

January 28, 2026

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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 West Creek Loop and Substation

Case No. PUR-2026-00009

Dear Mr. Logan:

Please find enclosed for electronic filing in the above-captioned proceeding the application for approval of electric transmission facilities on behalf of Virginia Electric and Power Company (the “Company”). This filing contains the Application, Appendix, Direct Testimony, DEQ Supplement, and Environmental 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 Goochland 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 email to the Commission’s Division of Public Utility Regulation on January 26, 2026.

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

Highest regards,



Vishwa B. Link

Enclosures

cc: William H. Chambliss, Esq.
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Mr. Neil Joshipura (without enclosures)

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**Dominion
Energy®**

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

**Before the State Corporation
Commission of Virginia**

**230 kV West Creek Loop and
Substation**

Application No. 356

Case No. PUR-2026-00009

Filed: January 28, 2026

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 West Creek Loop and Substation

Application No. 356

Case No. PUR-2026-00009

Filed: January 28, 2026

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
VIRGINIA ELECTRIC AND POWER COMPANY	)	Case No. PUR-2026-00009
	)	
For approval and certification of electric transmission	)	
facilities: 230 kV West Creek Loop and Substation	)	

**APPLICATION OF VIRGINIA ELECTRIC AND POWER COMPANY
FOR APPROVAL AND CERTIFICATION OF ELECTRIC
TRANSMISSION FACILITIES: 230 KV WEST CREEK
LOOP AND SUBSTATION**

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 requested by a retail electric service customer located in Goochland County (“Eli Lilly” or the “Customer”), to maintain reliable service for overall 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 Goochland County, Virginia, to:

- Construct one new 230 kilovolt (“kV”) double circuit overhead transmission line (for a total of two circuits) extending approximately 6.5 miles on new primarily 100-foot-wide right-of-way¹ by cutting the existing 230 kV Line #2009 (Midlothian to Short Pump) and extending a new 230 kV double circuit loop in and out of West Creek Substation (the “West Creek 230 kV Loop”), resulting in new Line #2009 (Midlothian to West Creek) and Line #2510 (West Creek to Short Pump) (the “West Creek Lines”). The West Creek Lines will be constructed primarily with double circuit weathering steel monopoles utilizing three-phase twin-bundled 768.2 Aluminum Conductor Steel Supported/Trapezoidal Wire/High Strength (“ACSS/TW/HS”) type conductor with a summer transfer capability of 1,573 MVA.²

¹ For the Proposed Route of the West Creek 230 kV Loop as defined herein, the Company is seeking approval to voluntarily acquire an additional 60 feet of right-of-way in order to accommodate future load growth in the area discussed in Section I.A of this Appendix. *See, e.g., Application of Virginia Electric and Power Co. For approval and certification of electric transmission facilities: Carmel Church and Ruther Glen 230 kV Transmission Line Projects*, Case No. PUR-2024-00221, Final Order at 10 (Sept. 26, 2025) (finding that “while Dominion is not prohibited from voluntarily obtaining additional right-of-way along the approved route, the Company cannot condemn more than the 100-foot right-of-way needed for the Ruther Glen Loop.”).

² Apparent power, measured in megavolt amperes (“MVA”), is made up of real power (megawatt or “MW”) and reactive power (megavolt ampere reactive or “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 retail customer projected load, reflecting representative pf, and

- Construct a new 230 kV substation in Goochland County, Virginia designed to accommodate an immediate four (4) 230 kV breaker ring-bus configuration, expandable to an ultimate of six (6) 230 kV breakers for potential future needs, on land provided by the Customer (“West Creek Substation”).

Collectively, the West Creek Lines and West Creek Substation, and related work are referred to as the “230 kV West Creek Loop and Substation” or the “Project.”

4. The Project as proposed is needed to ensure that Dominion Energy Virginia can adequately and reliably serve the Customer’s new manufacturing facilities in Goochland County, Virginia, and to maintain reliable service for the overall load growth in the Goochland Load Area, in compliance with mandatory NERC Reliability Standards. Specifically, the Company is proposing the Project to serve the projected load identified in the delivery point request of approximately 37 MW for a new manufacturing facility and new warehouses in Goochland County, Virginia, as well as to support future load growth in Goochland Load Area.

5. Additionally, the Company anticipates that load growth due to several large projects in the surrounding area will necessitate a new substation to relieve load out of the Rockville, North Pole, Short Pump, and River Road Substations in Goochland County and Henrico County by 2029. The Company’s Distribution Planning group submitted a DP request to the Transmission Planning group for construction of a new substation (i.e., the West Creek Substation) with 230 kV service requested to serve significant residential and commercial load growth in the West Creek Load Area, as well as future identified load growth in Goochland County and Henrico County, Virginia. Distribution planning will move a forecasted 16.4 MVA from River Road Transformer 3/Circuit 373, 11.4 MVA from River Road Transformer 3/Circuit 376, 10.1 MVA

the equipment ratings to handle the apparent power, which includes the real and reactive load components.

from Rockville Transformer 2/Circuit 416, 16 MVA from North Pole Transformer 1/Circuit 492, and 16.2 MVA from Short Pump Transformer 3/Circuit 381 to the new West Creek Substation to relieve load in this area. Accordingly, load driven by the Customer and general load growth will require construction of the proposed Project—specifically, construction of the West Creek Substation and a new double circuit 230 kV transmission line.

6. The Company identified an approximately 6.5-mile overhead proposed route for the West Creek Lines (the “Proposed Route”), an approximately 5.9-mile overhead alternative route (“Alternative Route 2”) and an approximately 6.0-mile overhead alternative route (“Alternative Route 5”), all of which the Company is proposing for Commission consideration and notice. Discussion of the Proposed Route 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 the Environmental Routing Study included with the Application.

7. The Company selected Route 3 as the Proposed Route because it balances a variety of impacts along with keeping portions of the route further from residential areas in Goochland County. While the Proposed Route is longer than both Alternative Routes 2 and 5, it would cross the second fewest total wetlands acres of the three routes, and the second fewest impacts to forested wetlands. It also has the second fewest waterbodies crossed and has the most collocation of any of the solutions.

8. The proposed West Creek Substation will be constructed with four 230 kV breakers with an AIS 230 kV ring bus with four 4000A circuit breakers utilizing two 230 kV line terminals. The West Creek Substation will be designed to accommodate future expansion, ultimately supporting a 230 kV circuit ring bus with a six-circuit breaker configuration and four 230 kV line terminals. The total area required to build the West Creek Substation is approximately 5.1 acres.

9. The desired in-service target date for the proposed Project is July 26, 2028. The Company estimates it will take approximately 24 months for detailed engineering, 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 July 1, 2026. Should the Commission issue a final order by July 1, 2026, to accommodate long-lead materials procurement, the Company estimates that construction should begin around July 2027, and be completed by July 26, 2028. 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. 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 to labor shortages or materials/supply issues. This schedule also is contingent upon the Company's ability to negotiate easements with property owners along the approved route without the need for additional litigation.

10. In addition, the Company is actively monitoring regulatory changes and requirements associated with the NLEB and how they could potentially impact construction timing associated with TOYRs. The USFWS issued the final guidance, replacing the interim guidance, on October 23, 2024, and the final guidance was fully implemented November 30, 2024. The Company is reviewing the final guidance to the extent it applies to the Company's projects and will coordinate with USFWS during the permitting stage.

11. The Company is also monitoring potential regulatory changes associated with the potential up-listing of the TCB. On September 14, 2022, the U.S. Fish and Wildlife Service

(“USFWS”) published the proposed rule to the Federal Register to list the TCB as endangered under the Endangered Species Act. USFWS extended its Final Rule issuance target from September 2023 to September 2024, but as of the date of this filing, the TCB listing decision has not been issued. The Company is actively tracking this ruling and evaluating the effects of potential outcomes on Company projects’ permitting, construction, and in-service dates, including electric transmission projects.

12. The review also accounted for regulatory changes and requirements associated with the monarch butterfly (*Danaus plexippus*) and the proposed USFWS listing of this species as federally threatened. The Company is anticipating the monarch butterfly will be listed; therefore, it assumes any regulatory changes associated with the potential listing of the monarch butterfly will affect this Project. On December 12, 2024, the monarch butterfly was proposed to be listed as threatened by the USFWS, and the 90-day public comment period was extended and closed on May 19, 2025. The Company is actively tracking this ruling and evaluating the effects of potential outcomes on the permitting, construction, and in-service dates of the Company projects, including electric transmission projects.

13. Any adjustments to this Project schedule resulting from these or similar challenges could necessitate a minimum of a six- to twelve-month delay in the targeted in-service date. Accordingly, for purposes of judicial economy, the Company requests that the Commission issue a final order approving both a desired in-service target date (*i.e.*, July 26, 2028) and an authorization sunset date (*i.e.*, July 26, 2029) for energization of the Project.³

³ The Company notes that this request is consistent with the Commission’s findings in other recent proceedings. See *Application of Virginia Electric and Power Company for approval of electric transmission facilities: Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005*, Case No. PUR-2024-00105, Final Order (Feb. 28, 2025), approving an in-service date of January 1, 2027, and a CPCN sunset date of January 1, 2028, for energization of that project in Ordering Paragraph (8); *Application of Virginia Electric and Power Company for approval of electric transmission facilities: 500-230 kV Aspen Substation, 500 kV Aspen-Goose Creek Line #5002, 500 kV and 230 kV Aspen-Golden Lines #5001 and #2333, 500-230 kV Golden Substation, and Lines #2081/#2150*

14. The total estimated conceptual cost of the Project utilizing the Proposed Route is approximately \$97.5 million, which includes approximately \$87.0 million for transmission-related work and approximately \$10.5 million for substation-related work (2025 dollars).

15. 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.

16. 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.

17. 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.

18. 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 Jason S. Whitlow, Jeff L. Miller, Lucas J. Craft, Mohammad M. Othman,

Loop, Case No. PUR-2024-00032, Final Order (Feb. 6, 2025), approving an in-service date of June 1, 2028, and a CPCN sunset date of June 1, 2029, for energization of that project in Ordering Paragraph (8); and *Application of Virginia Electric and Power Company for approval of electric transmission facilities: 230 kV Apollo-Twin Creeks Lines, and Twin Creeks, Sycolin Creek, Starlight, Lunar, and Apollo Substations*, Case No. PUR-2024-00044, Final Order (Feb. 5, 2025), approving an in service date of September 30, 2028, and a CPCN sunset date of September 30, 2029, for energization of that project in Ordering Paragraph (8); *Application of Virginia Electric and Power Company for approval and certification of electric transmission facilities: Hornbaker 230 kV Line Loop and Hornbaker Switching Station*, PUR-2025-00046, Final Order (Dec. 11, 2025), approving an in-service date of June 1, 2029 and a CPCN sunset date of June 1, 2030, for energization of that project in Ordering Paragraph (8).

Hannah Hurst, and Andrea Thornton filed with this Application.

19. Finally, Dominion Energy Virginia requests that, to the extent the Commission modifies the deadline for responses to interrogatories and requests for production of documents in 5 VAC 5-20-260, the Commission grant the parties seven calendar days in order to afford the Company adequate time to provide comprehensive responses to discovery.

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
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January 28, 2026

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 West Creek Loop and Substation

Application No. 356

Appendix

Containing Information in Response to
“Guidelines for Transmission Line Applications Filed Under title 56 of the Code of Virginia”

Case No. PUR-2026-00009

Filed: January 28, 2026

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EXECUTIVE SUMMARY

In order to provide service requested by a retail electric service customer located in Goochland County (“Eli Lilly” or the “Customer”), to maintain reliable service for overall 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 Goochland County, Virginia, to:

- (i) Construct one new 230 kilovolt (“kV”) double circuit overhead transmission line (for a total of two circuits) extending approximately 6.5 miles on new primarily 100-foot-wide right-of-way¹ by cutting the existing 230 kV Line #2009 (Midlothian to Short Pump) and extending a new 230 kV double circuit loop in and out of West Creek Substation (the “West Creek 230 kV Loop”), resulting in new Line #2009 (Midlothian to West Creek) and Line #2510 (West Creek to Short Pump). The West Creek Lines will be constructed primarily with double circuit weathering steel monopoles utilizing three-phase twin-bundled 768.2 Aluminum Conductor Steel Supported/Trapezoidal Wire/High Strength (“ACSS/TW/HS”) type conductor with a summer transfer capability of 1,573 MVA.²
- (ii) Construct a new 230 kV substation in Goochland County, Virginia designed to accommodate an immediate four (4) 230 kV breaker ring-bus configuration, expandable to an ultimate of six (6) 230 kV breakers for potential future needs, on land provided by the Customer (“West Creek Substation”).

Collectively, the West Creek Lines and West Creek Substation, and related work are referred to as the “230 kV West Creek Loop and Substation” or the “Project.”

The Project is necessary to (i) ensure that Dominion Energy Virginia can adequately and reliably serve the Customer’s new manufacturing facilities in Goochland County, Virginia; (ii) reliably serve significant projected residential and commercial load growth identified in Goochland County, Virginia; (iii) maintain and ensure reliable electric service in Goochland County consistent with NERC Reliability Standards for the overall growth in the load area, which for purposes of this Application, is defined generally as the “Goochland Load Area,” thereby supporting economic growth in Goochland County and Virginia; and (iv) comply with mandatory NERC Reliability Standards. As discussed in Section I.C, the Company’s primary

¹ For the Proposed Route of the West Creek 230 kV Loop as defined herein, the Company is seeking approval to voluntarily acquire an additional 60 feet of right-of-way in order to accommodate future load growth in the area discussed in Section I.A of this Appendix. See, e.g., Application of Virginia Electric and Power Co. For approval and certification of electric transmission facilities: Carmel Church and Ruther Glen 230 kV Transmission Line Projects, Case No. PUR-2024-00221, Final Order at 10 (Sept. 26, 2025) (finding that “while Dominion is not prohibited from voluntarily obtaining additional right-of-way along the approved route, the Company cannot condemn more than the 100-foot right-of-way needed for the Ruther Glen Loop.”).

² Apparent power, measured in megavolt amperes (“MVA”), is made up of real power (megawatt or “MW”) and reactive power (megavolt ampere reactive or “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 retail customer projected load, reflecting representative pf, and the equipment ratings to handle the apparent power, which includes the real and reactive load components.

sources of distribution power in the Goochland Load Area—including the existing Rockville and North Pole Substations—cannot serve the identified projected load due to practical considerations, geographic constraints, and/or the lack of adequate reliability and power quality to serve the area. Accordingly, the Company is proposing the Project to serve the Customer load identified in the delivery point (“DP”) request and projected residential and commercial load beginning in 2028.

The Company identified an approximately 6.5 mile overhead proposed route for the West Creek Lines (the “Proposed Route”), an approximately 5.9-mile overhead alternative route (“Alternative Route 2”) and an approximately 6.0-mile overhead alternative route (“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, underground, or overhead/underground hybrid routes that the Company studied but ultimately rejected, is provided in Section II of the Appendix and discussed in more detail in the Routing Study included with the Application.

In accordance with the Company’s Facility Interconnection Requirements (“FIR”) document and to reliably serve identified projected load growth in the Goochland Load Area, the proposed West Creek Substation initially will be constructed with an air insulated substation (“AIS”) 230 kV ring bus with four(4) 4000 amp (“A”) circuit breakers, four (4) 230 kV line terminals, and other associated equipment, including a control enclosure to accommodate the protective relay, communications, and security cabinets. The total area of the proposed West Creek Substation within the substation fence is approximately 5.1 acres.

The total estimated conceptual cost of the Project utilizing the Proposed Route is approximately \$97.5 million, which includes approximately \$87.0 million for transmission-related work and approximately \$10.5 million for substation-related work (2025 dollars).

The desired in-service target date for the proposed Project is July 26, 2028. The Company estimates it will take approximately 24 months for detailed engineering, 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 July 1, 2026. Should the Commission issue a final order by July 1, 2026, to accommodate long-lead materials procurement, the Company estimates that construction should begin around July 2027 and be completed by July 26, 2028. 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. 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 to labor shortages or materials/supply issues. This schedule is also contingent upon the Company’s ability to negotiate easements with property owners along the approved route and to obtain property rights for substation use without the need for additional litigation.

In addition, the Company is actively monitoring regulatory changes and requirements associated with the Northern long-eared bat (“NLEB”) and how they could potentially impact construction

timing associated with time of year restrictions (“TOYRs”). The U.S. Fish and Wildlife Service (“USFWS”) issued the final guidance, replacing the interim guidance, on October 23, 2024, and the final guidance was fully implemented November 30, 2024. The Company is reviewing the final guidance to the extent it applies to the Company’s projects and will coordinate with USFWS during the permitting stage.

The Company is also monitoring potential regulatory changes associated with the potential up-listing of the Tricolored bat (“TCB”). On September 14, 2022, the USFWS published the proposed rule to the Federal Register to list the TCB as endangered under the Endangered Species Act. USFWS extended its Final Rule issuance target from September 2023 to September 2024, but as of the date of this filing, the TCB listing decision has not been issued. The Company is actively tracking this ruling and evaluating the effects of potential outcomes on Company projects’ permitting, construction, and in-service dates, including electric transmission projects.

The review also accounted for regulatory changes and requirements associated with the monarch butterfly (*Danaus plexippus*) and the proposed USFWS listing of this species as federally threatened. The Company is anticipating the monarch butterfly will be listed; therefore, it assumes any regulatory changes associated with the potential listing of the monarch butterfly will affect this Project. On December 12, 2024, the monarch butterfly was proposed to be listed as threatened by the USFWS, and the 90-day public comment period was extended and closed on May 19, 2025. The Company is actively tracking this ruling and evaluating the effects of potential outcomes on the permitting, construction, and in-service dates of the Company projects, including electric transmission projects.

Any adjustments to this Project schedule resulting from these or similar challenges could necessitate a minimum of a six- to twelve-month delay of the targeted in-service date. Accordingly, for purposes of judicial economy, the Company requests that the Commission issue a final order approving both a desired in-service target date (i.e., July 26, 2028) and an authorization sunset date (i.e., July 26, 2029) for energization of the Project.

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 (i) ensure that Dominion Energy Virginia can adequately and reliably serve the Customer's new manufacturing facilities in Goochland County, Virginia; (ii) reliably serve significant projected residential and commercial load growth identified in Goochland County and Henrico County, Virginia; (iii) maintain and ensure reliable electric service in Goochland County consistent with NERC Reliability Standards for the overall growth in the load area. See Attachment I.A.1 for an overview map of the proposed Project along the Proposed Route, the Company's existing electric transmission facilities located in the vicinity of the Project, the Project study area for the West Creek Lines, the Goochland County Technology Overlay District ("TOD") and a general boundary of the Goochland Load Area.

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, Old Dominion Electric Cooperative, 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 "DOM Zone"). The Company needs to be able to maintain the overall, long-term reliability of its transmission system to meet its customers' evolving power needs in the future.

