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May 24, 2023

BY ELECTRONIC FILING

Mr. Bernard Logan, Clerk
c/o Document Control Center
State Corporation Commission
1300 East Main Street
Tyler Building – 1st Floor
Richmond, Virginia 23219

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
Case No. PUR-2023-00088

Dear Mr. Logan:

Please find enclosed for electronic filing in the above-captioned proceeding the application for approval of electric facilities on behalf of Virginia Electric and Power Company (the "Company"). This filing contains the Application, Appendix, Direct Testimony, DEQ Supplement, and Routing Study, including attachments.

As indicated in Section II.A.12.b of the Appendix, an electronic copy of the map of the Virginia Department of Transportation "General Highway Map" for Mecklenburg County, as well as the digital geographic information system ("GIS") map required by § 56-46.1 of the Code of Virginia, which is Attachment II.A.2 to the Appendix, were provided via an e-room to the Commission's Division of Public Utility Regulation on May 23, 2023.

Please do not hesitate to call if you have any questions in regard to the enclosed.

Very truly yours,

Vishwa B. Link

Vishwa B. Link

Enclosures

Cc: William H. Chambliss, Esq.
Mr. David Essah (without enclosures)

Mr. Neil Joshipura (without enclosures)
Mr. Michael A. Cizenski (without enclosures)
David J. DePippo, Esq.
Annie C. Larson, Esq.
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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 1 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

Application No. 325

Case No. PUR-2023-00088

Filed: May 24, 2023

COMMONWEALTH OF VIRGINIA

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	))))))))	Case No. PUR-2023-00088

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

Pursuant to § 56-46.1 of the Code of Virginia ("Va. Code") and the Utility Facilities Act, Va. Code § 56-265.1 *et seq.*, Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), by counsel, files with the State Corporation Commission of Virginia (the "Commission") this application for approval and certification of electric transmission facilities (the "Application"). In support of its Application, Dominion Energy Virginia respectfully states as follows:

1. Dominion Energy Virginia is a public service corporation organized under the laws of the Commonwealth of Virginia furnishing electric service to the public within its Virginia service territory. The Company also furnishes electric service to the public in portions of North Carolina. Dominion Energy Virginia's electric system—consisting of facilities for the generation, transmission, and distribution of electric energy—is interconnected with the electric systems of neighboring utilities and is a part of the interconnected network of electric systems serving the continental United States. By reason of its operation in two states and its interconnections with other utilities, the Company is engaged in interstate commerce.

2. In order to perform its legal duty to furnish adequate and reliable electric service,

Dominion Energy Virginia must, from time to time, replace existing transmission facilities or construct new transmission facilities in its system. The electric facilities proposed in this Application are necessary so that Dominion Energy Virginia can continue to provide reliable electric service to its customers, consistent with applicable reliability standards.

3. In this Application, in order to provide service to Mecklenburg Electric Cooperative's ("MEC") delivery point ("DP") at the request of Old Dominion Electric Cooperative ("ODEC") for MEC to provide service to one of its data center customers in Mecklenburg County, Virginia,[1] 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, the Company proposes in Mecklenburg County, Virginia, to:

(i) 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")[2] 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.[3] The

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[1] *See* Attachment I.A.2 of the Appendix for a copy of the DP request. While the request was submitted by ODEC on behalf of MEC, for ease of reference in this Application, the request will be referred to as MEC's DP request, as MEC is the Company's customer requiring this Project to provide service to MEC's Lakeside DP to serve MEC's customer's data center campus.

[2] The Finneywood Station is proposed for 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 Application.

[3] 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 Switching Station.

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.[4]

(ii) Convert the Company's future Jeffress 115 kV Switching Station ("Jeffress 115 kV Station")[5] located adjacent to Occoneechee State Park south of Highway 58 near Clarksville, Virginia, in Mecklenburg County to 230 kV operation ("Jeffress 230 kV Station").

(iii) 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."

4. 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").[6]

[4] Apparent power, measured in megavolt amperes ("MVA"), is made up of real power (megawatt or "MW") and reactive power megavolt ampere reactive ("MVAR"). The power factor ("pf") is the ratio of real power to apparent power. For loads with a high pf (approaching unity), real power will approach apparent power and the two can be used interchangeably. Load loss criteria specify real power (MW) units because that represents the real power that will be dropped; however, MVA is used to describe the equipment ratings to handle the apparent power, which includes the real and reactive load components.

[5] 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 Application, it will be referred to simply as Line #36 and Spanish Grove Switching Station will appear on Appendix 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 the Application. See Attachment I.A.5 to 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 to 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.

[6] The Company's Transmission Planning Criteria (effective April 1, 2023) can be found in Attachment 1 of the Company's Facility Interconnection Requirements ("FIR") document, which is available online at https://cdn-

5. MEC's DP request projects a summer peak of 24 MW in 2025, 30 MW in 2026, and 60 MW in 2027, with 240 MW at full build-out of the Lakeside Campus. In order to begin serving the Lakeside Campus beginning on January 1, 2025, as requested by MEC, the Lakeside DP will initially receive bridging power from the Company's future Jeffress 115 kV Station sourced by two temporary 115 kV single circuit transmission lines. However, the future Jeffress 115 kV Station cannot serve the full build-out power capacity required by the Lakeside Campus. Accordingly, the 230 kV Finneywood-Jeffress Lines and Jeffress 230 kV Station conversion are required to serve the full build out at the Lakeside Campus.

6. 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 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.

7. The Proposed Route is the shortest of the routes and would require correspondingly less right-of-way acreage. While the Proposed Route would require the most clearing of forested land of the three routes, it has the fewest parcels crossed, agricultural impacts, wetlands crossed, and waterbodies crossed, when compared to the other two routes. The Proposed Route would also have the fewest residences within 500 feet of the centerline (14) compared to Alternative Route 3 (22) and Alternative Route 5 (27). Finally, the Proposed Route has the least number of road

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dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/parallel-generation/facility-connection-requirements.pdf?la=en&rev=f280781e90cf47f69ea526c944c9c347&hash=82DD2567D0B033C47536134B8C4D5C5E.

crossings at 12, thereby limiting the visual impacts to commuters and through travelers in the Project area. For these reasons, the Company selected this route as the Proposed Route.

8. 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.

9. The in-service target date for the proposed Project is July 1, 2026. The Company estimates it will take approximately 29 months for detailed engineering, scheduled outages, materials procurement, permitting, real estate, and construction after a final order from the Commission. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order by January 15, 2024. Should the Commission issue a final order by January 15, 2024, the Company estimates that construction should begin around January 2025 and be completed by July 1, 2026. This schedule is contingent upon obtaining the necessary permits and outages, the latter of which may be particularly challenging due to the amount of new load growth, rebuilds, and new builds scheduled to occur in this load area. This schedule is also contingent upon the Company's ability to negotiate for easements with property owners along the approved route without the need for additional litigation. Dates may need to be adjusted based on permitting delays or design modifications to comply with additional

agency requirements identified during the permitting application process, as well as the ability to schedule outages, and unpredictable delays due labor shortages or materials/supply issues. 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 U.S. Fish and Wildlife Service 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.

10. The estimated conceptual cost of the Project utilizing the Proposed Route is approximately $134.7 million, which includes approximately $123.0 million for transmission-related work and approximately $11.7 million for substation-related work (2023 dollars).

11. Based on consultations with the Virginia Department of Environmental Quality ("DEQ"), the Company has developed a supplement ("DEQ Supplement") containing information designed to facilitate review and analysis of the proposed facilities by the DEQ and other relevant agencies. The DEQ Supplement is attached to this Application.

12. Based on the Company's experience, the advice of consultants, and a review of published studies by experts in the field, the Company believes that there is no causal link to harmful health or safety effects from electric and magnetic fields generated by the Company's existing or proposed facilities. Section IV of the Appendix provides further details on Dominion

Energy Virginia's consideration of the health aspects of electric and magnetic fields.

13. Section V of the Appendix provides a proposed route description for public notice purposes and a list of federal, state, and local agencies and officials that the Company has or will notify about the Application.

14. In addition to the information provided in the Appendix, the DEQ Supplement, and the Environmental Routing Study, this Application is supported by the pre-filed direct testimony of Company Witnesses Kunal S. Amare, Chloe A. Genova, Mohammad M. Othman, Chuck H. Weil, and Matt L. Teichert filed with this Application.

WHEREFORE, Dominion Energy Virginia respectfully requests that the Commission:

(a) direct that notice of this Application be given as required by § 56-46.1 of the Code of Virginia;

(b) approve pursuant to § 56-46.1 of the Code of Virginia the construction of the Project; and,

(c) grant a certificate of public convenience and necessity for the Project under the Utility Facilities Act, § 56-265.1 *et seq.* of the Code of Virginia.

VIRGINIA ELECTRIC AND POWER COMPANY

By: ___*/s/ Vishwa B. Link*___________
Counsel for Applicant

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Counsel for Applicant Virginia Electric and Power Company

May 24, 2023

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

Application No. 325

Appendix

Containing Information in Response to
"Guidelines for Transmission Line Applications Filed Under Title 56 of the Code of Virginia"

Case No. PUR-2023-00088

Filed: May 24, 2023

TABLE OF CONTENTS

EXECUTIVE SUMMARY

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,[1] 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, Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") 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")[2] 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.[3] 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.[4]

- Convert the Company's future Jeffress 115 kV Switching Station ("Jeffress 115 kV Station")[5] located adjacent to Occoneechee State Park south of Highway 58 near

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[1] *See* Attachment I.A.2 for a copy of the DP request. While the request was submitted by ODEC on behalf of MEC, for ease of reference in this Appendix, the request will be referred to as MEC's DP request, as MEC is the Company's customer requiring this Project to provide service to MEC's Lakeside DP to serve MEC's customer's data center campus.

[2] 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. 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.

[3] 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 Switching Station.

[4] Apparent power, measured in megavolt amperes ("MVA"), is made up of real power (megawatt or "MW") and reactive power megavolt ampere reactive ("MVAR"). The power factor ("pf") is the ratio of real power to apparent power. For loads with a high pf (approaching unity), real power will approach apparent power and the two can be used interchangeably. Load loss criteria specify real power (MW) units because that represents the real power that will be dropped; however, MVA is used to describe the equipment ratings to handle the apparent power, which includes the real and reactive load components.

[5] 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

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").[6]

MEC's DP request projects a summer peak of 24 MW in 2025, 30 MW in 2026, and 60 MW in 2027, with 240 MW at full build-out of the Lakeside Campus. In order to begin serving the Lakeside Campus beginning on January 1, 2025, as requested by MEC, the Lakeside DP will initially receive bridging power from the Company's future Jeffress 115 kV Station sourced by two temporary 115 kV single circuit transmission lines. However, the future Jeffress 115 kV Station cannot serve the full build-out power capacity required by the Lakeside Campus. Accordingly, the 230 kV Finneywood-Jeffress Lines and Jeffress 230 kV Station conversion are required to serve the full build out at the Lakeside Campus.

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 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

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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 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 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. 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. 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.

[6] The Company's Transmission Planning Criteria (effective April 1, 2023) can be found in Attachment 1 of the Company's Facility Interconnection Requirements ("FIR") document, which is available online at https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/parallel-generation/facility-connection-requirements.pdf?la=en&rev=f280781e90cf47f69ea526c944c9c347&hash=82DD2567D0B033C47536134B8C4D5C5E.

provided in Section II of the Appendix and in Sections 2.4 and 2.5 of the Environmental Routing Study included with the Application.

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.

The estimated conceptual cost of the Project utilizing the Proposed Route is approximately $134.7 million, which includes approximately $123.0 million for transmission-related work and approximately $11.7 million for substation-related work (2023 dollars).[7]

The in-service target date for the proposed Project is July 1, 2026. The Company estimates it will take approximately 29 months for detailed engineering, scheduled outages, materials procurement, permitting, real estate, and construction after a final order from the Commission. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order by January 15, 2024. Should the Commission issue a final order by January 15, 2024, the Company estimates that construction should begin around January 2025 and be completed by July 1, 2026. This schedule is contingent upon obtaining the necessary permits and outages, the latter of which may be particularly challenging due to the amount of new load growth, rebuilds, and new builds scheduled to occur in this load area. This schedule is also contingent upon the Company's ability to negotiate for easements with property owners along the approved route without the need for additional litigation. Dates may need to be adjusted based on permitting delays or design modifications to comply with additional agency requirements identified during the permitting application process, as well as the ability to schedule outages, and unpredictable delays due labor shortages or materials/supply issues. 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 U.S. Fish and Wildlife Service ("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.

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[7] The total Project costs are inclusive of excess facilities charges (*see e.g., supra*, n. 3) and exclude costs associated with the 115 kV temporary bridging infrastructure (*see supra*, n. 5).

I. NECESSITY FOR THE PROPOSED PROJECT

A. State the primary justification for the proposed project (for example, the most critical contingency violation including the first year and season in which the violation occurs). In addition, identify each transmission planning standard(s) (of the Applicant, regional transmission organization ("RTO"), or North American Electric Reliability Corporation) projected to be violated absent construction of the facility.

Response: The Project is necessary to provide requested transmission service to MEC, for MEC to provide service to one of its customers in Mecklenburg County, Virginia; to maintain reliable service for the overall load growth in the Project area; and to comply with mandatory NERC Reliability Standards. See Attachment I.A.1 for an overview map of the proposed Project.

Dominion Energy Virginia's transmission system is responsible for providing transmission service (i) for redelivery to the Company's retail customers; (ii) to Appalachian Power Company, ODEC, Northern Virginia Electric Cooperative, Central Virginia Electric Cooperative, and Virginia Municipal Electric Association for redelivery to their retail customers in Virginia; and, (iii) to North Carolina Electric Membership Corporation and North Carolina Eastern Municipal Power Agency for redelivery to their customers in North Carolina (collectively, the "Dominion Energy Zone" or "DOM Zone"). The Company needs to be able to maintain the overall, long-term reliability of its transmission system as its customers require more power in the future.

Dominion Energy Virginia is part of the PJM Interconnection, L.L.C. ("PJM") regional transmission organization ("RTO"), which provides service to a large portion of the eastern United States. PJM currently is responsible for ensuring the reliability and coordinating the movement of electricity through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. This service area has a population of approximately 65 million and, on August 2, 2006, set a record high of 166,929 MW for summer peak demand, of which Dominion Energy Virginia's load portion was approximately 19,256 MW. On August 9, 2022, the Company set a record high of 21,156 MW for summer peak demand. On December 24, 2022, the Company set a winter and all-time record demand of 22,189 MW. Based on the 2023 PJM Load Forecast, the Dominion Energy Zone is expected to grow with average growth rates of 5.0% summer and 4.8% winter over the next 10 years compared to the PJM average of 0.8% and 1.0% over the same period for the summer and winter, respectively.

Dominion Energy Virginia is also part of the Eastern Interconnection transmission grid, meaning its transmission system is interconnected, directly or indirectly, with all of the other transmission systems in the United States and Canada between the Rocky Mountains and the Atlantic coast, except for Quebec and most of Texas. All of the transmission systems in the Eastern Interconnection are dependent on each other for moving bulk power through the transmission system and for reliability support. Dominion Energy Virginia's service to its customers is extremely reliant on a robust and reliable regional transmission system.

NERC has been designated by the Federal Energy Regulatory Commission ("FERC") as the electric reliability organization for the United States. Accordingly, NERC requires that the planning authority and transmission planner develop planning criteria to ensure compliance with NERC Reliability Standards. Mandatory NERC Reliability Standards require that a transmission owner ("TO") develop facility interconnection requirements that identify load and generation interconnection minimum requirements for a TO's transmission system, as well as the TO's reliability criteria.[8]

Federally mandated NERC Reliability Standards constitute minimum criteria with which all public utilities must comply as components of the interstate electric transmission system. Moreover, the Energy Policy Act of 2005 mandates that electric utilities must follow these NERC Reliability Standards, and imposes fines on utilities found to be in noncompliance up to $1.3 million a day per violation.

PJM's Regional Transmission Expansion Plan ("RTEP") is the culmination of a FERC-approved annual transmission planning process that includes extensive analysis of the electric transmission system to determine any needed improvements.[9] PJM's annual RTEP is based on the effective criteria in place at the time of the analyses, including applicable standards and criteria of NERC, PJM, and local reliability planning criteria, among others.[10] Projects identified through the RTEP process are developed by the TO in coordination with PJM, and are presented at the Transmission Expansion Advisory Committee ("TEAC") meetings prior to inclusion in the RTEP, which is then presented for approval to the PJM Board of Managers (the "PJM Board").

Outcomes of the RTEP process include three types of transmission system upgrades or projects: (i) baseline upgrades are those that resolve a system reliability criteria violation, which can include planning criteria from NERC, ReliabilityFirst, SERC Reliability Corporation, PJM, and TOs; (ii) network upgrades are new or upgraded facilities required primarily to eliminate reliability criteria violations caused by proposed generation, merchant transmission, or long-term firm transmission service requests; and (iii) supplemental projects are projects initiated by the TO in order to interconnect new customer load, address degraded equipment performance, improve operational flexibility and efficiency, and increase infrastructure resilience. The Project is classified as a supplemental project

[8] *See* FAC-001-3 (R1, R3) (effective April 1, 2021), which can be found at https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/parallel-generation/facility-interconnection-requirements-signed.pdf?la=en&rev=38f51ffb04b1489f921b32a41d9887c8.

[9] PJM Manual 14B (effective July 1, 2021) focuses on the RTEP process and can be found at https://www.pjm.com/-/media/documents/manuals/m14b.ashx.

[10] *See* PJM Manual 14B, Attachment D: PJM Reliability Planning Criteria. *See supra*, n. 9.

initiated by the TO in order to interconnect new customer load. While supplemental projects are included in the RTEP, the PJM Board does not actually approve such projects. See Section I.J for a discussion of the PJM process as it relates to this Project.

Need for the Proposed Project

Mecklenburg County, Virginia, has seen much data center development over the last decade. Within this area, there is a current campus that is served by three Company-owned substations (Ridge Road Substation, Boydton Plank Substation, and Herbert Substation). Additionally, in the Butler Farm Proceeding, the Company is seeking approval to construct the future Finneywood Station and the future 230 kV Butler Farm Substation in Mecklenburg County to serve a new data center campus in this area.[11] See Attachment I.A.6 and Attachment I.G.1. The new Lakeside Campus is driving the need for this Project and the next phase of MEC's customer's plan for data center growth and development in the area. The Lakeside DP is in a rural area where additional load cannot be added without constructing additional transmission and distribution infrastructure.

MEC submitted its DP request to serve its Lakeside DP to Dominion Energy Virginia on June 21, 2022. See Attachment I.A.2. MEC's DP request projects a summer peak of 24 MW in 2025, 30 MW in 2026, and 60 MW in 2027, with 240 MW at full build-out of the Lakeside Campus.

The future Jeffress 115 kV Station is being constructed to provide bridging power to MEC's 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 Line #36 near Structure #36/1189 and looping two temporary 115 kV single circuit lines approximately 3.0 miles into and out of the future Jeffress 115 kV Station. See Attachment I.A.5. 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.

While the Lakeside DP will initially receive bridging power from the Company's future Jeffress 115 kV Station, the future Jeffress 115 kV Station cannot serve the full build-out power capacity required by the Lakeside Campus. Accordingly, the 230 kV Finneywood-Jeffress Lines and Jeffress 230 kV Station conversion are required to serve the full build out at the Lakeside Campus.

See Attachment I.A.3 for a one-line diagram of the existing system as of January 2023, and Attachment I.A.4 for a one-line diagram of the proposed system in June 2024 after completion of the Company's Spanish Grove Switching Station and

[11] *See supra*, n. 2.

Cloud and Easters Switching Station projects.[12] See Attachment I.A.5 for a one-line diagram of the proposed system after completion of the future Jeffress 115 kV Station and related temporary 115 kV lines in January 2025, and Attachment I.A.6 for a one-line diagram of the proposed system after completion of the Butler Farm Substation and Finneywood Station as of July 2025. Finally, see Attachment I.A.7 for a one-line diagram of the proposed system after completion of the Project as of July 2026. See Attachment II.A.2 for a map depicting the Project, including the Proposed and Alternative Routes of the Finneywood-Jeffress Lines.

The Proposed Project

As part of the proposed Project, the Company will construct the two new approximately 18.3-mile 230 kV single circuit Finneywood-Jeffress Lines on new right-of-way from the future 500-230 kV Finneywood Station to the newly converted Jeffress 230 kV Station, resulting in 230 kV Finneywood-Jeffress Line #2299 and 230 kV Finneywood-Jeffress Line #2302. 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. 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.

The Company identified an approximately 18.3-mile overhead Proposed Route (Route 4) for the Finneywood-Jeffress Lines, as well as overhead Alternative Route 3 and Alternative Route 5, all of which the 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.

The Project also includes the conversion of the future Jeffress 115 kV Station to 230 kV operation. The future Jeffress 115 kV Station will serve MEC's Lakeside DP beginning January 1, 2025 until such time as the 230 kV Finneywood-Jeffress Lines and Jeffress 230 kV Station are in service. The future Jeffress 115 kV Station will be designed to accommodate a 115 kV breaker and a half bus scheme with a configuration of six breakers.[13]

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

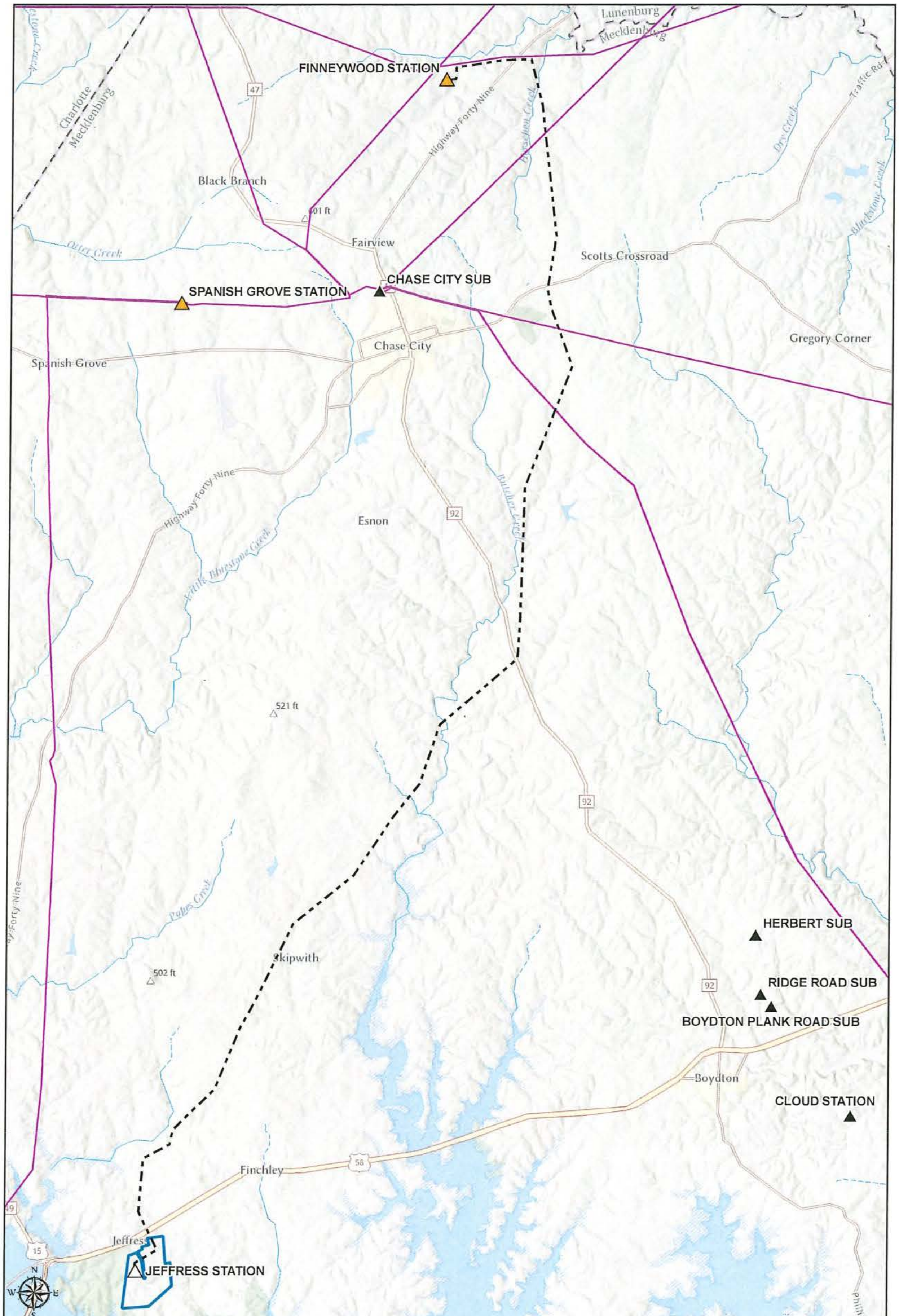
[12] *See supra*, n. 5, as to the Spanish Grove Switching Station, which is anticipated to be energized in August 2023. The referenced Cloud and Easters Switching Station projects were approved by the Commission in February 2022, and are anticipated to be in service by June 1, 2024. *See Application of Virginia Electric and Power Company for approval and certification of electric transmission facilities: Line #235 Extension to Cloud 230 kV Switching Station and related projects*, Case No. PUR-2021-00137, Final Order (Feb. 22, 2022) (the "Cloud & Easters Proceeding"). See Section I.E for additional discussion.

[13] Note, the future Jeffress 115 kV Station is not considered a component of the Project. *See supra*, n. 5.

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 4000A 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.

***

In summary, the proposed Project is necessary to provide service requested by MEC for its Lakeside DP in Mecklenburg County, Virginia, to maintain reliable service for the overall load growth in the Project area, and to comply with mandatory NERC Reliability Standards and the Company's Planning Criteria.



- ▲ Existing Substation
- ▲ Future Switching Station
- △ Station Proposed for Conversion
- Proposed 230 kV Transmission Line
- Existing Dominion Transmission Line
- Lakeside Campus

1:88,000

0 0.5 1 Miles

Attachment I.A.1
Overview
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

ERM

Dominion Energy

MPLS M:\US\Projects\D-F\Dominion\Finneywood_Jeffress_ArcGIS\SCC_Appendix_DOM_F2J_SCC_Appendix.aprx\Attachment I.A.1 | REVISED: 05/16/2023 | SCALE: 1:88,000 when printed at 11x17 DRAWN BY: Nicole.Dunn

**REQUEST/NOTIFICATION FOR
CHANGES IMPACTING DOMINION FACILITIES**

SECTION I – GENERAL Date: 06 / 21/ 2022 Revision No.: 3

Requestor Name: Old Dominion Electric Cooperative

Requestor Address: 4201 Dominion Blvd, Suite 300

Glen Allen, Virginia 23060

Name of Contact Person: Dan Watkins Coop Member Contact Person: Brian Woods MEC 434-372-6120

Contact's Phone: 804-314-6047 ext. Contact's Cell: [redacted]

Contact's Fax: - - Contact's Email: dwatkins@odec.com

Signature below authorizes Dominion to proceed with design, engineering, and estimation of Project cost as appropriate for Dominion to evaluate and respond to this request. This authorization is pursuant and subject to all terms and conditions of the Agreement of which this Appendix is a part.

Authorizing Signature: William Pezalla Auth. Date: 06 /21/ 2022

Printed Name: Bill Pezalla Phone: 804-968-2193

Title: Director of Transmission Serivces

SECTION II – DESCRIPTION OF REQUEST

Name of Delivery Point:	Lakeside
Brief Description of Request: (attach detail)	MEC is requesting Dominion Energy (DE) to study/design/construct a 230kV transmission line to a new 230kV delivery point. This delivery point should be served through a breaker and half scheme. Final designs are being performed to determine number of feeds across the fence to MEC. It is understood that a temporary 115kV feed may be required to meet the in-service timeline.
Brief Reasoning for Request: (attach detail)	MEC has a request to serve a new data center with a total build-out load of 240 MW.
Delivery Point Location: (attach detail if DP is new)	Site location is adjacent to Occoneechee State Park south of HWY 58 near Clarksville, VA. The proposed site is within the Lakeside Commerce Park.
Noteworthy Load Characteristics: (large motors, large fluctuating loads, large harmonic-producing loads, etc.)	Data Center

PRESENT DELIVERY POINT DATA:

Present Delivery Point Voltage:

Present Maximum kVA Capacity of Delivery Point Facilities:

Present Summer Peak kW Demand: Present Summer Peak kVAR Demand:

Present Winter Peak kW Demand: ____________ Present Winter Peak kVAR Demand: ____________

ANTICIPATED NEW DELIVERY POINT FACILITES DATA:

New Delivery Point Voltage: 230kV

New Peak kVA Capacity of Delivery Point Facilities: 240MVA

Peak kW and rkVA During First Three Years Following Implementation and Highest Peak Within Ten Years:

	Initial Year:	Second Year:	Third Year:	Highest in First Ten Years:
Enter Year ➔	2025	2026	2027	2035
Summer Peak kW:	24000	30000	60000	240000
Summer Peak rkVA:				
Winter Peak kW:	24000	32000	70000	240000
Winter Peak rkVA:				

Delivery Point Facilities Route:
(attach detail if new line extension is involved)

Additional Comments: Load ramp schedule and target connection date is attached. Load ramp scenario provided shows proposed utility load. MEC is requesting DE to study capacities and routes to make proposal to serve delivery point with expected target date for connection. MEC is still in development so updates will be necessary. It is understood that a 115kV temporary solution may be needed and that excess facilities may be required due to the request to have breaker and half scheme.

SECTION III – CUSTOMER'S EQUIPMENT

Transformer Primary Voltage: 230kV Transformer Secondary Voltage: 25kV

Transformer Nameplate Capacity: 40/60 MVA Temperature Rise: 55

Transformer Taps:

Connection (e.g. Wye-Wye): Delta - Wye

Transformer Impedance:

Isolation Device Type and Rating: 230 kV, 1200A, 3-PST, GOAB Switch

Protection Device Type and Rating: 230 kV, 2000A Circuit Breaker

Required Attachments: [1] One-line diagram [2] Transformer test report [3] Transformer loss curve
[4] Operating procedures description [5] Protection scheme functional diagram
[6] Protection Device information (including device types, serial and model numbers, relay settings, etc.)

SECTION IV – TIMING

Request included in Customer's planning documents submitted to Dominion on:

Most Recent Submission: 02 /03/ 2021 Second Most Recent Submission: 10 /12/ 2020

Expected Date Customer's Construction to Commence: / / 20

Expected Completion Date of Customer Work: / / 20

Date Requested for Dominion Construction to Commence: / / 20

Requested Completion Date of Dominion Work (De-energized): / / 20

Requested Date to Energize: **(See Note)** / / 20

Other Milestones: Project milestones directed by load ramp and schedule provided.

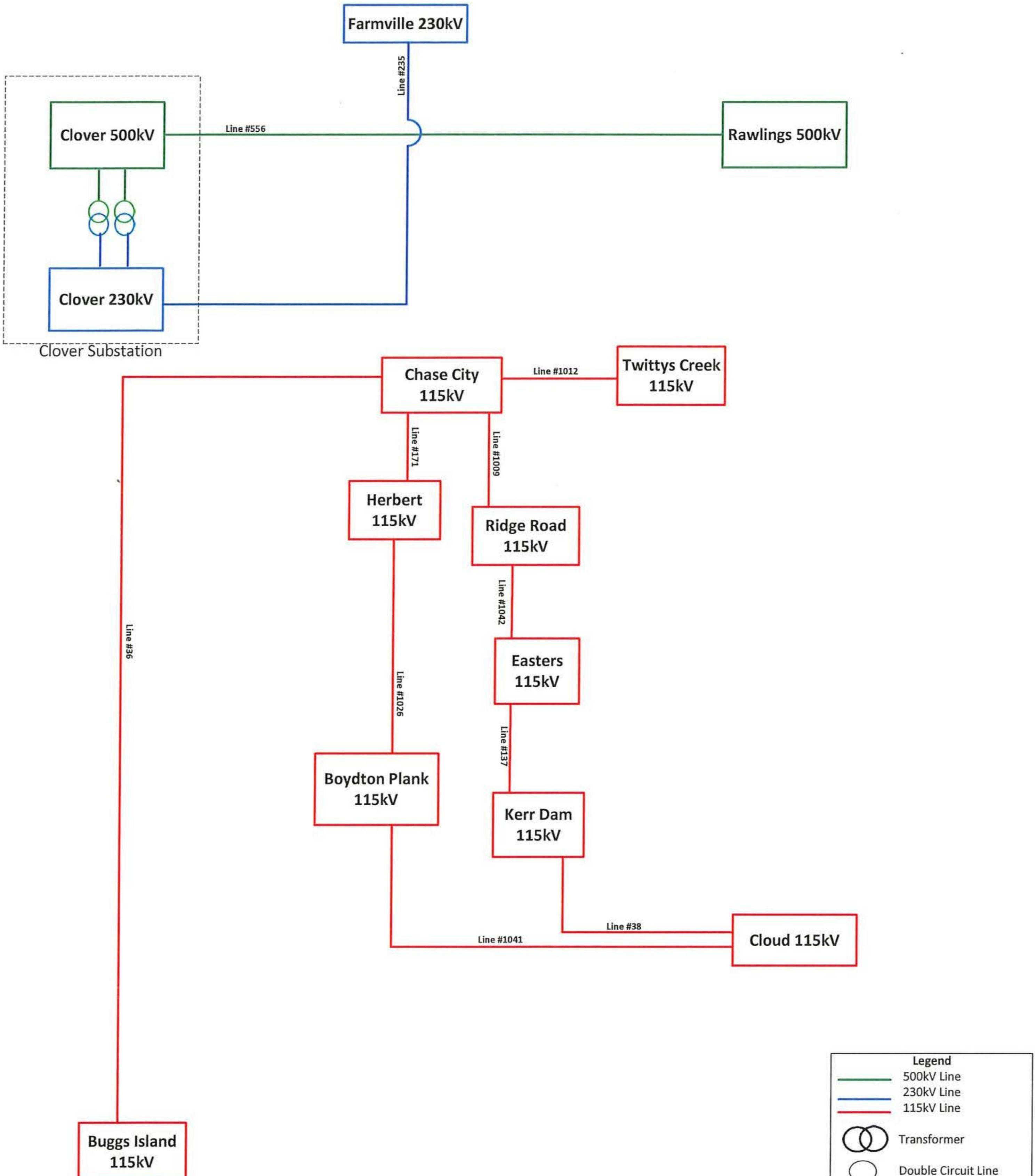
NOTE: If the "Requested Date to Energize" is marked as (E), then the firm date ultimately supplied must be on or after the estimated date, unless an earlier firm date is mutually agreed-upon prior to submission of the revised request form.

(E) = Estimated

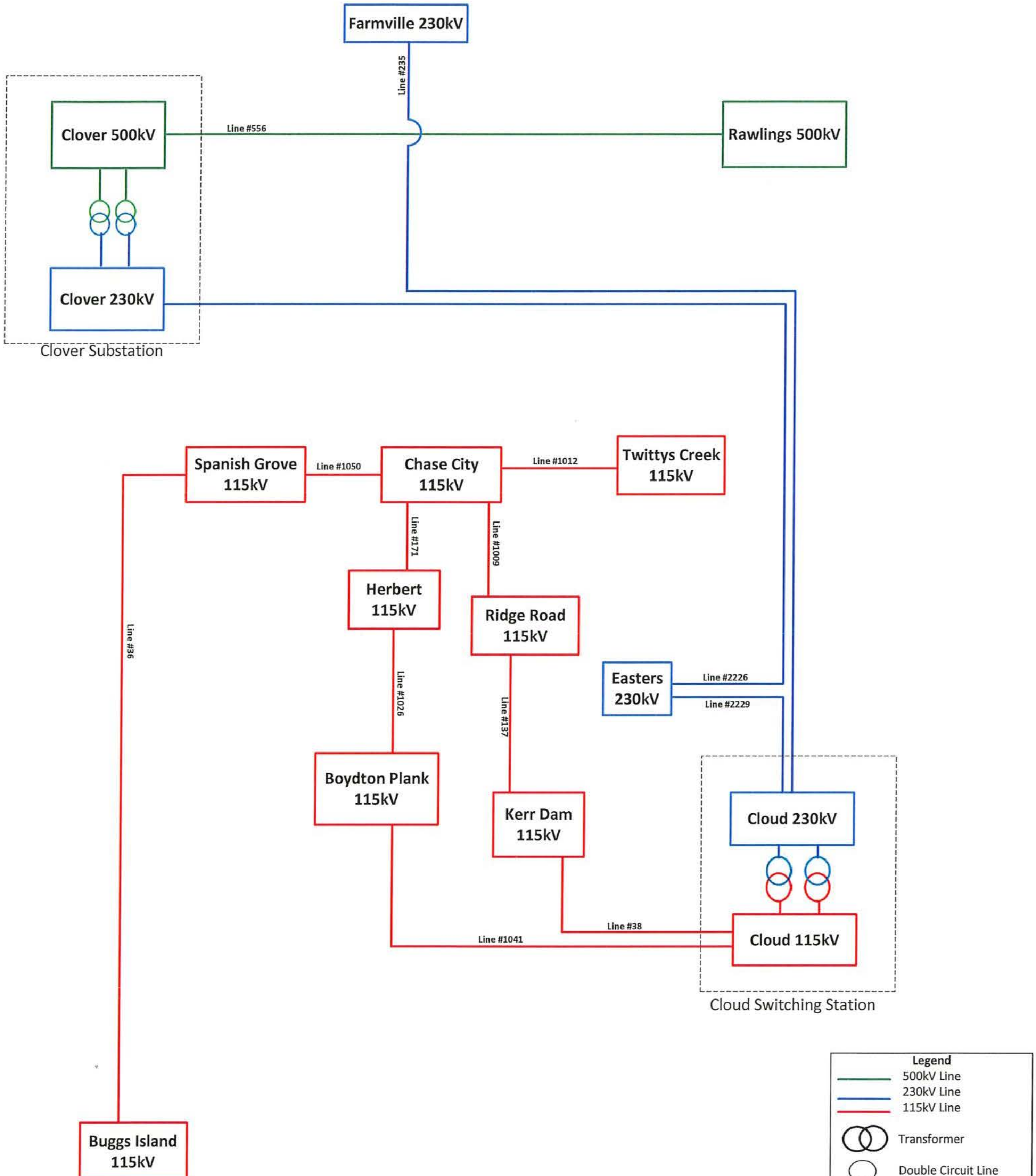
N/A = Not Available

TBD = To Be Determined

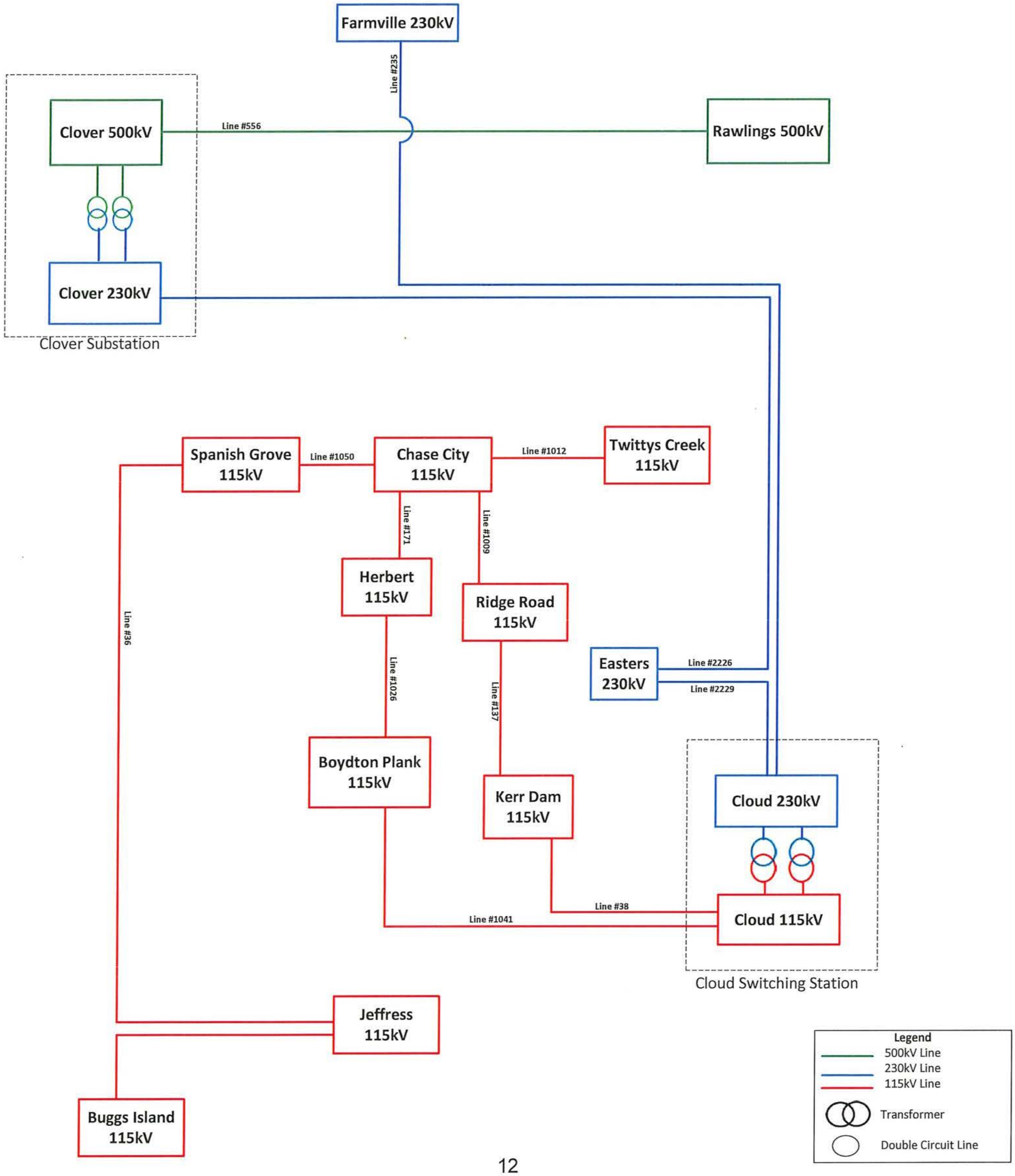
Existing System (System as of January 2023)



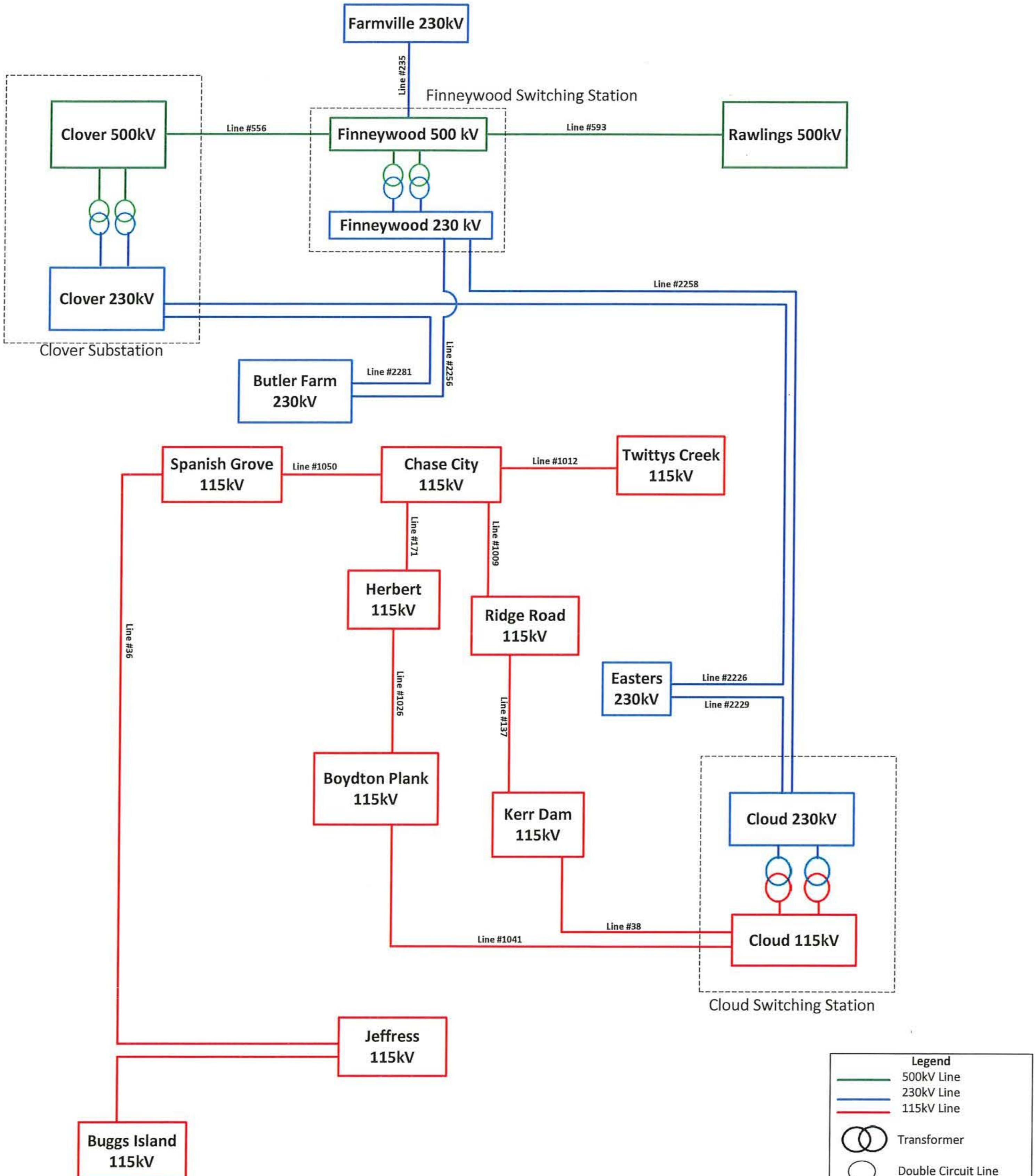
Proposed System (System as of Jun 2024)



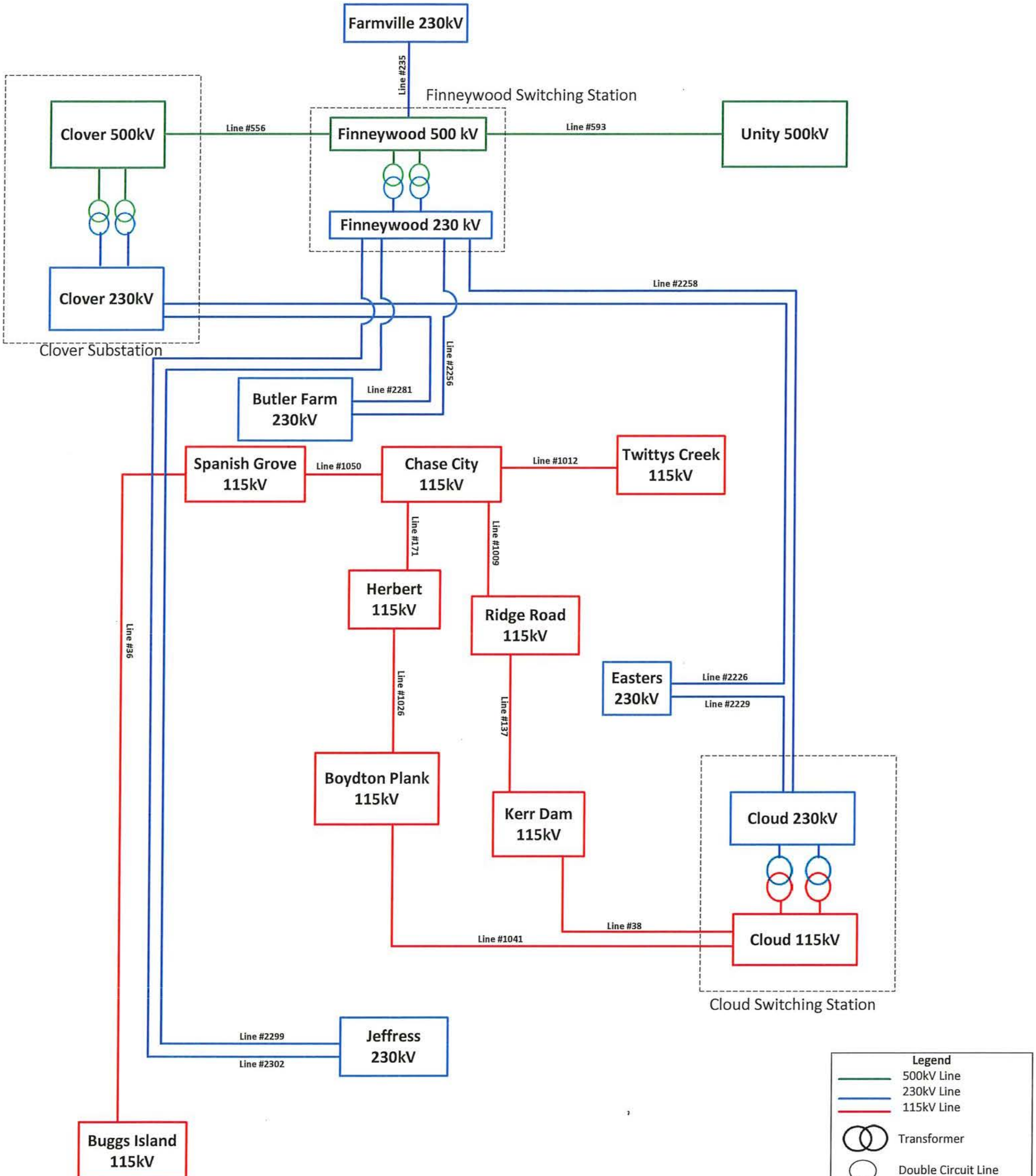
Proposed System (System as of Jan 2025)



Proposed System (System as of July 2025)



Proposed System After Completion of the Project (System as of July 2026)



I. NECESSITY FOR THE PROPOSED PROJECT

B. **Detail the engineering justifications for the proposed project (for example, provide narrative to support whether the proposed project is necessary to upgrade or replace an existing facility, to significantly increase system reliability, to connect a new generating station to the Applicant's system, etc.). Describe any known future project(s), including but not limited to generation, transmission, delivery point or retail customer projects, that require the proposed project to be constructed. Verify that the planning studies used to justify the need for the proposed project considered all other generation and transmission facilities impacting the affected load area, including generation and transmission facilities that have not yet been placed into service. Provide a list of those facilities that are not yet in service.**

Response: **(1) Engineering Justification for Project**

Detail the engineering justifications for the proposed project (for example, provide narrative to support whether the proposed project is necessary to upgrade or replace an existing facility, to significantly increase system reliability, to connect a new generating station to the Applicant's system, etc.).

See Section I.A of the Appendix.

(2) Known Future Projects

Describe any known future project(s), including but not limited to generation, transmission, delivery point or retail customer projects, that require the proposed project to be constructed.

The proposed Project is needed to serve MEC's Lakeside DP so that MEC can serve its data center customer's Lakeside Campus, as discussed in Section I.A. There are no known future projects that require the proposed Project to be constructed.

(3) Planning Studies

Verify that the planning studies used to justify the need for the proposed project considered all other generation and transmission facilities impacting the affected load area, including generation and transmission facilities that have not yet been placed into service.

Dominion Energy Virginia's Electric Transmission Planning group performs planning studies to ensure delivery of bulk power to a continuously changing customer demand under a wide variety of operating conditions. Studies are performed in coordination with the Company's RTO (*i.e.*, PJM) and in accordance with NERC Reliability Standards. In completing these studies, the Company considered all other known generation and transmission facilities impacting the affected load area.

In order to maintain reliable service to customers and to comply with mandatory NERC Reliability Standards, specifically Facility Connection ("FAC") standard FAC-001,[14] the Company's FIR document[15] addresses the interconnection requirements of generation, transmission, and electricity end-user facilities. The purpose of the NERC FAC standards is to avoid adverse impacts on reliability by requiring that each TO establish facility connection and performance requirements in accordance with FAC-001, and the TO's and end-users meet and adhere to the established facility connection and performance requirements in accordance with FAC-002.[16]

NERC Reliability Standards TPL-001 requirements R2, R5, and R6 require PJM, the Planning Coordinator and the TO, to have criteria. PJM's planning criteria outlined in Attachment D of Manual 14B requires the Company, as a TO, to follow NERC and Regional Planning Standards and criteria as well as the TO Standards filed in Dominion Energy Virginia's FERC 715 filings.[17] The Company's FERC 715 filing contains the Dominion Energy Virginia Transmission Planning Criteria in Exhibit A of the FIR document.

The four major criteria considered as part of this Project were:

1) Ring bus arrangement is required for load interconnections in excess of 100 MW (Company's FIR, Section 6.2);

2) The amount of direct-connected load at any substation is limited to 300 MW (Company's Transmission Planning Criteria Exhibit A, Section C.2.8);

3) N-1-1 contingencies load loss is limited to 300 MW (PJM Manual 14B Section 2.3.8, Attachment D, Attachment D-1, Attachment F); and

4) The minimum load levels within a 10-year planning horizon for the direct interconnection to existing transmission lines is 30 MW for a 230 kV delivery (Company's FIR document, Load Criteria – End User).

(4) <u>Facilities List</u>

Provide a list of those facilities that are not yet in service.

See Attachment I.A.1 for existing and future transmission facilities, which includes transmission lines and substations, in the affected area of Mecklenburg County, Virginia. See Attachment I.G.1 for existing transmission lines and for existing and

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[14] *See supra*, n. 8.

[15] *See supra*, n. 6.

[16] *See* https://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-002-2.pdf.

[17] For additional information related to FERC Form 715, *see* https://www.pjm.com/library/request-access/ferc-form-715.

proposed facilities. See Attachment II.A.2 for a map depicting the Project, including the Proposed and Alternative Routes of the Finneywood-Jeffress Lines.

I. NECESSITY FOR THE PROPOSED PROJECT

C. Describe the present system and detail how the proposed project will effectively satisfy present and projected future electrical load demand requirements. Provide pertinent load growth data (at least five years of historical summer and winter peak demands and ten years of projected summer and winter peak loads where applicable). Provide all assumptions inherent within the projected data and describe why the existing system cannot adequately serve the needs of the Applicant (if that is the case).

Response: See Attachment I.G.1 for the portion of the Company's transmission facilities in the area of the Project. The Company's existing Clarksville Substation and MEC's existing Jones Store DP are the primary sources of distribution power to the Lakeside Campus area. Neither of these stations has capacity to serve the transmission need required by MEC's customer. As shown in Attachment I.A.2, the combined load at the Lakeside Campus in 10 years is projected to be approximately 240 MW at full build-out. Adding this load to existing 115 kV substations in the Project area would result in overload conditions and NERC transmission system reliability criteria violations.

Specifically, MEC's DP request projects a summer peak of 24 MW in 2025, 30 MW in 2026, and 60 MW in 2027, with 240 MW at full build-out of the Lakeside Campus. See Attachment I.C.1.a for the projected monthly load ramp (MW) of the Lakeside Campus at the initially constructed Jeffress 115 kV Station (beginning January 2025) and at the converted Jeffress 230 kV Station (beginning July 2026). See Attachment I.C.1.b for the projected annual load ramp of the Lakeside Campus.

In order to begin serving the Lakeside Campus beginning on January 1, 2025, as requested by MEC, the Lakeside DP will initially receive bridging power from the Company's future Jeffress 115 kV Station sourced by two 115 kV temporary transmission lines. However, the future Jeffress 115 kV Station cannot serve the full build-out power capacity required by the Lakeside Campus, as shown in Attachments I.C.1.a and I.C.1.b. Accordingly, the 230 kV Finneywood-Jeffress Lines and Jeffress 230 kV Station conversion are required to serve the full build out at the Lakeside Campus.

Projected Monthly Load Ramp (MW)

Date	DC1	DC2	DC3	DC4	DC5	DC6	Total Utility MW
1/1/2025							-
2/1/2025	12.0						12.0
3/1/2025	12.0						12.0
4/1/2025	12.0	12.0					24.0
5/1/2025	1.0	12.0					13.0
6/1/2025	1.0	12.0					13.0
7/1/2025	1.0	1.0					2.0
8/1/2025	1.0	1.0					2.0
9/1/2025	1.0	1.0					2.0
10/1/2025	2.0	1.0					3.0
11/1/2025	3.0	1.0					4.0
12/1/2025	4.0	2.0					6.0
1/1/2026	5.0	3.0					8.0
2/1/2026	6.0	4.0					10.0
3/1/2026	7.0	5.0					12.0
4/1/2026	8.0	6.0	12.0				26.0
5/1/2026	9.0	7.0	12.0				28.0
6/1/2026	10.0	8.0	12.0				30.0
7/1/2026	11.0	9.0	1.0				21.0
8/1/2026	12.0	10.0	1.0				23.0
9/1/2026	13.0	11.0	1.0				25.0
10/1/2026	14.0	12.0	1.0				27.0
11/1/2026	15.0	13.0	1.0				29.0
12/1/2026	16.0	14.0	2.0				32.0
1/1/2027	17.0	15.0	3.0				35.0
2/1/2027	18.0	16.0	4.0				38.0
3/1/2027	19.0	17.0	5.0				41.0
4/1/2027	20.0	18.0	6.0	12.0			56.0
5/1/2027	21.0	19.0	7.0	12.0			59.0
6/1/2027	22.0	20.0	8.0	12.0			62.0
7/1/2027	23.0	21.0	9.0	1.0			54.0
8/1/2027	24.0	22.0	10.0	1.0			57.0
9/1/2027	25.0	23.0	11.0	1.0			60.0
10/1/2027	26.0	24.0	12.0	1.0			63.0
11/1/2027	27.0	25.0	13.0	1.0			66.0
12/1/2027	28.0	26.0	14.0	2.0			70.0
1/1/2028	29.0	27.0	15.0	3.0			74.0
2/1/2028	30.0	28.0	16.0	4.0			78.0
3/1/2028	31.0	29.0	17.0	5.0			82.0
4/1/2028	32.0	30.0	18.0	6.0	12.0		98.0
5/1/2028	33.0	31.0	19.0	7.0	12.0		102.0
6/1/2028	34.0	32.0	20.0	8.0	12.0		106.0
7/1/2028	35.0	33.0	21.0	9.0	1.0		99.0
8/1/2028	36.0	34.0	22.0	10.0	1.0		103.0

9/1/2028	37.0	35.0	23.0	11.0	1.0		107.0
10/1/2028	38.0	36.0	24.0	12.0	1.0		111.0
11/1/2028	39.0	37.0	25.0	13.0	1.0		115.0
12/1/2028	40.0	38.0	26.0	14.0	2.0		120.0
1/1/2029	41.0	39.0	27.0	15.0	3.0		125.0
2/1/2029	42.0	40.0	28.0	16.0	4.0		130.0
3/1/2029	43.0	41.0	29.0	17.0	5.0		135.0
4/1/2029	44.0	42.0	30.0	18.0	6.0		140.0
5/1/2029	45.0	43.0	31.0	19.0	7.0		145.0
6/1/2029	46.0	44.0	32.0	20.0	8.0		150.0
7/1/2029	47.0	45.0	33.0	21.0	9.0		155.0
8/1/2029	48.0	46.0	34.0	22.0	10.0		160.0
9/1/2029	48.0	47.0	35.0	23.0	11.0		164.0
10/1/2029	48.0	48.0	36.0	24.0	12.0		168.0
11/1/2029	48.0	48.0	37.0	25.0	13.0		171.0
12/1/2029	48.0	48.0	38.0	26.0	14.0		174.0
1/1/2030	48.0	48.0	39.0	27.0	15.0		177.0
2/1/2030	48.0	48.0	40.0	28.0	16.0		180.0
3/1/2030	48.0	48.0	41.0	29.0	17.0		183.0
4/1/2030	48.0	48.0	42.0	30.0	18.0		186.0
5/1/2030	48.0	48.0	43.0	31.0	19.0		189.0
6/1/2030	48.0	48.0	44.0	32.0	20.0		192.0
7/1/2030	48.0	48.0	45.0	33.0	21.0		195.0
8/1/2030	48.0	48.0	46.0	34.0	22.0		198.0
9/1/2030	48.0	48.0	47.0	35.0	23.0		201.0
10/1/2030	48.0	48.0	48.0	36.0	24.0		204.0
11/1/2030	48.0	48.0	48.0	37.0	25.0		206.0
12/1/2030	48.0	48.0	48.0	38.0	26.0		208.0
1/1/2031	48.0	48.0	48.0	39.0	27.0		210.0
2/1/2031	48.0	48.0	48.0	40.0	28.0		212.0
3/1/2031	48.0	48.0	48.0	41.0	29.0		214.0
4/1/2031	48.0	48.0	48.0	42.0	30.0		216.0
5/1/2031	48.0	48.0	48.0	43.0	31.0		218.0
6/1/2031	48.0	48.0	48.0	44.0	32.0		220.0
7/1/2031	48.0	48.0	48.0	45.0	33.0		222.0
8/1/2031	48.0	48.0	48.0	46.0	34.0		224.0
9/1/2031	48.0	48.0	48.0	47.0	35.0		226.0
10/1/2031	48.0	48.0	48.0	48.0	36.0		228.0
11/1/2031	48.0	48.0	48.0	48.0	37.0		229.0
12/1/2031	48.0	48.0	48.0	48.0	38.0		230.0
1/1/2032	48.0	48.0	48.0	48.0	39.0		231.0
2/1/2032	48.0	48.0	48.0	48.0	40.0		232.0
3/1/2032	48.0	48.0	48.0	48.0	41.0		233.0
4/1/2032	48.0	48.0	48.0	48.0	42.0		234.0
5/1/2032	48.0	48.0	48.0	48.0	43.0		235.0
6/1/2032	48.0	48.0	48.0	48.0	44.0		236.0
7/1/2032	48.0	48.0	48.0	48.0	45.0		237.0

8/1/2032	48.0	48.0	48.0	48.0	46.0		238.0
9/1/2032	48.0	48.0	48.0	48.0	47.0		239.0
10/1/2032	48.0	48.0	48.0	48.0	48.0		240.0
11/1/2032	48.0	48.0	48.0	48.0	48.0		240.0
12/1/2032	48.0	48.0	48.0	48.0	48.0		240.0
1/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
2/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
3/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
4/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
5/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
6/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
7/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
8/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
9/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
10/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
11/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
12/1/2033	48.0	48.0	48.0	48.0	48.0		240.0
1/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
2/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
3/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
4/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
5/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
6/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
7/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
8/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
9/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
10/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
11/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
12/1/2034	48.0	48.0	48.0	48.0	48.0		240.0
1/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
2/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
3/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
4/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
5/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
6/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
7/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
8/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
9/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
10/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
11/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
12/1/2035	48.0	48.0	48.0	48.0	48.0		240.0
1/1/2036	48.0	48.0	48.0	48.0	48.0		240.0
2/1/2036	48.0	48.0	48.0	48.0	48.0		240.0
3/1/2036	48.0	48.0	48.0	48.0	48.0		240.0
4/1/2036	48.0	48.0	48.0	48.0	48.0		240.0
5/1/2036	48.0	48.0	48.0	48.0	48.0		240.0
6/1/2036	48.0	48.0	48.0	48.0	48.0		240.0

7/1/2036	48.0	48.0	48.0	48.0	48.0		240.0
8/1/2036	48.0	48.0	48.0	48.0	48.0		240.0
9/1/2036	48.0	48.0	48.0	48.0	48.0		240.0
10/1/2036	48.0	48.0	48.0	48.0	48.0		240.0
11/1/2036	48.0	48.0	48.0	48.0	48.0		240.0
12/1/2036	48.0	48.0	48.0	48.0	48.0		240.0
1/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
2/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
3/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
4/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
5/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
6/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
7/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
8/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
9/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
10/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
11/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
12/1/2037	48.0	48.0	48.0	48.0	48.0		240.0
1/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
2/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
3/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
4/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
5/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
6/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
7/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
8/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
9/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
10/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
11/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
12/1/2038	48.0	48.0	48.0	48.0	48.0		240.0
1/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
2/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
3/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
4/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
5/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
6/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
7/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
8/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
9/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
10/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
11/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
12/1/2039	48.0	48.0	48.0	48.0	48.0		240.0
1/1/2040	48.0	48.0	48.0	48.0	48.0		240.0
2/1/2040	48.0	48.0	48.0	48.0	48.0		240.0
3/1/2040	48.0	48.0	48.0	48.0	48.0		240.0
4/1/2040	48.0	48.0	48.0	48.0	48.0		240.0
5/1/2040	48.0	48.0	48.0	48.0	48.0		240.0

6/1/2040	48.0	48.0	48.0	48.0	48.0		240.0
7/1/2040	48.0	48.0	48.0	48.0	48.0		240.0
8/1/2040	48.0	48.0	48.0	48.0	48.0		240.0
9/1/2040	48.0	48.0	48.0	48.0	48.0		240.0
10/1/2040	48.0	48.0	48.0	48.0	48.0		240.0
11/1/2040	48.0	48.0	48.0	48.0	48.0		240.0
12/1/2040	48.0	48.0	48.0	48.0	48.0		240.0

Projected Annual Load Ramp (MW)

Year	TX 1	TX 2	TX 3	TX 4	TX 5	Total Load MW
2025	4	2				6
2026	16	14	2			32
2027	28	26	14	2		70
2028	40	38	26	14	2	120
2029	48	48	38	26	14	174
2030	48	48	48	38	26	208
2031	48	48	48	48	38	230
2032	48	48	48	48	48	240
2033	48	48	48	48	48	240
2034	48	48	48	48	48	240
2035	48	48	48	48	48	240
2036	48	48	48	48	48	240
2037	48	48	48	48	48	240
2038	48	48	48	48	48	240
2039	48	48	48	48	48	240
2040	48	48	48	48	48	240

I. NECESSITY FOR THE PROPOSED PROJECT

D. If power flow modeling indicates that the existing system is, or will at some future time be, inadequate under certain contingency situations, provide a list of all these contingencies and the associated violations. Describe the critical contingencies including the affected elements and the year and season when the violation(s) is first noted in the planning studies. Provide the applicable computer screenshots of single-line diagrams from power flow simulations depicting the circuits and substations experiencing thermal overloads and voltage violations during the critical contingencies described above.

