! ©2006 National Geographic
<http://www.national.geographic.com/topo>
All other map products are from the Commonwealth of Virginia Department of Game and Inland
Fisheries.

map assembled 2023-02-17 10:00:49 (qa/qc March 21, 2016 12:20 - tn=1460989
dist=12469.75 I)
\$poi=36.7447900 -78.4793289

VaFWIS Search Report Compiled on 2/17/2023, 10:01:59 AM[Help](#)

Known or likely to occur within a **7.75 mile radius around point 36.7447900 -78.4793288**
in **037 Charlotte County, 117 Mecklenburg County, VA**

[View Map of
Site Location](#)

453 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 25) (25 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
010214	FESE	IIa	Logperch, Roanoke	Percina rex		BOVA
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
060173	FTST	Ia	Pigtoe, Atlantic	Fusconaia masoni	Potential	BOVA,Habitat,HU6
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050027	FPSE	Ia	Bat, tri-colored	Perimyotis subflavus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus	Yes	BOVA,BBA,SppObs,HU6
040385	ST	Ia	Sparrow, Bachman's	Peucaea aestivalis		BOVA,HU6
040379	ST	Ia	Sparrow, Henslow's	Centronyx henslowii		BOVA
060081	ST	IIa	Floater, green	Lasmigona subviridis		HU6
010353	ST	IIc	Darter, Carolina	Etheostoma collis		BOVA,HU6
010070	ST	IIc	Shiner, whitemouth	Notropis alborus	Yes	BOVA,TEWaters,Habitat,SppObs,HU6
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
030063	CC	IIIa	Turtle, spotted	Clemmys guttata		BOVA,HU6
030031	CC	IIIc	Kingsnake, scarlet	Lampropeltis elapsoides	Yes	SppObs
010174		Ia	Bass, Roanoke	Ambloplites cavifrons		BOVA,HU6
020023		IIa	Salamander, mole	Ambystoma talpoideum		BOVA

040052		IIa	Duck, American black	Anas rubripes		BOVA,HU6
040036		IIa	Night-heron, yellow-crowned	Nyctanassa violacea violacea		BOVA
040181		IIa	Tern, common	Sterna hirundo		BOVA,HU6
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA,HU6
040140		IIa	Woodcock, American	Scolopax minor		BOVA,HU6
060071		IIa	Lampmussel, yellow	Lampsilis cariosa		BOVA,HU6
040203		IIb	Cuckoo, black-billed	Coccyzus erythrophthalmus		BOVA
040105		IIb	Rail, king	Rallus elegans		BOVA
060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Potential	BOVA,Habitat,HU6

To view **All 453 species** [View 453](#)

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need;

III=VA Wildlife Action Plan - Tier III - High Conservation Need;

IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

Virginia Wildlife Action Plan Conservation Opportunity Ranking:

a - On the ground management strategies/actions exist and can be feasibly implemented.;

b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;

c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

[View Map of All Query Results from All Observation Tables](#)

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams

N/A

Impediments to Fish Passage

N/A

Colonial Water Bird Survey (1 records)

[View Map of All Query Results](#)

Colonial Water Bird Survey

Colony_Name	N Obs	Latest Date	N Species			View Map
			Different Species	Highest TE*	Highest Tier**	
Southside, Boynton, Mecklenburg	1	Mar 14 2012	1			Yes

Displayed 1 Colonial Water Bird Survey

Threatened and Endangered Waters (74 Reaches - displaying first 20)[View Map of All](#)[Threatened and Endangered Waters](#)

Stream Name	T&E Waters Species						View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name					
(0339687.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
(0341532.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
(0342324.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
(0344346.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
(0345703.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
(0350635.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
(0350990.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
(0351523.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
(0353113.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0341268.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0341391.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0341512.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0343400.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0343936.)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes

Allen Creek (0344282)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0344425)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0345067)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0345148)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0345226)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0345328)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0345337)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0345536)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Allen Creek (0347122)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes

To view All 74 Threatened and Endangered Waters records [View 74](#)

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests (2 records)

[View Map of All Query Results
Bald Eagle Nests](#)

Nest	N Obs	Latest Date	DGIF Nest Status	View Map
ME0101	3	Jan 1 2002	HISTORIC	Yes
ME0301	7	Mar 26 2007	HISTORIC	Yes

Displayed 2 Bald Eagle Nests

Species Observations (70 records - displaying first 20 , 9 Observations with Threatened or Endangered species)

[View Map of All Query Results
Species Observations](#)

obsID	class	Date Observed	Observer	N Species			View Map
				Different Species	Highest TE*	Highest Tier**	
708	SppObs	Jan 1 1900		1	ST	I	Yes
64308	SppObs	Aug 30 2001	PAUL L. ANGERMEIER AND B. ALBANESE	19	ST	II	Yes
300321	SppObs	Jun 21 2001	Bob Graham	9	ST	II	Yes
11532	SppObs	Aug 15 1989	ANGERMEIER ET AL	17	ST	II	Yes
11533	SppObs	Aug 14 1989	ANGERMEIER ET AL	20	ST	II	Yes
331573	SppObs	Jan 1 1949	JDA-ANDREWS	8	ST	II	Yes
331574	SppObs	Jan 1 1949	JDA-ANDREWS	11	ST	II	Yes
331598	SppObs	Jan 1 1949	ECR-RANEY	16	ST	II	Yes
635270	SppObs	Jul 1 2019	Ward Halligan	1	CC	III	Yes
63517	SppObs	Jul 25 2001	Mair, Flynn and McLeod, Virginia Cooperative Fish and Wildlife Research Unit, Virginia Tech	5		III	Yes
305357	SppObs	May 9 2001	Alderman, John M.	9		III	Yes
305358	SppObs	May 9 2001	Alderman, John M.	9		III	Yes
305354	SppObs	May 9 2001	Alderman, John M.	11		III	Yes
58926	SppObs	Sep 14 1997	Eugene G. Maurakis, Science Museum of Virginia	1		III	Yes
58927	SppObs	Sep 14 1997	Eugene G. Maurakis, Science Museum of Virginia	1		III	Yes
58920	SppObs	Aug 23 1997	Eugene G. Maurakis, Science Museum of Virginia	1		III	Yes
58919	SppObs	Aug 23 1997	Eugene G. Maurakis, Science Museum of Virginia	1		III	Yes
58996	SppObs	May 31 1996	PHILIP H. STEVENSON (PRINCIPLE PERMITTEE)	2		III	Yes
59008	SppObs	May 31 1996	PHILIP H. STEVENSON (PRINCIPLE PERMITTEE)	4		III	Yes
4218	SppObs	Jun 18 1982	Chris Pague, Bonnie Larson	9		III	Yes

Displayed 20 Species Observations

Selected 70 Observations [View all 70 Species Observations](#)

Habitat Predicted for Aquatic WAP Tier I & II Species (14 Reaches)[View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species](#)

Stream Name	Tier Species						View Map
	Highest TE *	BOVA Code, Status *, Tier **, Common & Scientific Name					
Allen Creek (30101061)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Bluestone Creek (30101021)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	
Bluestone Creek (30101021)		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Yes
Butcher Creek (30101021)	ST	010070	ST	IIC	Shiner, whitemouth	Notropis alborus	Yes
Goodell Creek (30101021)		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Yes
Horsepen Creek (03010204)	FTST	060173	FTST	Ia	Pigtoe, Atlantic	Fusconaia masoni	Yes
Little Bluestone Creek (30101021)		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Yes
Little Moody Creek (30101021)		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Yes
Otter Creek (30101021)		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Yes
Peckerwood Branch (30101021)		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Yes
Roanoke River (30101022)		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Yes
Rocky Branch (30101021)		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Yes
tributary (30101021)		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Yes
Woodpecker Creek (30101021)		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Yes
Woodpecker Creek (30101021)		060175		IIb	Slabshell, Roanoke	Elliptio roanokensis	Yes

Habitat Predicted for Terrestrial WAP Tier I & II Species

N/A

Virginia Breeding Bird Atlas Blocks (6 records)
[View Map of All Query Results](#)
[Virginia Breeding Bird Atlas Blocks](#)

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE *	Highest Tier **	
44025	Baskerville, SW	62		III	Yes
43024	Boydton, CE	1		III	Yes
43026	Boydton, SE	65		III	Yes
43036	Chase City, SE	69	ST	I	Yes
42026	Clarksville North, SE	82		III	Yes
42036	Wylliesburg, SE	55		III	Yes

Public Holdings: (2 names)

Name	Agency	Level
Kerr Reservoir/Buggs Island Lake	Army Corps of Engineers	Federal
Oconeechee State Park	VA Dept. of Conservation and Recreation	State

Summary of BOVA Species Associated with Cities and Counties of the Commonwealth of Virginia:

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
037	Charlotte	339	FTSE	I
117	Mecklenburg	390	FESE	I

USGS 7.5' Quadrangles:

Clarksville North
 Wylliesburg
 Boydton
 Chase City
 Baskerville
 Wightman

USGS NRCS Watersheds in Virginia:

N/A

USGS National 6th Order Watersheds Summary of Wildlife Action Plan Tier I, II, III, and IV Species:

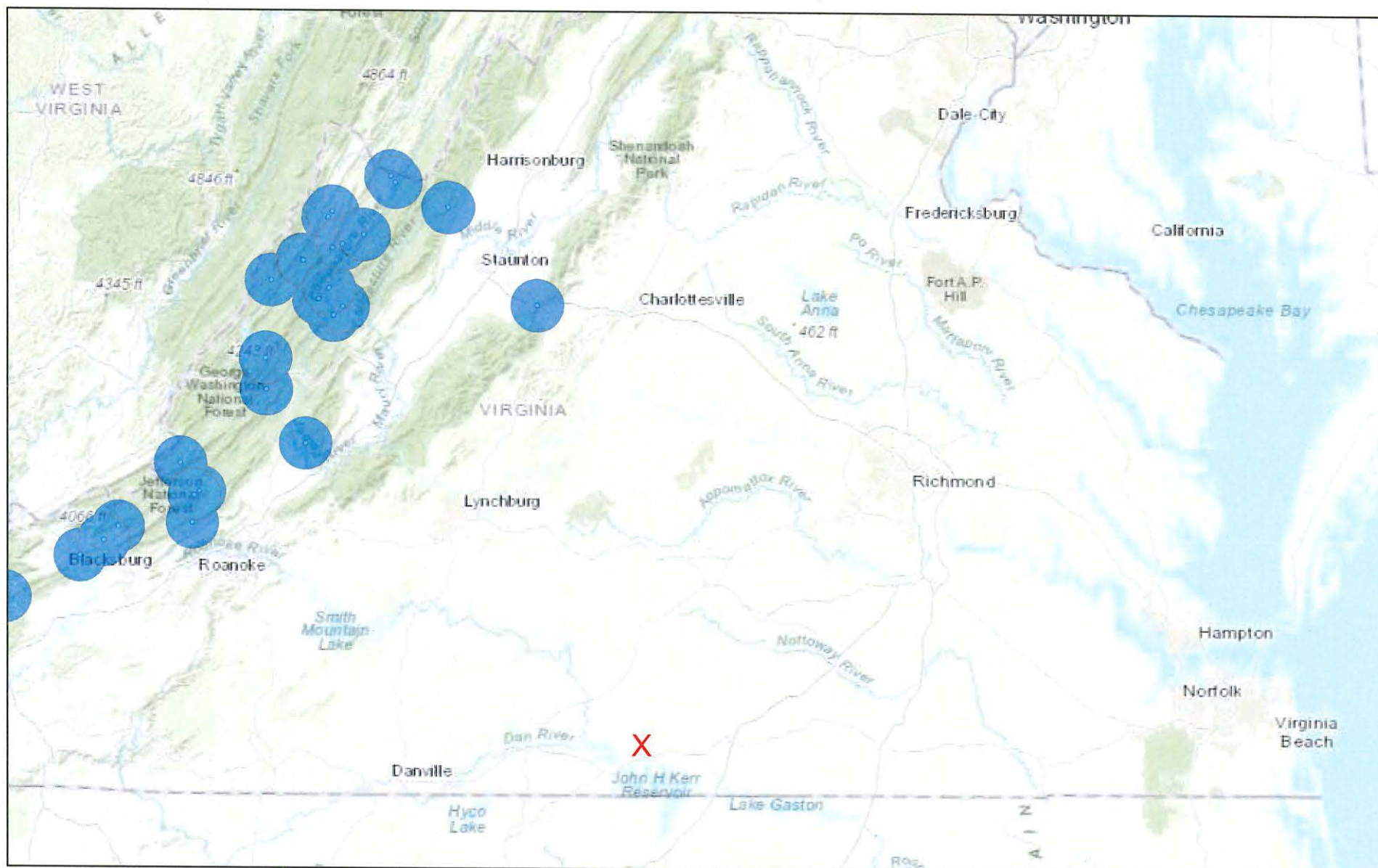
HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
CM02	South Meherrin River-Finneywood Creek	63	FTST	I

CM03	South Meherrin River-Blackstone Creek	64	FTST	I
CM08	Meherrin River-Mason Creek	64	FTST	I
RL06	Roanoke River/John H Kerr Reservoir-Panhandle Creek	58	ST	I
RL07	Butcher Creek/John H Kerr Reservoir	59	ST	I
RL09	Roanoke River/John H Kerr Reservoir-Eastland Creek	56	ST	I
RL10	Allen Creek-Layton Creek	58	ST	I
RL11	Allen Creek-Cox Creek	62	ST	I
RU91	Bluestone Creek-Otter Creek	64	ST	I
RU92	Little Bluestone Creek	57	ST	I
RU93	Bluestone Creek-Goodell Creek	59	ST	I
RU94	Roanoke River/John H Kerr Reservoir-Sandy Creek	64	ST	I

Compiled on 2/17/2023, 10:01:59 AM I1460989.0 report=all searchType=R dist= 12469 poi= 36.7447900 -78.4793288

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ArcGIS Web Map



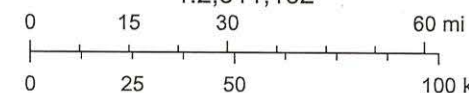
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 Tri-colored and Little Brown Hibernaculum Half Mile Buffer

Tri-colored and Little Brown Hibernaculum 5.5 Mile Buffer

X = Approximate site location

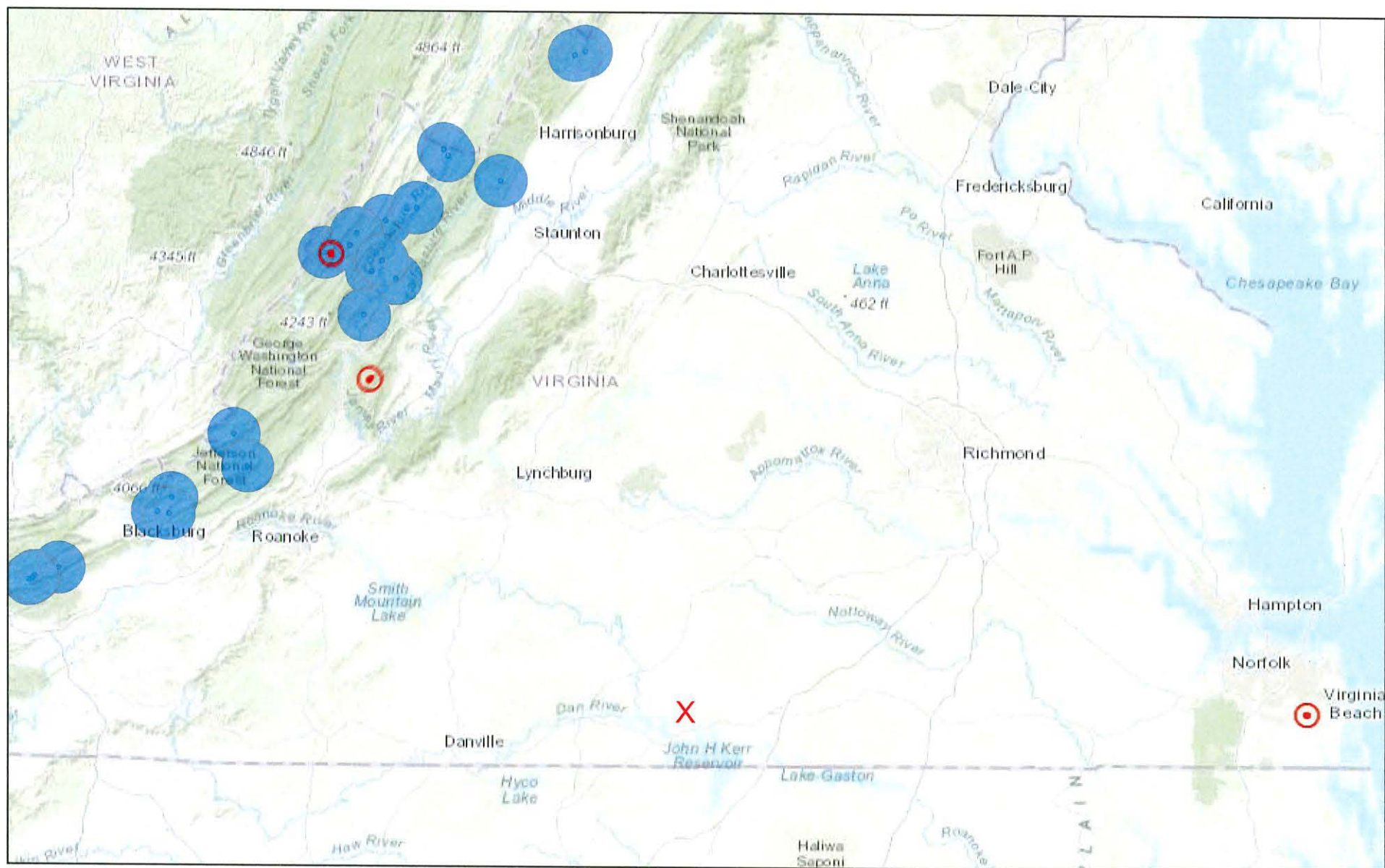
1:2,311,162



Esri, HERE, Garmin, FAO, USGS, EPA, NPS

Dept. Game and Inland Fisheries
Esri, HERE, Garmin, FAO, USGS, EPA, NPS |

NLEB Locations and Roost Trees



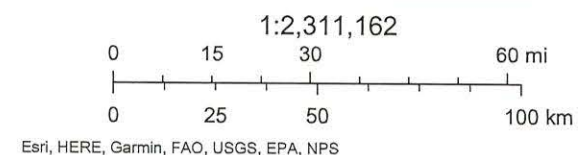
9/12/2022, 8:58:01 AM

○ NLEB Known Occupied Maternity Roost (Summer Habitat)

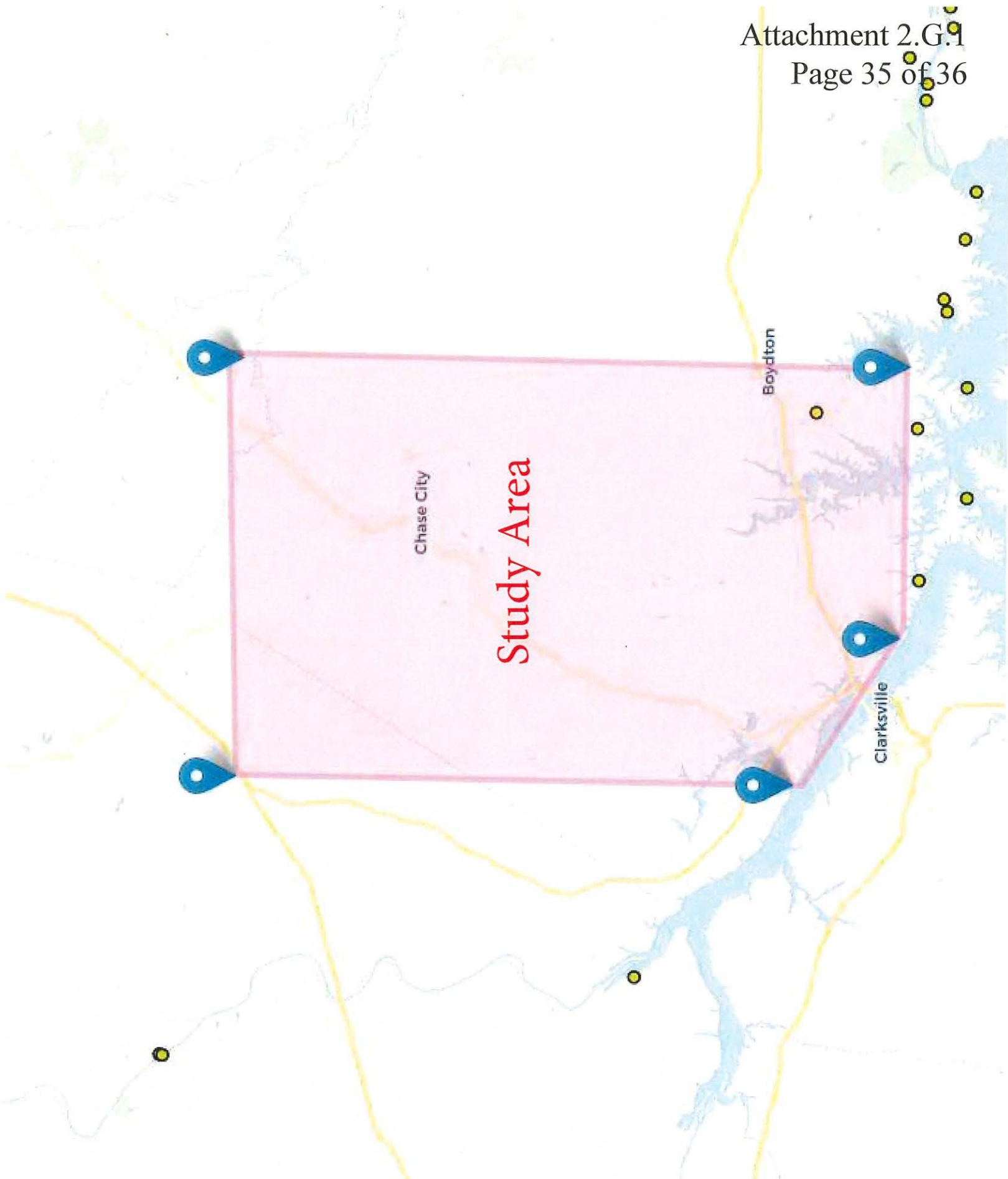
■ NLEB Hibernaculum 5.5 Mile Buffer

■ NLEB Hibernaculum Half Mile Buffer

X = Approximate site location

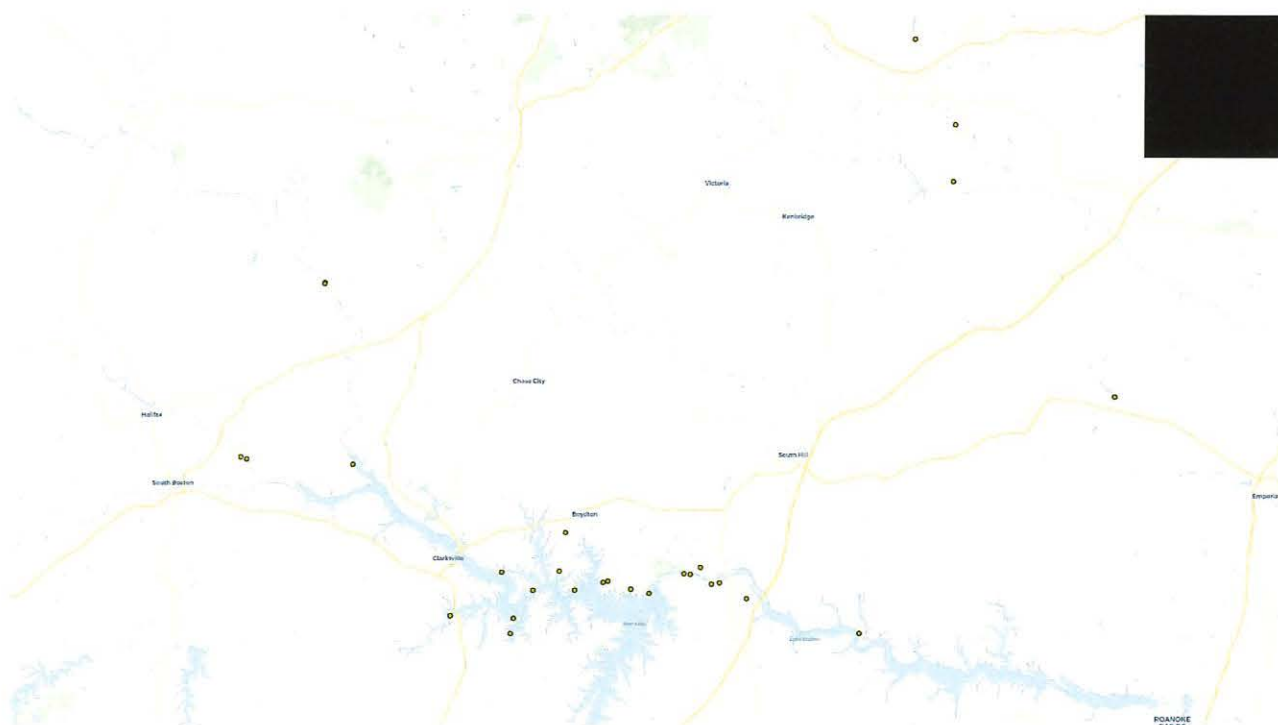


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CCB Mapping Portal



Layers: VA Eagle Nest Locator

Map Center [longitude, latitude]: [-78.34968566894531, 36.79389010047562]

Map Link:

https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&zoom=11&lat=36.79389010047562&lng=-78.34968566894531&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=Street+Map+%28OSM%2FCarto%29

Report Generated On: 09/12/2022

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August 13, 2019

Mr. Jason E. Williams
Director Environmental Services
Dominion Energy
5000 Dominion Boulevard
Glen Allen, VA 23060

Transmitted electronically: jason.e.william@dominionenergy.com

Subject: Dominion Energy (Electric Transmission) – Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management (AS&S for ESC and SWM)

Dear Mr. Williams:

The Virginia Department of Environmental Quality ("DEQ") hereby approves the Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management for Dominion Energy (Electric Transmission) dated "May 29, 2019". This coverage is effective from August 13, 2019 to August 12, 2020.

To ensure compliance with approved specifications, the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Act, DEQ staff will conduct random site inspections, respond to complaints, and provide on-site technical assistance with specific erosion and sediment control and stormwater management measures and plan implementation.