Dominion Energy Virginia is part of the PJM Interconnection, LLC ("PJM") regional transmission organization ("RTO"), which provides service to a large portion of the eastern United States. PJM is currently 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 165,563 MW for summer peak demand, of which Dominion Energy Virginia's load portion was approximately 19,256 MW. On June 24, 2025, the DOM Zone set a record high of 23,826 MW for summer peak demand. On January 23, 2025, the DOM Zone set a winter and all-time record demand of 24,678 MW. Based on the 2026 PJM Load Forecast, the DOM Zone is expected to grow with average growth rates of 5.4% summer and 5.1% winter over the next 10 years compared to the PJM

average of 3.6% and 4.0% over the same period for the summer and winter, respectively.³

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.

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. 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. 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,

³ A copy of the 2026 PJM Load Forecast is available at the following: <https://www.pjm.com/-/media/DotCom/library/reports-notice/load-forecast/2026-load-report.pdf>. See, in particular, page 9 (PJM) and 34 (DOM Zone).

Reliability First, 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 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.

As discussed in more detail below, the Project is needed to address significant projected residential and commercial load growth identified by the Company's Distribution Planning group in Goochland County, Virginia, as well as support future identified load growth in the Goochland County Load Area by constructing the West Creek Lines as two new 230 kV double circuit overhead transmission lines.

NEED FOR THE PROJECT

The Project is needed to (i) ensure that Dominion Energy Virginia can adequately and reliably serve the Customer's new manufacturing facilities in Goochland County, Virginia; (ii) reliably serve significant projected residential and commercial load growth identified in Goochland County and Henrico County, Virginia; (iii) maintain and ensure reliable electric service in Goochland and Henrico Counties consistent with NERC Reliability Standards for the overall growth in the load area.

Need to Serve New Customer Load

On September 16, 2025, Eli Lilly and Company announced its plans to construct a \$5 billion state-of-the-art manufacturing facility at the West Creek Business Park in Goochland County. Eli Lilly and Company anticipates that the facility will generate 650 high-wage jobs and 1,800 construction jobs. The new site will be the company's first dedicated, fully integrated active pharmaceutical ingredient and drug product plant for its emerging bioconjugate platform and monoclonal antibody portfolio. The project at West Creek represents one of these four projects for which new sites are being selected. An additional 37 MVA is needed to serve the Customer's new facility and new warehouses in Goochland County, Virginia.

Additionally, the Company anticipates that load growth due to several large projects in the surrounding area will necessitate a substation solution to relieve load out of the Rockville, North Pole, Short Pump, and River Road substations in Goochland County and Henrico County by 2029. For example, a large mixed-use development, two distribution centers, and multiple shell warehouses are

actively planned for the area. Economic development requests for information (“RFIs”) have been submitted to the Company for this area as well, with one RFI asking for 10 MW on an expedited timeline. Additionally, on November 6, 2025, the Goochland County Board of Supervisors approved both a Technology Overlay District and a Technology Zone in the area.⁴

Accordingly, the proposed Project—specifically, the West Creek Substation and the proposed double circuit—West Creek Lines—is required to serve this need with the projected ramp beginning in 2029. See Section I.C for discussion of the existing area infrastructure and why it is incapable of serving this need. See Section I.J for a discussion of the PJM process as it relates to this Project.

Need to Serve Additional Load Growth

In addition to the need for capacity as described above, there is a general need to serve load growth due to additional large projects and growing demand in the vicinity of the Rockville, North Pole, River Road and Short Pump Substations. The Company’s Distribution Planning group submitted a DP request to the Transmission Planning group for construction of a new substation (i.e., the West Creek Substation) with 230 kV service requested to serve significant residential and commercial load growth in the West Creek Load Area, as well as future identified load growth in Goochland County and Henrico County, Virginia. Distribution planning will move a forecasted 16.4 MVA from River Road Transformer 3/Circuit 373, 11.4 MVA from River Road Transformer 3/Circuit 376, 10.1 MVA from Rockville Transformer 2/Circuit 416, 16 MVA from North Pole Transformer 1/Circuit 492, and 16.2 MVA from Short Pump Transformer 3/Circuit 381 to the new West Creek substation to relieve load in this area.

Load driven by the Customer and general load growth will require construction of the proposed Project—specifically, construction of the West Creek Substation and a new double circuit 230 kV transmission line.

Area Transmission System

The Company’s existing area transmission system is incapable of serving the Customer’s projected load without the proposed Project. The Company’s primary sources of distribution power in the Goochland Load Area—including the existing Rockville and North Pole Substations—cannot serve the identified projected load due to practical considerations, geographic constraints, and/or the lack of adequate reliability and power quality. See Section I.C. Accordingly, the Company is proposing the Project, with the West Creek Lines constructed as a new 230 kV double circuit overhead transmission line, to serve approximately 70 MW of projected residential and commercial load by 2029. The proposed Project is the most robust solution to maintain and ensure reliable service for the

⁴ <https://www.goochlandva.us/1408/Technology-Overlay-District-Technology-Z>

Customer and overall load growth in the area, as well as prevent the existing system transformers from overloading consistent with reliability criteria.

Attachment I.A.2 provides the existing one-line diagram of the area transmission system in the Goochland Load Area as of November 2025. Attachment I.A.3 provides a one-line diagram of the transmission system in the Goochland Load Area after the proposed Project is energized on July 26, 2028, which includes all baseline and supplemental projects in the Project area that have been submitted to PJM as of October 2025.

THE PROPOSED PROJECT

West Creek Lines

The Company proposes to construct a new 230 kV double circuit overhead transmission line extending approximately 6.5 miles from the Company's existing Line #2009 to the proposed new West Creek Substation in Goochland County, Virginia, resulting in new Line #2009 (Midlothian to West Creek) and Line #2510 (West Creek to Short Pump).

The West Creek Lines will be constructed on new primarily 100-foot-wide right-of-way.⁵ The West Creek Lines will be constructed primarily with double circuit weathering steel monopoles utilizing three-phase twin-bundled 768.2 ACSS/TW/HS type conductor with a summer transfer capability of 1,573 MVA. The proposed West Creek Lines will be constructed to source the new proposed West Creek Substation, as there is no existing transmission infrastructure source that can reliably feed the proposed substation.

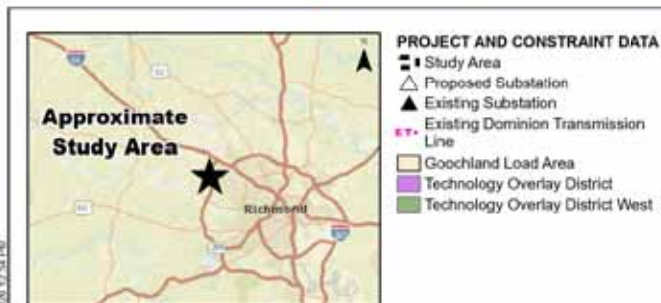
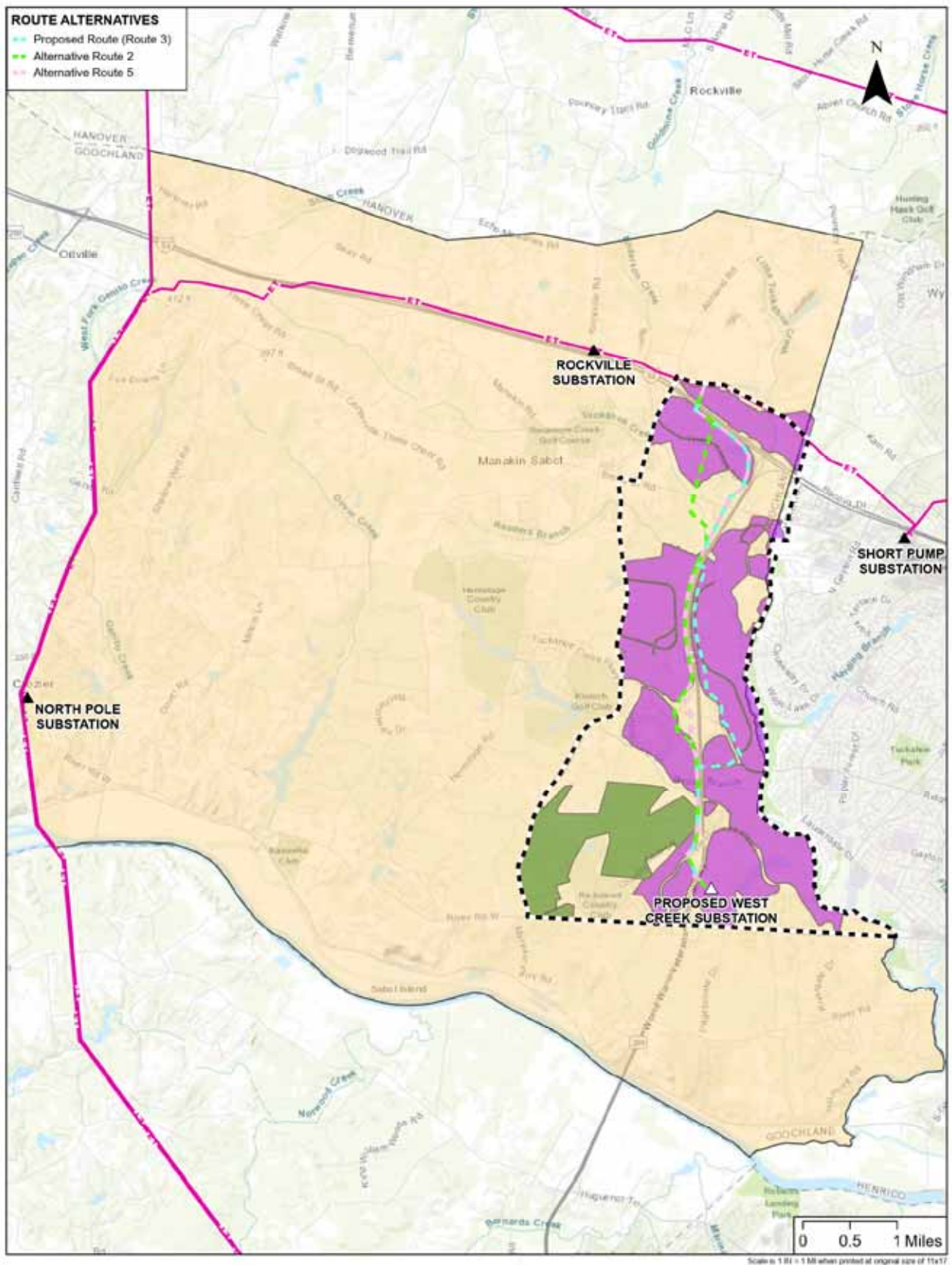
The Company identified an approximately 6.5 mile overhead proposed route for the West Creek Lines (the "Proposed Route"), an approximately 5.9-mile overhead alternative route ("Alternative Route 2") and an approximately 6.0-mile overhead alternative route ("Alternative Route 5"), all of which the Company is proposing for Commission consideration and notice. Discussion of the Proposed and Alternative Routes, as well as other overhead, underground, or overhead/underground hybrid routes that the Company studied but ultimately rejected, is provided in Section II of the Appendix and discussed in more detail in the Routing Study included with the Application.

West Creek Substation

As part of the Project, the Company proposes to construct the new 230-34.5 kV West Creek Substation in Goochland County, Virginia on land provided by the Customer. See Section II.C.

⁵ See *supra*, n. 1.

In summary, the proposed Project will provide electric service required to support significant growth in the load area, maintain and ensure reliable service for the overall load growth in the area thereby supporting economic growth in Goochland County and the Commonwealth of Virginia, and comply with mandatory NERC Reliability Standards.

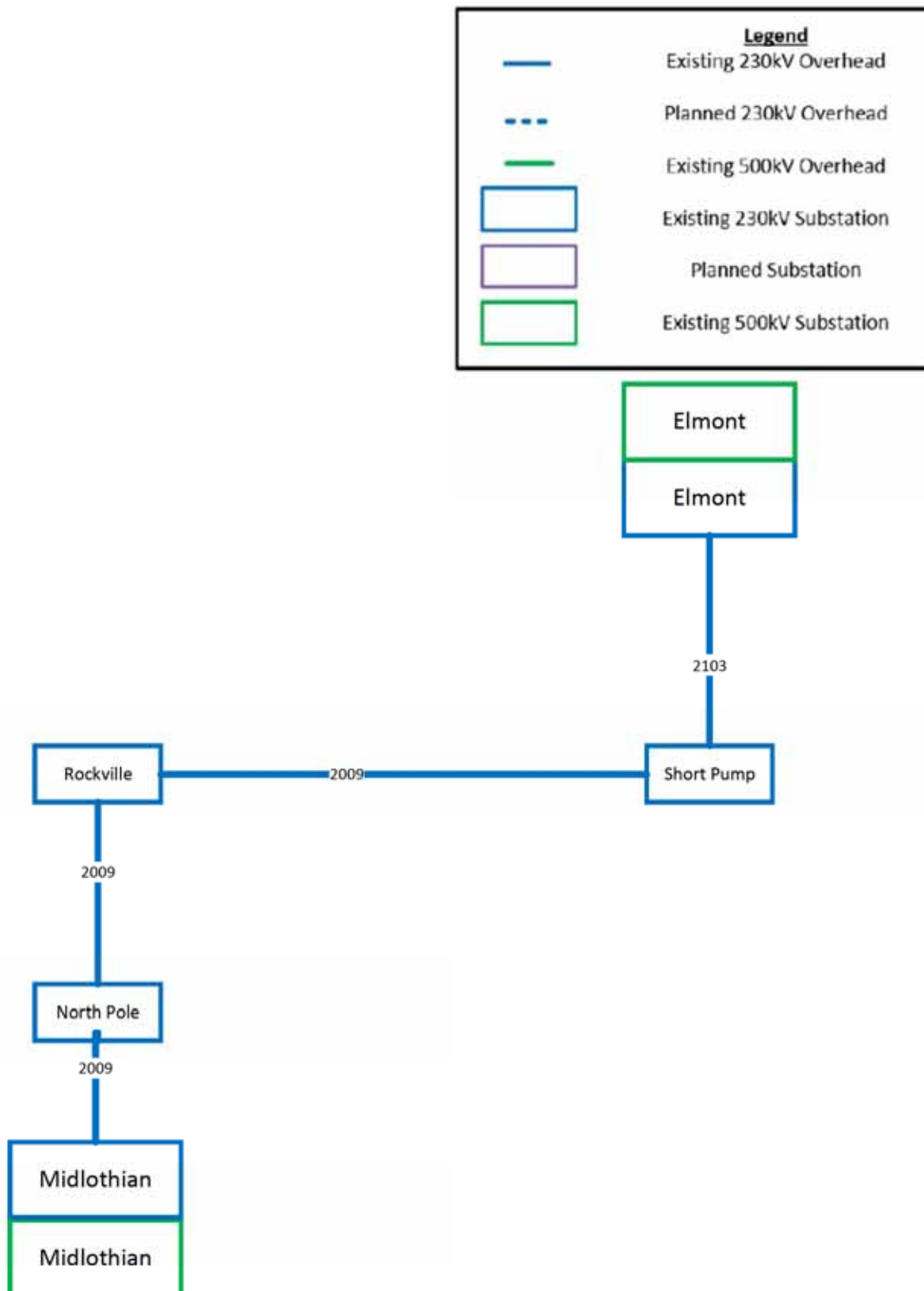


Attachment I.A.1 Project Overview

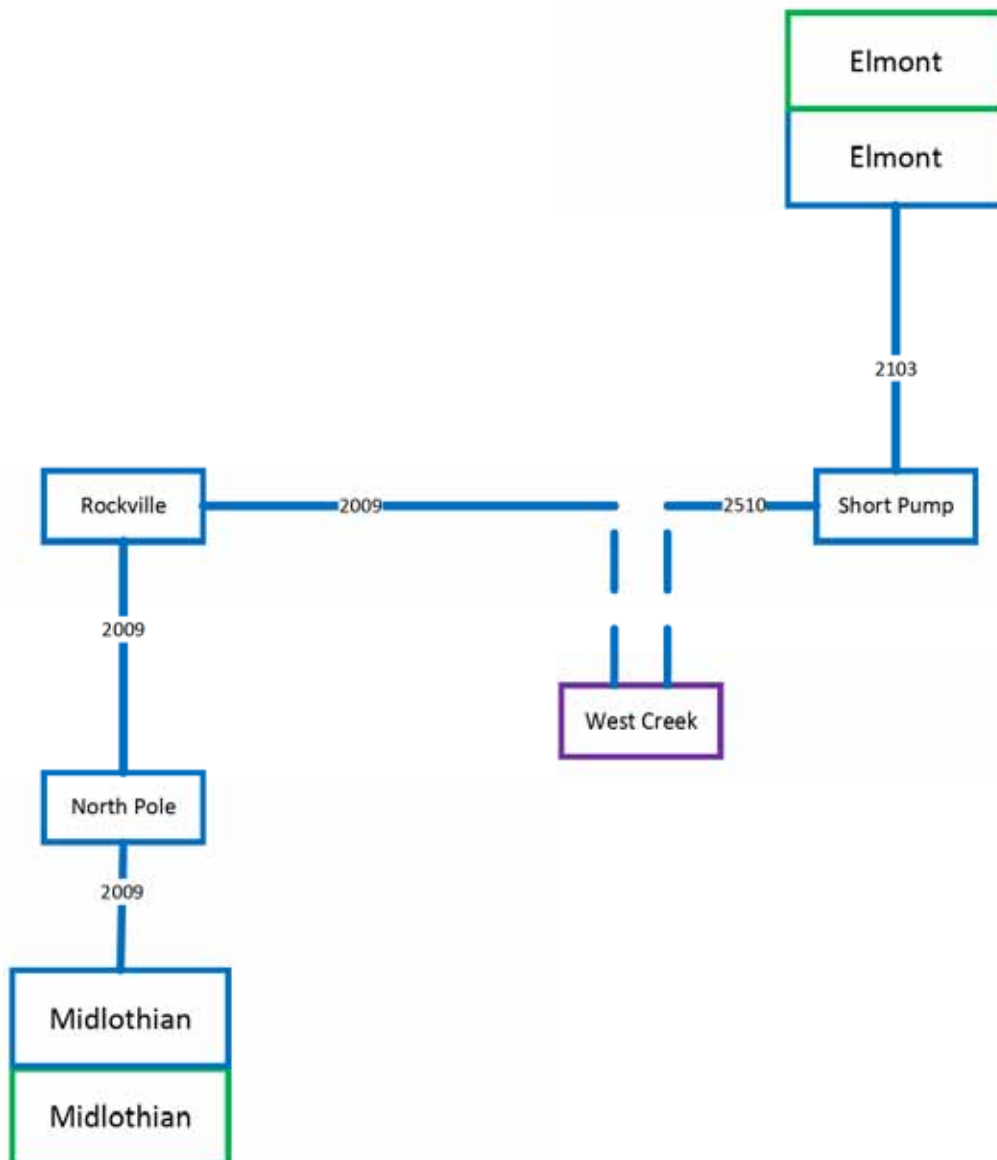
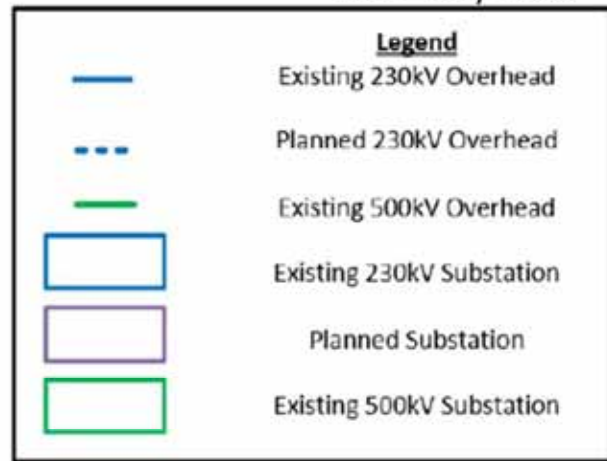
230 kV West Creek Loop and Substation
Dominion Energy Virginia
Goochland County, Virginia



Attachment I.A.2
Transmission One
Line - Existing



Attachment I.A.3
Proposed
Transmission One
Line – July 2028



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**

Requirement: 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 ensure that Dominion Energy Virginia can adequately and reliably serve the Customer's requested load and projected residential and commercial load growth identified by the Company's Distribution Planning group, consistent with the Company's Planning Criteria and NERC Reliability Standards. See Section I.A.