Response: Not applicable.

E. Describe the feasible project alternatives, if any, considered for meeting the identified need including any associated studies conducted by the Applicant or analysis provided to the RTO. Explain why each alternative was rejected.

Response: The Company identified one transmission electrical alternative to the proposed Project, as discussed below. No distribution alternatives were considered based on MEC's DP request.

Transmission Alternative:

As a transmission electrical alternative, the Company considered an alternative source for the two new single circuit 230 kV transmission lines to support the converted Jeffress 230 kV Station. Specifically, the Company identified the to-be-expanded 230 kV Cloud Switching Station ("Cloud Station")[18] as a possible alternative source. However, for the reasons explained below, the Company rejected this alternative.

Transmission Alternative: *Construct one new 230 kV single circuit line on new right-of-way from the Finneywood Switching Station to the Jeffress 230 kV Station and additionally construct one new 230 kV single circuit line on new right-of-way from the expanded Cloud 230 kV Switching Station to the Jeffress 230 kV Station*

This transmission electrical alternative is similar in scope to the proposed Project in that it would require two new 230 kV lines to support the converted Jeffress 230 kV Station. However, due to the projected loading on the expanded 230 kV Cloud Station (approximately 300 MW), the Transmission Planning group determined that this station could only source one of the new 230 kV lines to the converted Jeffress 230 kV Station. Accordingly, this alternative would require the construction of one new 230 kV line from the future Finneywood Station to the converted Jeffress 230 kV Station (a minimum of about 18 miles of new right-of-way) **and** the construction of one new 230 kV line from the expanded 230 kV Cloud Station to the converted Jeffress 230 kV Station (a minimum of about 10 miles of additional new right-of-way). Importantly, this additional length would also add to the costs and environmental impacts of the Project and would require the Company to acquire additional easements from property owners, which also could increase the overall Project timeline.

Therefore, the Company rejected this transmission alternative due to the increased length, additional costs, and potential construction timeline impacts, as well as impacts to property owners and the environment. See Attachment I.E.1 for a one-line diagram of this rejected transmission alternative to the Project.

[18] In the Cloud & Easters Proceeding, the Company requested and received Commission approval to expand its existing 115 kV Cloud Station to include 230 kV operation, among other related projects. The Company anticipates this expansion will be complete by June 1, 2024. *See supra*, n. 12.

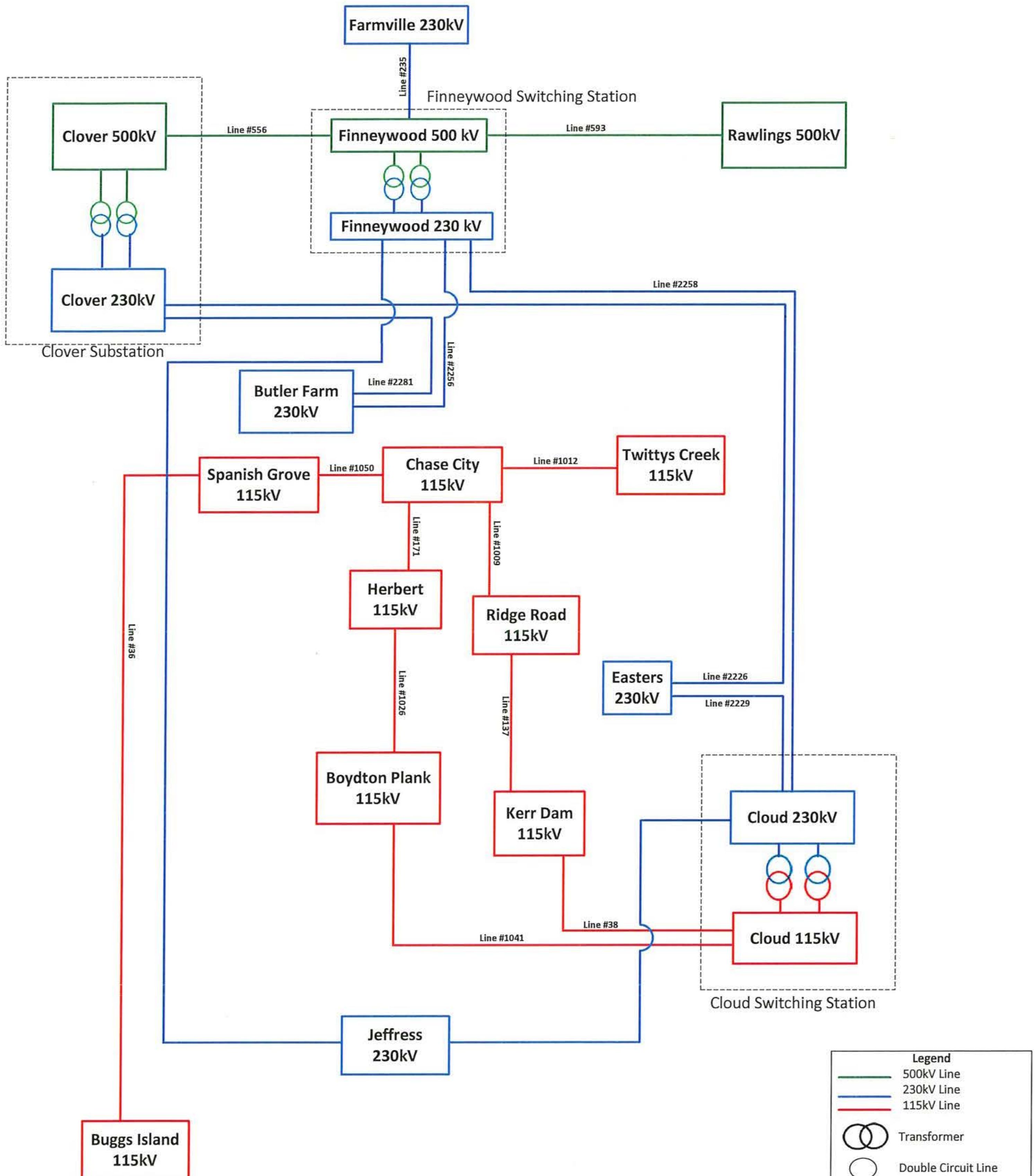
Analysis of Demand-Side Resources:

Pursuant to the Commission's November 26, 2013, Order entered in Case No. PUE-2012-00029, and its November 1, 2018, Final Order entered in Case No. PUR-2018-00075 ("2018 Final Order"), the Company is required to provide analysis of demand-side resources ("DSM") incorporated into the Company's planning studies. DSM is the broad term that includes both energy efficiency ("EE") and demand response ("DR"). In this case, PJM and the Company have identified a need for the proposed Project in order to provide requested service and comply with mandatory NERC Reliability Standards, while maintaining the overall long-term reliability of its transmission system.[19] Notwithstanding, when performing an analysis based on PJM's 50/50 load forecast, there is no adjustment in load for DR programs because PJM only dispatches DR when the system is under stress (*i.e.*, a system emergency). Accordingly, while existing DSM is considered to the extent the load forecast accounts for it, DR that has been bid previously into PJM's capacity market is not a factor in this particular application because of the identified need for the Project. Based on these considerations, the evaluation of the Project demonstrated that despite accounting for DSM consistent with PJM's methods, the Project is necessary.

Incremental DSM also will not absolve the need for the Project. As reflected in Attachment I.C.1.b, the highest annual projected peak load over the next 10 years at MEC's Lakeside DP is 240 MW. By way of comparison, statewide, the Company achieved demand savings of 308.4 MW (net) / 396.8 MW (gross) from its DSM Programs in 2021.

[19] While the PJM load forecast does not directly incorporate DR, its load forecast incorporates variables derived from Itron that reflect EE by modeling the stock of end-use equipment and its usages. Further, because P JM's load forecast considers the historical non-coincident peak ("NCP") for each load serving entity ("LSE") within PJM, it reflects the actual load reductions achieved by DSM programs to the extent an LSE has used DSM to reduce its NCPs.

Rejected Transmission Alternative



I. NECESSITY FOR THE PROPOSED PROJECT

F. Describe any lines or facilities that will be removed, replaced, or taken out of service upon completion of the proposed project, including the number of circuits and normal and emergency ratings of the facilities.

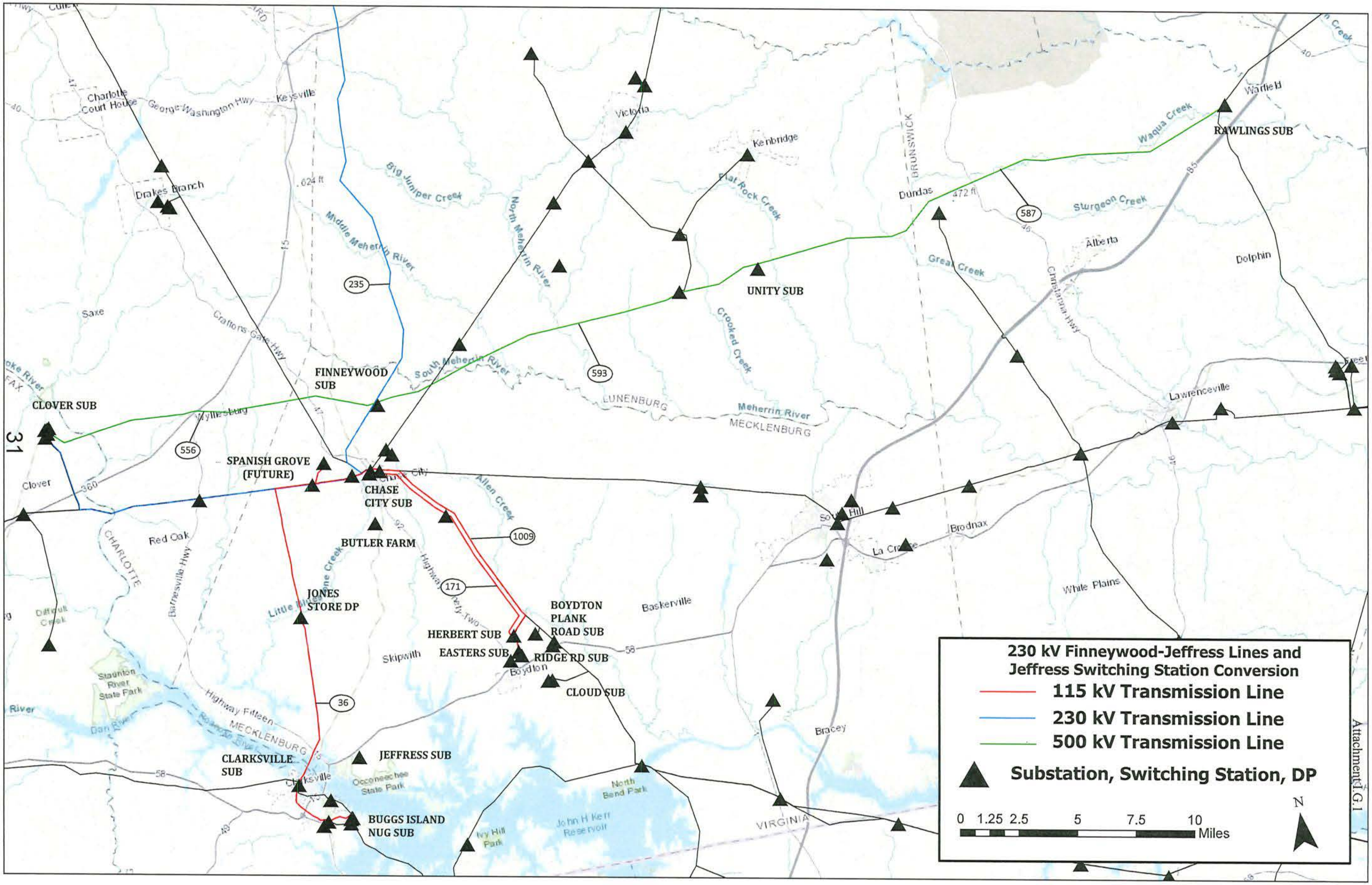
Response: Not applicable.[20]

[20] *But see supra*, n. 5.

I. NECESSITY FOR THE PROPOSED PROJECT

G. Provide a system map, in color and of suitable scale, showing the location and voltage of the Applicant's transmission lines, substations, generating facilities, etc., that would affect or be affected by the new transmission line and are relevant to the necessity for the proposed line. Clearly label on this map all points referenced in the necessity statement.

Response: See Attachment I.G.1.



Attachment I.G.1

I. NECESSITY FOR THE PROPOSED PROJECT

H. Provide the desired in-service date of the proposed project and the estimated construction time.

Response: The in-service target date for the proposed Project is July 1, 2026.

The Company estimates it will take approximately 29 months for detailed engineering, scheduled outages, materials procurement, permitting, real estate, and construction after a final order from the Commission. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order by January 15, 2024. Should the Commission issue a final order by January 15, 2024 the Company estimates that construction should begin around January 2025, and be completed by July 1, 2026. This schedule is contingent upon obtaining the necessary permits and outages, the latter of which may be particularly challenging due to the amount of new load growth, rebuilds, and new builds scheduled to occur in this load area. This schedule is also contingent upon the Company's ability to negotiate for easements with property owners along the approved route without the need for additional litigation. Dates may need to be adjusted based on permitting delays or design modifications to comply with additional agency requirements identified during the permitting application process, as well as the ability to schedule outages, and unpredictable delays due labor shortages or materials/supply issues.

In addition, the Company is actively monitoring the regulatory changes and requirements associated with the NLEB and how it could potentially impact construction timing associated with 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.

I. NECESSITY FOR THE PROPOSED PROJECT

I. Provide the estimated total cost of the project as well as total transmission-related costs and total substation-related costs. Provide the total estimated cost for each feasible alternative considered. Identify and describe the cost classification (e.g. "conceptual cost," "detailed cost," etc.) for each cost provided.

Response: The estimated conceptual cost of the proposed Project along the Proposed Route (Route 4) is approximately $134.7 million, which includes a total of approximately $123.0 million for transmission-related work,[21] and a total of approximately $11.7 million for substation-related work (2023 dollars).

The estimated conceptual costs for the transmission-related work associated with Alternative Route 3 and Alternative Route 5 are provided in Section II.A.9, and in the table below. The substation-related costs associated with those routes are the same as the Proposed Route (Route 4).

Estimated Conceptual Costs for Transmission-Related Work
Proposed Route and Alternative Routes
(Millions, Approximate)

Route	Estimated Conceptual Cost
Proposed Route (Route 4)	$123.0
Alternate Route 3	$126.5
Alternate Route 5	$131.9

[21] *See supra*, n. 7.

I. NECESSITY FOR THE PROPOSED PROJECT

J. If the proposed project has been approved by the RTO, provide the line number, regional transmission expansion plan number, cost responsibility assignments, and cost allocation methodology. State whether the proposed project is considered to be a baseline or supplemental project.

Response: The Project is classified as a supplemental project (Supplemental Project DOM-2022-0032) initiated by the TO in order to interconnect new customer load. The need for the Project was submitted to PJM on June 7, 2022, and the solution slide was submitted to PJM on April 11, 2023. See Attachments I.J.1 and I.J.2, respectively.

At the time of this filing, PJM is experiencing a backlog of several months in their Do-No-Harm ("DNH") analysis and will not assign Supplemental ID #'s to any of the Solutions presented at the April 11, 2023 TEAC Meeting until that analysis is complete and they have confirmed the Company's DNH results. Without Supplemental ID #'s, these projects cannot be included in the Company's 2023 Local Plan. During a recent call with PJM, the Company was informed that PJM anticipated only projects submitted through June 2023 would be considered for inclusion in the 2023 Local Plan. Given the information above, it is expected that, ultimately, the DNH analysis will be performed by PJM and this Project (DOM-2022-0032) will be included as part of the 2023 Local Plan. Regardless, as discussed in Section I.A, supplemental projects are not approved by the PJM Board and, as such, the Company believes it is more important to continue moving forward to interconnect customer load and address any harm created in a timely manner rather than to create constraints due to administrative backlog.

The Project is presently 100% cost allocated to DOM Zone.

Dominion Supplemental Projects

Transmission Expansion Advisory Committee
June 7, 2022

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Needs

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

2

Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2022-0032

Process Stage: Need Meeting 06/07/2022

Project Driver: Customer Service

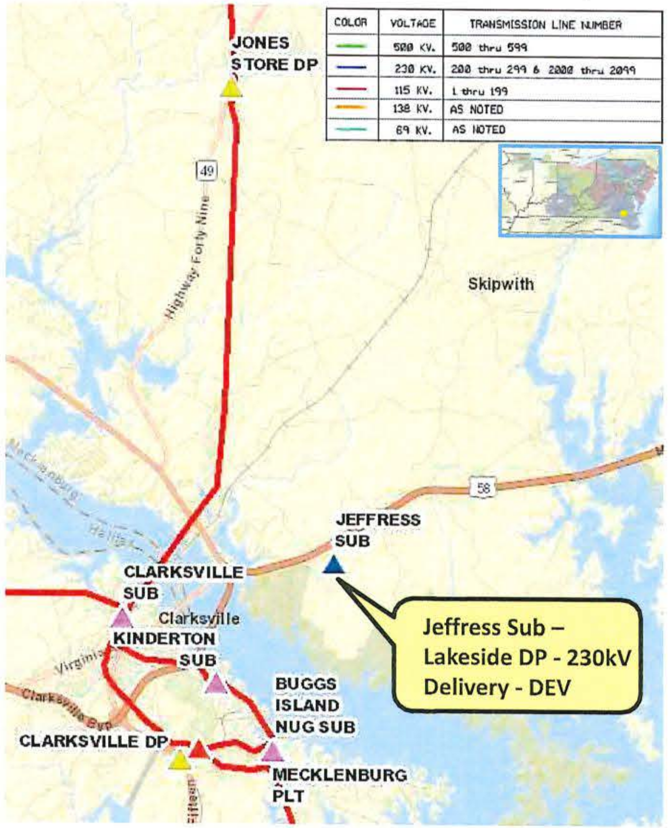
Specific Assumption References:

Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

Problem Statement:

37 DEV Distribution has submitted a delivery point request (Lakeside DP) for a new delivery point to serve a data center customer in Clarksville, VA. The total load is in excess of 100 MW. The customer requests service by July 1, 2026.

Initial In-Service Load	Projected 2027 Load
Summer: 70.0 MW	Summer: 123.0 MW



Dominion Supplemental Projects

Transmission Expansion Advisory Committee
April 11, 2023

Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2022-0032

Process Stage: Solutions Meeting 04/11/2023

Previously Presented: Need Meeting 06/07/2022

Project Driver: Customer Service

Specific Assumption References:

Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

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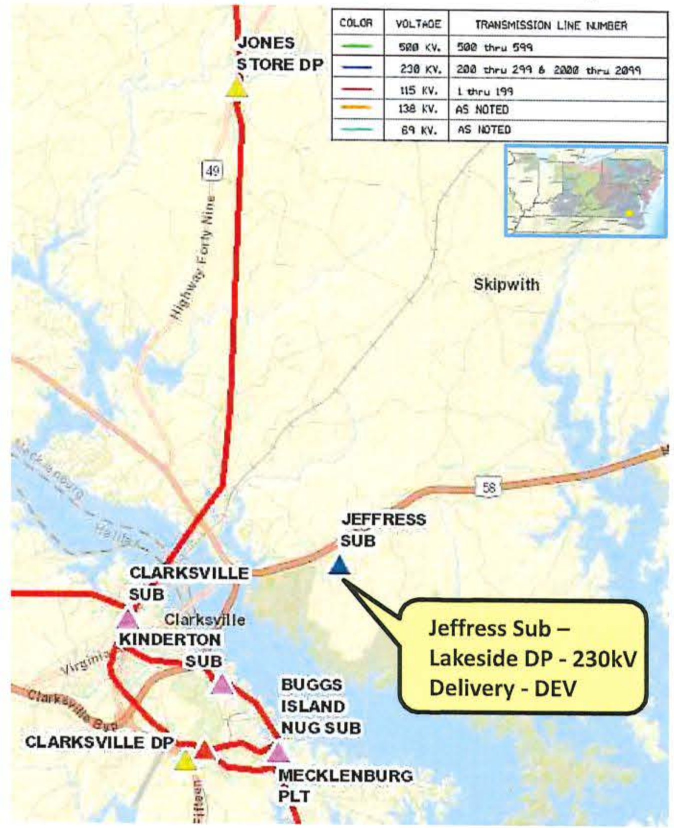
Problem Statement:

ODEC on behalf of Mecklenburg Electric Coop (MEC) has submitted a delivery point request (Lakeside DP) for a new delivery point to serve a data center customer in Clarksville, VA. The total load is in excess of 100 MW. The customer requests service by Jan 1, 2025.

Initial In-Service Load	Projected 2028 Load
Summer: 12.0 MW	Summer: 103.0 MW



Dominion Energy

Dominion Transmission Zone: Supplemental
Jeffress 230kV Delivery - MEC

Need Number: DOM-2022-0032

Process Stage: Solutions Meeting 04/11/2023

Proposed Solution:

The project will need to be built in 2 stages due to the timeframe associated with obtaining a CPCN and extend 230kV into the area. The 115kV Station will help meet the initial load target date.

Stage 1: Interconnect the new substation by cutting and extending Line #36 (Chase City– Buggs Island) to the proposed Jeffress 115kV Substation. The substation and line equipment used to interconnect Jeffress 115 kV with the transmission system will be same as 230kV substation. The projected in-service date for Stage 1 is January 1, 2025.

Stage 2: Construct two 230kV single circuits from Finneywood 500/230kV sub to the proposed Jeffress 230kV Substation. Once conversion from 115kV to 230kV substation is complete, remove Jeffress 115kV tap and reconnect Line #36 Chase City– Buggs Island. The projected in-service date for Stage 2 is July 1, 2026.

41

Estimated Project Cost: $120.0 M (Total)

Transmission Line	$90M
115kV Substation	$15M
230kV Substation	$15M

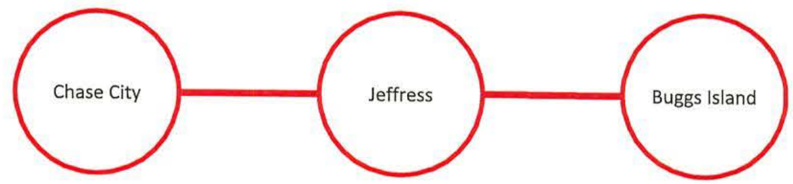
Alternatives Considered:

No feasible alternatives – 115kV system not adequate to support area data center growth.

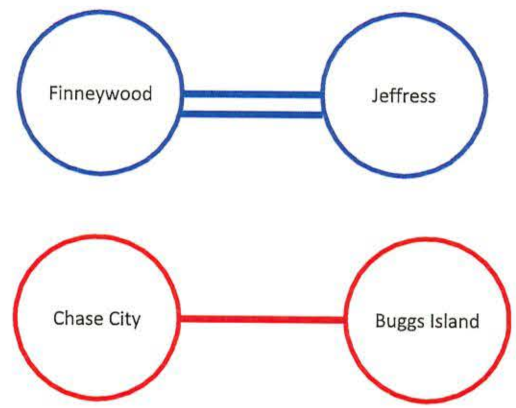
Projected In-service Date: 07/01/2026 (Stage 2)

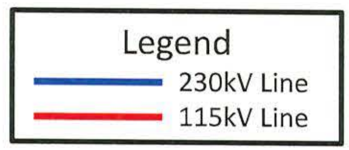
Project Status: Engineering

Stage 1: Jeffress 115kV Sub



Stage 2: Jeffress 230kV Sub





I. NECESSITY FOR THE PROPOSED PROJECT

K. If the need for the proposed project is due in part to reliability issues and the proposed project is a rebuild of an existing transmission line(s), provide five years of outage history for the line(s), including for each outage the cause, duration and number of customers affected. Include a summary of the average annual number and duration of outages. Provide the average annual number and duration of outages on all Applicant circuits of the same voltage, as well as the total number of such circuits. In addition to outage history, provide five years of maintenance history on the line(s) to be rebuilt including a description of the work performed as well as the cost to complete the maintenance. Describe any system work already undertaken to address this outage history.

Response: Not applicable.

I. NECESSITY FOR THE PROPOSED PROJECT

L. If the need for the proposed project is due in part to deterioration of structures and associated equipment, provide representative photographs and inspection records detailing their condition.

Response: Not applicable.

I. NECESSITY FOR THE PROPOSED PROJECT

M. In addition to the other information required by these guidelines, applications for approval to construct facilities and transmission lines interconnecting a Non-Utility Generator ("NUG") and a utility shall include the following information:

1. The full name of the NUG as it appears in its contract with the utility and the dates of initial contract and any amendments;

2. A description of the arrangements for financing the facilities, including information on the allocation of costs between the utility and the NUG;

3. a. For Qualifying Facilities ("QFs") certificated by Federal Energy Regulatory Commission ("FERC") order, provide the QF or docket number, the dates of all certification or recertification orders, and the citation to FERC Reports, if available;

b. For self-certificated QFs, provide a copy of the notice filed with FERC;

4. Provide the project number and project name used by FERC in licensing hydroelectric projects; also provide the dates of all orders and citations to FERC Reports, if available; and

5. If the name provided in 1 above differs from the name provided in 3 above, give a full explanation.

Response: Not applicable.

I. NECESSITY FOR THE PROPOSED PROJECT

N. Describe the proposed and existing generating sources, distribution circuits or load centers planned to be served by all new substations, switching stations and other ground facilities associated with the proposed project.

Response: The converted Jeffress 230 kV Station will serve MEC's Lakeside DP. See Section I.A. The Project may be used to support future load centers in the area.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

1. Provide the length of the proposed corridor and viable alternatives.

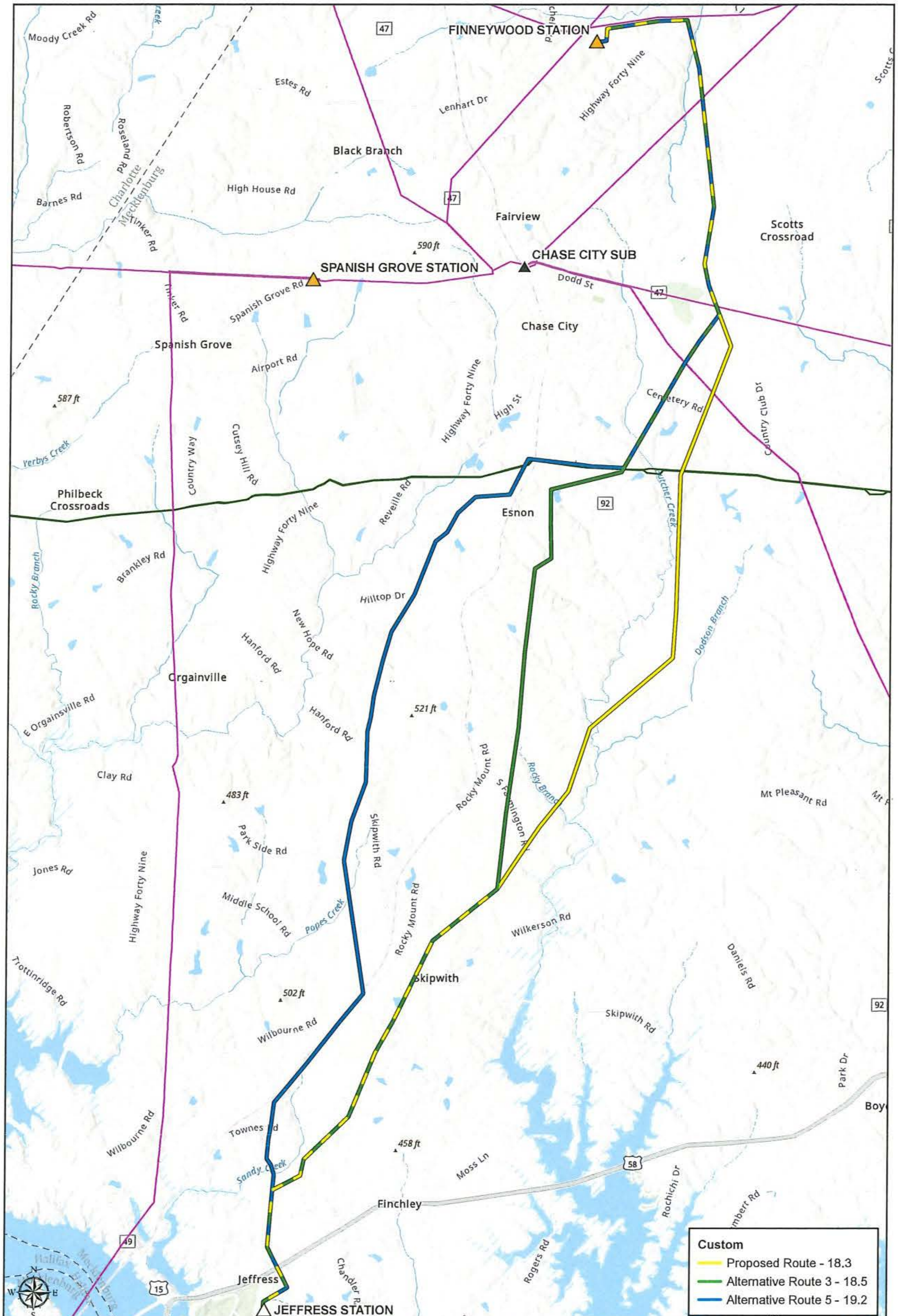
Response: The approximate lengths of the Proposed and Alternative Routes for the Finneywood-Jeffress Lines are as follows:

Proposed Route (Route 4): 18.3 miles

Alternative Route 3: 18.5 miles

Alternative Route 5: 19.2 miles

See Attachment II.A.1. See Section II.A.9 for an explanation of the Company's route selection process, as well as the Environmental Routing Study referenced therein.



▲ Existing Substation
▲ Future Switching Station
△ Station Proposed for Conversion
— Natural Gas Pipeline
— Existing Dominion Transmission Line
— Proposed Route
— Alternative Route 3
— Alternative Route 5

1:66,000 0 0.5 1 Miles

Attachment II.A.1
Route Overview
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

ERM

Dominion Energy

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DRAWN BY: Nicole.Dunn

II. DESCRIPTION OF THE PROPOSED PROJECT

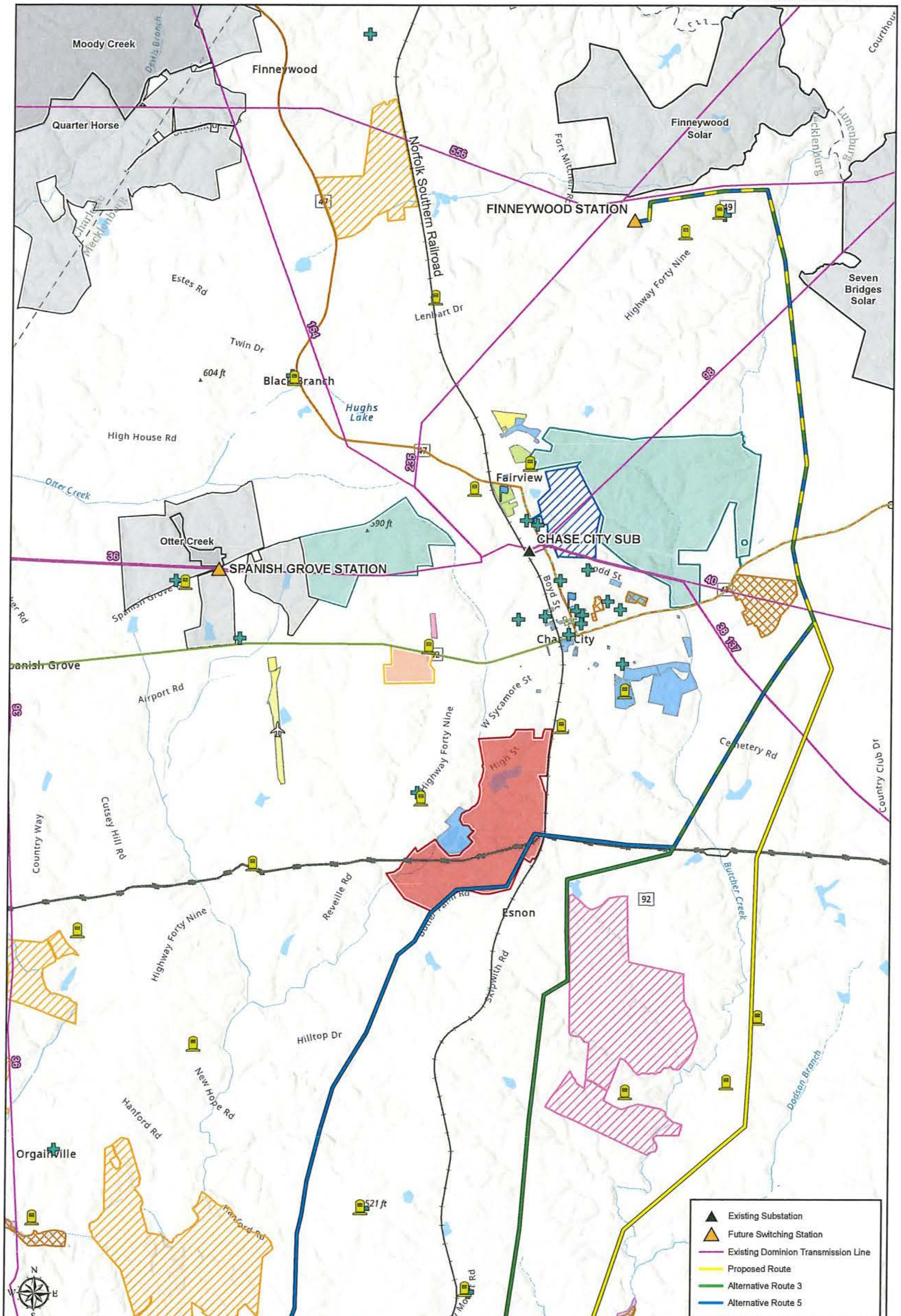
A. Right-of-way ("ROW")

2. Provide color maps of suitable scale (including both general location mapping and more detailed GIS-based constraints mapping) showing the route of the proposed line and its relation to: the facilities of other public utilities that could influence the route selection, highways, streets, parks and recreational areas, scenic and historic areas, open space and conservation easements, schools, convalescent centers, churches, hospitals, burial grounds/cemeteries, airports and other notable structures close to the proposed project. Indicate the existing linear utility facilities that the line is proposed to parallel, such as electric transmission lines, natural gas transmission lines, pipelines, highways, and railroads. Indicate any existing transmission ROW sections that are to be quitclaimed or otherwise relinquished. Additionally, identify the manner in which the Applicant will make available to interested persons, including state and local governmental entities, the digital GIS shape file for the route of the proposed line.

Response: See Attachment II.A.2. No portion of the right-of-way is proposed to be quitclaimed or relinquished as a part of the Project.[22]

Dominion Energy Virginia will make the digital Geographic Information Systems ("GIS") shape file available to interested persons upon request to the Company's legal counsel as listed in the Project Application.

[22] *But see supra,* n. 5. The easements for the temporary 115 kV right-of-way will expire by a date certain, subject to extension by agreement of the parties. Accordingly, they will not be "quitclaimed" or "relinquished." Note that the Proposed Route (Route 4) of the 230 kV Finneywood-Jeffress Lines is collocated in a 135-foot-wide right-of-way with the temporary 115 kV lines for approximately 1.6 miles. After construction and energization of one of the 230 kV lines, the 115 kV bridging lines and structures will be removed and a 15-foot-wide easement containing those 115 kV lines will expire. Once the 115 kV lines are removed, the Company will install the second 230 kV line, resulting in a 120-foot-wide permanent new right-of-way corridor containing the two 230 kV single circuit Finneywood-Jeffress Lines.



Airport	Tobacco Heritage Trail	Solar Site
Cemetery	Ward Burton Wildlife Foundation	Municipality Owned Land
School	Blue Ridge Land Conservancy	City Owned Land
Place of Worship	Virginia Outdoors Foundation Easement	County Owned Land
Railroad	Recreation Area	State Owned Land
Natural Gas Pipeline	Planned Development	USACE Owned Land
Birding and Wildlife Trail	Proposed Residential	
Scenic Byway	Proposed Solar Site	

1:45,000 — 0 0.5 1 Miles

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Attachment II.A.2
Constraints Map
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

Dominion Energy

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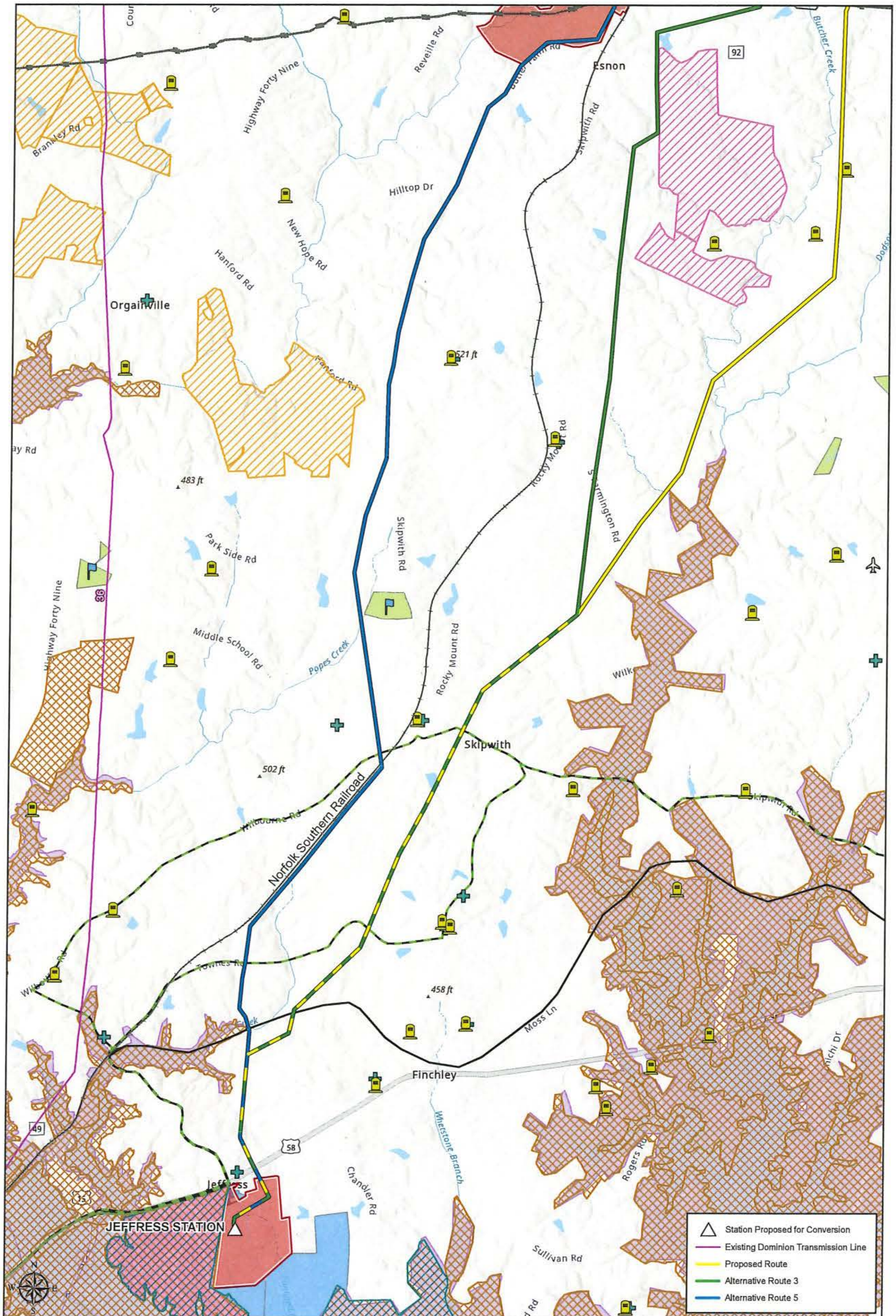

Airport	State Proposed Trail	Occoneechee State Park
Cemetery	State Trail	Planned Development
School	Birding and Wildlife Trail	City Owned Land
Place of Worship	Ward Burton Wildlife Foundation	County Owned Land
Railroad	Virginia Outdoors Foundation Easement	State Owned Land
Natural Gas Pipeline	Recreation Area	USACE Owned Land

1:45,000 0 0.5 1 Miles

ERM

Attachment II.A.2
Constraints Map
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

Dominion Energy

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II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

3. Provide a separate color map of a suitable scale showing all the Applicant's transmission line ROWs, either existing or proposed, in the vicinity of the proposed project.

Response: See Attachment I.G.1.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

4. To the extent the proposed route is not entirely within existing ROW, explain why existing ROW cannot adequately service the needs of the Applicant.

Response: There is no existing Company-owned permanent right-of-way that serves the converted 230 kV Jeffress 230 kV Station.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

5. Provide drawings of the ROW cross section showing typical transmission line structure placements referenced to the edge of the ROW. These drawings should include:

a. ROW width for each cross section drawing;

b. Lateral distance between the conductors and edge of ROW;

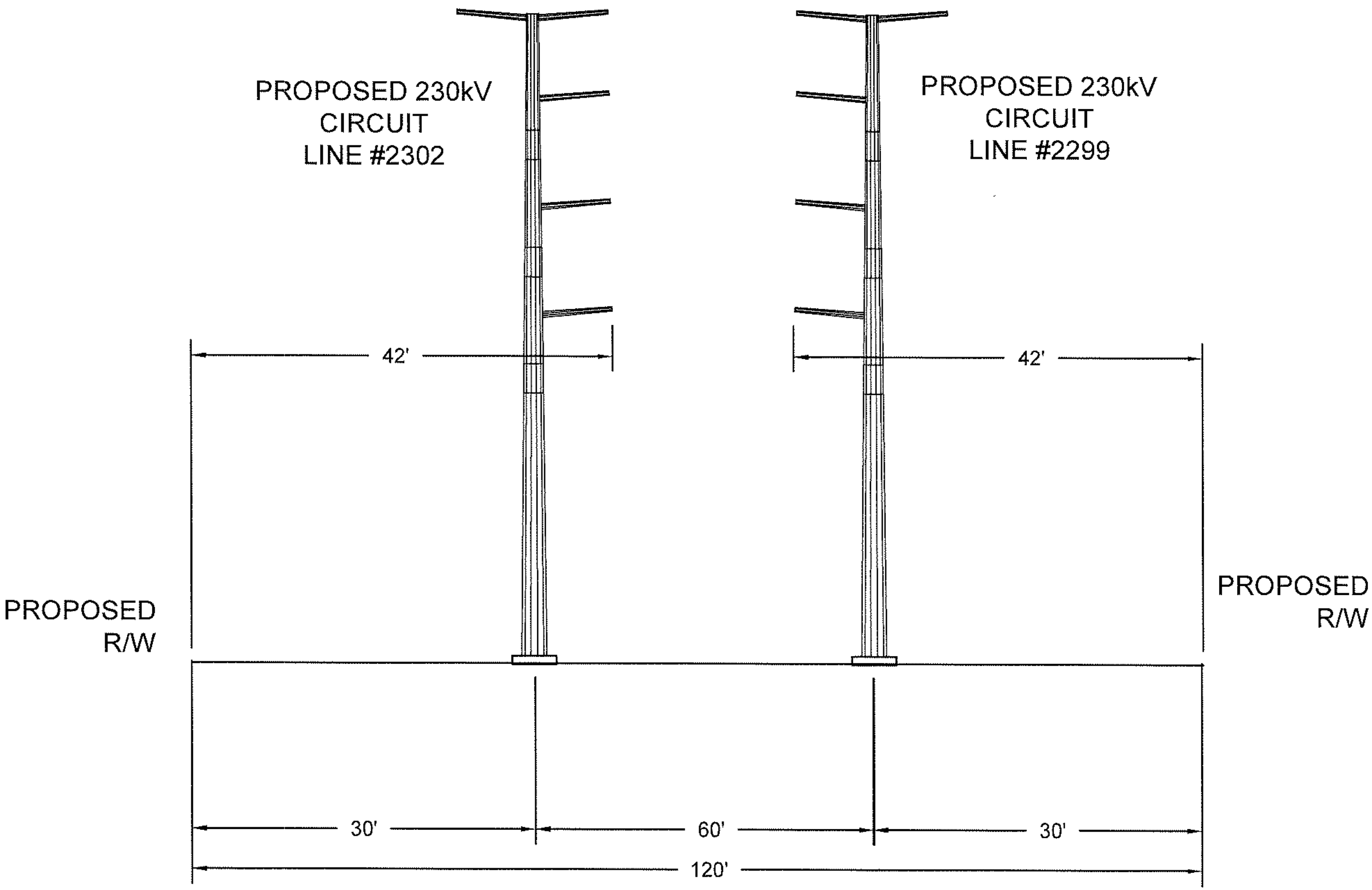
c. Existing utility facilities on the ROW; and

d. For lines being rebuilt in existing ROW, provide all of the above (i) as it currently exists, and (ii) as it will exist at the conclusion of the proposed project.

Response: See Attachments II.A.5.i-ii.

For additional information on the structures, see Section II.B.3.

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

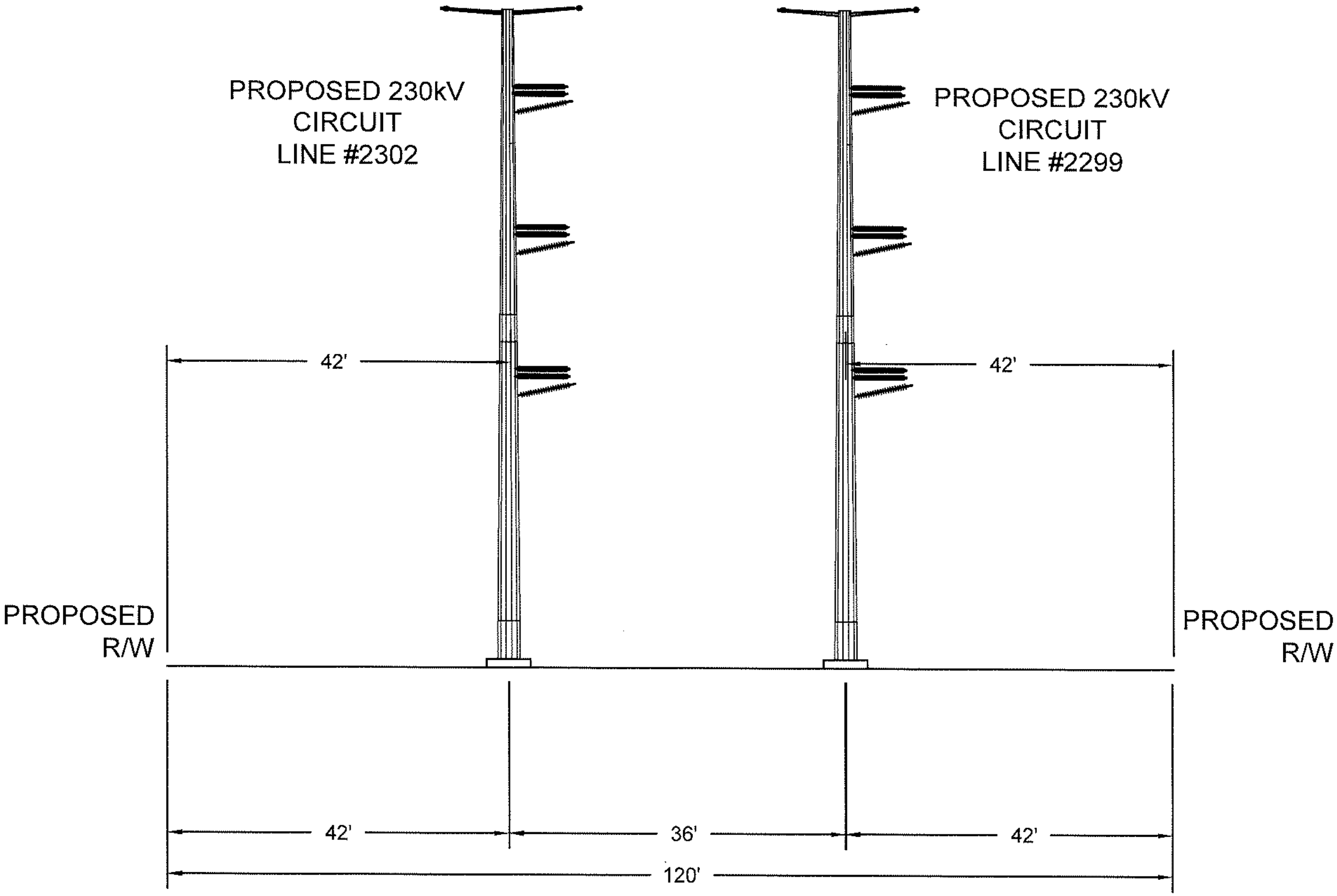


TYPICAL RIGHT OF WAY LOOKING TOWARD FINNEYWOOD

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

Attachment II.A.5.i

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



TYPICAL RIGHT OF WAY LOOKING TOWARD FINNEYWOOD

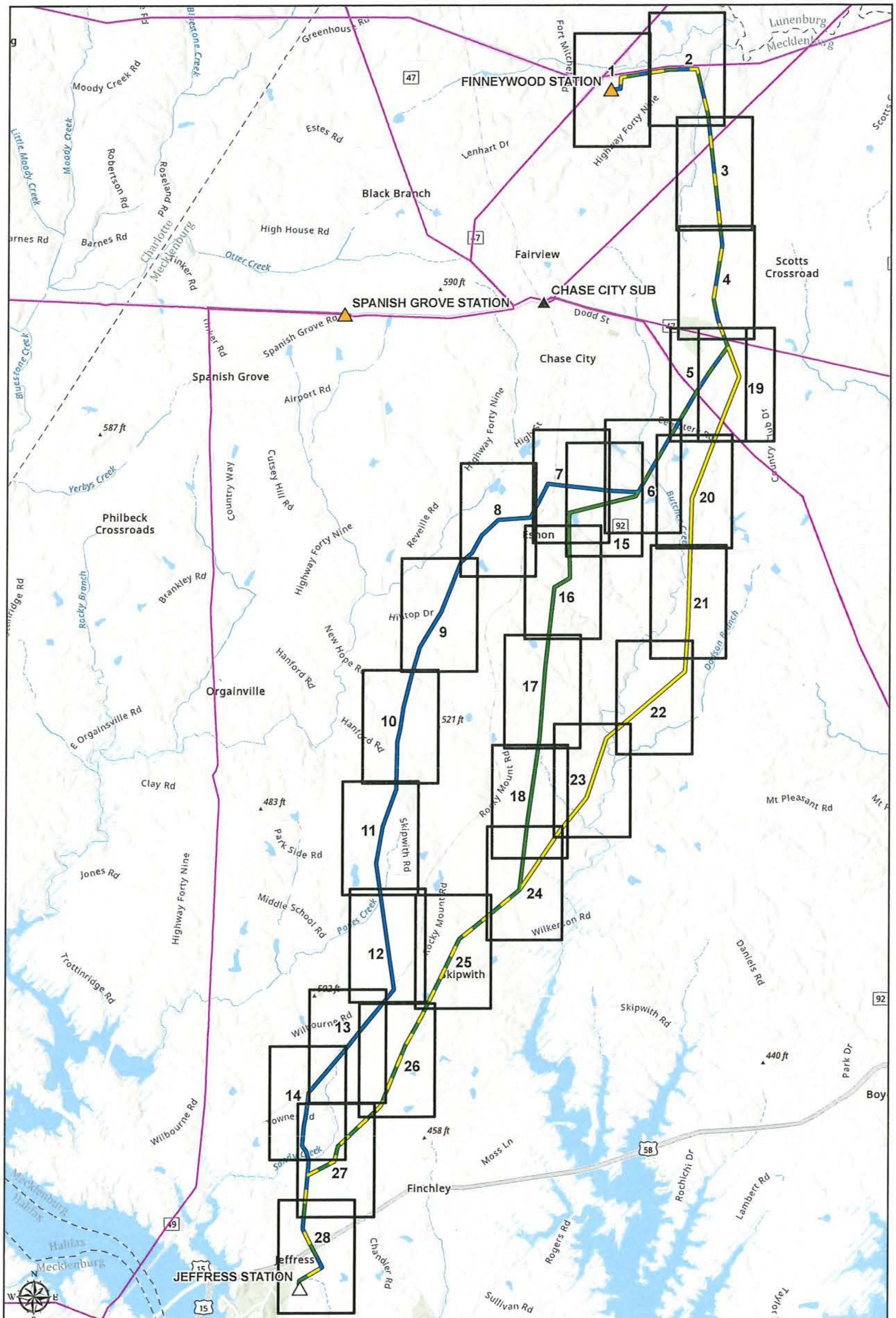
NOTE: INFORMATION CONTAINTED ON DRAWING IS CONSIDERED PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL DESIGN

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

6. Detail what portions of the ROW are subject to existing easements and over what portions new easements will be needed.

Response: As discussed in Section II.A.4, there is no existing Company-owned permanent right-of-way that serves the Company's converted Jeffress 230 kV Station. While the Proposed and Alternative Routes each will parallel the 150-foot-wide right-of-way of the Company's existing Clover-Rawlings Line #556 for approximately 0.9 mile, the Company currently does not anticipate that any right-of-way sharing will be feasible. See Attachment II.A.6.



▲ Existing Substation	Proposed Route
Future Switching Station	Alternative Route 3
△ Station Proposed for Conversion	Alternative Route 5
Existing Dominion Transmission Line	Index Page

1:70,000 0 0.5 1 Miles

Attachment II.A.6 Index
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
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Dominion Energy Virginia
Mecklenburg County, Virginia

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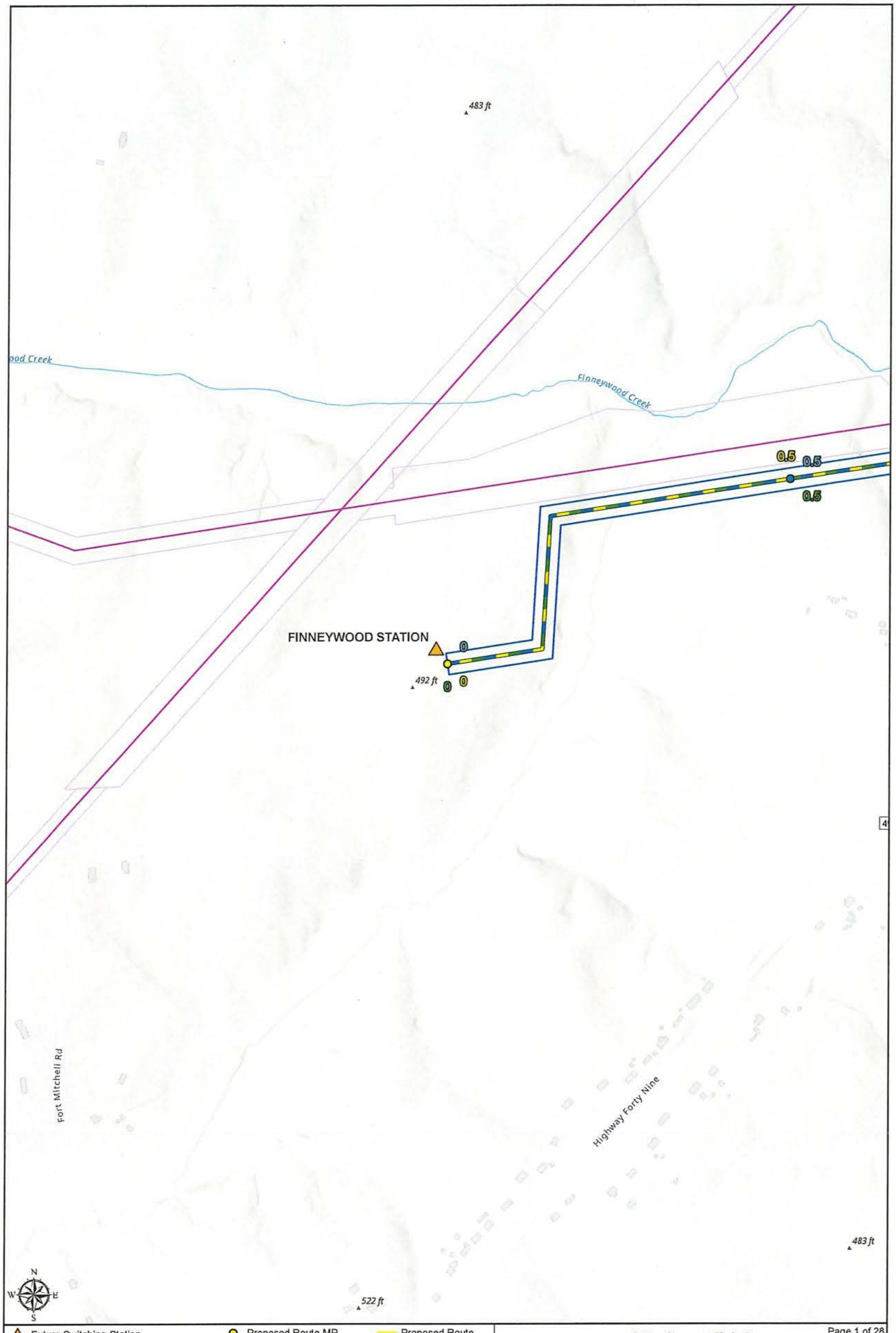

Future Switching Station
Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Right-of-Way Type
Proposed Right-of-Way
Proposed Route MP
Alternative Route 3 MP
Alternative Route 5 MP
Proposed Route
Alternative Route 3
Alternative Route 5

1:6,000 0 250 500 US Feet

ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

Dominion Energy

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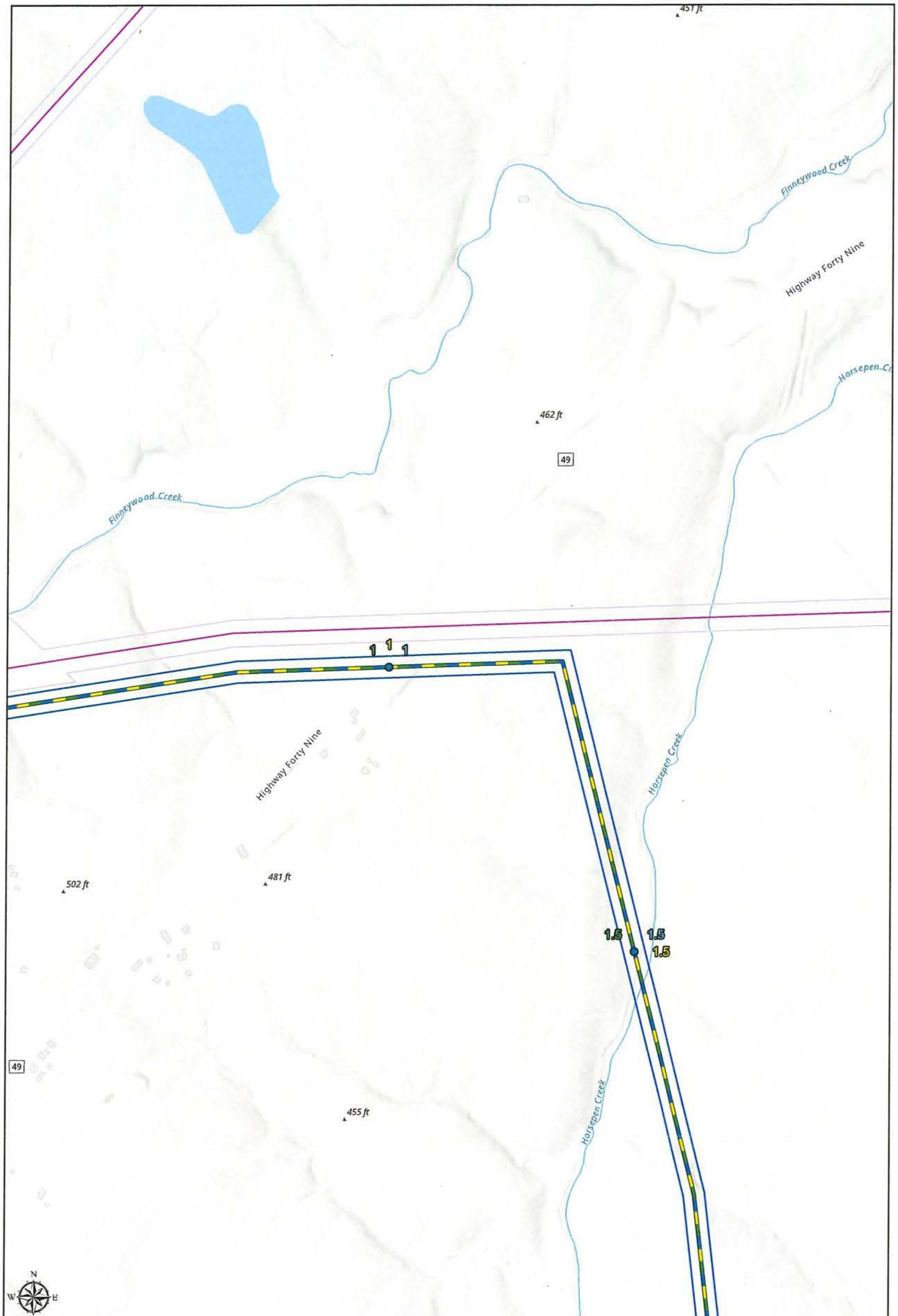

Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Right-of-Way Type
Proposed Right-of-Way

Proposed Route MP
Alternative Route 3 MP
Alternative Route 5 MP

Proposed Route
Alternative Route 3
Alternative Route 5

1:6,000 — 0 250 500 US Feet

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
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Dominion Energy Virginia
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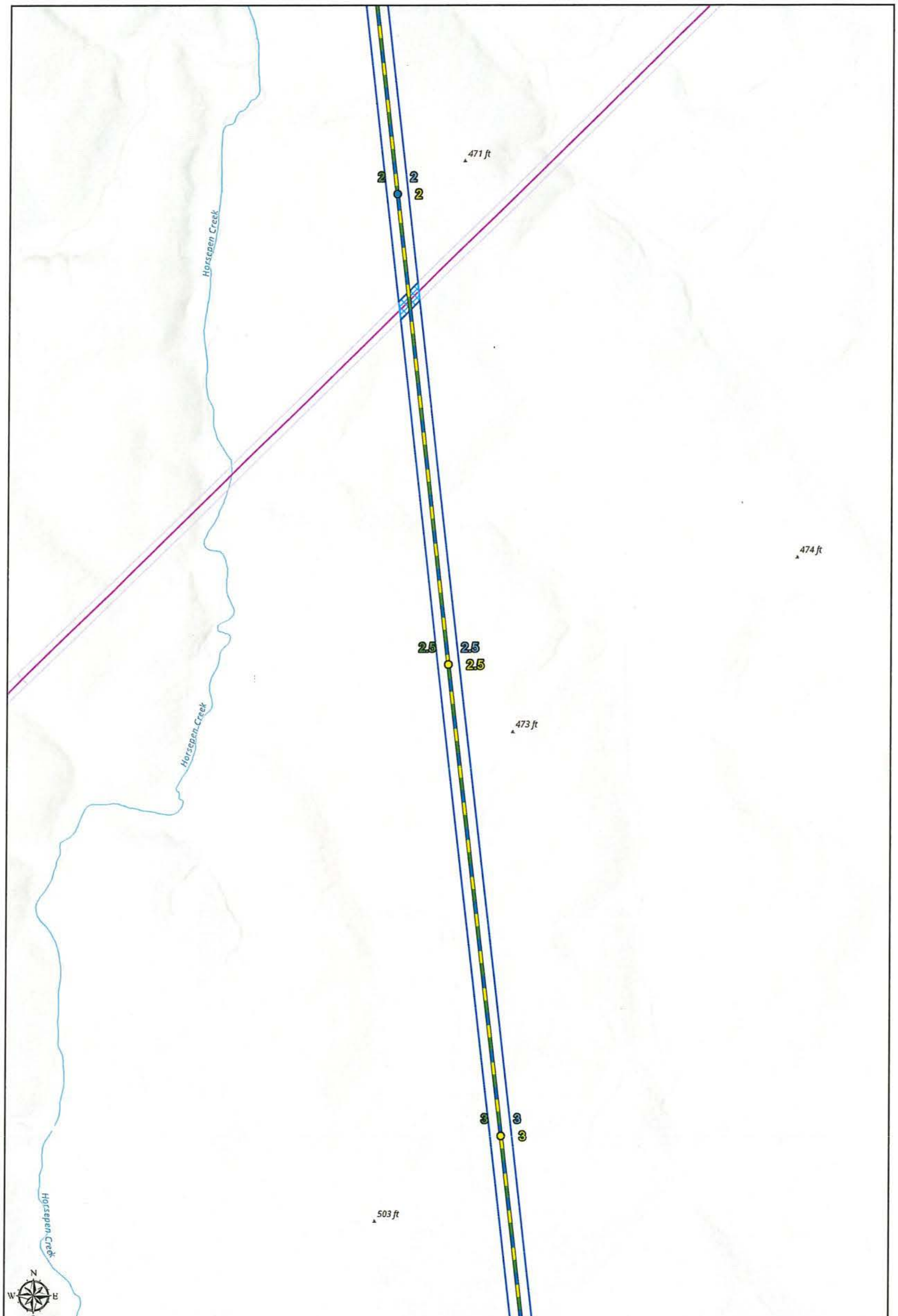

Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Right-of-Way Type
Existing Right-of-Way
Proposed Right-of-Way

Proposed Route MP
Alternative Route 3 MP
Alternative Route 5 MP

Proposed Route
Alternative Route 3
Alternative Route 5

1:6,000 0 250 500 US Feet

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

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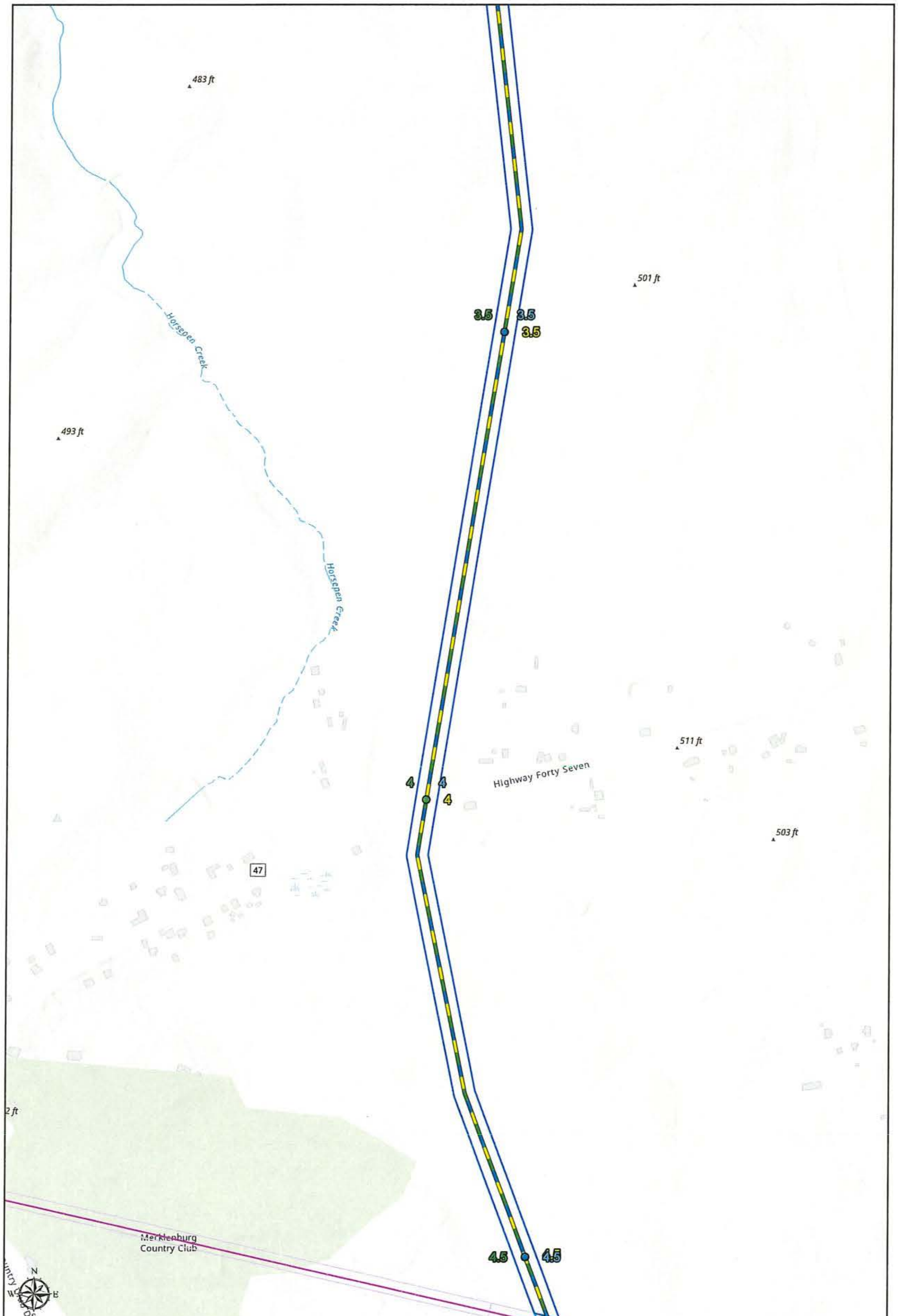

Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Right-of-Way Type
Existing Right-of-Way
Proposed Right-of-Way

Proposed Route MP
Alternative Route 3 MP
Alternative Route 5 MP

Proposed Route
Alternative Route 3
Alternative Route 5

1:6,000 0 250 500 US Feet

ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

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Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Right-of-Way Type
Existing Right-of-Way
Proposed Right-of-Way

Proposed Route MP
Alternative Route 3 MP
Alternative Route 5 MP

Proposed Route
Alternative Route 3
Alternative Route 5

1:6,000
0 250 500 US Feet

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion Project
Dominion Energy Virginia
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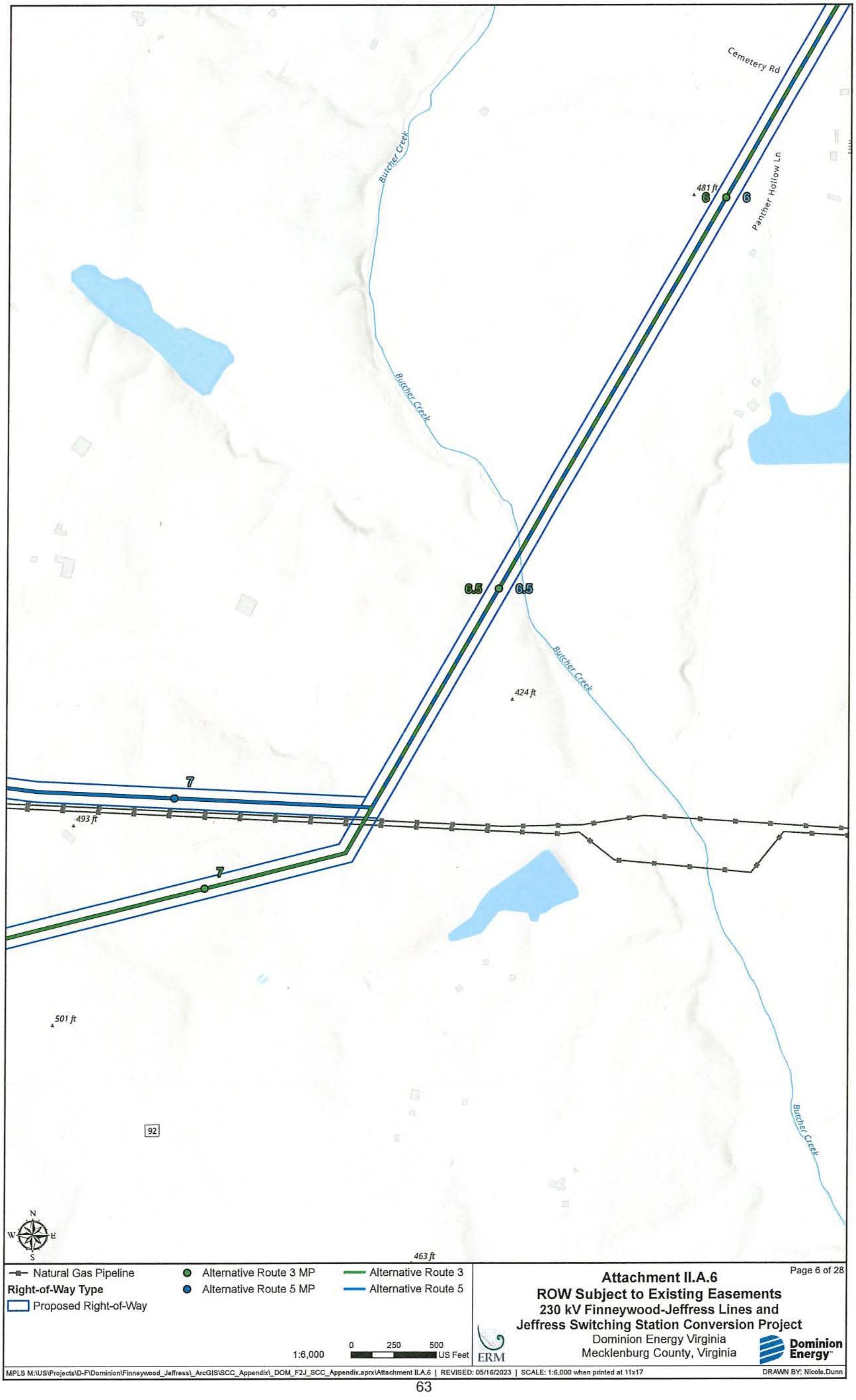

Natural Gas Pipeline

Right-of-Way Type

Proposed Right-of-Way

Alternative Route 3 MP

Alternative Route 5 MP

Alternative Route 3

Alternative Route 5

1:6,000 0 250 500 US Feet

Attachment II.A.6

ROW Subject to Existing Easements

230 kV Finneywood-Jeffress Lines and

Jeffress Switching Station Conversion Project

Dominion Energy Virginia

Mecklenburg County, Virginia

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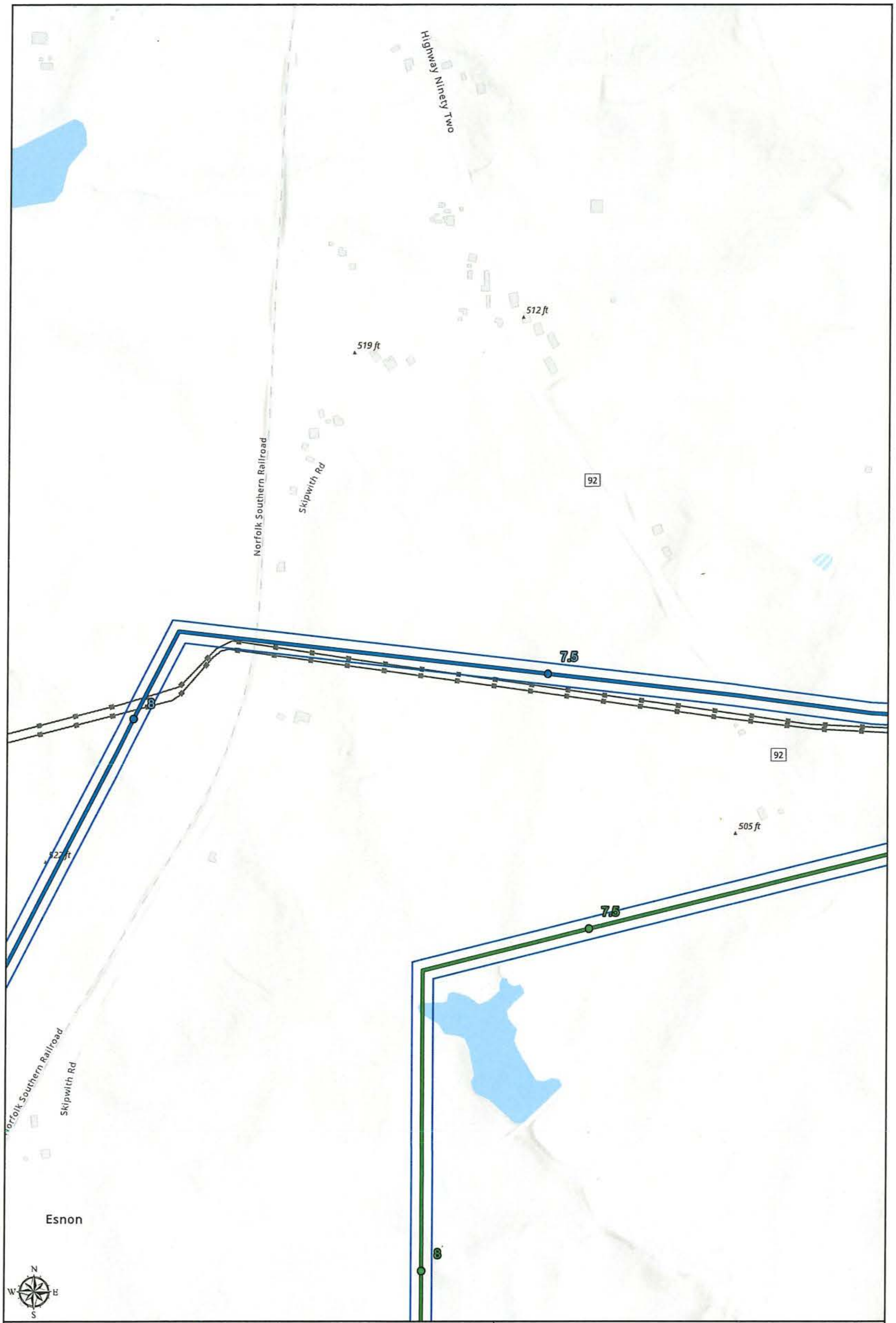

Natural Gas Pipeline
Right-of-Way Type
Proposed Right-of-Way

Alternative Route 3 MP
Alternative Route 5 MP

Alternative Route 3
Alternative Route 5

1:6,000 0 250 500 US Feet

ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
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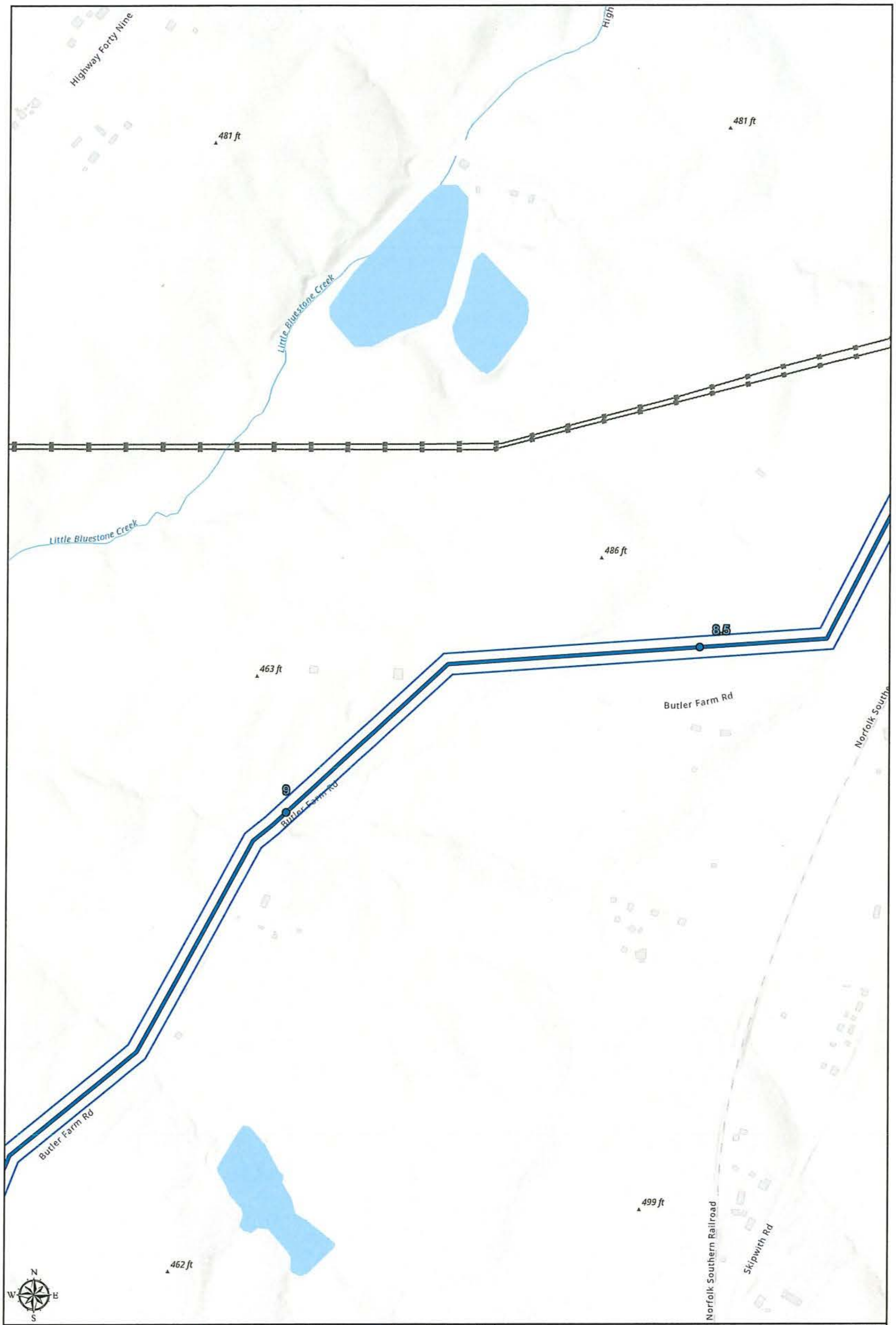

—■— Natural Gas Pipeline
Right-of-Way Type
Proposed Right-of-Way

● Alternative Route 5 MP

— Alternative Route 5

1:6,000 0 250 500 US Feet

ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project

Dominion Energy Virginia
Mecklenburg County, Virginia

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Right-of-Way Type

Proposed Right-of-Way

Alternative Route 5 MP

Alternative Route 5

1:6,000 0 250 500 US Feet

ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion Project
Dominion Energy Virginia
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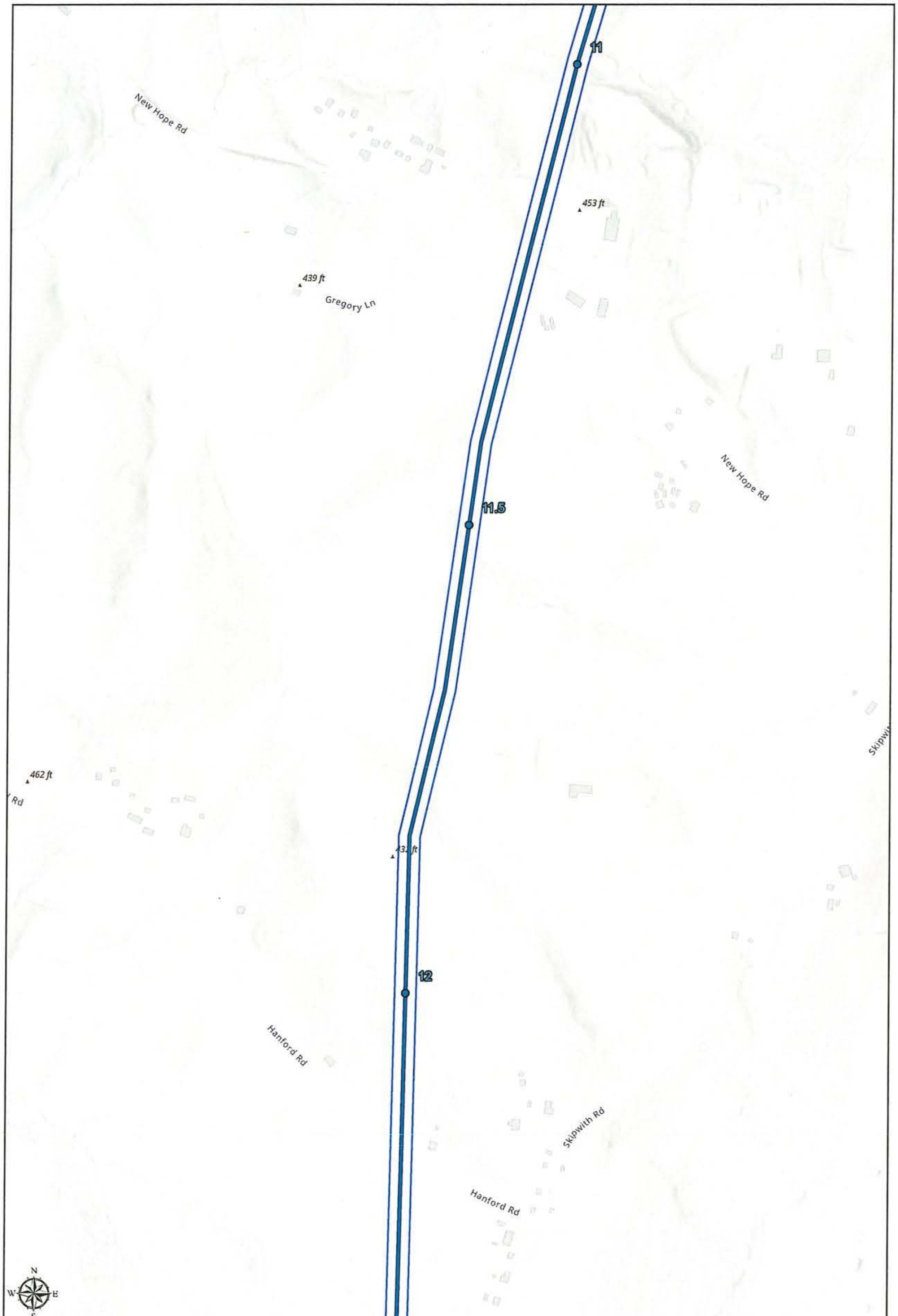

Right-of-Way Type

Proposed Right-of-Way

Alternative Route 5 MP

Alternative Route 5

1:6,000 0 250 500 US Feet

Attachment II.A.6

ROW Subject to Existing Easements

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

Dominion Energy Virginia

Mecklenburg County, Virginia

ERM

Dominion Energy

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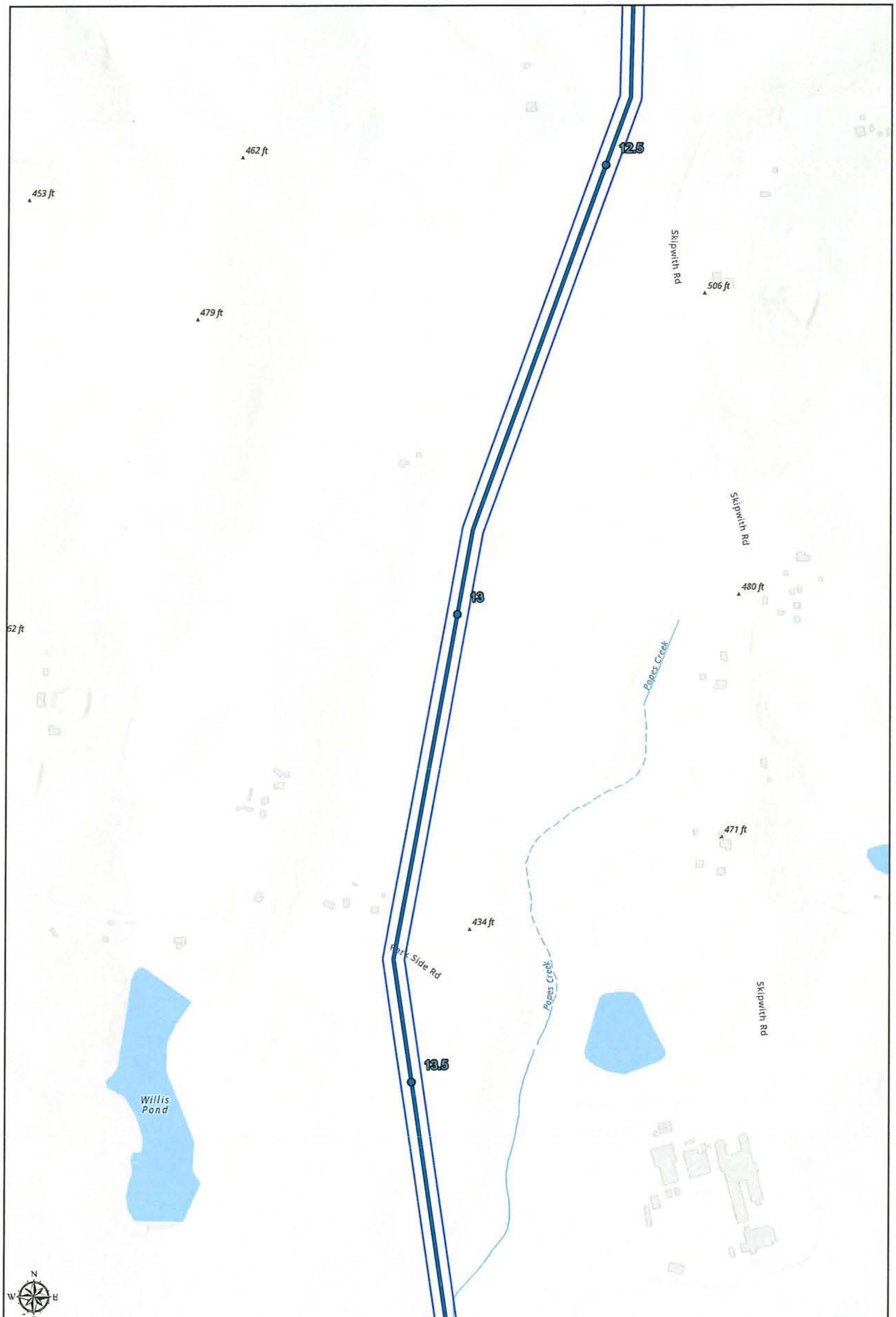

Right-of-Way Type

Proposed Right-of-Way

Alternative Route 5 MP

Alternative Route 5

1:6,000

0 250 500 US Feet

Attachment II.A.6

ROW Subject to Existing Easements

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

Dominion Energy Virginia

Mecklenburg County, Virginia

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Dominion Energy

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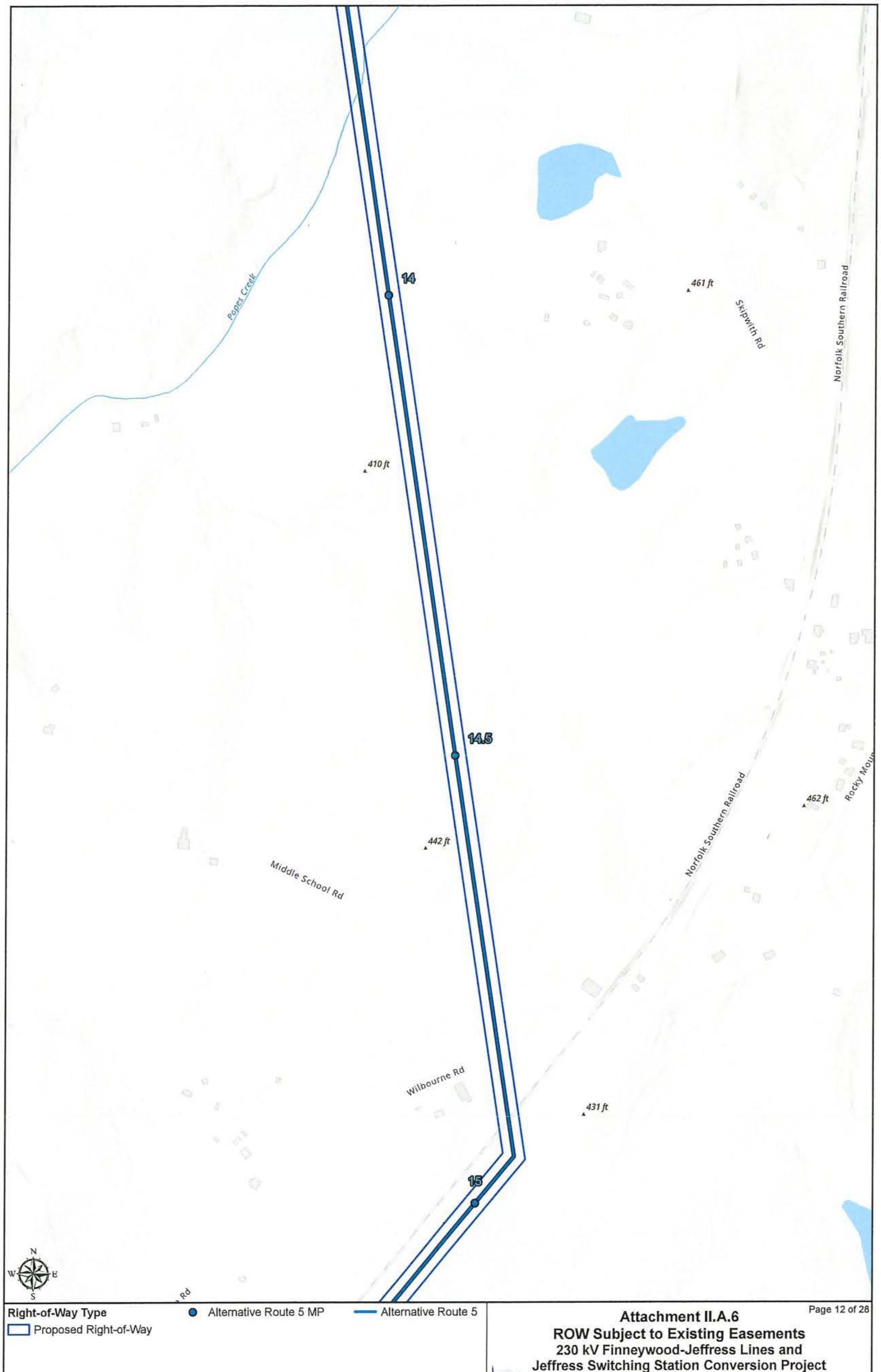

Right-of-Way Type

- Proposed Right-of-Way
- Alternative Route 5 MP
- Alternative Route 5

1:6,000 — 0, 250, 500 US Feet

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project

Dominion Energy Virginia
Mecklenburg County, Virginia

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Dominion Energy

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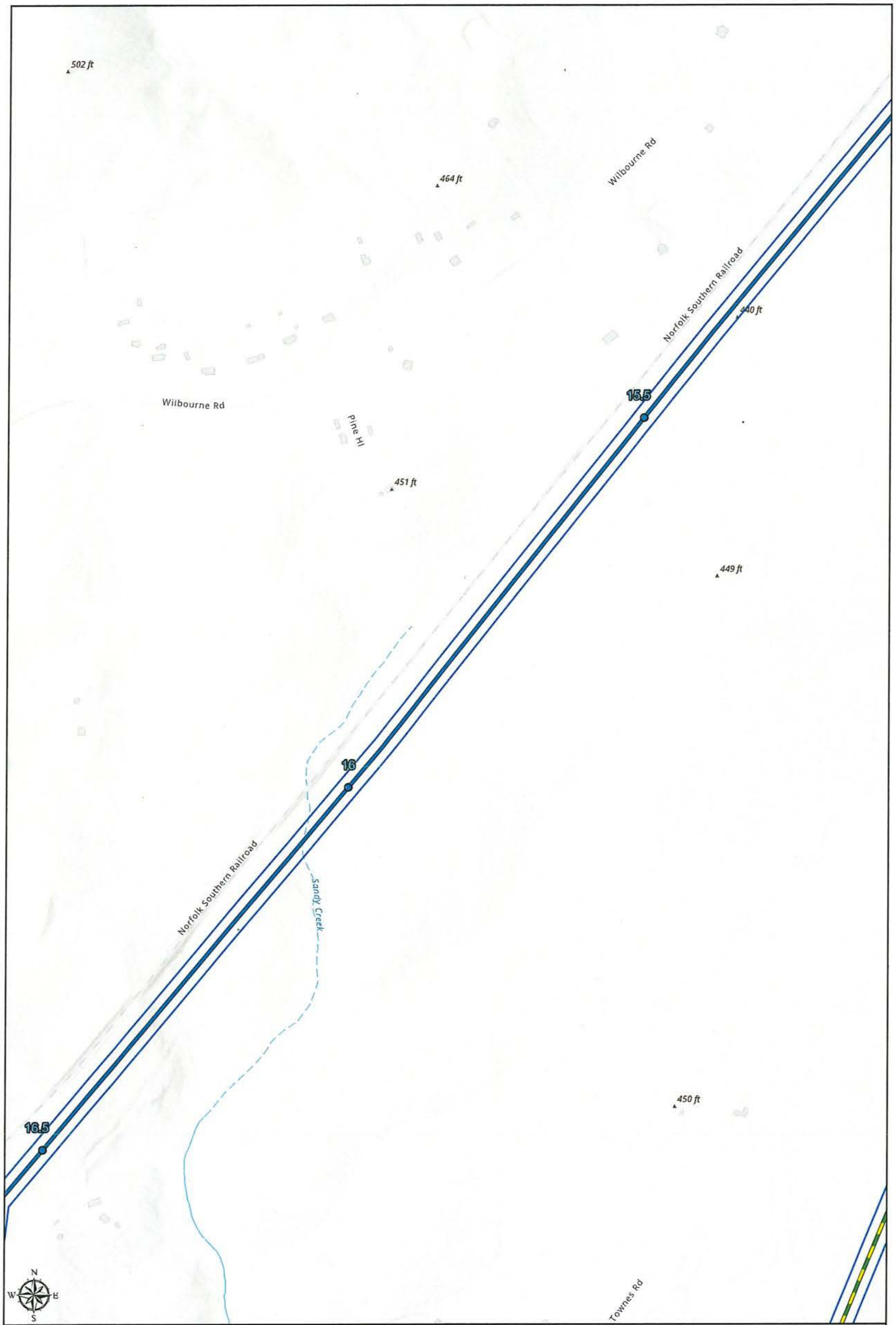

Right-of-Way Type

Proposed Right-of-Way

Alternative Route 5 MP

Proposed Route

Alternative Route 3

Alternative Route 5

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ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

Dominion Energy

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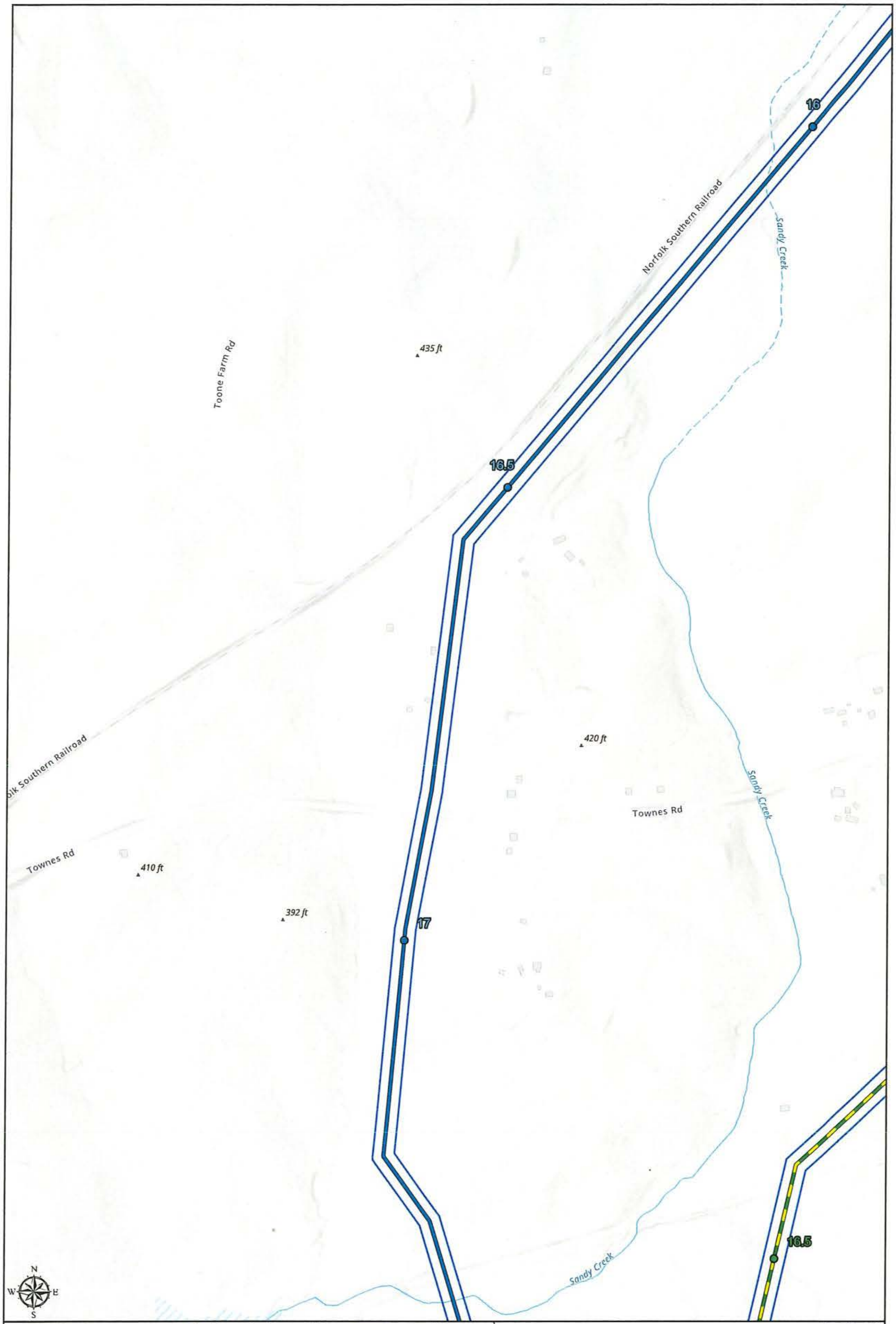

Right-of-Way Type
Proposed Right-of-Way

Alternative Route 3 MP
Alternative Route 5 MP

Proposed Route
Alternative Route 3
Alternative Route 5

1:6,000
0 250 500 US Feet

ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion Project
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—■— Natural Gas Pipeline
Right-of-Way Type
Proposed Right-of-Way

● Alternative Route 3 MP
● Alternative Route 5 MP

— Alternative Route 3
— Alternative Route 5

1:6,000
0 250 500 US Feet

Attachment II.A.6
ROW Subject to Existing Easements
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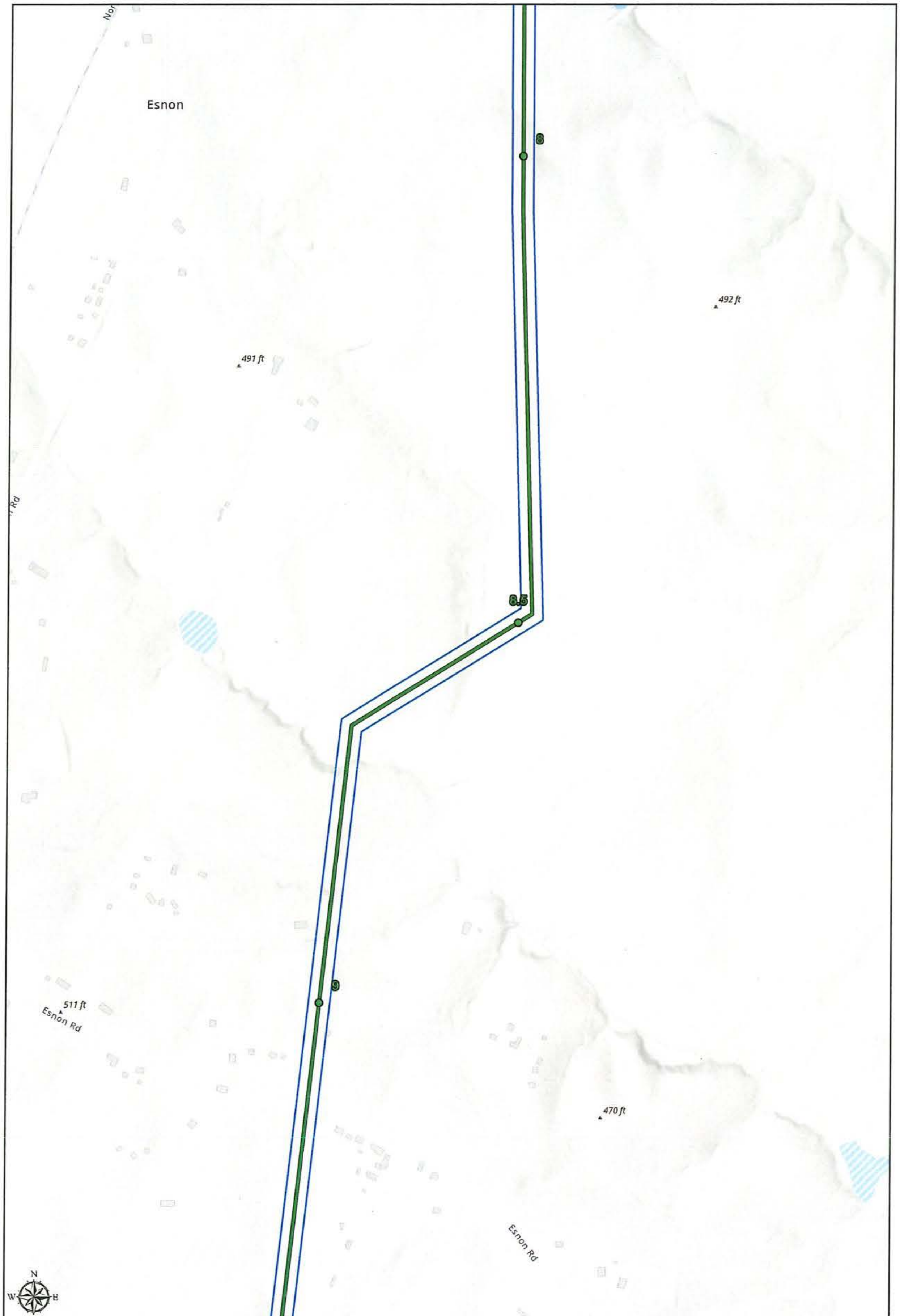

Right-of-Way Type

Proposed Right-of-Way

Alternative Route 3 MP

Alternative Route 3

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0 250 500 US Feet

Attachment II.A.6

ROW Subject to Existing Easements

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

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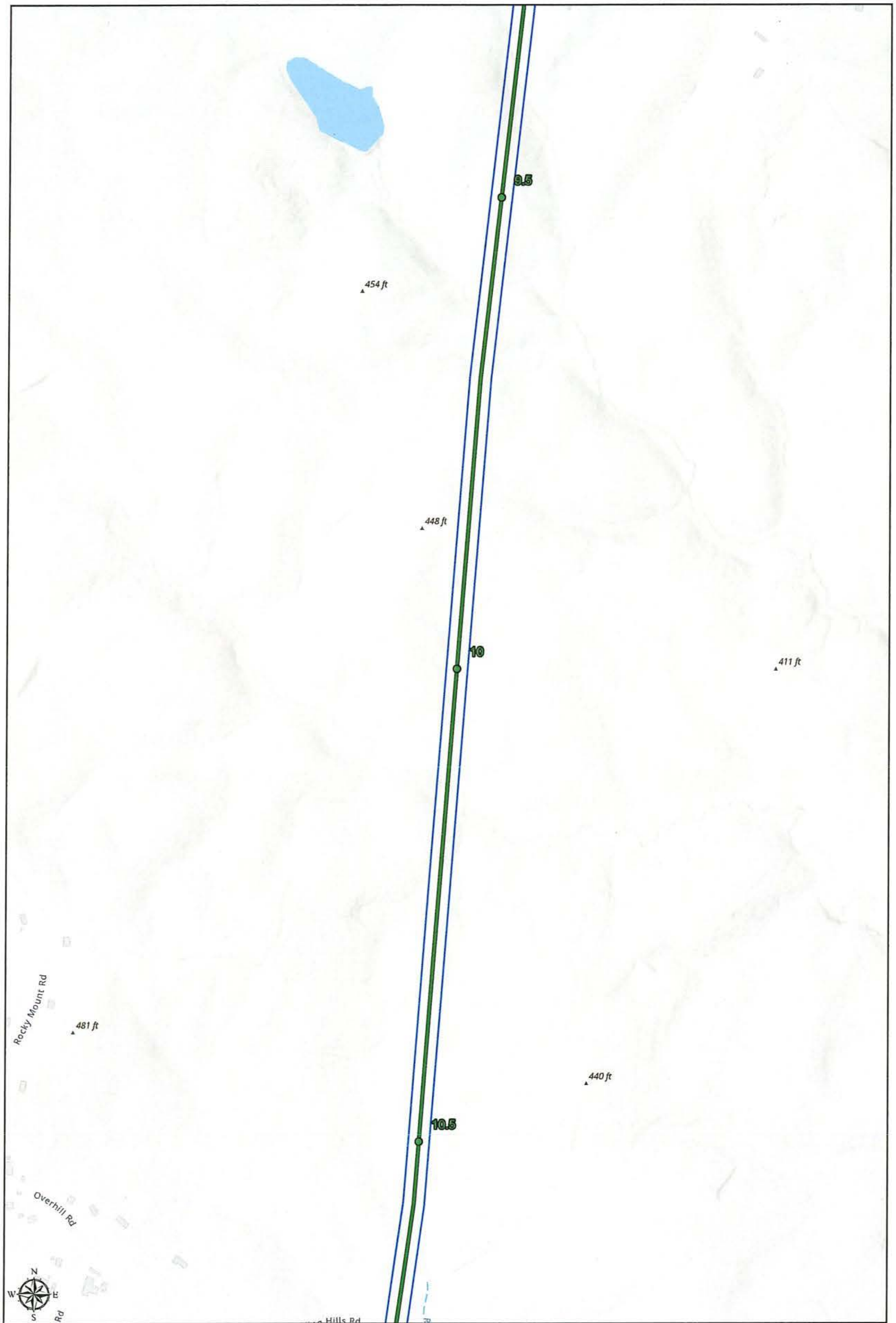

Right-of-Way Type

Proposed Right-of-Way

Alternative Route 3 MP

Alternative Route 3

1:6,000

0 250 500 US Feet

ERM

Attachment II.A.6

ROW Subject to Existing Easements

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

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Right-of-Way Type

- Proposed Right-of-Way
- Proposed Route MP
- Alternative Route 3 MP
- Proposed Route
- Alternative Route 3

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Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
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Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Right-of-Way Type
Existing Right-of-Way
Proposed Right-of-Way

Proposed Route MP
Alternative Route 3 MP
Alternative Route 5 MP

Proposed Route
Alternative Route 3
Alternative Route 5

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Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
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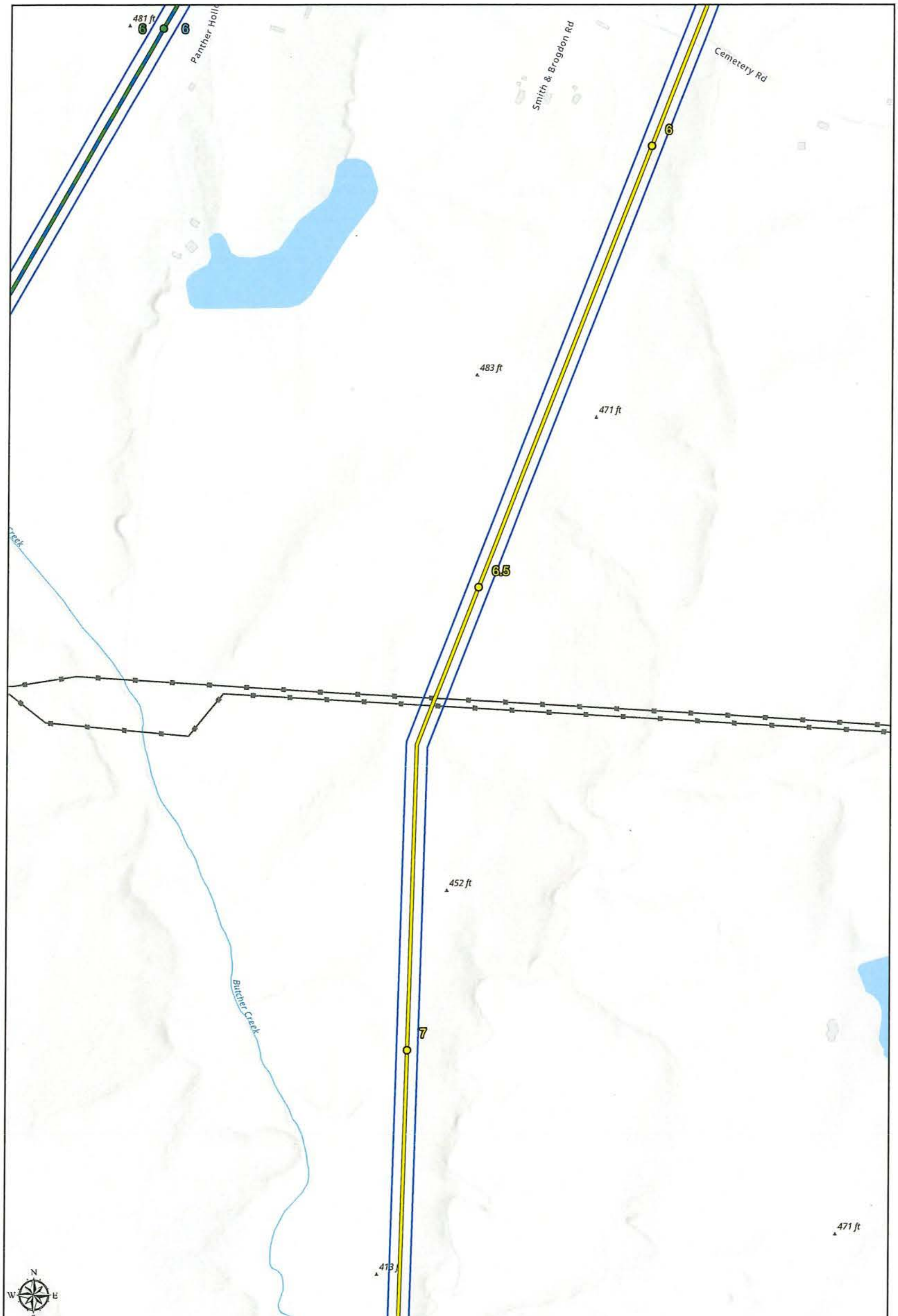

Natural Gas Pipeline

Right-of-Way Type

Proposed Right-of-Way

Proposed Route MP

Alternative Route 3 MP

Alternative Route 5 MP

Proposed Route

Alternative Route 3

Alternative Route 5

1:6,000

0 250 500 US Feet

Attachment II.A.6

ROW Subject to Existing Easements

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

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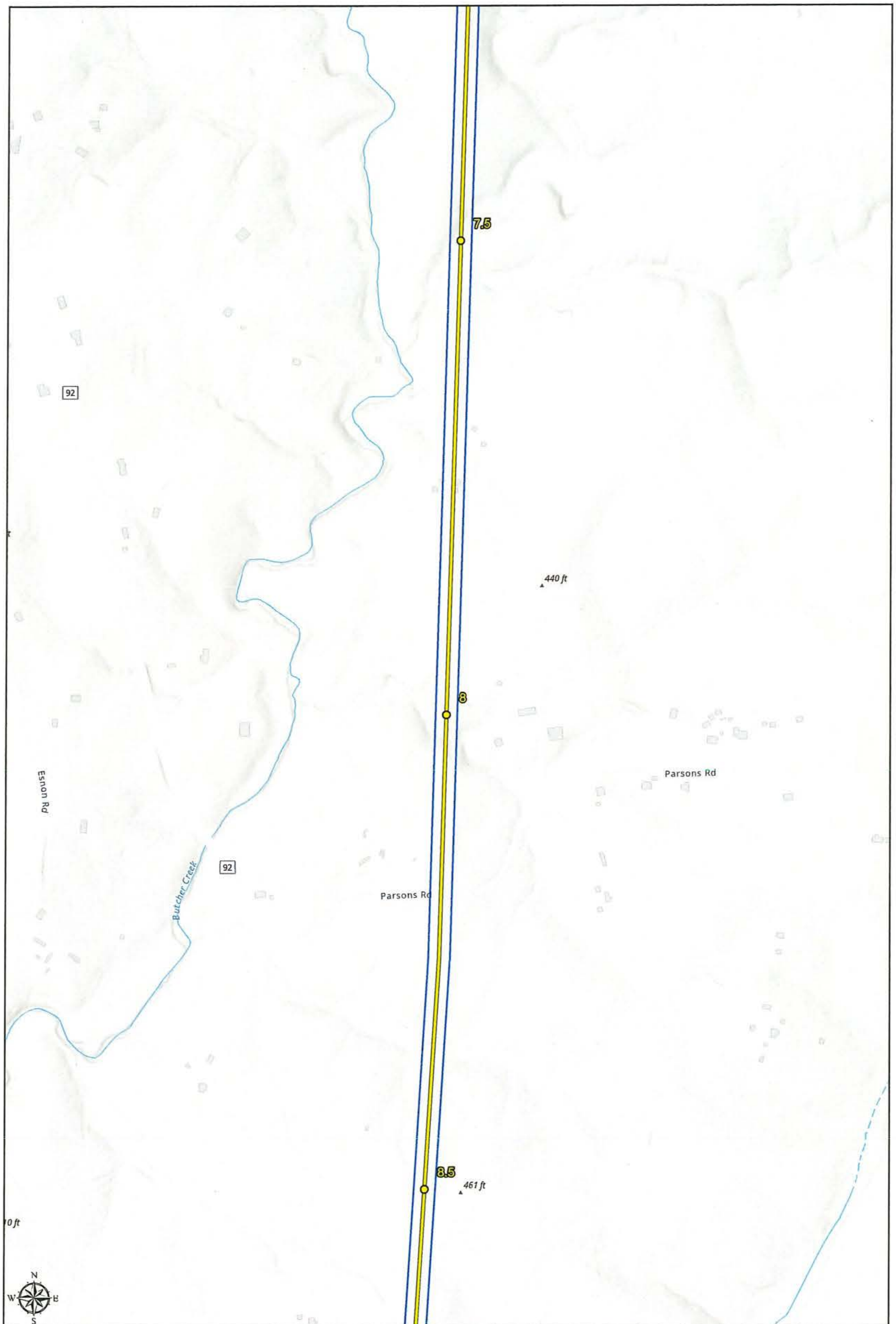

Right-of-Way Type
Proposed Right-of-Way
Proposed Route MP
Proposed Route

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0 250 500 US Feet

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
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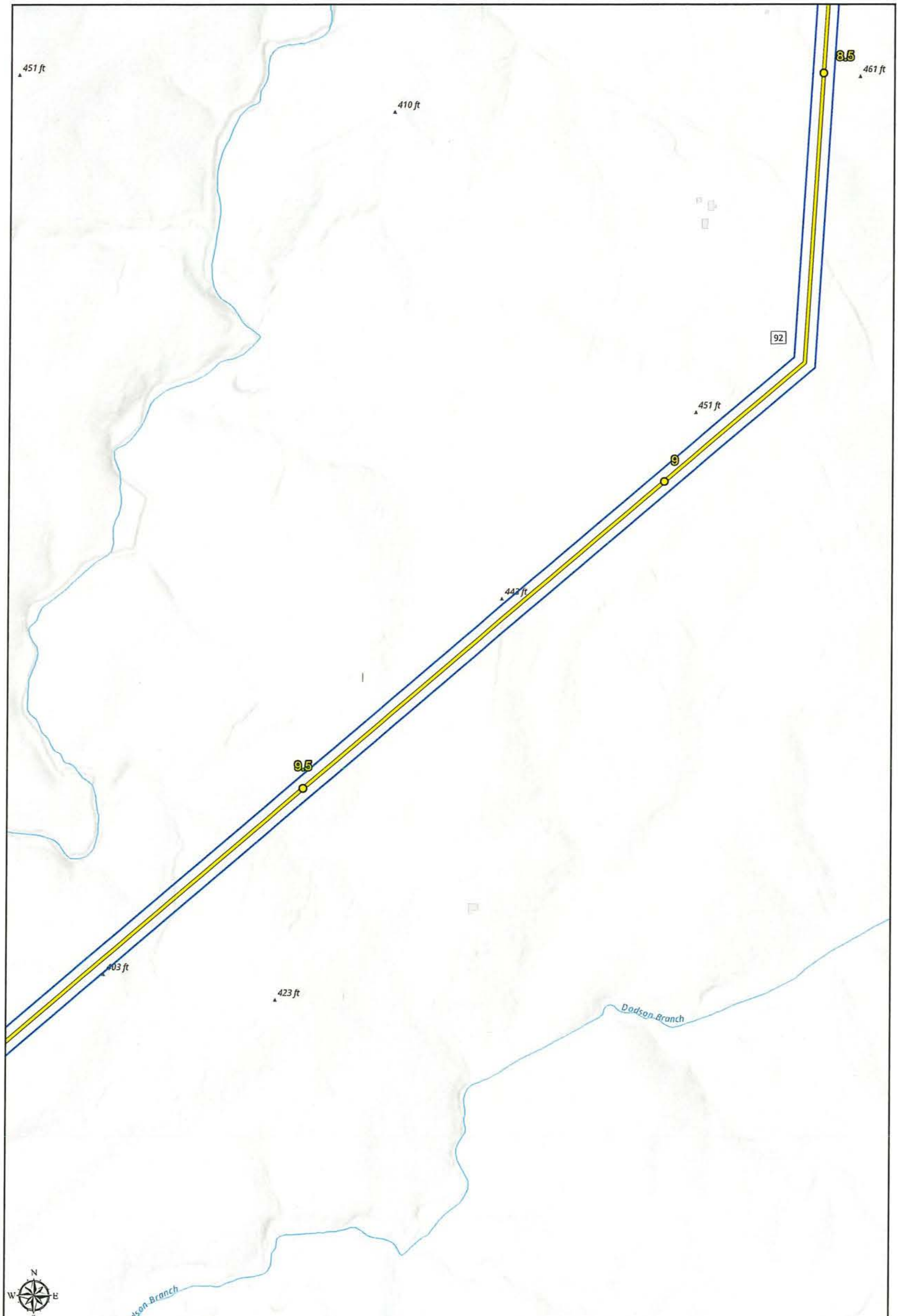

Right-of-Way Type

Proposed Right-of-Way

Proposed Route MP

Proposed Route

1:6,000

0 250 500 US Feet

ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
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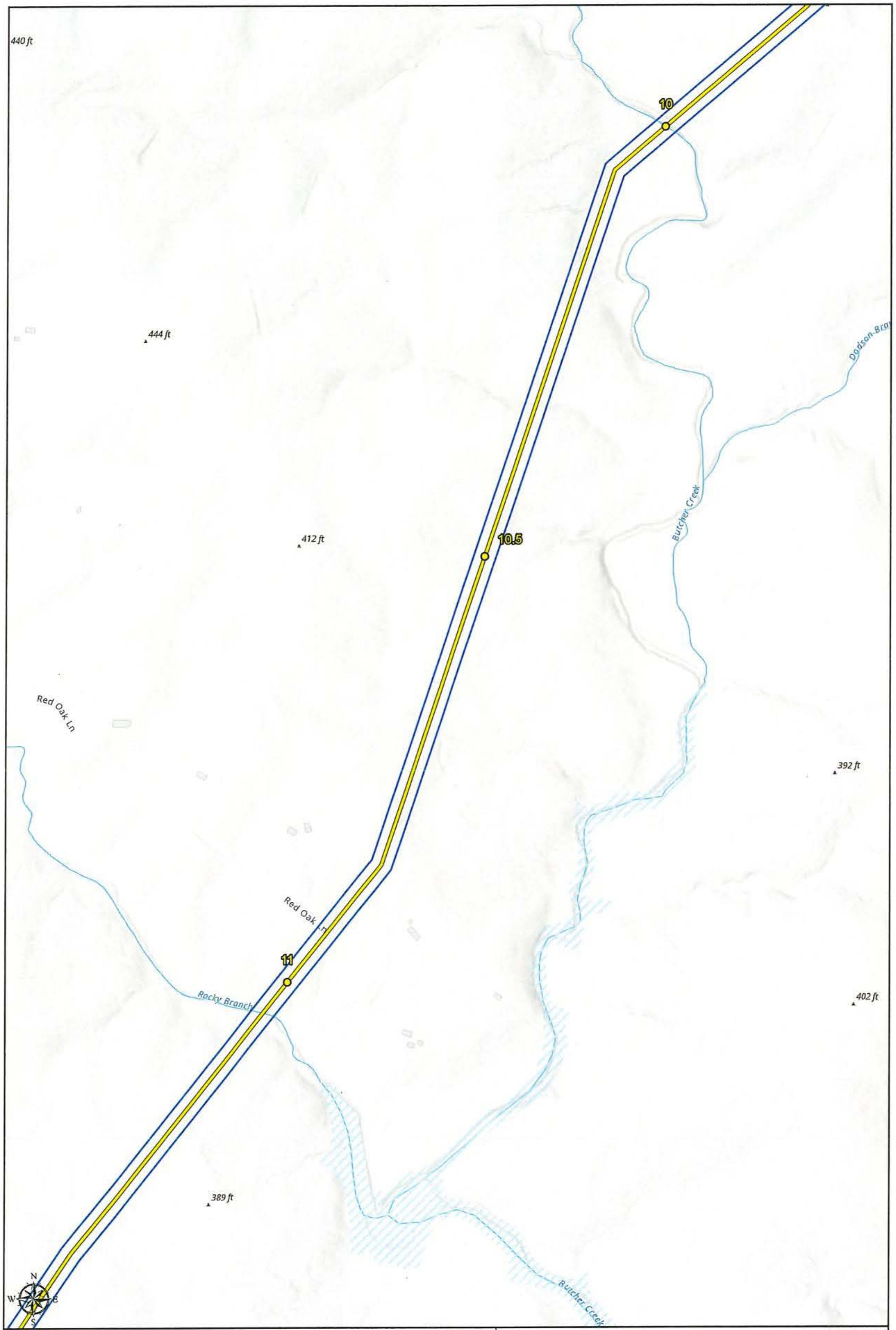

Right-of-Way Type
Proposed Right-of-Way

Proposed Route MP

Proposed Route

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0 250 500 US Feet

ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
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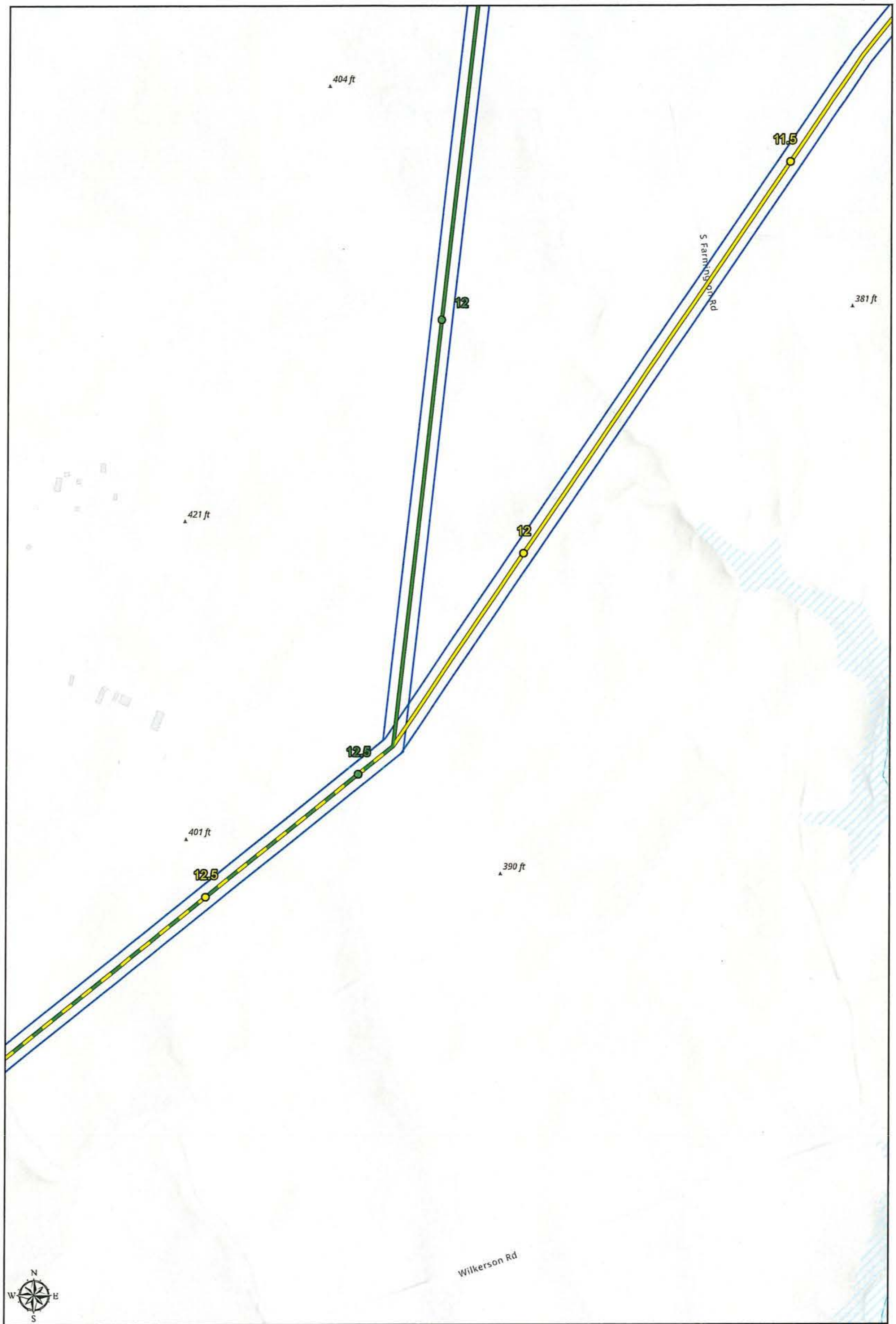