Please note that your approved Annual Standards and Specifications include the following requirements:

1. Variance, exception, and deviation requests must be submitted separately from this Annual Standards and Specifications submission to DEQ. DEQ may require project-specific plans associated with variance requests to be submitted for review and approval.
2. The following information must be submitted to DEQ for each project at least two weeks in advance of the commencement of regulated land-disturbing activities. Notifications shall be sent by email to: StandardsandSpecs@deq.virginia.gov
 - i: Project name or project number;
 - ii: Project location (including nearest intersection, latitude and longitude, access point);
 - iii: On-site project manager name and contact info;
 - iv: Responsible Land Disturber (RLD) name and contact info;
 - v: Project description;

Dominion Energy (Electric Transmission) – AS&S for ESC and SWM
August 12, 2019
Page 2 of 2

- vi: Acreage of disturbance for project;
 - vii: Project start and finish date; and
 - viii: Any variances/exceptions/waivers associated with this project.
3. Project tracking of all regulated land disturbing activities (LDA) must be submitted to the DEQ on a bi-annual basis. Project tracking records shall contain the same information as required in the two week e-notifications for each regulated LDA.
 4. Erosion & Sediment Control and Stormwater Management plan review and approval must be conducted by DEQ-Certified plan reviewers and documented in writing.

To ensure an efficient information exchange and response to inquiries, the DEQ Central Office is your primary point of contact. Central Office staff will coordinate with our Regional Office staff as appropriate.

Thank you very much for your submission and continued efforts to conserve and protect Virginia's precious natural resources.

Sincerely,



Jaime B. Robb, Manager
Office of Stormwater Management

Cc: Amelia Boschen, Amelia.h.boschen@dominionenergy.com
Elizabeth Hester, Elizabeth.l.hester@dominionenergy.com
Stacey Ellis, Stacey.t.ellis@dominionenergy.com

Case Decision Information:

~~As provided by Rule 2A.2~~ of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.



**Dominion
Energy®**

Finneywood to Jeffress 230 kV Transmission Line Project

Pre-Application Analysis

8 May 2023

Project No.: 0624580

Document details	The details entered below are automatically shown on the cover and the main page footer. PLEASE NOTE: This table must NOT be removed from this document.
Document title	Finneywood to Jeffress 230 kV Transmission Line Project
Document subtitle	Pre-Application Analysis
Project No.	0624580
Date	8 May 2023
Version	1.0
Author	Mary Beth Derrick, Megan Wiginton, Jeffrey L. Holland, Jeremy Mastroianni, Luke Hegeman, Danielle Neale, and Larissa A. Thomas, Ph.D.
Client Name	Dominion Energy Virginia

Document history

Version	Revision	Author	Reviewed by	ERM approval to issue		Comments
				Name	Date	
Draft	00	Name		Larissa Thomas	4-13-23	

Signature page

8 May 2023

Finneywood-Jeffress 230 kV Transmission Line Project

Pre-Application Analysis



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EXECUTIVE SUMMARY

This report presents the findings of the pre-application analysis for Virginia Electric and Power Company's (herein referred to as Dominion Energy Virginia, Dominion, or the Company) proposed Finneywood to Jeffress 230 kV Transmission Line Project (Project) in Mecklenburg County, Virginia. For this Project, Dominion Energy Virginia is proposing to construct and operate two new electric transmission lines from the Finneywood Switching Station (Finneywood Station) to the Jeffress Switching Station (Jeffress Station). The Project would include the conversion of the Company's future Jeffress 115 kV Switching Station to 230 kV operation. A proposed data center, adjacent to the future Jeffress Switching Station, is planned to be developed by the customer.

This pre-application analysis assesses and compares potential impacts on previously recorded historic and archaeological resources in relation to each route alternative. Environmental Resources Management (ERM) conducted the analysis on behalf of Dominion Energy Virginia to assist in the development of a feasible Project design that minimizes impacts to historic resources. The pre-application analysis is a required study for transmission line projects regulated by the Virginia State Corporation Commission (SCC). The study was completed in accordance with the Virginia Department of Historic Resources' *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (VDHR 2008) (Guidelines).

One known archaeological site, considered not eligible for listing in the National Register of Historic Places, is located in the right-of-way of all three route alternatives discussed in this study. While no transmission structures for the route alternatives would be placed within the site boundary, the site could be impacted by construction traffic or clearing within the right-of-way.

Five previously recorded historic architectural resources meeting criteria specified in the Guidelines fall within study tiers defined by the VDHR for identifying aboveground historic sites along and near the transmission line routes. Since portions of the route alternatives use common alignments, impacts on some resources would be identical regardless of the route option selected for the Project. The likely impacts on individual historic resources associated with each route are presented in the table below.

All five previously recorded historic architectural resources are located in the same VDHR study tiers for Route Alternatives 3 and 4. The same resources were identified for Route Alternative 5, although some were located in different VDHR study tiers than Route Alternatives 3 and 4. For Route Alternatives 3, 4, and 5, ERM recommends a finding of no impact on three resources, a minimal impact on one resource, and a moderate impact on one resource. Although the findings are the same for each route alternative, Route Alternative 4 is the farthest away from most resources, and thus would have a lesser impact.

Executive Summary of Status of Archaeological Resource in the Study Area of the Route Alternatives

Considered Resource	Proposed Route Alternatives		
	Route 3	Route 4	Route 5
44MC0986	Not Eligible	Not Eligible	Not Eligible

Executive Summary of Project Impacts to Considered Aboveground Historic Resources in the Study Area of the Route Alternatives

Considered Resource	Proposed Route Alternatives		
	Route 3	Route 4	Route 5
058-0038	Moderate	Moderate	Moderate
058-0091	None	None	None
058-0131	None	None	None
058-0281	Minimal	Minimal	Minimal
058-5104	None	None	None

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Acronyms and Abbreviations

Name	Description
3D	three dimensional
ABPP	American Battlefield Protection Program
CMOS	complementary metal–oxide–semiconductor
ERM	Environmental Resources Management
ESRI	Environmental Systems Research Institute
GNSS	Global Navigation Satellite System
ISO	International Organization for Standardization
JPEG	Joint Photographic Experts Group format
kV	kilovolt
MP	milepost
NHL	National Historic Landmark
NPS	National Park Service
NRHP	National Register of Historic Places
PBR	physically based rendering
PDF	portable document format
Project	Finneywood to Jeffress 230 kV Transmission Line Project
RAW	an unprocessed image
ROW	right-of-way
SCC	State Corporation Commission
SLR	single-lens reflex
SP	simulation point
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
V-CRIS	Virginia Cultural Resource Information System
VDHR	Virginia Department of Historic Resources
VLR	Virginia Landmarks Register

1. INTRODUCTION

This report presents the findings of the pre-application analysis for Virginia Electric and Power Company's (herein referred to as Dominion Energy Virginia, Dominion, or the Company) proposed Finneywood to Jeffress 230 kV Transmission Line Project (Project) in Mecklenburg County, Virginia. For this Project, Dominion Energy Virginia is proposing to construct and operate two new electric transmission lines, located in the same right-of-way, from the Finneywood Switching Station (Finneywood Station) to the Jeffress Switching Station (Jeffress Station). The Project would include the conversion of the Company's future Jeffress 115 kV Switching Station to 230 kV operation. A proposed data center, adjacent to the future Jeffress Switching Station, is planned to be developed by the customer.

This pre-application analysis assesses and compares potential impacts on previously recorded historic and archaeological resources in relation to each route alternative. Environmental Resources Management (ERM) conducted the analysis on behalf of Dominion Energy Virginia to assist in the development of a feasible Project design that minimizes impacts to historic resources. The pre-application analysis is a required study for transmission line projects regulated by the Virginia State Corporation Commission (SCC). The study was completed in accordance with the Virginia Department of Historic Resources' *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (VDHR 2008) (Guidelines).

1.1 Overview

Three route alternatives (Route Alternatives 3, 4, and 5) are currently under consideration for the new overhead transmission lines. A map depicting each route alternative, the Finneywood Station, and the Jeffress Station is provided as Figure 1.1-1.

The Project will consist of two single-circuit 230 kilovolt (kV) overhead transmission lines running from the Finneywood Station to the Jeffress Station. As discussed in more detail below, short segments of each route are collocated with existing overhead transmission rights-of-way, though the majority of each route uses greenfield alignments.

1.1.1 Route Alternative 3

Starting at the Finneywood Station, Route Alternative 3 heads northwest for about 0.2 mile to an intersection with the Company's existing right-of-way for Line #556. The route then heads east for about 0.9 mile paralleling the south side of the existing transmission corridor, with a crossing of Highway 49 at approximate milepost (MP) 1.0. The route then turns south and continues along a greenfield alignment for about 3.4 miles, passing northeast of Chase City. This segment crosses the Company's existing right-of-way for Line #98 at approximate MP 2.1, Highway 47 at approximate MP 4.0, and the Company's existing right-of-way for Line #40 at approximate MP 4.6. After crossing Line #40, the route turns to the southwest and continues for 2.2 miles, crossing Country Club Drive at approximate MP 5.1, the Company's existing right-of-way for Lines #38 and #137 at approximate MP 5.4, Cemetery Road at approximate MP 5.8, and Butchers Creek at approximate MP 6.5.

At this point, Route Alternative 3 turns and continues to the southwest for about 0.8 mile, crossing Highway 92 at approximate MP 7.1. The route then heads south for about 0.8 mile paralleling the western edge of a Ward Burton Wildlife Foundation Preserve parcel. At approximate MP 8.5, the alignment shifts to the south/southwest and continues for about 4 miles, intersecting Esnon Road at approximate MP 9.1 and Red Oak Lane at approximate MP 11.3. From there, the route heads southwest for 4.5 miles, intersecting Skipwith Road at approximate MP 13.8 and Townes Road at approximate MP 15.5. The route then turns south for about 0.7 mile towards Highway 58 near Jeffress. At approximate MP 17.6, the

route turns and heads south/southeast for about 0.5 mile, crossing Highway 58 at approximate MP 17.9. The route then turns and continues southwest for about 0.4 mile, terminating at the Jeffress Station.

Route Alternative 3 measures approximately 18.5 miles in length and would have a 120-foot-wide right-of-way. Existing land uses along the route largely consist of a mix of agricultural and forested lands with scattered residences and other developments at and near road crossings. Much of the forested land along the route is managed or replanted timber.

1.1.2 Route Alternative 4

Route Alternative 4 follows the same alignment as Route Alternative 3 for the first 4.7 miles from the Finneywood Station to a point just south of Dominion's existing right-of-way for Line #40. At that point, the route continues to the southeast for about 0.4 mile then south/southwest for 1.6 miles, intersecting Country Club Drive at approximate MP 5.2, Dominion's existing Line #38 right-of-way at approximate MP 5.7, and Cemetery Road at approximate MP 5.9. Just south of the crossing of an existing Transcontinental Gas Pipeline Company, LLC (Transco) natural gas pipeline right-of-way, the route turns and heads south for about 2.1 miles then southwest for about 3.4 miles, crossing Parson's Road at MP 8.2, Highway 92 at MP 8.8, and Red Oak Lane at MP 10.9. The route intersects Route Alternative 3 at approximate MP 12.2, and from here follows the same alignment as Route Alternative 3 for the remaining 5.9 miles to the Jeffress Station.

Route Alternative 4 measures approximately 18.2 miles in length and would have a 120-foot-wide right-of-way. Existing land uses along the route largely consist of a mix of agricultural and forested lands with scattered residences and other developments at and near road crossings. Much of the forested land along the route is managed or replanted timber.

1.1.3 Route Alternative 5

Route Alternative 5 follows the same alignment as Route Alternative 3 for the first 6.8 miles from the Finneywood Station south to a point east of Highway 92. From there, Route Alternative 5 turns west (away from Route Alternative 3, which heads southwest) to parallel the north side of the existing Transco pipeline right-of-way for about 1.1 miles, crossing Highway 92 and the Norfolk-Southern Railroad at approximate MPs 7.3 and 7.8, respectively. The route then meanders to the southwest for about 1.6 miles, including an approximately 1.1-mile-long segment adjacent to the north side of Butler Farm Road between about MPs 8.4 and 9.5.

The route next turns and heads south/southwest for about 2.9 miles to approximate MP 12.4, intersecting Hilltop Drive near MP 10.1, New Hope Road near MP 11.2, and Hanford Road near MP 12.2. The route then turns slightly to the south/southwest then south/southeast for about 2.5 miles, crossing Park Side Road at approximate MP 13.4, Middle School Road at about MP 14.7, Wilbourne Road at approximate MP 14.8, and the Norfolk Southern Railroad at near MP 14.9. After crossing the railroad, the route turns southwest and parallels the south side of the tracks for another approximately 1.6 miles. The route then turns south for about 1.0 mile, crossing Towns Road at approximate MP 16.9. The route intersects Route Alternative 3 near MP 17.6, and from there follows the same alignment as Route Alternative 3 for the remaining 1.6 miles to the Jeffress Station.

Route Alternative 5 measures approximately 19.2 miles in length and would have a 120-foot-wide right-of-way. Existing land uses along the route largely consist of a mix of agricultural and forested lands with scattered residences and other developments at and near road crossings. Much of the forested land along the route is managed or replanted timber.

1.2 Management Recommendations

One known archaeological site considered not eligible for listing in the National Register of Historic Places (NRHP) is located within the right-of-way for each of the proposed transmission line alternative routes. While no transmission structures for the alternative routes are planned to be placed within the site, the archaeological deposits at the site could be impacted by construction traffic or clearing within the right-of-way.

Five previously recorded historical architectural resources meeting criteria specified in the Guidelines fall within study tiers established by the VDHR for identifying aboveground historic sites along and near the transmission line route alternatives. For all three routes, ERM recommends a finding of no impact on three resources, a minimal impact on one resource, and a moderate impact on one resource. Although the findings are the same for each alternative route, Route Alternative 4 is the farthest away from most of the resources, and thus would have a lesser impact. More information about each resource and the nature of potential impacts for the various alternative routes is found in the sections that follow.

FINNEYWOOD TO JEFFRESS 230 KV TRANSMISSION LINE PROJECT
Pre-Application Analysis

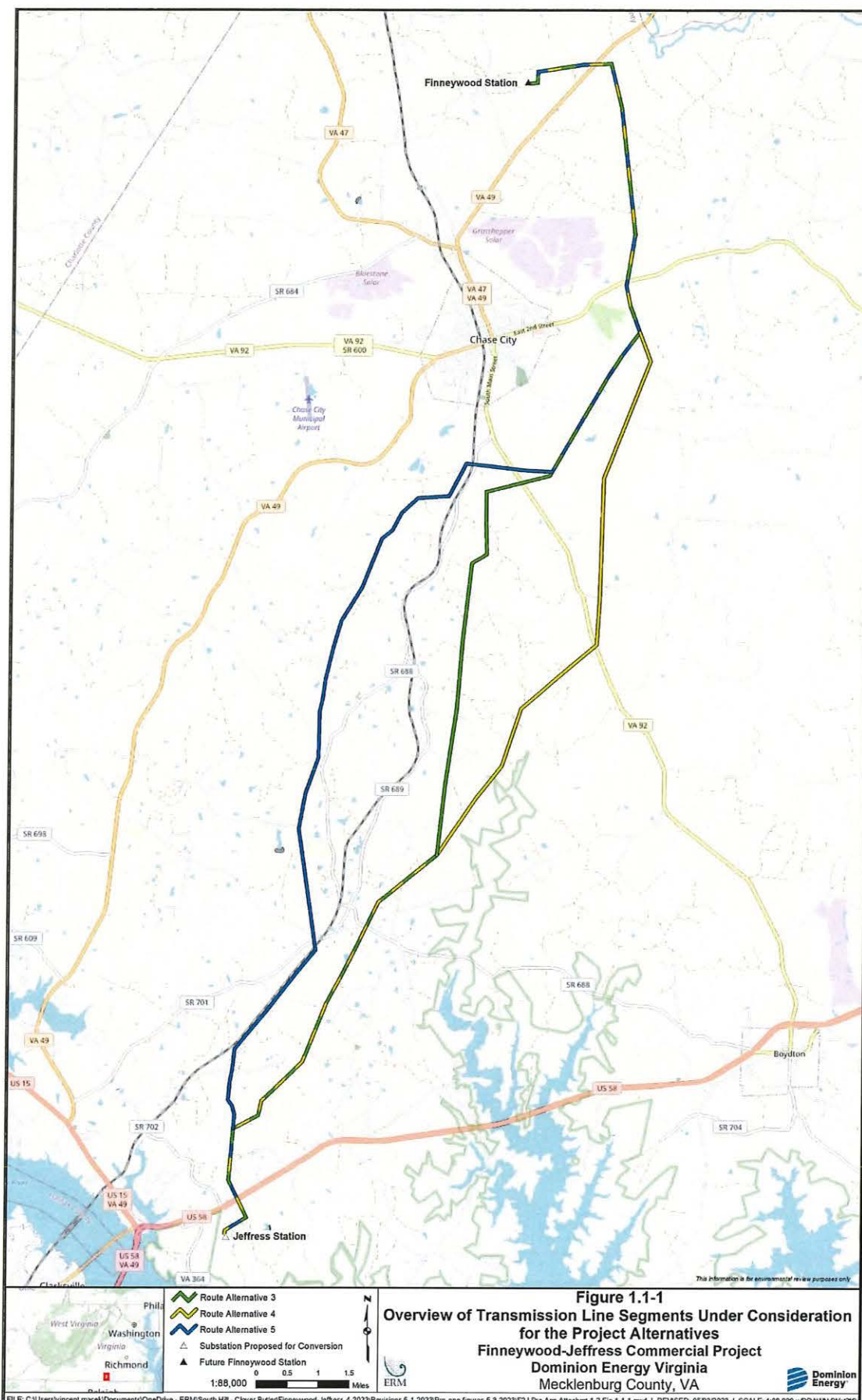


Figure 1.1-1: Overview of Transmission Line Segments under Consideration for the Project Alternative Routes

2. RECORDS REVIEW

2.1 Data Collection Approach

ERM conducted an analysis of potential cultural resource impacts for the route alternatives under consideration in accordance with the VDHR Guidelines. For each route, this analysis considered the following previously recorded resources:

- National Historic Landmarks (NHLs) within a 1.5-mile radius of each centerline;
- National Register of Historic Places (NRHP)-listed properties, NHLs, battlefields, and historic landscapes within a 1.0-mile radius of each centerline;
- NRHP-eligible and NRHP-listed properties, NHLs, battlefields, and historic landscapes within a 0.5-mile radius of each centerline; and
- All of the above qualifying resources as well as archaeological sites within the right-of-way for each route alternative.

Information on the considered resources in each study tier was collected from the Virginia Cultural Resource Information System (V-CRIS). ERM also collected information from Mecklenburg Virginia Tourism (2023) and Preservation Virginia (2023) to find locally significant resources within a 1.0-mile radius of the center of the right-of-way for each route. In addition, ERM collected information on battlefields surveyed and assessed by the National Park Service's American Battlefield Protection Program (ABPP) (NPS 2023). Two locally significant resources were identified within the relevant study tiers for the various route options during the data collection effort.

Along with the records review carried out for the four tiers as defined by VDHR, ERM also conducted field assessments of the considered aboveground resources for each Project route alternative in accordance with the VDHR Guidelines. Digital photographs of each architectural resource and views towards the proposed transmission line were taken. Photosimulations were prepared to assess potential viewshed impacts from construction of the proposed transmission line for each considered resource and relevant route alternative. For the previously recorded archaeological site under consideration, aerial photographs were examined to assess the current land condition and the spatial relationship between the site and any the rights-of-way for the route alternatives.

2.2 Archaeological Resources

Crossings of archaeological sites were considered a constraint in this study due to the potential for an electric transmission line to impact archaeological deposits in these areas (for example, due to transmission structure placement, tree clearing, or heavy equipment traffic within a site). Summary information on the known archaeological site in the right-of-way for each alternative transmission line route is provided in Table 2.2-1 and the site location is depicted on Figure 2.2-1. Individual maps for each proposed alternative route are provided in Attachment 1. Because portions of the route alternatives use common alignments, the resource is located in the right-of-way for all three routes.

The site is considered not eligible for listing on the NRHP and is unlikely to warrant further consideration in the context of the Project. It is possible that the site has been impacted by recent construction, however, the condition of the site would be confirmed during the Phase I survey to be completed for the Project.

Redacted - Contains Archaeological Site Information

Figure 2.2-1: Locations of Archaeological Resources in the Right-of-Way of Proposed Project Alternatives

Table 2.2-1: Archaeological Resource in the Right-of-Way for Each Route Alternative

Route Alternative	Greenfield or Existing/Expanded ROW?	Site Number	Description	NRHP Status
Route 3	Greenfield	44MC0986	Lithic scatter (Pre-Contact)	Not Eligible
Route 4				
Route 5				

ROW = right-of-way

2.3 Historic Resources

Each route alternative under consideration has the potential to impact a number of historic and architectural resources. The following discussion summarizes the known resources in the vicinity of each route alternative according to VDHR's tiered study area model. The locations of the considered architectural resources and the route alternatives are shown in Figure 2.3-1. Individual maps for each proposed alternative are located in Attachment 1.

None of the resources are located within the right-of-way of a route alternative, and none would be subject to direct impacts from placement of the line across the property. Resources in the 0.5-mile tier would not be directly impacted but could be visually impacted from changes to the viewshed introduced by the new transmission line structures and conductors, unless topography, vegetation, or the built environment obscures the view to the transmission line. At a distance of over 0.5 mile, it becomes less likely that a resource would be within line-of-sight of the proposed transmission line. However, the full architectural survey mandated in the second stage of VDHR's transmission line review process, would determine which resources actually would be visually impacted. Beyond 1.0 mile, it becomes even less likely that a given resource would be within line-of-sight of the proposed Project. In the case of the current Project, no qualifying NHL resources are located within 1.5 mile of the alternative routes, so no impacts were assessed at this distance.

Because of the overlap among the route alternatives, the same cultural resources would be impacted, regardless of the route selected for the Project, although the distance from the proposed transmission line would differ in some cases. The nature of these impacts, while estimated in this study with the assistance of photo simulations, would depend on the final Project design in which the exact placement and height of transmission line structures will be determined. Once a route is selected for the Project, that route will be subject to a full architectural survey, additional (as of yet, unrecorded) historic properties will be identified in the survey area, and actual Project impacts will be assessed. The survey area will be defined based on the height of the proposed transmission line structures, as well as topography, tree cover, and other factors impacting the line-of-sight from historic resources to the selected route.

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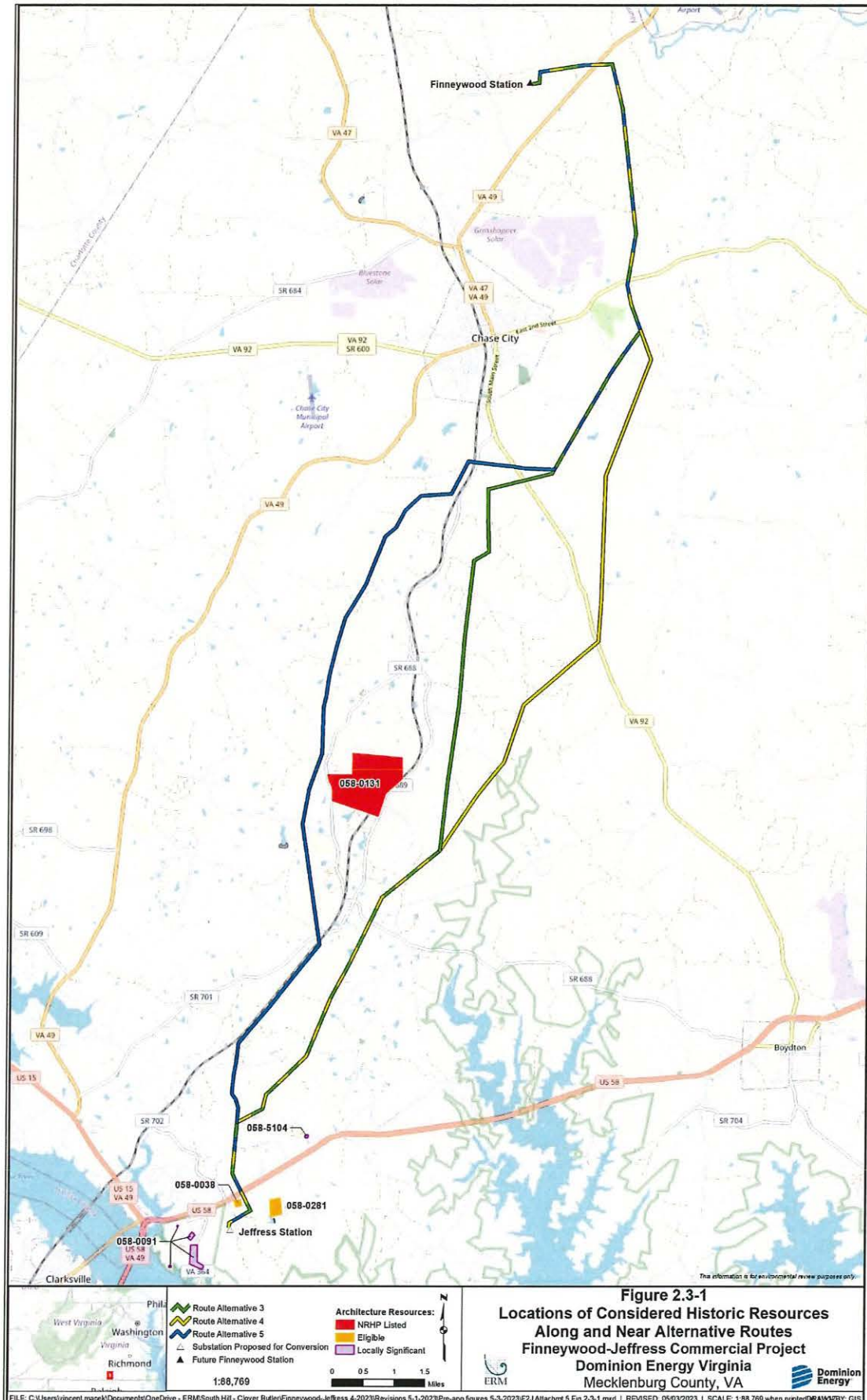


Figure 2.3-1. Locations of Considered Historic Resources Along and Near Alternative Routes

2.3.1 Route Alternative 3

The considered resources within the VDHR study tiers for Route Alternative 3 are presented in Table 2.3-1 and depicted in Attachment 1, Sheet 1. There are five aboveground historic resources identified within the VDHR tiers for Route Alternative 3. The considered resources were subjected to field reconnaissance and a preliminary assessment of impacts, discussed in the next chapter.