(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.

Distribution

For this Project, the Company's Distribution Planning group used historical load data and existing and proposed development projects in the Goochland Load Area to project future load growth. Based on the forecasted load, the Distribution Planning group determined that it was not feasible to serve the Customer and

general load growth with any of the Company's primary sources of distribution power in the Goochland Load Area due to practical considerations, geographic constraints, and/or lack of adequate reliability and power quality. See Section I.C.

Transmission

In order to maintain reliable service to the Company's customers and to comply with mandatory NERC Reliability Standards, specifically FAC-001, the Company's FIR document 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.

NERC Reliability Standards TPL-001 requirements R2, R5, and R6 require PJM, the Planning Coordinator ("PC"), and the 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. The Company's FERC 715 filing contains the Dominion Energy Virginia Transmission Planning Criteria in Attachment 1 of the FIR document.

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

- 1) Four-breaker ring bus arrangement is required for load interconnections in excess of 100 MW (Company's FIR V21.0, Section 4.3.2);
- 2) The amount of direct-connected load at any substation is limited to 300 MW (Company's Transmission Planning Criteria Attachment 1, 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 FAC-001 Section 4.3, Load Criteria – End User).

For requested load less than 100 MW and more than 1 mile from a transmission source, Section 4.3.C of the Company's FIR allows cutting and looping an existing 230kV transmission source to the load interconnection point.

(4) Facilities List

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

See Attachments I.A.2 and I.A.3 for the existing and planned transmission infrastructure for the Goochland Load Area. See Attachment I.G.1 for existing and future transmission facilities in the area of the proposed Project.

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). Indicate the date by which the existing system is projected to be inadequate.**

Response: For purposes of this Application, the Goochland Load Area extends generally from the Company's existing Line #576/2009 corridor to the West, Goochland/Hanover County Line to the North, Goochland/Henrico County Line to the East and Goochland/Powhatan County Line to the south. See Attachment I.A.1 for a map of the general location of the Goochland Load Area, and Attachment I.G.1 for the Company's transmission facilities in the area of the proposed Project.

While the Company's existing substations are the primary sources of distribution power in the Goochland Load Area, they are unable to serve the approximately 37 MVA request of the Customer and projected residential and commercial load, as discussed in Section I.A, due to practical considerations, geographic constraints, and/or lack of available capacity.

A transmission line extension and on-site substation are the recommended solution on the Eli Lilly Site due to the customer's load, reliability, and power quality requirements. The proposed substation will also infuse capacity into the West Creek development and surrounding area to serve anticipated load needs, promote economic development and improve reliability for the general public.

A distribution solution would require a primary feeder from Rockville Substation. Due to the sensitive nature of Eli Lilly's manufacturing processes, the primary feeder would need to be on its own distribution bus. If it were to share a bus with another circuit or circuits from Rockville Substation, it would be affected by approximately 40%-80% of events anywhere on those circuit(s) with which it shares a bus. This need for a dedicated bus limits the ability to install additional circuits in Rockville Substation that can feed area load. Additionally, by utilizing available distribution circuit routes to feed one customer, the ability for future circuit routing for area load growth becomes constrained.

A substation on the Eli Lilly site would solve these problems and meet all load, reliability, and power quality requirements for their operation. It would also facilitate the installation of up to two (2) additional 84 MVA transformers to serve area load growth and support economic development. These two transformers are in addition to the two (2) transformers that will be built to serve Eli Lilly's load.

Future facilities in this development with large loads may be fed from the additional capacity added by this substation.

In addition to supporting area load and economic growth, a new substation will improve reliability for the surrounding area. Four of the circuits surrounding the project site (Rockville 416, River Rd 373, River 376, and North Pole 492) are long overhead circuits with miles of overhead and tree exposure. The table below shows the reduction in exposure on those circuits:

Substation/Circuit	Overhead Exposure (Miles)		Customer Count	
	Existing	Proposed	Existing	Proposed
River Rd 373	8.8	3.2	4007	1567
River Rd 376	7.1	2	2542	1596
North Pole 492	7.1	4.9	1317	631

Dividing the existing circuits in this manner will give Dominion Energy Virginia the opportunity to further improve reliability by implementing new automated restoration schemes on each affected circuit. It will also positively impact substation transformer contingencies in Rockville, Short Pump, River Road, and North Pole.

Accordingly, to serve the projected load and maintain and ensure reliable service for the overall load growth in the area, consistent with NERC Reliability Standards, the Company is proposing to construct the West Creek Lines and West Creek Substation. With the proposed Project, the existing system transformers are not overloaded, and reliability criteria are met.

The following attachments show loading (MVA and MW) at Rockville, River Road, North Pole and Short Pump Substations, as follows:

Attachment I.C.1.a shows historical and projected loading at Rockville, North Pole, River Rd, and Short Pump Substations with existing project loads, which includes the projected load identified in the DP request (37 MW) as that load is native to this load area, and without the West Creek Substation.

Attachment I.C.1.b shows historical and projected loading at Rockville, North Pole, River Rd, and Short Pump Substations with existing project loads, which includes the projected load identified in the DP request (37 MW) as that load is native to this load area, and with West Creek Substation upon energization.

Note that all of the Section I.C attachments include only normal feed circuits to the Company's customers; they do not include any alternate feed loads. To be clear, that means there are no circuits normally open that serve as alternate feeds for customers with existing alternate feed arrangements shown in the Section I.C

attachments. Also note that the load tables in the Section I.C attachments show actual and projected peak loading in MVA based on the Distribution Planning group's load projections inclusive of existing project load in the Goochland Load Area.

Each substation transformer ("TX") has a nameplate rating and normal overload ("NOL") rating. The Company serves load on substation transformers up to the transformer's nameplate rating. The NOL rating is used for N-1 contingency service restoration scenarios in the event of failure of a substation transformer, and the NOL rating cannot be exceeded. Specifically, substation transformer loading beyond the limits of the NOL ratings for N-1 scenarios can result in unrestorable load, meaning the load exceeds all available capacity in the substation and adjacent circuits which, in turn, results in sustained outages.

Similarly, distribution circuits each have a thermal overload rating (i.e., a nameplate rating) that is based on the type of equipment and the configuration of the equipment in the field. To prevent overloads that could cause equipment damage or failure, the maximum capacity limits of the distribution circuits and the substation transformers cannot be exceeded.

To ensure reliability to its customers, the Company maintains a substation transformer contingency plan. Because of the negative impact to customers due to the outage duration if a substation transformer were to fail, the Company creates a switching plan that allows customer load to be picked up on other equipment for the loss of any substation transformer. There are various switching methods that can be used for these substation transformer contingency plans. If the contingency plan creates overloads in other equipment because of the switching, new substation capacity, such as constructing the proposed West Creek Substation, is necessary.

As shown in Attachment I.C.1.a, circuits at the River Road, North Pole and Short Pump Substations are overloaded beginning in 2034, 2032, and 2028 respectively, in excess of their nameplate ratings. Specifically, at River Road Substation, Circuit #376 is overloaded beginning in 2034. At North Pole Substation, Circuit #450 is overloaded beginning in 2032 and Circuit #451 is overloaded beginning in 2034. At Short Pump Substation, Circuit #423 is overloaded beginning in 2030, Circuit #383 is overloaded beginning in 2033, Circuit #409 is overloaded beginning in 2035, and Circuit #381 is overloaded beginning in 2028.

Moreover, transformers at the Rockville, North Pole and River Road Substations are overloaded in excess of their nameplate ratings beginning in 2030, 2028 and 2029, respectively, as shown in Attachment I.C.1.a. Specifically, at Rockville Substation, TX#1 is overloaded beginning in 2030. At North Pole Substation, TX#1, is overloaded beginning in 2028. At Short Pump Substation, TX#2 and TX#3 are overloaded beginning in 2029.

Accordingly, the West Creek Lines and West Creek Substation are needed to ensure that Dominion Energy Virginia can adequately and reliably serve significant projected residential and commercial load growth identified by the Company's Distribution Planning group.

Goochland Area Load Forecast

Area Substations WITHOUT West Creek Substation or Capacity Improvements

This forecast shows expected future loading on existing area facilities if no capacity projects are worked.

WINTER																		
	Load (MVA) Actual										Load (MVA) Projection							
	T = -4 2021	T = -3 2022	T = -2 2023	T = -1 2024	T = 0 2025	T = +1 2026	T = +2 2027	T = +3 2028	T = +4 2029	T = +5 2030	T = +6 2031	T = +7 2032	T = +8 2033	T = +9 2034	T = +10 2035	Rating (MVA)		
Rockville	Tx1	25.375	29.459	16.221	15.397	15.705	18.499	22.307	27.115	31.923	36.231	40.039	42.847	46.155	47.463	48.771	33.6	
	4XX	0.000	0.000	0.000	0.000	0.000	2.500	6.000	10.500	15.000	19.000	22.500	25.000	28.000	29.000	30.000	35.9	
	438	24.828	28.861	16.381	15.691	15.383	15.999	16.307	16.615	16.923	17.231	17.539	17.847	18.155	18.463	18.771	35.9	
	Tx2	0.000	15.766	17.798	17.691	18.044	29.934	33.393	33.852	34.311	34.770	35.229	35.688	36.147	36.606	37.065	56	
	416	0.000	0.000	16.145	15.926	16.245	16.564	16.883	17.202	17.521	17.840	18.159	18.478	18.797	19.116	19.435	35.9	
	421	0.000	0.000	3.42	3.65	3.700	13.370	16.510	16.650	16.790	16.930	17.070	17.210	17.350	17.490	17.630	35.9	
Total (MVA)		25.375	45.225	34.019	33.088	33.749	48.433	55.7	60.967	66.234	71.001	75.268	78.535	82.302	84.069	85.836		
Total (MW)		25.350	45.180	33.965	33.055	33.715	48.385	55.644	60.906	66.168	70.930	75.193	78.456	82.220	83.985	85.750		
River Rd	Tx3	62.358	59.192	66.445	62.656	68.41	71.113	74.638	78.159	81.682	85.205	88.729	92.252	95.775	99.298	102.821	84	
	371	17.210	18.836	21.964	19.65	21.515	22.600	23.601	24.542	25.483	26.425	27.366	28.307	29.248	30.189	31.131	35.9	
	373	15.436	17.823	18.002	19.289	21.155	22.212	23.503	24.793	26.083	27.374	28.664	29.955	31.245	32.535	33.826	35.9	
	376	19.08	21.679	23.346	22.098	25.428	26.241	27.533	28.824	30.116	31.407	32.699	33.990	35.282	36.573	37.865	35.9	
	Tx4	31.666	35.682	40.177	37.54	40.599	42.515	44.514	46.512	48.510	50.508	52.506	54.505	56.503	58.501	60.499	84	
	370	10.549	11.541	12.248	12.676	13.964	14.585	15.382	16.178	16.975	17.771	18.568	19.364	20.161	20.957	21.754	28.7	
Total (MVA)		111.79	124.868	138.646	130.282	142.043	147.944	153.846	159.748	165.650	171.551	177.453	183.355	189.257	195.159	201.061	35.9	
Total (MW)		94.024	106.622	120.196	110.196	122.049	127.679	133.309	138.939	144.569	150.199	155.829	161.459	167.089	172.719	178.349	31.4	
North Pole	Tx1	30.678	33.434	37.819	34.789	40.427	40.886	49.863	51.840	53.817	55.794	57.771	59.748	61.725	63.702	65.679	50	
	451	19.516	21.461	23.47	21.984	25.892	26.447	27.775	29.102	30.430	31.757	33.085	34.412	35.740	37.067	38.395	35.9	
	492	10.974	11.752	13.462	12.295	13.95	14.439	22.089	22.738	23.388	24.037	24.687	25.336	25.986	26.635	27.285	35.9	
	Tx2	17.225	18.017	25.382	19.732	26.200	26.159	27.967	29.775	31.583	33.391	35.200	37.008	38.816	40.624	42.432	56	
	450	16.899	17.682	24.736	19.234	25.140	26.159	27.967	29.775	31.583	33.391	35.200	37.008	38.816	40.624	42.432	35.9	
	Total (MVA)		47.903	51.451	63.201	54.521	66.627	67.045	77.830	81.615	85.400	89.186	92.971	96.756	100.541	104.326	108.112	-
Total (MW)		47.855	51.400	63.128	54.466	66.560	66.978	77.752	81.534	85.315	89.096	92.878	96.659	100.441	104.222	108.003	-	
Short Pump	Tx1	32.268	36.682	39.459	38.42	38.604	45.684	50.224	54.763	59.303	63.842	65.982	68.121	70.261	72.400	74.540	75	
	423	14.583	16.588	18.614	17.412	19.478	22.919	26.381	29.842	33.303	36.765	37.826	38.888	39.949	41.010	42.072	35.9	
	380	16.776	19.214	19.777	20.229	21.659	22.765	23.843	24.922	26.000	27.078	28.156	29.234	30.312	31.390	32.468	35.9	
	Tx2	55.008	60.932	68.366	65.626	66.252	74.643	78.220	81.797	85.374	88.952	92.529	96.106	99.684	103.261	106.838	84	
	383	20.741	22.538	26.732	23.558	26.778	27.998	29.307	30.616	31.926	33.235	34.545	35.854	37.163	38.473	39.782	35.9	
	384	15.468	16.869	20.91	18.114	20.012	21.375	22.408	23.441	24.474	25.508	26.541	27.574	28.608	29.641	30.674	35.9	
Total (MVA)		195.259	209.724	224.222	213.884	228.422	260.506	274.40	288.974	303.443	317.916	332.389	346.862	361.335	375.808	390.281	35.9	
TxD	Tx3	42.78	48.901	60.148	53.951	55.569	66.028	70.035	74.043	78.050	82.057	86.064	90.071	94.079	98.086	102.093	75	
	414	10.788	11.188	13.67	11.815	12.557	13.253	13.670	14.086	14.503	14.919	15.336	15.752	16.169	16.585	17.002	35.9	
	381	16.219	19.334	23.213	22.157	22.114	30.991	33.463	35.914	38.375	40.837	43.298	45.759	48.220	50.682	53.143	35.9	
	382	14.87	17.237	21.374	18.723	19.774	21.784	22.913	24.043	25.172	26.301	27.431	28.560	29.690	30.819	31.948	35.9	
	Total (MVA)		130.056	146.515	167.979	157.997	160.625	196.355	199.479	210.603	222.727	234.851	244.575	254.299	264.023	273.747	283.471	-
	Total (MW)		129.926	146.368	167.895	157.839	160.464	196.169	199.281	210.393	222.504	234.616	244.331	254.045	263.759	273.473	283.188	-

Goochland Area Load Forecast

Area Substations WITH West Creek Substation and Capacity Improvements

This forecast shows expected future loading on existing area facilities if no capacity projects are worked.

WINTER

	Load (MVA) Actual					Load (MVA) Projection										Rating (MVA)		
	T = -4 2021	T = -3 2022	T = -2 2023	T = -1 2024	T = 0 2025	T = +1 2026	T = +2 2027	T = +3 2028	T = +4 2029	T = +5 2030	T = +6 2031	T = +7 2032	T = +8 2033	T = +9 2034	T = +10 2035			
West Creek	Tx1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.000	19.000	22.500	25.000	28.000	29.000	30.000	33.6	
	3X1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.000	19.000	22.500	25.000	28.000	29.000	30.000	35.9	
	Tx2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	33.6	
	3X2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	35.9	
	Tx3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	70.060	72.960	74.781	76.602	78.423	80.244	82.044	83.144	84	
	3X3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.185	17.988	18.791	19.594	20.397	21.200	21.999	22.799	35.9	
	3X4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.394	11.875	12.356	12.837	13.318	13.799	14.280	14.760	35.9	
	3X5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.086	10.270	10.454	10.638	10.822	11.006	11.190	11.374	35.9	
	3X6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.992	16.345	16.698	17.051	17.404	17.757	18.110	18.463	35.9	
	3X7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	16.206	17.285	17.285	17.285	17.285	17.285	17.285	18.364	35.9	
Total (MVA)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	85.080	91.960	97.281	101.602	106.423	109.244	113.144	116.965	-		
Total (MVA)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	84.299	91.040	96.308	100.586	105.359	108.152	111.013	112.013	-		
Rockville	Tx1	25.375	29.459	16.221	15.397	15.705	18.499	22.307	27.115	16.923	17.231	17.539	17.847	18.155	18.463	18.771	33.6	
	4X1	0.000	0.000	0.000	0.000	0.000	2.500	6.000	10.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	35.9	
	4X2	24.828	28.861	16.381	15.383	15.691	15.999	16.307	16.615	16.923	17.231	17.539	17.847	18.155	18.463	18.771	35.9	
	Tx2	0.000	15.766	17.798	17.691	18.044	29.934	33.393	33.852	24.225	24.500	24.775	25.050	25.325	25.600	25.875	56	
	4X6	0.000	0.000	16.145	15.926	16.245	16.564	16.883	17.202	7.435	7.570	7.705	7.840	7.975	8.110	8.245	35.9	
	4X1	0.000	0.000	0.000	3.42	3.700	13.370	16.510	18.650	18.790	18.930	17.070	17.210	17.350	17.490	17.630	35.9	
	Total (MVA)	25.375	45.225	34.019	33.098	33.749	48.433	55.700	60.967	41.148	41.731	42.314	42.897	43.480	44.063	44.646	-	
	Total (MVA)	25.360	45.160	33.065	33.055	33.715	48.385	55.644	60.906	41.107	41.689	42.272	42.854	43.437	44.019	44.601	-	
	Power Rd	Tx3	62.358	59.192	66.445	62.656	68.41	71.113	74.836	78.159	53.906	56.145	58.383	60.621	62.859	65.097	67.336	84
		371	17.216	18.836	21.964	19.65	21.515	22.660	23.801	24.942	25.483	26.425	27.366	28.307	29.248	30.189	31.131	35.9
372		15.436	17.823	18.002	19.209	21.155	22.212	23.503	24.793	9.701	10.186	10.675	11.162	11.649	12.136	12.623	35.9	
376		19.08	21.879	23.348	22.098	25.428	26.241	27.533	28.824	18.722	19.532	20.342	21.152	21.962	22.772	23.582	35.9	
Tx4		31.666	35.682	40.177	37.54	40.599	42.515	44.514	46.512	48.510	50.508	52.506	54.505	56.503	58.501	60.499	84	
370		10.549	11.541	12.248	12.676	13.964	14.585	15.392	16.178	16.975	17.771	18.568	19.364	20.161	20.957	21.754	28.7	
372		11.79	13.037	14.468	12.826	14.384	14.794	15.292	15.790	16.287	16.785	17.283	17.780	18.278	18.776	19.273	35.9	
374		9.163	10.404	12.284	10.77	12.5	13.136	13.840	14.544	15.248	15.952	16.656	17.360	18.064	18.768	19.472	31.4	
Total (MVA)		94.024	94.874	106.022	100.196	109.009	118.6285	119.1498	124.0711	102.4164	106.0526	110.8892	115.1256	119.362	123.5984	127.8348	-	
Total (MVA)		93.648	94.495	106.196	99.795	108.573	113.174	118.673	124.172	102.007	106.226	110.446	114.665	118.885	123.104	127.323	-	
North Pole	Tx1	30.678	33.434	37.819	34.789	40.427	40.886	49.863	51.640	37.825	39.450	41.074	42.699	44.323	45.948	47.572	50	
	451	19.516	21.461	23.47	21.904	25.892	26.447	27.775	29.102	30.430	31.757	33.085	34.412	35.740	37.067	38.395	35.9	
	492	10.974	11.752	13.482	12.295	13.95	14.439	22.069	22.738	7.996	7.693	7.990	8.287	8.584	8.881	9.178	35.9	
	Tx2	17.225	18.617	25.382	19.732	26.200	26.159	27.967	29.775	31.583	33.391	35.200	37.008	38.816	40.624	42.432	56	
	450	16.898	17.652	24.736	19.234	25.149	26.158	27.967	29.775	31.583	33.391	35.200	37.008	38.816	40.624	42.432	35.9	
	Total (MVA)	47.903	51.451	63.201	54.521	66.627	67.0448	77.83	81.6152	85.4084	89.2411	93.0738	96.9065	100.7392	104.5719	108.4046	-	
Total (MVA)	47.855	51.400	63.138	54.466	66.569	66.978	77.752	81.534	85.339	89.168	92.997	96.827	100.656	104.485	108.315	-		
Short Pump	Tx1	32.268	36.682	39.459	38.42	38.004	45.684	50.224	54.763	59.303	63.842	65.982	68.121	70.261	72.400	74.540	75	
	423	14.583	16.588	18.614	17.412	19.478	22.910	26.381	29.842	33.303	36.765	37.826	38.887	39.949	41.010	42.072	35.9	
	380	16.776	20.229	19.777	22.659	22.765	23.843	26.922	26.000	26.000	26.000	26.000	26.000	26.000	26.000	26.000	35.9	
Tx2	55.008	60.932	68.366	65.626	66.252	74.643	78.220	81.797	85.374	88.952	92.529	96.106	99.684	103.261	106.839	84		