Right-of-Way Type

Proposed Right-of-Way

Proposed Route MP

Alternative Route 3 MP

Proposed Route

Alternative Route 3

1:6,000 0 250 500 US Feet

ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
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Right-of-Way Type

Proposed Right-of-Way

Proposed Route MP

Alternative Route 3 MP

Proposed Route

Alternative Route 3

1:6,000

0 250 500 US Feet

ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and
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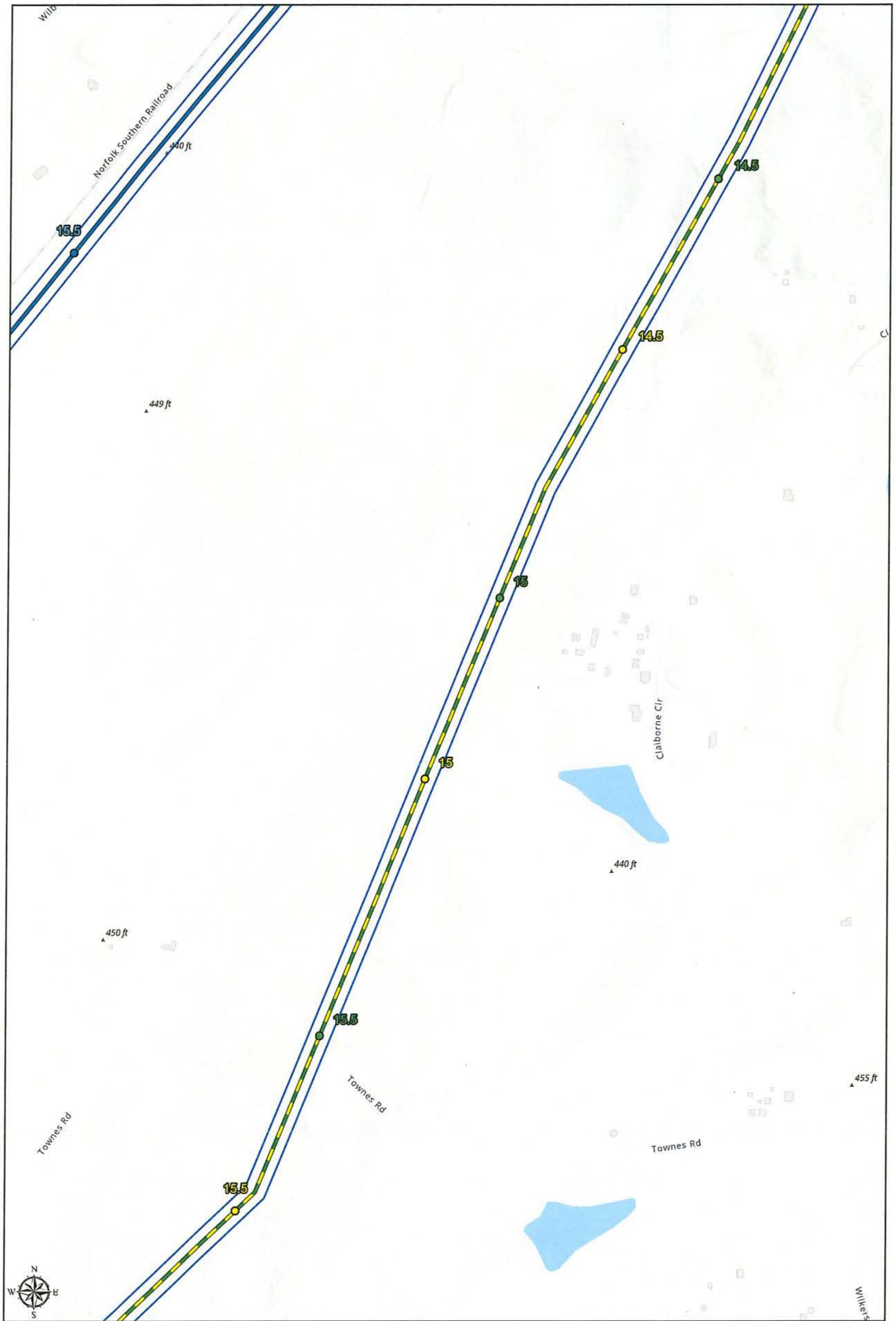

Right-of-Way Type
Proposed Right-of-Way

Proposed Route MP
Alternative Route 3 MP
Alternative Route 5 MP

Proposed Route
Alternative Route 3
Alternative Route 5

1:6,000 0 250 500 US Feet

ERM

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
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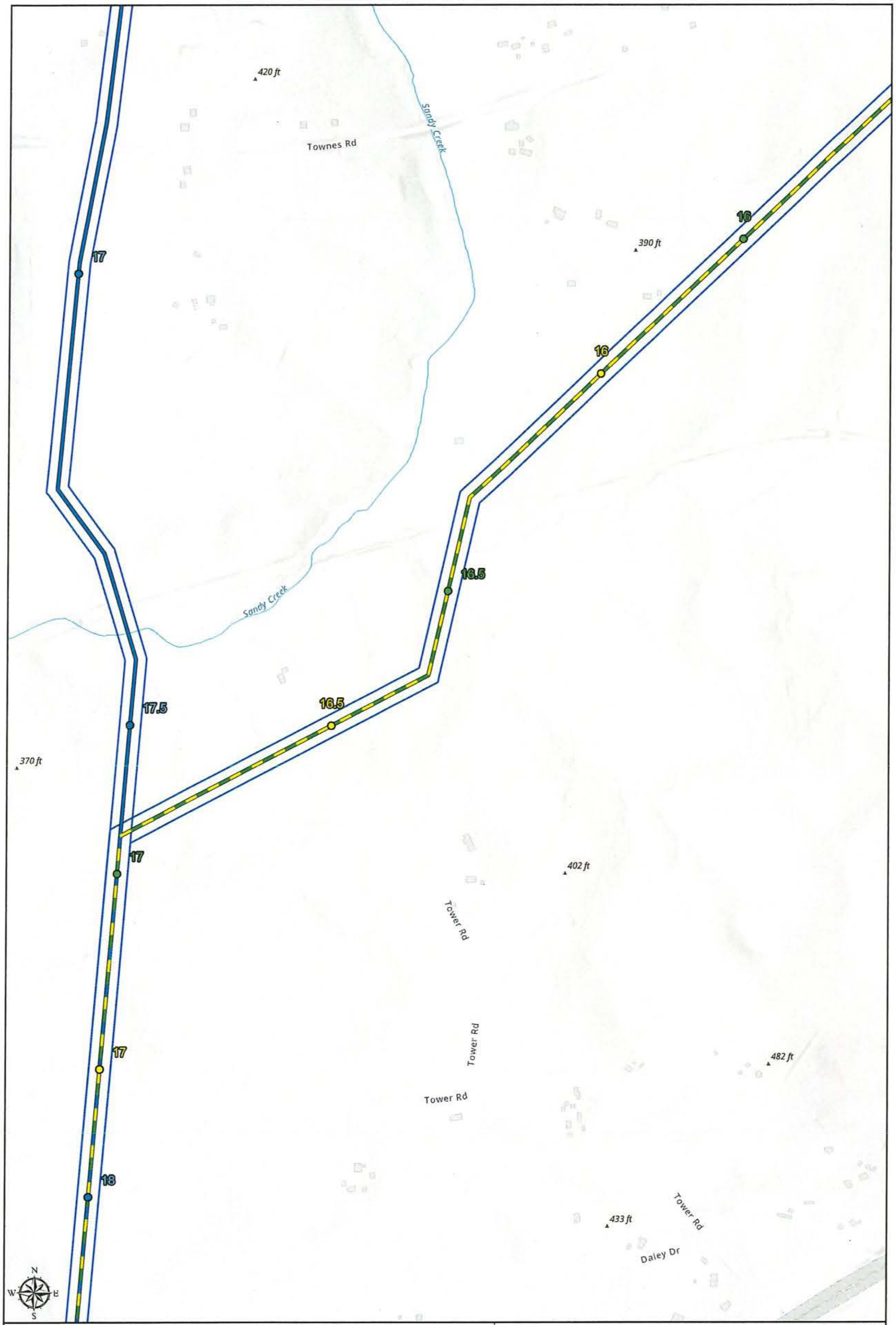

Right-of-Way Type
Proposed Right-of-Way

Proposed Route MP
Alternative Route 3 MP
Alternative Route 5 MP

Proposed Route
Alternative Route 3
Alternative Route 5

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0 250 500 US Feet

Attachment II.A.6
ROW Subject to Existing Easements
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
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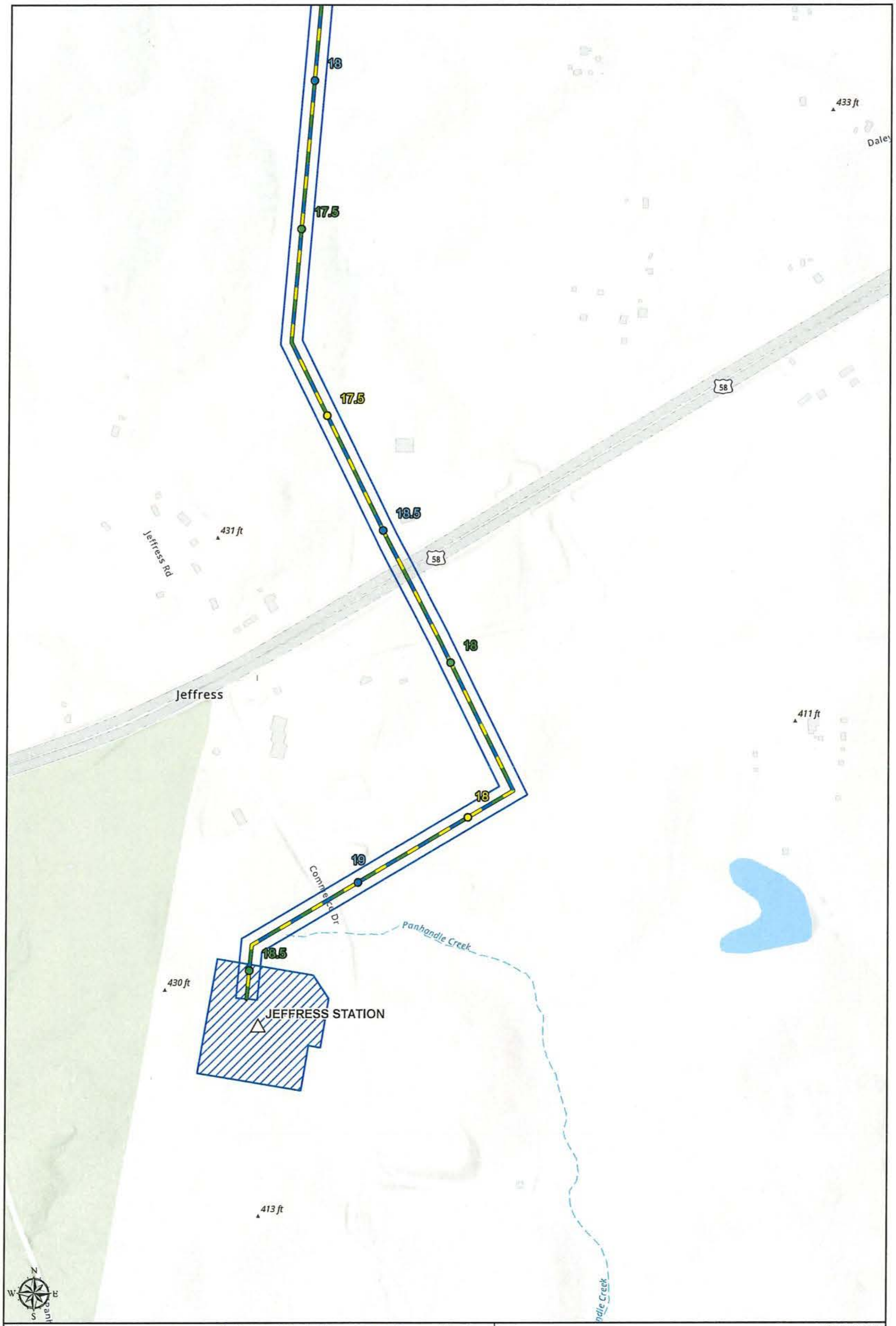

△ Station Proposed for Conversion

Right-of-Way Type

Proposed Right-of-Way

Converted Jeffress Station Site

Proposed Route MP

Alternative Route 3 MP

Alternative Route 5 MP

Proposed Route

Alternative Route 3

Alternative Route 5

1:6,000 0 250 500 US Feet

ERM

Attachment II.A.6

ROW Subject to Existing Easements

230 kV Finneywood-Jeffress Lines and

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II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

7. Detail the proposed ROW clearing methods to be used and the ROW restoration and maintenance practices planned for the proposed project.

Response: The permanent right-of-way for the proposed Project is 120 feet. Clearing will be required for the entire length of the route.

Trimming of tree limbs along the edge of the right-of-way also may be conducted to support construction activities for the Project. For any such minimal clearing within the right-of-way, trees will be cut to no more than three inches above ground level. Trees located outside of the right-of-way that are tall enough to potentially impact the transmission facilities, commonly referred to as "danger trees," may also need to be cut. Danger trees will be cut to be no more than three inches above ground level, limbed, and will remain where felled. Debris that is adjacent to homes will be disposed of by chipping or removal. In other areas, debris may be mulched or chipped as practicable. Danger tree removal will be accomplished by hand in wetland areas and within 100 feet of streams, if applicable. Care will be taken not to leave debris in streams or wetland areas. Matting will be used for heavy equipment in these areas. Erosion control devices will be used on an ongoing basis during all clearing and construction activities accompanied by weekly Virginia Stormwater Management Program inspections.

Erosion control will be maintained and temporary stabilization for all soil disturbing activities will be used until the right-of-way has been restored. Upon completion of the Project, the Company will restore the right-of-way utilizing site rehabilitation procedures outlined in the Company's *Standards & Specifications for Erosion & Sediment Control and Stormwater Management for Construction and Maintenance of Linear Electric Transmission Facilities* that was approved by the Virginia Department of Environmental Quality ("DEQ"). Time of year and weather conditions may affect when permanent stabilization takes place.

This right-of-way will continue to be maintained on a regular cycle to prevent interruptions to electric service and provide ready access to the right-of-way to patrol and make emergency repairs. Periodic maintenance to control woody growth will consist of hand cutting, machine mowing and herbicide application.

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.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

8. Indicate the permitted uses of the proposed ROW by the easement landowner and the Applicant.

Response: Any non-transmission use will be permitted that:

- Is in accordance with the terms of the easement agreement for the right-of-way;
- Is consistent with the safe maintenance and operation of the transmission lines;
- Will not restrict future line design flexibility; and
- Will not permanently interfere with future construction.

Subject to the terms of the easement, examples of typical permitted uses include but are not limited to:

- Agriculture
- Hiking Trails
- Fences
- Perpendicular Road Crossings
- Perpendicular Utility Crossings
- Residential Driveways
- Wildlife / Pollinator Habitat

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

9. Describe the Applicant's route selection procedures. Detail the feasible alternative routes considered. For each such route, provide the estimated cost and identify and describe the cost classification (e.g. "conceptual cost," "detailed cost," etc.). Describe the Applicant's efforts in considering these feasible alternatives. Detail why the proposed route was selected and other feasible alternatives were rejected. In the event that the proposed route crosses, or one of the feasible routes was rejected in part due to the need to cross, land managed by federal, state, or local agencies or conservation easements or open space easements qualifying under §§ 10.1-1009 – 1016 or §§ 10.1-1700 – 1705 of the Code (or a comparable prior or subsequent provision of the Code), describe the Applicant's efforts to secure the necessary ROW.

Response: The Company's route selection for a new transmission line typically begins with identification of the project "origin" and "termination" points provided by the Company's Transmission Planning Department. This is followed by the development of a study area for the project. The study area represents a circumscribed geographic area from which potential routes that may be suitable for a transmission line can be identified.

For this Project, the Company retained 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 an overhead route with two new single circuit 230 kV lines from the Company's future Finneywood Station extending south to the converted Jeffress 230 kV Station would be required for the Project.

A study area was developed that encompassed the areas surrounding the future Finneywood Station and the converted Jeffress 230 kV Station. The route development process for the Project is described in more detail in the Company's Environmental Routing Study included with the Application.

The Company identified multiple potential route alternatives; however, after discussions with the U.S. Army Corps of Engineers ("Corps") and the Virginia Outdoors Foundation ("VOF"), it was determined that if suitable alternatives to crossing these lands were available, the Company should pursue those options. The Corps indicated it would not permit a crossing of their land if a viable alternative was available. During discussions with the VOF, the Company learned that the VOF would require a 37:1 replacement ratio for the acreage that would be impacted, as well as a nominal crossing fee as part of compensation for crossing the easement. Additionally, the VOF indicated it would not begin reviewing and processing the crossing applications until after the Commission selects a route. The VOF stated that once it begins the review process it would likely take 6-18 months to approve the crossings. The Company has an in-service date for the proposed Project of July 1, 2026, so the in-service date would be in jeopardy if the VOF process extended beyond 12 months. For these reasons, the Company decided not to propose crossing either Corps fee-owned land or VOF easements and instead identified routes around or away from these types of lands. In the southern half of the study area there is an extensive amount of Corps fee-owned lands, as depicted in Attachment II.A.2. This restricted routes in this area to a narrower area in the south central portion of the study area.

The Company also identified and ultimately rejected Alternative Routes 1 and 2, which routed around Chase City to the west (Alternative Route 1) and to the east (Alternative Route 2), and then collocated with Dominion Energy Virginia's Line #36 to the extent possible. Due to increased overall length, increased impacts to environmental and social constraints, and negative feedback the Company received from the public on these routes at the initial open house, these routes were ultimately dismissed from consideration. Routes that were determined to not be viable and were excluded from further consideration are described in more detail in Section 2.5 of the Environmental Routing Study.

For the Project, the Company identified a total of three viable route alternatives, all of which are routed to the east of Chase City. Of these three routes, the eastern most route was identified as the Proposed Route, and Alternative Routes 3 and 5 were identified as viable alternatives to the Proposed Route.

PROPOSED AND ALTERNATIVE ROUTES

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. As noted in Section I.I, the estimated conceptual cost of the Proposed Route (Route 4) is approximately $123.0 million (2023 dollars).

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.

The Proposed Route will cross a total of approximately 18.3 miles of land affecting 266.5 acres of right-of-way. All 69 parcels crossed are privately owned. Land use along the Proposed Route right-of-way consists of 207.6 acres of forested land, 22.7 acres of agricultural land, 33.2 acres of open space, 1.2 acres of open water, and 1.6 acres of developed area.

Based on ERM's desktop wetland and waterbody analysis, the right-of-way of the Proposed Route will encompass approximately 12.9% (34.3 acres) of land with a medium/high or higher probability of containing wetlands and waterbodies. Of these 34.3 acres, the majority (29.5 acres) consist of forested wetlands. The Proposed Route has a total of 31 waterbody crossings: 8 perennial crossings, 20 intermittent crossings, and 3 lake/pond crossings. Lastly, the Proposed Route will require the clearing of approximately 207.6 acres of forested land, which is the greatest amount of forest clearing anticipated for any of the routes.

The Proposed Route will run parallel adjacent with one of the Company's existing transmission lines for 0.9 mile (5% of the route), which is same for all three route alternatives.

The Proposed Route is the shortest of the routes and would require correspondingly less right-of-way acreage. While the Proposed Route would require the most clearing of forested land of the three routes, it has the fewest parcels crossed, agricultural impacts, wetlands crossed, and waterbodies crossed, when compared to the other two routes. The Proposed Route would also have the fewest residences within 500 feet of the centerline (14) compared to Alternative Route 3 (22) and Alternative Route 5 (27). Finally, the Proposed Route has the least number of road crossings at 12, thereby limiting the visual impacts to commuters and through travelers in the Project area. For these reasons, the Company selected this route as the Proposed Route.

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. As noted in Section I.I, the estimated conceptual cost of Alternative Route 3 is approximately $126.5 million (2023 dollars).

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.

Construction of Alternative Route 3 will cross a total of approximately 18.5 miles of land affecting 269.5 acres of right-of-way. All 79 parcels crossed are privately owned. Land use along the Alternative Route 3 right-of-way consists of 198.8 acres of forested land, 41.3 acres of agricultural land, 26.6 acres of open space, 1.3 acres of open water and 1.5 acres of developed area.

Based on ERM's desktop wetland and waterbody analysis, the right-of-way of Alternative Route 3 will encompass approximately 13.3% (35.9 acres) of land with a medium/high or higher probability of containing wetlands and waterbodies. Of these 35.9 acres, the majority (31.6 acres) consist of forested wetlands. Alternative Route 3 has a total of 37 waterbody crossings: 8 perennial crossings, 26 intermittent crossings, and 3 lake/pond crossings. Lastly, Alternative Route 3 will require the clearing of approximately 198.8 acres of forested land, which is the least amount of forest clearing anticipated for any of the routes.

Alternative Route 3 will run parallel adjacent with one of the Company's existing transmission lines for 0.9 mile (5% of the route), which is same for all three route alternatives.

Alternative Route 3 is the second shortest of the routes and would require correspondingly the second least amount of right-of-way acreage. In addition, the route has the most parcels crossed, and most waterbodies crossed, when compared to the other two routes. Alternative Route 3 would have the second fewest residences within 500 feet of the centerline (22). Alternative Route 3 would have the second fewest wetland impacts and the fewest forested impacts of any of the routes. Alternative Route 3 has the most agricultural impacts of any of the routes. Alternative Route 3 has the second fewest number of road crossings at 14, thereby limiting the visual impacts to commuters/through travelers in the Project area. While acknowledging the impacts of Alternative Route 3, the Company proposes Alternative Route 3 for notice and the Commission's consideration as a viable alternative to the Proposed Route.

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. As noted in Section I.I, the estimated conceptual cost of Alternative Route 5 is approximately $131.9 million (2023 dollars).

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.

Construction of Alternative Route 5 will cross a total of approximately 19.2 miles of land affecting 279.1 acres of right-of-way. All 76 parcels crossed are privately owned. Land use along Alternative Route 5 right-of-way consists of 202.1 acres of forested land, 39.5 acres of agricultural land, 33.1 acres of open space, 1.0 acre of open water and 3.4 acres of developed area.

Based on ERM's desktop wetland and waterbody analysis, the right-of-way of Alternative Route 5 will encompass approximately 17.8% (49.7 acres) of land with a medium/high or higher probability of containing wetlands and waterbodies. Of these 49.7 acres, the majority (44.1 acres) consist of forested wetlands. Alternative Route 5 has a total of 34 waterbody crossings: 7 perennial crossings, 26 intermittent crossings, and 1 lake/pond crossing. Lastly, Alternative Route 5 will require the clearing of approximately 202.1 acres of forested land, which is the second greatest amount of forest clearing anticipated for any of the routes.

Alternative Route 5 will run parallel adjacent with one of the Company's existing transmission lines for 0.9 mile (5% of the route), which is same for all three route alternatives.

Alternative Route 5 is the longest of the routes and would require correspondingly the most right-of-way acreage. In addition, the route has the second most parcels crossed, and the most wetland impacts and road crossings, when compared to the other two routes. Alternative Route 5 would have the most residences within 500 feet of the centerline (27). Alternative Route 5 crosses two planned developments: the Bailey Data Center Development Site and the Jeffress Data Center Development Site. Finally, the route would require the second most amount of clearing of forested lands of the three routes. While acknowledging the impacts of Alternative Route 5, the Company proposes Alternative Route 5 for notice and the Commission's consideration as a viable alternative to the Proposed Route.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

10. Describe the Applicant's construction plans for the project, including how the Applicant will minimize service disruption to the affected load area. Include requested and approved line outage schedules for affected lines as appropriate.

Response: The Company plans to construct the new 230 kV transmission lines in a manner that minimizes outage time on existing substations and transmission lines. Assuming construction commences around January 2025, the installation of the new 230 kV lines going to the Jeffress 230 kV Station should start around May 2026. The installation will require PJM outage eDart tickets for the Company's future Jeffress and Finneywood Stations. The installation should require less than a two-week outage. Assuming a final order from the Commission by January 15, 2024, as requested in Section I.H of this Appendix, the Company estimates that conversion of the Jeffress 230 kV Station and construction of the Finneywood-Jeffress Lines will commence around January 2025 and be completed by July 1, 2026.

In addition, the Project will require an outage on the Chase City-Cloud transmission corridor in order to construct the Finneywood-Jeffress Lines over the lines in that corridor. The Company anticipates this work should require a one-week outage and will be completed during construction of the Project.

The Company will submit outages for this Project to Dominion Energy Virginia's System Operating System and request outages from PJM prior to the date of such outages. It is customary for PJM not to grant approval of outages until shortly before the outages are expected to occur (up until one week prior) and, therefore, it may be subject to change.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

11. Indicate how the construction of this transmission line follows the provisions discussed in Attachment 1 of these Guidelines.

Response: Attachment 1 to these Guidelines provides a tool routinely used by the Company in routing its transmission line projects.

The Proposed Route will avoid or minimize impacts to the maximum extent practicable on national historic places listed in the National Register of Historic Places ("NRHP"). Thus, it is consistent with Guideline #2 (where practical, rights of-way should avoid sites listed on the NRHP). A Stage I Pre-Application Analysis prepared by ERM on behalf of the Company is included with the Environmental Routing Study as Appendix F, which was submitted to the Virginia Department of Historic Resources ("VDHR") on May 18, 2023.

The Company utilized Guideline #3 (rights-of-ways should avoid prime or scenic timbered areas, steep slopes and proximity to main highways where practical) by siting the Proposed Route away from main highways. Some crossing of highways was unavoidable; however, most crossings are at nearly perpendicular angles to reduce visual impacts.

The Company has communicated with local, state, and federal agencies and relevant private organizations prior to filing this Application, consistent with Guideline #4 (where government land is involved the applicant should contact the agencies early in the planning process). In particular, the Company has consulted with the Corps, VOF, the Virginia Department of Conservation and Recreation ("DCR"), and Mecklenburg County. See Section III.B of this Appendix.

The Company follows recommended construction methods in the Guidelines on a site-specific basis for typical construction projects (Guidelines #8, #10, #11, #15, #16, #18, and #22).

The Company also utilizes recommended guidelines in clearing right-of-way, constructing facilities, and maintaining rights-of-way after construction. Moreover, secondary uses of right-of-way that are consistent with the safe maintenance and operation of facilities are permitted.

II. DESCRIPTION OF THE PROPOSED PROJECT

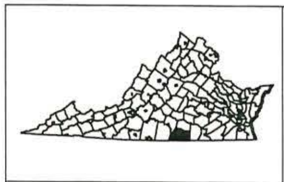
A. Right-of-way ("ROW")

12. a. Detail counties and localities through which the line will pass. If any portion of the line will be located outside of the Applicant's certificated service area: (1) identify each electric utility affected; (2) state whether any affected electric utility objects to such construction; and (3) identify the length of line(s) proposed to be located in the service area of an electric utility other than the Applicant; and

b. Provide three (3) color copies of the Virginia Department of Transportation "General Highway Map" for each county and city through which the line will pass. On the maps show the proposed line and all previously approved and certificated facilities of the Applicant. Also, where the line will be located outside of the Applicant's certificated service area, show the boundaries between the Applicant and each affected electric utility. On each map where the proposed line would be outside of the Applicant's certificated service area, the map must include a signature of an appropriate representative of the affected electric utility indicating that the affected utility is not opposed to the proposed construction within its service area.

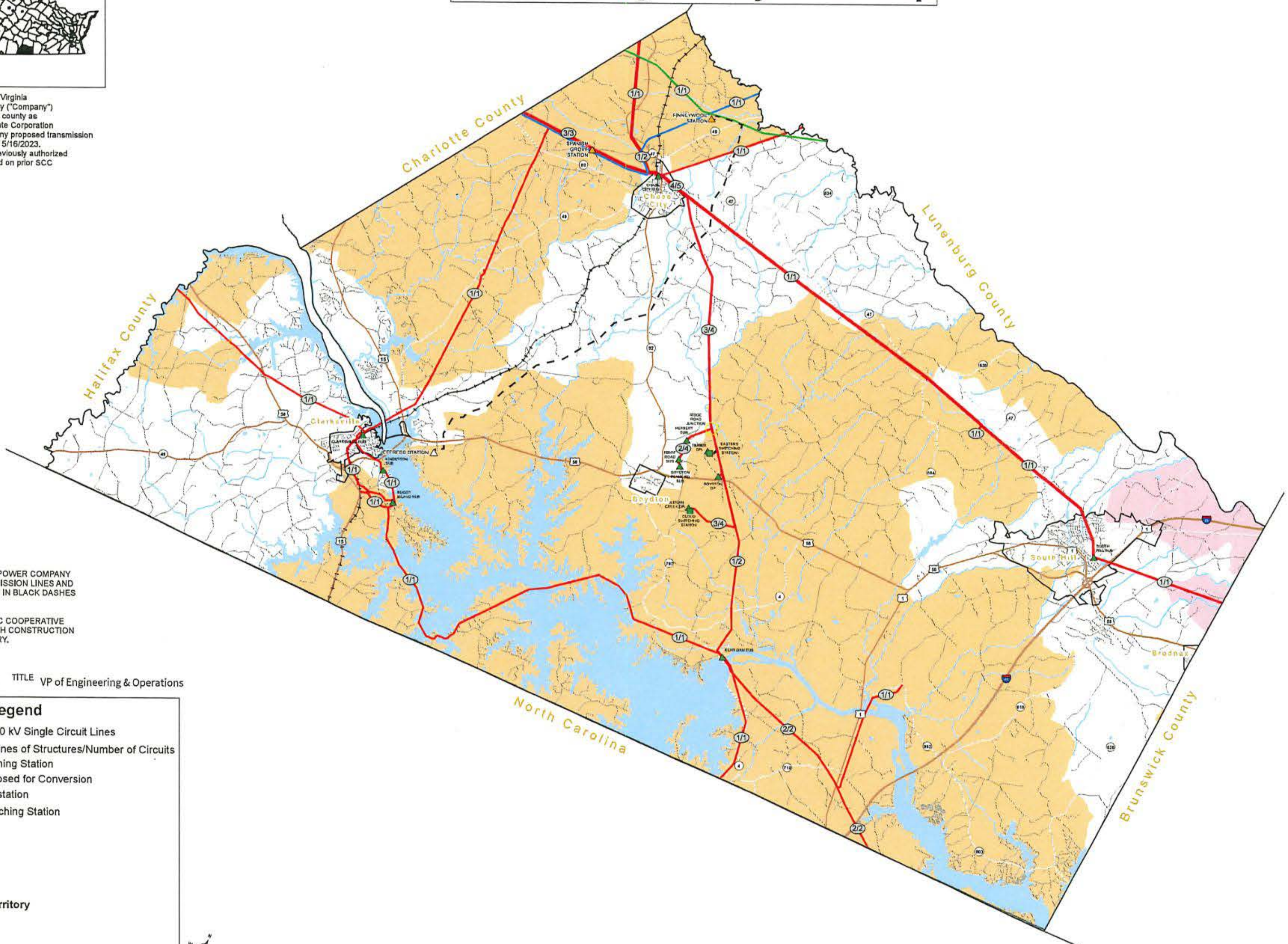
Response: a. The proposed Project traverses Mecklenburg County for a total of 18.3 miles. The Project is located within the Company's service territory for 12.7 miles and located within MEC's service territory for 5.6 miles. The Company has confirmed that MEC does not object to the Project.

b. An electronic copy of the map of the Virginia Department of Transportation ("VDOT") "General Highway Map" for Mecklenburg County has been marked as required and filed with the Application. A reduced copy of the map is provided as Attachment II.A.12.b.



This digital map depicts the Virginia Electric and Power Company ("Company") transmission facilities in this county as approved by the Virginia State Corporation Commission ("SCC"), and any proposed transmission facilities in this county, as of 5/16/2023. Other Company facilities previously authorized by the SCC may be depicted on prior SCC approved county maps.

Mecklenburg County Road Map



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VIRGINIA ELECTRIC AND POWER COMPANY PLANS TO BUILD TRANSMISSION LINES AND SUBSTATIONS AS SHOWN IN BLACK DASHES ON THIS MAP.

MECKLENBURG ELECTRIC COOPERATIVE IS NOT OPPOSED TO SUCH CONSTRUCTION IN ITS SERVICE TERRITORY.

SIGNATURE

DATE 05/22/2023 TITLE VP of Engineering & Operations

Legend

- Proposed 230 kV Single Circuit Lines
- Number of Lines of Structures/Number of Circuits
- Future Switching Station
- Station Proposed for Conversion
- Existing Substation
- Existing Switching Station
- Junction
- 115 kV
- 230 kV
- 500 kV

Provider Service Territory

- MEC
- SSEC
- VEPCO

2 1 0 2 4 6 Miles

*VDOT and other road data obtained from Navteq and County data, current as of July 2011.

Attachment II.A.12.b

Mecklenburg

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

1. Detail the number of circuits and their design voltage, initial operational voltage, any anticipated voltage upgrade, and transfer capabilities.

Response: The two proposed single circuit 230 kV lines will be designed and operated at 230 kV with no anticipated voltage upgrade and have a transfer capability of 1,573 MVA.

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

2. Detail the number, size(s), type(s), coating and typical configurations of conductors. Provide the rationale for the type(s) of conductor(s) to be used.

Response: The two proposed single circuit 230 kV lines will include three-phase twin-bundled 768.2 ACSS/TW/HS conductors. The twin-bundled 768.2 ACSS/TW/HS conductors are a Company standard for new 230 kV construction.

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

3. With regard to the proposed supporting structures over each portion of the ROW for the preferred route, provide diagrams (including foundation reveal) and descriptions of all the structure types, to include:

a. mapping that identifies each portion of the preferred route;

b. the rationale for the selection of the structure type;

c. the number of each type of structure and the length of each portion of the ROW;

d. the structure material and rationale for the selection of such material;

e. the foundation material;

f. the average width at cross arms;

g. the average width at the base;

h. the maximum, minimum and average structure heights;

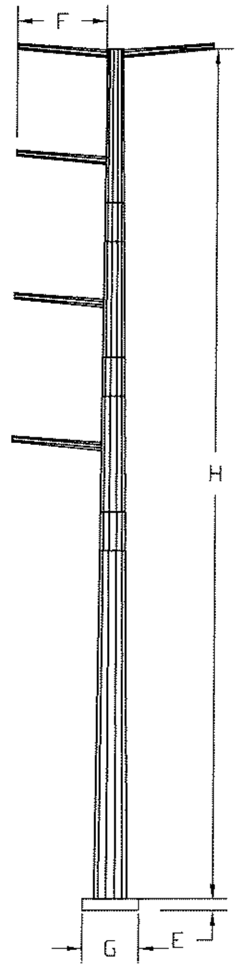
i. the average span length; and

j. the minimum conductor-to-ground clearances under maximum operating conditions.

Response: See Attachments II.B.3.i-iii for subparts (b)-(j).

For subpart (a), see Attachment II.B.3.iv for approximate mapping of the proposed structures along the Proposed Route, which is subject to change during final engineering.

JEFFRESS-FINNEYWOOD, LINES #2299 & #2302

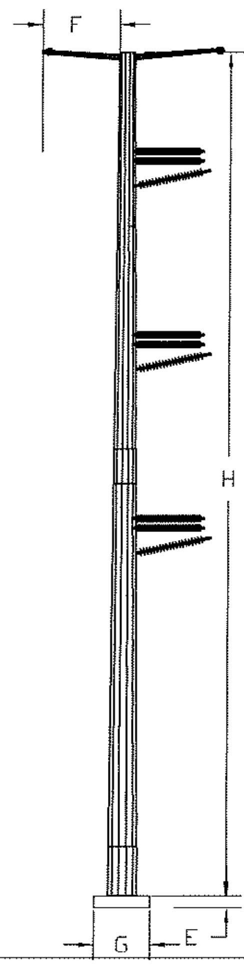


230kV SC ENGINEERED MONOPOLE SUSPENSION STRUCTURE

A. MAPPING OF THE ROUTE:	SEE ATTACHMENT II.B.3.iv
B. RATIONALE FOR STRUCTURE TYPE:	TO MINIMIZE RIGHT OF WAY
C. LENGTH OF R/W (STRUCTURE QTY):	18.3 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.

JEFFRESS-FINNEYWOOD, LINES #2299 & #2302



230kV SC ENGINEERED MONOPOLE DDE STRUCTURE

A. MAPPING OF THE ROUTE: SEE ATTACHMENT II.B.3.iv

B. RATIONALE FOR STRUCTURE TYPE: TO MINIMIZE RIGHT OF WAY

C. LENGTH OF R/W (STRUCTURE QTY): 18.3 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'

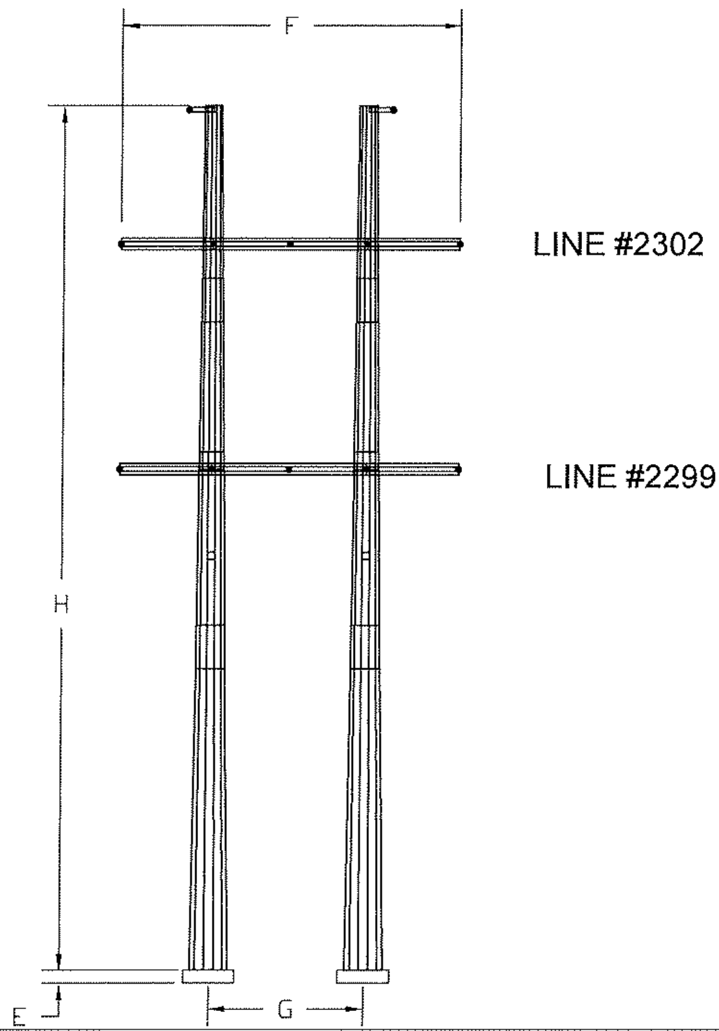
AVERAGE STRUCTURE HEIGHT: 117'

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.

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 R/W (STRUCTURE QTY): 18.3 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'

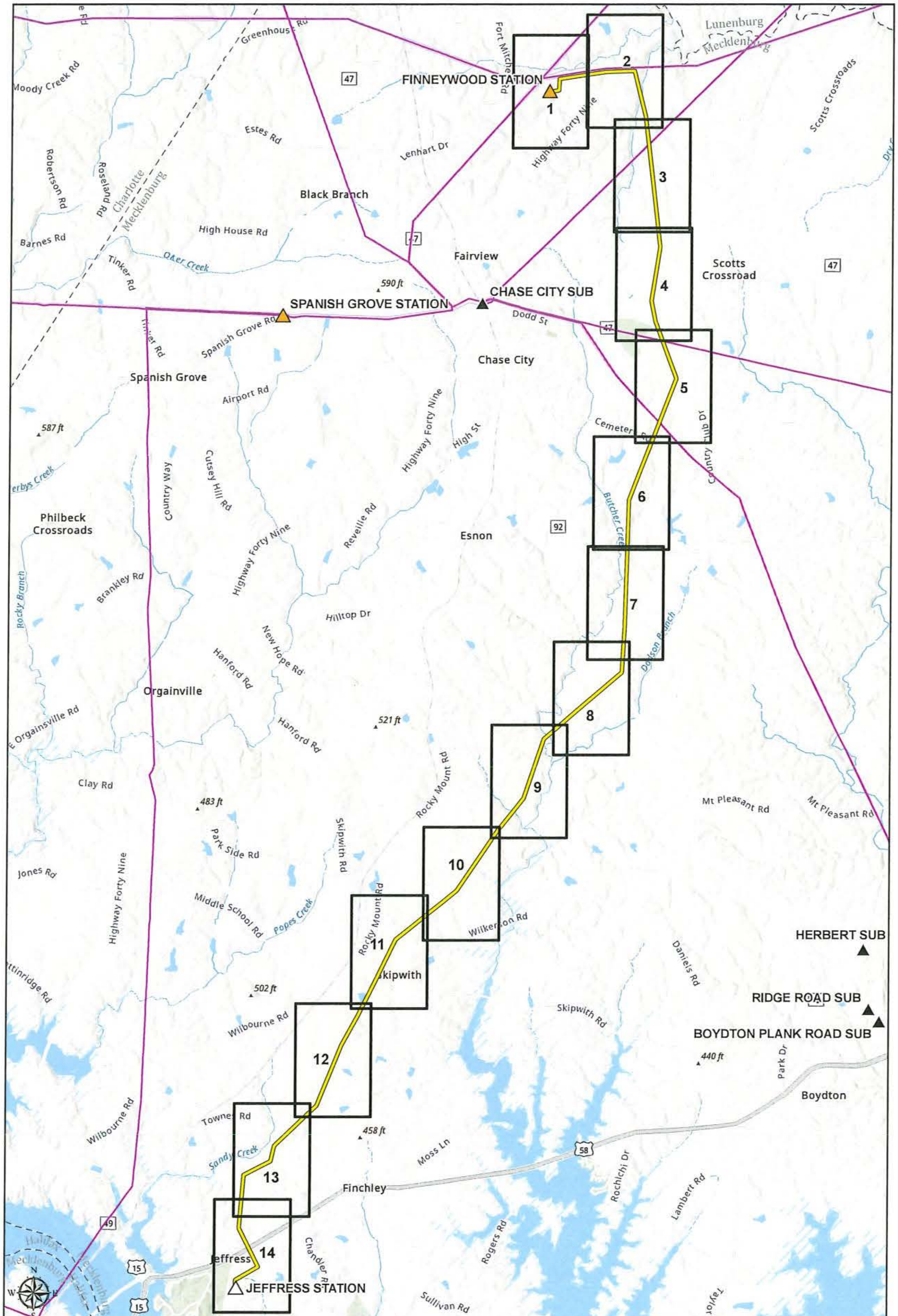
MAXIMUM STRUCTURE HEIGHT: 170'

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.



▲ Existing Substation
▲ Future Switching Station
△ Station Proposed for Conversion

Existing Dominion Transmission Line
Proposed Route
Index Page

1:70,000 — 0, 0.5, 1 Miles

Attachment II.B.3.iv Index
Proposed Structure Locations
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

ERM — Dominion Energy

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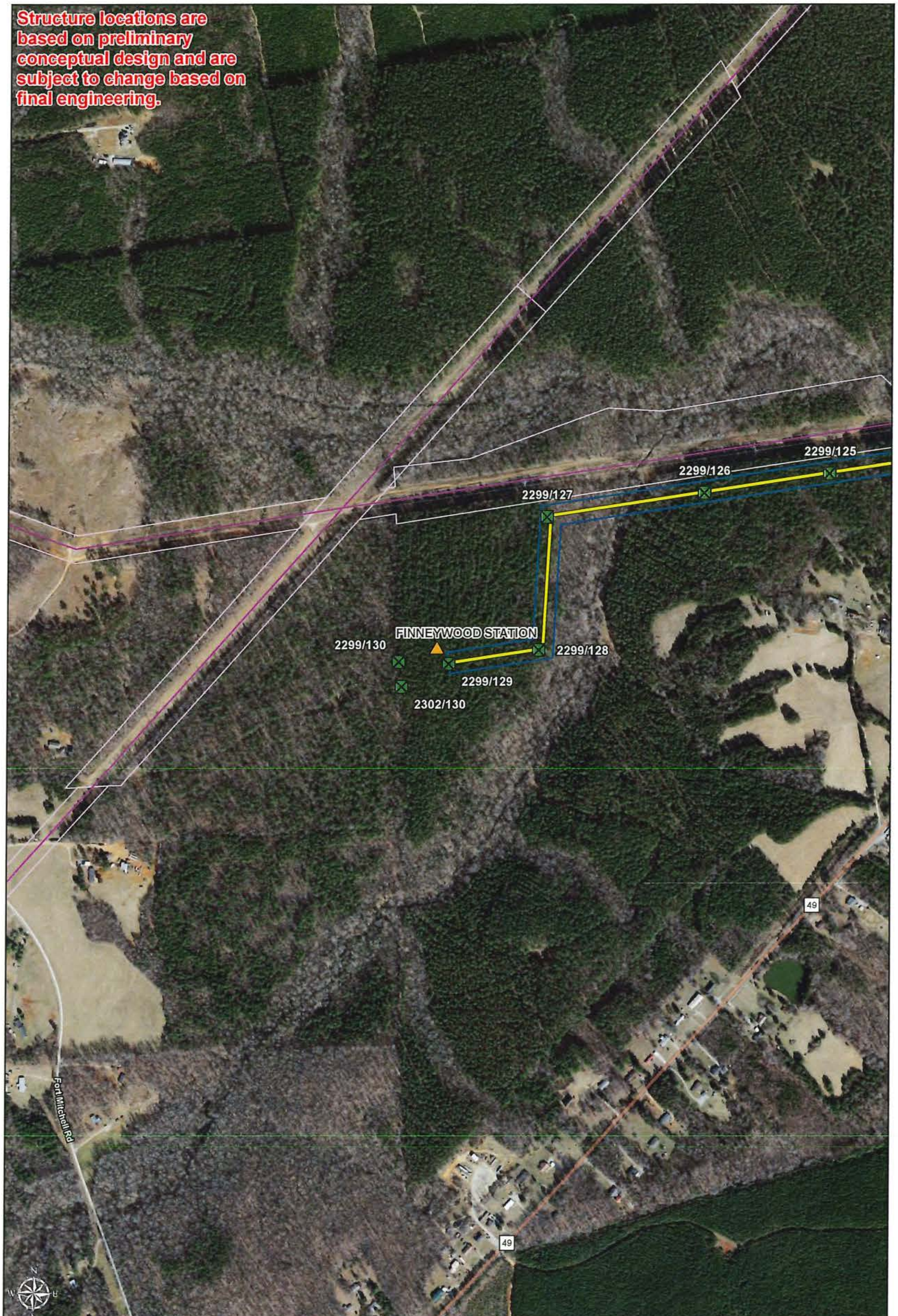

Future Switching Station
Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Proposed Structure Location
Proposed Route
Proposed Right-of-Way

1:6,000 0 250 500 US Feet

Attachment II.B.3.iv
Proposed Structure Locations
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
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Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Proposed Structure Location
Proposed Route
Proposed Right-of-Way

1:6,000 0 250 500 US Feet

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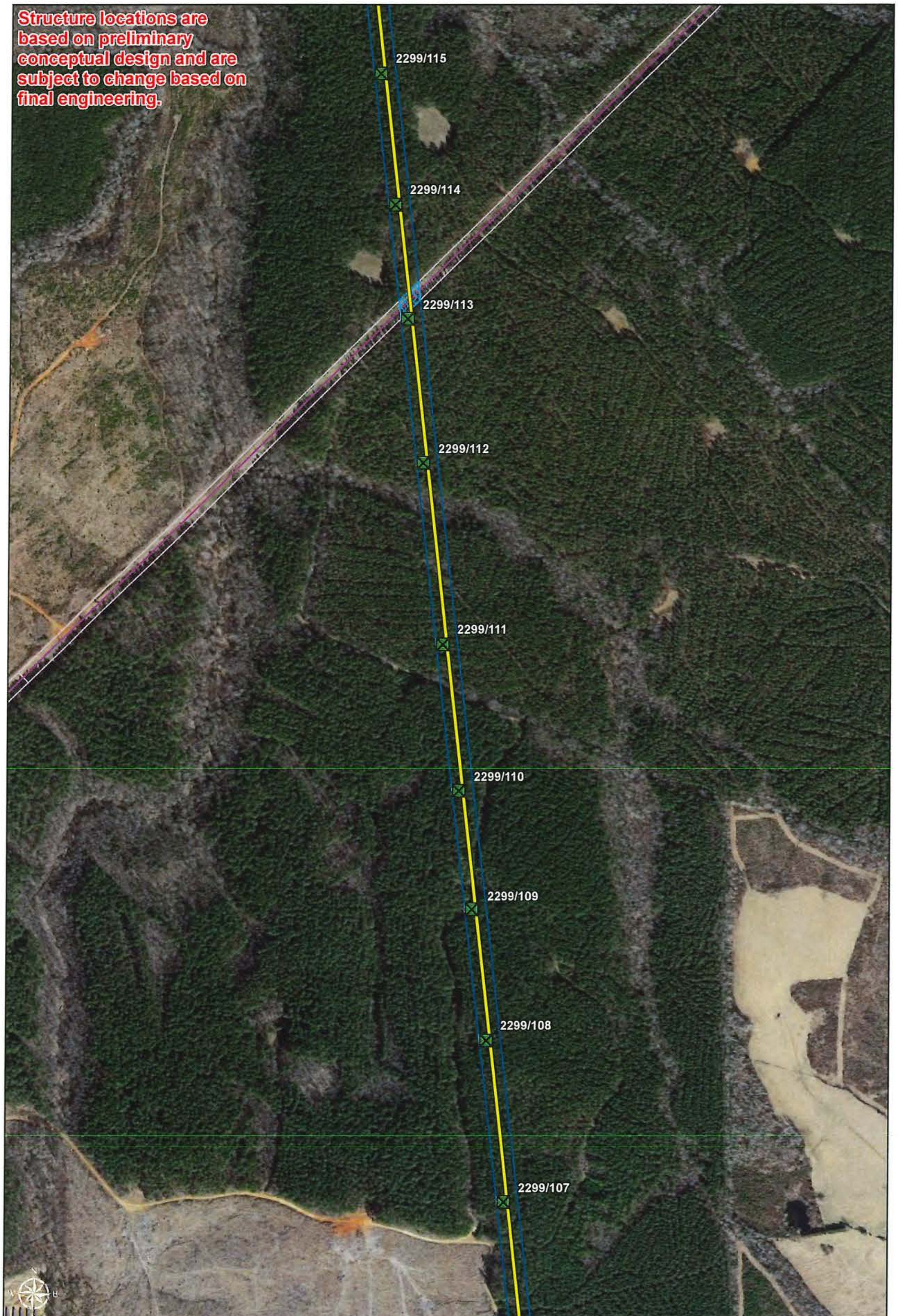

Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Proposed Structure Location
Proposed Route
Existing Right-of-Way
Proposed Right-of-Way

1:6,000 0 250 500 US Feet

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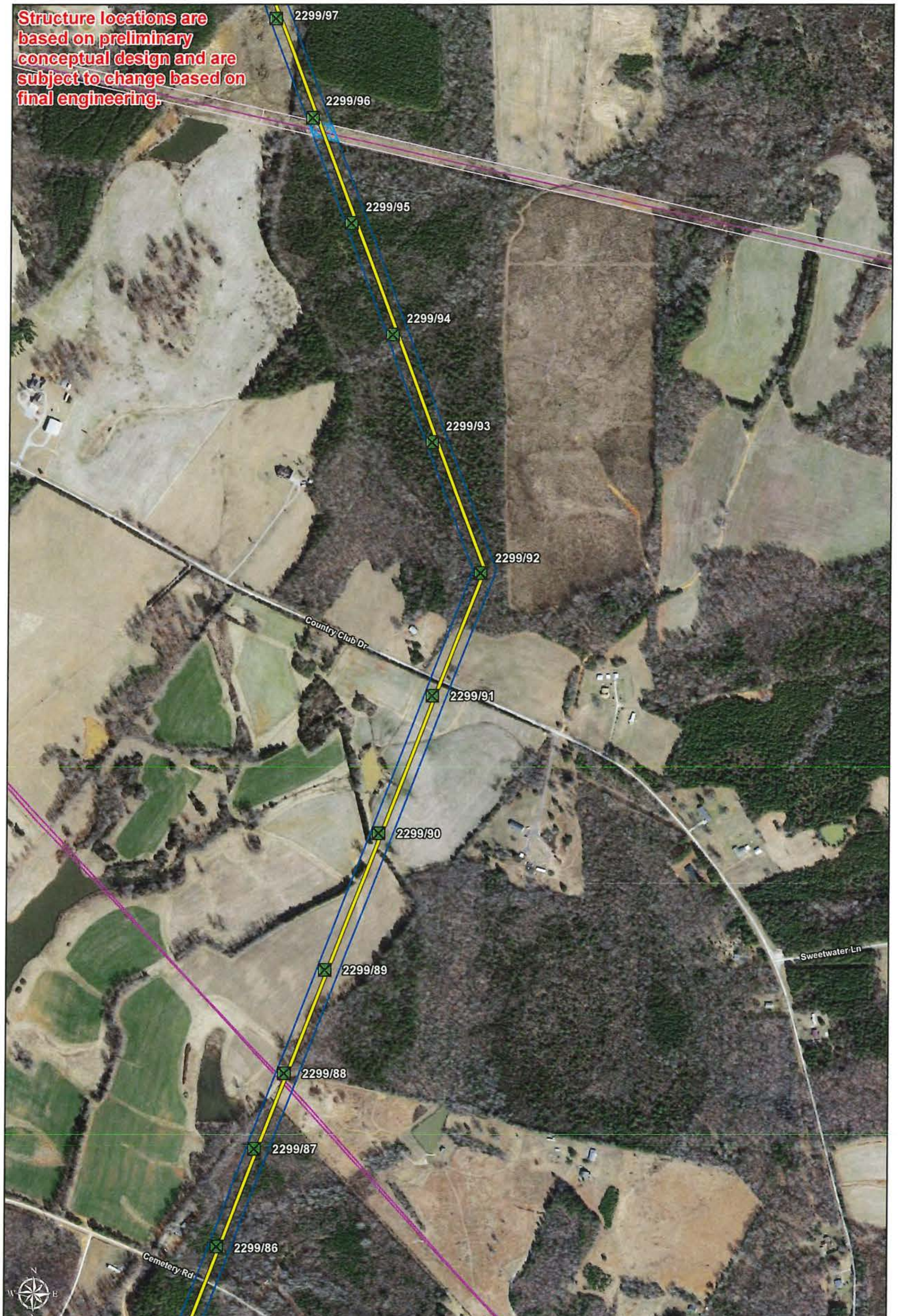

Existing Dominion Transmission Line
Existing Dominion Right-of-Way
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Existing Right-of-Way
Proposed Right-of-Way

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

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Proposed Right-of-Way

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Proposed Structure Location

Proposed Route

Proposed Right-of-Way

1:6,000 0 250 500 US Feet

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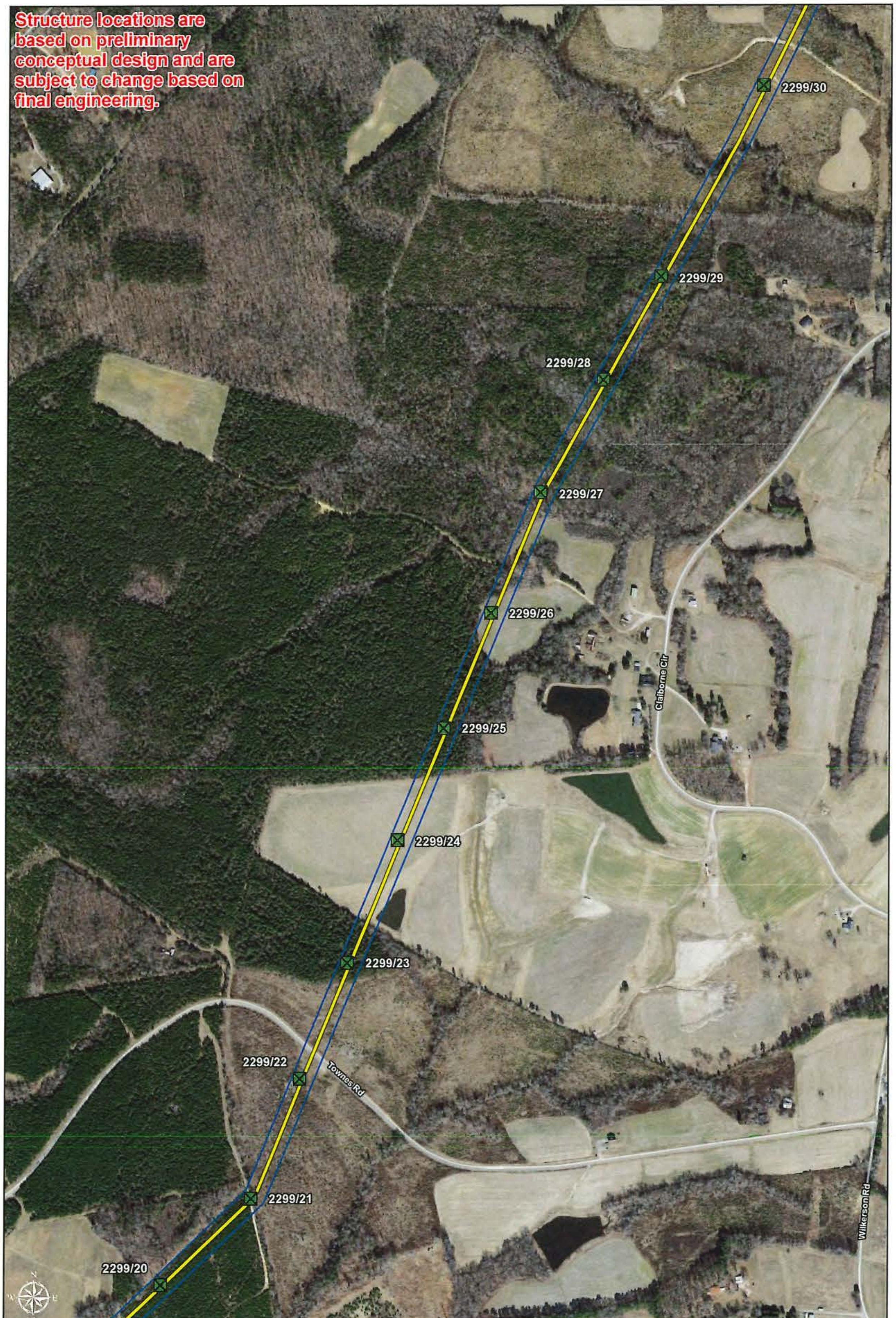

- Proposed Structure Location
- Proposed Route
- Proposed Right-of-Way

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Dominion Energy

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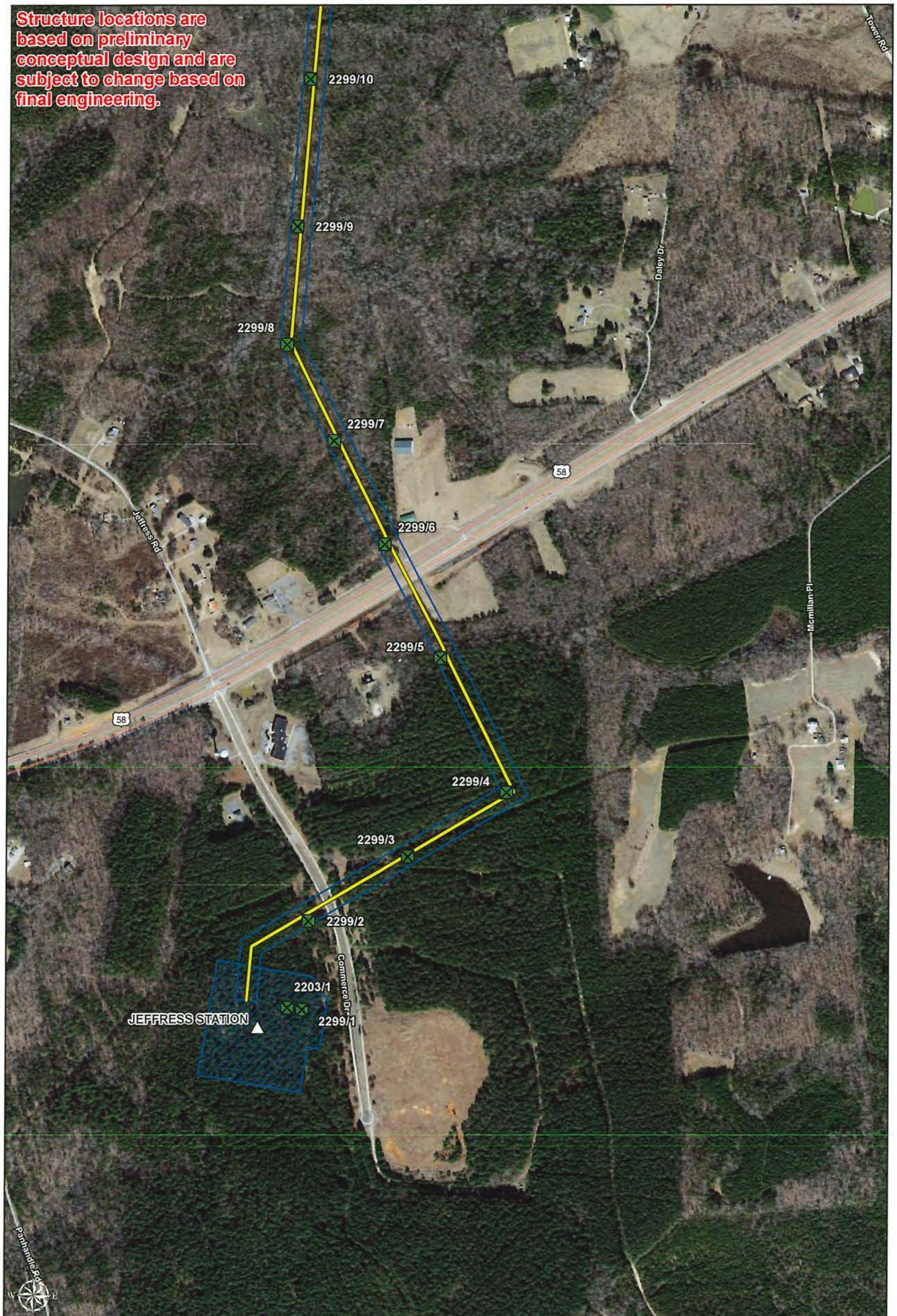

△ Station Proposed for Conversion
Proposed Structure Location
Proposed Route
Proposed Right-of-Way
Converted Jeffress Station Site

1:6,000 0 250 500 US Feet

Attachment II.B.3.iv
Proposed Structure Locations
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

ERM
Dominion Energy

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DRAWN BY: Nicole.Dunn

B. Line Design and Operational Features

4. With regard to the proposed supporting structures for all feasible alternate routes, provide the maximum, minimum and average structure heights with respect to the whole route.