Table 2.3-1: Historic Resources in the VDHR Study Tiers for Route Alternative 3

Buffer (miles)	Resource Category	Resource Number	Description
0.5 to 1.0	National Register Properties (Listed)	058-0131	Red Fox Farm
	Locally Significant	058-5104	Finchley Rosenwald School
0.0 to 0.5	National Register - eligible	058-0038	Mistletoe/Mistletoe Castle
		058-0281	Wilkinson Place/Grovesend
	Locally Significant	058-0091	Occoneechee Plantation

2.3.2 Route Alternative 4

The considered resources within the VDHR tiers for Route Alternative 4 are presented in Table 2.3-2 and depicted in Attachment 1, Sheet 2. There are five aboveground historic resources identified within the VDHR tiers for Route Alternative 4. The considered resources were subjected to field reconnaissance and a preliminary assessment of impacts, discussed in the next chapter.

Table 2.3-2: Historic Resources in the VDHR Study Tiers for Route Alternative 4

Buffer (miles)	Resource Category	Resource Number	Description
0.5 to 1.0	National Register Properties (Listed)	058-0131	Red Fox Farm
	Locally Significant	058-5104	Finchley Rosenwald School
0.0 to 0.5	National Register - eligible	058-0038	Mistletoe/Mistletoe Castle
		058-0281	Wilkinson Place/Grovesend
	Locally Significant	058-0091	Occoneechee Plantation

2.3.3 Route Alternative 5

The considered resources within the VDHR tiers for Route Alternative 5 are presented in Table 2.3-3 and depicted in Attachment 1, Sheet 3. There are five aboveground historic resources identified within the VDHR tiers for Route Alternative 5. The considered resources were subjected to field reconnaissance and a preliminary assessment of impacts, discussed in the next chapter.

Table 2.3-3: Historic Resources in the VDHR Study Tiers for Route Alternative 5

Buffer (miles)	Resource Category	Resource Number	Description
0.5 to 1.0	Locally Significant	058-5104	Finchley Rosenwald School
0.0 to 0.5	National Register Properties (Listed)	058-0131	Red Fox Farm
	National Register - eligible	058-0038	Mistletoe/Mistletoe Castle
		058-0281	Wilkinson Place/Grovesend
	Locally Significant	058-0091	Occoneechee Plantation

2.4 Previous Surveys

Portions of the various route alternatives have previously been surveyed for cultural resources. Five previous cultural resource surveys intersect at least one of the route alternatives. Information on these previous surveys, including VDHR survey number, report title, report authors, and report date, is provided in Table 2.4-1. The extent of the previous survey coverage is depicted on the map provided in Attachment 2. Below is a summary of the survey coverage as it pertains to the route alternative discussed in the study:

Table 2.4-1: Cultural Resource Surveys Covering Portions of the Alternative Routes

VDHR Survey #	Title	Author(s)	Date
BR-011	A Phase I Archaeological Survey and Phase II Evaluation of Site 44BR116 for the Clover to Carson 500 kV Transmission Line, Halifax, Charlotte, Lunenburg, Mecklenburg, Brunswick, and Dinwiddie Counties, Virginia	Higgins, Downing, Pullins, McDaid, and Beckett	1995
BR-039	Phase I Cultural Resources Investigation, Virginia Southside Expansion Project, Brunswick, Charlotte, Halifax, Mecklenburg, and Pittsylvania Counties, Virginia	Glenn, Duncan, Munford, Frye, Kenneally, and Baiocchi	2012
MC-037	Phase Ib Cultural Resources Investigation for the U.S. Route 58 Corridor Study (Clarksville Bypass) Mecklenburg County, Virginia	Stevens, Heck, and Meyer	1991
MC-073	Phase I Archaeological Survey and Assessment of the Proposed Clarksville-Chase City Regional Industrial Park, Mecklenburg County, Virginia	Dutton, Laird, and Givens	2000
MC-103	A Phase I Cultural Resources Survey of Approximately 2,510.6 Acres for the Proposed Seven Bridges Solar Site in Mecklenburg County, Virginia	Sadler, DeChard, and Stewart	2019

3. STAGE 1 PRE-APPLICATION ANALYSIS FINDINGS

3.1 Methods for Analysis

Fieldwork for the pre-application analysis was conducted by Emily Dodson, who is a Secretary of Interior Qualified architectural historian, between March 17 and March 21, 2023. The fieldwork involved

photographing five resources requiring assessment, under the Guidelines and examining potential line-of-sight views from each resource towards the route alternatives. For resources where property owner approval was granted for historic resource documentation, photographs were taken towards the proposed transmission line(s) from the property at the vantage point with the most prominent view of the landscape. When such permission was not available, photographs were taken from the public right-of-way (typically a road) nearest to the resource facing towards the applicable route(s).

Panoramic photographs were taken from each resource, with an effort to capture the direction with the clearest, most unobstructed view toward the applicable route alternative(s). The precise location of the photograph was captured with a mobile tablet device connected to a sub-meter accurate Global Navigation Satellite System (GNSS) receiver, the Trimble R1. The locations where photographs were taken were noted as Simulation Points (SP). Site visits to the SPs were prioritized based on their location relative to the resource, so that viewpoints east of the resource were visited in the morning and viewpoints west of the resource were visited in the afternoon. This helped ensure, where possible, that the sun was behind the photographer at the time the viewpoint photography was captured. Additionally, minor adjustments to position were made to obtain as clear a view to the site center as possible, avoiding trees, landscaping, or man-made obstructions. Tablets recorded the center bearing, angle of view, altitude, and camera lens height. Upon receipt of the viewpoint location information, the viewpoints were plotted on open-source mapping from the Environmental Systems Research Institute (ESRI) using the Universal Transverse Mercator (UTM) 18N coordinate system.

The process of taking panoramas included setting up the tripod and camera. The camera was placed on the panoramic head in a landscape orientation where its lens height was confirmed and set at 1.5 m (please note: a portrait camera orientation was sometimes used in situations where the viewpoint is very close to a development so that the top of the development is not cut off by the image boundaries). The tripod head and camera combination were then levelled. With the camera's viewfinder centered on the perceived site center, exposure and focus settings were taken. These were then fixed manually on the camera so that they could not be inadvertently altered. The head was rotated 90 degrees to the left where the first frame of the sequence was then taken. Each subsequent frame was taken using a 50 percent overlap of the previous frame until the full sequence was captured. The camera was then removed from the tripod and a viewpoint location photograph was captured showing the tripod in its position.

The following camera and tripod configuration was used:

- Camera body: Nikon D800 professional specification digital SLR (full frame CMOS sensor)
- Camera lens: Nikkor AF 50mm f1.8 prime
- Tripod: Manfrotto 055MF4 with Manfrotto 438 ball leveler
- Panoramic head: Manfrotto 303SPH

The following camera settings were used for all photography:

- Camera mode: Manual Priority
- ISO: 100
- Aperture: f13
- Image format: RAW

After the photos were completed, they were uploaded to a server to begin the simulation/visualization process. The single-frame photographs were opened in Adobe Photoshop CC 2022 where they were checked, and any camera sensor dust spots were removed before the photographs were saved as high-resolution JPEG images. If required, discrete color and tonal adjustments were made to each frame before they were saved. The single-frame photographs were stitched together in PTGui Pro version 12.11 professional photographic stitching software using cylindrical projection settings. The camera locations were plotted in Global Mapper version 23.1. Digital models of the transmission line structures were provided by Dominion, then cleaned up and textured in Autodesk 3DS Max 2021. The positions of each structure were provided by Dominion for Route Alternative 5. For the other routes, typical spacing was provided by Dominion, and iToo RailCone for Autodesk 3DS Max 2021 was used to project structure locations. The transmission structures along each route were rendered in Vray version 5.2 from each SP camera location. 3D imagery was produced for the field of view using camera matching. Renderings for each route and each tower combination were then exported for use as an overlay.

Detailed, correctly dimensioned 3D computer models of the transmission structures along each route were generated using Autodesk 3DS Max 2021 and iToo RailCone. The virtual 3D model of the structures was created using real-world measurements and elevation drawings provided by Dominion. These were textured using Vray PBR materials to simulate the weathering steel texture. The detailed, textured models were rendered to a digital image using a simulated physical camera and sun and sky simulation lighting model in the computer software consistent with conditions within the original viewpoint photography.

Photomontages were produced by overlaying the rendered image on the photograph, using known control points and the wireline imagery showing the tower columns at the correct height and distance. Final adjustments were then made to the brightness and contrast of the rendered images to match them to the photograph. Final photomontages were prepared from each viewpoint for each route. These were then opened in Adobe Photoshop CC 2022 where minor changes were made such as placing relevant wires over the proposed development rendered where necessary. Finally, the images were cropped to the proportions required for the visual simulation figures, and the visualization figures were prepared in Adobe InDesign CC 2022 and exported in a PDF format. The resulting photo simulations are presented in Attachment 5.

Six simulations were completed through aerial 3D rendering, as those resource locations could not be accessed due to a lack of permission. An existing conditions 3D model of the study area, including terrain, generic vegetation, and simple generic structures, were created from publicly available GIS data. The 3D model was geo-referenced and compiled with aerial imagery and GIS USGS 3DEP Elevation data. Structures, vegetation clusters, and skylines were cross-referenced with the aerial imagery to ensure an accurate representation of scale and placement within the 3D rendering. In addition, atmospheric data were imported into the 3D model to develop a sun and atmospheric system that matches the location-specific reference data. Based on computer-aided design, GIS, and transmission line systems computer-aided design data provided by the client, a 3D model of the Project was constructed. All information was imported into the 3D existing conditions model using the same geo-references and projections and then validated for accuracy. 3D materials and associated specular reflectance information were applied to the proposed 3D information. Easement right-of-way expansion was created by deleting 3D trees that fall within this expansion from the existing conditions model. After

all of the information was properly aligned, atmospherics checked, and materials applied, the 3D information was then rendered using highly accurate raytraced render engines. Cameras for each location were placed several hundred feet in the air to best show the complete area. A 3D north arrow was placed to easily depict the direction of each view. Finally, photo editing software was used to color-correct the final images and export them in a PDF format. The resulting aerial renderings are presented in Attachment 6.

3.2 Structure Types and Right-of-Ways Widths

Dominion Energy Virginia would use multiple structure configurations for the Project (see Attachment 3). The new structures would typically be single poles constructed of weathering steel, with an approximate height ranging from 110 to 120 feet. Each circuit would be located on an independent structure with two sets of structures in the right-of-way for the Project. The right-of-way width for all routes would be 120 feet. Note, however, that the planned structure design and locations are preliminary and subject to change based on final engineering. ERM will provide a revised assessment of Project impacts, if necessary, based on the final design.

3.3 Assessment of Potential Impacts

The assessment of potential Project impacts on individual resources made use of the visual assessment findings and categorized the severity level of impacts according to the following scale devised by VDHR:

None—Project is not visible from the resource.

Minimal—Viewsheds have existing transmission lines, there would be only a minor change in height of existing transmission lines, and/or other views are partially obscured by topography or vegetation.

Moderate—Viewsheds have more expansive views of the transmission line, more dramatic changes in height are proposed, and/or the overall visibility of the Project would be greater.

Severe—Existing viewshed contains no transmission line, the view to the Project would be relatively unobstructed, the new transmission line would introduce a significant change to the setting of historic properties, and/or a dramatic change in the height of an existing transmission line would take place in close proximity to historic properties.

3.4 Historic Resource Descriptions

3.4.1 058-0038, *Mistletoe/Mistletoe Castle*

The resource is located at 11560 Highway 58 in Clarksville. The resource is situated on a five-acre parcel, on the south side of the road, and is completely surrounded by a dense grouping of trees (Attachment 4, Figure 1). The surrounding area is rural, with some dwellings located to the north.

Resource 058-0038 was first recorded by Robert Higgins under the aegis of the Historic American Buildings Survey (HABS) in 1958, however no information from this documentation is noted in the V-CRIS survey form. The resource was again surveyed in 1991 by Richard Meyer and 1994 by Margarita Jerabek Wuellner for John Milner Associates. These surveys described the resource as a circa 1760, two-story, Central Hall dwelling with an asphalt-shingle, side-gabled roof, weatherboard siding, and course rubble stone foundation. The late-transitional Georgian structure included two American-bond brick, exterior-end chimneys. Fenestration was all wooden and included nine-over-nine windows on the first floor and six-over-six windows on the second floor. The English basement had six-light pivot windows. The primary entrance was located through a six-panel door with a three-light rectangular transom. It was accessed via a front-gabled porch supported by square posts. The entrance to the basement was located to the west of

the front porch. A two-story, one-bay, front-gabled addition was located on the rear elevation (Meyer 1991a; Wuellner 1994b).

The 1991 and 1994 survey mentioned a barn, well-house, tobacco stripping shed, silo foundation, the remnants of two early outbuildings, and slave quarters and kitchen archaeological sites. The barn was located to the east of the dwelling and was described as a nineteenth-century structure constructed of V-notch squared logs with a standing-seam metal, side-gabled roof. The circa 1950 log well-house was located to the east of the house and featured a steeply-pitched, standing-seam metal front-gabled roof. The nineteenth-century tobacco stripping shed was located to the southwest of the dwelling and featured a standing-seam metal shed roof, weatherboard siding, and a rubble stone foundation. The remains of an early twentieth century poured concrete silo and the rubble stone foundations of two early outbuildings were located to the east of the dwelling. The former site of a slave quarter and two kitchens were located to the south and west of the dwelling (Meyer 1991; Wuellner 1994).

ERM was not able to see any structures during the current survey of the resource due to vegetation between the resource and the nearest public right-of-way; however, review of successive aerial views through the present does not indicate any changes to the dwelling's footprint. These views do show that the barn was demolished between 2003 and 2007, the well-house was demolished between 2007 and 2009, and the tobacco stripping shed was demolished between 1994 and 2002. The other outbuildings could not be identified (NETROnline 2023).

The resource was determined eligible for the NRHP in 1995 and lies within the study area for Route Alternatives 3, 4, and 5.

3.4.2 058-0091, Occoneechee Plantation

Occoneechee Plantation is located on the Roanoke River (John H. Kerr Reservoir) at 638 and 669 Occoneechee Park Road in Clarksville. It is located within Occoneechee State Park, a 2,698-acre park that includes a visitors' center and museum dedicated to the Native American history of the region, as well as interpretive signage related to the plantation (Attachment 4, Figure 2). The resource is represented by architectural ruins and archaeological deposits associated with the antebellum-era tobacco plantation of William Townes. The resource is also recorded in V-CRIS as archaeological site 44MC318. Sites 44MC0305–44MC316 and 44MC0319 are also associated with the plantation and have been determined to be contributing resources to 058-0091. In V-CRIS, 058-0091 is mapped as four separate polygons. The architectural components of the resource are located in the large eastern polygon as well as the small northern polygon, which contains the remains of the barn. Very little standing architecture remains.

William Townes established a 3,100-acre plantation on the Roanoke River that also included Occoneechee Island, which had been the site of a village occupied by the Occoneechi Indians in the seventeenth century. The Occoneechi were displaced following Bacon's Rebellion in 1676 and moved south to the vicinity of Hillsboro, North Carolina.

The main house at Occoneechee was built in 1839 and was a large, frame, hipped-roof, two-story dwelling with wings on each side. It contained 20 rooms. The farm complex included numerous outbuildings such as a kitchen, icehouse, smokehouse, barns, and servants' quarters. The grounds included a terraced garden of boxwoods and ornamental trees connected by brick paths and stairs. Townes owned 160 slaves in 1840, and the overseer's house and slave quarters were located a short distance from the main house (Virginia State Parks 2014).

Townes was a prominent citizen of Mecklenburg County. He owned Boyd Tavern in Boynton where he built a 1-mile horse track and staged races. The events were social affairs and included lavish dinners and balls at the tavern. He served as a trustee of Randolph-Macon College and was involved in road and

railroad development in the county. In 1860, Townes's real estate was valued at \$107,000, and his personal estate (primarily slaves) was valued at \$108,200 (Ancestry 2023; Lambert 2014; Virginia State Parks 2014).

After the Civil War, in 1870, Townes's real estate was valued at \$60,000, while his personal estate was valued at \$2,565. He was 79 years old in 1870. Townes died in 1878, leaving the estate to be divided among his heirs and his former slaves, who were offered 4 acres or the monetary equivalent. His son, William Townes, Jr., already owned a nearby plantation, so the homeplace was sold to Dempsey Graves Crudup, who resided there with his family until Christmas Eve 1898, when a fire destroyed the house (Lambert 2014; Virginia State Parks 2014).

Oconeechee Plantation was originally recorded as a group of archaeological sites (Garrow et al. 1980). Kimmel (1989, 1991) organized the sites into four complexes, each containing former structures from the plantation. Complex A contains the main house and its dependencies, while Complex B is believed to be the slave quarters. Complex C contains one structure interpreted to be the overseer's residence. Complex D contains a possible barn (Brockington and Butler 1994).

The site contains surface features such as foundations, chimney bases, and landscaping, as well as subsurface artifact concentrations. Based on the level of preservation of these features, the site likely contains subsurface features, as well.

The site was recommended as eligible for the NRHP under multiple criteria on the multiple property nomination. It was also recommended as eligible under Criterion D as an individual property (Brockington and Butler 1994). It was listed on the Virginia Landmarks Register (VLR) in 1996, and a draft nomination for the NRHP was prepared but remains pending. Because it is listed on the VLR, ERM included it as a locally significant resource.

This resource lies within the study area for Route Alternatives 3, 4, and 5.

3.4.3 058-0131, Red Fox Farm

Red Fox Farm (058-0131) is located at 7446 Skipwith Road on a 216-acre parcel in the unincorporated community of Skipwith. The property is flanked by State Route 688/Skipwith Road to the west and State Route 689/Rocky Mount Road to the east. The parcel's topography consists of rolling hills and includes a pond, woodlands, cultivated land, and open pasture. The Norfolk Southern Railroad runs northeast-southwest through the southeastern corner of the property, almost parallel with State Route 689. The area surrounding the property is rural with cultivated fields and woodlands. The buildings and structures associated with this property are clustered together in the southwest corner of the parcel (Attachment 4, Figure 3).

Resource 058-0131 was previously surveyed in 1989 by Bobbi Pattison and again in 1993 by Jeffrey O'Dell and John Salmon. Pattison noted a circa 1880 dwelling with a front-gabled, standing-seam metal roof, wood siding, and six-over-six wooden windows (Pattison 1989). O'Dell and Salmon, who prepared the NRHP nomination, added that the dwelling had a one-story, two-room plan with decorative vertical siding and a modified front-porch with columns. The doors and windows featured Greek moldings and a beaded inner casing. O'Dell and Salmon noted 11 secondary resources including five tobacco barns, a pack house, a strip house, a log cabin, smokehouse, corncrib, commissary, well, and water trough. The tobacco barns dated to the late nineteenth century and are of unskinned log construction with diamond notches. The pack house had a gabled roof and weatherboard siding. The strip house is also a log structure with board sheathing. The log cabin featured an exterior-end rubblestone chimney and had two additions. The smokehouse had a gabled roof. O'Dell and Salmon also noted a twentieth century corncrib with a gabled roof with overhanging eaves, and a commissary with a gable-end roof (O'Dell and Salmon 1993).

ERM visited the property in 2023 and observed that the dwelling was being actively demolished (Attachment 4, Figure 4). Only the northern side of the dwelling was still standing. The remaining outbuildings present at the time of survey include four tobacco barns, the pack house, the strip house, commissary, log cabin, corn crib, and smokehouse (Attachment 4, Figure 5). The other tobacco barn was demolished between 2013 and 2016, and another shed was built between 2011 and 2013 (Google Earth Pro 2023). The well and water trough were not visible from the public right-of-way or aerial imagery.

The resource was formally determined to be eligible for the NRHP in 1989 and added to the VLR and NRHP in 1993 under Criteria A and C for its association with the agricultural history of Mecklenburg County and as a complete collection of farm structures that illustrate tobacco farming in the late nineteenth and twentieth centuries.

This resource is located in the study area for Route Alternatives 3, 4, and 5.

3.4.4 058-0281, Wilkinson Place/Grovesend

Resource 058-0281, Wilkinson Place Grovesend, is located on an approximately 140-acre lot at 753 McMillan Place, Clarksville on the south side of Route 58. The surrounding area consists of dense forest in all directions with man-made ponds to the south and east (Attachment 4, Figure 6).

Resource 058-0281 was previously surveyed in 1991 by Richard Meyer and again in 1994 by Margarita Wuellner for John Milner Associates. The prior surveys identified a circa 1890, one-story, central passage dwelling with a two-story rear ell. The primary dwelling was described as having a standing-seam metal roof, weatherboard siding, and brick interior chimney. It also included six-over-six, double-hung windows and a three-bay porch. Additionally, the survey identified 11 associated buildings, which included two secondary dwellings, two tobacco barns, a granary, barn, stable, smoke/meat house, well/well house, carport, and carriage house. These structures dated from circa 1890 to 1970 (Meyer 1991b; Wuellner 1994b).

ERM was not able to see any structures in the current survey of the resource due to vegetation between the resource and the public right-of-way; however, a review of aerial imagery did not reveal any changes to the dwelling, and 11 outbuildings are still visible (Mecklenburg County Virginia GIS 2023).

In 1995, the resource was determined eligible by VDHR staff under Criteria A and C as an example of a late nineteenth century farmstead with intact domestic and agricultural buildings.

The resource is located within the study area for Route Alternatives 3, 4, and 5.

3.4.5 058-5104, Finchley Rosenwald School

Resource 058-5104, the Finchley (Rosenwald) School, was located on the north side of New Liberty Church Road in Clarksville. The surrounding area consists of dense forest within a rural neighborhood.

Resource 058-5104 was previously surveyed by Kristin Kirchen in 2011 to identify Rosenwald Schools within the area. The structure was described as a circa 1920, vernacular style, three teacher, three room school with T-shaped footprint. It featured a cross-gabled, standing-seam metal roof, weatherboard siding, and a stone and concrete pier foundation. The structure featured two interior brick chimneys. It was accessed via two double-leaf doors and featured six-over-six double-hung windows. At the time of the 2011 survey, it was in deteriorated condition with a partially collapsed roof (Kirchen 2011).

ERM was not able to see the structure from the nearest public right-of-way, but did identify the sign associated with the school (Attachment 4, Figure 7). According to aerial views, however, the resource is no longer extant. It was demolished between 2013 and 2016 and a new dwelling was built on the property in 2017 (Google Earth Pro 2023). The school was part of a multiple property nomination for Rosenwald Schools in Virginia (012-5041/64500875), which was listed on the NRHP in 2004 (Green 2004). However,

VDHR has made no formal determination of eligibility as an individual resource. Because of its status as a Rosenwald School, ERM has categorized it as locally significant for the purposes of this Project.

This resource is located within the study area for Route Alternatives 3, 4, and 5.

3.5 Historic Resource Findings for Route Alternative 3

The impacts on each resource in the Route Alternative 3 study tiers are discussed below. Photo simulations are provided in Attachment 5.

3.5.1 058-0038, Mistletoe/Mistletoe Castle

Mistletoe/Mistletoe Castle is situated approximately 189 feet to the west of Route Alternative 3 in an area where the route uses a greenfield alignment (Attachment 5, Figure 1). Resource 058-0038 is also located approximately 0.24-mile north of Jeffress Station. The grounds and the area surrounding the resource are largely forested. Construction of the new transmission line would introduce modern elements (structures and conductors) to the eastern and southern viewshed, which currently only contains forest.

One photo simulation was prepared from SP 4, which is located along Highway 58, approximately 348 feet to the west of the route and approximately 375 feet north of the northern portion of the resource. This SP was chosen as the closest point to the resource from the nearest public right-of-way. At this location, as illustrated in the simulation from SP 4, the new transmission structures would be visible due to their close proximity (Attachment 5, Figure 2). However, this view towards the proposed route is unobstructed, and the view from the resource itself towards the new transmission line structures would be less visible due to the dense vegetation between the resource and the proposed route. While it is unlikely that the transmission line would be visible from the dwelling itself, it may be visible at the easternmost corner of the resource boundary during off-leaf season. This would add modern infrastructure (structures and conductors) to a viewshed that currently only contains forest.

As access to the resource itself was not granted, additional visual modeling was completed from Google Earth imagery to portray a closer approximation of proposed Project effects on the resource (Attachment 6, Figure 1). This rendering shows that Route Alternative 3 would result in the removal of trees to the east of the resource, which would result in a thinner tree line. However, the transmission line is likely to be visible only during off-leaf season. Regardless, because the Project would add a modern element to the entire eastern viewshed, ERM recommends that there would be a **Moderate Impact** on this resource from Route Alternative 3.

3.5.2 058-0091, Occoneechee Plantation

The Occoneechee Plantation is located approximately 0.38 mile to the southwest of the Jeffress Station and 0.46 mile southwest of Route Alternative 3, in an area where the route uses a greenfield alignment (Attachment 5, Figure 3). The area between the resource and the new transmission line consists of dense forest. Due to the distance from the route and the intervening vegetation, 058-0091 would have no view to Route Alternative 3, as shown by the viewpoint from SP 5 (Attachment 5, Figure 4). Because the view towards the Project from Occoneechee Plantation would be entirely screened, there would be **No Impact** on this resource from Route Alternative 3.

3.5.3 058-0131, Red Fox Farm

The Red Fox Farm is located approximately 0.60 mile to the west of Route Alternative 3 at its closest boundary in an area where the route uses a greenfield alignment (Attachment 5, Figure 5). The area between the resource and the transmission line consists of stands of dense forest and cleared land. Due

to the distance and intervening vegetation, 058-0131 would have no view to Route Alternative 3, as shown by the viewpoints from SP 8 (Attachment 5, Figure 6) and SP 9 (Attachment 5, Figure 7). Because there are no sight lines from Red Fox Farm to the Project, there would be **No Impact** on this resource from Route Alternative 3.

3.5.4 058-0281, Wilkinson Place/Grovesend

Wilkinson Place is located approximately 0.24 mile to the east of Route Alternative 3, where the route uses a greenfield alignment (Attachment 5, Figure 8). The area between the resource and the transmission line consists of dense forest, with one strip of cleared land from the western border of the resource to the right-of-way for Route Alternative 3.