		Load (MW) Actual										Load (MW) Projection										Rating (MW)
		T = -4					T = -1					T = +1					T = +6					
		T = -4	T = -3	T = -2	T = -1	T = 0	T = -4	T = -3	T = -2	T = -1	T = 0	T = +1	T = +2	T = +3	T = +4	T = +5	T = +6	T = +7	T = +8	T = +9	T = +10	
383	20.741	22.538	26.732	23.568	26.778	20.741	22.538	26.732	23.568	26.778	20.741	22.538	26.732	23.568	26.778	20.741	22.538	26.732	23.568	26.778	35.9	
384	15.468	16.869	20.91	18.114	20.012	15.468	16.869	20.91	18.114	20.012	15.468	16.869	20.91	18.114	20.012	15.468	16.869	20.91	18.114	20.012	35.9	
409	19.529	20.724	19.874	23.284	24.422	19.529	20.724	19.874	23.284	24.422	19.529	20.724	19.874	23.284	24.422	19.529	20.724	19.874	23.284	24.422	35.9	
T=3	42.78	48.901	60.148	53.951	55.569	42.78	48.901	60.148	53.951	55.569	42.78	48.901	60.148	53.951	55.569	42.78	48.901	60.148	53.951	55.569	76	
414	10.788	11.188	13.67	11.815	12.557	10.788	11.188	13.67	11.815	12.557	10.788	11.188	13.67	11.815	12.557	10.788	11.188	13.67	11.815	12.557	35.9	
381	16.219	19.334	23.213	22.157	27.114	16.219	19.334	23.213	22.157	27.114	16.219	19.334	23.213	22.157	27.114	16.219	19.334	23.213	22.157	27.114	35.9	
382	14.87	17.237	21.374	18.723	19.774	14.87	17.237	21.374	18.723	19.774	14.87	17.237	21.374	18.723	19.774	14.87	17.237	21.374	18.723	19.774	35.9	
Total (MW)		130.056	146.515	167.973	157.997	160.625	130.056	146.515	167.973	157.997	160.625	130.056	146.515	167.973	157.997	160.625	130.056	146.515	167.973	157.997	260.529	
Total (MW)		129.926	146.368	167.805	157.839	160.464	129.926	146.368	167.805	157.839	160.464	129.926	146.368	167.805	157.839	160.464	129.926	146.368	167.805	157.839	260.529	

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.

I. NECESSITY FOR THE PROPOSED PROJECT

- 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: During the initial stages of route development, Dominion Energy reviewed additional electrical solutions for the project. The electrical solutions were presented by the Company's electrical planning department as equally viable electrically as the proposed solution. These electrical solutions were eliminated from further consideration for the reasons presented below.

Western Solution (Cutting Line #2009 Near North Pole Substation)

The Company reviewed potential routing options from Line #2009 near the North Pole Substation. The Company's existing Line #2009 continues west from the proposed cut-in location under the proposed electrical solution for approximately 6.3 miles before joining the corridor of the existing 500 kV Line #576. Line #2009 then continues south for another approximately 6.0 miles before crossing the James River. The North Pole Substation is located about 1.4 miles north of the James River crossing. A large number of routing constraints exist between this portion of Line #2009 and the proposed West Creek Substation, including but not limited to residential developments, rural historic districts and areas on the National Register of Historic Places and Virginia Landmark Register, and large areas of conservation easements.

Residential development starts to get dense in areas east of Dover Road and north of Route 6 (River Road West) with multiple denser subdivisions including the Meadows at Manakin, Auburn Chase, Cedar Run Estates, Dovershire at Manakin Woods, The Park at Manakin Woods, Manakin Farms, and Edgehill to name a few. More rural residential development also exists on the south side of River Road West.

Deep Run Hunt Rural Historic District is a large (approximately 16 square mile) proposed historic district on the north side of River Road West. The proposed district covers the majority of the residential development described above. Other aboveground historic resources in this area include two National Register of Historic Places and Virginia Landmarks Register listed sites.

- Brookview Farms/Dover Slave Quarter (VDHR #037-5012) is one of Virginia's few surviving groupings of slave quarters and is located on the north side of Route 6 and west of Dover Road. In addition to this being a listed resource, a Virginia Department of Historic Resources ("VDHR") conservation easement and a Virginia Outdoors Foundation ("VOF") conservation easement overlap with this site.

- Ben Dover Farm (VDHR #037-0078) is one of three Italian Villas built in the Sabot area around 1850 and is located on the south side of Route 6 on the east side of Sabot. In addition to being a listed resource, a VOF conservation easement overlaps a portion of the site.

Two scenic resource routing constraints were also identified. The Virginia Scenic Rivers Program helps to protect rivers and streams that possess “outstanding scenic, recreational, historic, and natural characteristics of statewide significance for future generations” (Virginia Department of Conservation and Recreation [DCR], 2025). The segment of the James River from Maidens Road (Route 522) east to Watkins Landing Road has been identified as a potential scenic river. The State Scenic Highway and Virginia Byway Act of 1966 defined a Virginia Byway as “a road designated by the Commonwealth Transportation Board having relatively high aesthetic or cultural value, leading to or within areas of historical, natural, or recreational significance” (Virginia Department of Transportation, 2025). Route 6 (River Road West) from the Town of Scottsville in Fluvanna County to Route 650 in Goochland County was designated as a Virginia Byway in 1987.

The VOF was created under the Virginia Open-Space Land-Act, which allows public bodies to create open-space easements as a means of protecting and preserving open-spaces (or significant natural, cultural, and recreational resources) on public and private lands. Easements put into place by private landowners allow for the property to stay in private ownership but with safeguards imposed to restrict land uses on the easement. In addition to the two VOF conservation easements described above that overlap with historic resources, two additional VOF easements exist in this corridor. The first is located immediately east of Brookview Farms, and the second is located on the north side of the James River in River Oaks.

To avoid crossing large extents of residential development and VOF easements, a route along this corridor would need to start close to the James River and then head east following along Route 6. Given the amount of development along Route 6, a route would need to cross and be directly collocated with this scenic byway. Due to the visual impacts that would occur along this scenic byway and proposed scenic river, that any routes would be at least two miles longer than route alternatives identified for the proposed electrical solution, and that multiple viable alternatives were identified for the proposed solution, the Company decided to not carry the Western Solution forward for additional study and the development of route alternatives for the Project.

Eastern Solution (Cutting Line #222)

The Company reviewed potential routing options from their existing Line #222 which runs north to south approximately 4.0 miles east of the eastern boundary of the study area, through a heavily developed portion of Henrico County and continues south towards the James River. The Line #222 right-of-way is bounded

on either side by dense residential development between I-64 and Route 6. Given the extent and density of residential development along this transmission line right-of-way, the only potential viable cut-in location for this electrical solution would be on the southern end of this corridor. A large conservation easement operated by The Nature Conservancy (“TNC”) is located south of Route 6, north of the CSX railroad, and west of the existing Line #222 right-of-way. This pushes the potential cut-in location to a small area south of the CSX railroad and north of the James River. A large number of routing constraints exist between Line #222 and the proposed West Creek Substation, including but not limited to dense residential developments between I-64 and Route 6, conservation easements, CSX railroad property, wetlands, and two golf courses.

The Line #222 right-of-way is bounded on either side by dense residential development between I-64 and Route 6. Given the extent and density of residential development along this transmission line right-of-way, the only potential viable cut-in location for this electrical solution would be on the southern end of this corridor. A large conservation easement operated by The Nature Conservancy (“TNC”) is located south of Route 6, north of the CSX railroad, and west of the existing Line 222 right-of-way. This pushes the potential cut-in location to a small area south of the CSX railroad and north of the James River.

The area south of the CSX railroad and north of the James River is almost entirely wetlands and consists of a combination of palustrine forested (“PFO”) and palustrine shrub scrub (“PSS”) wetlands. Due to the extent of existing development on the north side of the CSX railroad (residential and two golf course/country clubs), a route for this electrical solution would need to cross approximately three miles of wetlands in this area alone. Given the extent of wetland conversion (forested and scrub shrub to emergent wetlands), it is expected that an individual permit would be required from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act for impacts to Waters of the United States (WOTUS). The additional time needed to design and successfully permit the project through these wetlands would risk the Project in-service date of July 26, 2028.

In addition to the TNC conservation easement that is adjacent to the existing Line #222 right-of-way, three additional conservation easements exist in the area that present as routing constraints.

- VDHR Conservation Easement: A conservation easement overlaps with the NRHP and VLR listed Woodside architectural resource (VDHR #043-0012) located on the west side of South Gaskins Road north of St. Julians Lane. The main house on the Woodside property is a well-preserved example of a Greek Revival style rural villa and was built in 1858.
- VOF Conservation Easement: A large easement is located west of the Country Club of Virginia Tuckahoe and encompasses all of the Tuckahoe

Point Farm property and continues south into Henrico County to the James River.

- VDHR Conservation Easement: A large easement is located west and adjacent to the VOF conservation easement listed above. This easement overlaps partially with the NRHP and VLR listed Tuckahoe Plantation (VDHR #037-0033) located south of Route 6 on either side of River Road. This historic resource is the childhood home of Thomas Jefferson. The property consists of over 550-acres (about 340 of which are under the VDHR protective easement) and includes a residential historic manor, historic outbuildings, gardens, cemeteries, farm buildings and structures, and open space land used for crop production and pastureland.

In addition to the two NRHP and VLR listed resources discussed above, a third resource occurs in the area which does not overlap with a conservation easement. Bella Foundry/Clark Foundry Ruins (VDHR #020-0359) is located on the north side of the James River east of South Gaskins Road. The defense/magazine resource was constructed in 1816, and three workshops remain onsite.

The County Club of Virginia is located on the north side of Route 6. This private country club includes two 18-hole golf courses (Tuckahoe and James River) and presents as a routing constraint, as it is bounded on the west side by a VOF conservation easement and on the east side by residential development. In order for a route to head north to the substation site, it would need to either cross dense residential development, the country club, or the VOF conservation easement. Due to these routing constraints, and that an individual permit would be required for the conversion of a minimum of three miles of PFO/PSS wetlands to PFO wetlands, the Eastern Solution was not deemed viable for additional study and the development of route alternatives for the Project.

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: Existing double circuit double deadend H-Frame structure 2009/120 will be replaced with a like double circuit double deadend H-Frame structure.

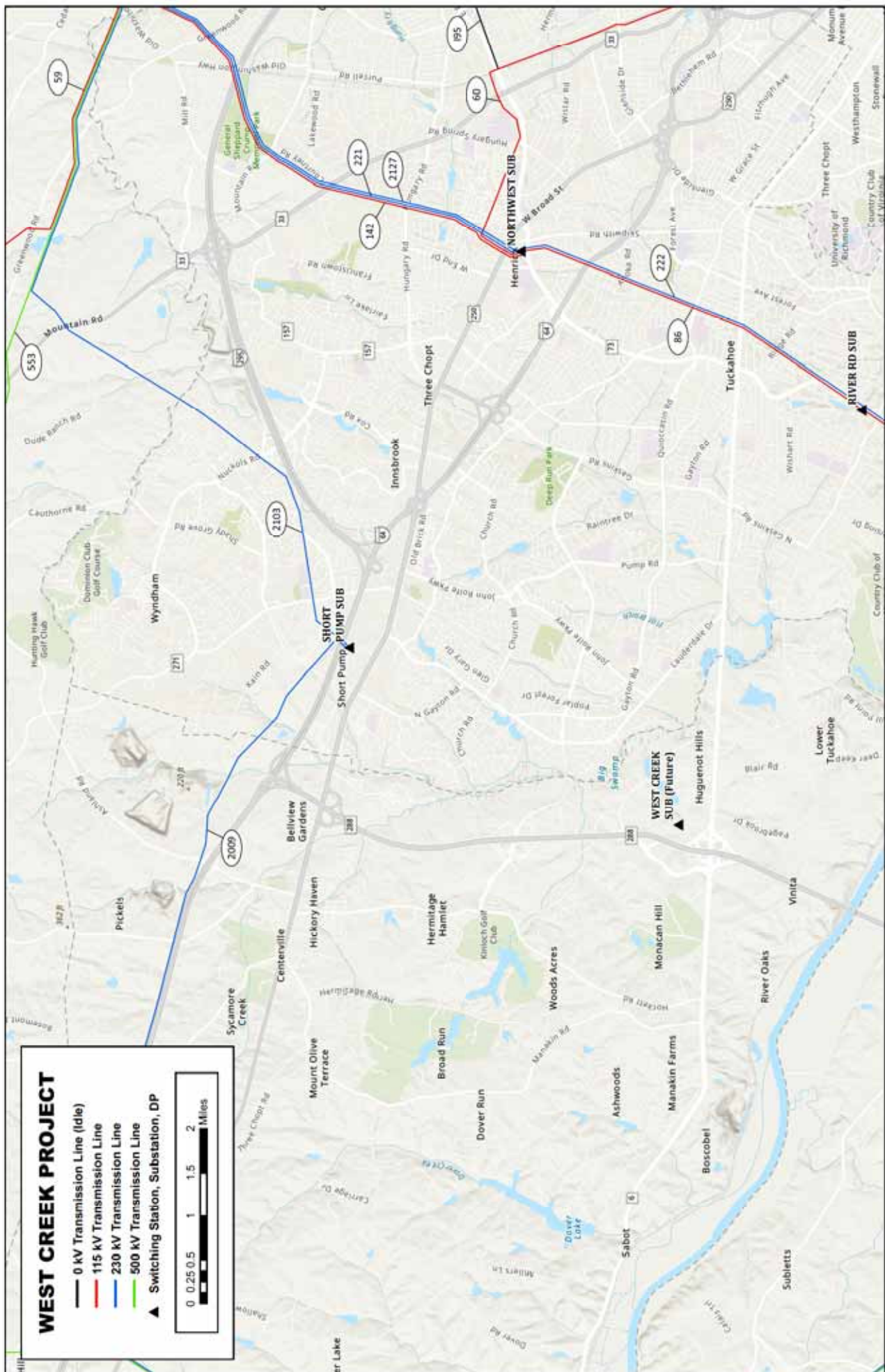
Existing double circuit double deadend H-Frame structure 2009/122 will be replaced with a double circuit double deadend monopole structure.

Existing double circuit suspension H-Frame structure 2009/121 will be replaced with a double circuit suspension monopole structure.

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.



I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: The desired in-service target date for the proposed Project is July 26, 2028.

The Company estimates it will take approximately 24 months for detailed engineering, 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 July 1, 2026. Should the Commission issue a final order by July 1, 2026, the Company estimates that construction should begin around July 2027, and be completed by July 26, 2028. 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. 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 to labor shortages or materials/supply issues. This schedule is also contingent upon the Company's ability to negotiate easements with property owners along the approved route and to obtain property rights for substation use without the need for additional litigation.

In addition, the Company is actively monitoring regulatory changes and requirements associated with the NLEB and how they could potentially impact construction timing associated with TOYRs. The USFWS issued the final guidance, replacing the interim guidance, on October 23, 2024, and the final guidance was fully implemented November 30, 2024. The Company is reviewing the final guidance to the extent it applies to the Company's projects and will coordinate with USFWS during the permitting stage.

The Company is also monitoring potential regulatory changes associated with the potential up-listing of the TCB. On September 14, 2022, the USFWS published the proposed rule to the Federal Register to list the TCB as endangered under the Endangered Species Act. USFWS extended its Final Rule issuance target from September 2023 to September 2024, but as of the date of this filing, the TCB listing decision has not been issued. The Company is actively tracking this ruling and evaluating the effects of potential outcomes on Company projects' permitting, construction, and in-service dates, including electric transmission projects.

The review also accounted for regulatory changes and requirements associated with the monarch butterfly (*Danaus plexippus*) and the proposed USFWS listing of this species as federally threatened. The Company is anticipating the monarch butterfly will be listed; therefore, it assumes any regulatory changes associated with the potential listing of the monarch butterfly will affect this Project. On December 12,

2024, the monarch butterfly was proposed to be listed as threatened by the USFWS, and the 90-day public comment period was extended and closed on May 19, 2025. The Company is actively tracking this ruling and evaluating the effects of potential outcomes on the permitting, construction, and in-service dates of the Company projects, including electric transmission projects.