Response: The approximate structure heights along the Proposed and Alternative Routes are provided in the table below, based on preliminary conceptual design, not including foundation reveal and subject to change based on final engineering design.

Route	Minimum (ft.)	Maximum (ft.)	Average (ft.)
Proposed Route (Route 4)	90	170	121
Alternative Route 3	90	170	121
Alternative Route 5	90	170	121

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

5. For lines being rebuilt, provide mapping showing existing and proposed structure heights for each individual structure within the ROW, as proposed in the application.

Response: Not applicable.

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

6. Provide photographs for typical existing facilities to be removed, comparable photographs or representations for proposed structures, and visual simulations showing the appearance of all planned transmission structures at identified historic locations within one mile of the proposed centerline and in key locations identified by the Applicant.

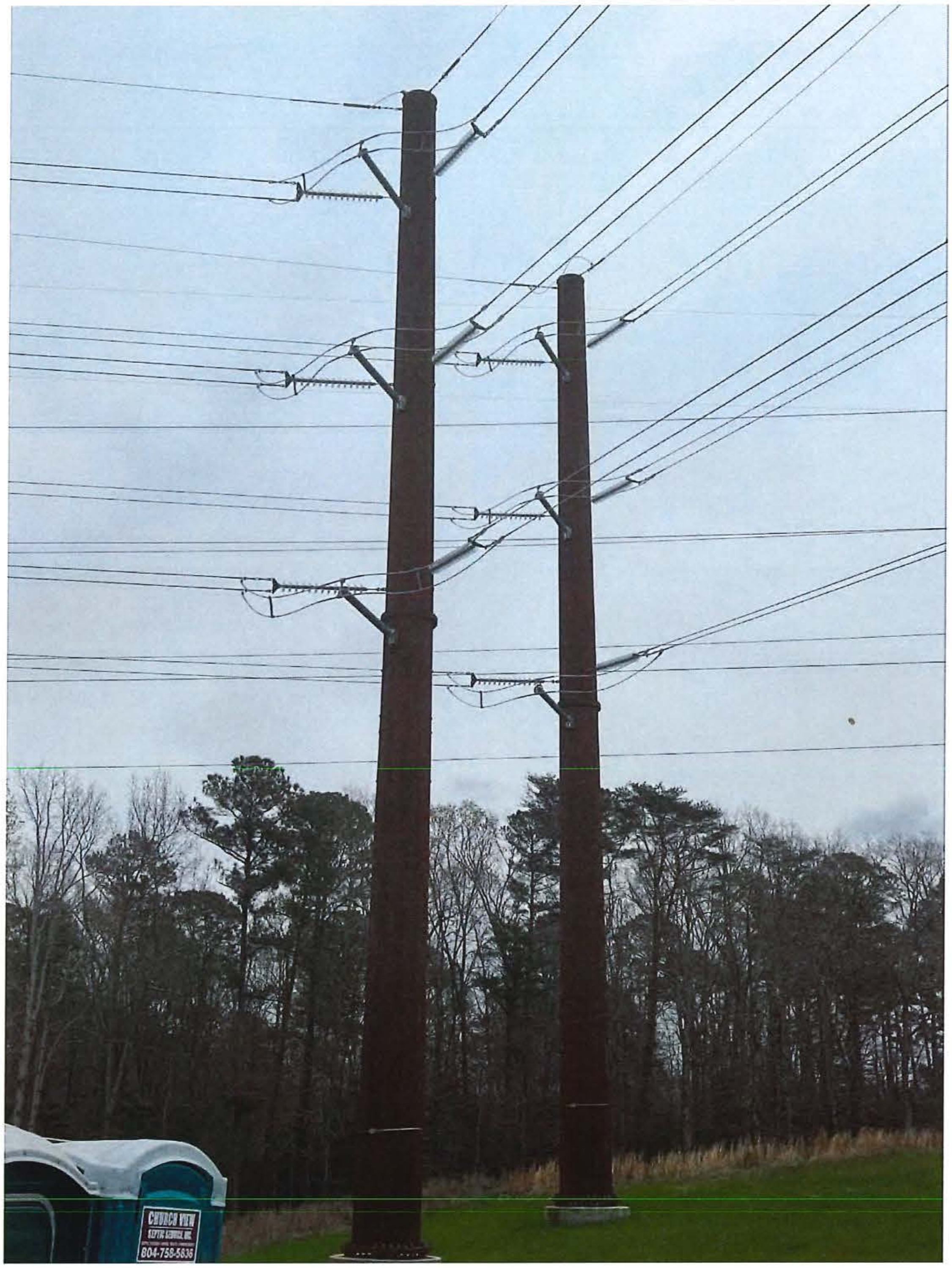
Response: [a] Not applicable.

[b] See Attachment II.B.6.b for representative photographs of the proposed structures.

[c] Visual simulations showing the appearance of the proposed transmission structures at identified historic locations within 1.0 mile of the proposed Project centerline of the Proposed Route are provided. See Attachment II.B.6.c for maps depicting each of the simulation locations, the existing views at the historic properties, and simulated proposed views. These simulations were created using GIS modeling to depict whether the proposed structures will be visible from the identified historic property. The historic properties evaluated are described below. See also the Stage I Pre-Application Analysis Report contained in Appendix F of the Environmental Routing Study.

Historic Property	Viewpoint	Comments
Mistletoe/Mistletoe Castle (VDHR ID# 058-0038)	4	The Proposed Route, Alternative Route 3, and Alternative Route 5 would have a moderate impact on 058-0038
Occoneechee Plantation (VDHR ID# 058-0091)	5	The Proposed Route, Alternative Route 3, and Alternative Route 5 would have no impact on 058-0091
Red Fox Farm (VDHR ID# 058-0131)	9	The Proposed Route would have no impact on 058-0131
	8 and 9	Alternative Route 3 would have no impact on 058-0131
	17	Alternative Route 5 would have no impact on 058-0131
Wilkinson Place/ Grovesend (VDHR ID# 058-0281)	3	The Proposed Route, Alternative Route 3, and Alternative Route 5 would have a minimal impact on 058-0281
The Finchley Rosenwald School (VDHR ID# 058-5104)	15	The Proposed Route, Alternative Route 3, and Alternative Route 5 would have no impact on 058-5104

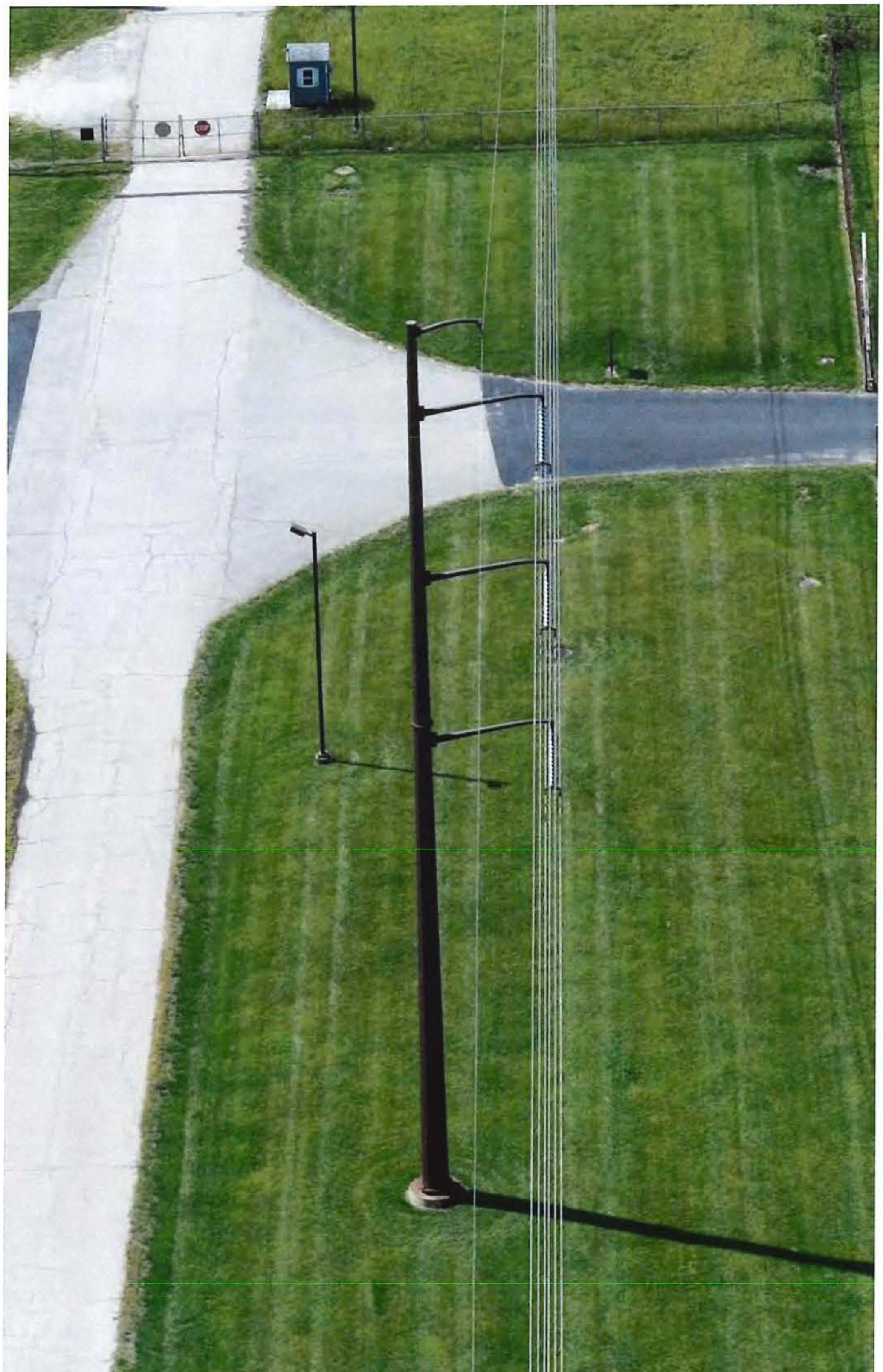
See Attachment III.B.7 and Attachment III.B.8 for visual simulations and renderings, respectively, of key locations evaluated.



Proposed Structure Type:
230 kV Deadend Monopole

Dominion Energy

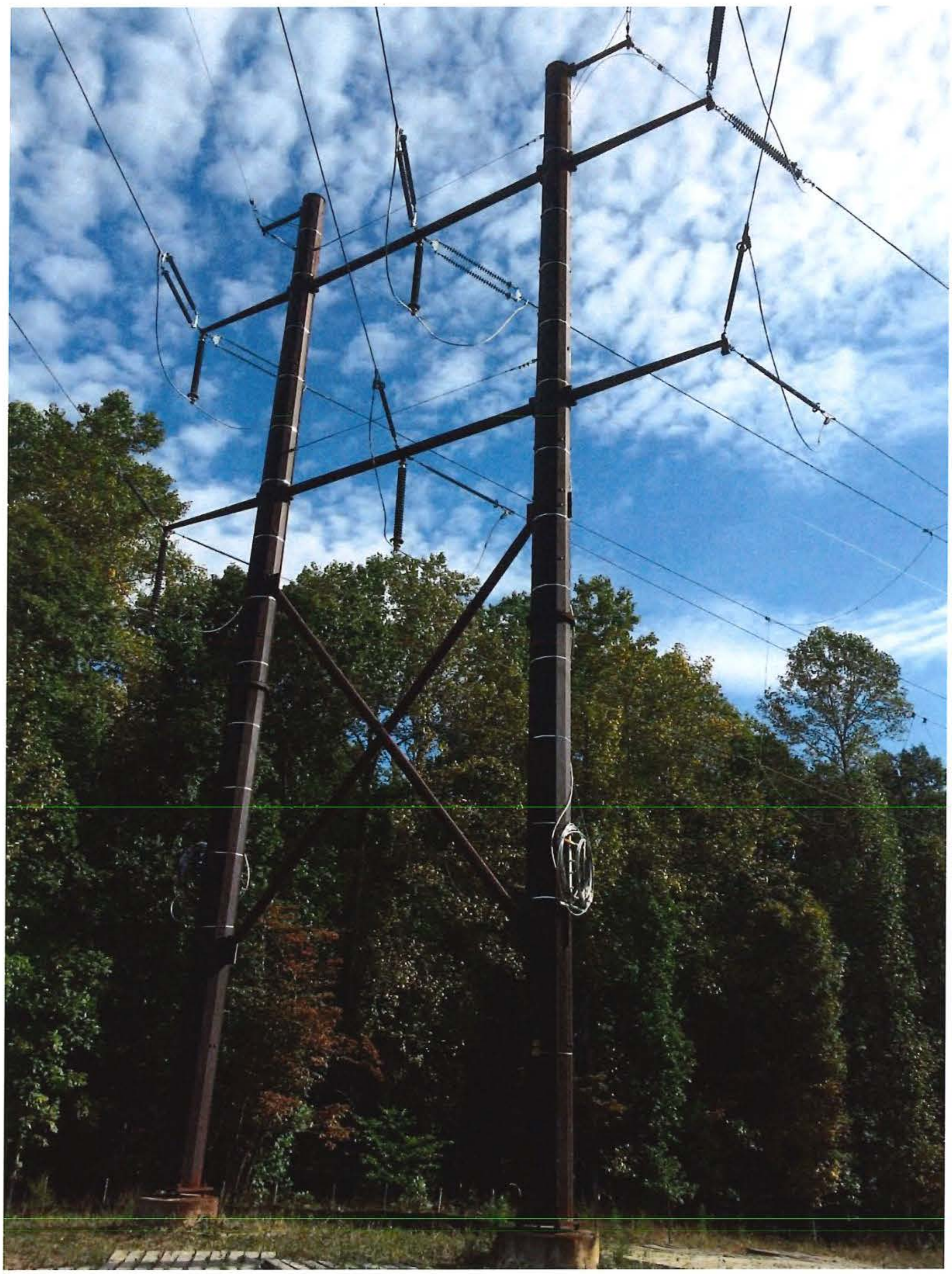
Attachment II.B.6.b



Proposed Structure Type:
230 kV Single Circuit Steel Monopole (Tangent)

Dominion Energy

Attachment II.B.6.b

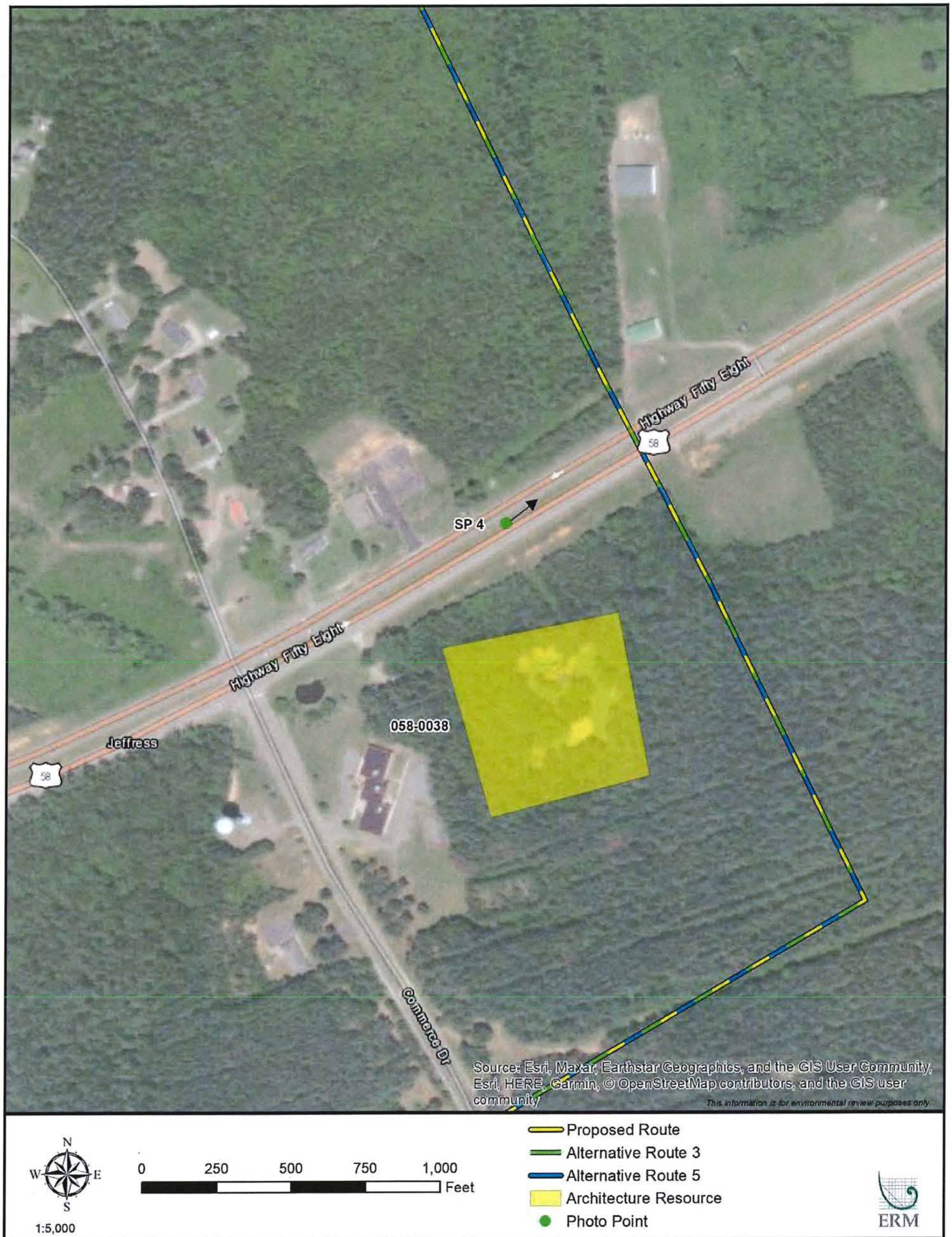


Proposed Structure Type:

230 kV Double Circuit Steel H-Frame (Double Deadend)

Dominion Energy

Attachment II.B.6.b



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Attachment 5

Existing View

Proposed View - Visible

Dominion Energy

ERM

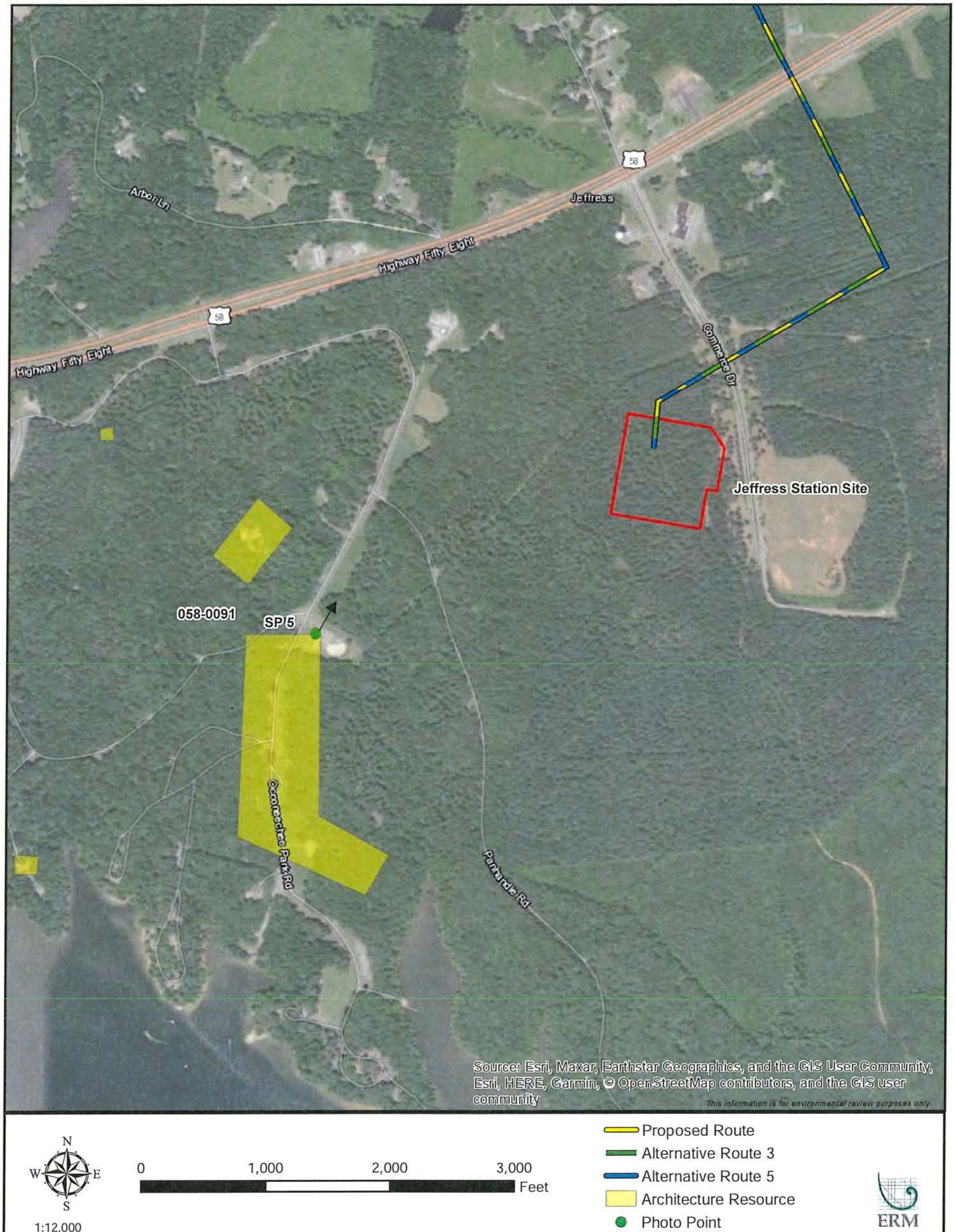
Viewpoint Location UTM Zone 17S:	721926E 4057759N
View Direction:	52 degrees
Viewpoint Elevation:	390 feet
Distance to Development:	438 feet
Horizontal Field of View:	89 degrees

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

VIEWPOINT CONTEXT

Figure 2
Viewpoint SP 4 - Proposed Route and Alternative Routes 3 and 5
Hwy 58 E of Commerce Dr
058-0038

Pre-Application Analysis
Finneywood to Jeffress



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Attachment 5

Existing View

128

Proposed View - Hidden

Dominion Energy

ERM

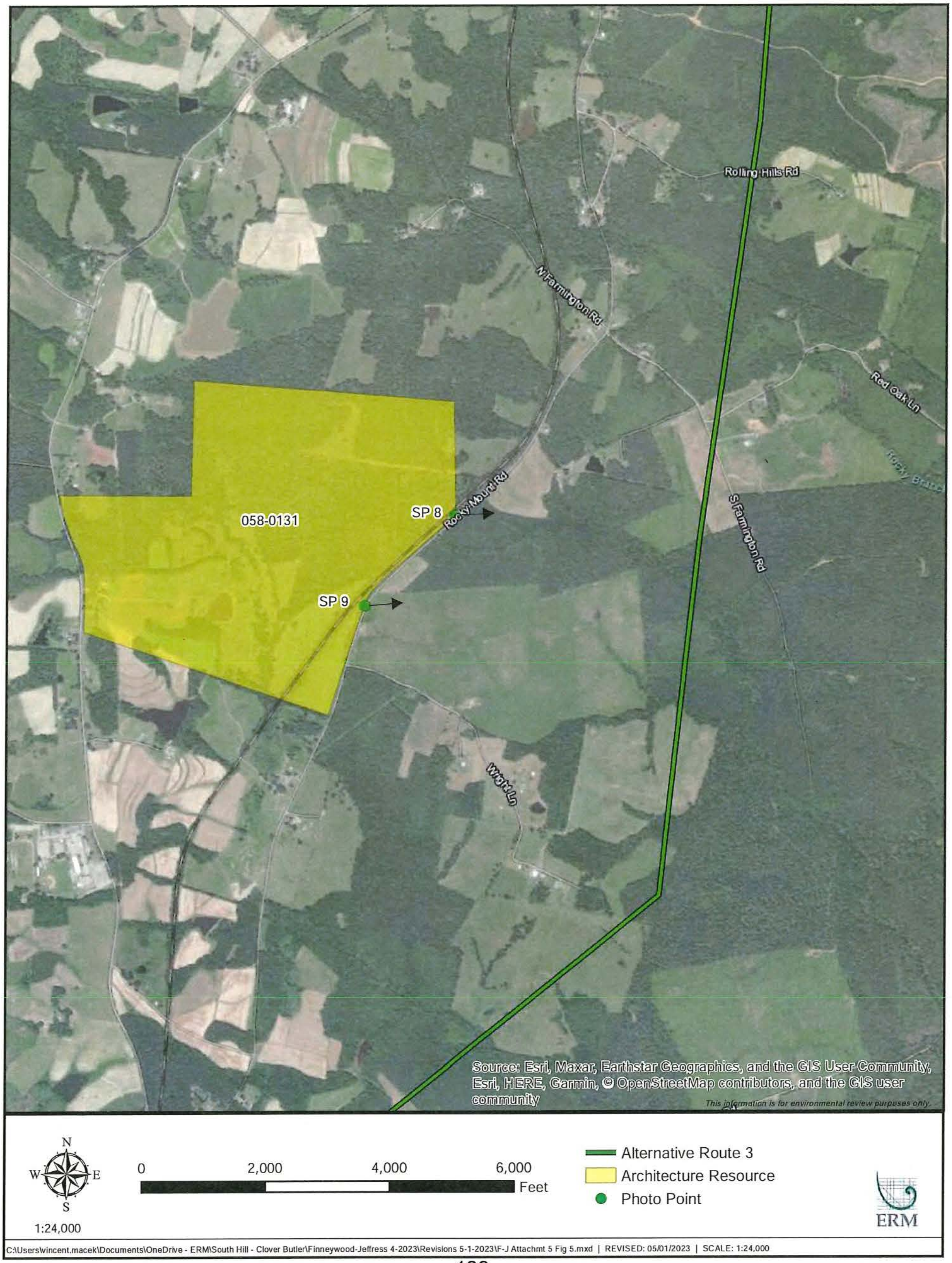
Viewpoint Location UTM Zone 17S: 721130E 4056717N
View Direction: 31 degrees
Viewpoint Elevation: 393 feet
Distance to Development: 2546 feet
Horizontal Field of View: 89 degrees

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

VIEWPOINT CONTEXT

Figure 4
Viewpoint SP 5 - Proposed Route and Alternative Routes 3 and 5
Occoneechee Park Rd S of Panhandle Rd
058-0091

Pre-Application Analysis
Finneywood to Jeffress



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Attachment 5

Existing View

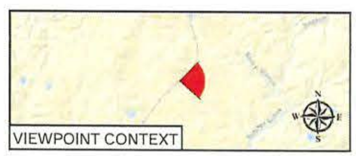
Proposed View - Hidden

Dominion Energy

ERM

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



VIEWPOINT CONTEXT

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

Pre-Application Analysis
Finneywood to Jeffress

Attachment 5

Existing View

Proposed View - Hidden

Dominion Energy

ERM

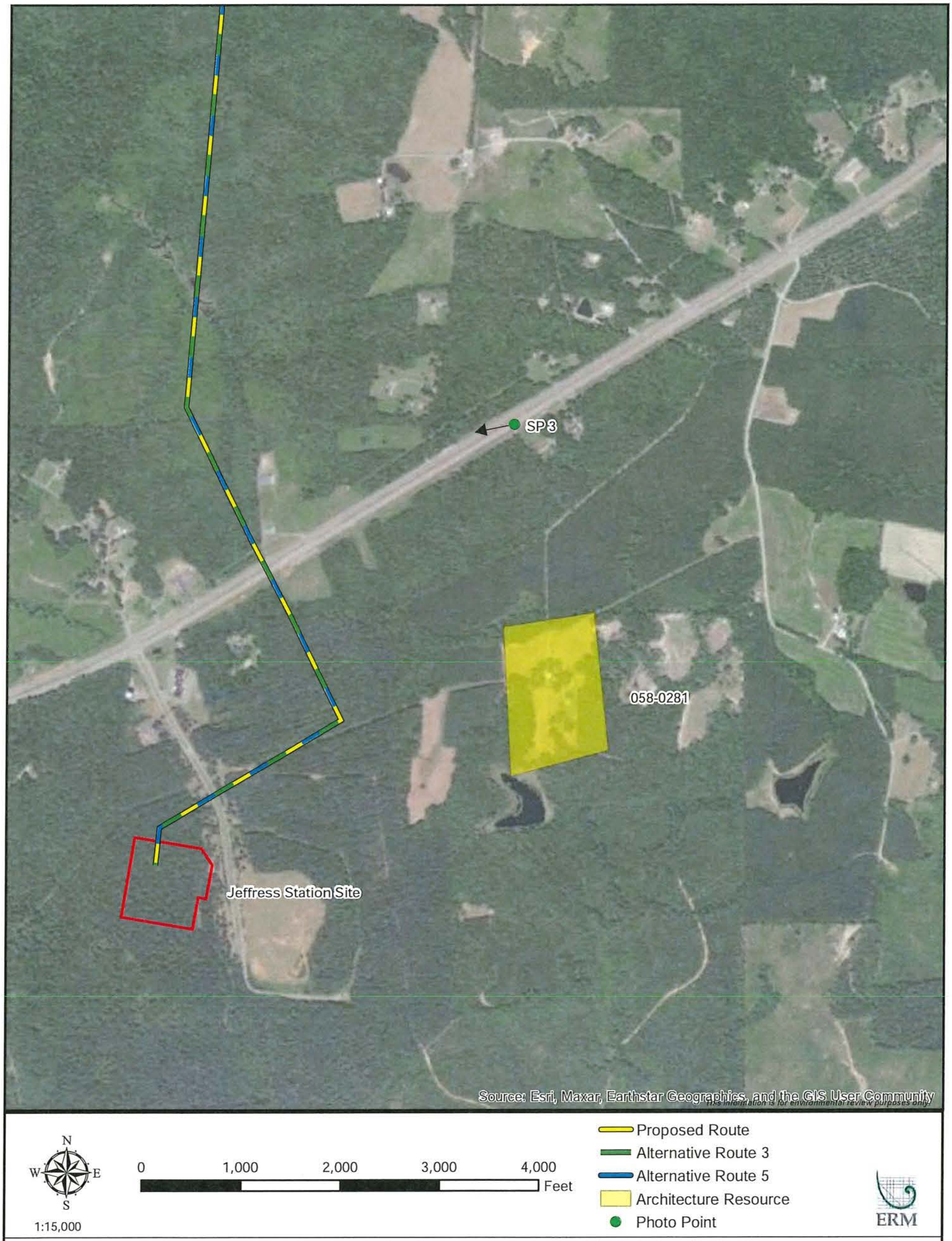
Viewpoint Location UTM Zone 17S:724753E 4066103N
View Direction: 83 degrees
Viewpoint Elevation: 431 feet
Distance to Development: 5145 feet
Horizontal Field of View: 89 degrees

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

VIEWPOINT CONTEXT

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

Pre-Application Analysis
Finneywood to Jeffress



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Existing View

Proposed View - Visible

Dominion Energy ERM

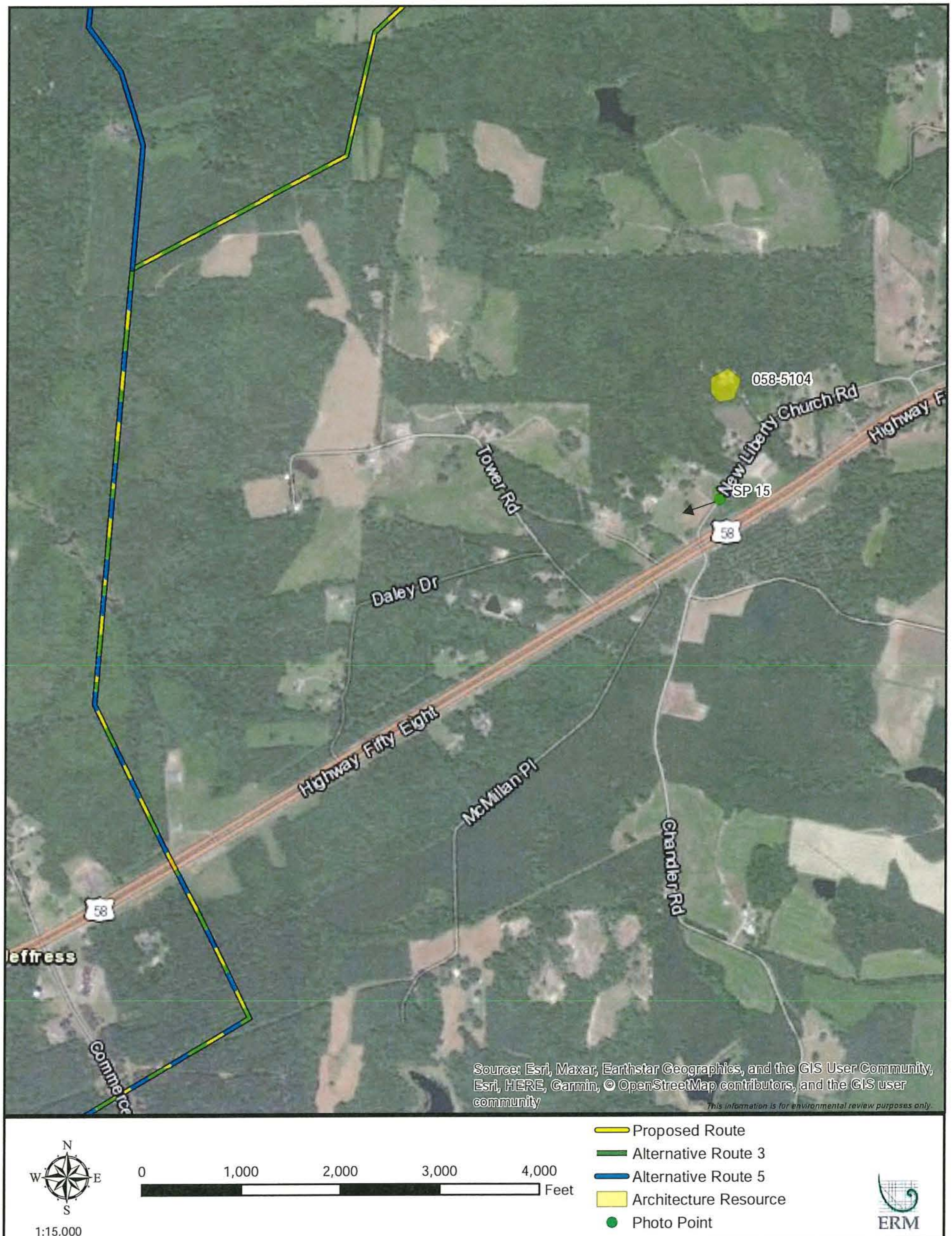
Viewpoint Location UTM Zone 17S:722634E 4058191N
View Direction: 260 degrees
Viewpoint Elevation: 384 feet
Distance to Development: 2773 feet
Horizontal Field of View: 89 degrees

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

VIEWPOINT CONTEXT

Figure 9
Viewpoint SP 3 - Proposed Route and Alternative Routes 3 and 5
Hwy 58 NE of Daley Dr
058-0281

Pre-Application Analysis Finneywood to Jeffress



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Attachment 5

Existing View

Proposed View - Hidden

Dominion Energy

ERM

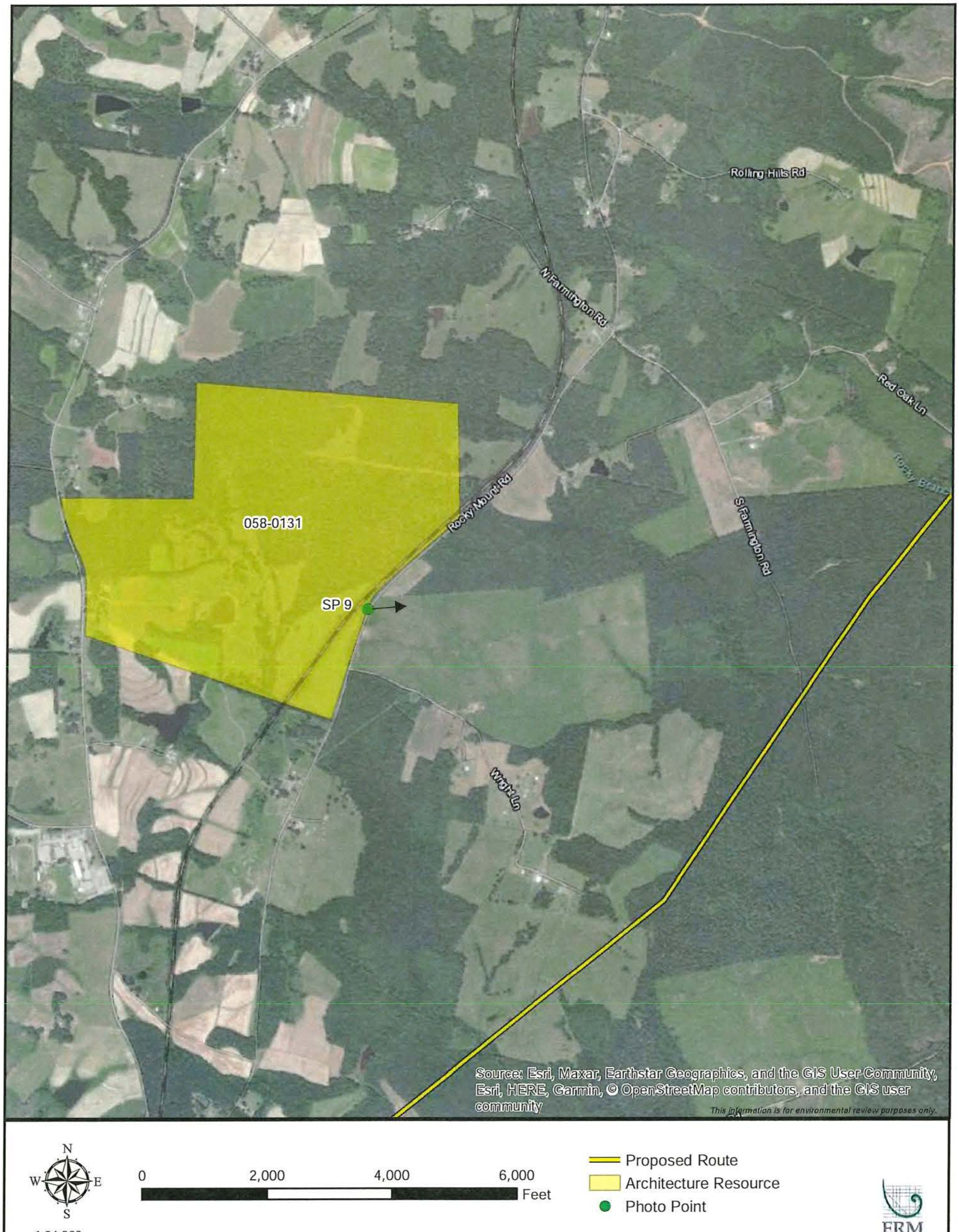
Viewpoint Location UTM Zone 17S: 723350E 4058745N
View Direction: 250 degrees
Viewpoint Elevation: 401 feet
Distance to Development: 4997 feet
Horizontal Field of View: 89 degrees

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

VIEWPOINT CONTEXT

Figure 11
Viewpoint SP 15 - Proposed Route and Alternative Routes 3 and 5
New Liberty Church Rd N of Hwy 58
058-5104

Pre-Application Analysis
Finneywood to Jeffress



Proposed Route
Architecture Resource
Photo Point

ERM

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Attachment 5

Existing View

Proposed View - Hidden

Dominion Energy

ERM

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

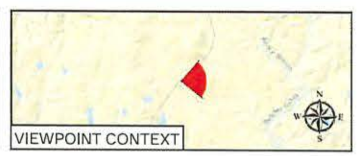
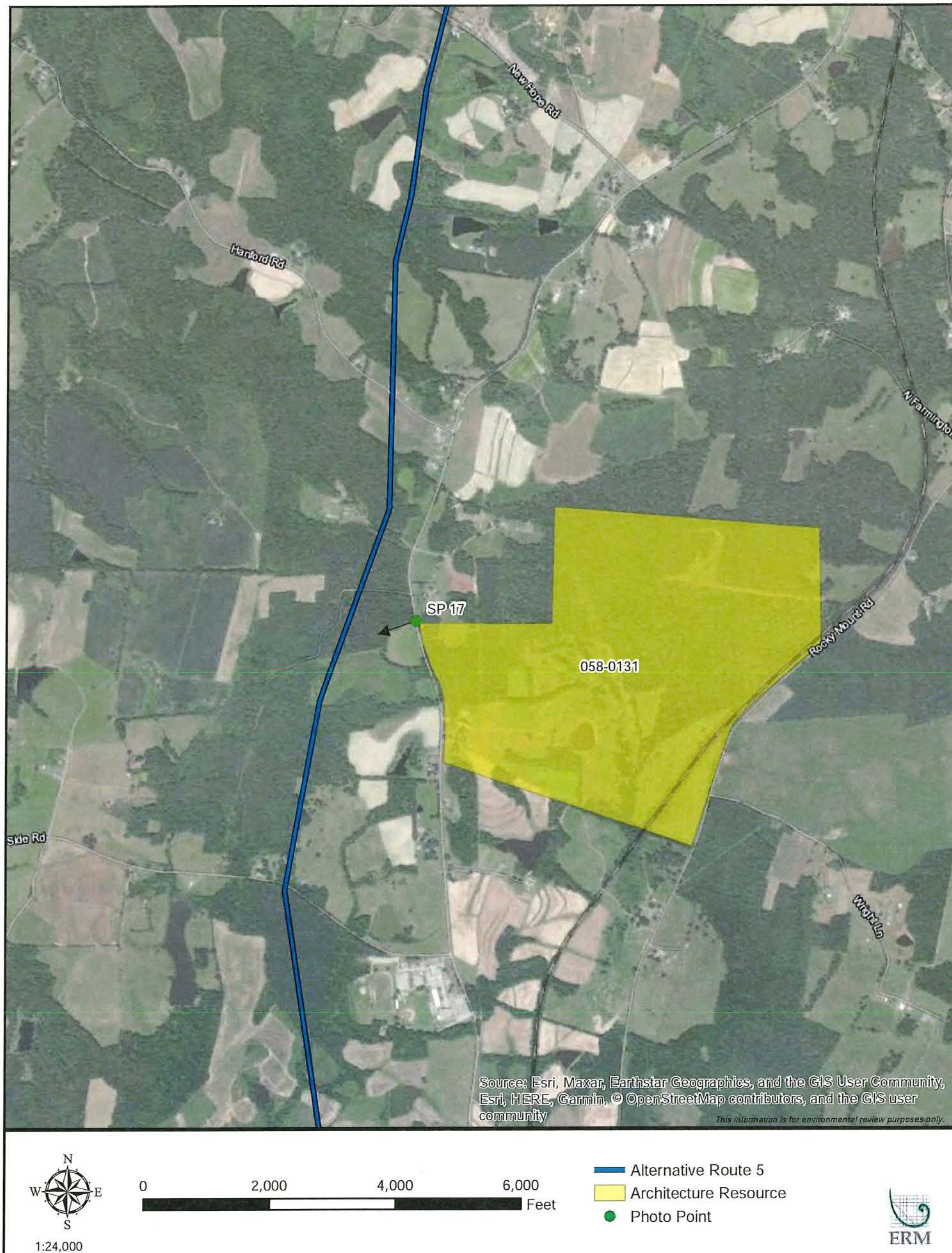


Figure 13
Viewpoint SP 9 - Proposed Route
Rocky Mount Rd N of Wright Lane
058-0131

Pre-Application Analysis
Finneywood to Jeffress



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Attachment 5

Existing View

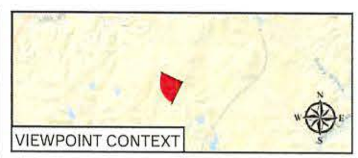
Proposed View - Hidden

Dominion Energy

ERM

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



VIEWPOINT CONTEXT

Figure 15
Viewpoint SP 17 - Alternative Route 5
Skipwith Rd S of Hanford Rd
058-0131

Pre-Application Analysis
Finneywood to Jeffress

II. DESCRIPTION OF THE PROPOSED PROJECT

C. Describe and furnish plan drawings of all new substations, switching stations, and other ground facilities associated with the proposed project. Include size, acreage, and bus configurations. Describe substation expansion capability and plans. Provide one-line diagrams for each.

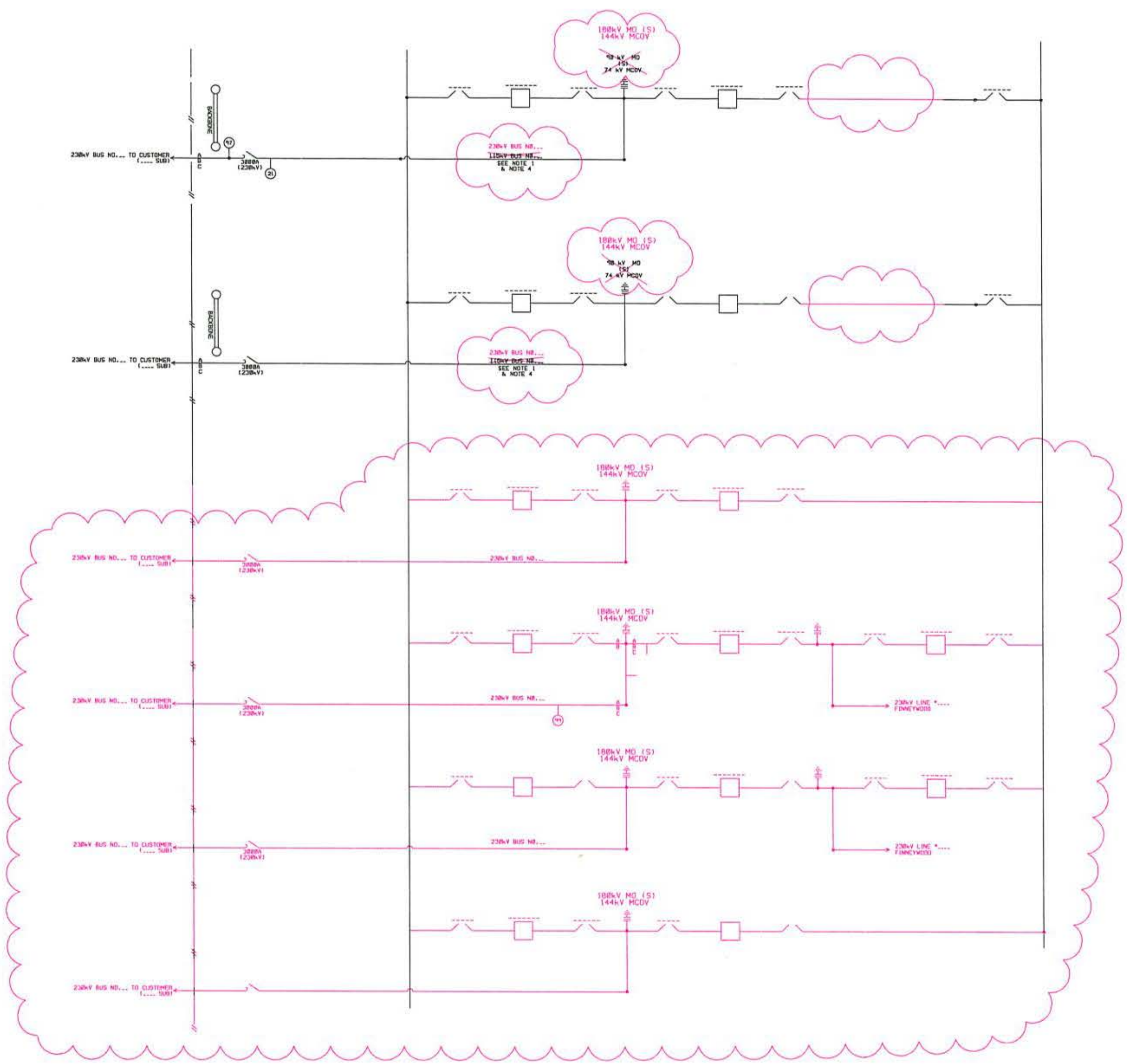
Response: The proposed Project requires converting the future Jeffress 115 kV Station to 230 kV operation.

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 4000A 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 Jeffress 115 kV Station will be situated on an approximately 5.8-acre parcel, and the conversion of the station to 230 kV will not require any additional acreage.

The one-line and general arrangement diagrams for the converted Jeffress 230 kV Station are provided as <u>Attachment II.C.1</u> and <u>Attachment II.C.2</u>.

The Project also requires minor station-related work at the future Finneywood Station to terminate the new Finneywood-Jeffress Lines, including relay updates and installation of line risers.

Attachment II.C.1



PRELIMINARY NOT FOR CONSTRUCTION

Drawn By: MMO	Date 10/06/21	CONSTRUCTION ONE LINE DIAGRAM	
		Substation	JEFFRESS SW STATION
Approval	Date	Drawing No.	II.C.1

Dominion Energy

By | Date | Project No. | Network No. | SM No. | Description | Approval

Revisions

USER: mohamm6

Attachment II.C.2

	Dominion Energy		
	JEFFRESS SW STATION		
	Name	Date	Project No.	Sheet No.
Designed by:				
Approvals			Scale	OF
Approvals				
		B/M No.	Revisions	
Cad File Name			Drawing No.	
PLOTTED:	3/23/2023		II.C.2	

FILENAME:
PLOTTED: 3/23/2023
USER: mohamm

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells For Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

No.	Date	By	Checked/Appr.	Description	Project Number	B/M

Revisions

USER: mohamm

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

A. Describe the character of the area that will be traversed by this line, including land use, wetlands, etc. Provide the number of dwellings within 500 feet, 250 feet and 100 feet of the centerline, and within the ROW for each route considered. Provide the estimated amount of farmland and forestland within the ROW that the proposed project would impact.

Response: **Proposed Route (Route 4)**

The Proposed Route is approximately 18.3 miles in length and is located entirely in Mecklenburg County. Extending east and then south from the Finneywood Station, the route crosses predominantly forested habitat for the first 4.6 miles as it passes east of Chase City. After crossing the Company's existing right-of-way of Line #40, the route crosses through a mix of land cover types consisting of agricultural land, forested land, and areas of recent clear-cut forests for the next 4.2 miles. This segment includes sparse rural residences at road crossings. After crossing Highway 92, the route crosses large land tracks that consist of forested habitat with pockets of recent clear cutting present, for the next 3.5 miles. Southwest of Farmington Road, the route continues southwest crossing a mix of forested and agricultural lands for 4.6 miles. This segment also includes sparse rural residences at road crossings. At this point, the route turns south and traverses through lands dominated by forested habitat for the final 1.5 miles before terminating at the converted Jeffress 230 kV Station.

According to County parcel data, zoning data, and aerial photo analysis, there are 14 dwellings located within 500 feet of the proposed centerline, 3 dwellings located within 250 feet of the proposed centerline, and no dwellings located within 100 feet of the proposed centerline or directly within the right-of-way of the Proposed Route. There are 32 non-residential buildings (*e.g.*, sheds and outbuildings) located within 500 feet of the proposed centerline of the Proposed Route.

See Attachment III.A.1 for a map depicting prime farmland and farmland of statewide importance in the Project area, and Section 2.L of the DEQ Supplement for the estimated amount of farmland and forestland within the right-of-way that the Proposed Route would impact.

For additional description of the character of the area that will be traversed by the Proposed Route and the related impacts, see the DEQ Supplement, specifically as to wetlands (Section 2.D), forests (Section 2.L), agricultural lands (Section 2.L), historic resources (Section 2.I), and wildlife (Section 2.K).

Alternative Route 3

Alternative Route 3 is approximately 18.5 miles in length and is located entirely in Mecklenburg County. Extending east and then south from the Finneywood Station, the route crosses predominantly forested habitat for the first 4.7 miles as it passes east of Chase City. After crossing the Company's existing right-of-way of Line #40, the route crosses through a mix of land cover types consisting of agricultural land, forested land, and areas of recent clear-cut forests for the next 2.5 miles. This segment includes sparse rural residences at road crossings. After crossing Highway 92, the route crosses through dense forested areas, with some rural residences, for the next 4.1 miles. After crossing Farmington Road, the route continues southwest crossing a mix of forested and agricultural lands for 5.8 miles. This segment also includes sparse rural residences at road crossings. At this point, the route turns south and traverses through lands dominated by forested habitat for the final 1.5 miles before terminating at the converted Jeffress 230 kV Station.

According to County parcel data, zoning data, and aerial photo analysis, there are 22 dwellings located within 500 feet of the proposed centerline, 3 dwellings located within 250 feet of the proposed centerline, and no dwellings located within 100 feet of the proposed centerline or within the right-of-way of Alternative Route 3. There are 34 non-residential buildings (*e.g.*, sheds and outbuildings) located within 500 feet of the proposed centerline of Alternative Route 3.

See Attachment III.A.1 for a map depicting prime farmland and farmland of statewide importance in the Project area, and Section 2.L of the DEQ Supplement for the estimated amount of farmland and forestland within the right-of-way that Alternative Route 3 would impact.

For additional description of the character of the area that will be traversed by Alternative Route 3 and the related impacts, see the DEQ Supplement, specifically as to wetlands (Section 2.D), forests (Section 2.L), agricultural lands (Section 2.L), historic resources (Section 2.I), and wildlife (Section 2.K).

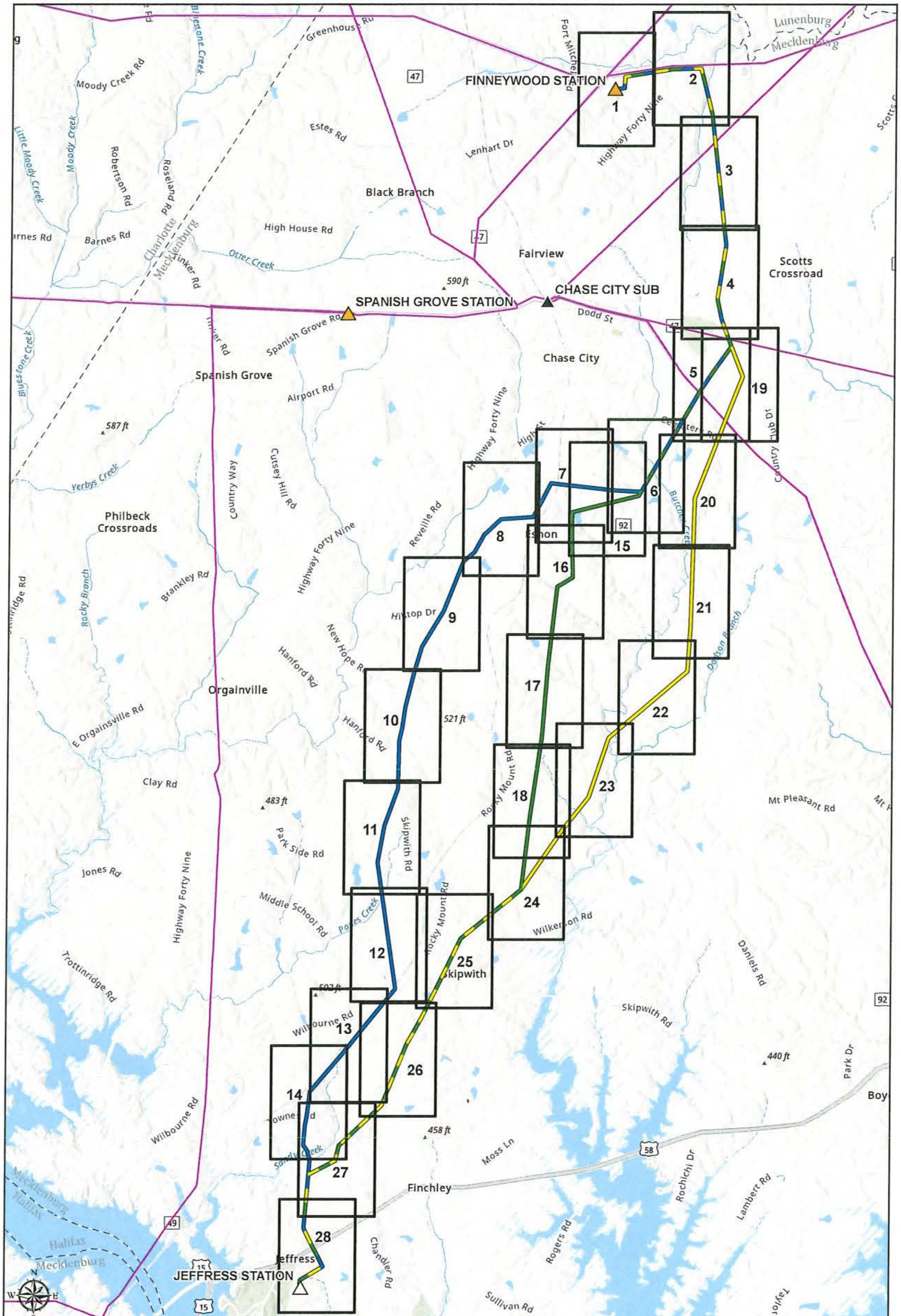
Alternative Route 5

Alternative Route 5 is approximately 19.2 miles in length and is located entirely in Mecklenburg County. Extending east and then south from the Finneywood Station, the route crosses predominantly forested habitat for the first 4.7 miles as it passes east of Chase City. After crossing the Company's existing right-of-way of Line #40, the route crosses through a mix of land cover types consisting of agricultural and forested habitat for the next 2.1 miles. This segment includes sparse rural residences at road crossings. At this point, the route turns west and parallels the Transco natural gas pipeline corridor for 1.1 miles. After crossing the Norfolk Southern Railroad, the route extends southwest and crosses open grasslands associated with the Bailey Data Center Development Site, for 1.1 miles. The route then crosses through forested habitat, with some agricultural lands and rural residences dispersed, for the next 4.4 miles. After crossing Park Side Road, the route extends south for 1.6 miles crossing a mix of agricultural and forested lands. After crossing the Norfolk Southern Railroad, the route extends southwest paralleling the south side of the railroad, crossing forested lands for 1.6 miles. The route then turns south and traverses through lands dominated by forested habitat for the final 2.6 miles before terminating at the converted Jeffress 230 kV Station.

According to County parcel data, zoning data, and aerial photo analysis, there are 27 dwellings located within 500 feet of the proposed centerline, 6 dwellings located within 250 feet of the proposed centerline, and no dwellings located within 100 feet of the proposed centerline or within the right-of-way of Alternative Route 5. There are 35 non-residential buildings (*e.g.*, sheds and outbuildings) located within 500 feet of the proposed centerline of Alternative Route 5.

See Attachment III.A.1 for a map depicting prime farmland and farmland of statewide importance in the Project area, and Section 2.L of the DEQ Supplement for the estimated amount of farmland and forestland within the right-of-way that Alternative Route 5 would impact.

For additional description of the character of the area that will be traversed by Alternative Route 5 and the related impacts, see the DEQ Supplement, specifically as to wetlands (Section 2.D), forests (Section 2.L), agricultural lands (Section 2.L), historic resources (Section 2.I), and wildlife (Section 2.K).