One photo simulation was prepared from SP 3, which is located at Highway 58, approximately 0.42 mile to the northeast of the route. This SP was chosen because it is the closest point to the resource from the nearest public right-of-way. At this location, the new transmission structures would be visible in the distance crossing the highway (Attachment 5, Figure 9). However, this view towards the Project is unobstructed, while the view towards the new transmission line from the resource itself would be obstructed by the dense vegetation between the resource and the route. The only area where the route might be visible from the resource would be at the resource's western boundary where a narrow-cleared corridor, that may be the result of a logging road, proceeds west-southwest towards Route Alternative 3, but has a slight bend before reaching the route. If Route Alternative 3 is selected for the Project, the new transmission structures could potentially be visible from the resource's western boundary. All other vantage points within the resource would have no view of the transmission line due to the dense foliage. The addition of the transmission line, which may or may not be visible from the resource, would constitute a very minor change to the existing view, given that only one vantage point would have a distant view of the transmission line. As access to the resource itself was not granted, additional visual modeling was completed using Google Earth imagery to portray a closer approximation of Project effects on the resource (Attachment 6, Figure 2). This Google Earth rendering shows that Route Alternative 3 would result in the removal of trees to the west of the resource, which would not be visible from the buildings associated with resource but might be visible from one vantage point along the western boundary.

In summary, a point on the western boundary of the resource might have line of sight towards the route, but the vast majority of the resource would experience no viewshed change. By virtue of the possible visibility of the Project from one location within the resource that would add modern infrastructure to a view that currently only contains forest, ERM recommends that there would be a **Minimal Impact** to this resource from Route Alternative 3.

3.5.5 058-5104, Finchley Rosenwald School

Finchley Rosenwald School is located approximately 0.64 mile to the southeast of Route Alternative 3, where the route uses a greenfield alignment (Attachment 5, Figure 10). The area between the resource and the route consists of dense forest and intervening residential structures, which block any view from the resource towards the transmission line. One simulation was prepared for the resource, SP 15. This location was chosen because it was the closest point to the resource from the nearest public road, New Liberty Church Road. Due to distance, change in elevation, and intervening forest and residential structures, 058-5104 will have no view to Route Alternative 3, as evidenced by the viewpoint from SP 15 (Attachment 5, Figure 11). Because the Finchley Rosenwald School would be entirely screened, there would be **No Impact** on this resource from Route Alternative 3.

3.6 Historic Resource Findings for Route Alternative 4

3.6.1 058-0038, Mistletoe/Mistletoe Castle

Route Alternative 4 follows the same alignment and would use the same design as Route Alternative 3 where it passes near resource 058-0038. Mistletoe/Mistletoe Castle is situated approximately 189 feet to the west of Route Alternative 4 in an area where the route uses a greenfield alignment (Attachment 5, Figure 12). Resource 058-0038 is also located approximately 0.24 mile north of the Jeffress Station. The grounds and the area surrounding the resource are largely forested. Construction of the new transmission line would introduce modern elements (structures and conductors) to the eastern and southern viewshed, which currently only contains forest.

One photo simulation was prepared from SP 4, which is located along Highway 58, approximately 348 feet to the west of the route and approximately 375 feet north of the northern portion of the resource. This SP was chosen as the closest point to the resource from the nearest public right-of-way. At this location, as illustrated in the simulation from SP 4, the new transmission structures would be visible due to their close proximity (Attachment 5, Figure 13). However, this view towards the proposed route is unobstructed, and the view from the resource itself towards the new transmission line structures would be less visible due to the dense vegetation between the resource and the proposed route. While it is unlikely that the transmission line would be visible from the dwelling itself, it may be visible at the easternmost corner of the resource boundary during off-leaf season. This would add modern infrastructure (structures and conductors) to a viewshed that currently only contains forest.

As access to the resource itself was not granted, additional visual modeling was completed from Google Earth imagery to portray a closer approximation of proposed Project effects on the resource (Attachment 6, Figure 3). This rendering shows that Route Alternative 4 would result in the removal of trees to the east of the resource, which would result in a thinner tree line. However, the transmission line is likely to be visible only during off-leaf season. Regardless, because the Project would add a modern element to the entire eastern viewshed, ERM recommends that there would be a **Moderate Impact** on this resource from Route Alternative 4.

3.6.2 058-0091, Occoneechee Plantation

Route Alternative 4 follows the same alignment and would use the same design as Route Alternative 3 where it passes near resource 058-0091. The Occoneechee Plantation is located approximately 0.38 mile southwest of the Jeffress Station and 0.46 mile southwest of Route Alternative 4, in an area where the route uses a greenfield alignment (Attachment 5, Figure 14). The area between the resource and the new transmission line consists of dense forest. Due to the distance from the route and the intervening vegetation, 058-0091 would have no view to Route Alternative 4, as shown by the viewpoint from SP 5 (Attachment 5, Figure 15). Because the view towards the Project from Occoneechee Plantation would be entirely screened, there would be **No Impact** on this resource from Route Alternative 4.

3.6.3 058-0131, Red Fox Farm

The Red Fox Farm is located approximately 0.92 mile to the northwest of Route Alternative 4 at its closest boundary in an area where the route uses a greenfield alignment (Attachment 5, Figure 16). The area between the resource and the route consists of stands of dense forest and cleared land. Due to the distance and intervening vegetation, 058-0131 would have no view to Route Alternative 4, as shown by the viewpoint from SP 9 (Attachment 5, Figure 17). Because there are no sight lines from Red Fox Farm to the Project, there would be **No Impact** on this resource from Route Alternative 4.

3.6.4 058-0281, Wilkinson Place/Grovesend

Route Alternative 4 follows the same alignment and would use the same design as Route Alternative 3 where it passes near 058-0281. Wilkinson Place is located approximately 0.24 mile to the east of the Route Alternative 4, where the route uses a greenfield alignment (Attachment 5, Figure 18). The area between the resource and the route consists of dense forest, with one strip of cleared land from the western border of the resource to the right-of-way for Route Alternative 4.

One photo simulation was prepared from SP 3, which is located at Highway 58, approximately 0.42 mile to the northeast of the route. This SP was chosen because it was the closest point to the resource from the nearest public right-of-way. At this location, the new transmission structures would be visible in the distance crossing the highway (Attachment 5, Figure 19). However, this view towards the Project is unobstructed, while the view towards the new transmission line from the resource itself would be obstructed by the dense vegetation between the resource and the route. The only area where the route might be visible from the resource would be at the resource's western boundary where a narrow-cleared corridor that may be the result of a logging road, proceeds west-southwest towards Route Alternative 4, but has a slight bend before reaching the route. If Route Alternative 4 is selected for the Project, the new transmission structures for the line could potentially be visible from the resource's western boundary. All other vantage points within the resource would have no view of the transmission line due to the dense foliage.

The addition of the transmission line, which may or may not be visible from the resource, would constitute a very minor change to the existing view, given that only one vantage point would have a distant view of the transmission line. As access to the resource itself was not granted, additional visual modeling was completed using Google Earth imagery to portray a closer approximation of Project effects on the resource (Attachment 6, Figure 4). This Google Earth rendering shows that Route Alternative 4 would result in the removal of trees to the west of the resource, which would not be visible from the buildings associated with the resource but might be visible from one vantage point along the western boundary.

In summary, a point on the western boundary of the resource might have line of sight towards the route, but the vast majority of the resource would experience no viewshed change. By virtue of the possible visibility of the Project from one location within the resource that would add modern infrastructure to a view that currently only contains forest, ERM recommends that there would be a **Minimal Impact** to this resource from Route Alternative 4.

3.6.5 058-5104, Finchley Rosenwald School

Route Alternative 4 follows the same alignment and would use the same design as Route Alternative 3 where it passes near resource 058-5104. Finchley Rosenwald School is located approximately 0.64 mile to the southeast of the Route Alternative 4, where the route uses a greenfield alignment (Attachment 5, Figure 20). The area between the resource and the route consists of dense forest and intervening residential structures, which block any view from the resource towards the new transmission line. One simulation was prepared for the resource, SP 15. This location was chosen because it was the closest point to the resource from the nearest public road, New Liberty Church Road. Due to distance, change in elevation, and intervening forest and residential structures, 058-5104 would have no view to Route Alternative 4, as evidenced by the viewpoint from SP 15 (Attachment 5, Figure 21). Because the Finchley Rosenwald School would be entirely screened, there would be **No Impact** on this resource from Route Alternative 4.

3.7 Historic Resource Findings for Route Alternative 5

3.7.1 058-0038, Mistletoe/Mistletoe Castle

Route Alternative 5 follows the same alignment and would use the same design as Route Alternatives 3 and 4 where it passes near resource 058-0038. Mistletoe/Mistletoe Castle is situated approximately 189 feet to the west of Route Alternative 5 in an area where the route uses a greenfield alignment (Attachment 5, Figure 22). Resource 058-0038 is also located approximately 0.24 mile north of the Jeffress Station. The grounds and the area surrounding the resource are largely forested. Construction of the new transmission line would introduce modern elements (structures and conductors) to the eastern and southern viewshed, which currently only contains forest.

One photo simulation was prepared from SP 4, which is located along Highway 58, approximately 348 feet to the west of the route and approximately 375 feet north of the northern portion of the resource. This SP was chosen as the closest point to the resource from the nearest public right-of-way. At this location, as illustrated in the simulation from SP 4, the new transmission structures would be visible due to their close proximity (Attachment 5, Figure 23). However, this view towards the proposed route is unobstructed, and the view from the resource itself towards the new transmission line structures would be less visible due to the dense vegetation between the resource and the proposed route. While it is unlikely that the proposed transmission line would be visible from the dwelling itself, it may be visible at the easternmost corner of the resource boundary during off-leaf season. This would add modern infrastructure (structures and conductors) to a viewshed that currently only contains forest.

As access to the resource itself was not granted, additional visual modeling was completed from Google Earth imagery to portray a closer approximation of proposed Project effects on the resource (Attachment 6, Figure 5). This rendering shows that Route Alternative 5 would result in the removal of trees to the east of the resource, which would result in a thinner tree line. However, the transmission line is likely to be visible only during off-leaf season. Regardless, because the project would add a modern element to the entire eastern viewshed, ERM recommends that there would be a **Moderate Impact** on this resource from Route Alternative 5.

3.7.2 058-0091, Occoneechee Plantation

Route Alternative 5 follows the same alignment and would use the same design as Route Alternatives 3 and 4 where it passes near resource 058-0091. The Occoneechee Plantation is located approximately 0.38 mile southwest of the Jeffress Station and 0.46 mile southwest of Route Alternative 5, in an area where the route uses a greenfield alignment (Attachment 5, Figure 24). The area between the resource and the new transmission line consists of dense forest. Due to the distance from the route and the intervening vegetation, 058-0091 would have no view to Route Alternative 5, as shown by the viewpoint from SP 5 (Attachment 5, Figure 25). Because the view towards the Project from Occoneechee Plantation would be entirely screened, there would be **No Impact** on this resource from Route Alternative 5.

3.7.3 058-0131, Red Fox Farm

058-0131, Red Fox Farm, is located approximately 820 feet to the east of Route Alternative 5, where the route uses a greenfield alignment (Attachment 5, Figure 26). The area between the resource and the new transmission line consists of dense forest, with some areas containing agricultural land. Due to the dense intervening vegetation, 058-0131 would have no view to Route Alternative 5, as shown by the viewpoint from SP 17 (Attachment 5, Figure 27). Because there are no sight lines from Red Fox Farm to the Project, there would be **No Impact** on this resource from Route Alternative 5.

3.7.4 058-0281, Wilkinson Place/Grovesend

Route Alternative 5 follows the same alignment and would use the same design as Route Alternatives 3 and 4 where it passes near 058-0281. Wilkinson Place is located approximately 0.24 mile to the east of Route Alternative 5, where the route uses a greenfield alignment (Attachment 5, Figure 28). The area between the resource and the new transmission line consists of dense forest, with one strip of cleared land from the western border of the resource to the right-of-way for Route Alternative 5.

One photo simulation was prepared from SP 3, which is located at Highway 58, approximately 0.42 mile to the northeast of the route. This SP was chosen because it was the closest point to the resource from the nearest public right-of-way. At this location, the new transmission structures would be visible in the distance crossing the highway (Attachment 5, Figure 29). However, this view towards the Project is unobstructed, while the view towards the new transmission line from the resource itself would be obstructed by the dense vegetation between the resource and the route. The only area where the route might be visible from the resource would be at the resource's western boundary where a narrow-cleared corridor, that may be the result of a logging road, proceeds west-southwest towards Route Alternative 5, but has a slight bend before reaching the route. If Route Alternative 5 is selected for the Project, the new transmission structures could potentially be visible from the resource's western boundary. All other vantage points within the resource would have no view of the transmission line due to the dense foliage.

The addition of the transmission line, which may or may not be visible from the resource, would constitute a very minor change to the existing view, given that only one vantage point would have a distant view of the transmission line. As access to the resource itself was not granted, additional visual modeling was completed using Google Earth imagery to portray a closer approximation of Project effects on the resource (Attachment 6, Figure 6). This Google Earth rendering shows that Route Alternative 5 would result in the removal of trees to the west of the resource, which would not be visible from the buildings associated with the resource but might be visible from one vantage point along the western boundary.

In summary, a point on the western boundary of the resource might have line of sight towards the route, but the vast majority of the resource would experience no viewshed change. By virtue of the possible visibility of the Project from one location within the resource that would add modern infrastructure to a view that currently only contains forest, ERM recommends that there would be a **Minimal Impact** to this resource from Route Alternative 5.

3.7.5 058-5104, Finchley Rosenwald School

Finchley Rosenwald School is located approximately 0.89 mile to the southeast of Route Alternative 5, where the route uses a greenfield alignment (Attachment 5, Figure 30). The area between the resource and the route consists of dense forest and intervening residential structures, which block any view from the resource towards the new transmission line. One simulation was prepared for the resource, SP 15. This location was chosen because it was the closest point to the resource from the nearest public road, New Liberty Church Road. Due to distance, the change in elevation, and intervening forest and residential structures, 058-5104 would have no view to Route Alternative 5, as evidenced by the viewpoint from SP 15 (Attachment 5, Figure 31). Because the Finchley Rosenwald School would be entirely screened, there would be **No Impact** on this resource from Route Alternative 5.

3.8 Archaeology Findings

One known archaeological site (44MC0986) is located within the right-of-way of the route alternatives where the three routes share the same alignment (Table 3.8-1). Based on a Phase I survey conducted by Stantec in 2019 for a proposed solar project, the site consists of a 0.78-acre prehistoric lithic scatter of indeterminate temporal affiliation. Fieldwork at the site consisted of pedestrian survey augmented by the excavation of 15 shovel tests in and around the site. Two shovel tests yielded a combined total of five

non-diagnostic artifacts, three quartz flakes and two pieces of quartz shatter. Stantec recommended the site as not eligible for listing in the NRHP based on the paucity of recovered artifacts and an absence of subsurface features (Sadler et al 2019). The VDHR concurred with this recommendation.

Although the site is in an area proposed to be developed for a solar generating facility, this development is still in the planning stages and unconstructed as of 2023. Land cover currently consists of managed timber. Aerial images dating from 1985, 1994, 2002, 2003, 2005, 2006, 2007, 2009, 2011, 2013, 2016, and 2019 (Google Earth 2023) indicate the site has been managed for timber resources for at least the last two decades with the last cut occurring between 1994 and 2002. The site is on the south side of Dominion's existing right-of-way for Line #98.

The site is considered not eligible for listing on the NRHP and is unlikely to warrant further consideration in the context of the Project. It is possible that the site has been impacted by recent construction, however, the condition of the site would be confirmed during the Phase I survey to be completed for the Project.

Table 3.8-1: Archaeological Resources within the Right-of-Way for the Alternate Routes

Considered Resource	Proposed Alternative		
	Butler Farm–Clover Line		
	Route 1	Route 2	Route 3
44MC0986	X	X	X
Total Resources	1	1	1

3.8.1 Route Alternative 3

One archaeological site lies within the right-of-way for Route Alternative 3: 44MC0986. This site is approximately 1.0 mile southeast of Highway 49 in Mecklenburg County. The site is located along a greenfield segment of Route Alternative 3. While no transmission structures for Route Alternative 3 are planned be placed within the site boundaries, the site could be impacted by construction traffic or clearing within the right-of-way.

3.8.2 Route Alternative 4

Site 44MC0986 is located within an area where Route Alternative 4 shares the same alignment as Route Alternative 3. While no transmission structures for Route Alternative 4 are planned to be placed within the site boundaries, the site could be impacted by construction traffic or clearing within the right-of-way.

3.8.3 Route Alternative 5

Site 44MC0986 is located within an area where Route Alternative 5 shares the same alignment as Route Alternatives 3 and 4. While no transmission structures for Route Alternative 5 are planned to be placed within the site boundaries, the site could be impacted by construction traffic or clearing within the right-of-way.

4. CONCLUSIONS AND RECOMMENDATIONS

The pre-application analysis gathered information on archaeological and historic architectural resources that qualify for consideration according to the VDHR Guidelines for transmission line projects.

One known archaeological site (44MC0986) is located within or adjacent to the right-of-way for each of the three route alternatives, in an area where they share a common alignment. The site is considered not eligible for listing on the NRHP and is unlikely to warrant further consideration in the context of the Project. It is possible that the site has been impacted by recent construction, however, the condition of the site would be confirmed during the Phase I survey to be completed for the Project.

Five aboveground resources fall within the VDHR study tiers for the route alternatives under consideration (058-0038, 058-0091, 058-0131, 058-0281, and 058-5104). Since portions of the routes use common alignments, each of these resources would be affected regardless of the route alternative selected by the SCC for the Project. A comparison of the number of resources impacted and the degree of impact for each route alternative is presented in Table 4-1. The specific resources affected by each alternative are covered in the subsections that follow.

Table 4-1: Comparison of Project Impacts on Historic Resources in the Study Areas of the Alternative Routes

Route Alternative	Number of Considered Resources in Each Impact Category				
	None	Minimal	Moderate	Severe	Total
Route 3	3	1	1	0	5
Route 4	3	1	1	0	5
Route 5	3	1	1	0	5

Final assessments of Project impacts will be dependent on the completion of identification-phase archaeological and historic structure surveys along the route selected by the SCC and subsequent review of survey results by VDHR. For any resources with a finding of moderate or severe impact, the Company will propose treatments to avoid, minimize, or mitigate those impacts. Treatment options for archaeological sites could include selective structure placement to avoid direct impacts on sites, minor route adjustments to avoid crossing sites, or archaeological data recovery. Treatment options for aboveground historic resources could include detailed site documentation, historical research, or historic preservation studies; preparation of digital media or museum-type exhibits for public interpretation; installation of historical markers or signs; installation of vegetative screening; or contributions to historical preservation organizations or specific preservation projects. Additional mitigation measures could be identified through consultation with VDHR and other consulting parties.

4.1 Route Alternative 3

Five previously recorded historic architectural resources meet the criteria specified in the Guidelines within the VDHR study tiers for Route Alternative 3 (Table 4.1-1). The route would have no impact on three of these, a minimal impact on one, and a moderate impact on one.

Table 4.1-1: Impacts to Historic Resources in the VDHR Study Tiers for Route Alternative 3

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	-	-	-
0.5 to 1.0	National Register Properties (listed)	058-0131	Red Fox Farm	None
	Locally Significant	058-5104	Finchley Rosenwald School	None
0.0 to 0.5	National Register-eligible	058-0038	Mistletoe/Mistletoe Castle	Moderate
		058-0281	Wilkinson Place/Grovesend	Minimal
	Locally Significant	058-0091	Occoneechee Plantation	None
0.0 (within ROW)	National Historic Landmarks, National Register Properties (listed and eligible)	-	-	-

ROW = right-of-way

4.2 Route Alternative 4

Five previously recorded historic architectural resources meet the criteria specified in the Guidelines within the VDHR study tiers for Route Alternative 4 (Table 4.1-2). The route would have no impact on three of these, a minimal impact on one, and a moderate impact on one.

Table 4.2-1: Impacts to Historic Resources in the VDHR Study Tiers for Route Alternative 4

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	-	-	-
0.5 to 1.0	National Register Properties (listed)	058-0131	Red Fox Farm	None
	Locally Significant	058-5104	Finchley Rosenwald School	None
0.0 to 0.5	National Register-eligible	058-0038	Mistletoe/Mistletoe Castle	Moderate
		058-0281	Wilkinson Place/Grovesend	Minimal
	Locally Significant	058-0091	Occoneechee Plantation	None
0.0 (within ROW)	National Historic Landmarks, National Register Properties (listed and eligible)	-	-	-

ROW = right-of-way

4.3 Route Alternative 5

Five previously recorded historic architectural resources meet the criteria specified in the Guidelines within the VDHR study tiers for Route Alternative 5 (Table 4.1-3). The route would have no impact on three of these, a minimal impact on one, and a moderate impact on one.

Table 4.3-1: Impacts to Historic Resources in the VDHR Study Tiers for Route Alternative 5

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	-	-	-
0.5 to 1.0	Locally Significant	058-5104	Finchley Rosenwald School	None
0.0 to 0.5	National Register Properties (Listed)	058-0131	Red Fox Farm	None
	National Register-eligible	058-0038	Mistletoe/Mistletoe Castle	Moderate
		058-0281	Wilkinson Place/Grovesend	Minimal
	Locally Significant	058-0091	Occoneechee Plantation	None
0.0 (within ROW)	National Historic Landmarks, National Register Properties (listed and eligible)	-	-	-

ROW = right-of-way

4.4 Future Investigations

The next stage of assessing impacts on historic resources will be to conduct an identification-phase field survey to identify and assess resources along the route selected by the SCC for the Project. Survey of the approved route alternative will be conducted in accordance with the following guidelines:

- Guidelines for Assessing Impacts of Proposed Electrical Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia (VDHR 2008);
- Guidelines for Conducting Historic Resources Survey in Virginia (VDHR 2017);
- National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation (NPS 1995).

The survey teams will be led by individuals meeting the Secretary of the Interior's professional qualifications standards for archaeology and architectural history, respectively. Teams will traverse the length of the Project corridor, revisiting previously recorded archaeological and historic architectural resources and documenting additional as-of-yet unrecorded resources in the survey area defined in the Guidelines for the Project design. The archaeological survey will adhere to VDHR survey standards (VDHR 2017) and will entail systematic coverage of the approved route. All material culture, including artifacts and features, that could be 50 years old or older will be recorded. Sites will be delineated within the proposed right-of-way and investigations will include subsurface testing sufficient to inform recommendations of potential eligibility for the NRHP under Criterion D. Each site will be fully documented with appropriate mapping, digital photography, and artifact collection/analysis. Site forms will be prepared for V-CRIS submittal along with full descriptions in the technical report.

During the course of the historic architectural survey, all structures determined to be of age will be photographed and marked on the applicable U.S. Geological Survey (USGS) quadrangle map. While the NPS Bulletin 15 (NPS 1995) defines a historic property as a resource that is 50 years or older, for the purposes of this Project, survey will include those 45 years or older to accommodate the length of time needed to complete the permitting phase for the Project. Furthermore, the survey will also record those resources that may have reached significance prior to the 50 (45) year age threshold, in accordance with NPS guidance, if they are integral parts of districts, or have sufficient merit to be considered eligible for the NRHP on their own.

Digital photographs will be taken to record the historic resources' overall appearance and details. Sketch maps will be drawn depicting the relationship of dwellings to outbuildings and associated landscape features. Additional information on the structures' appearance and integrity will be recorded to assist in making recommendations of NRHP eligibility. Historic maps, aerial photographs, and tax assessor data will be consulted to assist in dating the resources. Resources identified in the field effort will be reported to the VDHR, V-CRIS numbers will be obtained, and shapefiles and database information will be provided. Sufficient information will be collected to make recommendations for each identified historic resource regarding eligibility for listing on the NRHP and to assess Project impacts.