Any adjustments to this Project schedule resulting from these or similar challenges could necessitate a minimum of a six- to twelve-month delay in the targeted in-service date. Accordingly, for purposes of judicial economy, the Company requests that the Commission issue a final order approving both a desired in-service target date (*i.e.*, July 26, 2028) and an authorization sunset date (*i.e.*, July 26, 2029) for energization of the Project.

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 total estimated conceptual cost of the Project utilizing the Proposed Route is approximately \$97.5 million, which includes approximately \$87.0 million for transmission-related work and approximately \$10.5 million for substation-related work (2025 dollars).

A breakdown of the estimated conceptual costs for transmission-related work associated with the Proposed and Alternative Routes are provided below. The substation-related costs are the same for the Alternative Routes as those identified along the Proposed Route (Route 3).

Proposed Route (Route 3): \$87.0 million

Alternative Route 2: \$84.1 million

Alternative Route 5: \$80.2 million

A breakdown of the estimated conceptual costs for substation work is provided below. Costs associated with minor substation-related work at the Company's existing Short Pump, North Pole, Rockville, and Midlothian Substations are not included in the total Project costs described above but are provided for informational purposes.

West Creek Substation: \$ 10.5 million

Short Pump Substation: \$329,000

Rockville Substation: \$22,000

North Pole Substation: \$22,000

Midlothian Substation: \$30,000

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-2025-0054) initiated by the TO in order to interconnect new customer load. The Project need slide was submitted to PJM at the October 8, 2025 TEAC Meeting, and the solution slide was submitted to PJM at the January 6, 2026 TEAC Meeting. See Attachment I.J.1 and Attachment I.J.2, respectively. While, the Company has not received a Supplemental ID# for this Project, the Project as originally submitted to PJM is expected to be included in the 2026 Local Plan.

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

Dominion Supplemental Projects

Transmission Expansion Advisory
Committee
October 08, 2025

Needs

Dominion Transmission Zone: Supplemental
Customer Load Request

Need Number: DOM-2025-0054

Process Stage: Need Meeting 10/08/2025

Project Driver: Customer Service

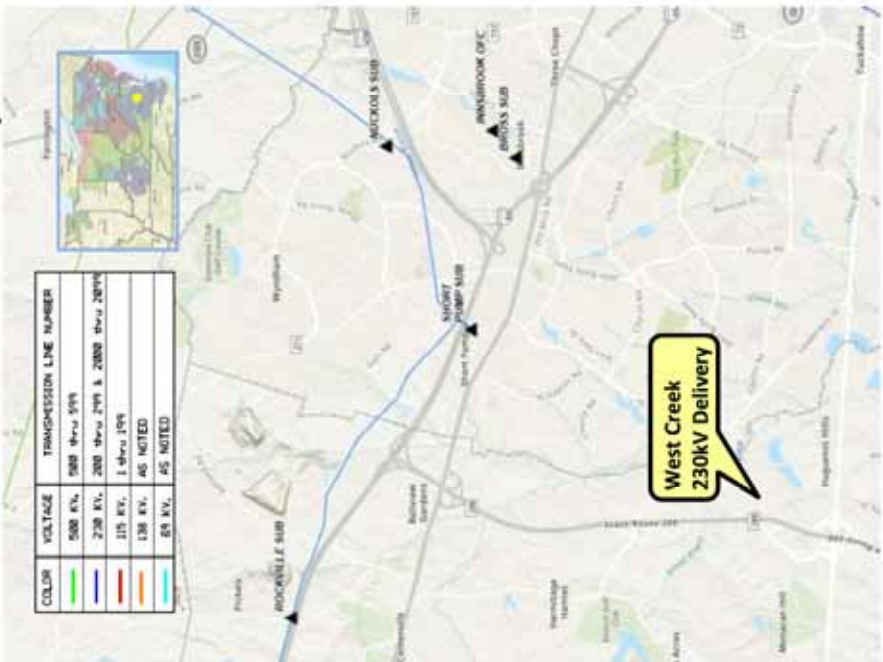
Specific Assumption References:

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

Problem Statement:

DEV has submitted a DP Request for a new substation (West Creek) to serve an industrial load in Goochland County with a total expected capacity of 100 MW.

The requested in-service date is 1/2/2029.



Dominion Supplemental Projects

Transmission Expansion Advisory
Committee
January 06, 2026

Solutions

Dominion Transmission Zone: Supplemental
Customer Load Request

Need Number: DOM-2025-0054

Process Stage: Solution Meeting 01/06/2026

Previously Presented: Need Meeting 10/08/2025

Project Driver: Customer Service

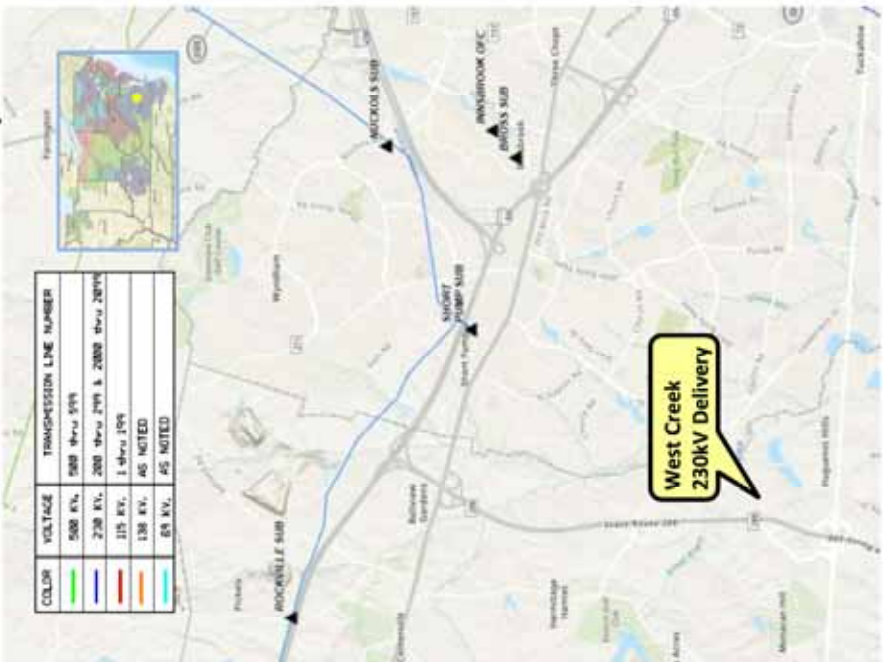
Specific Assumption References:

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

Problem Statement:

DEV has submitted a DP Request for a new substation (West Creek) to serve an industrial load in Goochland County with a total expected load of 100 MW.

The requested in-service date is 01/02/2029.



Dominion Transmission Zone: Supplemental
West Creek 230kV Delivery - DEV

Need Number: DOM-2025-0054
Process Stage: Solution Meeting 01/06/2026
Previously Presented: Need Meeting 10/08/2025
Project Driver: Customer Service

Proposed Solution:

Cut existing 230kV Line 2009 between Short Pump and Rockville and extend a new 230kV double circuit loop, approximately 6.5 miles, in and out of West Creek Substation. West Creek Substation will be constructed with a 230 kV ring-bus, configured for an ultimate arrangement of six breakers, with four breakers installed initially.

Estimated Project Cost: \$35M (Total)
Transmission Line – \$20M
230kV Substation – \$15M

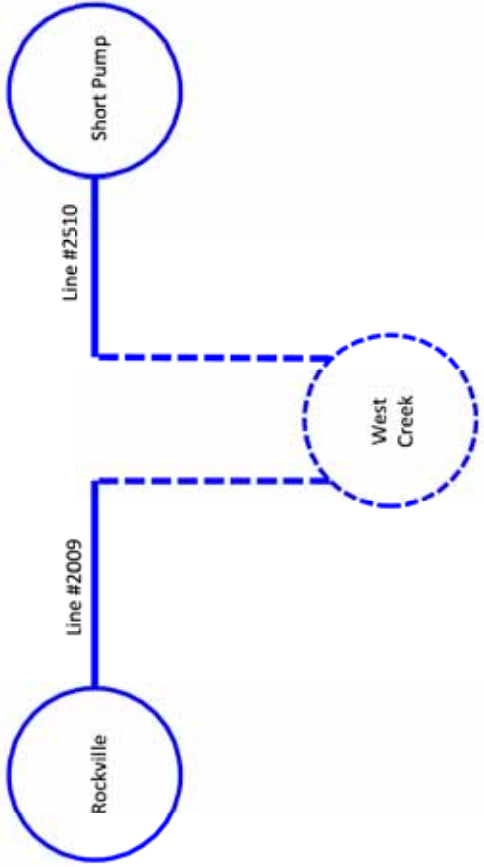
Alternatives Considered:

Cut existing 230kV Line 2009 between North Pole and Midlothian.
Cut existing 230kV Line 222.

Projected In-service Date: 07/26/2028

Project Status: Planning

Model: 2029 RTEP



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. See Section I.A.

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. See Sections I.A and I.C.

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 proposed Project will serve the significant projected residential and commercial load growth in the Goochland Load Area generally depicted in Attachment I.A.1. The Project will be used to support future load in the area as described in Sections I.A and I.C.

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

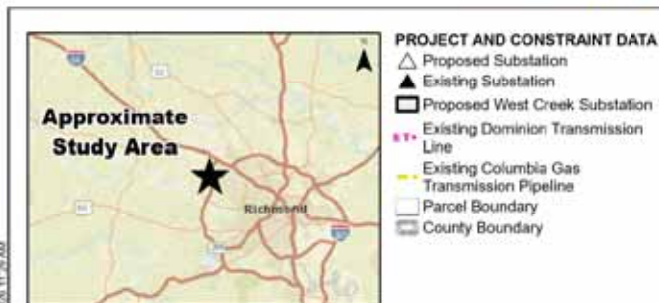
Response: The approximate lengths of the Proposed and Alternative Routes for the West Creek Lines are as follows:

Proposed Route (Route 3): 6.5 miles

Alternative Route 2: 5.9 miles

Alternative Route 5: 6.0 miles

See Section II.A.9 for an explanation of the Company's route selection process, as well as Section 2 of the Environmental Routing Study. Also, see Attachment II.A.1 for an overview map of the Proposed and Alternative Routes.



Attachment II.A.1 Route Overview

230 kV West Creek Loop and Substation
Dominion Energy Virginia
Goochland County, Virginia



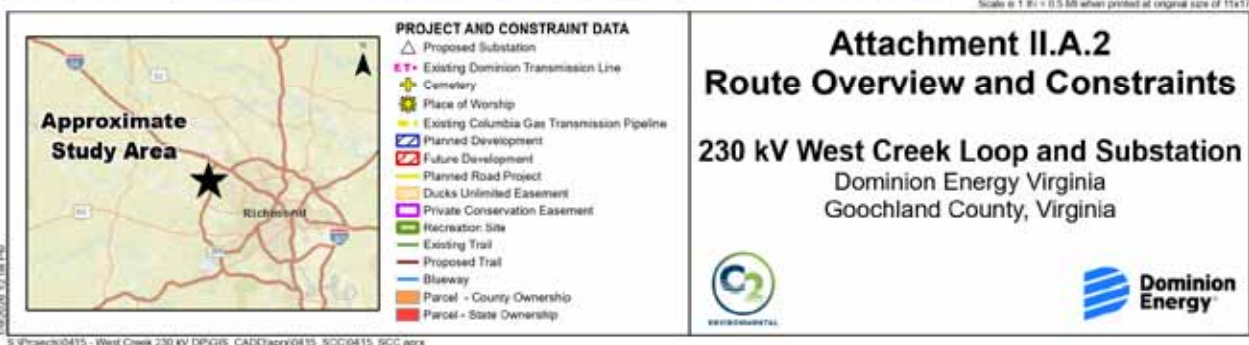
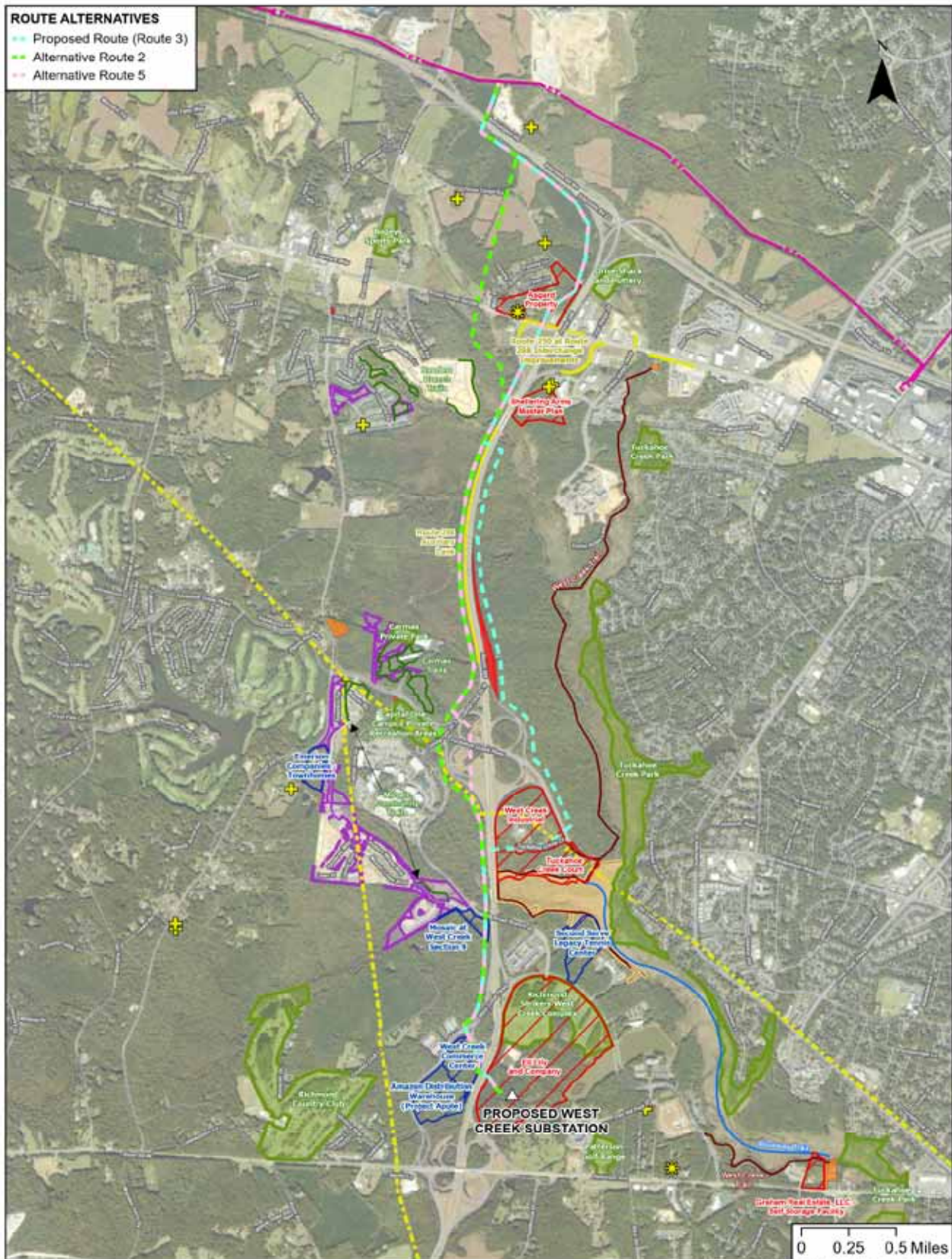
II. DESCRIPTION OF THE PROPOSED PROJECT

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.

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



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 for existing transmission line rights-of-way and Attachment II.B.3.d for proposed transmission line rights-of-way in the Project area.

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 electric transmission right-of-way that connects the proposed West Creek Substation to the existing transmission system.

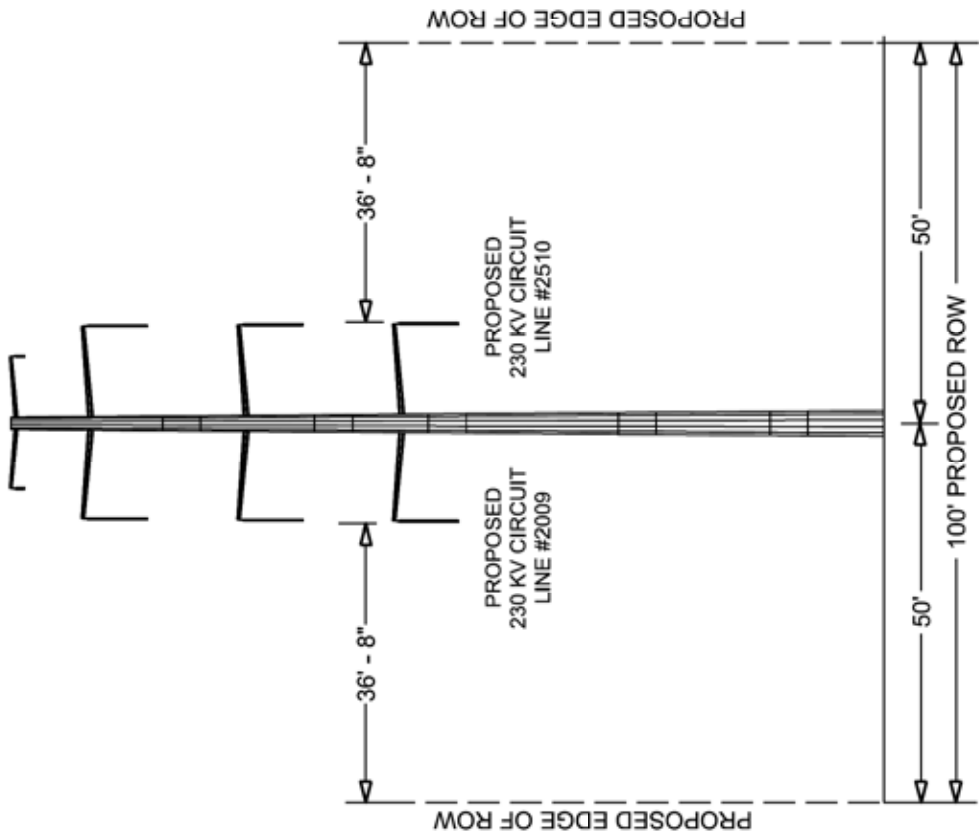
II. DESCRIPTION OF THE PROPOSED PROJECT

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 Attachment II.A.5.a.

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



PROPOSED ROW CONFIGURATION

DISCLAIMER		DESCRIPTION & VIEW		ATTACHMENT NO.
THE INFORMATION CONTAINED ON THIS DRAWING IS CONSIDERED PRELIMINARY IN NATURE AND IS SUBJECT TO CHANGE BASED ON FINAL DESIGN		Dominion Energy 5000 Dominion Blvd. Glen Allen, VA 23060		II.A.5.a
				DRAWN BY LJC

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 electric transmission right-of-way that connects the proposed West Creek Substation to the existing transmission system. Accordingly, the entire right-of-way for each of the Proposed and Alternative Routes will require easements for a new-build transmission line. See Attachment II.A.6.a.