▲ Existing Substation
▲ Future Switching Station
△ Station Proposed for Conversion
Existing Dominion Transmission Line
Proposed Route
Alternative Route 3
Alternative Route 5
Index Page

1:70,000 0 0.5 1 Miles

Attachment III.A.1 Index
Prime Farmland and Farmland of Statewide Importance
230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

ERM
Dominion Energy

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Future Switching Station
Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Parcel Boundary
All areas are prime farmland
Farmland of statewide importance
Not prime farmland

1:6,000 — 0 250 500 US Feet

Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance
230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

ERM
Dominion Energy

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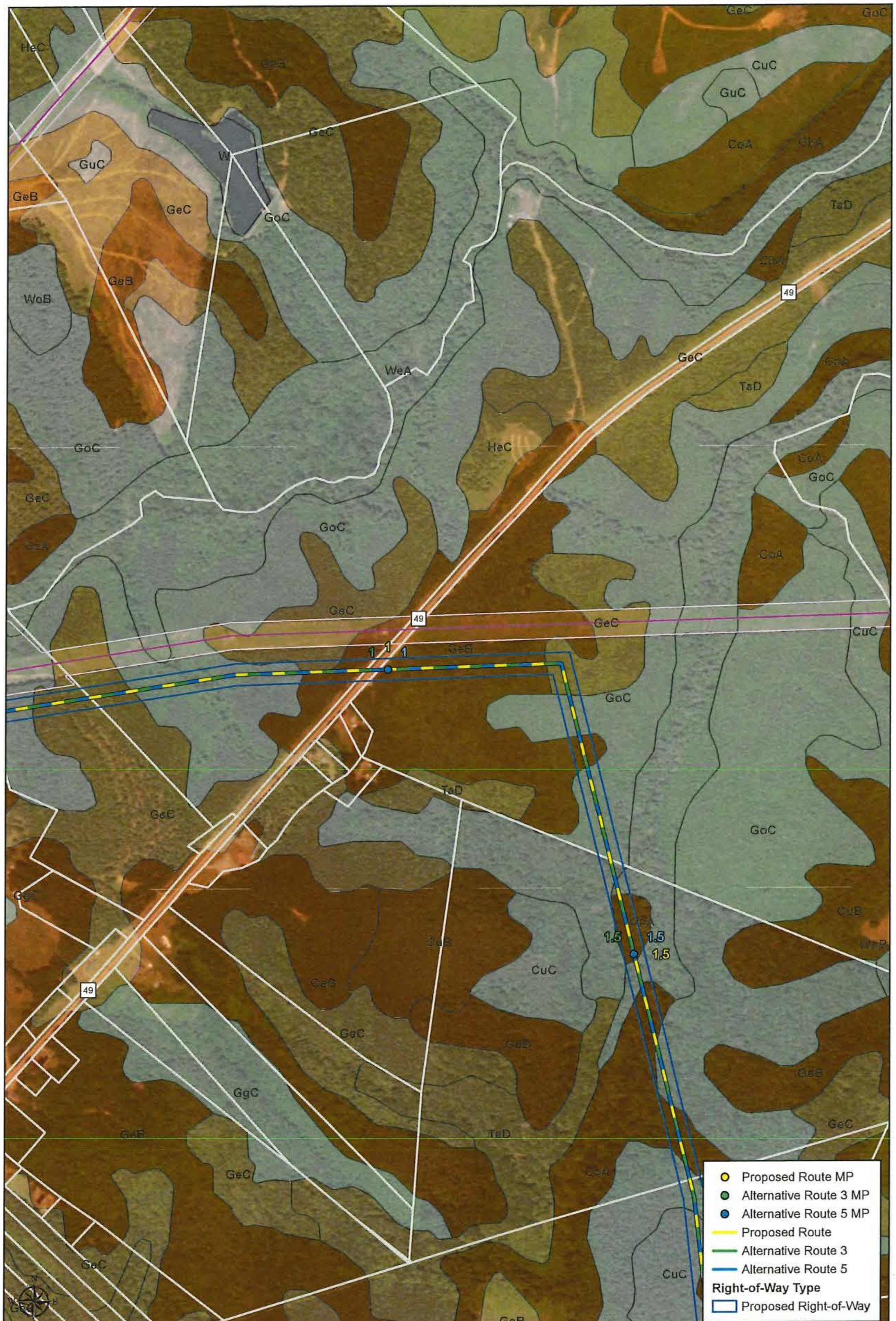

Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Parcel Boundary

All areas are prime farmland
Farmland of statewide importance
Not prime farmland

1:6,000 — 0 250 500 US Feet

Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance
230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

ERM

Dominion Energy

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Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Parcel Boundary

All areas are prime farmland
Farmland of statewide importance
Not prime farmland

1:6,000 0 250 500 US Feet

Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance
230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

ERM

Dominion Energy

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DRAWN BY: Nicole.Dunn

Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Parcel Boundary

All areas are prime farmland
Farmland of statewide importance
Not prime farmland

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Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance
230 kV Finneywood-Jeffress Lines and
Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

ERM

Dominion Energy

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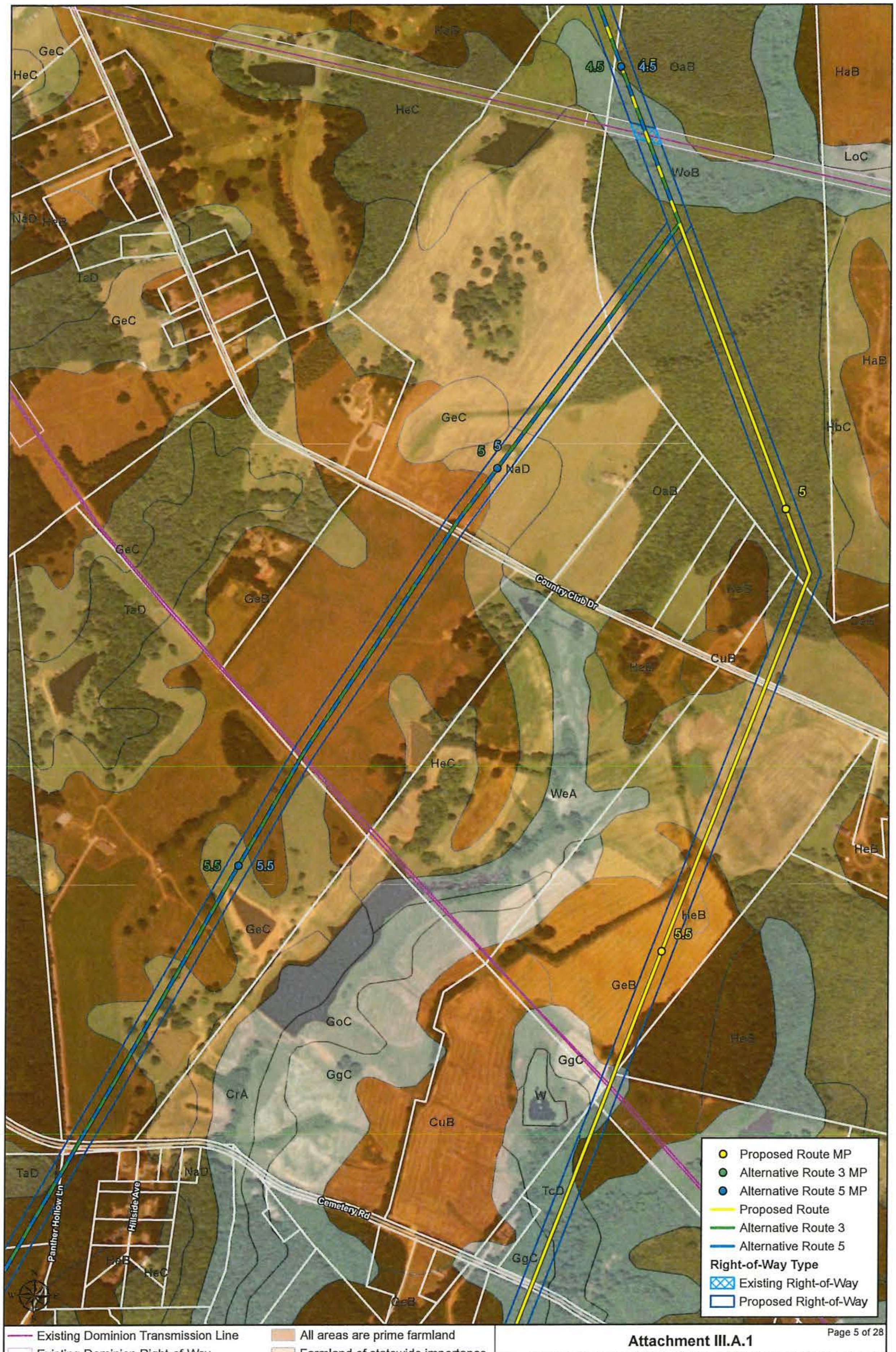

Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Parcel Boundary

All areas are prime farmland
Farmland of statewide importance
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Prime Farmland and Farmland of Statewide Importance

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Dominion Energy Virginia

Mecklenburg County, Virginia

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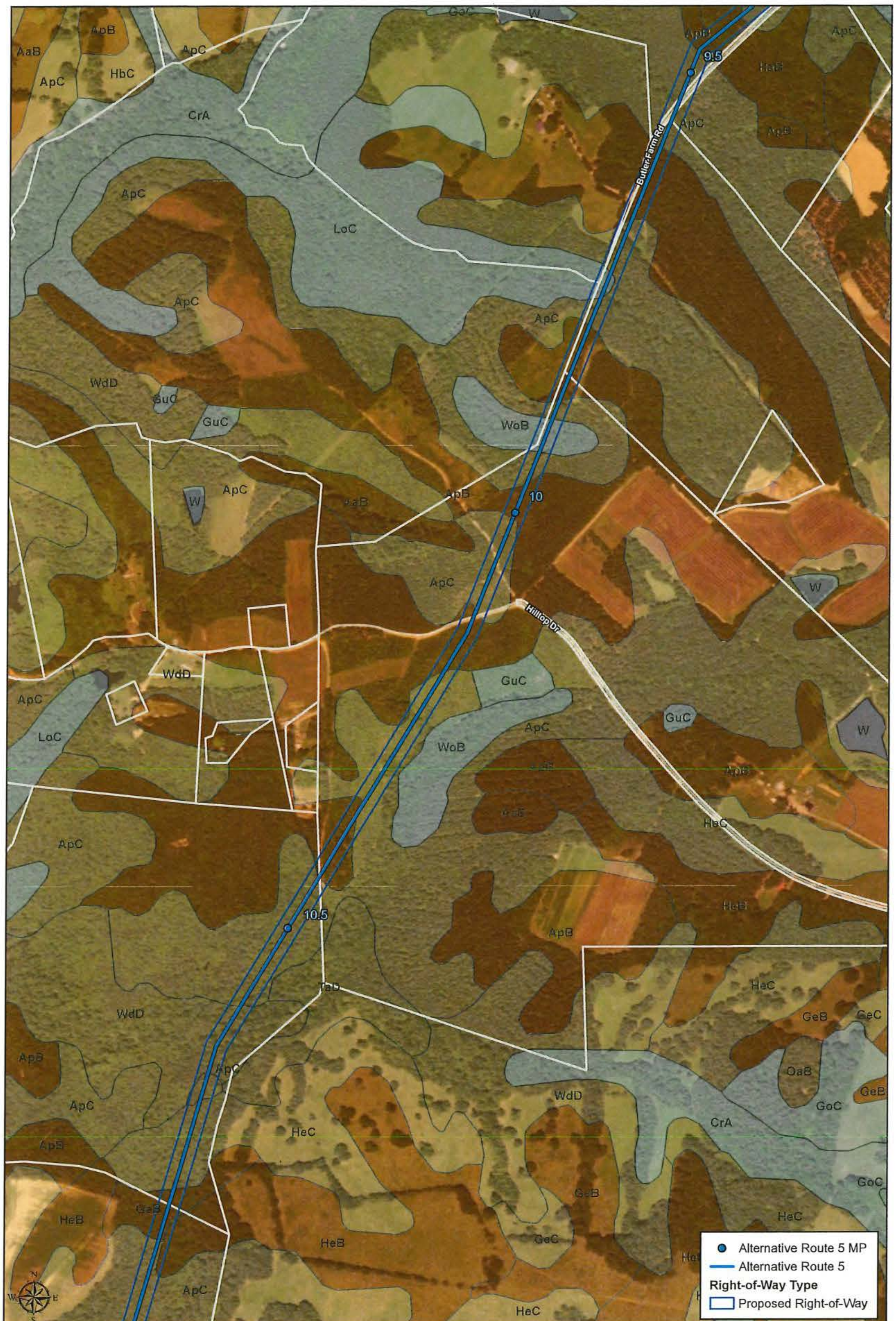

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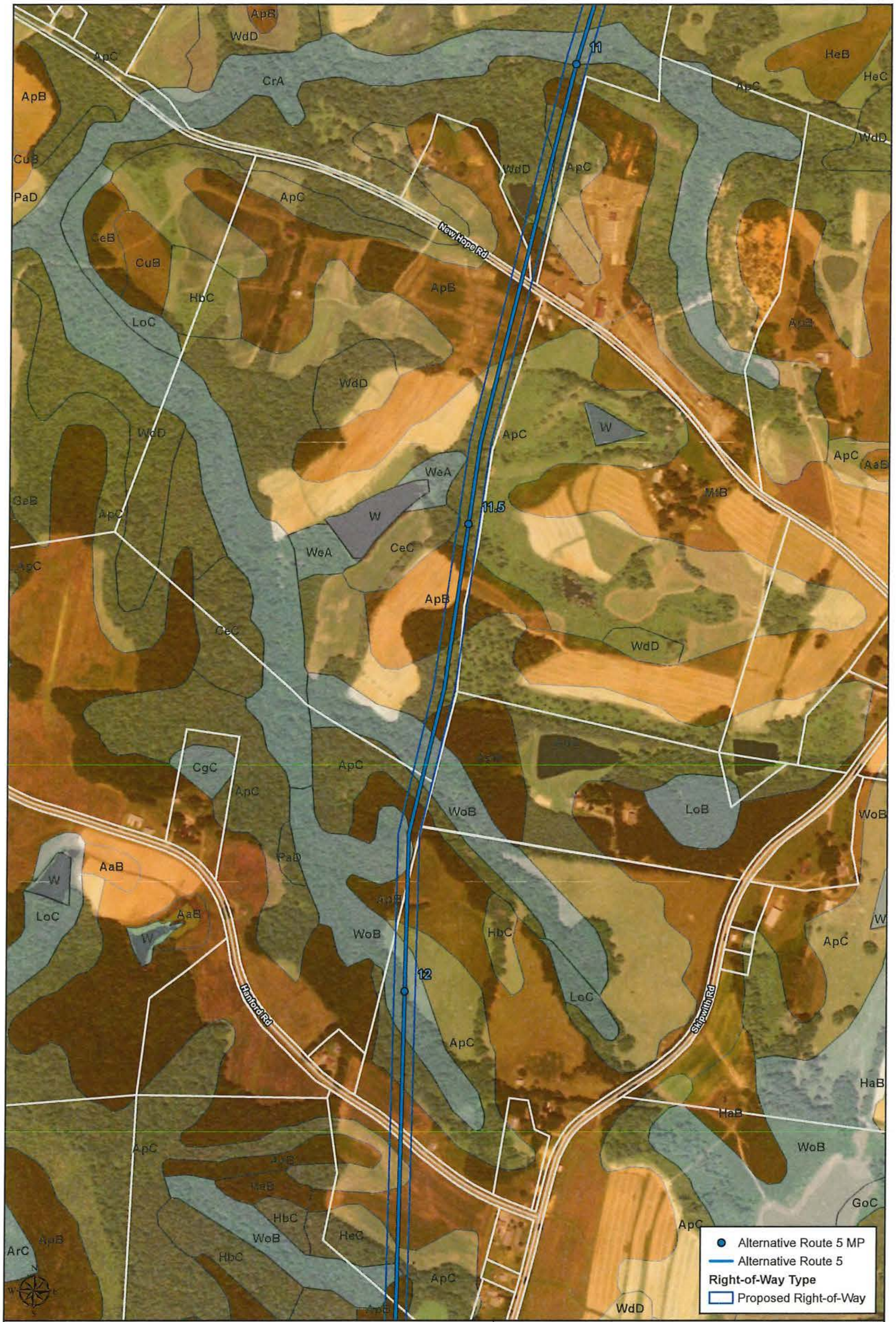

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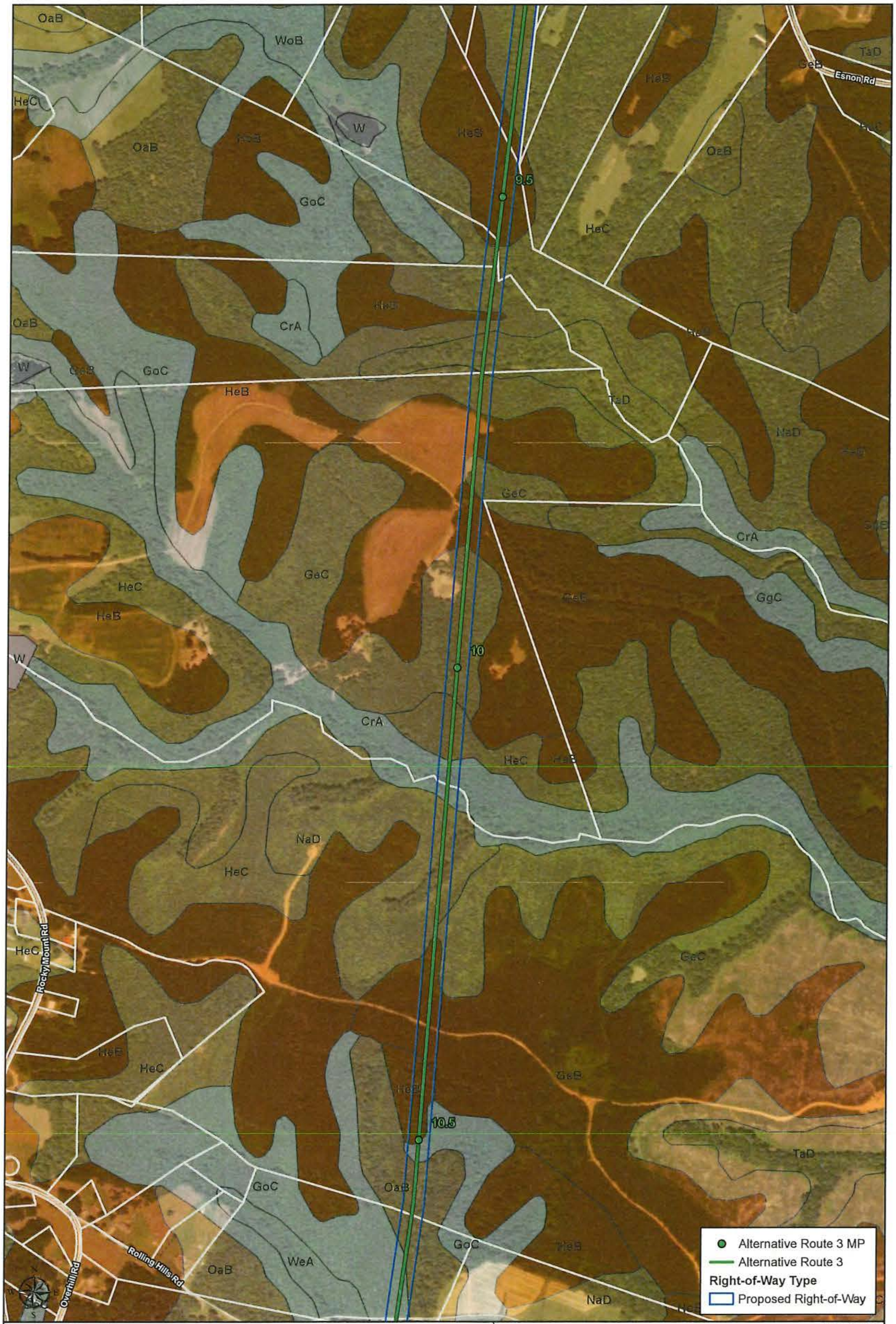

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Attachment III.A.1
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Mecklenburg County, Virginia

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Existing Dominion Transmission Line
Existing Dominion Right-of-Way
Parcel Boundary

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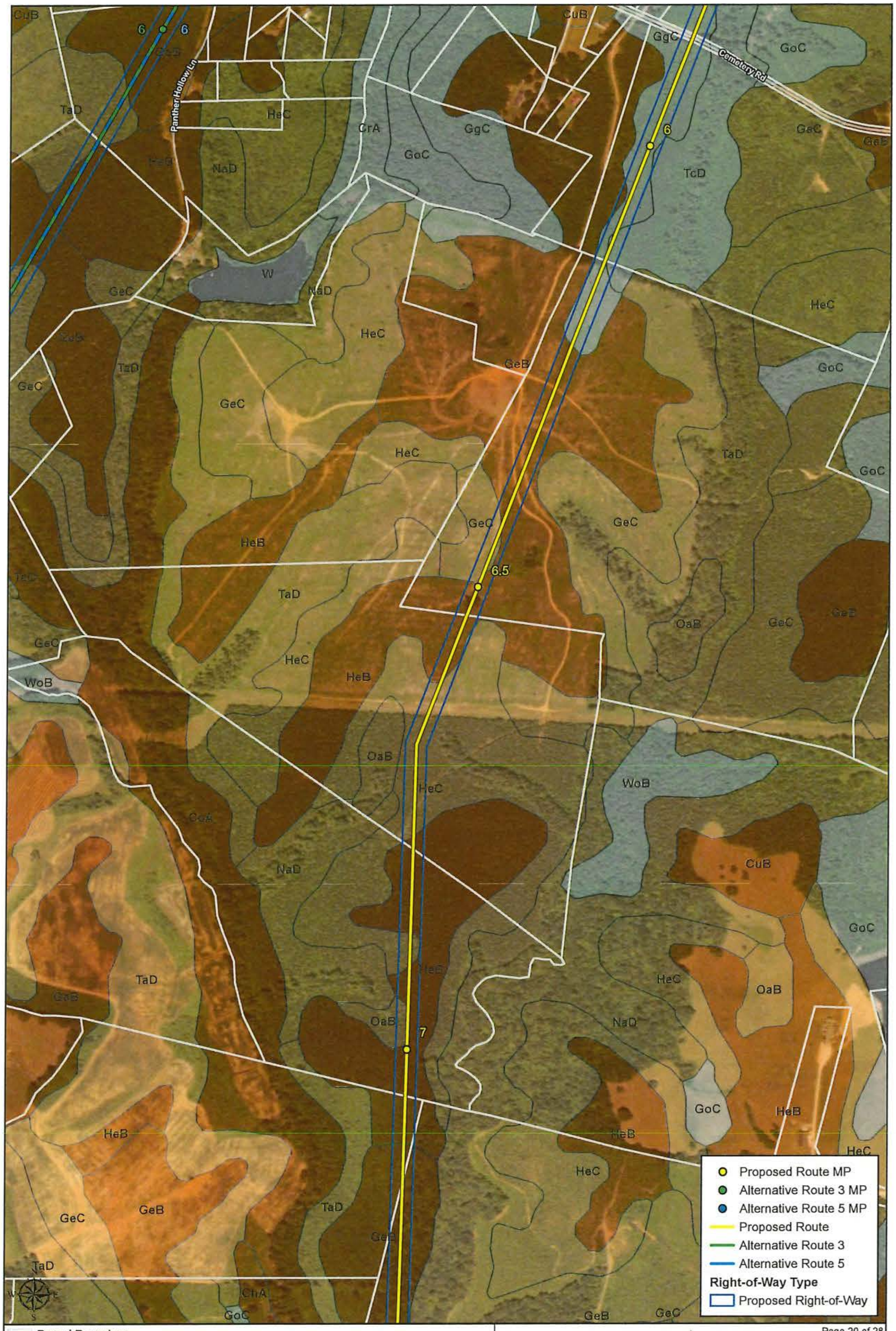

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Mecklenburg County, Virginia

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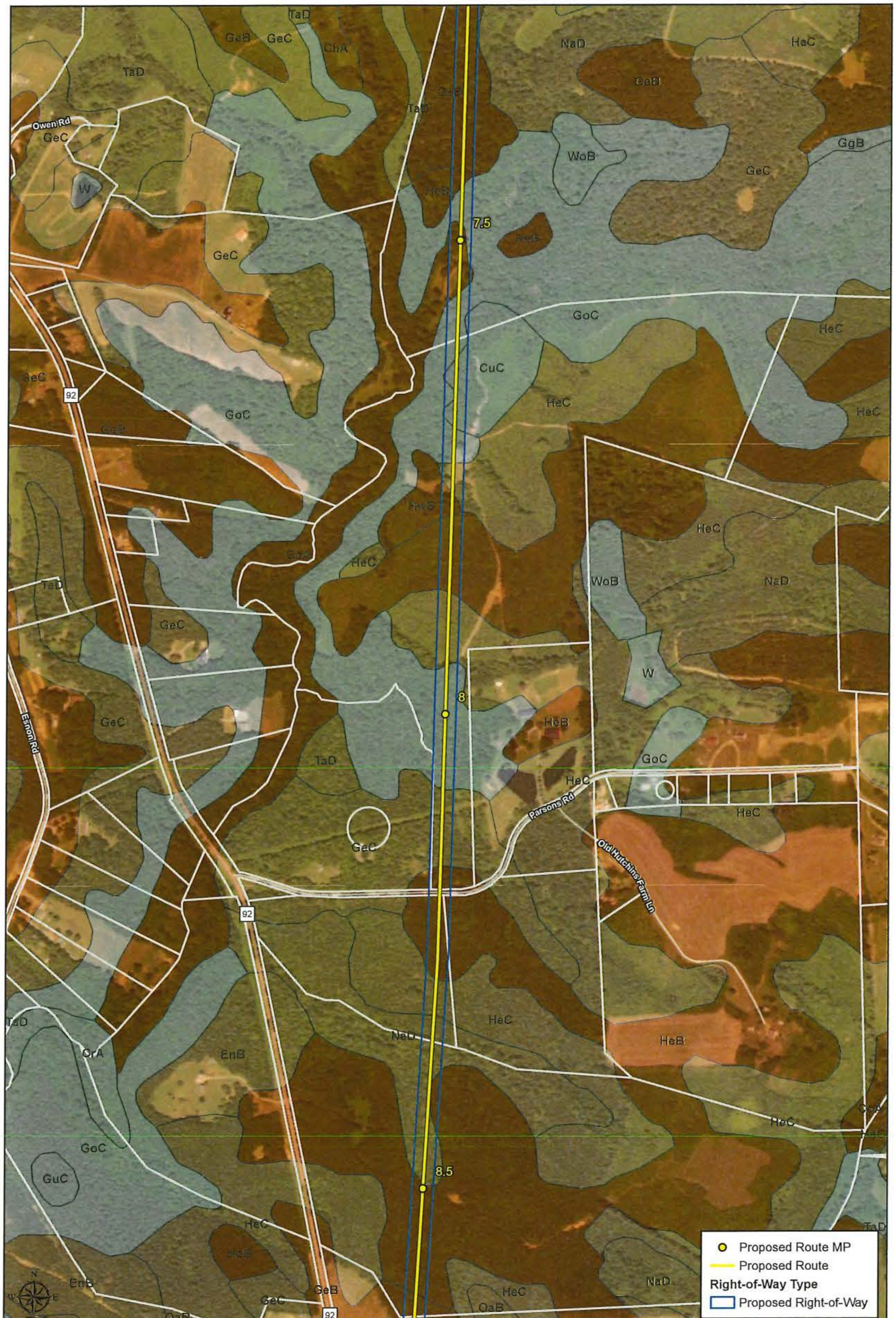

Parcel Boundary
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Attachment III.A.1

Page 21 of 28

Prime Farmland and Farmland of Statewide Importance
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Mecklenburg County, Virginia

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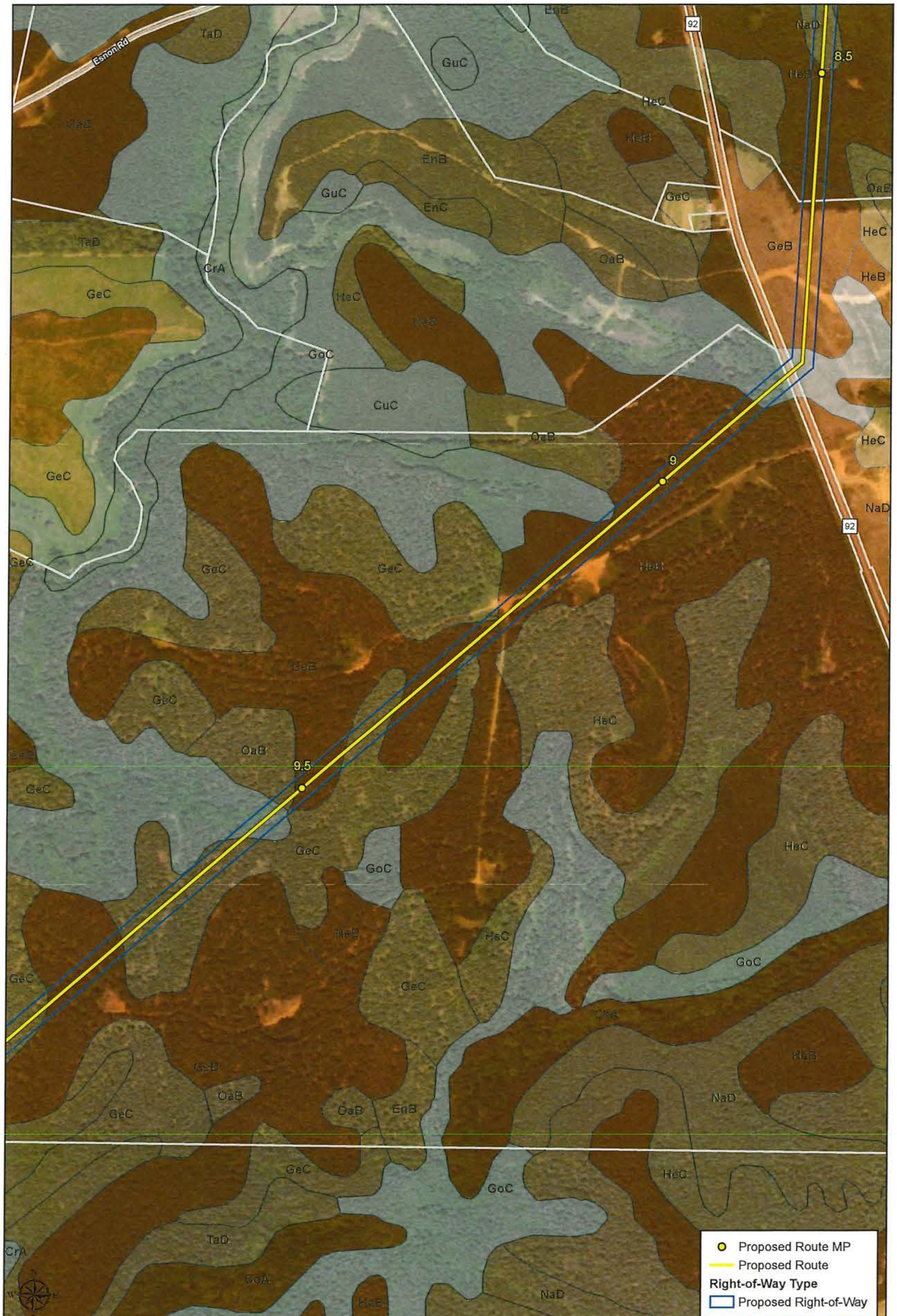

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Mecklenburg County, Virginia

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Attachment III.A.1

Page 23 of 28

Prime Farmland and Farmland of Statewide Importance

230 kV Finneywood-Jeffress Lines and

Jeffress Switching Station Conversion Project

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Mecklenburg County, Virginia

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Attachment III.A.1
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Station Proposed for Conversion
Parcel Boundary
All areas are prime farmland
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Page 28 of 28

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III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

B. Describe any public meetings the Applicant has had with neighborhood associations and/or officials of local, state or federal governments that would have an interest or responsibility with respect to the affected area or areas.

Response: Beginning in January 2022, the Company engaged with Mecklenburg County regarding the proposed Project, including the following:

- In January 2022, Company representatives briefed the Mecklenburg County Administrator to introduce the Project prior to the Mecklenburg County Board of Supervisors ("BOS") meeting.
- In February 2022, Company representatives introduced the Project to the Mecklenburg County BOS.
- In March 2022, Company representatives briefed the Town Manager of Chase City about the Project. The Town Manager and the Mayor of Chase City attended the February 15, 2023 in-person community meeting.
- In December 2022, Company representatives briefed the Mecklenburg County Administrator and provided additional information about the Project that was not available earlier that year.
- In February 2023, Lunenburg County and Charlotte County representatives were notified and informed about the Project because a new routing alternative within Mecklenburg County was identified within 1.0 mile of those Counties' residents. Additionally, in early February 2023, Senator Ruff and staff members of Delegate Wright were made aware of the February 15 and February 16 community meetings.
- On May 8, 2023, Company representatives provided the Mecklenburg County BOS with an update on the Project and outreach to the community.

In December 2022, the Company launched an internet website dedicated to the proposed Project: www.dominionenergy.com/jeffress. The website includes a description of the proposed Project, an explanation of need, routing options, GeoVoice (an interactive mapping tool), photo simulations, recordings of the in-person community meeting presentations, and information on the Commission review process.

Since January 2023, the Company has released four mailers totaling more than 7,700 pieces of correspondence informing the public about the Project and inviting the public to learn more about the Project and its development. These mailers were sent to property owners within one mile of the routing alternatives of the Project and included two postcards mailed in January 2023 (Attachment III.B.1 and

Attachment III.B.2), and letters mailed in February 2023 (Attachment III.B.3) and in March 2023 (Attachment III.B.4).

The Company deployed an online tool called GeoVoice on February 10, 2023 on the Project website (https://geovoice.powereng.com/dominion/Mecklenburg/), which allows users to review the potential transmission routing alternatives and provide location-based comments to share insights. Users do not need to register before viewing the routing details but do need to register to submit a comment to the Project team.

The Company used traditional and digital media to build awareness, promote public events, and ensure interested community members knew that the Company is available to discuss their interests and concerns about the Project. Newspaper print advertisements regarding the Project and community meetings were placed in the Mecklenburg Sun, News Progress, and South Hill Enterprise on February 8, 2023, in the South Hill Enterprise on February 12, 2023, and in the Mecklenburg Sun, News Progress, and South Hill Enterprise on March 29, 2023. A copy of the print advertisement is included as Attachment III.B.5. A copy of the digital media advertisements is included as Attachment III.B.6. An overview of the digital campaign results as of May 2023 is as follows:

- Pre-Event 2/15 campaign results:
  - 110,322 Impressions Delivered
  - 1,433 Link Clicks
  - 13,416 Video Views with an Average 6.35% Video Completion Rate
  - 0.65% Clickthrough Rate
  - 26 Ad Engagements

- Pre-Event 2/16 campaign results:
  - 241,761 Impressions Delivered
  - 2,712 Link Clicks
  - 21,899 Video Views with an Average 4.90% Video Completion Rate
  - 0.56% Clickthrough Rate
  - 48 Ad Engagements

- Pre-Event 4/6 campaign results:
  - 367,153 Impressions Delivered
  - 2,088 Link Clicks
  - 38,598 Video Views with an Average 14.18% Video Completion Rate
  - 0.36% Clickthrough Rate
  - 31 Ad Engagements

- Post-Event 2/15 and 2/16 campaign results:
  - 671,958 Impressions Delivered
  - 3,351 Link Clicks
  - 74,516 Video Views with an Average 11.70% Video Completion Rate
  - 0.35% Clickthrough Rate
  - 74 Ad Engagements

- Post-Event 4/6 campaign results:
  - 482,545 Impressions Delivered
  - 2,655 Link Clicks
  - 46,372 Video Views with an Average 14.52% Video Completion Rate
  - 0.46% Clickthrough Rate
  - 28 Ad Engagements

The Company hosted in-person public meetings on February 15, February 16, and April 6, 2023. The purpose of the February 15 and 16 meetings was to build community awareness about the Project, share preliminary routes for the Project, and address property owner concerns. Approximately 110 individuals attended the February 2023 meetings. A presentation used during the February meetings, as well as a structure rendering and aerial renderings presented during those meetings are available on the Project website.

The purpose of the April 6 meeting was to provide the community with an update on the Project after incorporating public input, where possible, to the routes as well as to continue addressing property owner concerns. Approximately 47 individuals attended the April 6, 2023 meeting. Photo simulations (Attachment III.B.7) and photo renderings (Attachment III.B.8) from key locations and updated routing options were presented at this meeting.

As routes changed based on additional analysis and feedback during the routing process, the Project team updated GeoVoice with revised simulations for impacted routes. Note some of these simulations may be different from the simulations presented during the open houses, as the ones available on GeoVoice are the most recent. The Project website includes the date that GeoVoice was last updated.

As part of preparing for the Project, the Company researched the demographics of the surrounding communities using the U.S. Environmental Protection Agency's Environmental Justice ("EJ") mapping and screening tool, EJScreen 2.11 , and census data from the U.S. Census Bureau 2016-2020 American Community Survey. This review revealed that 6 Census Block Groups ("CBGs") are located within the Project study area and within one mile of the route alternatives. A review of demographic data released by the U.S. Census Bureau identified populations within the Project study area that meet the Virginia Environmental Justice Act threshold to be defined as Environmental Justice Communities ("EJ

Communities"). Two of the six CBGs within the study area appear to be communities of color and low-income populations. One of CBGs within the study area appears to be solely low-income. See Sections 3.2 and 4.2 of the Environmental Routing Study for the results of the Company's EJ analysis.

As discussed in more detail in Section IV.B, scientific evidence does not show that common sources of EMF in the environment, including transmission lines and other parts of the electric system, are a cause of any adverse health effects. As such, the impacts of constructing and operating any of the proposed alternatives on the natural and human environments are not anticipated to be significant.

Based on the analysis of the Project, the Company does not anticipate disproportionately high or adverse impacts to the surrounding community and the EJ Communities located within the study area, consistent with the Project design to reasonably minimize such impacts.

In addition to its evaluation of impacts, the Company has and will continue to engage the EJ Communities in a manner that allows them to meaningfully participate in the Project development and approval process so that the Company can take their views and input into consideration. See Attachment III.B.9 for a copy of the Company's Environmental Justice Policy.

Electric Transmission
P.O. Box 26666
Richmond, VA 23261

Dominion Energy®

Actions Speak Louder

Investing in Our Communities

Dominion Energy

IMPORTANT

Local Power Line Project Information

Use your iPhone camera or the QR reader app on other smartphones to visit the project page on our website.

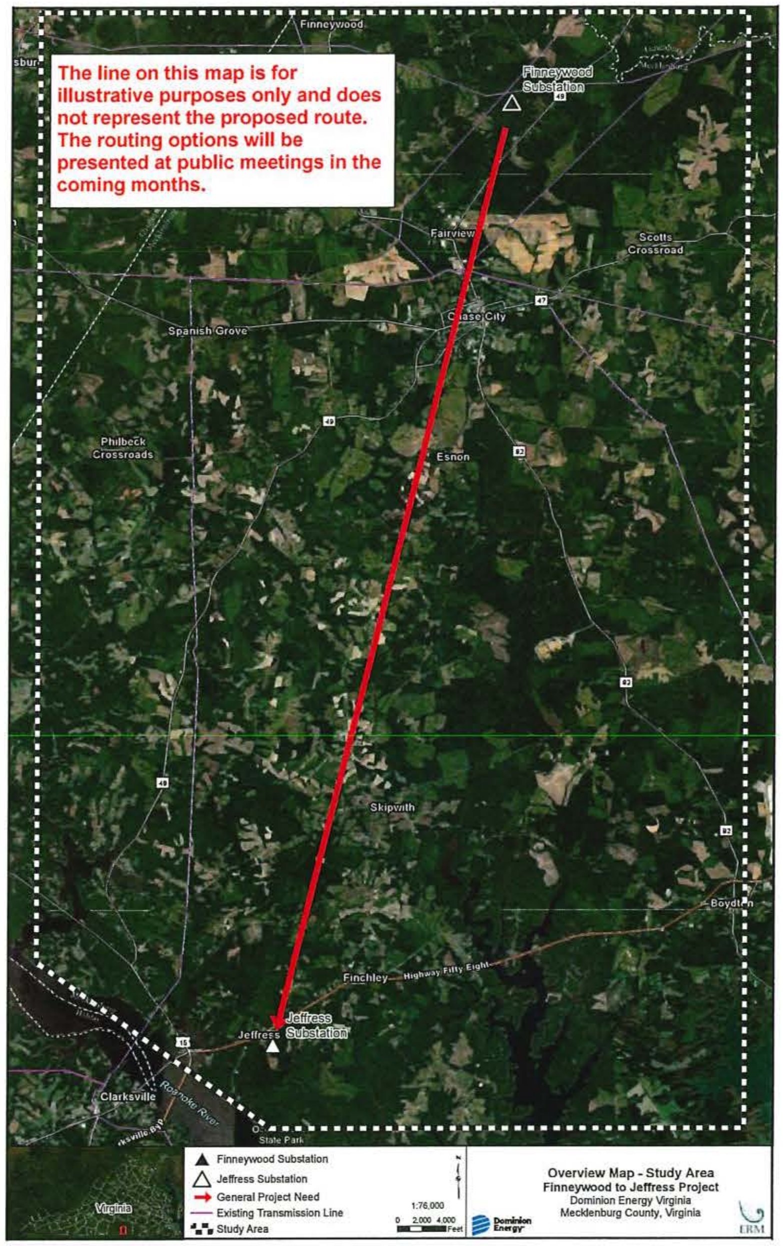
Jeffress 230 kV Electric Transmission Line and Substation Project

AT DOMINION ENERGY, we are committed to providing safe, reliable and secure energy to the communities we serve. You may be aware of the Butler Farm project in the area, but you are receiving this postcard because we are planning for another new electric transmission project in Mecklenburg County.

Mecklenburg County has been successful in diversifying its economic prospects and growing new industries in the county. As data center development continues to materialize, there is a growing need for new electric infrastructure. As such, we are currently evaluating and planning for two new single-circuit 230 kilovolt (kV) electric transmission lines in Mecklenburg County.

We are in the early design stages and want to involve the public in our planning process. This includes providing input on new right of way needed for this project. Be on the lookout for invitations to public meetings in the coming months where you will be able to review the routing options and meet with project team members.

Thank you for your patience as we work to maintain reliable service in your community.



CONTACT US

Visit our website at DominionEnergy.com/jeffress for project updates. Or contact us by sending an email to powerline@dominionenergy.com or calling 888-291-0190.

WHAT:

This proposed project includes two new single-circuit 230 kV electric transmission lines with new right of way in Mecklenburg County. The lines will need to be constructed from the Finneywood Substation and connect to the Jeffress Substation, located in southwest Mecklenburg.

WHY:

Recent data center development requires new investment to support growing electrical needs. As the energy needs change, new electrical infrastructure is needed in Mecklenburg County.

WHERE:

This project involves constructing approximately 18–21 miles of two single-circuit 230 kV transmission lines paralleling one another on shared right of way from the Finneywood Substation located north of Chase City to the Jeffress Substation located north of the Roanoke River and John H. Kerr Reservoir in Mecklenburg County, Virginia.

HIGH-LEVEL ACTIVITIES

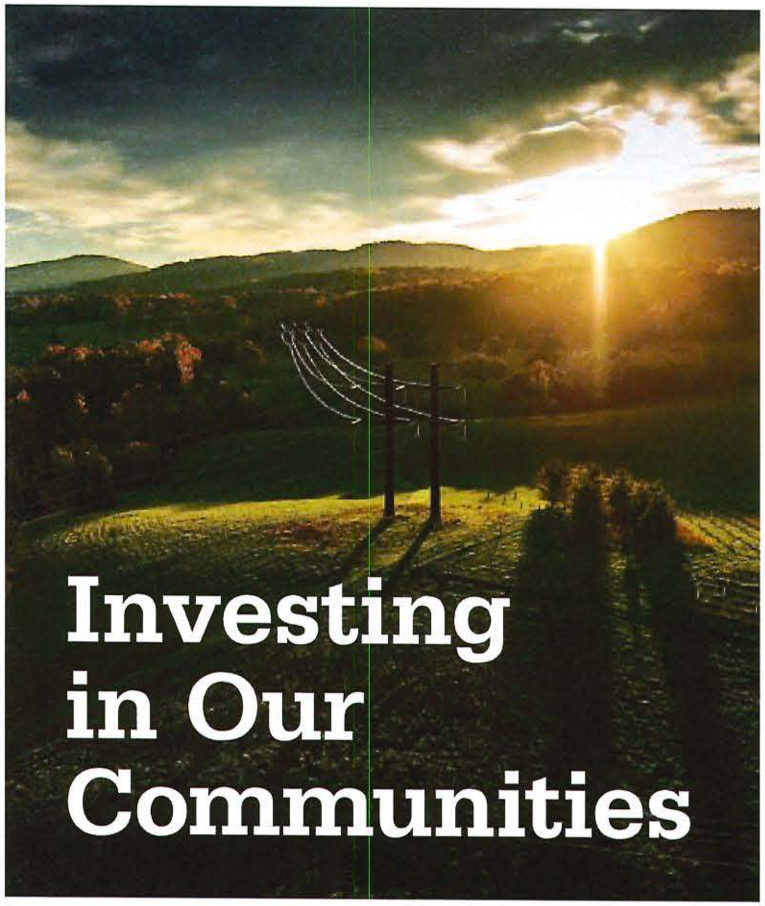
At least two public meetings in the first half of 2023

Submit application for approval with the Virginia State Corporation Commission (SCC) in summer 2023

Tentative construction start date in early 2025

Project completion targeted for summer 2026

AT DOMINION ENERGY, protecting the grid and making it secure against natural and man-made acts is a top priority. We work alongside government officials to prepare for potential incidents that could affect our ability to provide electricity safely and reliably to the communities we serve. Learn how we're keeping you safe at powerlines101.dominionenergy.com.



Dominion Energy image. Not project specific.

Electric Transmission
P.O. Box 26666
Richmond, VA 23261

Dominion Energy®

Actions Speak Louder

YOU ARE INVITED TO A COMMUNITY MEETING!

INFORMATION ENCLOSED

IMPORTANT

Local Power Line Project Information

Use your iPhone camera or the QR reader app on other smartphones to visit the project page on our website.

Jeffress 230 kV Electric Transmission Line and Substation Project — Community Meeting

AT DOMINION ENERGY, we are committed to continually reviewing and analyzing our growing energy infrastructure to provide safe, reliable, and secure electricity to the communities we serve. This commitment involves evaluating our customers' needs along with the impact of economic growth that can contribute to increased electrical demands.

You are receiving this postcard because we would like to invite you to attend a community meeting to learn about a recently announced project. This project involves the construction of two new single-circuit 230 kilovolt (kV) electric transmission lines on new right of way around Chase City. These lines will connect to a new substation north of the Roanoke River and John H. Kerr Reservoir in Mecklenburg County.

182

During the meeting, our project team will give a 20-minute presentation explaining the project need, routing options, impact and construction timelines. You will be able to speak with and ask questions directly to our subject matter experts. The presentation begins at 5 p.m. However, if your schedule does not allow you to attend the presentation, you are still welcome to join us until the meeting concludes at 7 p.m.

Unable to attend? The presentation will be recorded and posted on the project website. We will also host another in-person meeting once public input is received and incorporated into project planning. You may also contact us and request a presentation be given to a smaller group in your community.

We look forward to your attendance and will continue to engage the community in our project development.

AT DOMINION ENERGY, protecting the grid and making it secure against natural and man-made acts is a top priority. We work alongside government officials to prepare for potential incidents that could affect our ability to provide electricity safely and reliably to the communities we serve. Learn how we're keeping you safe at powerlines101.dominionenergy.com.

CONTACT US

Visit our website at DominionEnergy.com/jeffress for project updates.
Or contact us by sending an email to powerline@dominionenergy.com or calling 888-291-0190.

COMMUNITY MEETINGS

**Wednesday
February 15, 2023
5 p.m. – 7 p.m.**

**Estes Community Center
316 N. Main Street • Chase City, VA 23924**

(20-minute presentation begins at 5 p.m.)

**Thursday
February 16, 2023
5 p.m. – 7 p.m.**

**Clarion Pointe on the Lake – Conference Room
103 Second Street • Clarksville, VA 23927**

(20-minute presentation begins at 5 p.m.)

Dominion Energy Virginia
Electric Transmission
P.O. Box 26666, Richmond, VA 23261
DominionEnergy.com

February 1, 2023

Jeffress 230 kV Electric Transmission Line and Substation Project

Dear Neighbor,

At Dominion Energy, we are committed to keeping our neighbors informed about projects in the communities we serve. You recently received an invitation to attend in-person community meetings. During the meetings, you will learn about and be able to provide input on a recently announced project which includes two new 230 kilovolt (kV) electric transmission lines on new right of way in Mecklenburg County. Data center development requires new investment in Southside Virginia to support the electrical needs of this growth.

Two new single-circuit 230 kV transmission lines, approximately 18-21 miles long, will need to be constructed from the Finneywood Substation located north of Chase City to the Jeffress Substation just north of the Roanoke River and John H. Kerr Reservoir in Mecklenburg County. These lines will parallel one another on new right of way.

Community input is an important part of our project planning and development. We hope you will attend one of our meetings to learn more about this project, review the routing options, and speak with our subject matter experts. The meeting will begin with a 20-minute presentation at 5 p.m. If your schedule doesn't allow you to attend the presentation, please join us as your schedule permits until the meeting concludes at 7 p.m.

February 15, 2023
5 – 7 p.m.
Estes Community Center
316 N. Main Street
Chase City, VA 23924
(20-minute presentation begins at 5 p.m.)

February 16, 2023
5 – 7 p.m.
Clarion Pointe On The Lake – Conference Room
103 2nd Street
Clarksville, VA 23927
(20-minute presentation begins at 5 p.m.)

Unable to attend? The presentations will be recorded and posted on the project website. We will host another in-person community meeting once public input is received and incorporated into our project planning. You may also contact us and request a presentation be given to a smaller group in your community.

We plan to file an application with the Virginia State Corporation Commission (SCC) for final evaluation and approval in Summer 2023. In the application, we will identify one proposed route with alternatives. Only one route will be selected to construct.

Visit our website at DominionEnergy.com/jeffress for details and project updates. You may also contact us by calling 888-291-0190 or sending an email to powerline@dominionenergy.com. Thank you for your understanding while we plan for long-term reliability investments in your community.

Sincerely,

The Electric Transmission Project Team

Enclosures: Map, FAQ, GeoVoice Fact Sheet, The Electric Grid 101 Fact Sheet

Jeffress 230 kV Electric Transmission Line and Substation Project

FAQ

The map is difficult to see. How do I know if my property is impacted? How can I see these routes in detail?

There are multiple ways to know if your property may be impacted by the preliminary routes. You can:

- Attend our public meetings. We will have enlarged maps so you can take a closer look at where these preliminary routes cross property boundaries. During the meetings, you can also speak directly to subject matter experts. We hope to see you at the public meetings so we can hear what matters most to you.

- Search your address on GeoVoice, an interactive mapping tool found on DominionEnergy.com/jeffress. See the enclosed fact sheet for more information on how to use GeoVoice.

- Contact us by email at powerline@dominionenergy.com or by phone at 888-291-0190. Please be sure to provide us with your address and/or Parcel ID.

I am unable to attend the community meetings. How do I provide my feedback?

- By signing up for GeoVoice, you can leave comments and questions with our project team. See the enclosed fact sheet for more information on how to use GeoVoice.
- You can invite us to your community or property, and we can meet you on site to discuss the project and answer questions.
- You may also contact us by email at powerline@dominionenergy.com or by phone at 888-291-0190. Please be sure to provide us with your property address and/or Parcel ID.

Why is new electric transmission infrastructure needed?

Due to recent data center development in Mecklenburg County, there is a growing need for new electric infrastructure. The proposed Jeffress 230 kV electric transmission lines will allow us to meet the growing energy needs and continue reliable electric service.

Will all these routes be needed?

No, only one route will be constructed.

How will the final route be chosen for construction?

The Virginia State Corporation Commission (SCC) is the regulatory body with jurisdiction over utilities which decides whether a project is necessary. The SCC will review the routes and select the route that reasonably minimizes impacts.

Jeffress 230 kV Electric Transmission Line and Substation Project
Introducing GeoVoice, an interactive mapping tool

Dominion Energy

GeoVoice is your key to finding the latest project information and sharing your feedback with Dominion Energy.

Use GeoVoice to explore and comment on proposed project routes and participate firsthand in the routing process.

Sign up to provide our team with comments about the locations that matter to you or sign in as a guest and use other map features.

For example, you can add details about natural or historic resources in your community or more information related to your specific property.

ADDRESS SEARCH

MEASURE

PRINT

Take advantage of the interactive map's features, including address search, measuring, and print tools to better understand project details in your area.

To submit a comment:

1. Sign up
2. Drop a pin
3. Provide information about the nature of your comment ***Use the drop down to ensure the project you are commenting on is Jeffress**
4. Add any important details
5. Click submit

A project team member may follow up for any additional details or discussion. What matters to you, matters to us.

Use your iPhone camera or the QR reader app on other smartphones to access GeoVoice.

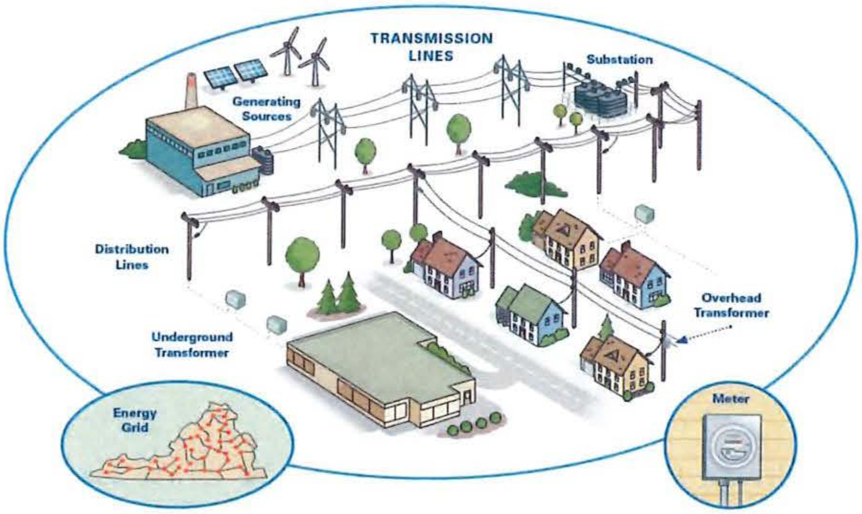
For more information about this project, visit our website DominionEnergy.com/jeffress.
Or contact us
email: powerline@dominionenergy.com
phone: 888-291-0190

The Electric Grid 101

Transmission lines move energy from power stations to substations. Power stations, — fueled by natural gas, wind, solar or other sources — make energy.

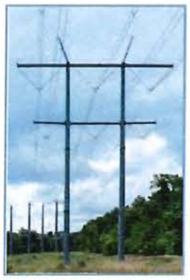
Substations take that energy and either lower or increase the voltage so distribution lines can safely carry the energy to homes and businesses.

Transmission lines are connected and work together to form what we call the **energy grid**.



Transmission Lines

Electric transmission lines are the tall high-voltage lines that carry electricity over long distances, such as from a power station to a city.

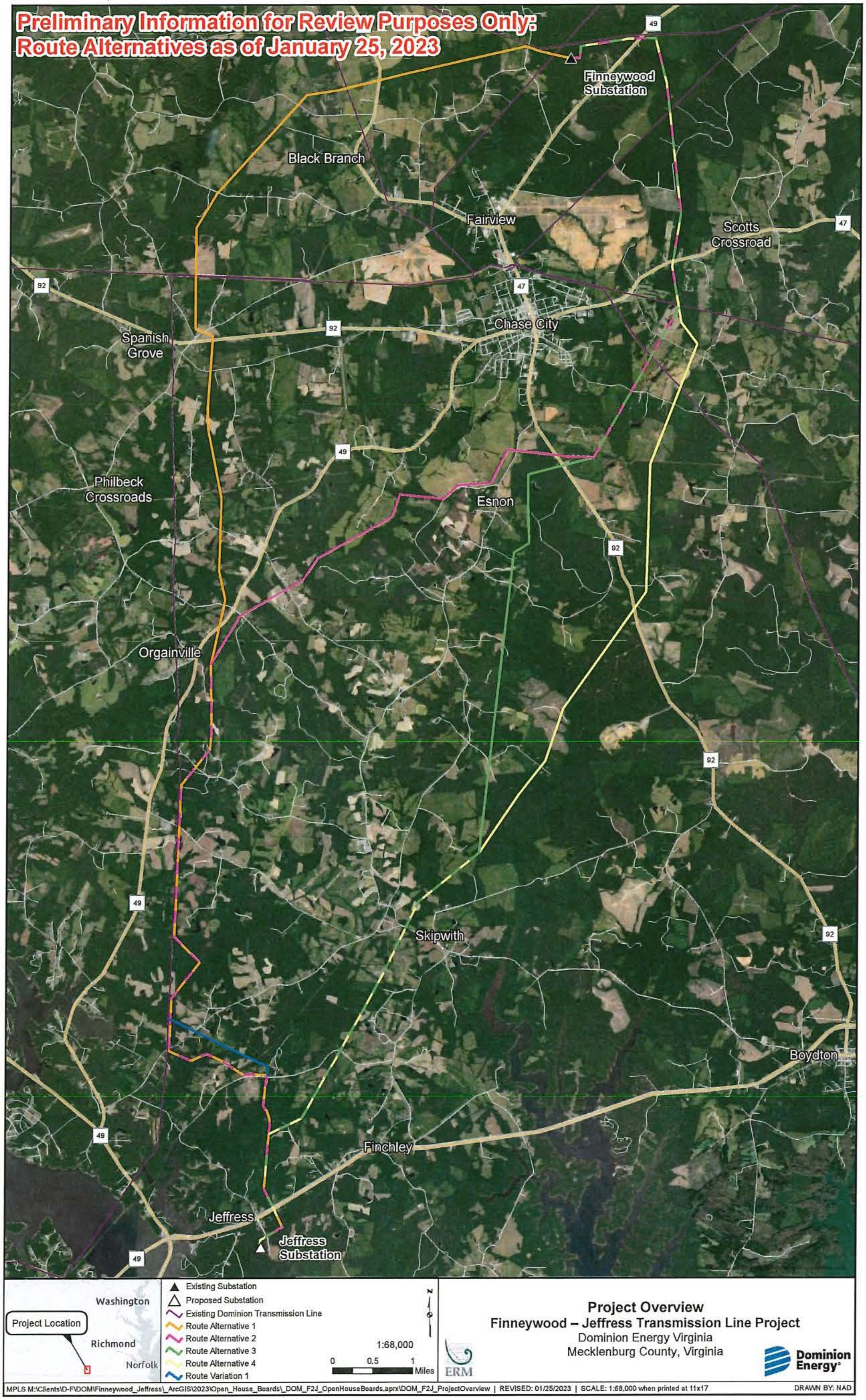


Distribution Lines

Distribution lines carry electricity or energy to homes and businesses.

For more information about our electric transmission practices, view informational videos and documents on our virtual open house page at powerlines101.dominionenergy.com.

Dominion Energy



Preliminary Information for Review Purposes Only:
Route Alternatives as of January 25, 2023
Finneywood Substation
Black Branch
Fairview
Scotts Crossroad
Chase City
Spanish Grove
Philbeck Crossroads
Esnon
Orgainville
Skipwith
Boydton
Finchley
Jeffress
Jeffress Substation
49
47
92
Washington
Project Location
Richmond
Norfolk
Existing Substation
Proposed Substation
Existing Dominion Transmission Line
Route Alternative 1
Route Alternative 2
Route Alternative 3
Route Alternative 4
Route Variation 1
N
1:68,000
0 0.5 1 Miles
Project Overview
Finneywood – Jeffress Transmission Line Project
Dominion Energy Virginia
Mecklenburg County, Virginia
ERM
Dominion Energy
MPLS M:\Clients\D-F\DOM\Finneywood_Jeffress_ArcGIS\2023\Open_House_Boards_DOM_F2J_OpenHouseBoards.aprx\DOM_F2J_ProjectOverview | REVISED: 01/25/2023 | SCALE: 1:68,000 when printed at 11x17
DRAWN BY: NAD

Dominion Energy Virginia
Electric Transmission
P.O. Box 26666, Richmond, VA 23261
DominionEnergy.com

Mar. 23, 2023

Jeffress 230 kV Electric Transmission Line and Substation Project

Dear Neighbor:

At Dominion Energy, we are dedicated to keeping the communities we serve informed of projects in their area. You are receiving this letter because we are currently planning for two new 230 kilovolt (kV) electric transmission lines on new right of way in Mecklenburg County. Data center development requires new investment in Southside Virginia to support the growing electrical needs.

Two new single-circuit 230 kV transmission lines, approximately 18-21 miles long, will need to be constructed from the Finneywood Substation located north of Chase City to the Jeffress Substation just north of the Roanoke River and John H. Kerr Reservoir in Mecklenburg County. These lines will parallel one another on new right of way.

The project was announced in January 2023 with four routing alternatives under consideration. Following the announcement, community meetings were held on February 15 and February 16, 2023, to review the project and incorporate community feedback into our plans. As a result, Route Alternative 1 and Route Alternative 2 are being dismissed from consideration. A new route, Route Alternative 5, is currently being evaluated. In our commitment to investigating and gaining feedback on all options, this new routing alternative will be presented at a community meeting. We want landowners to have an opportunity to meet with us in person to provide feedback.

Planning and constructing new transmission lines is not something our team at Dominion Energy takes lightly. We want to ensure the community members closest to the project have an opportunity for input, which is why we are inviting you to participate in our public meeting.

The new route (Route Alternative 5) and previously announced routes (Route Alternative 3 and 4) will be discussed at an upcoming community meeting on **Thursday, April 6, 2023, at the Estes Center from 5-7 p.m.** We invite you to attend the meeting to learn more about the project, view the preliminary routing alternatives, and speak directly with our team.

April 6, 2023
5 – 7 p.m.
Estes Community Center
316 N. Main Street
Chase City, VA 23924

(A brief presentation will begin at 5 p.m. If your schedule doesn't allow you to attend the presentation, please join us as your schedule permits until the meeting concludes at 7 p.m. The presentation will be recorded and posted on the project website.)

Unable to attend? You may also contact us and request a presentation be given to a smaller group in your community.

We plan to file an application with the Virginia State Corporation Commission (SCC) in Summer 2023. In the application, we will identify one preferred route with alternatives. Only one route will be selected by the SCC to construct.

Visit our website at DominionEnergy.com/jeffress for details and project updates. You may also contact us by calling 888-291-0190 or sending an email to powerline@dominionenergy.com. Thank you for your understanding while we plan for long-term reliability investments in your community.

Sincerely,

The Electric Transmission Project Team

Enclosures: Map, FAQ, GeoVoice Fact Sheet, The Electric Grid 101 Fact Sheet

Jeffress 230 kV Electric Transmission Line and Substation Project

FAQ

Why is new electric transmission infrastructure needed?

Due to recent data center development in Mecklenburg County, there is a growing need for new electric infrastructure. The proposed Jeffress 230 kV electric transmission lines will allow us to meet the growing energy needs and continue reliable electric service.

The map is extremely small. How do I know if my property is impacted? How can I see these routes in detail?

There are multiple ways to know if your property may be impacted by the preliminary routes. You can:

- Attend our public meeting on April 6th. We will have enlarged maps so you can take a closer look at where these preliminary routes cross property boundaries. During the meeting, you can also speak directly to subject matter experts. We hope to see you at the public meeting so we can hear what matters most to you.
- Search your address on GeoVoice, an interactive mapping tool found on DominionEnergy.com/jeffress. See the enclosed fact sheet for more information on how to use GeoVoice.
- Contact us by email at powerline@dominionenergy.com or by phone at 888-291-0190. Please be sure to provide us with your address and/or parcel information.

I am unable to attend the community meetings. How do I provide my feedback?

- By signing up for GeoVoice, you can leave comments and questions with our project team. See the enclosed fact sheet for more information on how to use GeoVoice.
- You can invite us to your community or property, and we can meet you on site to discuss the project and answer questions.
- You may also contact us by email at powerline@dominionenergy.com or by phone at 888-291-0190. Please be sure to provide us with your property address and/or parcel information.

Why are Route Alternative 1 and Route Alternative 2 being dismissed? What does "dismissed" mean?

"Dismissed" means Dominion Energy is no longer considering these routes. We are dismissing (or removing) these routes for consideration for the Virginia State Corporation Commission (SCC).

When evaluating and analyzing routing alternatives, Route Alternative 1 and Route Alternative 2 are significantly more impactful than other routing alternatives. While both Route Alternative 1 and Route Alternative 2 co-locate with existing infrastructure, they have both been dismissed from further study based on several factors. These factors include, but are not limited to, planned development, length, cost, Virginia Outdoor Foundation restrictions, Army Corps of Engineers property, significantly more residential homes nearby, and community feedback.

Why is Route Alternative 5 being introduced?

Our team is committed to investigating multiple routing alternatives for this project. Since Route Alternative 3 and 4 share a signification portion of alignment, we think it is necessary to study another option. We understand this is a new route and involves new landowners, and we look forward to engaging with those landowners and hearing their questions.

I live on/near Route Alternative 1 and Route Alternative 2. Moving forward, will I still receive mail regarding this project?

In some circumstances, you may continue to receive future mailings As a reminder, please visit DominionEnergy.com/jeffress for project updates.

Will all these routes be needed?

No, only one route will be constructed.

How will the final route be chosen for construction?

The Virginia State Corporation Commission (SCC) is the regulatory body with jurisdiction over utilities which decides whether a project is necessary. The SCC will review the routes and select the route that reasonably minimizes impacts.

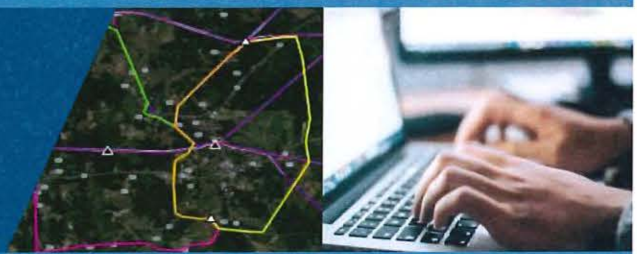
What happens after Dominion Energy's application is submitted to the SCC?

The SCC has their own review process and time for public input. The SCC invites the public to voice their concerns and share their thoughts, even after we have filed our application. Details on how to participate during the SCC process will be available after we submit our application and after the SCC issues the procedural order.

Jeffress 230 kV Electric Transmission Line and Substation Project
Introducing GeoVoice, an interactive mapping tool

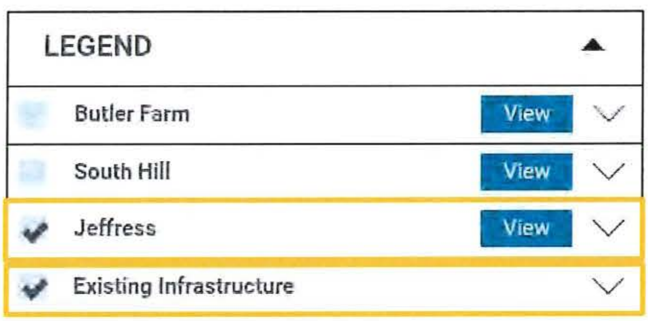
Dominion Energy®

GeoVoice is your key to finding the latest project information and sharing your feedback with Dominion Energy.



Use GeoVoice to explore and comment on proposed project routes and participate firsthand in the routing process. Sign up to provide our team with comments about the locations that matter to you or sign in as a guest and use other map features. For example, you can add details about natural or historic resources in your community or information related to your specific property.

****Select the "Jeffress" and "Existing Infrastructure" boxes in the legend.***



ADDRESS SEARCH

MEASURE

PRINT

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2. Drop a pin
3. Provide information about the nature of your comment ****Use the drop down to ensure you are commenting on the Jeffress project***
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5. Click submit

A project team member may follow up for any additional details or discussion. What matters to you, matters to us.

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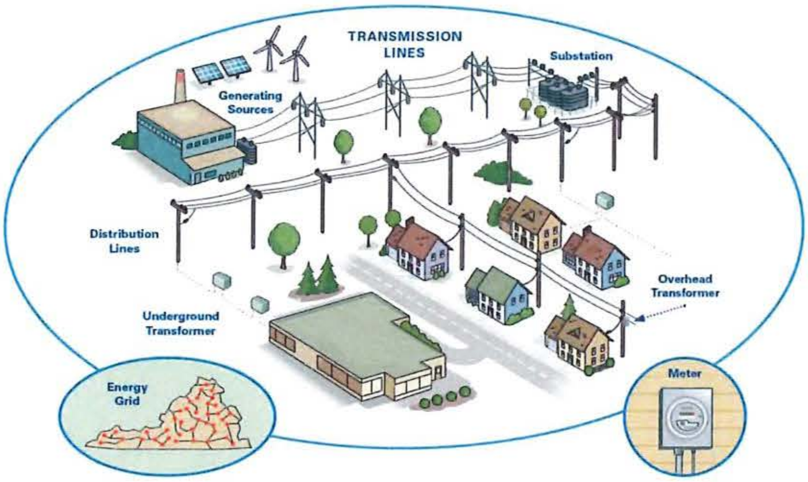
For more information about this project, visit **DominionEnergy.com/jeffress** or contact us by **emailing** powerline@dominionenergy.com or **calling** 888-291-0190.

The Electric Grid 101

Transmission lines move energy from power stations to substations. Power stations, — fueled by natural gas, wind, solar or other sources — make energy.

Substations take that energy and either lower or increase the voltage so distribution lines can safely carry the energy to homes and businesses.

Transmission lines are connected and work together to form what we call the **energy grid**.



Transmission Lines

Electric transmission lines are the tall high-voltage lines that carry electricity over long distances, such as from a power station to a city.