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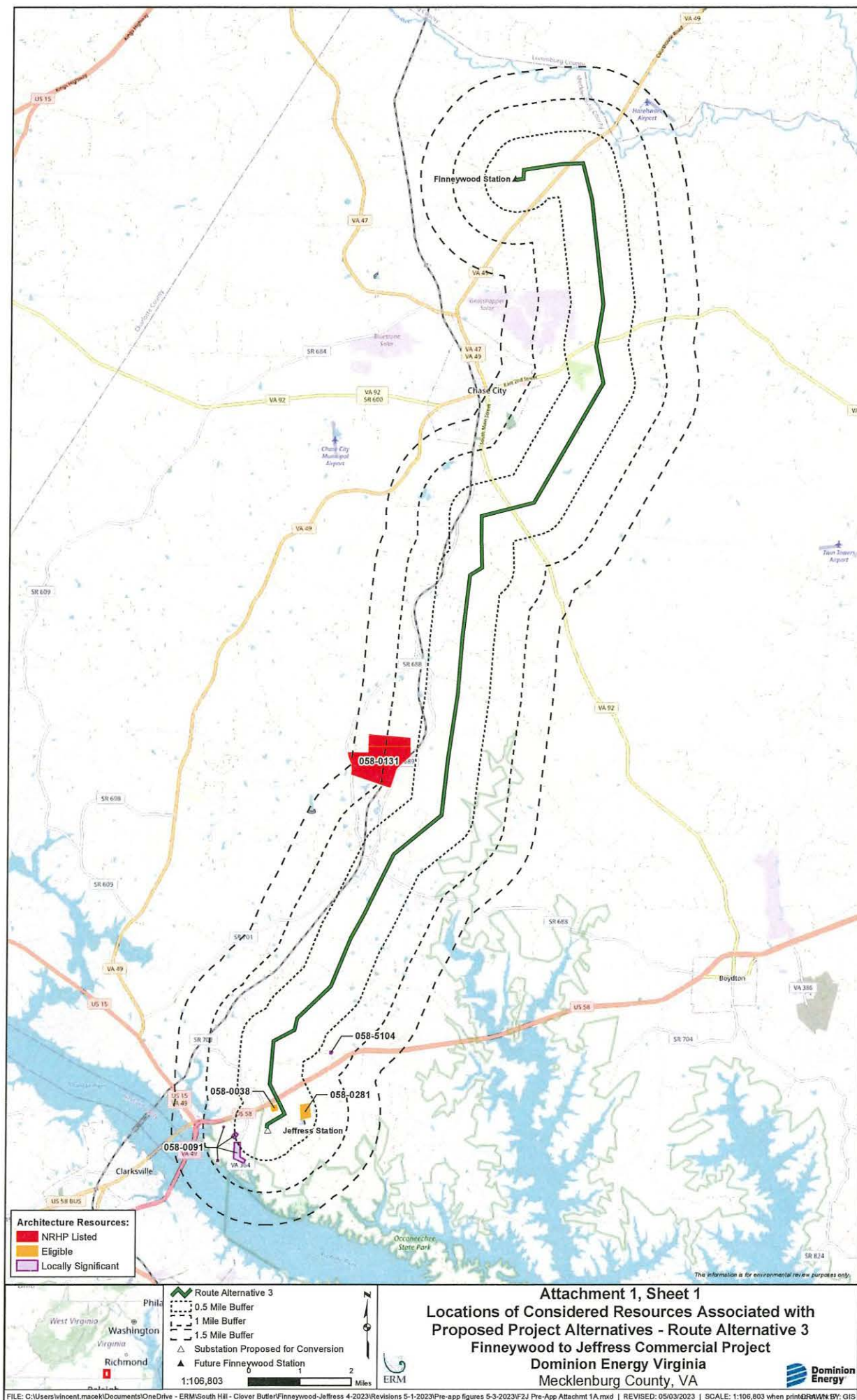
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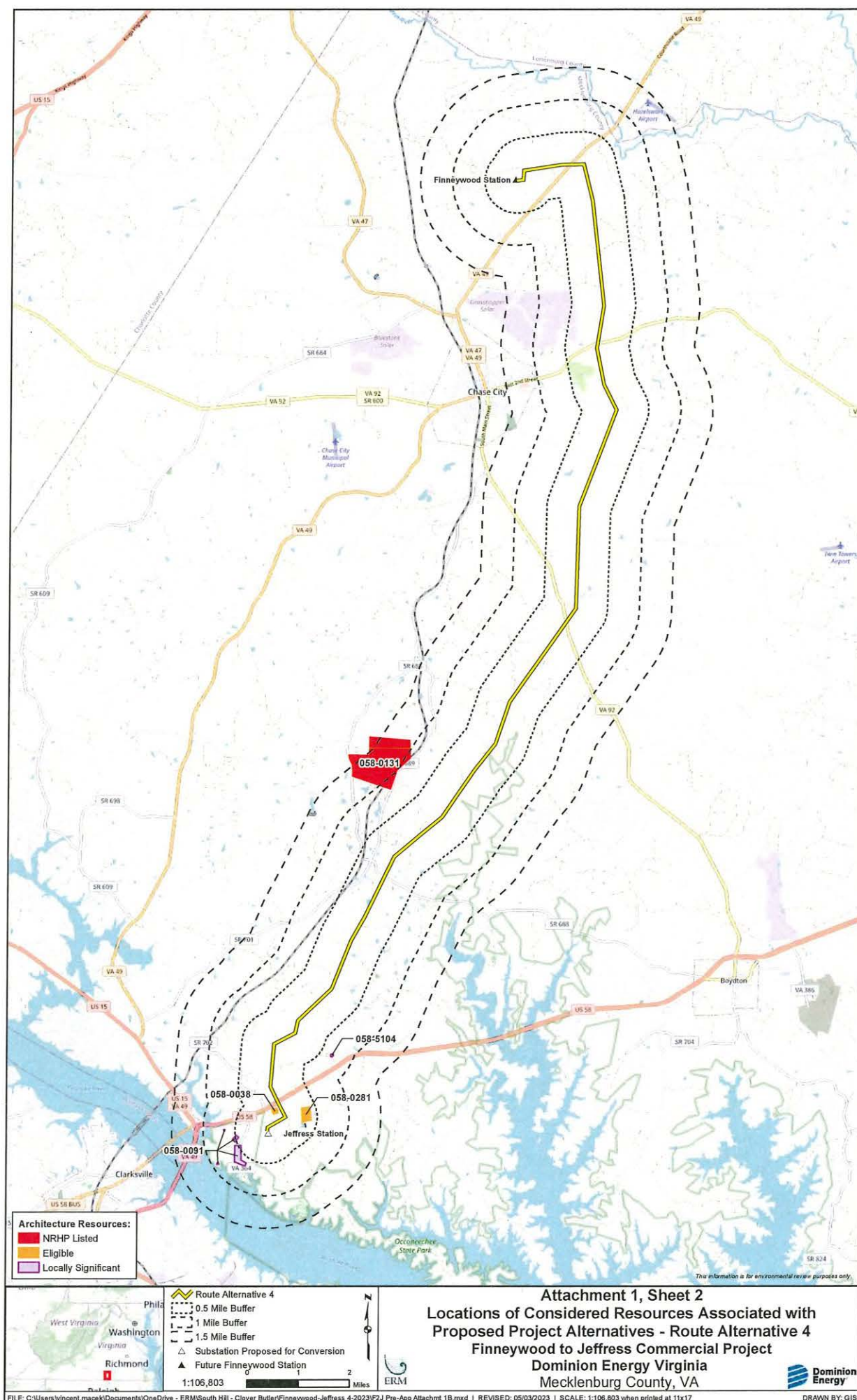
Wuellner, Margarita Jerabek

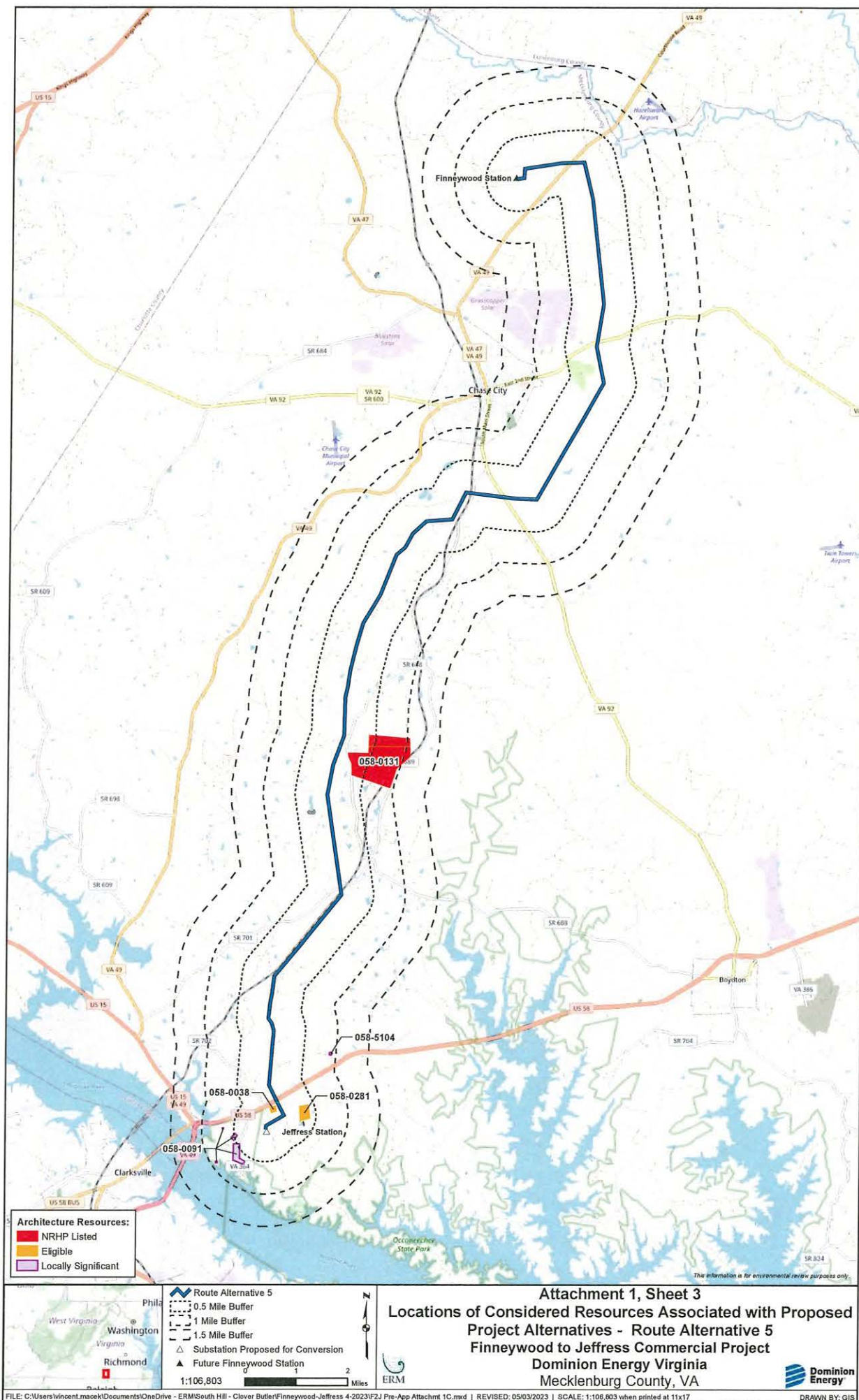
1994a VCRIS Architecture Form, 058-0038. On file, Virginia Department of Historic Resources.

1994b VCRIS Architecture Form, 058-0281. On file, Virginia Department of Historic Resources.

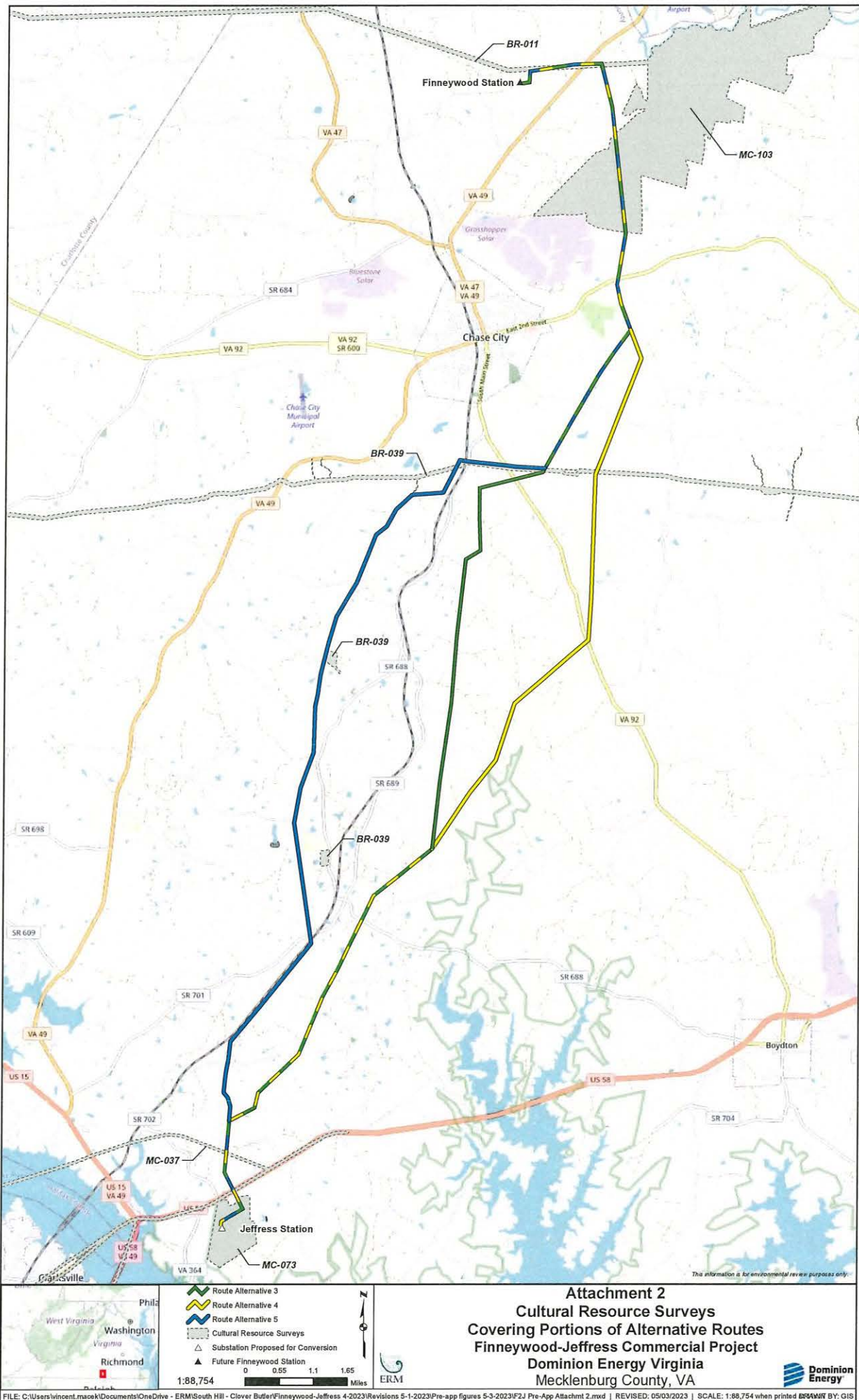
ATTACHMENT 1 LOCATIONS OF CONSIDERED HISTORIC RESOURCES ASSOCIATED WITH PROPOSED PROJECT ALTERNATIVES







ATTACHMENT 2 CULTURAL RESOURCES SURVEY COVERING PORTIONS OF ALTERNARIVE ROUTES

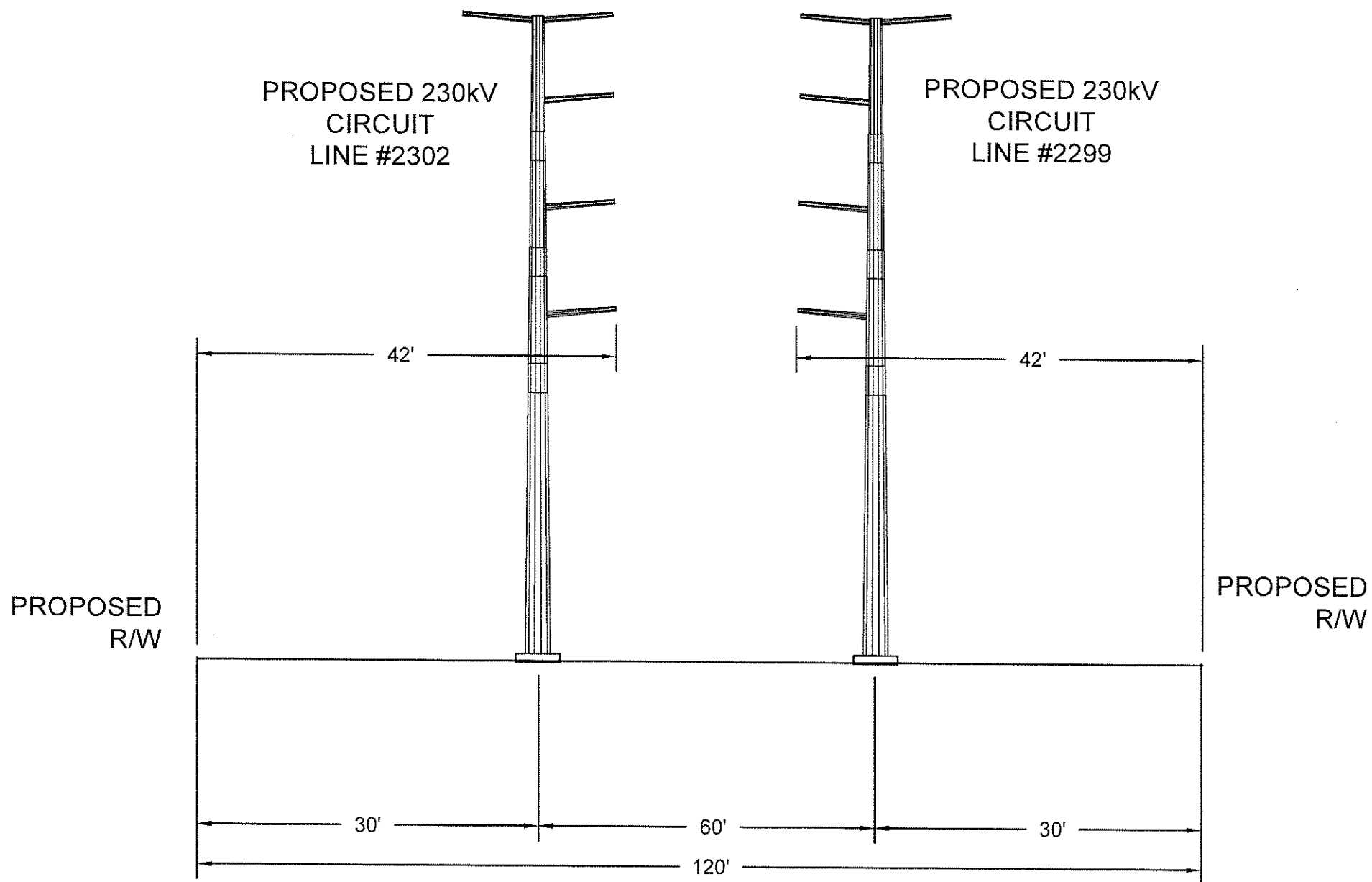


FINNEYWOOD TO JEFFRESS 230 KV TRANSMISSION LINE PROJECT

ATTACHMENT 3 TYPICAL DESIGN AND LAYOUT

Figure 1

FINNEYWOOD-JEFFRESS, LINES #2299 & #2302
PROPOSED CONFIGURATION

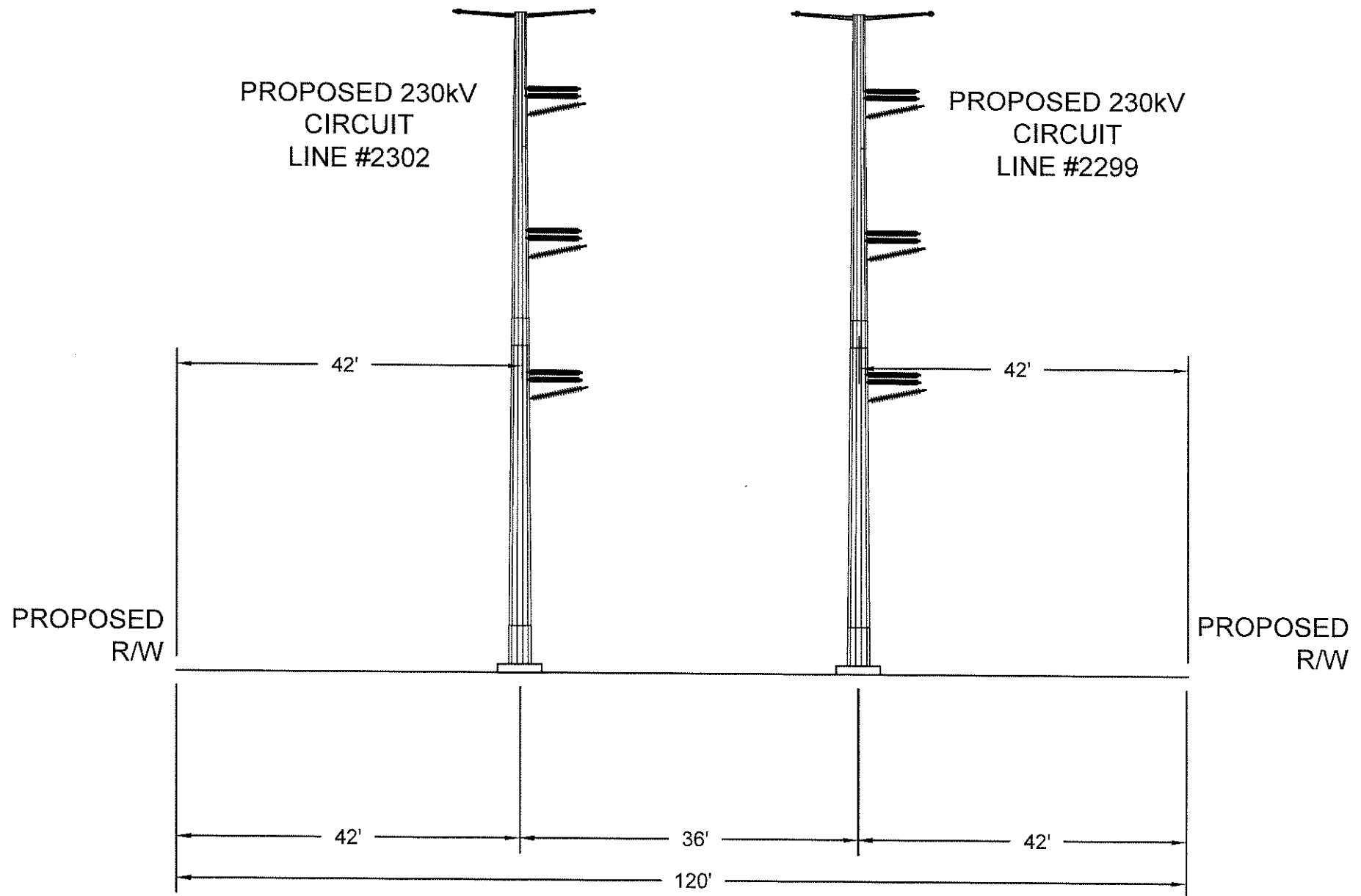


TYPICAL RIGHT OF WAY LOOKING TOWARD FINNEYWOOD

NOTE: INFORMATION CONTAINED ON DRAWING IS CONSIDERED PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL DESIGN

Figure 2

FINNEYWOOD-JEFFRESS, LINES #2299 & #2302
PROPOSED CONFIGURATION

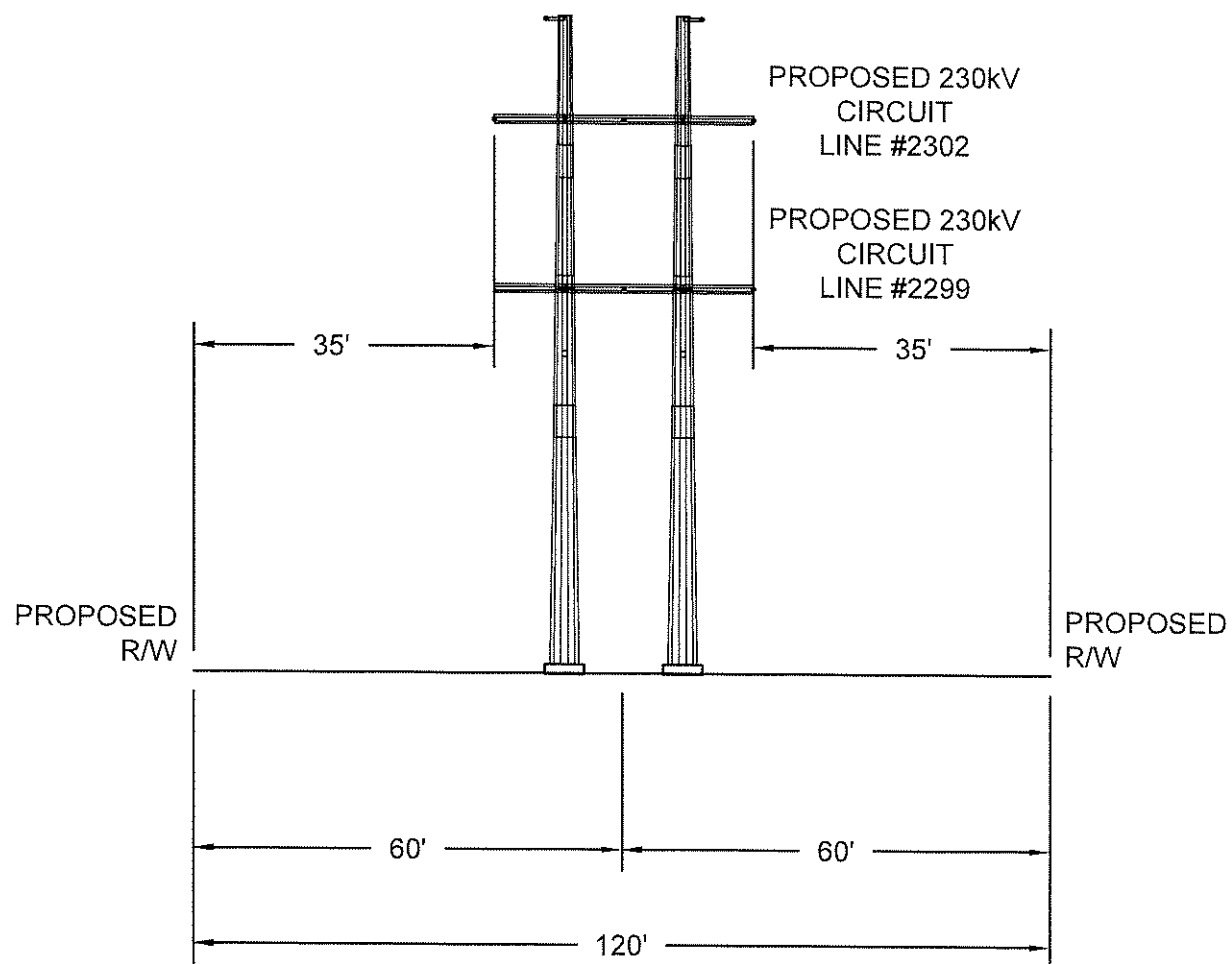


TYPICAL RIGHT OF WAY LOOKING TOWARD FINNEYWOOD

NOTE: INFORMATION CONTAINED ON DRAWING IS CONSIDERED PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL DESIGN

Figure 3

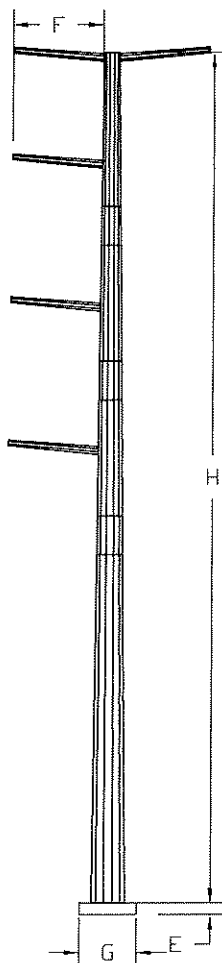
FINNEYWOOD-JEFFRESS, LINES #2299 & #2302
PROPOSED CONFIGURATION



TYPICAL RIGHT OF WAY LOOKING
TOWARD FINNEYWOOD

Figure 4

JEFFRESS-FINNEYWOOD, LINES #2299 & #2302



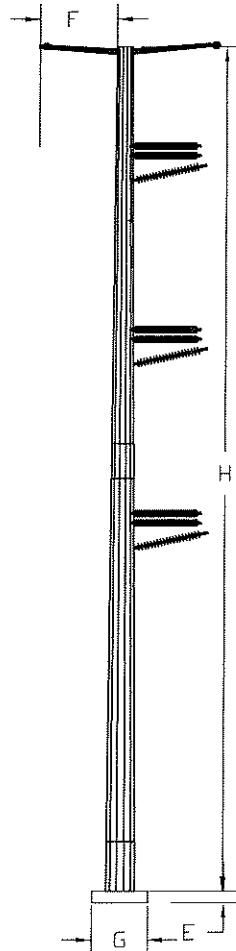
230kV SC ENGINEERED MONOPOLE SUSPENSION STRUCTURE

- | | |
|-----------------------------------|--|
| A. MAPPING OF THE ROUTE: | N/A |
| B. RATIONALE FOR STRUCTURE TYPE: | TO MINIMIZE RIGHT OF WAY |
| C. LENGTH OF R/W (STRUCTURE QTY): | 18.2 MILES (95 STRUCTURES) |
| D. STRUCTURE MATERIAL: | WEATHERING STEEL |
| RATIONALE FOR MATERIAL: | WEATHERING STEEL WAS SELECTED TO MATCH OTHER LINES IN THE AREA |
| E. FOUNDATION MATERIAL: | CONCRETE |
| AVERAGE FOUNDATION REVEAL: | SEE NOTE 2 |
| F. AVERAGE WIDTH AT CROSS ARM: | 12' |
| G. AVERAGE WIDTH AT BASE: | SEE NOTE 2 |
| H. MINIMUM STRUCTURE HEIGHT: | 100' |
| MAXIMUM STRUCTURE HEIGHT: | 140' |
| AVERAGE STRUCTURE HEIGHT: | 118' |
| I. AVERAGE SPAN LENGTH (RANGE): | 761' (510'-1208') (SEE NOTE 4) |
| J. MINIMUM CONDUCTOR-TO-GROUND: | 22.5' (AT MAXIMUM OPERATING TEMPERATURE) |

- NOTES: 1. INFORMATION CONTAINED ON DRAWING IS PRELIMINARY IN NATURE AND SUBJECT TO CHANGE DURING FINAL DESIGN.
2. A MINIMUM FOUNDATION REVEAL SHALL BE 1.5 FEET. FOUNDATION DIAMETER SHALL BE BASED ON FINAL ENGINEERING.
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE AND DO NOT INCLUDE FOUNDATION REVEAL.
4. THE SPAN ASSOCIATED WITH EACH STRUCTURE IS THE AHEAD SPAN.