The Company developed potential route alternatives for the West Creek Lines to maximize collocation with Route 288. The preferred route and route alternatives all require crossings of Route 288, Interstate-64 and other VDOT maintained roadways which will require new easements. The Company will also require new easements where the Proposed and Alternative Routes cross an existing Columbia Gas Transmission natural gas pipeline. The Company will coordinate with Columbia Gas Transmission to obtain the necessary easements and minimize impacts during construction and future operation of the West Creek Lines. While not needed as part of this Project, the Company reviewed if the Proposed Route would have space available to expand the 100-foot right-of-way by an additional 60 feet in the future to accommodate additional circuits. See Attachment II.A.6.b.⁵

⁵ See *supra*, n. 1.



Attachment II.A.6.a Right-of-Way Subject to New and Existing Easements

230 kV West Creek Loop and Substation
Dominion Energy Virginia
Goochland County, Virginia

PROJECT DATA

- Proposed Route (Route 3)
- Alternative Route 2
- Alternative Route 5
- Study Area
- Proposed Substation
- Map Sheet

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SHEET
1 OF 6





Attachment II.A.6.a **Right-of-Way Subject to New** **and Existing Easements**

230 kV West Creek Loop and Substation
 Dominion Energy Virginia
 Goochland County, Virginia

PROJECT DATA

- Proposed Route (Route 3)
- Alternative Route 2
- Alternative Route 5
- Existing Dominion Transmission Line

CONSTRAINT DATA

- Study Area
- Proposed Right-of-Way
- Proposed Substation
- Proposed Substation Footprint
- Existing Columbia Gas Transmission Pipeline
- Ducks Unlimited Easement
- Private Conservation Easement
- Parcel - State Ownership
- Parcel Boundary



1:6,000
 SHEET
 2 OF 6





Attachment II.A.6.a
Right-of-Way Subject to New
and Existing Easements

230 kV West Creek Loop and Substation
Dominion Energy Virginia
Goochland County, Virginia

PROJECT DATA

- Proposed Route (Route 3)
- Alternative Route 2
- Alternative Route 5
- Existing Dominion Transmissions
- Study Area

Study Area

- ☐ Proposed Right-of-Way
☐ Proposed Substation
☒ Proposed Substation Footprint

CONSTRAINT DATA

- Existing Columbia Gas Transmission Pipeline
■ Ducks Unlimited Easement
■ Private Conservation Easement
■ Parcel - State Ownership
■ Parcel Boundary

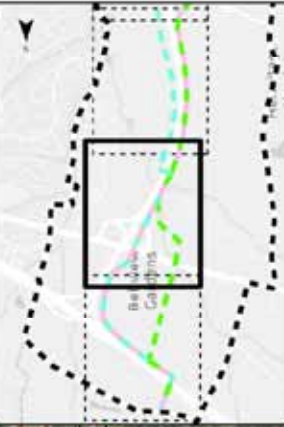


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3 OF 6





Attachment II.A.6.a **Right-of-Way Subject to New** **and Existing Easements**

230 kV West Creek Loop and Substation
 Dominion Energy Virginia
 Goochland County, Virginia

PROJECT DATA

- Proposed Route (Route 3)
- Alternative Route 2
- Alternative Route 5
- Existing Dominion Transmission Line

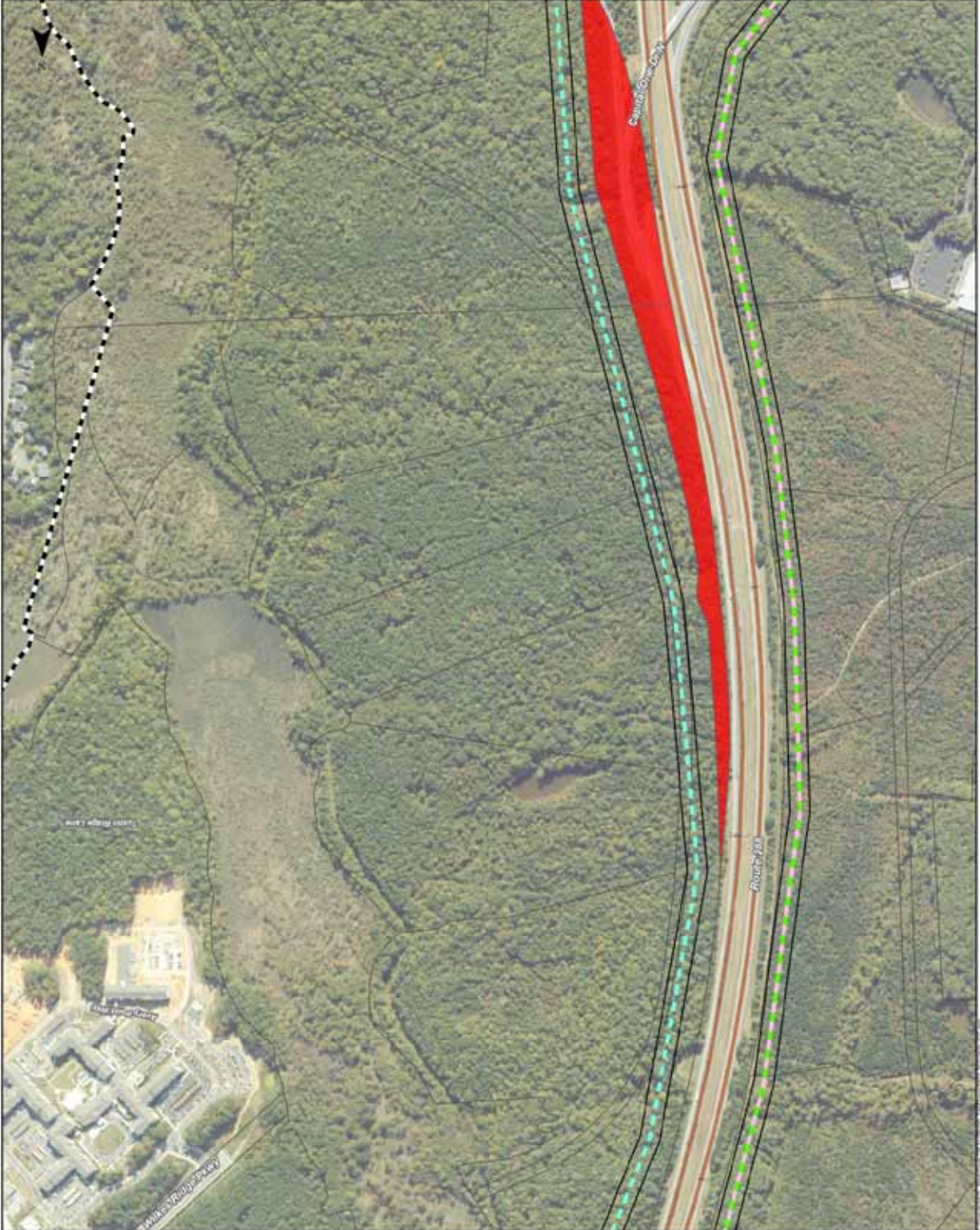
CONSTRAINT DATA

- Study Area
- Proposed Right-of-Way
- Proposed Substation
- Proposed Substation Footprint
- Existing Columbia Gas Transmission Pipeline
- Ducks Unlimited Easement
- Private Conservation Easement
- Parcel - State Ownership
- Parcel Boundary

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 SHEET
 4 OF 6





Attachment II.A.6.a **Right-of-Way Subject to New** **and Existing Easements**

230 kV West Creek Loop and Substation
 Dominion Energy Virginia
 Goochland County, Virginia

PROJECT DATA

- Proposed Route (Route 3)
- Alternative Route 2
- Alternative Route 5
- Existing Dominion Transmission Line

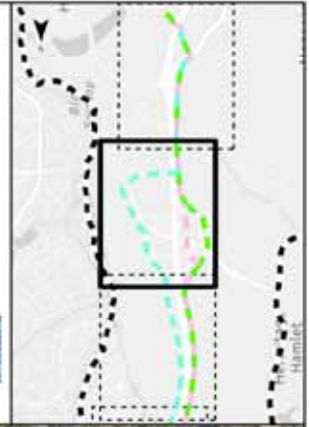
CONSTRAINT DATA

- Study Area
- Proposed Right-of-Way
- Proposed Substation
- Proposed Substation Footprint
- Existing Columbia Gas Transmission Pipeline
- Ducks Unlimited Easement
- Private Conservation Easement
- Parcel - State Ownership
- Parcel Boundary

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 Feet



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 SHEET
 5 OF 6





Attachment II.A.6.a
Right-of-Way Subject to New
and Existing Easements

230 kV West Creek Loop and Substation
 Dominion Energy Virginia
 Goochland County, Virginia

PROJECT DATA

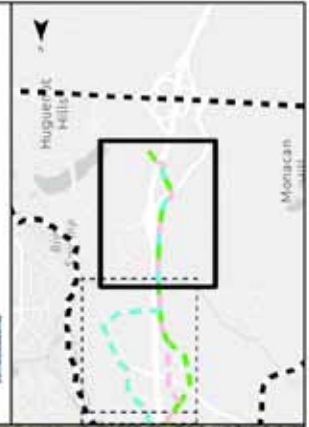
- Proposed Route (Route 3)
- Alternative Route 2
- Alternative Route 5
- Existing Dominion Transmission Line
- Study Area
- Proposed Right-of-Way
- Proposed Substation
- Proposed Substation Footprint

CONSTRAINT DATA

- Existing Columbia Gas Transmission Pipeline
- Ducks Unlimited Easement
- Private Conservation Easement
- Parcel - State Ownership
- Parcel Boundary



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 SHEET
 6 OF 6





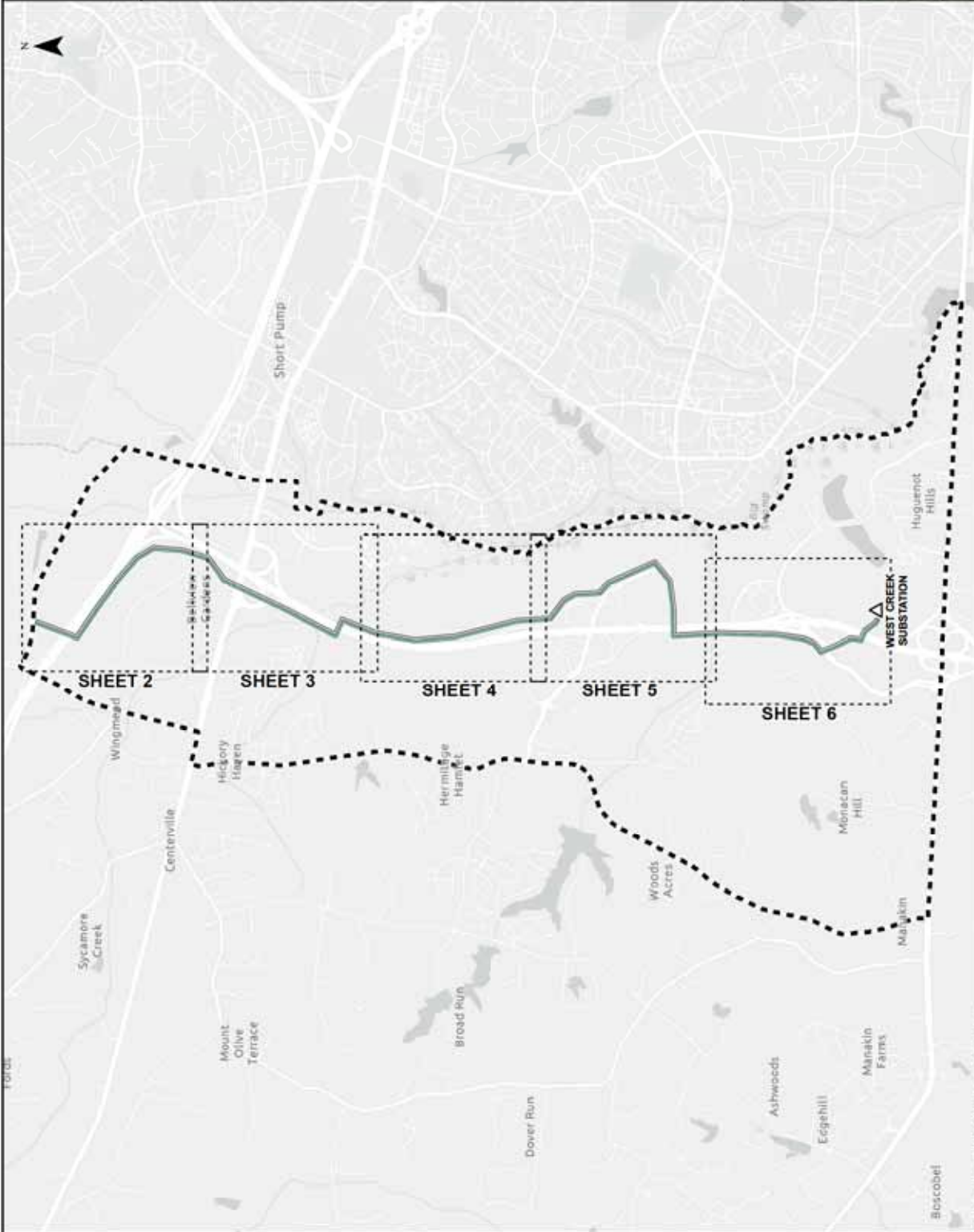
Attachment II.A.6.b
Additional 60 Feet of Right-of-Way
230 kV West Creek Loop and Substation
 Dominion Energy Virginia
 Goodland County, Virginia

PROJECT DATA
 ■ Study Area
 ■ Proposed Route 100 FT Right-of-Way
 ■ Proposed Route Additional 60 FT Right-of-Way
 ▲ Proposed Substation
 □ Map Sheet

0 3,500 7,000
 Feet



1:40,000
 SHEET
 1 OF 6





Attachment II.A.6.b
Additional 60 Feet of Right-of-Way
230 kV West Creek Loop and Substation
 Dominion Energy Virginia
 Goochland County, Virginia

PROJECT DATA

- Study Area
- Proposed Route 100 FT Right-of-Way
- Proposed Route Additional 60 FT Right-of-Way
- Existing Dominion Transmission Line
- Proposed Substation
- Proposed Substation Footprint
- Parcel Boundary

0 500 1,000
Feet



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SHEET
2 OF 6





Attachment II.A.6.b
Additional 60 Feet of Right-of-Way
230 kV West Creek Loop and Substation
 Dominion Energy Virginia
 Goochland County, Virginia

PROJECT DATA

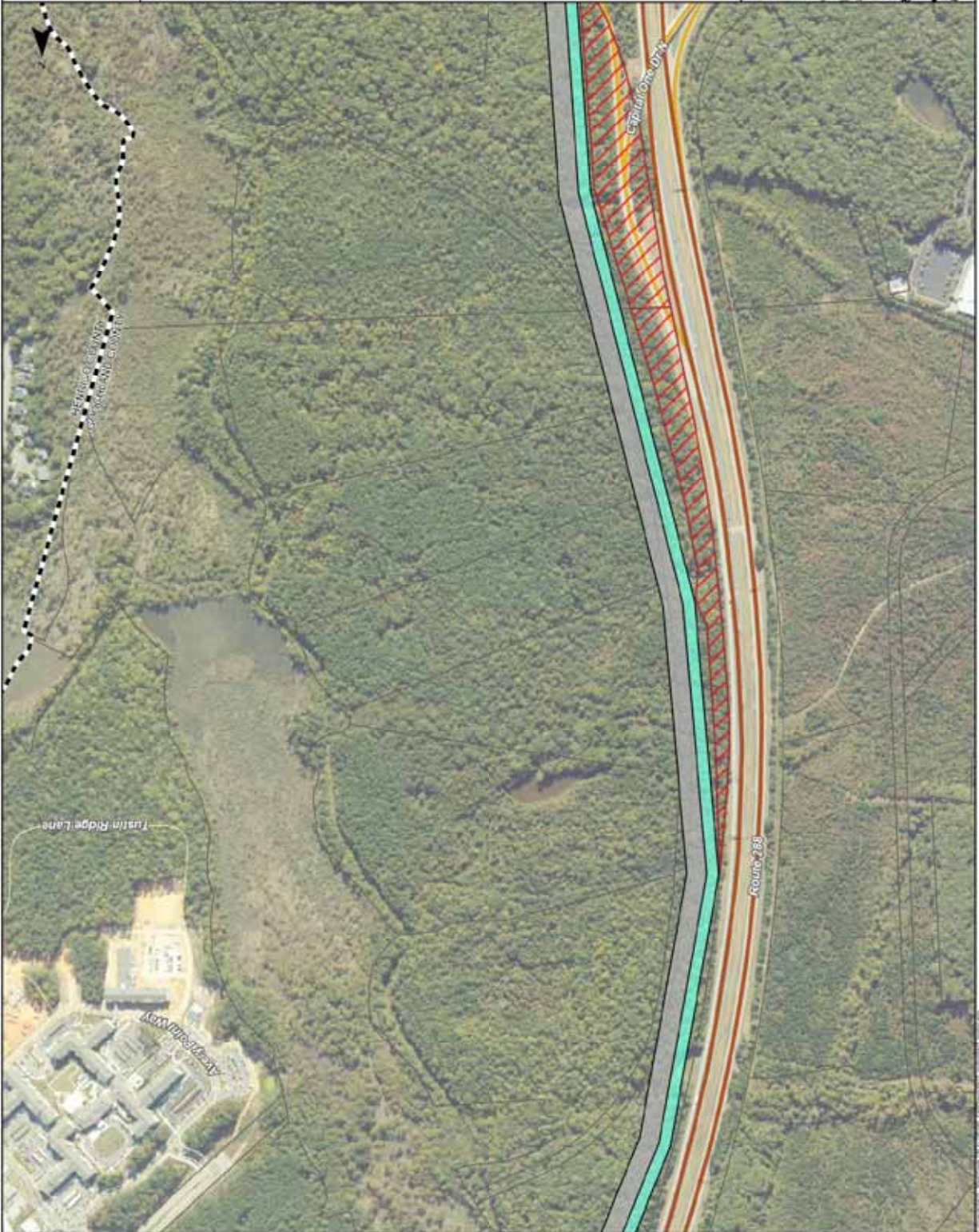
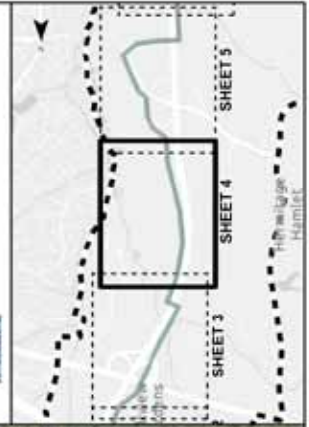
- Study Area
- Proposed Route 100 FT Right-of-Way
- Proposed Route Additional 60 FT Right-of-Way
- Existing Dominion Transmission Line
- Proposed Substation
- Proposed Substation Footprint
- Parcel Boundary

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Feet



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SHEET
4 OF 6





Attachment II.A.6.b
Additional 60 Feet of Right-of-Way
230 kV West Creek Loop and Substation
 Dominion Energy Virginia
 Goochland County, Virginia