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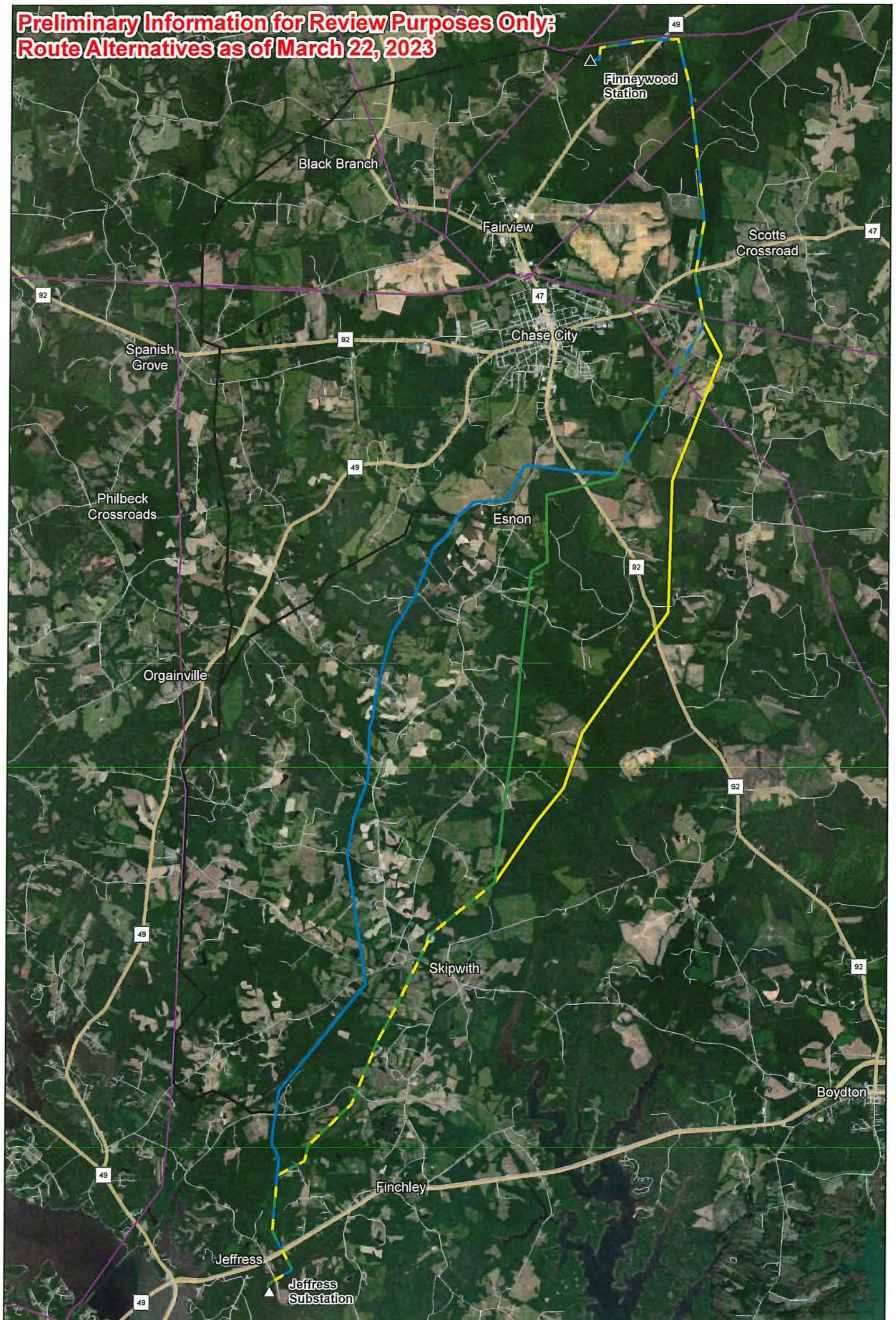
Dominion Energy®



Existing Substation
Proposed Substation
Existing Dominion Transmission Line
Route Alternative 3
Route Alternative 4
Route Alternative 5
Dismissed Route

Washington
Project Location
Richmond
Norfolk

1:68,000
0 0.5 1 Miles

Project Overview
Finneywood – Jeffress Transmission Line Project
Dominion Energy Virginia
Mecklenburg County, Virginia

ERM
Dominion Energy

MPLS M:\Clients\D-F\DOM\Finneywood_Jeffress_ArcGIS\2023\Open_House_Boards_DOM_F2J_OpenHouseBoards.aprx\DOM_F2J_ProjectOverview | REVISED: 03/20/2023 | SCALE: 1:68,000 when printed at 11x17 DRAWN BY: NAD charles ryan associates

Jeffress Creative

Community Meeting
Newspaper

2/15, 2/16 Print Ad

4/06 Print Ad

charles ryan associates

Dominion Energy Electric Transmission Contact:
Roxana Demeter, roxana.d.demeter@dominionenergy.com

Jeffress Creative

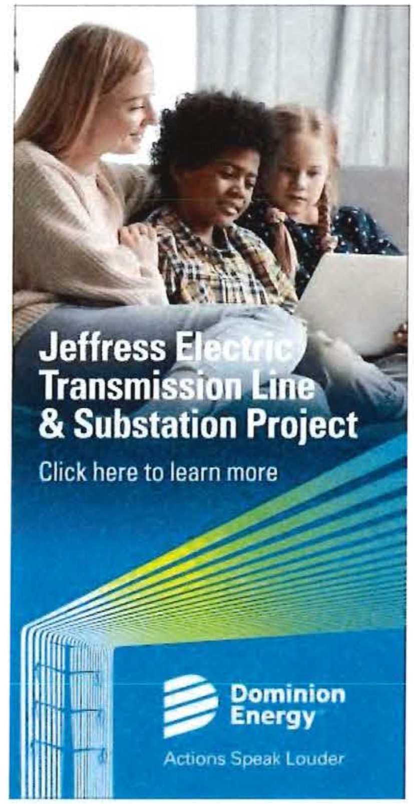
Display Ads

2/15, 2/16 Pre-event

3/14 Post-event

4/06 Pre-event

4/21 Post-event



Jeffress Creative

Community Meeting
Pre and post-event
Nextdoor Imagery

2/15, 2/16, 4/06 Pre-event Post Image:

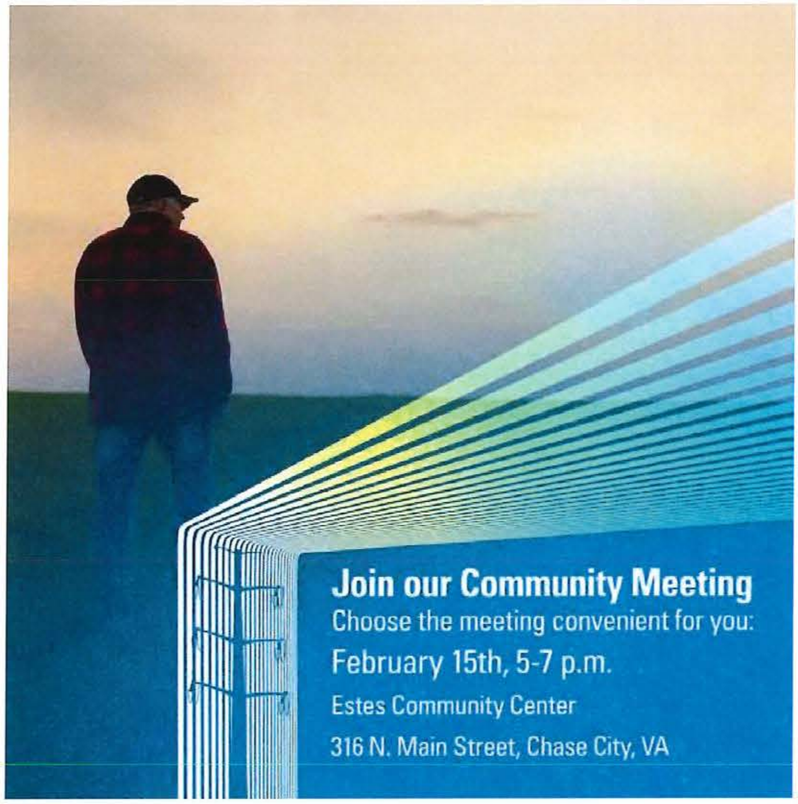
3/14 Post-event Post Image

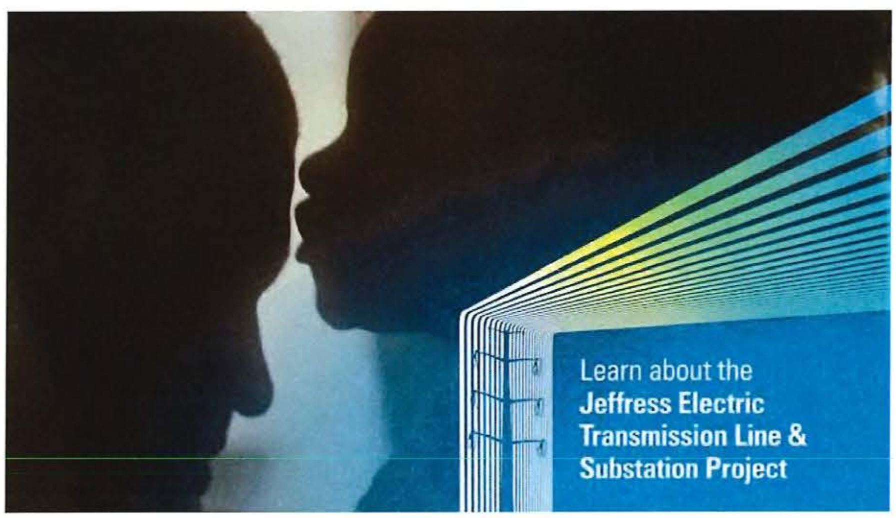
4/21 Post-event Post Image:

Jeffress Creative

Community Meeting
Pre-event
Social Videos

2/15, 2/16 Pre-event Social Videos (Click Video Below to Play)

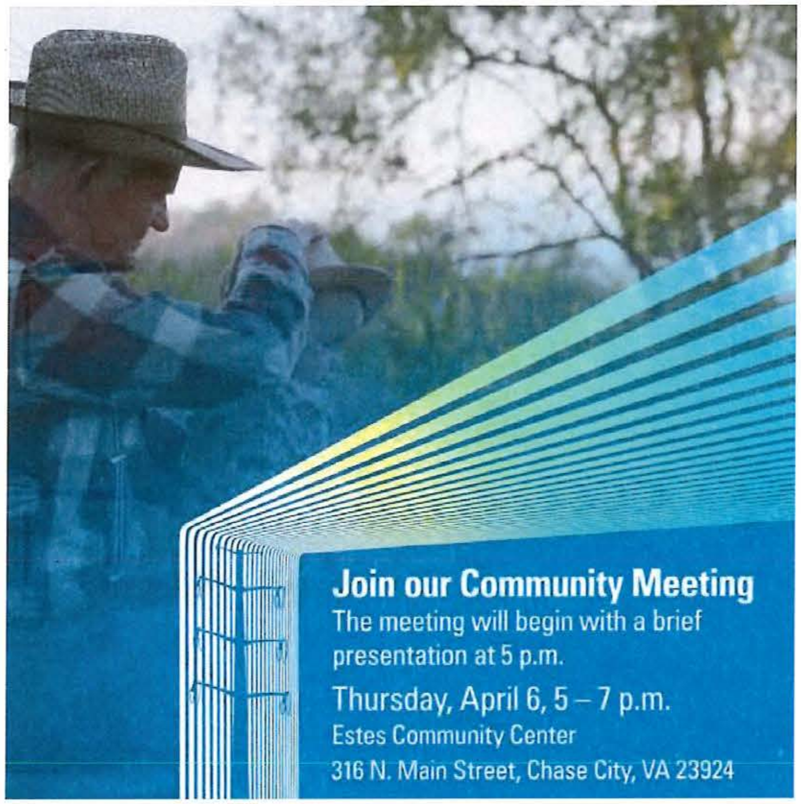


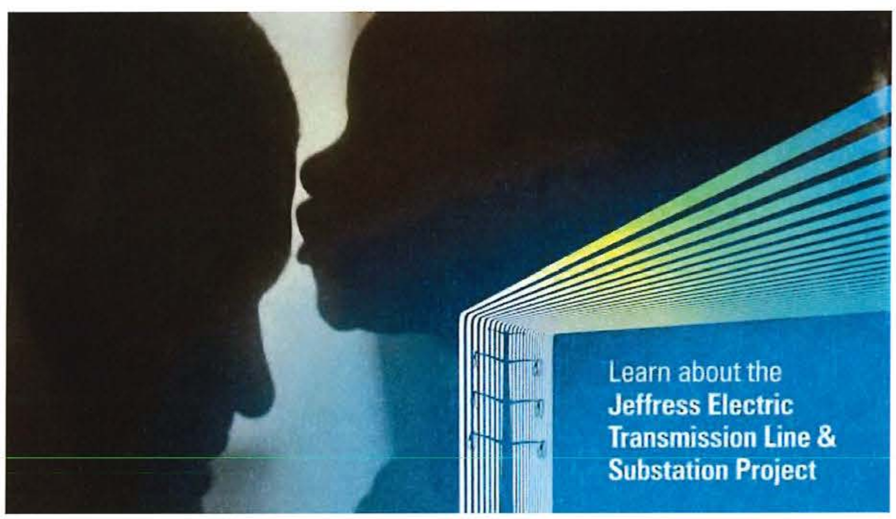


Jeffress Creative

Community Meeting
Pre-event
Social Videos

4/06 Pre-event Social Videos (Click Video Below to Play)

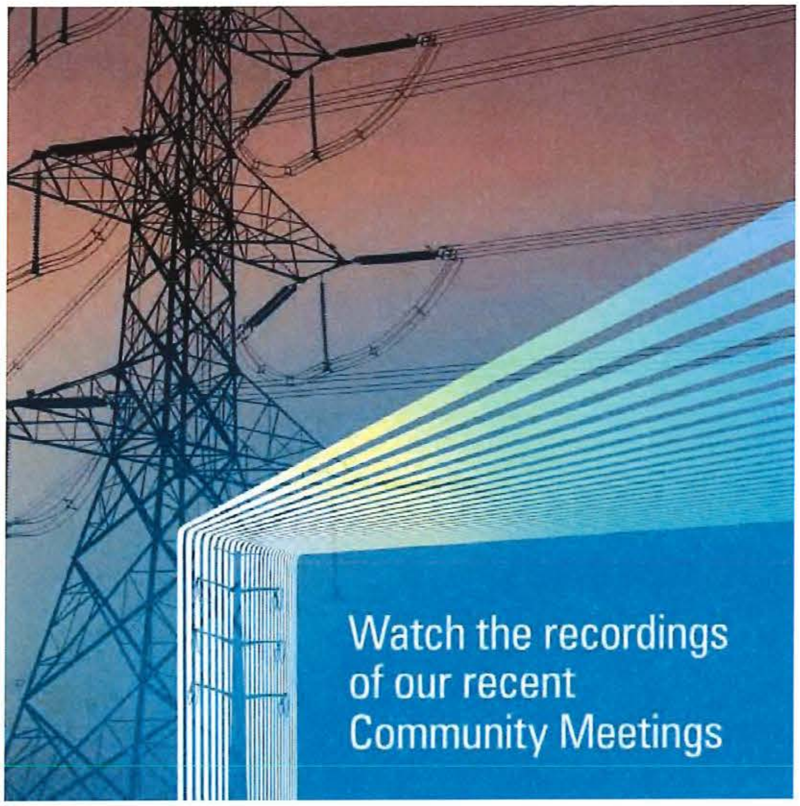




Jeffress Creative

Community Meeting
Post-event
Social Videos

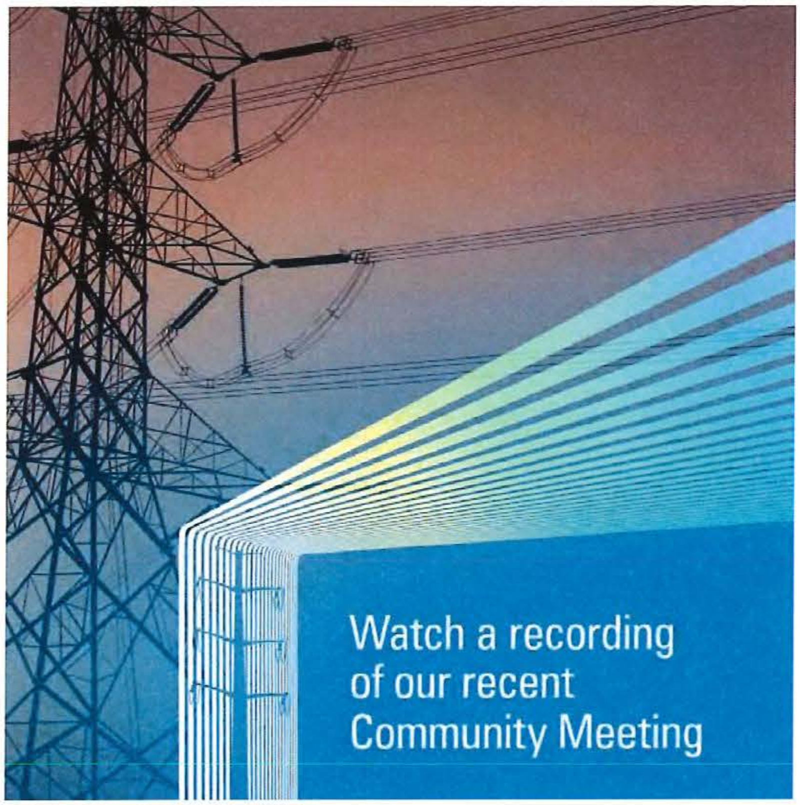
3/14 Post-event (Click Video Below to Play)

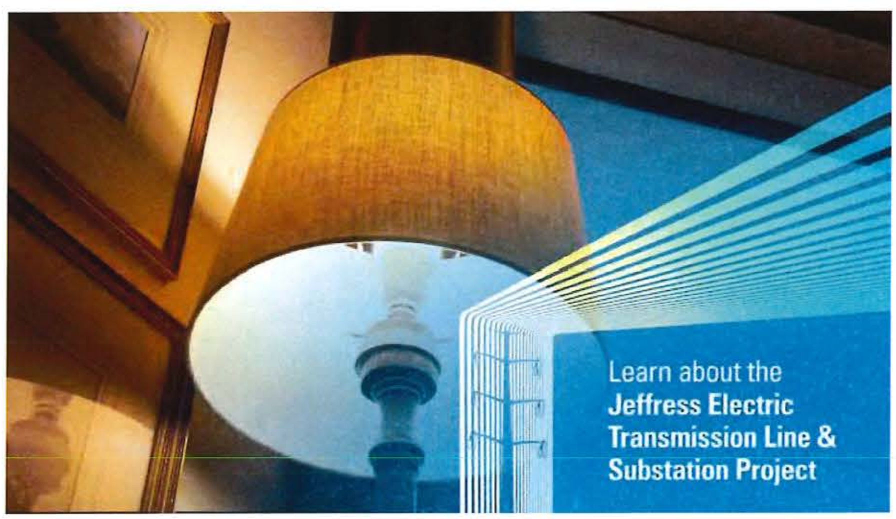


Jeffress Creative

Community Meeting
Post-event
Social Videos

4/21 Post-event (Click Video Below to Play)



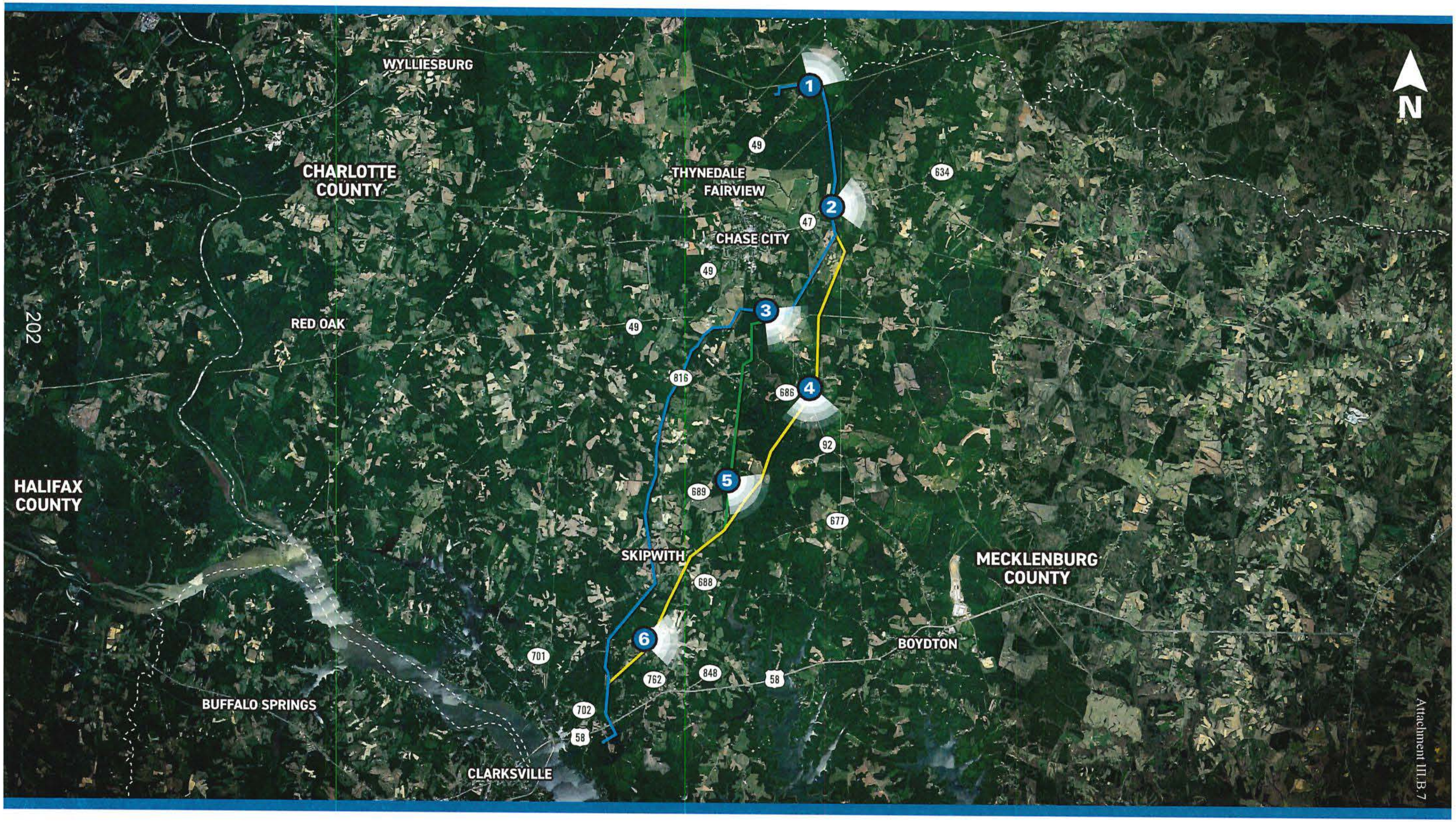


FINNEYWOOD TO JEFFRESS
Transmission Line Project

Photo Location Map

1 Viewpoint Location — Route Alternative 3 — Route Alternative 4 — Route Alternative 5

Dominion Energy®



202

Attachment III.B.7

FINNEYWOOD TO JEFFRESS
Transmission Line Project

Viewpoint 1

Date: 04/28/2022 **Time:** 2:23 pm **Viewing Direction:** Northeast

1 Viewpoint Location — Route Alternative 3 — Route Alternative 4 — Route Alternative 5

Note: At this location all three routes share the same alignment.

Dominion Energy®

FINNEYWOOD TO JEFFRESS
Transmission Line Project

Viewpoint 2

Date: 04/28/2022 **Time:** 1:32 pm **Viewing Direction:** East

② Viewpoint Location — Route Alternative 3 — Route Alternative 4
— Route Alternative 5

Note: At this location all three routes share the same alignment.

Dominion Energy®

FINNEYWOOD TO JEFFRESS
Transmission Line Project

Viewpoint 3

Date: 09/23/2022 **Time:** 9:56 am **Viewing Direction:** Southeast

③ Viewpoint Location — Route Alternative 5

Dominion Energy®

205

EXISTING CONDITIONS

PROPOSED CONDITIONS

Simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

FINNEYWOOD TO JEFFRESS
Transmission Line Project

Viewpoint 3

Date: 09/23/2022 **Time:** 9:56 am **Viewing Direction:** Southeast

③ Viewpoint Location — Route Alternative 3

Dominion Energy®

FINNEYWOOD TO JEFFRESS
Transmission Line Project

Viewpoint 4

Date: 09/23/2022 **Time:** 10:17 am **Viewing Direction:** South

4 Viewpoint Location — Route Alternative 4

Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

Simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

FINNEYWOOD TO JEFFRESS
Transmission Line Project

Viewpoint 5

Date: 09/22/2022 **Time:** 3:09 pm **Viewing Direction:** Southeast

5 Viewpoint Location — Route Alternative 3

Dominion Energy®

FINNEYWOOD TO JEFFRESS
Transmission Line Project

Viewpoint 5

Date: 09/22/2022 **Time:** 3:09 pm **Viewing Direction:** Southeast

5 Viewpoint Location — Route Alternative 4

Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

Simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

FINNEYWOOD TO JEFFRESS
Transmission Line Project

Viewpoint 6

Date: 09/22/2022 **Time:** 1:08 pm **Viewing Direction:** East

6 Viewpoint Location — Route Alternative 3 — Route Alternative 4

Note: At this location two routes share the same alignment.

Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

Simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

FINNEYWOOD TO JEFFRESS
Transmission Line Project

Rendering Location Map

1 Viewpoint Location — Route Alternative 3 — Route Alternative 4 — Route Alternative 5

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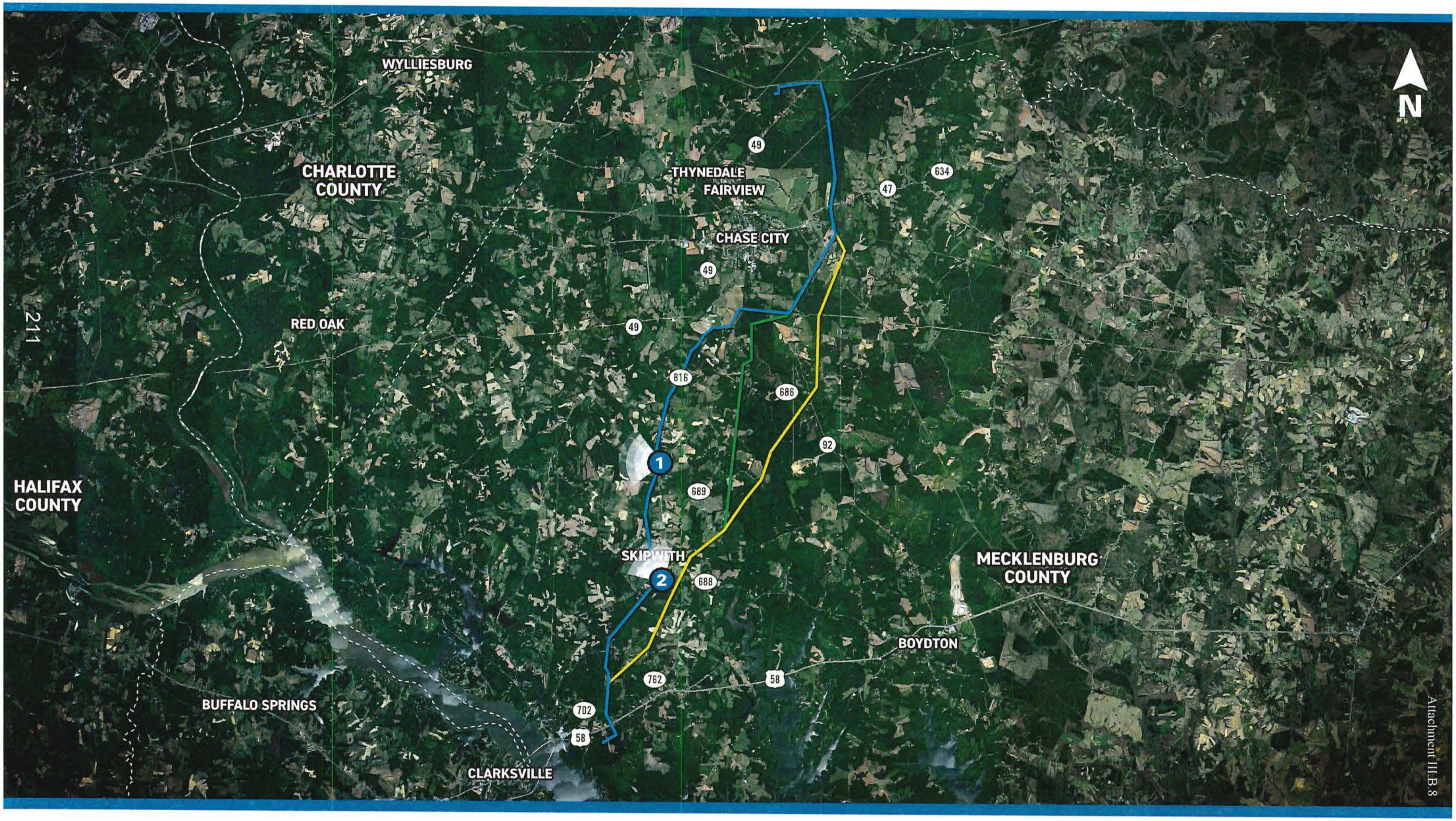

211

Attachment III.B.8

FINNEYWOOD TO JEFFRESS
Transmission Line Project

EXISTING CONDITIONS

PROPOSED CONDITIONS

GROUND RENDERING 1

Typical Structure:
120' - 2 Single Circuit Monopoles

Right-of-Way Width:
120 Feet

Structure Material:
Weathering Steel

Viewing Direction:
Northwest

1 Viewpoint Location — Route Alternative 5

Visualization is for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

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FINNEYWOOD TO JEFFRESS
Transmission Line Project

AERIAL RENDERING 2

Typical Structure:
120' - 2 Single Circuit Monopoles

Right-of-Way Width:
120 Feet

Structure Material:
Weathering Steel

Viewing Direction:
Northwest

2 Viewpoint Location — Route Alternative 5

Visualization is for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

Dominion Energy®

Environmental Justice: Ongoing Commitment to Our Communities

At Dominion Energy, we are committed to providing reliable, affordable, clean energy in accordance with our values of safety, ethics, excellence, embrace change and team work. This includes listening to and learning all we can from the communities we are privileged to serve.

Our values also recognize that environmental justice considerations must be part of our everyday decisions, community outreach and evaluations as we move forward with projects to modernize the generation and delivery of energy.

To that end, communities should have a meaningful voice in our planning and development process, regardless of race, color, national origin, or income. Our neighbors should have early and continuing opportunities to work with us. We pledge to undertake collaborative efforts to work to resolve issues. We will advance purposeful inclusion to ensure a diversity of views in our public engagement processes.

Dominion Energy will be guided in meeting environmental justice expectations of fair treatment and sincere involvement by being inclusive, understanding, dedicated to finding solutions, and effectively communicating with our customers and our neighbors. We pledge to be a positive catalyst in our communities.

November 2018

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

C. Detail the nature, location, and ownership of each building that would have to be demolished or relocated if the project is built as proposed.

Response: During the initial review of the Proposed Route right-of-way, the Company identified one outbuilding that will need to be relocated or removed. This encroachment is a dilapidated building located within the proposed right-of-way. In support of the Project, the Company will be reviewing the entire corridor width prior to construction and plans to address any identified encroachments with the property owner, as appropriate.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

D. Identify existing physical facilities that the line will parallel, if any, such as existing transmission lines, railroad tracks, highways, pipelines, etc. Describe the current use and physical appearance and characteristics of the existing ROW that would be paralleled, as well as the length of time the transmission ROW has been in use.

Response: The Proposed Route (Route 4) and Alternative Routes 3 and 5 each parallel the Company's existing overhead Line #556 for approximately 0.9 mile. The existing Line #556 right-of-way has been in continuous use since 1995 and is regularly maintained to keep vegetation at the emergent and scrub-shrub level for the safe operation of the existing facilities.

Additionally, Alternative Route 5 parallels a Transco natural gas pipeline, owned by Williams Companies, Inc., for approximately 1.1 miles. The Transco pipeline corridor is regularly maintained in a grassy herbaceous state for the safe operation of the pipeline.

See Attachment II.A.6.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

E. Indicate whether the Applicant has investigated land use plans in the areas of the proposed route and indicate how the building of the proposed line would affect any proposed land use.

Response: The Mecklenburg Long Range Plan (adopted in 2012 and amended in 2017)[23] and the Town of Chase City Comprehensive Plan (adopted in 2011)[24] were reviewed to evaluate the potential effect the Proposed and Alternatives could have on future development.

Mecklenburg Long Range Plan

The Mecklenburg Long Range Plan does not address electric transmission lines other than in discussion with emergence of solar energy facilities and collocation with existing transmission lines. It should be noted that the County's vision includes providing cost-effective utility infrastructure to help drive future development and has advanced investment in telecommunications and utility infrastructure to attract a number of high-profile technology companies. There is an emphasis in the plan to market the County for information technology and data center business opportunities, including creating a Technology Advisory Council to connect businesses and schools. The arrival or expansion of industries potentially herald the start of an information technology and data center cluster in Mecklenburg County. Additionally, one of the goals established in the Strategic Economic Development Plan within the Long Range Plan is to implement a high-speed rail line from Raleigh, North Carolina to Richmond, Virginia. Demand is expected to continue to grow with new data centers and the Southeast High-Speed Rail.

Planned development within Mecklenburg County includes transportation improvements such as bridge rehabilitation, bypass construction, and general road improvement projects. There are no planned unit or clustered development provisions included in the plan; however, the County is working to revise zoning codes to allow for additional development.

Within Mecklenburg County, the Proposed and Alternative Routes are collocated with existing transmission lines to the maximum extent possible to minimize new corridor creation and avoid impacts to the area. The Proposed and Alternative Routes are not expected to interfere with future planning in Mecklenburg County and are expected to aid in the development goals of the County by increasing connectivity to potential data centers and meeting growing electricity demands.

---

[23] See https://va-mecklenburgcounty.civicplus.com/DocumentCenter/View/284/Mecklenburg-County-Comprehensive-Plan?bidId=.

[24] *See* https://www.chasecity.org/the-town/downloads#/.

Town of Chase City

The Chase City Comprehensive Plan discusses the priority of expanding available land for industrial development, particularly northwest of the Town in an existing industrial park. The plan identifies future annexation zones around the current municipal boundary. Neither the Proposed Route nor the Alternatives Routes cross through the current or potential annexation boundaries. The plan indicates that the Town of Chase City will petition the County for a boundary adjustment to allow for future town growth. Chase City Zoning has not identified zoning districts for this expansion area and no land use controls are in place beyond the County zoning.

Virginia Department of Transportation

Review of VDOT Projects and Studies was completed to determine the impact of the Proposed and Alternative Routes on future road projects. Two six-year improvement plan projects have been approved within 0.5 mile of the Project routes; however, none would be crossed or affected by any of the routes. See Sections 3.1.8 and 4.1.8 of the Environmental Routing Study.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

F. Government Bodies

1. Indicate if the Applicant determined from the governing bodies of each county, city and town in which the proposed facilities will be located whether those bodies have designated the important farmlands within their jurisdictions, as required by § 3.2-205 B of the Code.

2. If so, and if any portion of the proposed facilities will be located on any such important farmland:

a. Include maps and other evidence showing the nature and extent of the impact on such farmlands;

b. Describe what alternatives exist to locating the proposed facilities on the affected farmlands, and why those alternatives are not suitable; and

c. Describe the Applicant's proposals to minimize the impact of the facilities on the affected farmland.

Response: (1) Coordination with Mecklenburg County has concluded that no land is designated as important farmlands within the study area.

(2) Not applicable.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

G. Identify the following that lie within or adjacent to the proposed ROW:

1. **Any district, site, building, structure, or other object included in the National Register of Historic Places maintained by the U.S. Secretary of the Interior;**

2. **Any historic architectural, archeological, and cultural resources, such as historic landmarks, battlefields, sites, buildings, structures, districts or objects listed or determined eligible by the Virginia Department of Historic Resources ("DHR");**

3. **Any historic district designated by the governing body of any city or county;**

4. **Any state archaeological site or zone designated by the Director of the DHR, or its predecessor, and any site designated by a local archaeological commission, or similar body;**

5. **Any underwater historic assets designated by the DHR, or predecessor agency or board;**

6. **Any National Natural Landmark designated by the U.S. Secretary of the Interior;**

7. **Any area or feature included in the Virginia Registry of Natural Areas maintained by the Virginia Department of Conservation and Recreation ("DCR");**

8. **Any area accepted by the Director of the DCR for the Virginia Natural Area Preserves System;**

9. **Any conservation easement or open space easement qualifying under §§ 10.1-1009 – 1016, or §§ 10.1-1700 – 1705, of the Code (or a comparable prior or subsequent provision of the Code);**

10. **Any state scenic river;**

11. **Any lands owned by a municipality or school district; and**

12. **Any federal, state or local battlefield, park, forest, game or wildlife preserve, recreational area, or similar facility. Features, sites, and the like listed in 1 through 11 above need not be identified again.**

Response: (1) None

(2) None

(3) None

(4) The known archaeological sites in the right-of-way for the Proposed and Alternative Routes are summarized in the table below. The site, a Pre-Contact lithic scatter, has been formally determined not eligible for the NRHP and is not a cemetery.

Route Alternatives	**Site Number**	**Description**	**NRHP Status**
Proposed Route (Route 4) Alternative Route 3 Alternative Route 5	44MC0986	Lithic Scatter (Pre-Contact)	Not Eligible

(5) None

(6) None

(7) None

(8) None

(9) Alternative Route 3 is located directly adjacent (within 20-40 feet of the edge of the right-of-way) to the Ward Burton Wildlife Foundation Preserve for approximately 0.7 mile where the route turns south, south of Highway 92. Accordingly, the Company anticipates that Alternative Route 3 would require removal or clearing of danger trees based on final design.

No existing easements are crossed by or adjacent to the Proposed Route or Alternative Route 5.

Alternative Route 5 crosses three parcels that are currently under consideration by VOF for an easement. The parcels under review are located north and south of New Hope Road, where Alternative Route 5 crosses the road. The Company has been and will continue to be in communication with VOF regarding these parcels.

(10) None

(11) Alternative Route 5 is located directly adjacent to lands owned by the Mecklenburg County School Board, which are associated with Bluestone High School on the south of Parkside Road. Bluestone High School was recently closed in 2022 with students relocated to the new Mecklenburg County Middle and High School Complex. The school structures are not currently in use. No

other municipal or school district lands are crossed by the Proposed Route or the Alternative Routes.

(12) The Proposed Route crosses within 30 feet of the John H. Kerr Reservoir south of Highway 92. Alternative Route 5 crosses within 100 feet of John H. Kerr Reservoir north of Highway 58. No other recreational lands are crossed by the Proposed Route or Alternative Routes.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

H. List any registered aeronautical facilities (airports, helipads) where the proposed route would place a structure or conductor within the federally-defined airspace of the facilities. Advise of contacts, and results of contacts, made with appropriate officials regarding the effect on the facilities' operations.

Response: The Federal Aviation Administration ("FAA") is responsible for overseeing air transportation in the United States. The FAA manages air traffic in the United States and evaluates physical objects that may affect the safety of aeronautical operations through an obstruction evaluation. The prime objective of the FAA in conducting an obstruction evaluation is to ensure the safety of air navigation and the efficient utilization of navigable airspace by aircraft.

The Company has reviewed the FAA's website[25] to identify airports within 10 miles of the proposed Project. Based on this review, the following airports were identified:

Airport Name	Approximate Distance and Direction from Proposed Project Facility (nautical miles)	Use
Hazelswart Airport	o 1.4 mile northeast of Proposed Route and Alternative Routes 3 and 5	Private Use
Chase City Municipal Airport	o 1.6 miles northwest of Alternative Route 5 o 2.4 miles west/northwest of Alternative Route 3	Public Use
Murdocks Flying V Airport	o 1.6 miles southeast of Proposed Route	Private Use
Murdock's Holly Bu Airport	o 1.7 miles southeast of Proposed Route	Private Use
Lake County Regional Airport	o 3.0 miles southwest of Jeffress Switching Station	Public Use
Merifield Airport	o 3.3 miles south of Jeffress Switching Station	Private Use
Twin Towers Airport	o 3.8 miles west of Proposed Route	Private Use

Based on FAA Form 7460-1, Notice of Proposed Construction or Alteration, notice must be filed for penetrating a 100 to 1 slope within a distance of 20,000 feet from a public airport or any airport with at least one FAA-approved instrument approach procedure.

The Company reviewed height limitations associated with FAA-defined imaginary surfaces for all runways associated with the Chase City Municipal Airport and all other public or private registered airfields to determine whether any of the structure

[25] *See* https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

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) of Runway 18/36 of the Chase City Municipal Airport. The airport surveyed ground elevation is 167.5 feet above mean sea level. Based on the above-mentioned airport study, all Project routes would be located outside of the airport's horizontal surface and approach surface. There would be no potential impacts to the airport from any of the proposed Project routes.

It is anticipated that cranes would be used to install the structures. Based on current plans, Alternative Routes 3 and 5 would likely each require FAA Part 7460 notifications because of their proximity to the Chase City Airport. The Proposed Route (Route 4) would likely not require an FAA Part 7460 notification.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

I. Advise of any scenic byways that are in close proximity to or that will be crossed by the proposed transmission line and describe what steps will be taken to mitigate any visual impacts on such byways. Describe typical mitigation techniques for other highways' crossings.

Response: Highway 47, as it extends south into Chase City as well as west out of Chase City, is designated as a Virginia Byway. This designation identifies roads "having relatively high aesthetic or cultural value, leading to or within areas of historical, natural or recreational significance."[26] The designation does not carry land use or visual impact controls, but instead recognizes roads "controlled by zoning or otherwise, to reasonably protect the aesthetic or cultural value of the highway."[27]

The Proposed and Alternative Routes would all cross Highway 47 once in the same location. The crossing is located east of Chase City approximately 0.6 mile east of Country Club Drive at MP 4.0. The crossing would be a new greenfield crossing of the byway. The routes all cross Highway 47 at nearly a perpendicular angle reducing overall visual impacts. Given tree coverage will remain beyond the right-of-way on both sides, visual impacts will be held to the area impacted and short durations while driving. See Attachment III.B.7, Viewpoint 2, for a photo simulation of the location where the Proposed and Alternatives Routes cross Highway 47.

Perpendicular road crossings, which are preferred by VDOT and Mecklenburg County, will be utilized to the extent possible at other road crossings to mitigate impacts.

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[26] VDOT (Virginia Department of Transportation). 2019. Virginia's Scenic Byways. Accessed: June 2021. Retrieved from: http://www.virginiadot.org/programs/prog-byways.asp.

[27] Va. Code § 33.2-406.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

J. Identify coordination with appropriate municipal, state, and federal agencies.

Response: As described in detail in Sections III.B and V.D of the Appendix, the Company solicited feedback from Mecklenburg County regarding the proposed Project. Below is a list of coordination that has occurred with municipal, state, and federal agencies:

- Coordination with the Corps, DEQ, and VDOT will take place as appropriate to obtain necessary approvals for the Project.
- A letter dated April 20, 2023, was submitted to Mecklenburg County to describe the Project and request comments. See Section V.D.
- Letters were sent to the agencies listed in Section V.C on April 18 and 20, 2023, describing the Project and requesting comment. See Attachment 2 to the DEQ Supplement.
- A Stage I Pre-Application Analysis has been prepared and was submitted to VDHR on May 18, 2023. See Attachment 2.I.1 to the DEQ Supplement.

  On December 1, 2022, the Company solicited comments via letter from several federal and state recognized Native American tribes, including:

  Cheroenhaka (Nottoway) Indian Tribe
  Chickahominy Indian Tribe
  Chickahominy Indian Tribe Eastern Division
  Chickahominy Tribe
  Mattaponi Tribe
  Monacan Indian Nation
  Nansemond Indian Tribe of Virginia
  Nottoway Indian Tribe of Virginia
  Pamunkey Indian Tribe
  Pamunkey Indian Tribal Resource Office
  Patawomeck Indian Tribe of Virginia
  Rappahannock Tribe
  Upper Mattaponi Indian Tribe
  Catawba Indian Nation
  Delaware Nation, Oklahoma
  Sappony Tribe
  Haliwa-Saponi Tribe
  Occaneechi Band of the Saponi Nation

  A copy of the letter template and overview map is included as Attachment III.J.1. The Catawba Indian Nation responded by letter dated January 4, 2023, indicating it had no immediate concerns. A copy of the letter is included as Attachment III.J.2. The Delaware Nation Historic Preservation Department requested the Company forward the correspondence to Carissa Speck for review, which the Company did.

The following Native American Tribes also were included in the public mailings (see Attachment III.B.3 and Attachment III.B.4), inviting communities to the public meetings:

Cheroenhaka (Nottoway) Indian Tribe
Chickahominy Indian Tribe
Chickahominy Indian Tribe Eastern Division
Chickahominy Tribe
Mattaponi Tribe
Monacan Indian Nation
Nansemond Indian Tribe of Virginia
Nottoway Indian Tribe of Virginia
Pamunkey Indian Tribe
Pamunkey Indian Tribal Resource Office
Patawomeck Indian Tribe of Virginia
Rappahannock Tribe
Upper Mattaponi Indian Tribe
Catawba Indian Nation
Delaware Nation, Oklahoma
Sappony Tribe
Haliwa-Saponi Tribe
Occaneechi Band of the Saponi Nation

See also Sections III.B, III.K and V.D of this Appendix, and the DEQ Supplement.

Dominion Energy Virginia
Electric Transmission
P.O. Box 26666, Richmond, VA 23261
DominionEnergy.com

Dominion Energy®

Dec. 1, 2022

Jeffress 230 kV Electric Transmission Line and Substation Project

Dear ____________:

At Dominion Energy, we are dedicated to maintaining reliable and secure electric service in the communities we serve. As a valued stakeholder with a vested interest in the community, we invite you to participate in the development of an upcoming electric transmission project in Mecklenburg County, Virginia. As you may be familiar, Mecklenburg County has been successful in diversifying its economic prospects and growing new industries in the county. As data center development continues to materialize, there is a growing need for new electric infrastructure. This project requires new 230 kilovolt (kV) transmission lines and a related substation.

Jeffress Project:

- Counties involved: Mecklenburg County
- Project Goal Scope:
    - Build approximately 18 miles of new two single-circuit 230 kV transmission lines paralleling one another on shared right of way from our future Finneywood Substation Site to the Jeffress Substation Site. Right of way needs: ~120' wide
    - Jeffress Substation on data center property

We are currently in the conceptual phase and are seeking input prior to submitting an application with the Virginia State Corporation Commission (SCC) in early summer 2023. Doing so allows us to hear any concerns you may have as we work to meet the project's needs. We will be hosting in-person community meetings in the coming months. Meetings will be recorded and posted on the project website for those unable to attend.

Enclosed is a project overview map to help in your review. More information will be provided in the coming weeks, including initial routing options and an invitation to the community meetings. Please feel free to notify other relevant organizations that may have an interest in the project area. If you have general feedback regarding the area, please let us know as soon as possible. We appreciate your assistance as we move through the planning process.

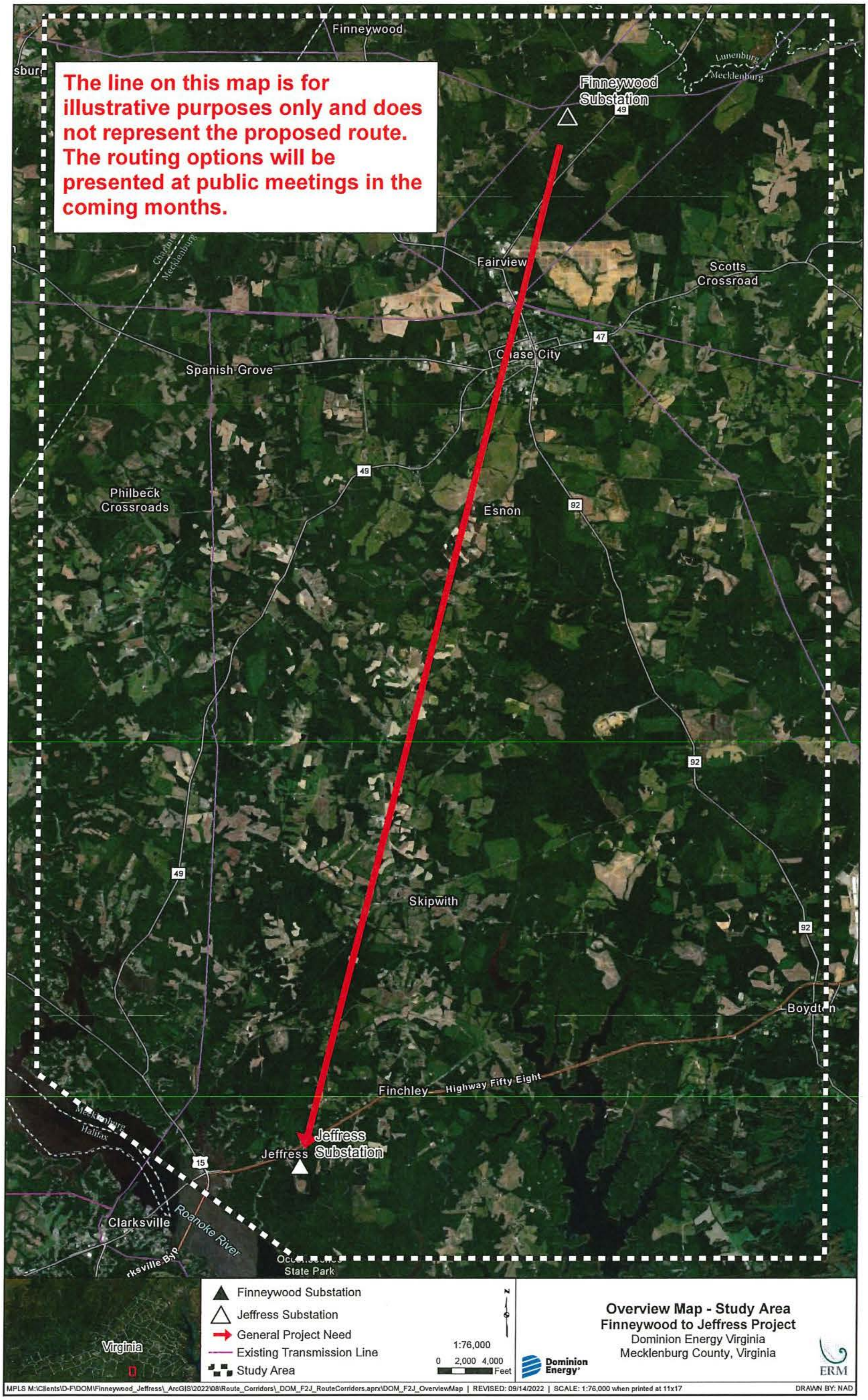
If you would like any additional information, have questions, or would like to set up a meeting to discuss the project, please contact me by email at Roxana.D.Demeter@dominionenergy.com or by calling 804-317-1669. You may also contact Ken Custalow, our Tribal Liaison Manager. He can be reached by email at Ken.Custalow@dominionenergy.com. Thank you for your willingness to join us in our commitment to serving the community.

Sincerely,

Roxana Demeter

Roxana Demeter
The Electric Transmission Project Team

[Enclosure: Project Overview Map]



The line on this map is for illustrative purposes only and does not represent the proposed route. The routing options will be presented at public meetings in the coming months.
Finneywood
Finneywood Substation
Lunenburg
Mecklenburg
49
Fairview
Scotts Crossroad
47
Chase City
Spanish Grove
49
Philbeck Crossroads
Esnon
92
92
49
Skipwith
92
Boydton
Finchley
Highway Fifty Eight
Jeffress
Jeffress Substation
15
Clarksville
Roanoke River
State Park
Virginia
Finneywood Substation
Jeffress Substation
General Project Need
Existing Transmission Line
Study Area
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0 2,000 4,000 Feet
Overview Map - Study Area
Finneywood to Jeffress Project
Dominion Energy Virginia
Mecklenburg County, Virginia
Dominion Energy
ERM
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DRAWN BY: NAD

Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Office 803-328-2427

Attachment III.J.2

January 4, 2023

Attention: Roxana Demeter
Dominion Energy
P.O. Box 26666
Richmond, VA 23261

Re. THPO #	TCNS #	Project Description
2023-1108-5		Jeffress 230 kV Electric Transmission Line and Substation Project

Dear Ms. Demeter,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Caitlin Rogers for

Wenonah G. Haire
Tribal Historic Preservation Officer

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

K. Identify coordination with any non-governmental organizations or private citizen groups.

Response: On December 1, 2022, the Company solicited comments via letter from the community leaders, environmental groups, and business groups identified below. A copy of the letter template is included as Attachment III.K.1. The VDHR responded on December 28, 2022, requesting that archaeological and architectural surveys be performed. A copy of the letter is included as Attachment III.K.2.

The community leaders, environmental groups, and business groups identified below also were included in the Company's public mailings (see Attachment III.B.3 and Attachment III.B.4), which invited communities to the public meetings.

Name	Organization
Ms. Elizabeth S. Kostelny	Preservation Virginia
Mr. Thomas Gilmore	American Battlefield Trust
Mr. Jim Campi	American Battlefield Trust
Mr. Max Hokit	American Battlefield Trust
Mr. Steven Williams	Colonial National Historical Park
Ms. Eleanor Breen, PhD, RPA	Council of Virginia Archaeologists
Ms. Leighton Powell	Scenic Virginia
Ms. Elaine Chang	National Trust for Historic Preservation
Ms. Julie Bolthouse	Piedmont Environmental Council
Mr. John McCarthy	Piedmont Environmental Council
Dr. Cassandra Newby-Alexander, Dean	Norfolk State University
Mr. Roger Kirchen, Archaeologist	Virginia Department of Historic Resources
Ms. Adrienne Birge-Wilson	Virginia Department of Historic Resources
Mr. Dave Dutton	Dutton + Associates, LLC

Dominion Energy Virginia
Electric Transmission
P.O. Box 26666, Richmond, VA 23261
DominionEnergy.com

Dec. 1, 2022

Jeffress 230 kV Electric Transmission Line and Substation Project

Dear _________,

At Dominion Energy, we are dedicated to maintaining reliable and secure electric service in the communities we serve. As a valued stakeholder with a vested interest in the community, we invite you to participate in the development of an upcoming electric transmission project in Mecklenburg County, Virginia. As you may be familiar, Mecklenburg County has been successful in diversifying its economic prospects and growing new industries in the county. As data center development continues to materialize, there is a growing need for new electric infrastructure.

A letter was sent in April 2022 referencing three electric transmission projects: the Butler Farm Project, South Hill Project, and Jeffress Project. This letter is to remind you of the upcoming Jeffress Project. This project requires new 230 kilovolt (kV) transmission lines and a related substation.

Jeffress Project:

- Counties involved: Mecklenburg County
- Project Goal Scope:
    - Build approximately 18 miles of new two single-circuit 230 kV transmission lines paralleling one another on shared right of way from our future Finneywood Substation Site to the Jeffress Substation Site. Right of way needs: ~120' wide
    - Jeffress Substation on data center property

We are currently in the conceptual phase and are seeking input prior to submitting an application with the Virginia State Corporation Commission (SCC) in early summer 2023. Doing so allows us to hear any concerns you may have as we work to meet the project's needs. We will be hosting in-person community meetings in the coming months. Meetings will be recorded and posted on the project website for those unable to attend.

Enclosed is a project overview map to help in your review. More information will be provided in the coming weeks, including initial routing options and an invitation to the community meetings. Please feel free to notify other relevant organizations that may have an interest in the project area. If you have general feedback regarding the area, please let us know as soon as possible. We appreciate your assistance as we move through the planning process.

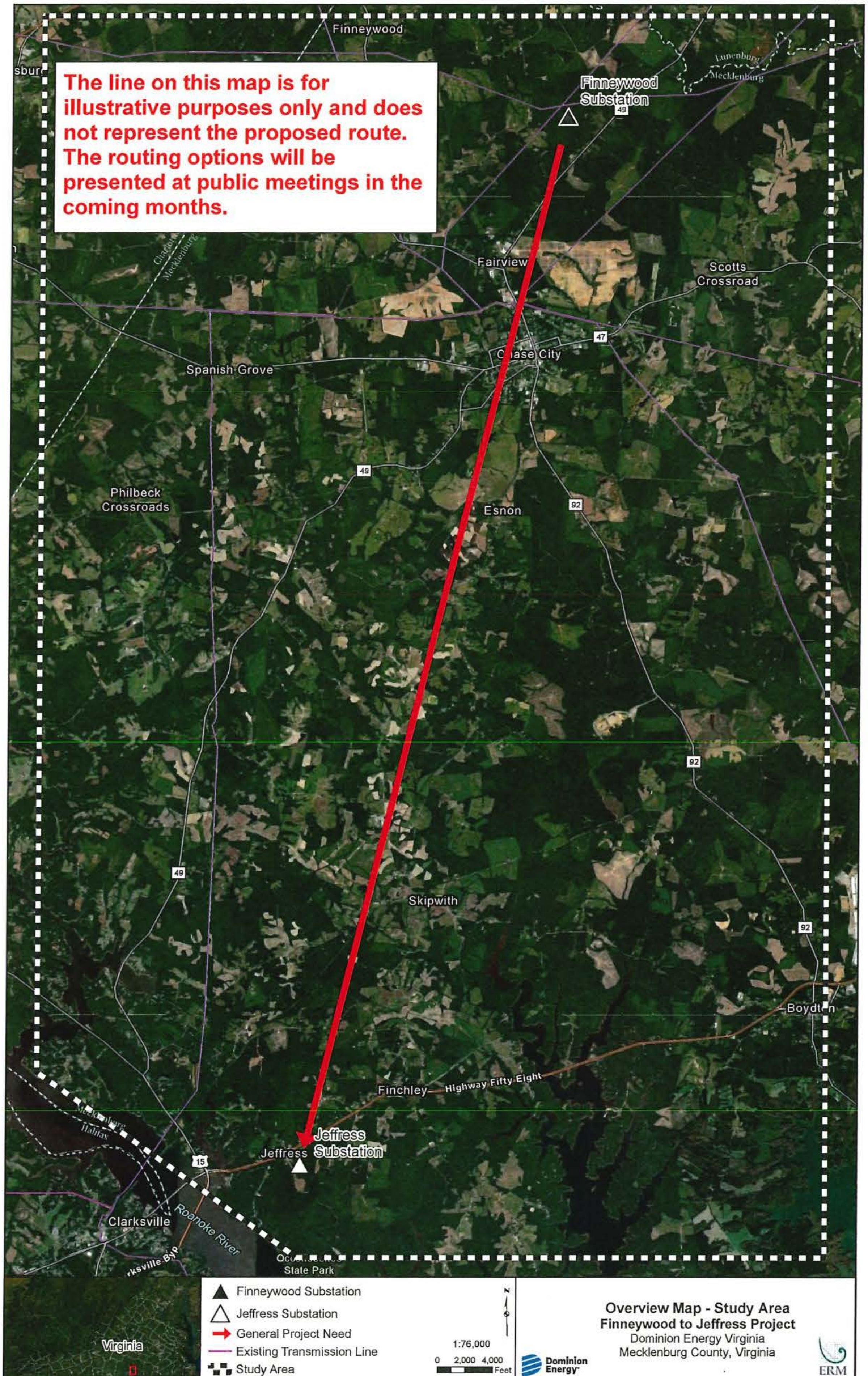
If you would like any additional information, have questions, or would like to set up a meeting to discuss the project, please contact me by email at Roxana.D.Demeter@dominionenergy.com or by calling 804-317-1669. Thank you for your willingness to join us in our commitment to serving the community.

Sincerely,

Roxana Demeter

Roxana Demeter
The Electric Transmission Project Team

[Enclosure: Project Overview Map]



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COMMONWEALTH of VIRGINIA

Travis A. Voyles
Acting 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

December 28, 2022

Roxana Demeter
Dominion Energy Virginia
Electric Transmission
P.O. Box 26666
Richmond, VA 23261

Re: Jeffress 230 kV Electric Transmission Line and Substation Project
Mecklenburg County, Virginia
DHR File No. 2022-3641

Dear Ms. Demeter

We have received your request for comments on the project referenced above. The undertaking, as presented, involves the construction of eighteen (18) miles of new two single-circuit 230 kV transmission lines. 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 submission, Dominion plans to prepare an application for a certificate of public convenience and necessity (CPCN) from the State Corporation Commission (SCC). Typically, we recommend that Dominion follow the *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* developed by DHR 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 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

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
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III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

L. Identify any environmental permits or special permissions anticipated to be needed.

Response: The permits or special permissions that are likely to be required for the proposed Project are listed below.

Potential Permits

Activity	Potential Permit	Agency/Organization
Impacts to wetlands and other waters of the U.S.	Nationwide Permit 57	U.S. Army Corps of Engineers
Impacts to wetlands and other waters of the U.S.	Virginia Water Protection Permit	Virginia Department of Environmental Quality
Aerial Water Crossing	Subaqueous Habitat Management Permit	Virginia Marine Resources Commission
Discharge of stormwater from construction	Construction General Permit	Virginia Department of Environmental Quality
Work within VDOT rights-of-way	Land Use Permit	Virginia Department of Transportation
Airspace obstruction evaluation	FAA 7460-1	Chase City Municipal Airport
Work within, over or on Railroad property	Utility Occupancy Permit	Norfolk Southern Railroad

IV. HEALTH ASPECTS OF ELECTROMAGNETIC FIELDS ("EMF")

A. Provide the calculated maximum electric and magnetic field levels that are expected to occur at the edge of the ROW. If the new transmission line is to be constructed on an existing electric transmission line ROW, provide the present levels as well as the maximum levels calculated at the edge of ROW

Response Public exposure to magnetic fields is best estimated by field levels from power lines calculated at annual average loading. For any day of the year, the EMF levels associated with average conditions provide the best estimate of potential exposure. Maximum (peak) values are less relevant as they may occur for only a few minutes or hours each year.

This section describes the levels of EMF associated with the proposed transmission lines. EMF levels are provided for future (2028) annual average and maximum (peak) loading conditions.

Proposed Project – Projected average loading in 2028

EMF levels were calculated for the proposed Project at the ***projected average*** load condition (129 amps for Lines #2299 and #2302) and at an operating voltage of 241.5 kV when supported on the proposed Project structures – see Attachment II.A.5.i and Attachment II.A.5.ii.

These field levels were calculated at mid-span where the conductors are closest to the ground and the conductors are at a projected average load operating temperature.

EMF levels at the edge of the rights-of-way for the proposed Project at the projected peak loading:

Proposed Lines - Projected Average Loading				
	Left Edge Looking Toward Finneywood		Right Edge Looking Toward Finneywood	
Attachment	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.i	0.093	5.952	0.091	5.969
II.A.5.ii	0.086	5.995	0.086	5.997

Proposed Project – Projected Peak loading in 2028

EMF levels were calculated for the proposed Project at the ***projected peak*** load condition (259 amps for Lines #2299 and #2302) and at an operating voltage of 241.5 kV when supported on the proposed Project structures – see Attachment II.A.5.i and Attachment II.A.5.ii.

These field levels were calculated at mid-span where the conductors are closest to the ground and the conductors are at a projected peak load operating temperature.

EMF levels at the edge of the rights-of-way for the proposed Project at the projected peak loading:

Proposed Lines - Projected Peak Loading				
	Left Edge Looking Toward Finneywood		**Right Edge Looking Toward Finneywood**	
Attachment	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.i	0.086	12.034	0.086	12.034
II.A.5.ii	0.045	11.236	0.045	11.236

IV. HEALTH ASPECTS OF ELECTROMAGNETIC FIELDS ("EMF")

B. If the Applicant is of the opinion that no significant health effects will result from the construction and operation of the line, describe in detail the reasons for that opinion and provide references or citations to supporting documentation.

Response: The conclusions of multidisciplinary scientific review panels assembled by national and international scientific agencies during the past three decades are the foundation of the Company's opinion that no adverse health effects are anticipated to result from the operation of the proposed Project. Each of these panels has evaluated the scientific research related to health and power-frequency EMF and provided conclusions that form the basis of guidance to governments and industries. The Company regularly monitors the recommendations of these expert panels to guide their approach to EMF.

Research on EMF and human health varies widely in approach. Some studies evaluate the effects of high, short-term EMF exposures not typically found in people's day-to-day lives on biological responses, while others evaluate the effects of common, lower EMF exposures found throughout communities. Studies also have evaluated the possibility of effects (e.g., cancer, neurodegenerative diseases, and reproductive effects) of long-term exposure. Altogether, this research includes well over a hundred epidemiologic studies of people in their natural environment and many more laboratory studies of animals (*in vivo*) and isolated cells and tissues (*in vitro*). Standard scientific procedures, such as weight-of-evidence methods, were used by the expert panels assembled by agencies to identify, review, and summarize the results of this large and diverse research.