Figure 5

JEFFRESS-FINNEYWOOD, LINES #2299 & #2302



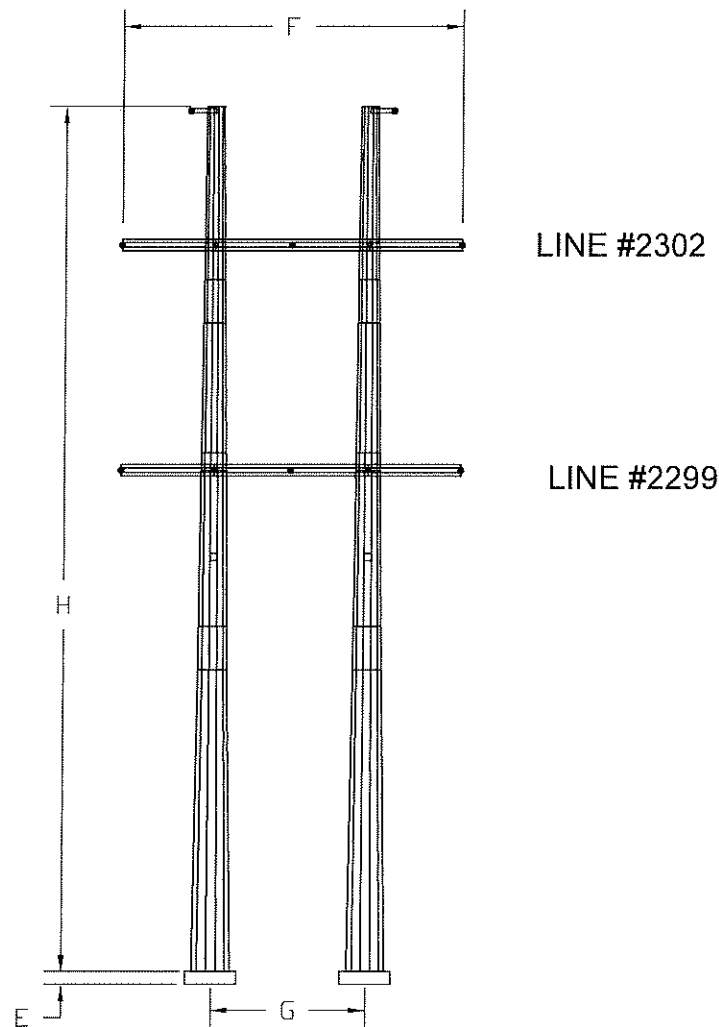
230kV SC ENGINEERED MONOPOLE DDE STRUCTURE

- | | |
|-----------------------------------|---|
| A. MAPPING OF THE ROUTE: | N/A |
| B. RATIONALE FOR STRUCTURE TYPE: | TO MINIMIZE RIGHT OF WAY |
| C. LENGTH OF R/W (STRUCTURE QTY): | 18.2 MILES (30 STRUCTURES) |
| D. STRUCTURE MATERIAL: | WEATHERING STEEL |
| RATIONALE FOR MATERIAL: | WEATHERING STEEL WAS SELECTED TO MATCH OTHER LINES IN THIS AREA |
| E. FOUNDATION MATERIAL: | CONCRETE |
| AVERAGE FOUNDATION REVEAL: | SEE NOTE 2 |
| F. AVERAGE WIDTH AT CROSS ARM: | 8' |
| G. AVERAGE WIDTH AT BASE: | SEE NOTE 2 |
| H. MINIMUM STRUCTURE HEIGHT: | 90' |
| MAXIMUM STRUCTURE HEIGHT: | 135' |
| AVERAGE STRUCTURE HEIGHT: | 117' |
| I. AVERAGE SPAN LENGTH (RANGE): | 736' (294-1013') (SEE NOTE 4) |
| J. MINIMUM CONDUCTOR-TO-GROUND: | 22.5' (AT MAXIMUM OPERATING TEMPERATURE) |

- NOTES: 1. INFORMATION CONTAINED ON DRAWING IS PRELIMINARY IN NATURE AND SUBJECT TO CHANGE DURING FINAL DESIGN.
2. A MINIMUM FOUNDATION REVEAL SHALL BE 1.5 FEET. FOUNDATION DIAMETER SHALL BE BASED ON FINAL ENGINEERING.
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE AND DO NOT INCLUDE FOUNDATION REVEAL.
4. THE SPAN ASSOCIATED WITH EACH STRUCTURE IS THE AHEAD SPAN.

Figure 6

JEFFRESS - FINNEYWOOD, LINE #2299 & #2302



230kV DC ENGINEERED H-FRAME DDE STRUCTURE

- | | |
|----------------------------------|--|
| A. MAPPING OF THE ROUTE: | SEE ATTACHMENT II.B.3.iv |
| B. RATIONALE FOR STRUCTURE TYPE: | TO FACILITATE TRANSMISSION CROSSING |
| C. LENGTH OF RW (STRUCTURE QTY): | 18.2 MILES (2 STRUCTURES) |
| D. STRUCTURE MATERIAL: | WEATHERING STEEL |
| RATIONALE FOR MATERIAL: | WEATHERING STEEL WAS SELECTED TO MATCH OTHER LINES IN THE AREA |
| E. FOUNDATION MATERIAL: | CONCRETE |
| AVERAGE FOUNDATION REVEAL: | SEE NOTE 2 |
| F. AVERAGE WIDTH AT CROSS ARM: | 50' |
| G. AVERAGE WIDTH AT BASE: | SEE NOTE 2 |
| H. MINIMUM STRUCTURE HEIGHT: | 170' |
| MAXIMUM STRUCTURE HEIGHT: | 170' |
| AVERAGE STRUCTURE HEIGHT: | 170' |
| I. AVERAGE SPAN LENGTH (RANGE): | 534' (452'-617') (SEE NOTE 4) |
| J. MINIMUM CONDUCTOR-TO-GROUND: | 22.5' (AT MAXIMUM OPERATING TEMPERATURE) |

- NOTES: 1. INFORMATION CONTAINED ON DRAWING IS PRELIMINARY IN NATURE AND SUBJECT TO CHANGE DURING FINAL DESIGN.
2. A MINIMUM FOUNDATION REVEAL SHALL BE 1.5 FEET. FOUNDATION DIAMETER SHALL BE BASED ON FINAL ENGINEERING.
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE AND DO NOT INCLUDE FOUNDATION REVEAL.
4. THE SPAN ASSOCIATED WITH EACH STRUCTURE IS THE AHEAD SPAN.

FINNEYWOOD TO JEFFRESS 230 KV TRANSMISSION LINE PROJECT

ATTACHMENT 4 HISTORIC RESOURCE PHOTOS

Attachment 4: Historic Resource Photos
Finneywood to Jeffress Transmission Line Project



Figure 1. 058-0038, Mistletoe/Mistletoe Castle, no access, view southeast.



Figure 2. 058-0091, Occoneechee Plantation, view south along Occoneechee Park Road.

Attachment 4: Historic Resource Photos
Finneywood to Jeffress Transmission Line Project



Figure 3. 058-0131, Red Fox Farm, view southeast along Route 688.



Figure 4. 058-0131, Red Fox Farm, dwelling, view east-southeast along Route 688.

Attachment 4: Historic Resource Photos
Finneywood to Jeffress Transmission Line Project



Figure 5. 058-0131, Red Fox Farm, pack house and strip house, view southeast along Route 688.



Figure 6. 058-0281, Wilkinson Place/Grovesend, no access, view east along Highway 58.

Attachment 4: Historic Resource Photos
Finneywood to Jeffress Transmission Line Project

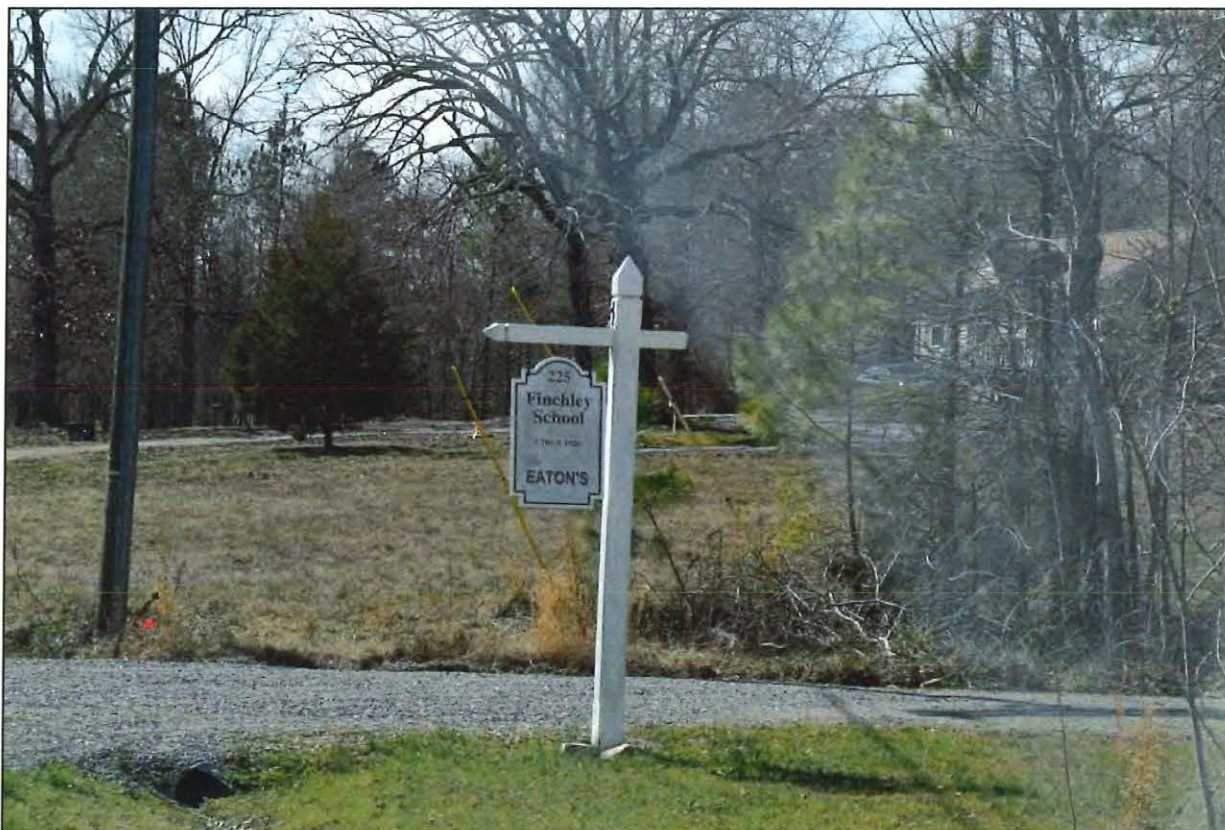
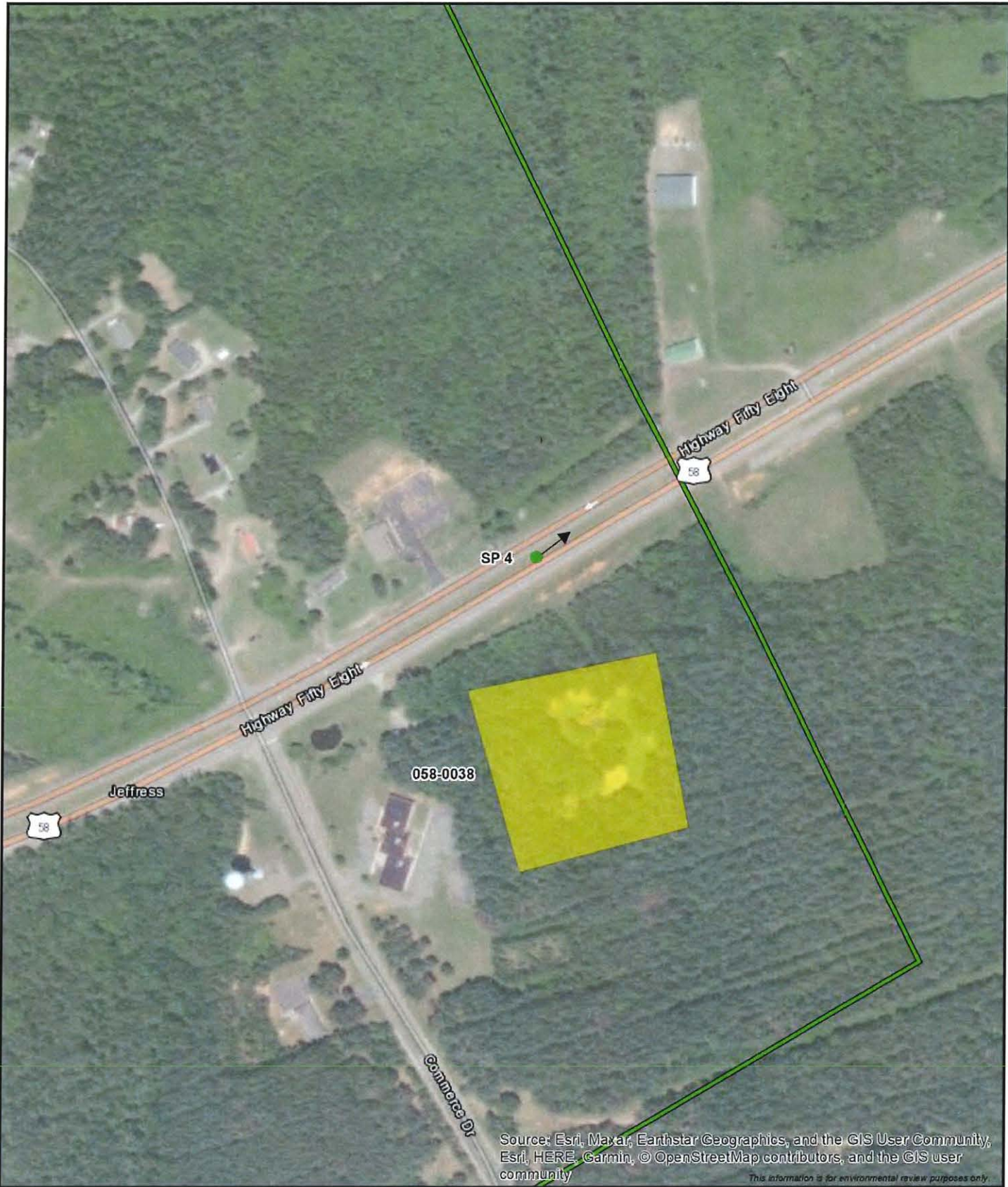


Figure 7. 058-5104, Finchley Rosenwald School, no access, view northwest along Chandler Road.

FINNEYWOOD TO JEFFRESS 230 KV TRANSMISSION LINE PROJECT

ATTACHMENT 5 PHOTO SIMULATIONS



1:5,000

0 250 500 750 1,000
Feet

- Route Alternative 3
- Architecture Resource
- Photo Point



C:\Users\vincent.macek\Documents\OneDrive - ERM\South Hill - Clover Butler\Finneywood-Jeffress 4-2023\Revisions 5-1-2023\Pre-app figures 5-3-2023\F2J Pre-App Attachmt 5 Fig 1.mxd | REVISED: 05/03/2023 | SCALE: 1:5,000

Figure 1. Aerial photograph depicting land use and photo view for 058-0038.

Existing View



Proposed View - Visible



Viewpoint Location UTM Zone 17S:721926E 4057759N
View Direction: 52 degrees
Viewpoint Elevation: 390 feet
Distance to Development: 438 feet
Horizontal Field of View: 89 degrees

Date of Photography: 21st February 2023 14:09
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 61 inches



Figure 2
Viewpoint SP 4 - Route Alternative 3
Hwy 58 E of Commerce Dr
058-0038

Pre-Application Analysis
Finneywood to Jeffress

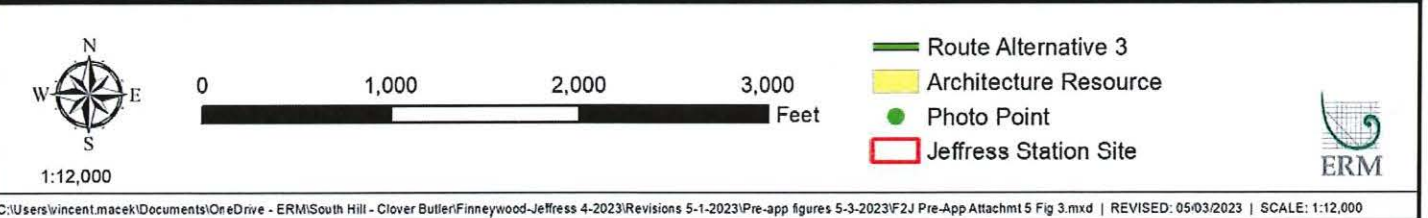
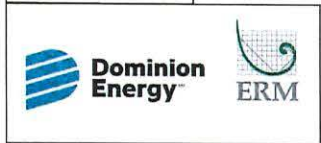


Figure 3. Aerial photograph depicting land use and photo view for 058-0091.

Existing View



Proposed View - Hidden



Viewpoint Location UTM Zone 17S:721130E 4056717N
View Direction: 31 degrees
Viewpoint Elevation: 393 feet
Distance to Development: 2546 feet
Horizontal Field of View: 89 degrees

Date of Photography: 25th February 2023 11:47
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 58.5 inches



Figure 4
Viewpoint SP 5 - Route Alternative 3
Occoneechee Park Rd S of Panhandle Rd
058-0091
Pre-Application Analysis
Finneywood to Jeffress

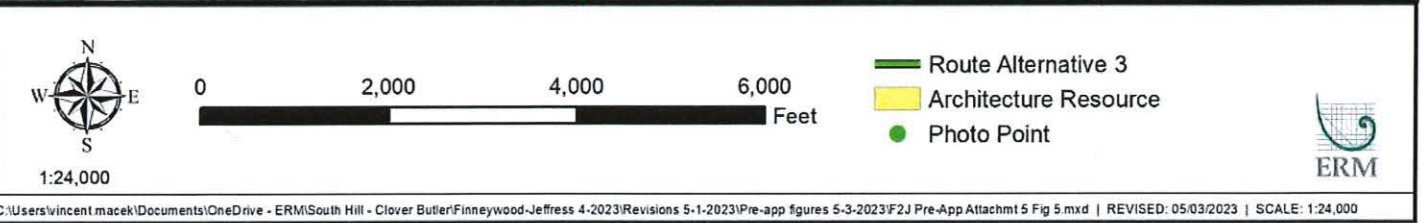


Figure 5. Aerial photograph depicting land use and photo view for 058-0131.



Existing View



Proposed View - Hidden



Viewpoint Location UTM Zone 17S:725098E 4066467N
View Direction: 86 degrees
Viewpoint Elevation: 425 feet
Distance to Development: 3834 feet
Horizontal Field of View: 89 degrees

Date of Photography: 21st February 2023 10:30
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 59 inches



Figure 6
Viewpoint SP 8 - Route Alternative 3
Rocky Mount Rd S of S Farmington Rd
058-0131

Pre-Application Analysis
Finneywood to Jeffress



Existing View



Proposed View - Hidden



Viewpoint Location UTM Zone 17S:724753E 4066103N
View Direction: 83 degrees
Viewpoint Elevation: 431 feet
Distance to Development: 5145 feet
Horizontal Field of View: 89 degrees

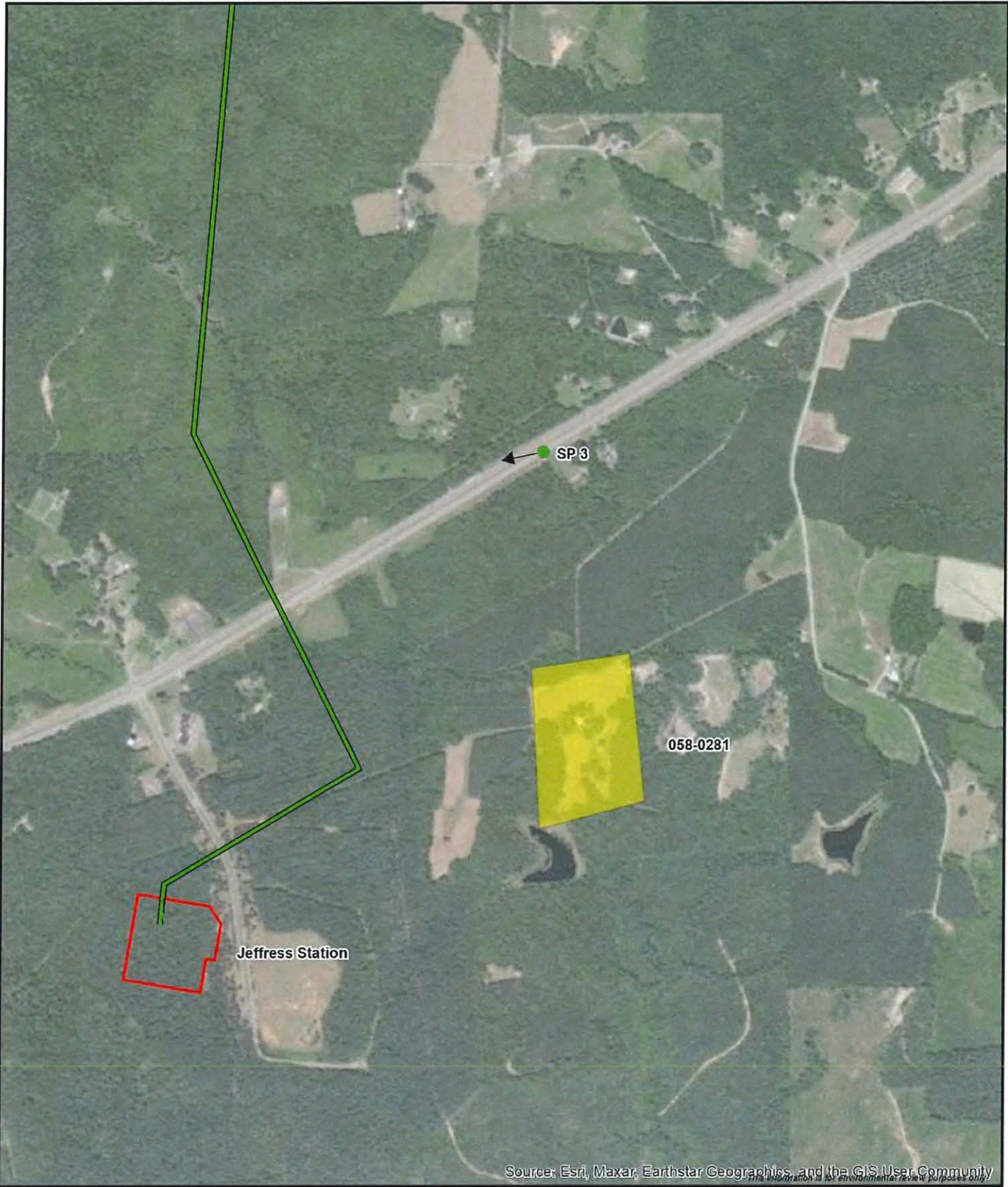
Date of Photography: 21st February 2023 10:28
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 58.75 inches



Figure 7
Viewpoint SP 9 - Route Alternative 3
Rocky Mount Rd N of Wright Lane
058-0131

Pre-Application Analysis
Finneywood to Jeffress

Attachment 5



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

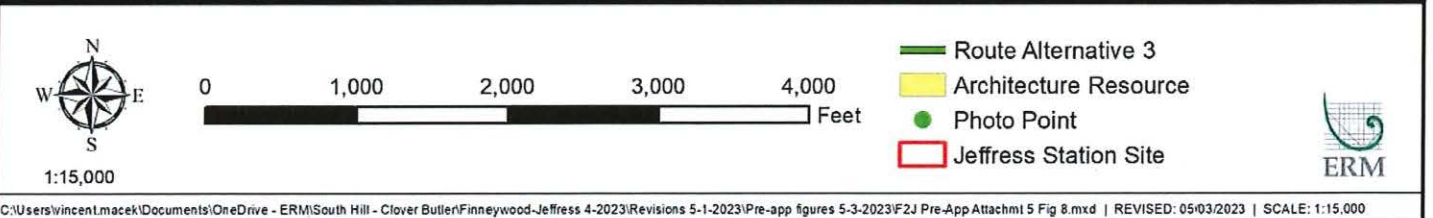


Figure 8. Aerial photograph depicting land use and photo view for 058-0281.