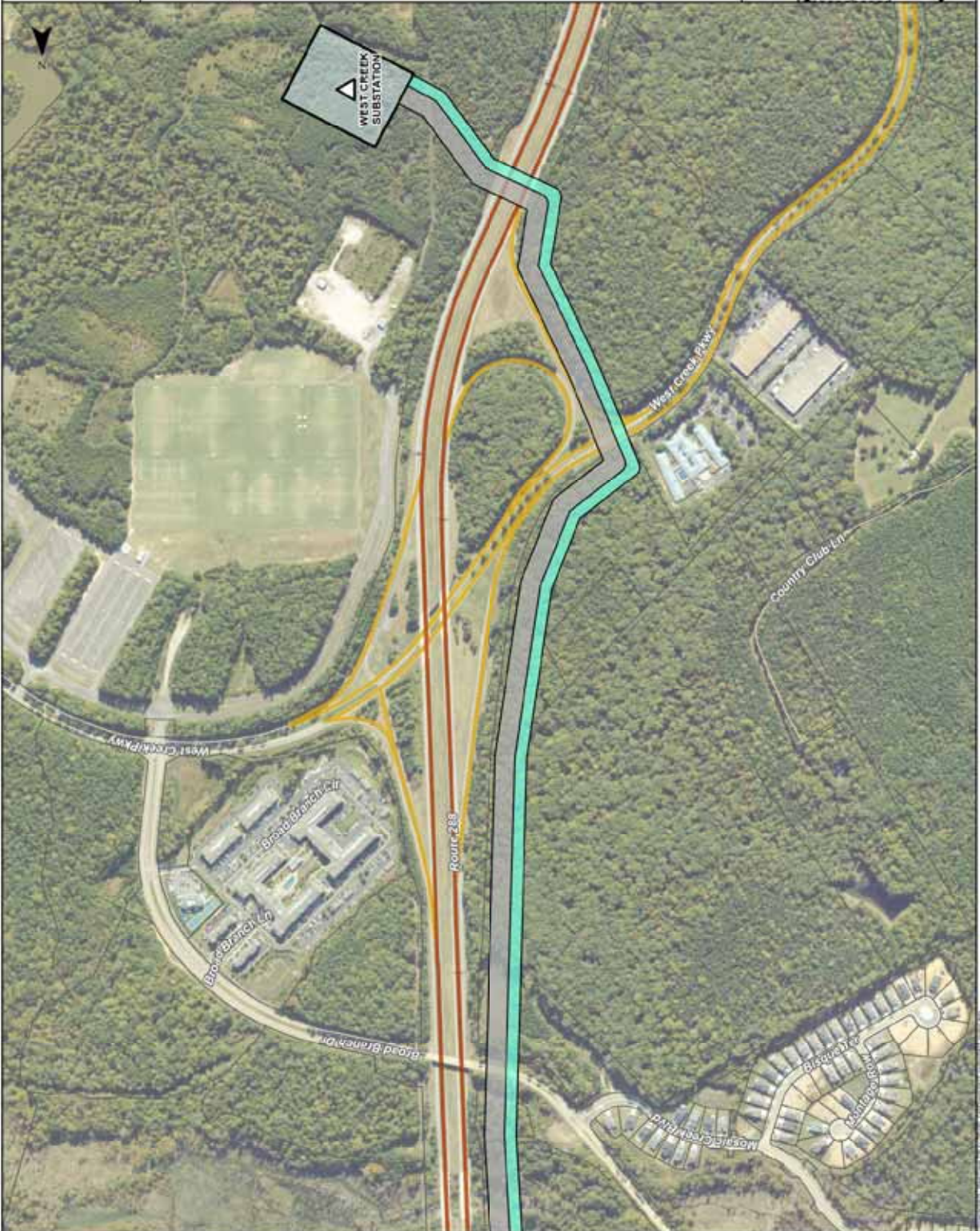
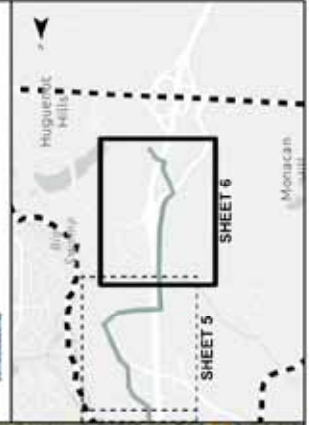
PROJECT DATA

- Study Area
- Proposed Route 100 FT Right-of-Way
- Proposed Route Additional 60 FT Right-of-Way
- Existing Dominion Transmission Line
- Proposed Substation
- Proposed Substation Footprint
- Parcel Boundary

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Feet



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SHEET 6 OF 6



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 right-of-way for the Proposed Route will be primarily 100 feet wide.⁶ Based on anticipated conditions, tree clearing will be required along the majority of the Proposed 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 where development has already occurred, 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 avoid land disturbance 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 where applicable 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 in order to patrol and make emergency repairs. Periodic maintenance to control woody growth will consist of hand cutting, machine mowing and/or herbicide application.

⁶ See *supra*, n. 1.

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 or access to Dominion Energy Virginia's facilities.

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

- Agriculture
- Hiking Trails Crossings
- Fences
- Perpendicular Road Crossings
- Perpendicular Utility Crossings
- Residential Driveways Crossings
- 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 group. 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 suitable for a transmission line can be identified. The Company also considers the facilities required to construct and operate the new infrastructure, the length of the new right-of-way required for the project, existing and future land uses, the potential for environmental impacts and impacts on communities, constructability, and cost.

For this Project, the Company retained the services of C2 Environmental Inc ("C2") 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 ("Routing Study"). After review of the new build options, the Company identified one electrical option for the Project, which is located entirely within Goochland County, Virginia. Two additional electrical solutions were studied and ultimately eliminated from consideration for the West Creek Lines as described in Section I.E of this Appendix and Section 2.6 of the Routing Study.

The study area encompasses an area containing the Project origin and termination points, and is bounded by the following features:

- The Company's existing Line #2090 to the north;
- The Goochland / Henrico County border and Tuckahoe Creek to the east;
- Ashland Road and Hockett Road to the west; and

- Route 6 (River Road West) and the proposed West Creek Substation to the south.

C2 initially identified five potential overhead routes for the West Creek Lines, which are referred to in the Routing Study as Routes 1, 2, 3, 4, and 5. Of the five route alternatives initially identified, Route 3 was carried forward as the Company's preferred route (Proposed Route) and Routes 2 and 5 were carried forward as viable route alternatives.

The Company evaluated utilizing underground construction for the Project. Dominion's underground engineering reviewed the pathways for the overhead alignments identified early in the routing process and reviewed space requirements for transition stations. A discussion of the engineering and routing constraints, many of which present challenges when compared with overhead routes, are presented in Section 2.7 of the Routing Study. For reasons including construction methodology, increased impacts on wetlands and permitting timeline concerns, gas pipeline crossings, VDOT interchange crossings, need for transition stations, limiting cut-in opportunities for future growth, and increased cost and construction timeline, conceptual underground and hybrid routes were rejected from further consideration for the Project.

Route 1 was eliminated from further consideration due to proximity to residences, impacts on open space and stream conservation easements, crossing of Technology Overlay District ("TOD") West, requiring multiple crossings of natural gas pipeline easements, and overall greater length and construction footprint impacts. See Figure 2.5-1 in Appendix B of the Routing Study for a map of the eliminated overhead route. Additional discussion of Route 1 is included in Section 2.5 of the Routing Study.

Route 4 was carried through the Routing Study and was ultimately rejected and not put forth as a viable route alternative due to a greater number of various environmental impacts including wetlands, forested land, and ecological cores. Additional discussion on why Route 4 was eliminated is included in Section 6.1 of the Routing Study.

Comparison of Route Alternatives

Resource	Unit	Proposed Route (Route 3)	Alternative Route 2	Alternative Route 5
Total length	miles	6.5	5.9	6.0
Total construction footprint	acres	83.8	76.0	77.9
Collocation with existing linear facilities	miles	5.4	4.0	5.1
Collocation with existing linear facilities	percent of total	84%	68%	84%
County TOD lands crossed	miles	4.8	4.7	4.4
Industrial/commercial zoned lands crossed	percent of total	56%	58%	49%
Existing residences within 500 feet of route centerline	number	1	5	0
Planned developments crossed	miles	0.3	0.3	0.3
Future developments crossed	miles	0.7	0.1	0.4
Existing roads crossed	number	14	11	13
Forested wetland impacts	acres	8.4	12.3	7.6
Waterbodies crossed	number	23	33	22
Permanent forest impacts	acres	68.3	61.8	62.6

TOD = Goochland County Technology Overlay District

The three viable overhead route alternatives for the proposed West Creek Lines identified between the Company's existing Line #2009 and the proposed West Creek Substation are discussed in more detail below and in the Routing Study. The transmission-related estimated conceptual costs associated with the route alternatives are provided in Section I.I.

Proposed and Alternative Routes

Proposed Route (Route 3)

The Proposed Route would involve constructing a new double circuit overhead 230 kV transmission lines on primarily double circuit monopoles in a new primarily 100-foot-wide right-of-way beginning at the Company's existing Line #2009 and extending approximately 6.5 miles to the proposed West Creek Substation.

Starting at the cut-in location along the Company's existing Line #2009, the Proposed Route heads south for about 0.3 mile and crosses I-64. Turning southeast, the route is then collocated with I-64 for approximately 0.6 mile before turning south and paralleling the I-64 and Route 288 interchange for another 0.5 mile. The route then crosses Three Chopt Road and turns slightly southwest for about 0.2 mile. Continuing south for about 0.5 mile, the route then crosses Broad Street (250) and the Broad Street / Route 288 interchange. Turning east, the route then crosses Route 288 (0.1 mile) and then heads south paralleling the east side of Route 288 for about 1.5 miles, crossing Tuckahoe Creek. Continuing generally south, the route traverses the outside of the Route 288 / Tuckahoe Creek Parkway interchange and Tuckahoe Creek Parkway for about 0.9 mile. The route then crosses Tuckahoe Creek Parkway and heads west for approximately 0.4 mile before crossing Route 288 (0.1 mile) for a second time. Turning south, the route then parallels the west side of Route 288 for about 0.8 mile, crossing Broad Branch and Broad Branch Drive. Continuing in a generally southerly direction for the remaining 0.6 mile, the route crosses West Creek Parkway and Route 288 before terminating at the substation site.

The Proposed Route measures approximately 6.5 miles long. The right-of-way for the Proposed Route (78.7 acres) and the proposed West Creek Substation site (5.1 acres) would encompass a combined 83.8 acres.

The Proposed Route crosses 40 parcels, all of which are privately owned. Land use along the Proposed Route right-of-way consists of 63.2 acres of forested land, 1.3 acres of agricultural land, 10.8 acres of open land, 3.5 acres of developed land, and less than 0.1 acre of open water. The entire West Creek Substation site consists of forested land.

Route 3 was selected as the Proposed Route for the Project. While the route is longer than both Alternative Routes 2 and 5, it balances a variety of impacts along with keeping portions of the route further from residential areas in Goochland County. Route 3 received primarily positive feedback from the public and both the Goochland County Board of Supervisors and the Economic Development Authority are in support of Route 3 as it stays further from residential areas where possible and is located in areas the County believes likely to be developed by non-

residential uses. Letters of support from the County are included in Attachment II.A.9. For additional information on why Route 3 was selected as the Proposed Route, see Section 6.2 in the Environmental Routing Study.

Alternative Route 2

Alternative Route 2 would involve constructing a new double circuit overhead 230 kV transmission lines on primarily double circuit monopoles in a new primarily 100-foot-wide right-of-way beginning at the Company's existing Line #2009 and extending approximately 5.9 miles to the proposed West Creek Substation.

Starting at the cut-in location along the Company's existing Line #2009, Alternative Route 2 follows the same alignment as the Proposed Route (Route 3) for about 0.5 mile. The route then deviates from the Proposed Route alignment and turns south for approximately 1.0 mile, crossing Three Chopt Road and Broad Street (250). The route then turns southeast for an additional 0.4 mile, crossing Tuckahoe Creek in two locations and Readers Branch, before paralleling with the west side of Route 288 for approximately 1.6 miles. Continuing generally south, the route then traverses the outside of the Route 288 / Tuckahoe Creek Parkway interchange for about 0.7 mile, crossing Tuckahoe Creek Parkway and Capital One Drive. The route then continues south, paralleling the west side of Route 288 for another 1.1 miles, crossing Broad Branch, and Broad Branch Drive. Along this stretch of the alignment, Route 2 merges back with the alignment of the Proposed Route. Continuing in a generally southerly direction for the remaining 0.6 mile, the route crosses West Creek Parkway and Route 288 before terminating at the substation site.

Alternative Route 2 measures approximately 5.9 miles long. The right-of-way for Alternative Route 2 (70.9 acres) and the proposed West Creek Substation site (5.1 acres) would encompass a combined 76.0 acres.

Alternative Route 2 crosses 28 parcels, all of which are privately owned. Land use along the Alternative Route 2 right-of-way currently consists of 56.7 acres of forested land, 3.3 acres of agricultural land, 8.6 acres of open land, 2.2 acres of developed land, and <0.1 acre of open water. The entire West Creek Substation site consists of forested land.

Alternative Route 2 represents a viable, but less preferable alternative to the Proposed Route. Alternative Route 2 received primarily negative feedback from the public who had concerns that the route was closer to both Readers Branch and Bellview Gardens residential communities. Alternative Route 2 has the largest number of residences in proximity to the route. A total of five residences are within 500 feet of the centerline of Route 2, two of which are also within 250 feet of the centerline. Route 2 is also collocated with existing linear infrastructure for the lowest percentage of the route (68 percent) and would have the greatest amount of wetland and waterbody impacts.

Alternative Route 2 would have the least number of impacts on VDOT rights-of-way and cross the least number of future developments. The route would cross 0.6 mile of VDOT right-of-way and only requires one crossing of Route 288. While the route would require three structures in VDOT right-of-way, none of these structures would be located within a cloverleaf of an interchange. Alternative Route 2 avoids crossing both the Route 288 / Broad Street interchange and the Route 288 / Tuckahoe Creek Parkway interchange. Alternative Route 2 is the only route that avoids crossing the Asgard Property future development. See Section III.E further discussion regarding the Asgard Property future development.

Alternative Route 5

Alternative Route 5 would involve constructing a new double circuit overhead 230 kV transmission lines on primarily double circuit monopoles in a new primarily 100-foot-wide right-of-way beginning at the Company's existing Line #2009 and extending approximately 6.0 miles to the proposed West Creek Substation.

Starting at the cut-in location along the Company's existing Line #2009, Alternative Route 5 follows the same alignment as the Proposed Route for about 2.1 miles. The route then deviates from the Proposed Route and stays parallel to the west side of 288 for an additional approximately 1.7 miles. The route then crosses a ramp to Route 288 (0.1 mile) and crosses through the Route 288 / Tuckahoe Creek Parkway interchange for about 0.4 mile. Continuing generally south, the route then continues to parallel the west side of Route 288 for another 1.1 miles, joining back with the alignment of the Proposed route, crossing Broad Branch and Broad Branch Drive. Continuing in a generally southerly direction for the remaining 0.6 mile, the route crosses West Creek Parkway and Route 288 before terminating at the substation site.

Alternative Route 5 measures approximately 6.0 miles long. The right-of-way for Alternative Route 5 (72.8 acres) and the proposed West Creek Substation site (5.1 acres) would encompass a combined 77.9 acres.

Alternative Route 5 crosses 28 parcels, all of which are privately owned. Land use along Alternative Route 5 right-of-way consists of 57.5 acres of forested land, 1.3 acres of agricultural land, 11.2 acres open land, and 2.9 acres of developed land. The entire West Creek Substation site consists of forested land.

Alternative Route 5 represents a viable, but less favorable alternative to the Proposed Route. Alternative Route 5 received primarily positive feedback from the community and residents liked that the route was collocated with Route 288 and has fewer environmental impacts when compared with the Proposed Route. Alternative Route 5 was considered less favorable than the Proposed Route as it does not cross to the east side of Route 288 and stays on the west side, closer to residential and existing commercial development. As noted in Sections 3.1.7 and 4.1.6 of the Environmental Routing Study, there are already two future

developments proposed for the east side of Route 288, and the County anticipates additional higher energy consuming customers proposing development in this area. Having a transmission line routed in this area may provide cut-in options for future developers.

Additionally, Alternative Route 5 would have the greatest impact on VDOT rights-of-way (1.2 miles) and the largest number of structures (7) needing to be located within VDOT rights-of-way. Route 5 is the only route that crosses the Route 288 / Tuckahoe Creek Parkway interchange. While the Company has structures in interchanges across the state, they are cognizant of the fact that the permitting for these structures can take additional time and coordination with VDOT. At the time of this filing, the Company does not anticipate that the crossings of these interchanges would impact the schedule for the Project.

BOARD OF SUPERVISORS

Jonathan Christy, Vice-Chair, District 1
Neil Spoonhower, District 2
Tom Winfree, Chair, District 3
Charles Vaughters, District 4
Jonathan Lyle, District 5



Dr. Jeremy J. Raley
County Administrator

Sara Worley
Deputy County Administrator

Josh Gillespie, AICP
Deputy County Administrator

www.goochlandva.us

December 11, 2025

Jeff Koestner
Dominion Energy Virginia
5000 Dominion Blvd
Glen Allen, VA 23060

RE: West Creek 230 kV Electric Transmission Project

Dear Mr. Koestner:

Goochland County is in support of Dominion Energy's proposed and expedited transmission line to support connecting Eli Lilly's proposed manufacturing facility in West Creek. With this \$5 billion dollar investment, the new facility will create 1,800 construction jobs and 650 permanent jobs in Goochland County.

Furthermore, the location of the new manufacturing facility is the County's approved Technology Overlay District (TOD), which is consistent with the County's planned uses for that area and economic goals. In addition to promoting jobs and economic development in the County, the TOD was also designed to provide additional protections for nearby residents through buffers, setbacks, and other parameters.

The County supports Dominion Energy's proposed project route and overhead construction, which is located away from residents and in areas the County believes likely will be developed by non-residential uses. Relatedly, the County supports Dominion Energy's request to their regulator, the Virginia State Corporation Commission, to voluntarily obtain 60 additional feet of right of way to secure a place for the location of an additional transmission line in the future, which is consistent with the County's development plans for the TOD area.

Sincerely,

Jeremy Raley, Ed.D
County Administrator



Economic Development Authority

December 15, 2025

Jeff Koestner
 Dominion Energy Virginia
 5000 Dominion Blvd
 Glen Allen, VA 23060
 RE: West Creek 230 kV Electric Transmission Project

Dear Mr. Koestner:

The Goochland County Economic Development Authority (EDA) is in support of Dominion Energy's proposed and expedited transmission line to support connecting Eli Lilly's proposed manufacturing facility in West Creek. The mission of the Economic Development Authority is to attract, cultivate, and retain diverse business in Goochland County by promoting economic growth through commercial, and industrial development while preserving Goochland's agricultural heritage. This new proposed and expedited transmission line enhances critical infrastructure in Goochland County that will support the EDA's mission of promoting economic growth. The transmission line will directly support the \$5 billion dollar investment Eli Lilly is making in Goochland, which will lead to 1,800 construction jobs and 650 permanent jobs in the Goochland community.