The reviews of EMF-related biological and health research have been conducted by numerous scientific and health agencies, including, for example, the European Health Risk Assessment Network on Electromagnetic Fields Exposure ("EFHRAN"), the International Commission on Non-Ionizing Radiation Protection ("ICNIRP"), the World Health Organization ("WHO"), the IEEE's International Committee on Electromagnetic Safety ("ICES"), the Scientific Committee on Emerging and Newly Identified Health Risks ("SCENIHR") of the European Commission, and the Swedish Radiation Safety Authority ("SSM") (formerly the Swedish Radiation Protection Authority ["SSI"]) (WHO, 2007; SCENIHR, 2009, 2015; EFHRAN, 2010, 2012; ICNIRP, 2010; SSM, 2015, 2016, 2018, 2019, 2020, 2021, 2022; ICES, 2019). The general scientific consensus of the agencies that have reviewed this research, relying on generally accepted scientific methods, is that the scientific evidence does not confirm that common sources of EMF in the environment, including transmission lines and other parts of the electric system, appliances, etc., are a cause of any adverse health effects.

The most recent reviews on this topic include the 2015 report by SCENIHR and annual reviews published by SSM (e.g., for the years 2015 through 2022). These reports, similar to previous reviews, found that the scientific evidence does not confirm the existence of any adverse health effects caused by environmental or community exposure to EMF.

The WHO has recommended that countries adopt recognized international standards published ICNIRP and ICES. Typical levels of EMF from Dominion's power lines outside its property and rights-of-way are far below the screening reference levels of EMF recommended for the general public and still lower than exposures equivalent to restrictions to limits on fields within the body (ICNIRP, 2010; ICES, 2019).

Thus, based on the conclusions of scientific reviews and the levels of EMF associated with the proposed Project, the Company has determined that no adverse health effects are anticipated to result from the operation of the proposed Project.

References

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Swedish Radiation Safety Authority (SSM). Research 2022:16. Recent Research on EMF and Health Risk – Sixteenth report from SSM's Scientific Council on Electromagnetic Fields, 2021. Stockholm, Sweden: Swedish Radiation Safety Authority (SSM), 2022.

World Health Organization (WHO). Environmental Health Criteria 238: Extremely Low Frequency (ELF) Fields. Geneva, Switzerland: World Health Organization, 2007.

IV. HEALTH ASPECTS OF ELECTROMAGNETIC FIELDS ("EMF")

C. Describe and cite any research studies on EMF the Applicant is aware of that meet the following criteria:

1. **Became available for consideration since the completion of the Virginia Department of Health's most recent review of studies on EMF and its subsequent report to the Virginia General Assembly in compliance with 1985 Senate Joint Resolution No. 126;**

2. **Include findings regarding EMF that have not been reported previously and/or provide substantial additional insight into findings; and**

3. **Have been subjected to peer review.**

Response: The Virginia Department of Health ("VDH") conducted its most recent review and issued its report on the scientific evidence on potential health effects of extremely low frequency ("ELF") EMF in 2000: "[T]he Virginia Department of Health is of the opinion that there is no conclusive and convincing evidence that exposure to extremely low frequency EMF emanated from nearby high voltage transmission lines is causally associated with an increased incidence of cancer or other detrimental health effects in humans."[28]

The continuing scientific research on EMF exposure and health has resulted in many peer-reviewed publications since 2000. The accumulating research results have been regularly and repeatedly reviewed and evaluated by national and international health, scientific, and government agencies, including most notably:

- The WHO, which published one of the most comprehensive and detailed reviews of the relevant scientific peer-reviewed literature in 2007;
- SCENIHR, a committee of the European Commission, which published its assessments in 2009 and 2015;
- The SSM, which has published annual reviews of the relevant peer-reviewed scientific literature since 2003, with its most recent review published in 2022; and,
- EFHRAN, which published its reviews in 2010 and 2012.

The above reviews provide detailed analyses and summaries of relevant recent peer-reviewed scientific publications. The conclusions of these reviews that the evidence overall does not confirm the existence of any adverse health effects due to exposure to EMF below scientifically established guideline values are consistent with the conclusions of the VDH report. With respect to the statistical association observed in some of the childhood leukemia epidemiologic studies, the most recent

[28] *See* http://www.vdh.virginia.gov/content/uploads/sites/12/2016/02/highfinal.pdf.

comprehensive review of the literature by SCENIHR, published in 2015, concluded that "no mechanisms have been identified and no support is existing [*sic*] from experimental studies that could explain these findings, which, together with shortcomings of the epidemiological studies prevent a causal interpretation" (SCENIHR, 2015, p. 16).

While research is continuing on multiple aspects of EMF exposure and health, many of the recent publications have focused on an epidemiologic assessment of the relationship between EMF exposure and childhood leukemia and EMF exposure and neurodegenerative diseases. Of these, the following recent publications, published following the inclusion date (June 2014) for the SCENIHR (2015) report through May 2023, provided additional evidence and contributed to clarification of previous findings. Overall, new research studies have not provided evidence to alter the previous conclusions of scientific and health organizations, including the WHO and SCENIHR.

Epidemiologic studies of EMF and childhood leukemia published during the above referenced period include:

- Bunch et al. (2015) assessed the potential association between residential proximity to high-voltage underground cables and development of childhood cancer in the United Kingdom largely using the same epidemiologic data as in a previously published study on overhead transmission lines (Bunch et al., 2014). No statistically significant associations or trends were reported with either distance to underground cables or calculated magnetic fields from underground cables for any type of childhood cancers.

- Pedersen et al. (2015) published a case-control study that investigated the potential association between residential proximity to power lines and childhood cancer in Denmark. The study included all cases of leukemia (n=1,536), central nervous system tumor, and malignant lymphoma (n=417) diagnosed before the age of 15 between 1968 and 2003 in Denmark, along with 9,129 healthy control children matched on sex and year of birth. Considering the entire study period, no statistically significant increases were reported for any of the childhood cancer types.

- Salvan et al. (2015) compared measured magnetic-field levels in the bedroom for 412 cases of childhood leukemia under the age of 10 and 587 healthy control children in Italy. Although the statistical power of the study was limited because of the small number of highly exposed subjects, no consistent statistical associations or trends were reported between measured magnetic-field levels and the occurrence of leukemia among children in the study.

- Bunch et al. (2016) and Swanson and Bunch (2018) published additional analyses using data from an earlier study (Bunch et al., 2014). Bunch et al. (2016) reported that the association with distance to power lines observed in earlier years was linked to calendar year of birth or year of cancer diagnosis, rather than the age of the power lines. Swanson and Bunch (2018) re-analyzed data using finer exposure categories (e.g., cut-points of every 50-meter distance) and broader groupings of diagnosis date (e.g., 1960-1979, 1980-1999, and 2000-on) and reported no overall associations between exposure categories and childhood leukemia for the later periods (1980 and on), and consistent pattern for the periods prior to 1980.

- Crespi et al. (2016) conducted a case-control epidemiologic study of childhood cancers and residential proximity to high-voltage power lines (60 kV to 500 kV) in California. Childhood cancer cases, including 5,788 cases of leukemia and 3,308 cases of brain tumor, diagnosed under the age of 16 between 1986 and 2008, were identified from the California Cancer Registry. Controls, matched on age and sex, were selected from the California Birth Registry. Overall, no consistent statistically significant associations for leukemia or brain tumor and residential distance to power lines were reported.

- Kheifets et al. (2017) assessed the relationship between calculated magnetic-field levels from power lines and development of childhood leukemia within the same study population evaluated in Crespi et al. (2016). In the main analyses, which included 4,824 cases of leukemia and 4,782 controls matched on age and sex, the authors reported no consistent patterns, or statistically significant associations between calculated magnetic-field levels and childhood leukemia development. Similar results were reported in subgroup and sensitivity analyses. In two subsequent studies, Amoon et al. (2018a, 2019) examined the potential impact of residential mobility (i.e., moving residences between birth and diagnosis) on the associations reported in Crespi et al. (2016) and Kheifets et al. (2017). Amoon et al. (2018a) concluded that changing residences was not associated with either calculated magnetic-field levels or proximity to the power lines, while Amoon et al. (2019) concluded that while uncontrolled confounding by residential mobility had some impact on the association between EMF exposure and childhood leukemia, it was unlikely to be the primary driving force behind the previously reported associations in Crespi et al. (2016) and Kheifets et al. (2017).

- Amoon et al. (2018b) conducted a pooled analysis of 29,049 cases and 68,231 controls from 11 epidemiologic studies of childhood leukemia and residential distance from high-voltage power lines. The authors reported no statistically-significant association between childhood leukemia and proximity to transmission lines of any voltage. Among subgroup analyses, the reported associations were slightly stronger for leukemia cases diagnosed before 5 years of age and in study periods prior to 1980. Adjustment for various potential confounders (e.g., socioeconomic status, dwelling type, residential mobility) had little effect on the estimated associations.

- Kyriakopoulou et al. (2018) assessed the association between childhood acute leukemia and parental occupational exposure to social contacts, chemicals, and electromagnetic fields. The study was conducted at a major pediatric hospital in Greece and included 108 cases and 108 controls matched for age, gender, and ethnicity. Statistically non-significant associations were observed between paternal exposure to magnetic fields and childhood acute leukemia for any of the exposure periods examined (1 year before conception; during pregnancy; during breastfeeding; and from birth until diagnosis); maternal exposure was not assessed due to the limited sample size. No associations were observed between childhood acute leukemia and exposure to social contacts or chemicals.

- Auger et al. (2019) examined the relationship between exposure to EMF during pregnancy and risk of childhood cancer in a cohort of 784,000 children born in Quebéc. Exposure was defined using residential distance to the nearest high-voltage transmission line or transformer station. The authors reported statistically non-significant associations between proximity to transformer stations and any cancer, hematopoietic cancer, or solid tumors. No associations were reported with distance to transmission lines.

- Crespi et al. (2019) investigated the relationship between childhood leukemia and distance from high-voltage lines and calculated magnetic-field exposure, separately and combined, within the California study population previously analyzed in Crespi et al. (2016) and Kheifets et al. (2017). The authors reported that neither close proximity to high-voltage lines nor exposure to calculated magnetic fields alone were associated with childhood leukemia; an association was observed only for those participants who were both close to high-voltage lines (< 50 meters) and had high calculated magnetic fields ($\geq$ 0.4 microtesla ["μT"]) (i.e., $\geq$ 4 milligauss ["mG"]). No associations were observed with low-voltage power lines (< 200 kV). In a subsequent study, Amoon et al. (2020) examined the potential impact of dwelling type on the associations reported in Crespi et al. (2019). Amoon et al. (2020) concluded that while the type of dwelling at which a child resides (e.g., single-family home, apartment, duplex, mobile home) was associated with socioeconomic status and race or ethnicity, it was not associated with childhood leukemia and did not appear to be a potential confounder in the relationship between childhood leukemia and magnetic-field exposure in this study population.

- Swanson et al. (2019) conducted a meta-analysis of 41 epidemiologic studies of childhood leukemia and magnetic-field exposure published between 1979 and 2017 to examine trends in childhood leukemia development over time. The authors reported that while the estimated risk of childhood leukemia initially increased during the earlier period, a statistically non-significant decline in estimated risk has been observed from the mid-1990s until the present (i.e., 2019).

- Talibov et al. (2019) conducted a pooled analysis of 9,723 cases and 17,099 controls from 11 epidemiologic studies to examine the relationship between parental occupational exposure to magnetic fields and childhood leukemia. No statistically significant association was found between either paternal or maternal exposure and leukemia (overall or by subtype). No associations were observed in the meta-analyses.

- Núñez-Enríquez et al. (2020) assessed the relationship between residential magnetic-field exposure and B-lineage acute lymphoblastic leukemia ("B-ALL") in children under 16 years of age in Mexico. The study included 290 cases and 407 controls matched on age, gender, and health institution; magnetic-field exposure was assessed through the collection of 24-hour measurements in the participants' bedrooms. While the authors reported some statistically significant associations between elevated magnetic-field levels and development of B-ALL, the results were dependent on the chosen cut-points.

- Seomun et al. (2021) performed a meta-analysis based on 33 previously published epidemiologic studies investigating the potential relationship between magnetic-field exposure and childhood cancers, including leukemia and brain cancer. For childhood leukemia, the authors reported statistically significant associations with some, but not all, of the chosen cut-points for magnetic-field exposure. The associations between magnetic-field exposure and childhood brain cancer were statistically non-significant. The study provided limited new insight as most of the studies included in the current meta-analysis, were included in previously conducted meta- and pooled analyses.

- Amoon et al. (2022) conducted a pooled analysis of four studies of residential exposure to magnetic fields and childhood leukemia published following a 2010 pooled analysis by Kheifets et al. (2010). The study by Amoon et al. (2022) compared the exposures of 24,994 children with leukemia to the exposures of 30,769 controls without leukemia in California, Denmark, Italy, and the United Kingdom. Exposure was assessed by measured or calculated magnetic fields at their residences. The exposure of these two groups to magnetic fields were found not to significantly differ. A decrease in the combined effect estimates in epidemiologic studies was observed over time, and the authors concluded that their findings, based on the most recent studies, were "not in line" with previous pooled analyses that reported an increased risk of childhood leukemia.

- Brabant et al. (2022) performed a literature review and meta-analysis of studies of childhood leukemia and magnetic-field exposure. The overall analysis included 21 epidemiologic studies published from 1979 to 2020. The authors reported a statistically significant association, which they noted was "mainly explained by the studies conducted before 2000." The authors reported a statistically significant association between childhood leukemia and measured or calculated magnetic-field exposures > 0.4 μT (4 mG); no statistically significant overall associations were reported between childhood leukemia and lower magnetic-field exposures (< 0.4 μT [4 mG]), residential distance from power lines, or wire coding configuration. An association between childhood leukemia and electric blanket use was also reported. The overall results were likely influenced by the inclusion of a large number of earlier studies; 10 of the 21 studies in the main analysis were published prior to 2000. Studies published prior to 2000 included fewer studies deemed to be of higher study quality, as determined by the authors, compared to studies published after 2000.

- Nguyen et al. (2022) investigated whether potential pesticide exposure from living in close proximity to commercial plant nurseries confounds the association between magnetic-field exposure and childhood leukemia development reported within the California study population previously analyzed in Crespi et al. (2016) and Kheifets et al. (2017). The authors in Nguyen et al. (2022) noted that while the association between childhood leukemia and magnetic-field exposure was "slightly attenuated" after adjusting for nursery proximity or when restricting to subjects living > 300 meters from nurseries, their results "do not support plant nurseries as an explanation for observed childhood leukemia risks." The authors further noted that close residential proximity to nurseries may be an independent risk factor for childhood leukemia.

- Zagar et al. (2023) examined the relationship between magnetic fields and childhood cancers, including childhood leukemia, in Slovenia. Cancer cases, including 194 cases of leukemia, were identified from the Slovenian Cancer Registry; cases were then classified into one of five calculated magnetic-field exposure levels (ranging from < 0.1 μT to ≥ 0.4 μT) based on residential distance to high-voltage (e.g., 110-kV, 220-kV, and 400-kV) power lines. The authors reported that less than 1% of Slovenian children and adolescents lived in an area near high-voltage power lines. No differences in the development of childhood cancers, including leukemia, brain tumors, or all cancers combined, were reported across the five exposure categories.

Epidemiologic studies of EMF and neurodegenerative diseases published during the above referenced period include:

- Seelen et al. (2014) conducted a population-based case-control study in the Netherlands and included 1,139 cases diagnosed with amyotrophic lateral sclerosis ("ALS") between 2006 and 2013 and 2,864 frequency-matched controls. The shortest distance from the case and control residences to the nearest high-voltage power line (50 to 380 kV) was determined by geocoding. No statistically significant associations between residential proximity to power lines with voltages of either 50 to 150 kV or 220 to 380 kV and ALS were reported.

- Sorahan and Mohammed (2014) analyzed mortality from neurodegenerative diseases in a cohort of approximately 73,000 electricity supply workers in the United Kingdom. Cumulative occupational exposure to magnetic-fields was calculated for each worker in the cohort based on their job titles and job locations. Death certificates were used to identify deaths from neurodegenerative diseases. No associations or trends for any of the included neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, and ALS) were observed with various measures of calculated magnetic fields.

- Koeman et al. (2015, 2017) analyzed data from the Netherlands Cohort Study of approximately 120,000 men and women who were enrolled in the cohort in 1986 and followed up until 2003. Lifetime occupational history, obtained through questionnaires, and job-exposure matrices on ELF magnetic fields and other occupational exposures were used to assign exposure to study subjects. Based on 1,552 deaths from vascular dementia, the researchers reported a statistically not significant association of vascular dementia with estimated exposure to metals, chlorinated solvents, and ELF magnetic fields. However, because no exposure-response relationship for cumulative exposure was observed and because magnetic fields and solvent exposures were highly correlated with exposure to metals, the authors attributed the association with ELF magnetic fields and solvents to confounding by exposure to metals (Koeman et al., 2015). Based on a total of 136 deaths from ALS among the cohort members, the authors reported a statistically significant, approximately two-fold association with ELF magnetic fields in the highest exposure category. This association, however, was no longer statistically significant when adjusted for exposure to insecticides (Koeman et al., 2017).

- Fischer et al. (2015) conducted a population-based case-control study that included 4,709 cases of ALS diagnosed between 1990 and 2010 in Sweden and 23,335 controls matched to cases on year of birth and sex. The study subjects' occupational exposures to ELF magnetic fields and electric shocks were classified based on their occupations, as recorded in the censuses and corresponding job-exposure matrices. Overall, neither magnetic fields nor electric shocks were related to ALS.

- Vergara et al. (2015) conducted a mortality case-control study of occupational exposure to electric shock and magnetic fields and ALS. They analyzed data on 5,886 deaths due to ALS and over 58,000 deaths from other causes in the United States between 1991 and 1999. Information on occupation was obtained from death certificates and job-exposure matrices were used to categorize exposure to electric shocks and magnetic fields. Occupations classified as "electric occupations" were moderately associated with ALS. The authors reported no consistent associations for ALS, however, with either electric shocks or magnetic fields, and they concluded that their findings did not support the hypothesis that exposure to either electric shocks or magnetic fields explained the observed association of ALS with "electric occupations."

- Pedersen et al. (2017) investigated the occurrence of central nervous system diseases among approximately 32,000 male Danish electric power company workers. Cases were identified through the national patient registry between 1982 and 2010. Exposure to ELF magnetic fields was determined for each worker based on their job titles and area of work. A statistically significant increase was reported for dementia in the high exposure category when compared to the general population, but no exposure-response pattern was identified, and no similar increase was reported in the internal comparisons among the workers. No other statistically significant increases among workers were reported for the incidence of Alzheimer's disease, Parkinson's disease, motor neuron disease, multiple sclerosis, or epilepsy, when compared to the general population, or when incidence among workers was analyzed across estimated exposure levels.

- Vinceti et al. (2017) examined the association between ALS and calculated magnetic-field levels from high-voltage power lines in Italy. The authors included 703 ALS cases and 2,737 controls; exposure was assessed based on residential proximity to high-voltage power lines. No statistically significant associations were reported and no exposure-response trend was observed. Similar results were reported in subgroup analyses by age, calendar period of disease diagnosis, and study area.

- Checkoway et al. (2018) investigated the association between Parkinsonism[29] and occupational exposure to magnetic fields and several other agents (endotoxins, solvents, shift work) among 800 female textile workers in Shanghai. Exposure to magnetic fields was assessed based on the participants' work histories. The authors reported no statistically significant associations between Parkinsonism and occupational exposure to any of the agents under study, including magnetic fields.

- Gunnarsson and Bodin (2018) conducted a meta-analysis of occupational risk factors for ALS. The authors reported a statistically significant association between occupational exposures to EMF, estimated using a job-exposure matrix, and ALS among the 11 studies included. Statistically significant associations were also reported between ALS and jobs that involve working with electricity, heavy physical work, exposure to metals (including lead) and chemicals (including pesticides), and working as a nurse or physician. The authors reported some evidence for publication bias. In a subsequent publication, Gunnarsson and Bodin (2019) updated their previous meta-analysis to also include Parkinson's disease and Alzheimer's disease. A slight, statistically significant association was reported between occupational exposure to EMF and Alzheimer's disease; no association was observed for Parkinson's disease.

- Huss et al. (2018) conducted a meta-analysis of 20 epidemiologic studies of ALS and occupational exposure to magnetic fields. The authors reported a weak overall association; a slightly stronger association was observed in a subset analysis of six studies with full occupational histories available. The authors noted substantial heterogeneity among studies, evidence for publication bias, and a lack of a clear exposure-response relationship between exposure and ALS.

[29] Parkinsonism is defined by Checkoway et al. (2018) as "*a syndrome whose cardinal clinical features are bradykinesia, rest tremor, muscle rigidity, and postural instability. Parkinson disease is the most common neurodegenerative form of [parkinsonism]*" (p. 887).

- Jalilian et al. (2018) conducted a meta-analysis of 20 epidemiologic studies of occupational exposure to magnetic fields and Alzheimer's disease. The authors reported a moderate, statistically significant overall association; however, they noted substantial heterogeneity among studies and evidence for publication bias.

- Röösli and Jalilian (2018) performed a meta-analysis using data from five epidemiologic studies examining residential exposure to magnetic fields and ALS. A statistically non-significant negative association was reported between ALS and the highest exposed group, where exposure was defined based on distance from power lines or calculated magnetic-field level.

- Gervasi et al. (2019) assessed the relationship between residential distance to overhead power lines in Italy and risk of Alzheimer's dementia and Parkinson's disease. The authors included 9,835 cases of Alzheimer's dementia and 6,810 cases of Parkinson's disease; controls were matched by sex, year of birth, and municipality of residence. A weak, statistically non-significant association was observed between residences within 50 meters of overhead power lines and both Alzheimer's dementia and Parkinson's disease, compared to distances of over 600 meters.

- Peters et al. (2019) examined the relationship between ALS and occupational exposure to both magnetic fields and electric shock in a pooled study of data from three European countries. The study included 1,323 ALS cases and 2,704 controls matched for sex, age, and geographic location; exposure was assessed based on occupational title and defined as low (background), medium, or high. Statistically significant associations were observed between ALS and ever having been exposed above background levels to either magnetic fields or electric shocks; however, no clear exposure-response trends were observed with exposure duration or cumulative exposure. The authors also noted significant heterogeneity in risk by study location.

- Filippini et al. (2020) investigated the associations between ALS and several environmental and occupational exposures, including electromagnetic fields, within a case-control study in Italy. The study included 95 cases and 135 controls matched on age, gender, and residential province; exposure to electromagnetic fields was assessed using the participants' responses to questions related to occupational use of electric and electronic equipment, occupational EMF exposure, and residential distance to overhead power lines. The authors reported a statistically significant association between ALS and residential proximity to overhead power lines and a statistically non-significant association between ALS and occupational exposure to EMF; occupational use of electric and electronic equipment was associated with a statistically non-significant decrease in ALS development.

- Huang et al. (2020) conducted a meta-analysis of 43 epidemiologic studies examining potential occupational risk factors for dementia or mild cognitive impairment. The authors included five cohort studies and seven case-control studies related to magnetic-field exposure. For both study types, the authors reported positive associations between dementia and work-related magnetic-field exposures. The paper, however, provided no information on the occupations held by the study participants, their magnetic-field exposure levels, or how magnetic-field levels were assessed; therefore, the results are difficult to interpret. The authors also reported a high level of heterogeneity among studies. Thus, this analysis adds little, if any, to the overall weight of evidence on a potential association between dementia and magnetic fields.

- Jalilian et al. (2020) conducted a meta-analysis of ALS and occupational exposure to both magnetic fields and electric shocks within 27 studies from Europe, the United States, and New Zealand. A weak, statistically significant association was reported between magnetic-field exposure and ALS; however, the authors noted evidence of study heterogeneity and publication bias. No association was observed between ALS and electric shocks.

- Chen et al. (2021) conducted a case-control study to examine the association between occupational exposure to electric shocks, magnetic fields, and motor neuron disease ("MND") in New Zealand. The study included 319 cases with a MND diagnosis (including ALS) and 604 controls, matched on age and gender; exposure was assessed using the participants' occupational history questionnaire responses and previously developed job-exposure matrices for electric shocks and magnetic fields. The authors reported no associations between MND and exposure to magnetic fields; positive associations were reported between MND and working at a job with the potential for electric shock exposure.

- Grebeneva et al. (2021) evaluated disease rates among electric power company workers in the Republic of Kazakhstan. The authors included three groups of "exposed" workers who "were in contact with equipment generating [industrial frequency EMF]" (a total of 161 workers), as well as 114 controls "who were not associated with exposure to electromagnetic fields." Disease rates were assessed "based on analyzing the sick leaves of employees" from 2010 to 2014 and expressed as "incidence rate per 100 employees." The authors reported a higher "incidence rate" of "diseases of the nervous system" in two of the exposed categories compared to the non-exposed group. No meaningful conclusions from the study could be drawn, however, because no specific diagnoses within "*diseases of the nervous system*" were identified in the paper and no clear description was provided on how the authors defined and calculated "incidence rate" for the evaluated conditions. In addition, no measured or calculated magnetic-field levels were presented by the authors.

- Filippini et al. (2021) conducted a meta-analysis to assess the dose-response relationship between residential exposure to magnetic fields and ALS. The authors identified six ALS epidemiologic studies, published between 2009 and 2020, that assessed exposure to residential magnetic fields by either distance from overhead power lines or magnetic-field modeling. They reported a decrease in risk of ALS in the highest exposure categories for both distance-based and modeling-based exposure estimates. The authors also reported that their dose-response analyses "showed little association between distance from power lines and ALS"; the data were too sparse to conduct a dose-response analysis for modeled magnetic-field estimates. The authors noted that their study was limited by small sample size, "imprecise" exposure categories, the potential for residual confounding, and by "some publication bias."

- Jalilian et al. (2021) conducted a meta-analysis of occupational exposure to ELF magnetic fields and electric shocks and development of ALS. The authors included 27 studies from Europe, the United States, and New Zealand that were published between 1983 and 2019. A weak, statistically significant association was reported between magnetic-field exposure and ALS, and no association was observed between electric shocks and ALS. Indications of publication bias and "moderate to high" heterogeneity were identified for the studies of magnetic-field exposure and ALS, and the authors noted that "the results should be interpreted with caution."

- Sorahan and Nichols (2022) investigated magnetic-field exposures and mortality from MND in a large cohort of employees of the former Central Electricity Generating Board of England and Wales. The study included nearly 38,000 employees first hired between 1942 and 1982 and still employed in 1987. Estimates of exposure magnitude, frequency, and duration were calculated using data from the power stations and the employees' job histories, and were described in detail in a previous publication (Renew et al., 2003). Mortality from MND in the total cohort was observed to be similar to national rates. No statistically significant dose-response trends were observed with lifetime, recent, or distant magnetic-field exposure; statistically significant associations were observed for some categories of recent exposure, but not for the highest exposure category.

- Vasta et al. (2023) examined the relationship between residential distance to power lines and ALS development in a cohort study of 1,098 participants in Italy. The authors reported no differences in the age of ALS onset or ALS progression rate between low-exposed and high-exposed participants based on residential distance to power lines at the time of the participants' diagnosis. Similarly, no differences were observed when exposure was based on residential distance to repeater antennas.

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C, Raaschou-Nielsen O, Röösli M, Spycher BD, Sudan M, Swanson J, Tittarelli A, Tuck DM, Tynes T, Vergara X, Vinceti M, Wunsch-Filho V, Kheifets L. Proximity to overhead power lines and childhood leukaemia: an international pooled analysis. Br J Cancer 119: 364-373, 2018b.

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V. NOTICE

A. Furnish a proposed route description to be used for public notice purposes. Provide a map of suitable scale showing the route of the proposed project. For all routes that the Applicant proposed to be noticed, provide minimum, maximum and average structure heights.

Response: A map showing the overhead Proposed Route and two overhead Alternative Routes for the proposed Finneywood-Jeffress Lines is provided in Attachment V.A. A written description of the Proposed and Alternative Routes is as follows:

Proposed Route (Route 4)

The Proposed Route (Route 4) of the Finneywood-Jeffress Lines is approximately 18.3 miles in length and is located entirely in Mecklenburg County, Virginia. Starting at the future Finneywood Switching Station, the route initially heads east and then south passing east of the Town of Chase City. South of Highway 92, the route turns to the southwest passing by the unincorporated community of Skipwith before terminating at the converted Jeffress 230 kV Switching Station.

The Proposed Route (Route 4) will be constructed on new 120-foot-wide right-of-way primarily supported by single circuit weathering steel monopoles. For the entire route, the minimum structure height is approximately 90 feet, the maximum structure height is approximately 170 feet, and the average structure height is approximately 121 feet. These proposed structure heights are based on preliminary conceptual design, do not include foundation reveal, and are subject to change based on final engineering design.

Alternative Route 3

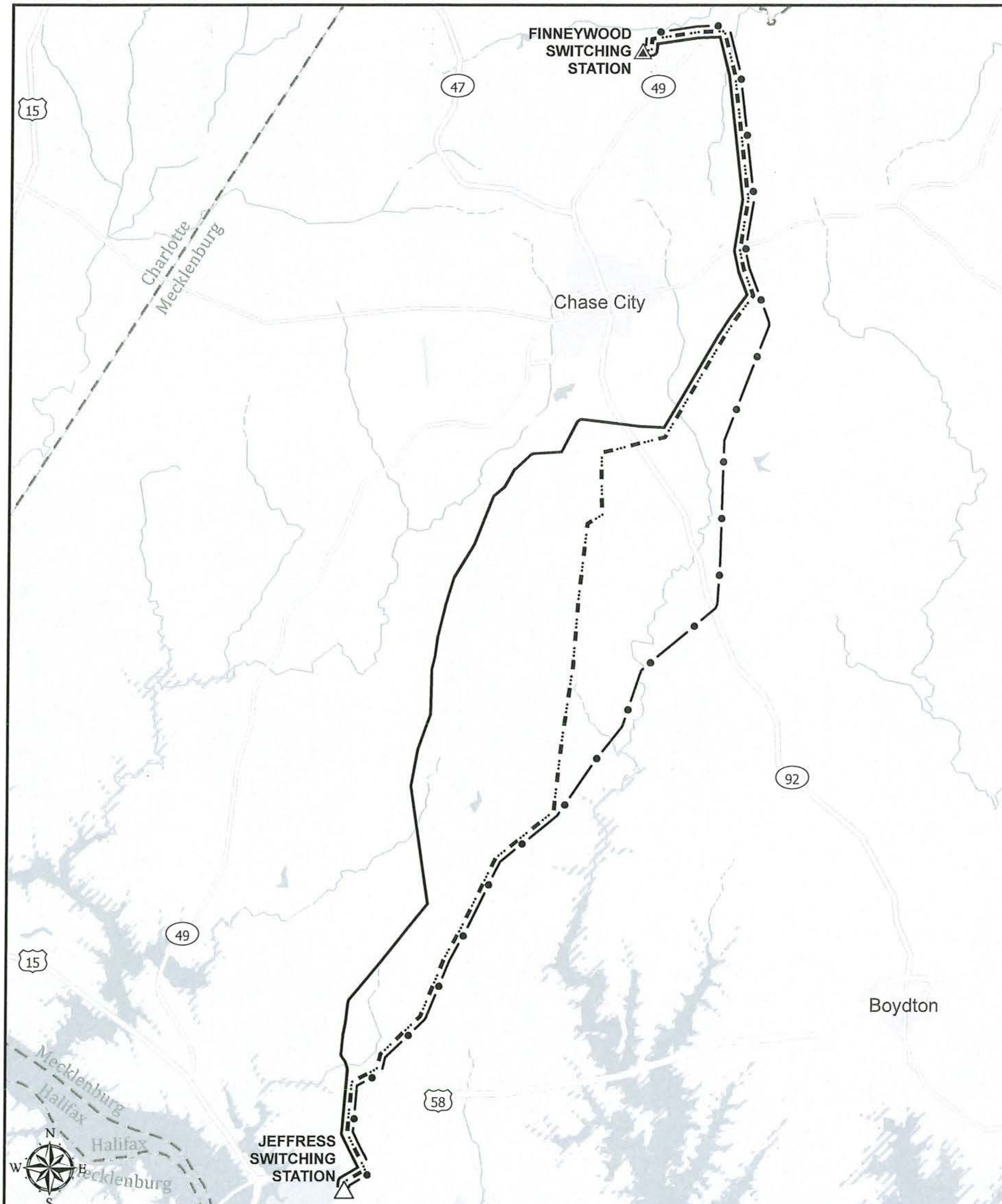
Alternative Route 3 of the Finneywood-Jeffress Lines is approximately 18.5 miles in length and is located entirely in Mecklenburg County, Virginia. Starting at the future Finneywood Switching Station, the route initially heads east and then south passing east of the Town of Chase City. South of Rocky Mount Road, the route turns to the southwest passing by the unincorporated community of Skipwith before terminating at the converted Jeffress 230 kV Switching Station.

Alternative Route 3 will be constructed on new 120-foot-wide right-of-way primarily supported by single circuit weathering steel monopoles. For the entire route, the minimum structure height is approximately 90 feet, the maximum structure height is approximately 170 feet, and the average structure height is approximately 121 feet. These proposed structure heights are based on preliminary conceptual design, do not include foundation reveal, and are subject to change based on final engineering design.

Alternative Route 5

Alternative Route 5 of the Finneywood-Jeffress Lines is approximately 19.2 miles in length and is located entirely in Mecklenburg County, Virginia. Starting at the future Finneywood Switching Station, the route initially heads east and then south passing east of the Town of Chase City. South of Chase City, the route turns to the west and parallels a natural gas pipeline corridor before turning to the southwest and then south. After crossing Wilbourne Road, the route turns to the southwest and parallels the south side of the Norfolk Southern Railroad, before turning south and crossing Highway 58, and terminating at the converted Jeffress 230 kV Switching Station.

Alternative Route 5 will be constructed on new 120-foot-wide right-of-way primarily supported by single circuit weathering steel monopoles. For the entire route, the minimum structure height is approximately 90 feet, the maximum structure height is approximately 170 feet, and the average structure height is approximately 121 feet. These proposed structure heights are based on preliminary conceptual design, do not include foundation reveal, and are subject to change based on final engineering design.



Future Finneywood Station

Switching Station Proposed for Conversion

Alternative Route 3

Proposed Route 4

Alternative Route 5

1:112,000

0 0.5 1 Miles

Attachment V.A
Notice Map
230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion Project
Dominion Energy Virginia
Mecklenburg County, Virginia

ERM

Dominion Energy

MPLS M:\US\Projects\D-F\Dominion\Finneywood_Jeffress_ArcGIS\SCC_Appendix_DOM_F2J_SCC_Appendix.aprx\Attachment V.A | REVISED: 05/03/2023 | SCALE: 1:112,000 DRAWN BY: Nicole.Dunn

V. NOTICE

B. List Applicant offices where members of the public may inspect the application. If applicable, provide a link to website(s) where the application may be found.

Response: The Application will be made available electronically for public inspection at: www.dominionenergy.com/jeffress.

V. NOTICE

C. List all federal, state, and local agencies and/or officials that may reasonably be expected to have an interest in the proposed construction and to whom the Applicant has furnished or will furnish a copy of the application.

Response:

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

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

Ms. Rene Hypes
Virginia Department of Conservation and Recreation
Division of Natural Heritage
600 East Main Street, 24th Floor
Richmond, Virginia 23219

Ms. Kristal McKelvey
Department of Conservation and Recreation, Planning Bureau
600 East Main Street, 17th Floor
Richmond, Virginia 23219

Ms. Amy M. Ewing
Virginia Department of Wildlife Resources
7870 Villa Park, Suite 400
Henrico, Virginia 23228

Mr. Keith Tignor
Virginia Department of Agriculture and Consumer Affairs
102 Governor Street
Richmond, Virginia 23219

Mr. Karl Didier, PhD
Virginia Department of Forestry
Forestland Conservation Division
900 Natural Resources Drive, Suite 800
Charlottesville, Virginia 22903

Ms. Tiffany Birge
Virginia Marine Resources Commission
Habitat Management Division
Building 96, 380 Fenwick Road
Ft. Monroe, Virginia 23651

Mr. Troy Andersen
US Fish and Wildlife Service
Virginia Field Office, Ecological Services
6669 Short Lane
Gloucester, Virginia 23061

Mr. Keith Goodwin
U.S. Army Corps of Engineers
WRDA Dominion VA Liaison
Norfolk District
803 Front Street
Norfolk, Virginia 23510

Mr. John Egertson
Mecklenburg County Administrator
P.O. Box 307
Boydton, Virginia 23917

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

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

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

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

V. NOTICE

D. If the application is for a transmission line with a voltage of 138 kV or greater, provide a statement and any associated correspondence indicating that prior to the filing of the application with the SCC the Applicant has notified the chief administrative officer of every locality in which it plans to undertake construction of the proposed line of its intention to file such an application, and that the Applicant gave the locality a reasonable opportunity for consultation about the proposed line (similar to the requirements of § 15.2-2202 of the Code for electric transmission lines of 150 kV or more).

Response: In accordance with Va. Code § 15.2-2202 E, a letter dated April 20, 2023, was sent to H. Wayne Carter, III, County Administrator in Mecklenburg County, where the Project is located. The letter stated the Company's intention to file this Application and invited the County to consult with the Company about the Project. This letter is included as Attachment V.D.1.

Attachment V.D.1

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

Dominion Energy

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.

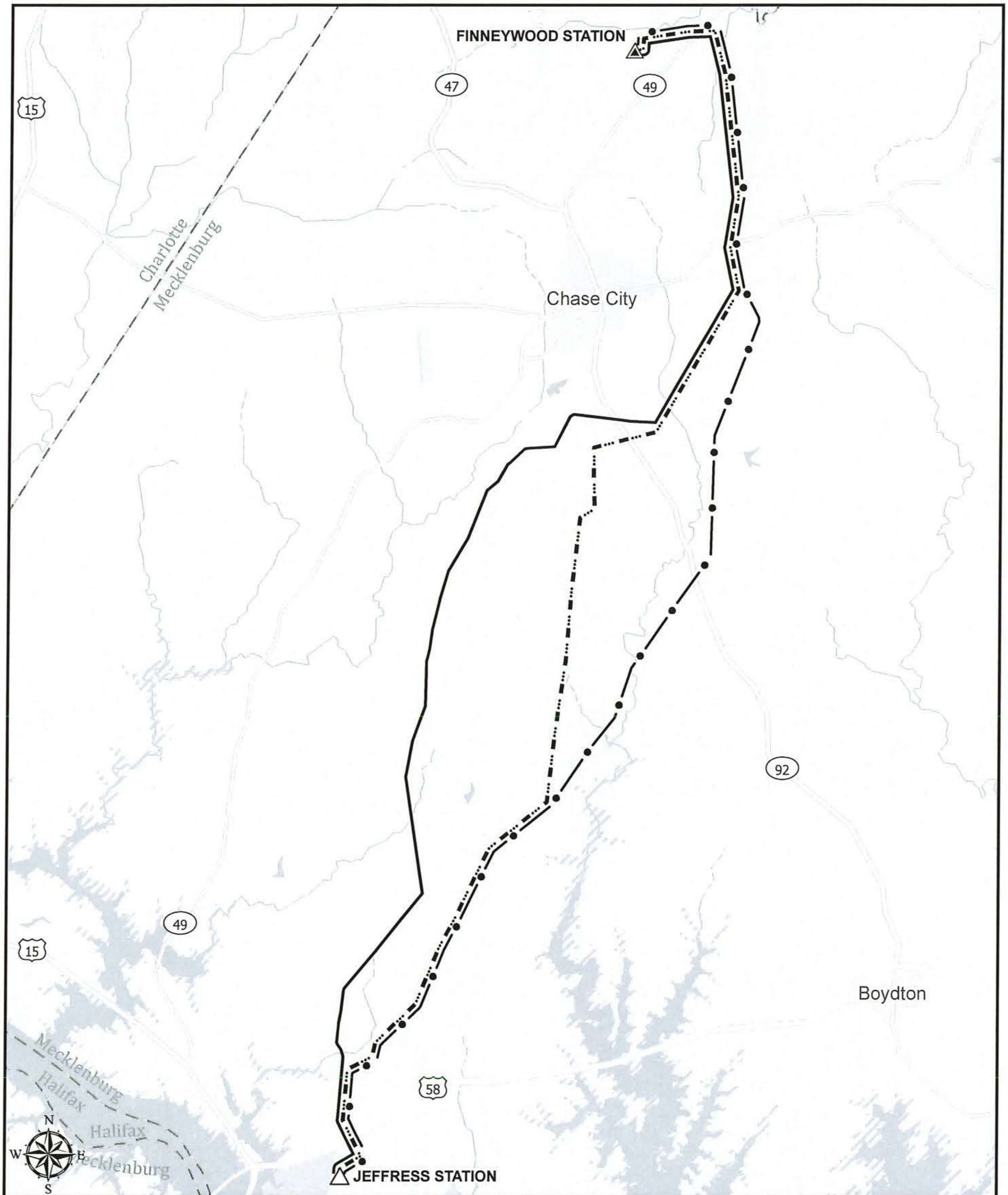
Enclosed is a preliminary Project Overview Map depicting the proposed and alternative routes of the 230 kV Finneywood-Jeffress Lines and overall Project location. All final materials, including maps, will be available in the Company's application filing to the Commission. If you would like to receive 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

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

ERM

Dominion Energy

MPLS M:\Clients\D-F\DOM\Finneywood_Jeffress_ArcGIS\SCC_Appendix_DOM_F2J_SCC_Appendix.aprx\Attachment Overview Map | REVISED: 04/04/2023 | SCALE: 1:112,000 DRAWN BY: Nicole.Dunn

COMMONWEALTH OF VIRGINIA

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	)))))))	Case No. PUR-2023-00088

IDENTIFICATION, SUMMARIES, AND TESTIMONY OF DIRECT WITNESSES OF VIRGINIA ELECTRIC AND POWER COMPANY

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Kunal S. Amare

Title: Engineer III – Electric Transmission Planning

Summary:

Company Witness Kunal S. Amare sponsors those portions of the Appendix describing the Company's electric transmission system and the need for, and benefits of, the proposed Project, as follows:

- Section I.B: This section details the engineering justifications for the proposed project.
- Section I.C: This section describes the present system and details how the proposed project will effectively satisfy present and projected future load demand requirements.
- Section I.D: This section describes critical contingencies and associated violations due to the inadequacy of the existing system.
- Section I.E: This section explains feasible project alternatives, when applicable.
- Section I.G: This section provides a system map of the affected area.
- Section I.H: This section provides the desired in-service date of the proposed project and the estimated construction time.
- Section I.J: This section provides information about the project if approved by the RTO.
- Section I.K: Although not applicable to the proposed project, this section, when applicable, provides outage history and maintenance history for existing transmission lines if the proposed project is a rebuild and is due in part to reliability issues.
- Section I.M: Although not applicable to the proposed project, this section, when applicable, contains information for transmission lines interconnecting a non-utility generator.
- Section I.N: This section provides the proposed and existing generating sources, distribution circuits or load centers planned to be served by all new substations, switching stations, and other ground facilities associated with the proposed project.
- Section II.A.3: This section provides color maps of existing or proposed rights-of-way in the vicinity of the proposed project.
- Section II.A.10: This section provides details of the construction plans for the proposed project, including requested line outage schedules.

Additionally, Company Witness Amare co-sponsors the following portions of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Chloe A. Genova, Mohammad M. Othman, and Matt L. Teichert): This section details the primary justifications for the proposed project.
- Section I.L (co-sponsored with Company Witness Chloe A. Genova): Although not applicable to the proposed project, this section, when applicable, provides details on the deterioration of structures and associated equipment.

A statement of Mr. Amare's background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
KUNAL S. AMARE
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2023-00088

Q. Please state your name, position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), and business address.

A. My name is Kunal S. Amare, and I am an Engineer III in the Electric Transmission Planning Department for the Company. My business address is 5000 Dominion Boulevard, Glen Allen, Virginia 23060. A statement of my qualifications and background is provided as Appendix A.

Q. Please describe your areas of responsibility with the Company.

A. I am responsible for planning the Company's electric transmission system for voltages of 69 kilovolt ("kV") through 500 kV.

Q. What is the purpose of your testimony in this proceeding?

A. 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, the Company 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") 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. 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") located adjacent to Occoneechee State Park south of Highway 58 near 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 purpose of my testimony is to describe the Company's electric transmission system and the need for, and benefits of, the proposed Project. I sponsor Sections I.B, I.C, I.D, I.E, I.G, I.H, I.J, I.K, I.M, I.N, II.A.3, and II.A.10 of the Appendix. Additionally, I co-sponsor the Executive Summary and Sections I.A with Company Witnesses Chloe A. Genova, Mohammad M. Othman, Chuck H. Weil, and Matt L. Teichert; and Section I.L with Company Witness Chloe A. Genova.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS OF KUNAL S. AMARE

Kunal S. Amare received a Master of Science degree in Electrical Engineering from Virginia Polytechnic Institute and State University in 2016. He received a Bachelor of Technology degree in Electrical Engineering from the University of Mumbai in 2014. He has been licensed as a Professional Engineer in the State of Texas since 2019. He has been employed with the Company in the Transmission Planning team since June 2020. Prior to working with Dominion, Mr. Amare worked with Entergy Services LLC in the Transmission Planning Department from 2017-2020. Mr. Amare is skilled in Transmission Planning, Transient Stability Analysis, Renewable Energy Systems, and Electromagnetic Transient Analysis.

Mr. Amare has previously submitted pre-filed testimony to the State Corporation Commission of Virginia.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Chloe A. Genova

Title: Engineering Technical Specialist II

Summary:

Company Witness Chloe A. Genova sponsors those portions of the Appendix providing an overview of the design characteristics of the transmission facilities for the proposed Project, and discussing electric and magnetic field levels, as follows:

- Section I.F: This section describes any lines or facilities that will be removed, replaced, or taken out of service upon completion of the proposed project.
- Section II.A.5: This section provides drawings of the right-of-way cross section showing typical transmission lines structure placements.
- Section II.B.1 to II.B.2: These sections provide the line design and operational features of the proposed project, as applicable.
- Section IV: This section provides analysis on the health aspects of electric and magnetic field levels.

Additionally, Company Genova co-sponsors the following portions of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Kunal S. Amare, Mohammad M. Othman, Chuck H. Weil, and Matt L. Teichert): This section details the primary justifications for the proposed project.
- Section I.I (co-sponsored with Company Witness Mohammad M. Othman): This section provides the estimated total cost of the proposed project.
- Section I.L (co-sponsored with Company Witness Kunal S. Amare): This section, when applicable, provides details on the deterioration of structures and associated equipment.
- Sections II.B.3 to II.B.5 (co-sponsored with Company Witness Chuck H. Weil): These sections, when applicable, provide supporting structure details along the proposed and alternative routes.
- Section II.B.6 (co-sponsored with Company Witnesses Chuck H. Weil and Matt L. Teichert): This section provides photographs of existing facilities, representations of proposed facilities, and visual simulations.
- Section V.A (co-sponsored with Company Witnesses Chuck H. Weil and Matt L. Teichert): This section provides the proposed route description and structure heights for notice purposes.

A statement of Ms. Genova's background and qualifications is attached to her testimony as Appendix A.

DIRECT TESTIMONY
OF
CHLOE A. GENOVA
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2023-00088

Q. Please state your name, position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), and business address.

A. My name is Chloe A. Genova, and I am an Engineering Technical Specialist II in the Electric Transmission Line Engineering Department of the Company. My business address is 5000 Dominion Boulevard, Glen Allen, Virginia 23060. A statement of my qualifications and background is provided as Appendix A.

Q. Please describe your areas of responsibility with the Company.

A. I am responsible for the estimating, conceptual, and final design of high voltage transmission line projects from 69 kilovolt ("kV") to 500 kV.

Q. What is the purpose of your testimony in this proceeding?

A. 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, the Company 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") 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. 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") located adjacent to Occoneechee State Park south of Highway 58 near 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 purpose of my testimony is to describe the design characteristics of the transmission facilities for the proposed Project, and also to discuss electric and magnetic field ("EMF") levels. I sponsor Sections I.F, II.A.5, II.B.1, II.B.2, and IV of the Appendix. Additionally, I co-sponsor the Executive Summary and Sections I.A with Company Witnesses Kunal S. Amare, Mohammad M. Othman, Chuck H. Weil, and Matt L. Teichert; Section I.I with Company Witness Mohammad M. Othman; Section I.L with Company Witness Kunal S. Amare; Sections II.B.3 to II.B.5 with Company Witness Chuck H. Weil; Section II.B.6 and V.A with Company Witnesses Chuck H. Weil and Matt L. Teichert.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS
OF
CHLOE A. GENOVA

Chloe A. Genova received a Bachelor of Science degree in Civil Engineering Technology from the Pennsylvania College of Technology in 2018. She currently possesses an Engineer-in-Training certification in Virginia. She worked as a contractor for Dominion Energy for three years before being hired as a full-time employee in July 2021. Ms. Genova's experience with the Company includes Overhead Electric Transmission Line Design (July 2018-Present).

Ms. Genova has previously submitted pre-filed testimony to the State Corporation Commission of Virginia.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Mohammad M. Othman

Title: Engineer III – Substation Engineering

Summary:

Company Witness Mohammad M. Othman sponsors or co-sponsors the following sections of the Appendix describing the substation work to be performed for the proposed project as follows:

- Section I.A (co-sponsored with Company Witnesses Kunal S. Amare, Chloe A. Genova, Chuck H. Weil, and Matt L. Teichert): This section details the primary justifications for the proposed project.

- Section I.I (co-sponsored with Company Witness Chloe A. Genova): This section provides the estimated total cost of the proposed project.

- Section II.C: This section describes and furnishes a one-line diagram of the substation associated with the proposed project.

A statement of Mr. Othman's background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
MOHAMMAD M. OTHMAN
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2023-00088

Q. Please state your name, position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), and business address.

A. My name is Mohammad M. Othman, and I am an Engineer III in the Substation Engineering section of the Electric Transmission group of the Company. My business address is 5000 Dominion Boulevard, Glen Allen, Virginia 23060. A statement of my qualifications and background is provided as Appendix A.

Q. Please describe your area of responsibility with the Company.

A. I am responsible for evaluation of the substation project requirements, feasibility studies, conceptual physical design, scope development, preliminary engineering and cost estimating for high voltage transmission and distribution substations.

Q. What is the purpose of your testimony in this proceeding?

A. 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, the Company 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") 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. 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") located adjacent to Occoneechee State Park south of Highway 58 near 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 purpose of my testimony is to describe the work to be performed as part of the Project. As it pertains to station work, I sponsor Section II.C of the Appendix. Additionally, I co-sponsor the Executive Summary and Section I.A with Company Witnesses Kunal S. Amare, Chloe A. Genova, Chuck H. Weil, and Matt L. Teichert; and Section I.I of the Appendix with Company Witness Chloe A. Genova, specifically, as it pertains to substation work.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

BACKGROUND AND QUALIFICATIONS
OF
MOHAMMAD M. OTHMAN

Mohammad M. Othman received a Bachelor of Science degree in Electrical Engineering from Virginia Commonwealth University in 2008. Mr. Othman's responsibilities include the evaluation of the substation project requirements, development of scope documents and schedules, preparation of estimates and proposals, preparation of specifications and bid documents, material procurement, design substation physical layout, development of detailed physical drawings, bill of materials, electrical schematics and wiring diagrams. Mr. Othman joined the Dominion Energy Virginia Substation Engineering department in 2010 as an Engineer II and was later promoted to Engineer III, the title he currently holds.

Mr. Othman has previously submitted pre-filed testimony to the State Corporation Commission of Virginia.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Chuck H. Weil
Title: Electric Transmission Local Permitting Consultant
Summary:

Company Witness Chuck H. Weil will sponsor those portions of the Appendix providing an overview of the design of the route for the proposed Project, and related permitting, as follows:

- Section II.A.12: This section identifies the counties and localities through which the proposed project will pass and provides General Highway Maps for these localities.
- Sections V.B-D: These sections provide information related to public notice of the proposed project.

Additionally, Mr. Weil co-sponsors the following section of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Kunal S. Amare, Chloe A. Genova, Mohammad M. Othman, and Matt L. Teichert): This section details the primary justifications for the proposed project.
- Section II.A.1 (co-sponsored with Company Witness Matt L. Teichert): This section provides the length of the proposed corridor and viable alternatives to the proposed project.
- Section II.A.2 (co-sponsored with Company Witness Matt L. Teichert): This section provides a map showing the route of the proposed project in relation to notable points close to the proposed project.
- Section II.A.4 (co-sponsored with Company Witness Matt L. Teichert): This section explains why the existing right-of-way is not adequate to serve the need.
- Sections II.A.6 to II.A.8 (co-sponsored with Company Witness Matt L. Teichert): These sections provide detail regarding the right-of-way for the proposed project.
- Section II.A.9 (co-sponsored with Company Witness Matt L. Teichert): This section describes the proposed route selection procedures and details alternative routes considered.
- Section II.A.11 (co-sponsored with Company Witness Matt L. Teichert): This section details how the construction of the proposed project follows the provisions discussed in Attachment 1 of the Transmission Appendix Guidelines.
- Sections II.B.3 to II.B.5 (co-sponsored with Company Witness Chloe A. Genova): These sections, when applicable, provide supporting structure details along the proposed and alternative routes.
- Section II.B.6 (co-sponsored with Company Witnesses Chloe A. Genova and Matt L. Teichert): This section provides photographs of existing facilities, representations of proposed facilities, and visual simulations.
- Section III (co-sponsored with Company Witness Matt L. Teichert): This section details the impact of the proposed project on scenic, environmental, and historic features.
- Section V.A (co-sponsored with Company Witnesses Chloe A. Genova and Matt L. Teichert): This section provides the proposed route description and structure heights for notice purposes.

Finally, Mr. Weil co-sponsors the DEQ Supplement filed with the Application with Company Witness Matt L. Teichert. A statement of Mr. Weil' background and qualifications is attached to her testimony as Appendix A.

DIRECT TESTIMONY
OF
CHUCK H. WEIL
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2023-00088

Q. Please state your name, position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), and business address.

A. My name is Chuck H. Weil, and I am an Electric Transmission Local Permitting Consultant for the Company. My business address is 5000 Dominion Boulevard, Glen Allen, Virginia 23060. A statement of my qualifications and background is provided as Appendix A.

Q. Please describe your areas of responsibility with the Company.

A. I am responsible for identifying appropriate routes for transmission lines and obtaining necessary federal, state, and local approvals and environmental permits for those facilities. In this position, I work closely with government officials, permitting agencies, property owners, and other interested parties, as well as with other Company personnel, to develop facilities needed by the public so as to reasonably minimize environmental and other impacts on the public in a reliable, cost-effective manner.

Q. What is the purpose of your testimony in this proceeding?

A. 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, the Company 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") 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. 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") located adjacent to Occoneechee State Park south of Highway 58 near 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 purpose of my testimony is to provide an overview of the route and permitting for the proposed Project. I sponsor Sections II.A.12 and V.B to V.D of the Appendix. Additionally, I co-sponsor the Executive Summary and Section I.A with Company Witnesses Kunal S. Amare, Chloe A. Genova, Mohammad M. Othman, and Matt L. Teichert; Sections II.A.1, II.A.2, II.A.4, II.A.6 to II.A.9, II.A.11, and III with Company Witness Matt L. Teichert; Sections II.B.3 to II.B.5 with Company Witness Chloe A. Genova; and Section II.B.6 and V.A with Company Witnesses Chloe A. Genova and Matt L. Teichert. Finally, I co-sponsor the DEQ Supplement with Company Witness Matt L. Teichert.

Q. Has the Company complied with Va. Code § 15.2-2202 E?

A. Yes. In accordance with Va. Code § 15.2-2202 E, a letter dated April 20, 2023, was sent to H. Wayne Carter, III, County Administrator in Mecklenburg County, where the Project is located. The letter stated the Company's intention to file this Application and invited the County to consult with the Company about the proposed Project. A copy of this letter is included as Attachment V.D.1 to the Appendix.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS
OF
CHUCK H. WEIL

Mr. Chuck H. Weil graduated from Virginia Tech in 2012 with a Bachelor of Science in Civil and Environmental Engineering. He has a professional license in Civil Engineering. He was previously a transportation engineer with various consulting firms and the City of Suffolk, Virginia before joining Dominion Energy Virginia as an Engineer II in the Siting and Permitting Group in 2019.

Mr. Weil has previously submitted pre-filed testimony to the Virginia State Corporation Commission.

WITNESS REBUTTAL TESTIMONY SUMMARY

Witness: Matt L. Teichert

Title: Principal Consultant, Environmental Resource Management

Summary:

Company Witness Matt L. Teichert sponsors the Environmental Routing Study provided as part of the Company's Application.

Additionally, Mr. Teichert co-sponsors the following portion of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Kunal S. Amare, Chloe A. Genova, and Mohammad M. Othman, and Chuck H. Weil): This section details the primary justifications for the proposed project.
- Section II.A.1 (co-sponsored with Company Witness Chuck H. Weil): This section provides the length of the proposed corridor and viable alternatives to the proposed project.
- Section II.A.2 (co-sponsored with Company Witness Chuck H. Weil): This section provides a map showing the route of the proposed project in relation to notable points close to the proposed project.
- Section II.A.4 (co-sponsored with Company Witness Chuck H. Weil): This section explains why the existing right-of-way is not adequate to serve the need.
- Sections II.A.6 to II.A.8 (co-sponsored with Company Witness Chuck H. Weil): These sections provide detail regarding the right-of-way for the proposed project.
- Section II.A.9 (co-sponsored with Company Witness Chuck H. Weil): This section describes the proposed route selection procedures and details alternative routes considered.
- Section II.A.11 (co-sponsored with Company Witness Chuck H. Weil): This section details how the construction of the proposed project follows the provisions discussed in Attachment 1 of the Transmission Appendix Guidelines.
- Section II.B.6 (co-sponsored with Company Witnesses Chloe A. Genova and Chuck H. Weil): This section provides photographs of existing facilities, representations of proposed facilities, and visual simulations.
- Section III (co-sponsored with Company Witness Chuck H. Weil): This section details the impact of the proposed project on scenic, environmental, and historic features.
- Section V.A (co-sponsored with Company Witnesses Chloe A. Genova and Chuck H. Weil): This section provides the proposed route description and structure heights for notice purposes.

Finally, Mr. Teichert co-sponsors the DEQ Supplement filed with this Application with Company Witness Chuck H. Weil.

A statement of Mr. Teichert's background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
MATT L. TEICHERT
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2023-00088

Q. Please state your name, position and place of employment and business address.

A. My name is Matt L. Teichert. I am employed as a Principal Consultant with Environmental Resource Management ("ERM"). My business address is 222 South 9th Street, Suite 2900, Minneapolis, Minnesota 55402. A statement of my qualifications and background is provided as Appendix A.

Q. What professional experience does ERM have with the routing of linear energy transportation facilities?

A. ERM has extensive experience in the routing, feasibility assessments, and permitting of energy infrastructure projects. It has assisted its clients in the identification, evaluation and development of linear energy facilities for the past 30 years. During this time, it has developed a consistent approach for linear facility routing and route selection based on the identification, mapping and comparative evaluation of routing constraints and opportunities within defined study areas. ERM uses data-intensive Geographic Information System spatial and dimensional analysis and the most current and refined data layers and aerial photography resources available for the identification, evaluation and selection of transmission line routes.

In addition to Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), its clients include some of the largest energy companies in the United

States, Canada, and the world, including ExxonMobil, TC Energy, Shell, NextEra Energy, Phillips 66, Kinder Morgan, British Petroleum, Enbridge Energy, and others. ERM also routinely assists the staff of the Federal Energy Regulatory Commission, United States Army Corps of Engineers, and the U.S. Forest Service in the identification and/or evaluation of linear energy routes to support federal National Environmental Policy Act evaluations. ERM works on both small and large energy projects and has assisted in or conducted the routing and route evaluation of some of the largest electric transmission line and pipeline facilities in North America.

In Virginia, ERM served as routing consultant to Dominion Energy Virginia for many projects over the last 15 years, including:

- Cannon Branch-Cloverhill 230 kV transmission line project in the City of Manassas and Prince William County (Case No. PUE-2011-00011);
- Dahlgren 230 kV double circuit transmission line project in King George County (Case No. PUE-2011-00113);
- Surry-Skiffes Creek-Whealton 500 and 230 kV transmission lines (Case No. PUE-2012-00029);
- Remington CT-Warrenton 230 kV double circuit transmission line (Case No. PUE-2014-00025);
- Haymarket 230 kV Line and Substation Project (Case No. PUE-2015-00107);
- Remington-Gordonsville Electric Transmission Project (Case No. PUE-2015-00117);
- Norris Bridge (Case No. PUE-2016-00021);
- Idylwood-Tysons 230 kV single circuit underground transmission line, Tysons Substation rebuild, and related transmission facilities (Case No. PUR-2017-00143);
- Lockridge 230 kV Line Loop and Substation (Case No. PUR-2019-00215);

- Coastal Virginia Offshore Wind Commercial Project (Case No. PUR-2021-00142);
- DTC 230 kV Line Loop and DTC Substation (Case No. PUR-2021-00280);
- Aviator 230 kV Line Loop and Substation (Case. No. PUR-2022-00012);
- Nimbus Substation and 230 Farmwell-Nimbus Transmission Line (Case No. PUR-2022-00027); and
- 500-230 kV Wishing Star Substation, 500 kV and 230 kV Mars-Wishing Star Lines, 500-230 kV Mars Substation, and Mars 230 kV Loop (Case No. PUR-2022-00183).

Most recently, ERM served as the routing consultant for the Company's 500-230 kV Unity Switching Station, 230 kV Tunstall-Unity Lines #2259 and #2262, 230-36.5 kV Tunstall, Evans Creek, Raines Substations, and 230 kV Substation Interconnect Lines, in Case No. PUR-2022-00167; Butler Farm to Clover 230 kV Line and Butler Farm to Finneywood 230 kV Line, in Case No. PUR-2022-00175; and 230 kV Altair Loop and Altair Switching Station, in Case No. PUR-2022-00197.

ERM's role as routing consultant for each of these transmission line projects included preparation of an Environmental Routing Study for the project and submission of testimony sponsoring it.

Q. What were you asked to do in connection with this case?

A. 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, the Company 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") 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. 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") located adjacent to Occoneechee State Park south of Highway 58 near 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."

ERM was engaged on behalf of the Company to assist it in the identification and evaluation of route alternatives to resolve the identified electrical need that would meet the applicable criteria of Virginia law and the Company's operating needs.

The purpose of my testimony is to introduce and sponsor the Environmental Routing Study, which is included as part of the Application filed by the Company in this proceeding. Additionally, I co-sponsor the Executive Summary and Section I.A with Company Witnesses Kunal s. Amare, Chloe A. Genova, Mohammad M. Othman, and Chuck H. Weil; Sections II.A.1, II.A.2, II.A.4, II.A.6 to II.A.9, II.A.11, and III with Company Witness Chuck H. Weil; and Sections II.B.6 and V.A with Company Witnesses

Chloe A. Genova and Chuck H. Weil. Lastly, I co-sponsor the DEQ Supplement with Company Witness Chuck H. Weil.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

BACKGROUND AND QUALIFICATIONS OF MATT L. TEICHERT

Matt L. Teichert earned a Bachelor of Arts degree from University of Minnesota-Duluth. He has approximately 15 years of experience working in the energy-related consulting field, specializing in the siting and regulatory permitting of major linear energy facilities, including both interstate and intrastate electric transmission lines and gas and oil pipelines throughout the United States. During this time, he was employed for 3 years with Natural Resource Group and 13 years with ERM, a privately-owned consulting company specializing in the siting, licensing and environmental construction compliance of large, multi-state energy transportation facilities.

Mr. Teichert's professional experience related to electric transmission line projects includes the direct management of field studies, impact assessments, and agency consultations associated with the routing and licensing of multiple transmission line projects in the mid-Atlantic region, including the management and/or supervision of the routing and permitting. Work on these projects included studies to identify and delineate routing constraints and options; identification and evaluation of route alternatives; and the direction of field studies to inventory wetlands, stream crossings, cultural resources, and sensitive habitats and land uses. Within the last several years he has managed the identification and evaluation of over 75 miles of 230 kV and 500 kV transmission line route alternatives in the Commonwealth for Virginia Electric and Power Company.

Mr. Teichert has previously submitted pre-filed testimony to the State Corporation Commission of Virginia.