Existing View



Proposed View - Visible



Viewpoint Location UTM Zone 17S:722634E 4058191N
View Direction: 260 degrees
Viewpoint Elevation: 384 feet
Distance to Development: 2773 feet
Horizontal Field of View: 89 degrees

Date of Photography: 21st February 2023 13:25
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 62.75 inches



Figure 9
Viewpoint SP 3 - Route Alternative 3
Hwy 58 NE of Daley Dr
058-0281
Pre-Application Analysis
Finneywood to Jeffress

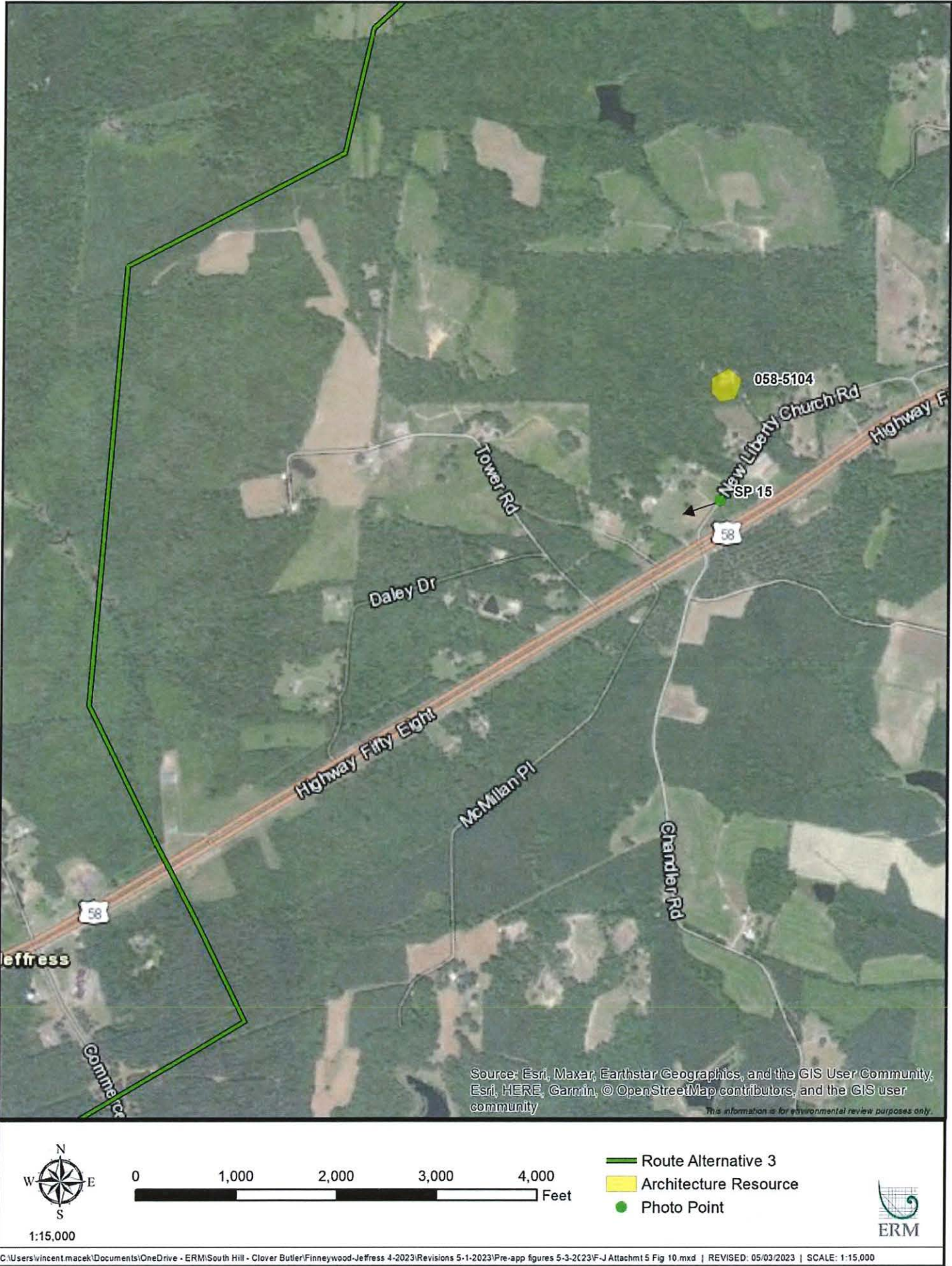


Figure 10. Aerial photograph depicting land use and photo view for 058-5104.



Existing View



Proposed View - Hidden



Viewpoint Location UTM Zone 17S:723350E 4058745N
View Direction: 250 degrees
Viewpoint Elevation: 401 feet
Distance to Development: 4997 feet
Horizontal Field of View: 89 degrees

Date of Photography: 21st February 2023 12:29
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 60.75 inches



Figure 11
Viewpoint SP 15 - Route Alternative 3
New Liberty Church Rd N of Hwy 58
058-5104
Pre-Application Analysis
Finneywood to Jeffress

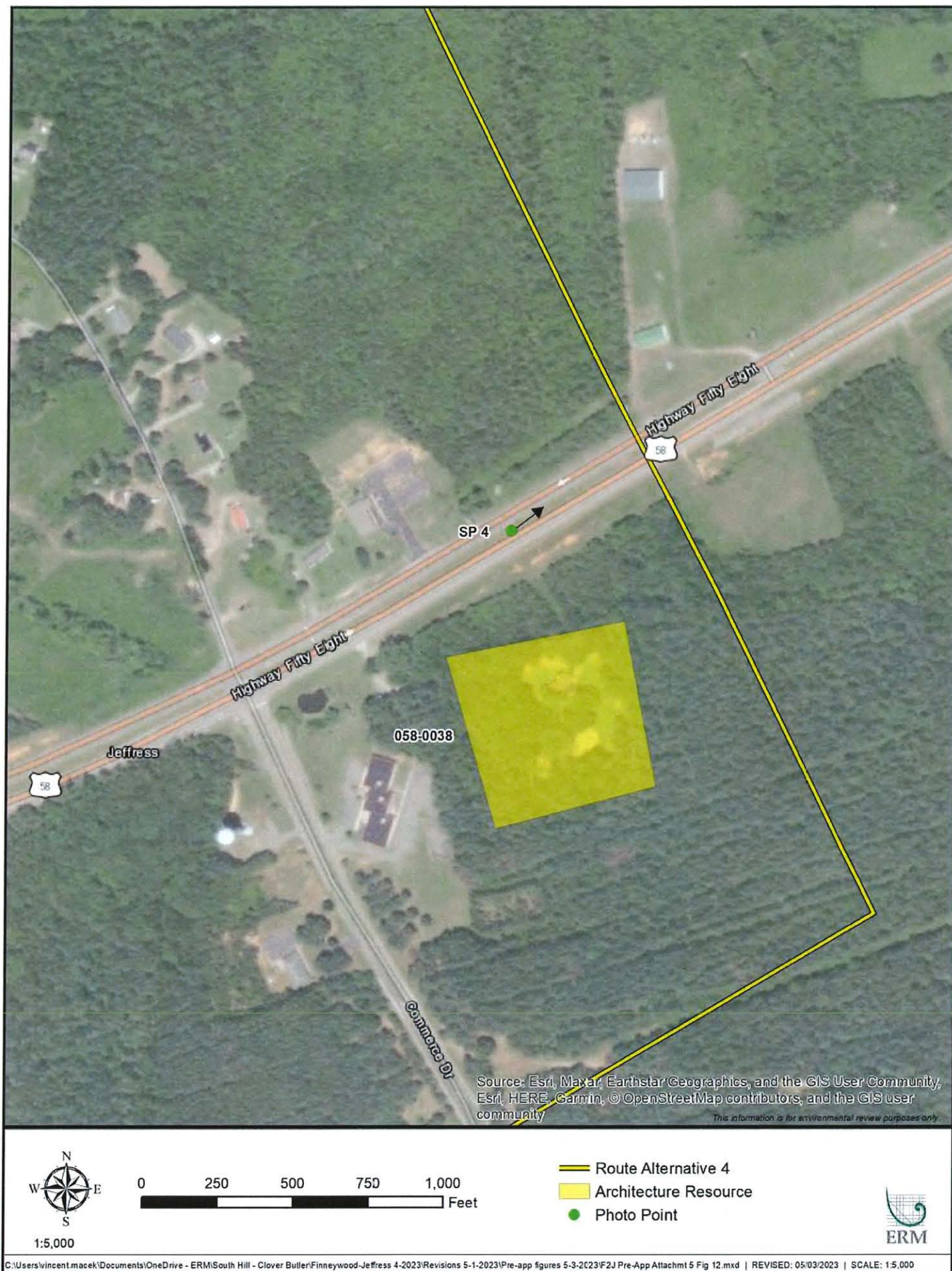


Figure 12. Aerial photograph depicting land use and photo view for 058-0038.

Existing View



Proposed View - Visible



Viewpoint Location UTM Zone 17S:721926E 4057759N
View Direction: 52 degrees
Viewpoint Elevation: 390 feet
Distance to Development: 435 feet
Horizontal Field of View: 89 degrees

Date of Photography: 21st February 2023 14:09
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 61 inches



Figure 13
Viewpoint SP 4 - Route Alternative 4
Hwy 58 NE of Jeffress Rd
058-0038

**Pre-Application Analysis
Finneywood to Jeffress**

Attachment 5



Figure 14. Aerial photograph depicting land use and photo view for 058-0091.



Existing View



Proposed View - Hidden



Viewpoint Location UTM Zone 17S: 721130E 4056717N
View Direction: 31 degrees
Viewpoint Elevation: 393 feet
Distance to Development: 2546 feet
Horizontal Field of View: 89 degrees

Date of Photography: 25th February 2023 11:47
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 58.5 inches



Figure 15
Viewpoint SP 5 - Route Alternative 4
Occoneechee Park Rd S of Panhandle Rd
058-0091
Pre-Application Analysis
Finneywood to Jeffress

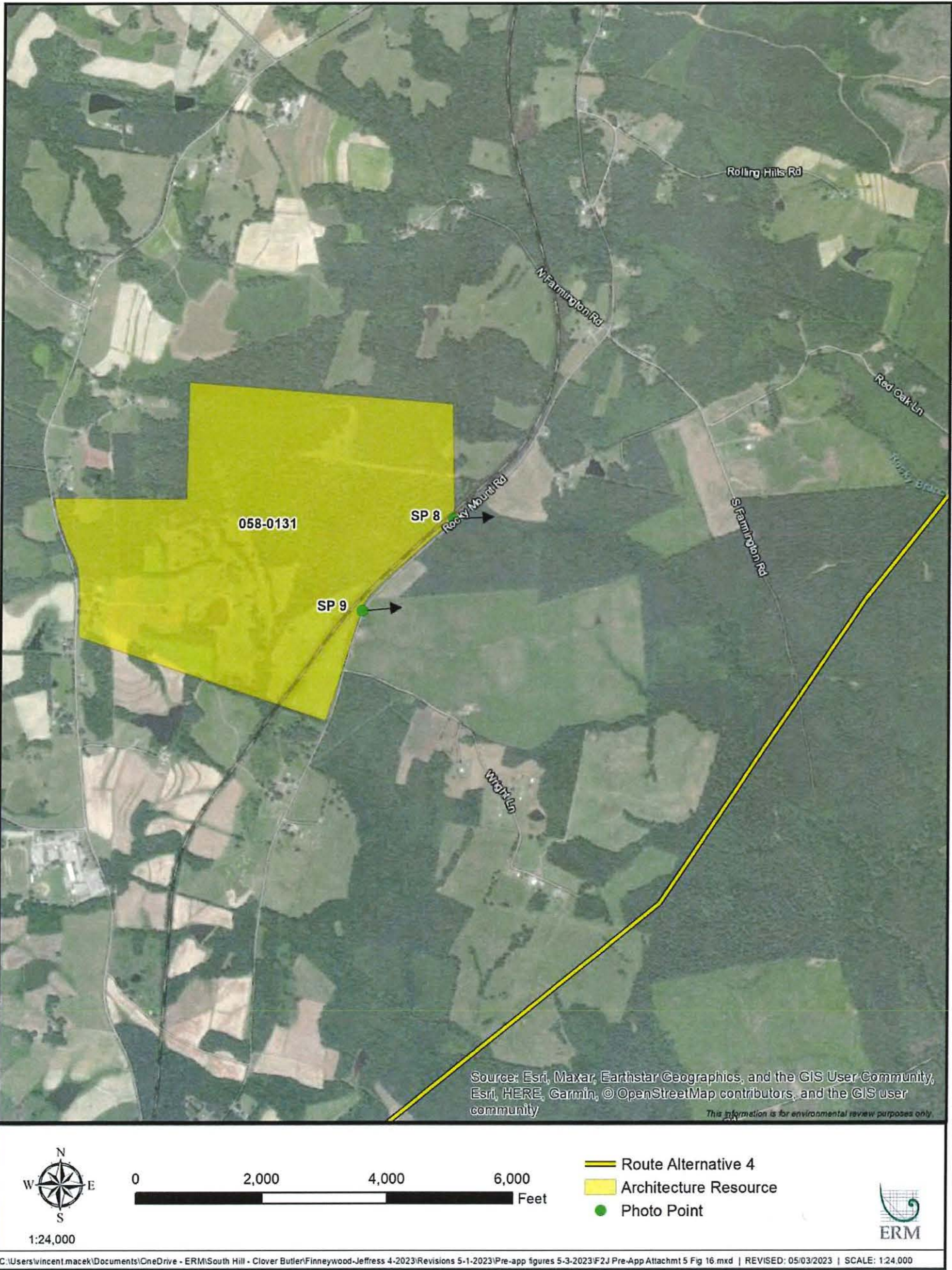


Figure 16. Aerial photograph depicting land use and photo view for 058-0131.



Existing View



Proposed View - Hidden



Viewpoint Location UTM Zone 17S:724753E 4066103N
View Direction: 83 degrees
Viewpoint Elevation: 431 feet
Distance to Development: 5145 feet
Horizontal Field of View: 89 degrees

Date of Photography: 21st February 2023 10:28
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 58.75 inches



Figure 17
Viewpoint SP 9 - Route Alternative 4
Rocky Mount Rd N of Wright Lane
058-0131

Pre-Application Analysis
Finneywood to Jeffress

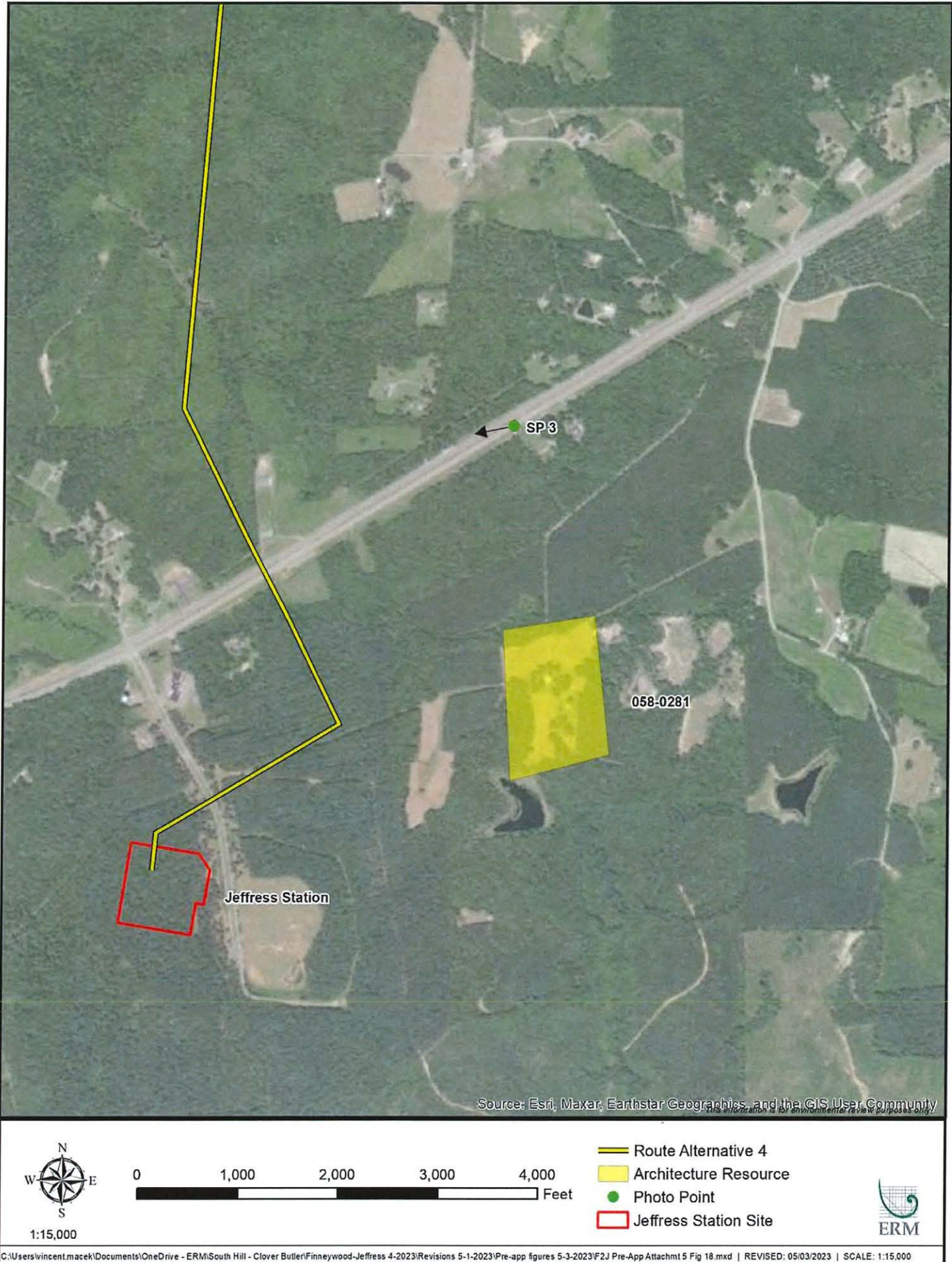


Figure 18. Aerial photograph depicting land use and photo view for 058-0281.

Existing View



Proposed View - Visible



Viewpoint Location UTM Zone 17S:722634E 4058191N
View Direction: 260 degrees
Viewpoint Elevation: 384 feet
Distance to Development: 2773 feet
Horizontal Field of View: 89 degrees

Date of Photography: 21st February 2023 13:25
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 62.75 inches



Figure 19
Viewpoint SP 3 - Route Alternative 4
Hwy 58 NE of Daley Dr
058-0281

**Pre-Application Analysis
Finneywood to Jeffress**

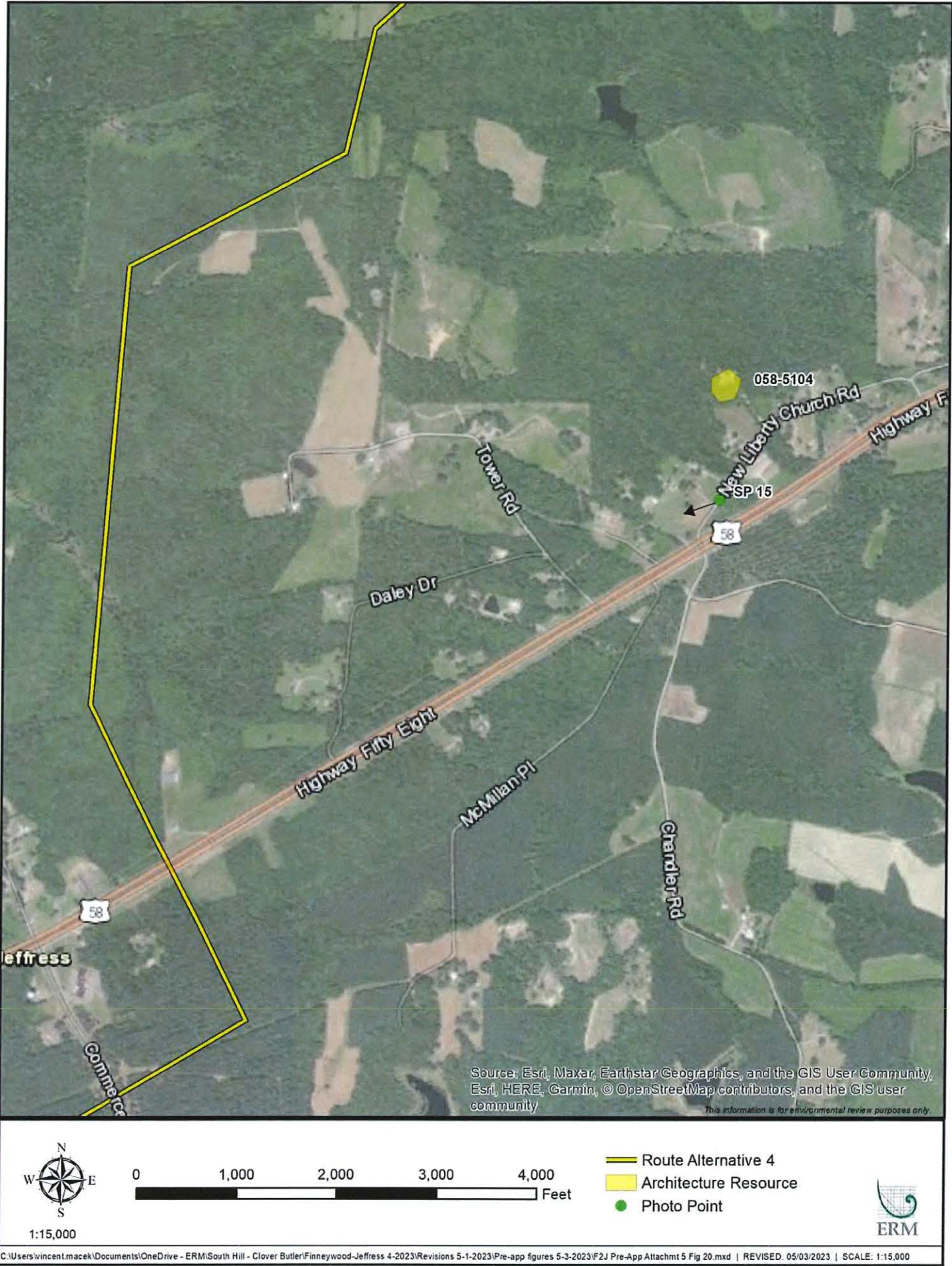


Figure 20. Aerial photograph depicting land use and photo view for 058-5104.



Existing View



Proposed View - Hidden



Viewpoint Location UTM Zone 17S:723350E 4058745N
View Direction: 250 degrees
Viewpoint Elevation: 401 feet
Distance to Development: 4997 feet
Horizontal Field of View: 89 degrees

Date of Photography: 21st February 2023 12:29
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 60.75 inches



Figure 21
Viewpoint SP 15 - Route Alternative 4
New Liberty Church Rd N of Hwy 58
058-5104
Pre-Application Analysis
Finneywood to Jeffress

Attachment 5



Figure 22. Aerial photograph depicting land use and photo view for 058-0038.

Existing View



Proposed View - Visible



Viewpoint Location UTM Zone 17S:721926E 4057759N
View Direction: 52 degrees
Viewpoint Elevation: 390 feet
Distance to Development: 435 feet
Horizontal Field of View: 89 degrees

Date of Photography: 21st February 2023 14:09
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 61 inches



Figure 23
Viewpoint SP 4 - Route Alternative 5
Hwy 58 NE of Jeffress Rd
058-0038

Pre-Application Analysis
Finneywood to Jeffress

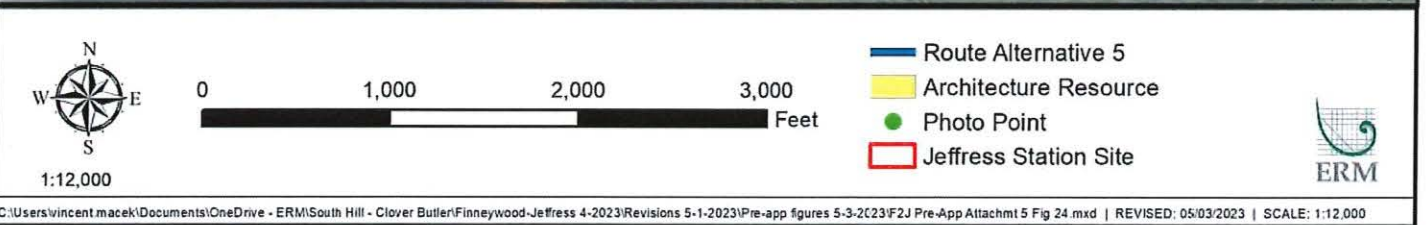


Figure 24. Aerial photograph depicting land use and photo view for 058-0091.

Existing View



Proposed View - Hidden



Viewpoint Location UTM Zone 17S:721130E 4056717N
View Direction: 31 degrees
Viewpoint Elevation: 393 feet
Distance to Development: 2546 feet
Horizontal Field of View: 89 degrees

Date of Photography: 25th February 2023 11:47
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 58.5 inches



Figure 25
Viewpoint SP 5 - Route Alternative 5
Occonechee Park Rd S of Panhandle Rd
058-0091

Pre-Application Analysis
Finneywood to Jeffress

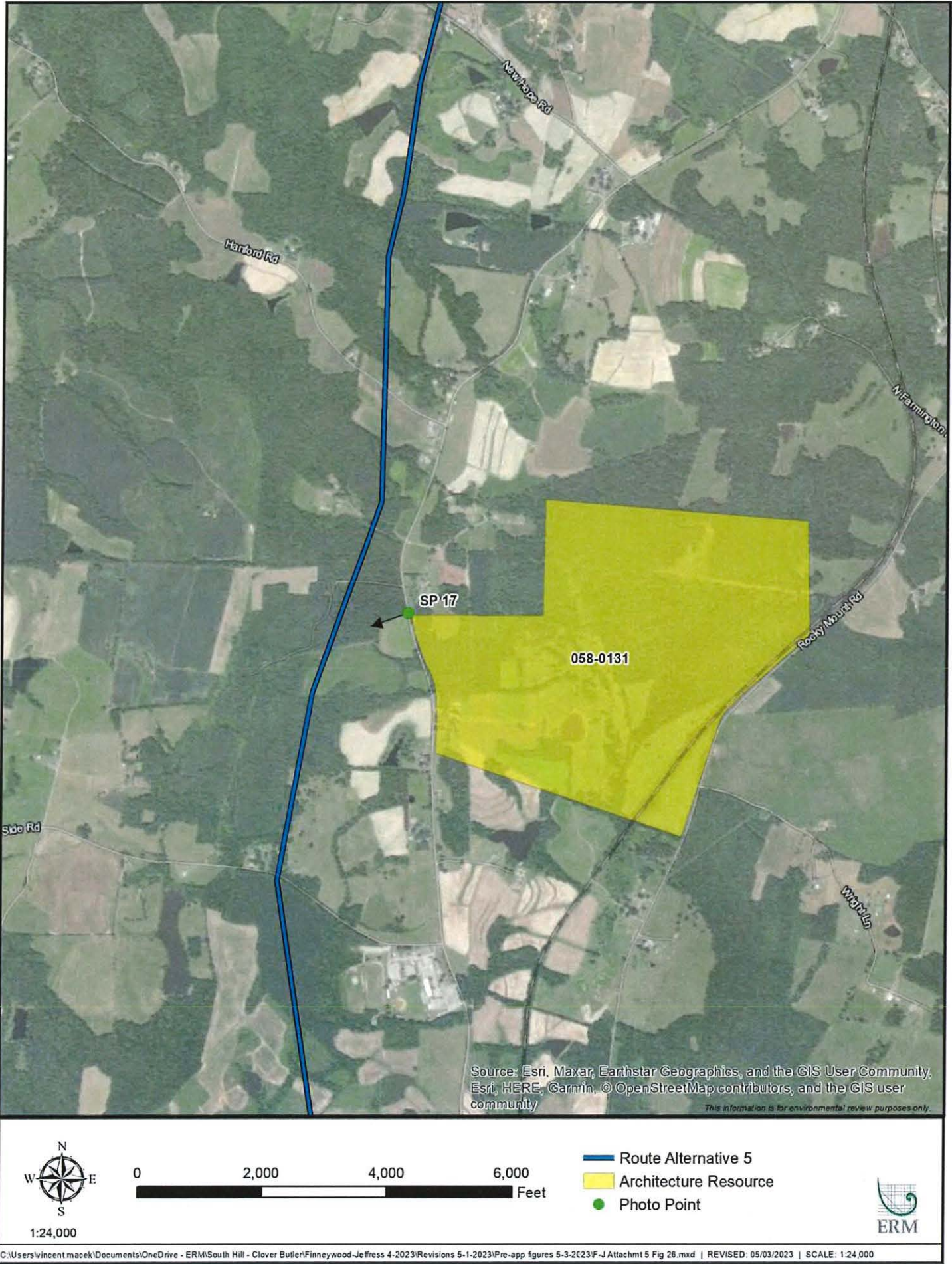
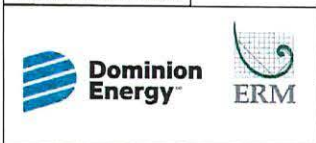


Figure 26. Aerial photograph depicting land use and photo view for 058-0131.

Existing View



Proposed View - Hidden



Viewpoint Location UTM Zone 17S:723528E 4066512N
View Direction: 250 degrees
Viewpoint Elevation: 417 feet
Distance to Development: 999 feet
Horizontal Field of View: 89 degrees

Date of Photography: 24th March 2023 11:32
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 63.25 inches



Figure 27
Viewpoint SP 17 - Route Alternative 5
Skipwith Rd S of Hanford Rd
058-0131
Pre-Application Analysis
Finneywood to Jeffress

Attachment 5

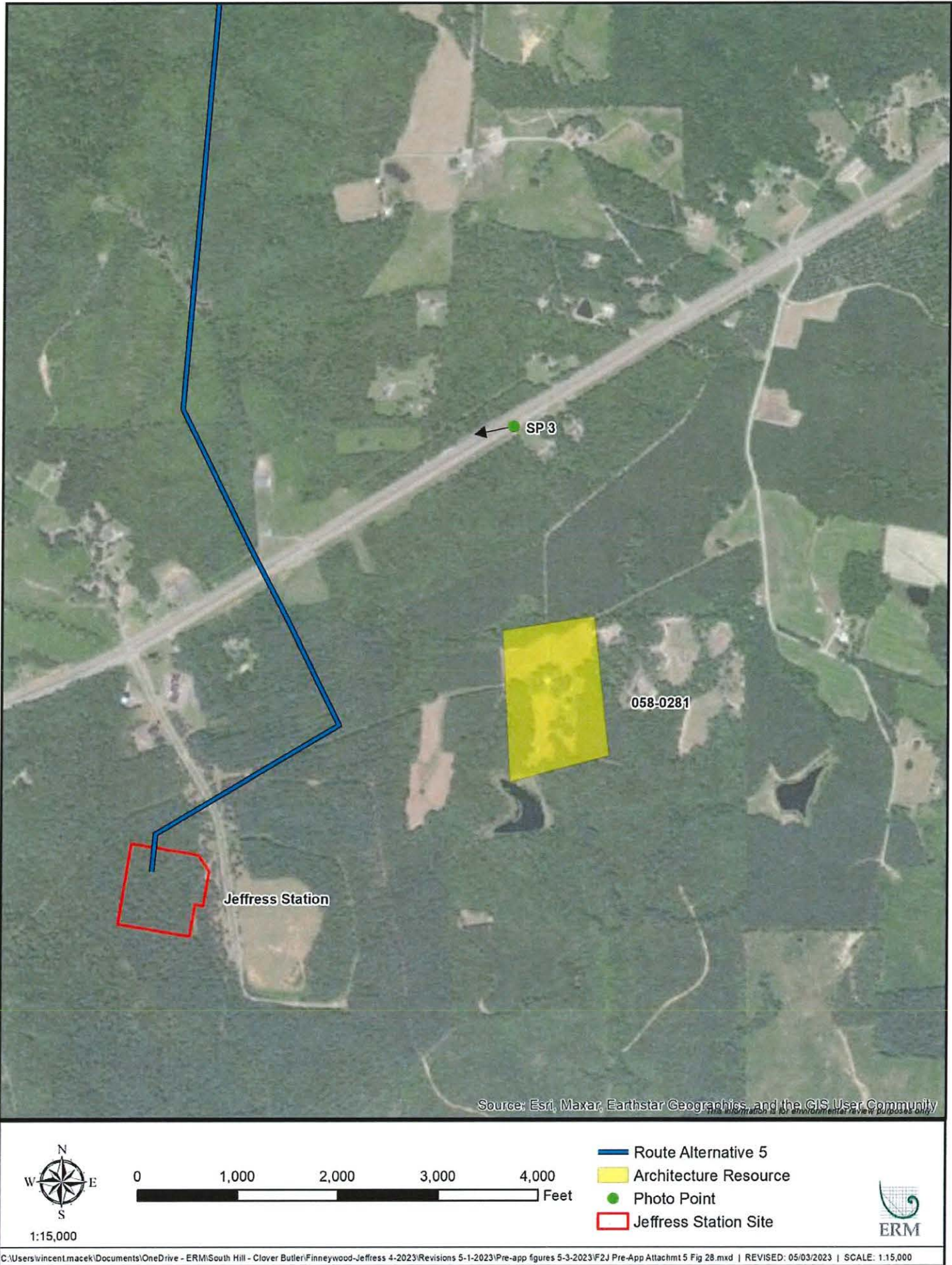


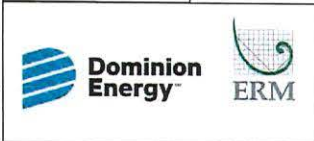
Figure 28. Aerial photograph depicting land use and photo view for 058-0281.



Existing View



Proposed View - Visible



Viewpoint Location UTM Zone 17S:722634E 4058191N
View Direction: 260 degrees
Viewpoint Elevation: 384 feet
Distance to Development: 2773 feet
Horizontal Field of View: 89 degrees

Date of Photography: 21st February 2023 13:25
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 62.75 inches



Figure 29
Viewpoint SP 3 - Route Alternative 5
Hwy 58 NE of Daley Dr
058-0281
Pre-Application Analysis
Finneywood to Jeffress

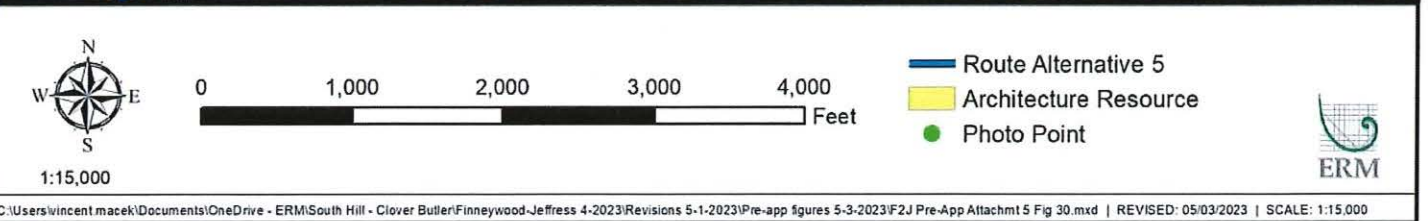
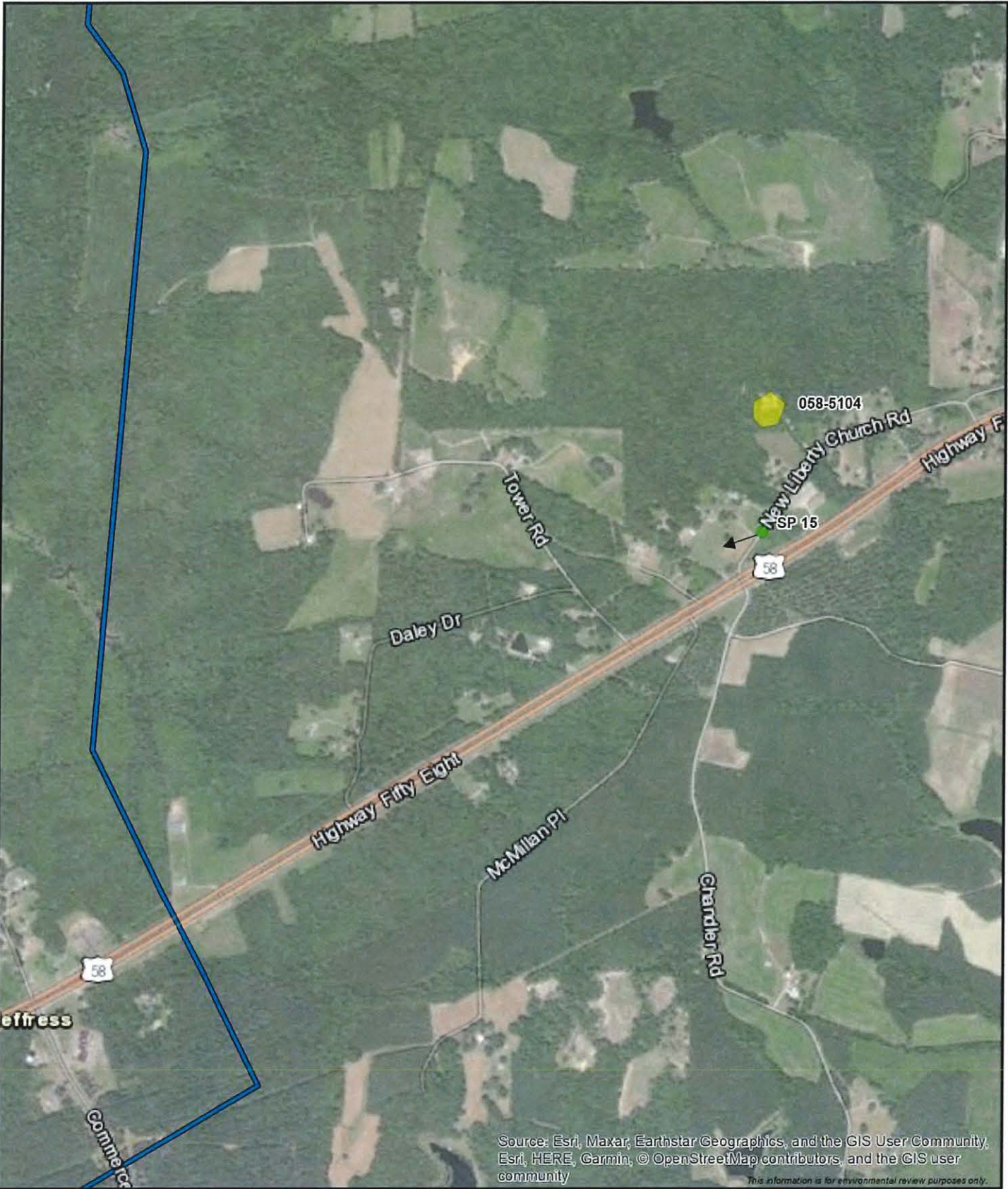


Figure 30. Aerial photograph depicting land use and photo view for 058-5104.



Existing View



Proposed View - Hidden



Viewpoint Location UTM Zone 17S:723350E 4058745N
View Direction: 250 degrees
Viewpoint Elevation: 401 feet
Distance to Development: 4997 feet
Horizontal Field of View: 89 degrees

Date of Photography: 21st February 2023 12:29
Camera: Nikon D800
Lens: Nikkor 50mm 1.4
Camera Height: 60.75 inches



Figure 31
Viewpoint SP 15 - Route Alternative 5
New Liberty Church Rd N of Hwy 58
058-5104
Pre-Application Analysis
Finneywood to Jeffress

FINNEYWOOD TO JEFFRESS 230 KV TRANSMISSION LINE PROJECT

ATTACHMENT 6 GOOGLE EARTH RENDERINGS

GOOGLE EARTH RENDERINGS FOR FINNEYWOOD-JEFFRESS LINE

Route 3

Existing View



Proposed View



Figure 1. GoogleEarth rendering showing the relationship between Route Alternative 3 and 058-0038.

Existing View



Proposed View



Figure 2. GoogleEarth rendering showing the relationship between Route Alternative 3 and 058-0281.

GOOGLE EARTH RENDERINGS FOR FINNEYWOOD-JEFFRESS LINE

Route 4

Existing View



Proposed View



Figure 3. GoogleEarth rendering showing the relationship between Route Alternative 4 and 058-0038.

Existing View



Proposed View



Figure 4. GoogleEarth rendering showing the relationship between Route Alternative 4 and 058-0281.

GOOGLE EARTH RENDERINGS FOR FINNEYWOOD-JEFFRESS LINE

Route 5



Existing View



Proposed View

Figure 5. GoogleEarth rendering showing the relationship between Route Alternative 5 and 058-0038.

Existing View



Proposed View



Figure 6. GoogleEarth rendering showing the relationship between Route Alternative 5 and 058-0281.

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Hong Kong	South Africa
India	South Korea
Indonesia	Spain
Ireland	Sweden
Italy	Switzerland
Japan	Taiwan
Kazakhstan	Thailand
Kenya	UAE
Malaysia	UK
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Travis A. Voyles
*Secretary of Natural and
Historic Resources*

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director
Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

May 18, 2023

Charles H. Weil
Dominion Energy Virginia
Electric Transmission
P.O. Box 26666
Richmond, VA 23261

Re: Finneywood - Jeffress 230 kV Electric Transmission Line and Jeffress Switching/Substation
Mecklenburg County, Virginia
DHR File No. 2023-3309

Dear Mr. Weil,

We have received your request for comments on the project referenced above. The undertaking, as presented, involves the construction of two new 230 kV single circuit lines on new right-of-way from the future 500-230 kV Finneywood Switching Station to the Company's future Jeffress 115 kV Switching Station (the "230 kV Finneywood-Jeffress Lines"), and then to convert the future Jeffress 115 kV Switching Station located adjacent to Oconeechee State Park south of Highway 58 near Clarksville, Virginia, in Mecklenburg County, to 230 kV operation ("Jeffress 230 kV Station") (collectively, the "Project"). Our comments are provided as technical assistance to Dominion. We have not been notified by any state or federal agency of their involvement in this project; however, we reserve the right to provide additional comment pursuant to the National Historic Preservation Act, if applicable.

Based on the notice, the proposed project does meet the requirements to be filed with the Virginia State Corporation Commission (SCC). Typically, for SCC permitted projects, we recommend that Dominion follows the *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia*, developed by DHR and the SCC to assist project proponents in developing transmission line projects that minimize impacts to historic resources.

Typically, we recommend that the project proponent establish a study area for each route alternative under consideration and gather information on known resources. A qualified cultural resources consultant in the appropriate discipline should perform an assessment of impact for each known historic resource present within the proposed study area.

Once the route alternatives have been finalized, DHR recommends that full archaeological and architectural surveys be performed to determine the effect of the project on all historic resources listed in or eligible for

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

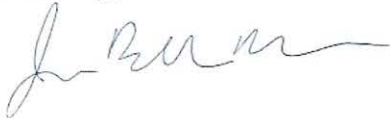
Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033

Eastern Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

listing in the National Register. This process involves the identification and recordation of all archaeological sites and structures greater than 50 years of age, the evaluation of those resources for listing in the National Register, determining the degree of impact of the project on eligible resources, and developing a plan to avoid, minimize, or mitigate any negative impacts. Comments received from the public or other stakeholder regarding impacts to specific historic resources should be addressed as part of this survey and assessment process.

Thank you for seeking our comments on this project. If you have any questions at this time, please do not hesitate to contact me at jennifer.bellville-marrion@dhr.virginia.gov.

Sincerely,



Jenny Bellville-Marrion, Project Review Archaeologist
Review and Compliance Division



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

RICHMOND DISTRICT
2430 Pine Forest Drive
COLONIAL HEIGHTS, VA 23834
www.VDOT.Virginia.gov

Stephen C. Brich, P.E.
COMMISSIONER

April 27, 2023

Chuck Weil, PE
Engineer III
Siting & Permitting, Electric Transmission
5000 Dominion Blvd.
Glen Allen, VA 23060

(Sent Via E-mail)

**SUBJECT: Dominion Energy Virginia's Proposed 230 kv Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Mecklenburg County, VA**

Dear Mr. Weil:

The Virginia Department of Transportation, South Hill Residency Southern Region Land Development Office has reviewed the subject submission received by email on April 24, 2023. We have no objections to the project but do offer the below comments.

- A plan submission will be required for any entrances/work done within the road right-of-way for review by our office.
- A Land Use Permit will need to be obtained through our office prior to any land disturbing activities in the road right-of-way.

If you have any questions in the meantime, please feel free to contact me at 434-774-2310 or by email, todd.cage@vdot.virginia.gov.

Sincerely,

C. Todd Cage

Digitally signed by C. Todd Cage
DN: C=US,
E=todd.cage@vdot.virginia.gov,
CN=C. Todd Cage
Reason: I am the author of this
document
Date: 2023.04.27 08:50:46-04'00'

C. Todd Cage

Land Development Engineer
Southern Region Land Development
Richmond District/South Hill & Petersburg Residencies

CC: Paul Hinson, P.E., LEED AP, VDOT Southern Region Area Land Use Engineer
John Legg, VDOT Southern Region Permits/Subdivision Specialist Sr.
Tommy Johnson, VDOT South Hill Residency Administrator
Kevin Smith, VDOT South Hill Assistant Residency Administrator

WE KEEP VIRGINIA MOVING

From: [Denny, S. Scott \(DOAV\)](#)
To: [Charles H Weil \(Services - 6\)](#)
Subject: [EXTERNAL] Re: Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project - Mecklenburg County, VA - CPCN agency Notification
Date: Monday, April 24, 2023 1:31:35 PM
Attachments: [image001.png](#)

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Mr. Weil:

After reviewing the information provided in your April 20th email, st6aff has determined that a portion of the project potentially lies within 20,000 linear feet of the Chase city Airport. Therefore, a 7460 form must be completed by the project sponsor and submitted for review by the Federal Aviation Administration (FAA). Provided the FAA determines the proposed development does not constitute a hazard air navigation, the Department does not object to the project as it has been presented.

If you have any questions regarding this matter, please contact me at (804) 236-3638.

Sincerely,

S. Scott Denny
Senior Aviation Planner
Virginia Department of Aviation

From: Charles.H.Weil@dominionenergy.com <Charles.H.Weil@dominionenergy.com>
Sent: Thursday, April 20, 2023 3:51 AM
To: Denny, S. Scott (DOAV) <Scott.Denny@doav.virginia.gov>
Cc: james.p.young@dominionenergy.com <james.p.young@dominionenergy.com>
Subject: Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project - Mecklenburg County, VA - CPCN agency Notification

Good morning Mr. Denny,

Please see the attached agency notification for our CPCN application with the SCC. If you have any questions, please feel free to contact me.

Thank you!

Chuck Weil, PE
Engineer III

Siting & Permitting, Electric Transmission
5000 Dominion Blvd.
Glen Allen, VA 23060
M: 804-239-6450



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From: Warren, Arlene <arlene.warren@vdh.virginia.gov>
Sent: Tuesday, June 22, 2021 7:53 AM
To: Rachel.M.Studebaker@dominionenergy.com
Subject: [EXTERNAL] Re: FW: SCC Case No. PUR-2021-00010/DEQ21-013S

This is an EXTERNAL email that was NOT sent from Dominion Energy. Are you expecting this message? Are you expecting a link or attachment? DO NOT click links or open attachments until you verify them

The proposal from Dominion is reasonable and we consider it acceptable.

Best Regards,

Arlene Fields Warren

GIS Program Support Technician

Office of Drinking Water

Virginia Department of Health

109 Governor Street

Richmond, VA 23219

(804) 864-7781

On Thu, Jun 17, 2021 at 4:33 PM Rachel.M.Studebaker@dominionenergy.com
<Rachel.M.Studebaker@dominionenergy.com> wrote:

Hello Ms. Warren,

I am reaching out in regard to the DEQ Report for SCC Case No. PUR-2021-00010/DEQ21-013S (230 kV lines #2113 and #2154 Transmission Line Rebuilds and Related Projects). As part of the VDH ODW review, it was recommended that all wells within a 1,000-foot radius of the project site be field marked and protected from accidental damage. It is our custom construction process to not conduct any work outside of the existing right-of-way (ROW), with the exception of entry using existing access roads, and use DEQ approved erosion and sediment controls. These wells are located outside of the project area ROW on private land and Dominion Energy does not have permission to enter private property to field mark the wells.

Therefore, we are proposing to plot and call out the wells on the Erosion and Sediment control plans as a way of flagging them for the construction team for protection from accidental damage. Is this a sufficient approach to comply with the ODW recommendation?

Thank you,

Rachel Studebaker

Environmental Specialist II

Dominion Energy Services

120 Tredegar Street, Richmond, VA 23219

Office: (804) 273-4086

Cell: (804) 217-1847

#



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James P Young (Services - 6)

From: Warren, Arlene (VDH) <Arlene.Warren@vdh.virginia.gov>
Sent: Monday, May 8, 2023 11:37 AM
To: James P Young (Services - 6)
Cc: Environmental Impact Review (DEQ)
Subject: [EXTERNAL] RE: NEW SCOPING Finneywood-Jeffress Lines and Jeffress Switching Station Conversion

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Project #: N/A

Project Name: SCOPING Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project

UPC #: N/A

Location: Mecklenburg County

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems **must be verified by the local utility**.

There are no public groundwater wells within a 1-mile radius of the project site.

The following surface water intakes are located within a 5-mile radius of the project site:

PWS ID Number	System Name	Facility Name
5117310	CLARKSVILLE, TOWN OF	KERR RESERVOIR INTAKE

The project is within the watershed of the following public surface water sources (facilities where the project falls within 5 miles of the intake **and** is within the intake's watershed are formatted in **bold**):

PWS ID Number	System Name	Facility Name
5117310	CLARKSVILLE, TOWN OF	KERR RESERVOIR INTAKE
5025450	LAWRENCEVILLE, TOWN OF	MEHERRIN RIVER
3595250	EMPORIA, CITY OF	MEHERRIN RIVER
5117707	ROANOKE RIVER SERVICE AUTHORITY	LAKE GASTON INTAKE

Best Management Practices should be employed, including Erosion & Sedimentation Controls and Spill Prevention Controls & Countermeasures on the project site.

Materials should be managed while on site and during transport to prevent impacts to nearby surface water.

The Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.

From: Fulcher, Valerie (DEQ) <Valerie.Fulcher@deq.virginia.gov>

Sent: Friday, May 5, 2023 2:35 PM

To: dgif-ESS Projects (DWR) <ESSProjects@dwr.virginia.gov>; Tignor, Keith (VDACS) <Keith.Tignor@vdacs.virginia.gov>; DCR-PRR Environmental Review (DCR) <envreview@dcr.virginia.gov>; odwreview (VDH) <odwreview@vdh.virginia.gov>; Churchill, Nikolas (DEQ) <Nikolas.Churchill@deq.virginia.gov>; Ballou, Thomas (DEQ) <Thomas.Ballou@deq.virginia.gov>; Gavan, Larry (DEQ) <Larry.Gavan@deq.virginia.gov>; West, Kelley (DEQ) <Kelley.West@deq.virginia.gov>; Kirchen, Roger (DHR) <Roger.Kirchen@dhr.virginia.gov>; Spears, David (Energy) <David.Spears@energy.virginia.gov>; ImpactReview (impactreview@vof.org) <impactreview@vof.org>; Carter III, H. Wayne <wayne.carter@mecklenburgva.com>; dgoshney@southsidepdc.org (dgoshney@southsidepdc.org) <dgoshney@southsidepdc.org>; Henicheck, Michelle (DEQ) <Michelle.Henicheck@deq.virginia.gov>

Cc: james.p.young@dominionenergy.com (james.p.young@dominionenergy.com) <james.p.young@dominionenergy.com>

Subject: NEW SCOPING Finneywood-Jeffress Lines and Jeffress Switching Station Conversion

Good afternoon—attached is a **request for scoping comments on the following:**

Dominion Energy Virginia's Proposed 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project - Mecklenburg County, VA

If you choose to make comments, please send them directly to the project sponsor (james.p.young@dominionenergy.com) and copy the DEQ Office of Environmental Impact Review: eir@deq.virginia.gov. We will coordinate a review when the environmental document is completed.

DEQ-OEIR's scoping response is also attached.

If you have any questions regarding this request, please email our office at eir@deq.virginia.gov.

Valerie

Valerie A. Fulcher, CAP, OM, Admin/Data Coordinator Senior

Department of Environmental Quality

Environmental Enhancement - Office of Environmental Impact Review

1111 East Main Street

Richmond, VA 23219

NEW PHONE NUMBER: 804-659-1550

Email: Valerie.Fulcher@deq.virginia.gov

<https://www.deq.virginia.gov/permits-regulations/environmental-impact-review>

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