Furthermore, the location of the new manufacturing facility is in the County's approved Technology Overlay District (TOD), which is consistent with the County's planned uses for that area and economic goals. The new transmission line will enhance the business readiness of West Creek and the TOD, making it more attractive for future investment from new and existing industries, supporting the economic growth goals of Goochland County.

The Goochland Economic Development Authority endorses Dominion Energy's proposed project route and overhead construction, which is located away from residents and in areas the County believes likely will be developed by non-residential uses. In addition, the EDA supports Dominion Energy's request to their regulator, the Virginia State Corporation Commission, to voluntarily obtain 60 additional feet of right of way to secure a place for the location of an additional transmission line in the future, which is consistent with the County's development plans for the TOD area.

Sincerely,

Ben Slone
 Chairman
 Goochland County Economic Development Authority

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 Project in a manner that minimizes outage times on Line #2009. Assuming the Commission issues a final order by July 1, 2026, and construction commences around July 2027, the cut-in of the lines going to West Creek Substation should occur in July 2028. Two outages on Line #2009 are anticipated during construction. The first outage should occur in the Spring of 2028 and should be no longer than 30 days. The purpose of this outage is to install the cut in structures within the existing Line #2009 right-of-way and make ready the existing transmission, static and fiber lines for the new West Creek line cut-in. The second outage will occur in July 2028 and should be a five (5) day outage. The purpose of this outage will be to cut-in the new lines going to West Creek and energize the station. No customers should be disrupted as a result of these outages, as all distribution service should be maintained. As noted in Section I.H of the Appendix, the Company estimates that construction of the Project will be completed by July 26, 2028.

The Company intends to complete this work during requested outage windows, as described above. However, as with all outage scheduling, these timeframes may change depending on whether PJM approves the outages and other relevant considerations allow for it. It is customary for PJM to hold requests for outages and approve only shortly before the outages are expected to occur and, therefore, the requested outages are subject to change. Therefore, the Company will not have clarity on whether this work will be done as requested until very close in time to the requested outages. If PJM approves different outage dates, the Company will continue to diligently pursue timely completion of this work.

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 Company utilized Guideline #1 (To the extent permitted by the property interest involved, rights-of-way should be selected with the purpose of minimizing conflict between the rights-of-way and present and prospective uses of the land on which they are to be located) by meeting with landowners and developers and minimizing conflict between the proposed right-of-way and present and prospective uses of the land on which the proposed Project is to be located.

The proposed Project is consistent with Guideline #2 (where practical, rights of-way should avoid sites listed on the National Register of Historic Places ("NRHP")), as it will have no impact to any site listed on the NRHP. A Stage I Pre-Application Analysis prepared by Dutton + Associates on behalf of the Company is included with the Routing Study as Appendix F and was submitted to the Virginia Department of Historic Resources ("VDHR") on January 27, 2026.

The Company 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 consulted with Goochland County Economic Development Authority ("EDA"), Goochland County Planning and Zoning, and VDOT. See Sections III. and V. 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 follows 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.**

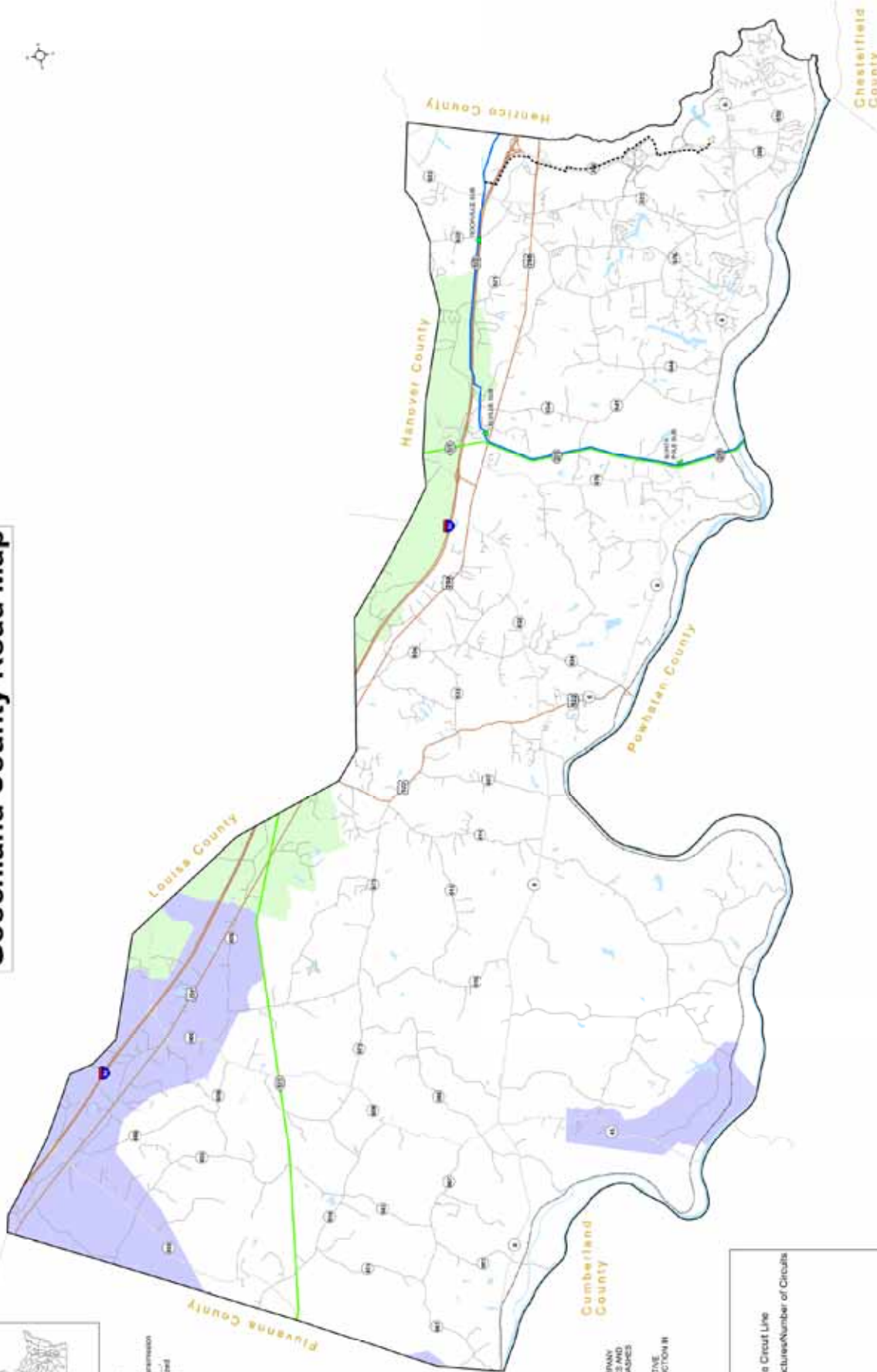
Response: a. The 6.5-mile proposed Project is located entirely within Goochland County, Virginia, and Dominion Energy Virginia's service territory.

b. An electronic copy of the VDOT "General Highway Map" for Goochland County has been marked as required and submitted with the Application. A reduced copy of the map is provided as Attachment II.A.12.b.

Goochland County Road Map



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") for proposed transmission facilities in this county, as of September 2011. Other Company facilities previously authorized by the SCC may be depicted on this SCC approved county map.



VIRGINIA ELECTRIC AND POWER COMPANY
TRANSMISSION FACILITIES TO BE CONSTRUCTED
AND SUBSTATIONS TO BE BUILT IN BLACK CIRCLES
ON THIS MAP

IS NOT OFFENSE TO SUCH CONSTRUCTION IN
ITS SERVICE TERRITORY

SIGNATURE

DATE

TITLE

Legend

- Proposed 230 kV Double Circuit Line
- Number of Lines of Structures/Number of Circuits
- ▲ Proposed Substation
- ▲ Existing Substation
- 115 kV
- 230 kV
- 500 kV
- Provider Service Territory
- CVEC
- REC
- VEPCO

*SCC and other road data
obtained from Maps and
County data, current as of
September 2011.



Goochland

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 proposed West Creek Lines, a total of four new circuits, will be designed and operated at 230 kV with no anticipated voltage upgrade and each circuit will 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 proposed West Creek Lines will include three-phase twin-bundled 768.2 ACSS/TW/HS type conductor arranged as shown in Attachments II.B.3.a-II.B.3.c. The twin-bundled 768.2 ACSS/TW/HS conductors are a Company standard for new 230 kV construction.

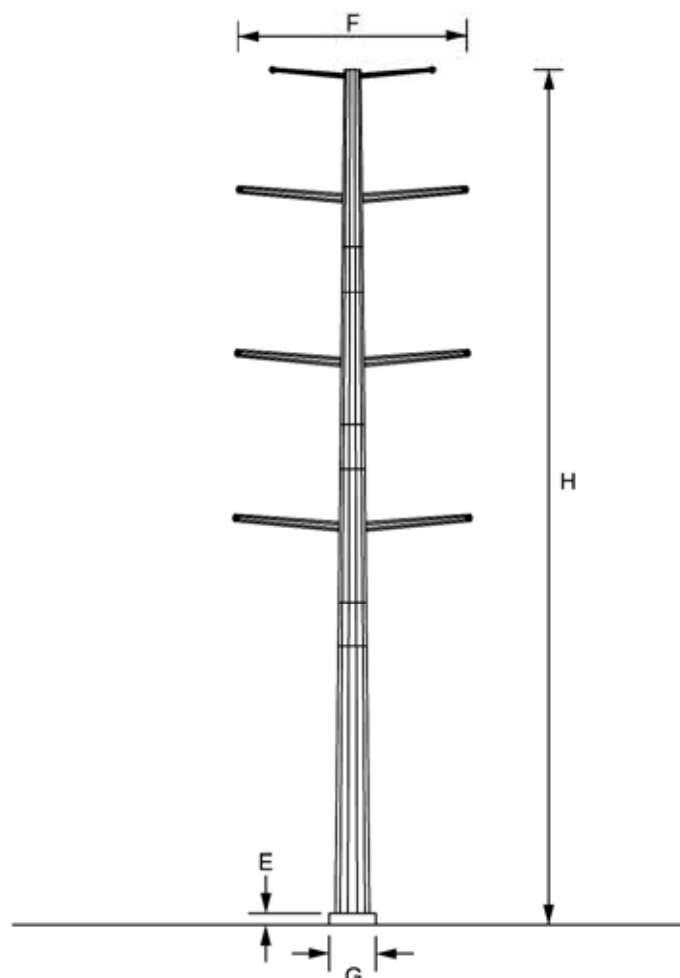
II. DESCRIPTION OF THE PROPOSED PROJECT

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.a-c.

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



TYPICAL DC ENGINEERED MONOPOLE DOUBLE DEADEND STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	MINIMIZES RIGHT OF WAY ACQUISITION
C. LENGTH OF R/W (STRUCTURE QTY):	6.5 MILES (22) - SEE NOTE 1
D. STRUCTURE MATERIAL:	WEATHERING STEEL
RATIONALE FOR STRUCTURE MATERIAL:	WEATHERING STEEL WAS SELECTED TO MATCH THE RURAL NATURE OF THE PROPOSED RIGHT OF WAY
E. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 2
F. AVERAGE WIDTH AT CROSSARM:	26'
G. AVERAGE WIDTH AT BASE:	SEE NOTE 3
H. MINIMUM STRUCTURE HEIGHT (SEE NOTE 4):	96.5'
MAXIMUM STRUCTURE HEIGHT (SEE NOTE 4):	131.5'
AVERAGE STRUCTURE HEIGHT (SEE NOTE 4):	107.4'
I. AVERAGE SPAN LENGTH:	596' (317' - 1013')
J. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES: 1. ROW LENGTH & STRUCTURE QUANTITY ARE EXCLUSIVE OF COMPANY-OWNED SUBSTATION PROPERTIES
 2. MINIMUM FOUNDATION REVEAL SHALL BE 1.5'
 3. FOUNDATION DIAMETER SHALL BE BASED ON GEOTECHNICAL FINDINGS DURING FINAL ENGINEERING
 4. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE AND EXCLUDE FOUNDATION REVEAL
 5. THE SPAN LENGTHS ASSOCIATED WITH THIS STRUCTURE TYPE ARE THE AHEAD SPANS

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



Dominion Energy
 5000 Dominion Blvd.
 Glen Allen, VA 23060

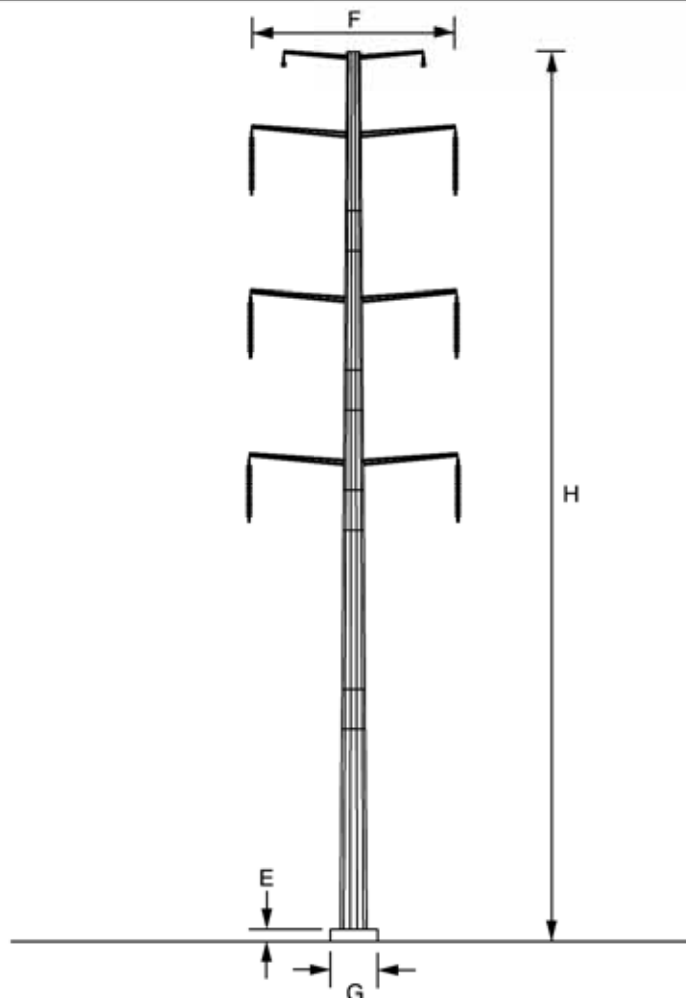
LINES 2009, 2510

TYPICAL DC ENGINEERED MONOPOLE
 DOUBLE DEADEND STRUCTURE

ATTACHMENT NO.

II.B.3.a

DRAWN BY: LJC



TYPICAL DC ENGINEERED MONOPOLE SUSPENSION STRUCTURE (I-STRING)

B. RATIONALE FOR STRUCTURE TYPE:	MINIMIZES RIGHT OF WAY ACQUISITION
C. LENGTH OF R/W (STRUCTURE QTY):	6.5 MILES (25) - SEE NOTE 1
D. STRUCTURE MATERIAL:	WEATHERING STEEL
RATIONALE FOR STRUCTURE MATERIAL:	WEATHERING STEEL WAS SELECTED TO MATCH THE RURAL NATURE OF THE PROPOSED RIGHT OF WAY
E. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 2
F. AVERAGE WIDTH AT CROSSARM:	26'
G. AVERAGE WIDTH AT BASE:	SEE NOTE 3
H. MINIMUM STRUCTURE HEIGHT (SEE NOTE 4):	97'
MAXIMUM STRUCTURE HEIGHT (SEE NOTE 4):	132'
AVERAGE STRUCTURE HEIGHT (SEE NOTE 4):	116'
I. AVERAGE SPAN LENGTH (RANGE):	597' (337' - 784') - SEE NOTE 5
J. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES: 1. ROW LENGTH & STRUCTURE QUANTITY ARE EXCLUSIVE OF COMPANY-OWNED SUBSTATION PROPERTIES
 2. MINIMUM FOUNDATION REVEAL SHALL BE 1.5'
 3. FOUNDATION DIAMETER SHALL BE BASED ON GEOTECHNICAL FINDINGS DURING FINAL ENGINEERING
 4. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE AND INCLUDE FOUNDATION REVEAL
 5. THE SPAN LENGTHS ASSOCIATED WITH THIS STRUCTURE TYPE ARE THE AHEAD SPANS

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



Dominion Energy
 5000 Dominion Blvd.
 Glen Allen, VA 23060

LINES 2009, 2510

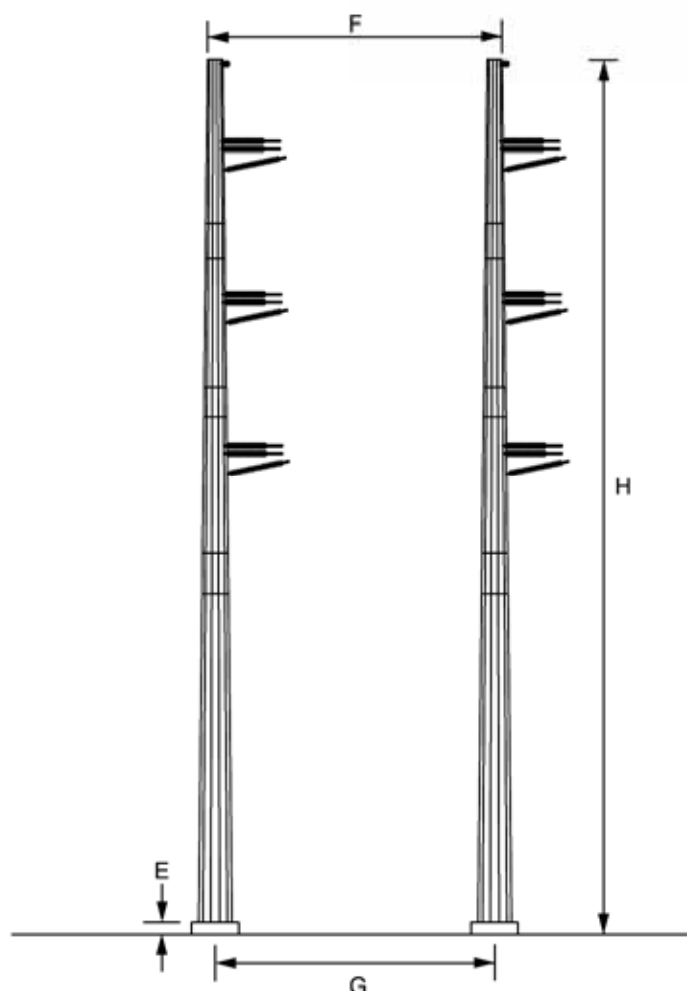
TYPICAL DC ENGINEERED MONOPOLE
 SUSPENSION STRUCTURE (I-STRING)

83

ATTACHMENT NO.

II.B.3.b

DRAWN BY: LJC



TYPICAL DC ENGINEERED 2-POLE DOUBLE DEADEND STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	MINIMIZES RIGHT OF WAY ACQUISITION; 2-POLES USED FOR HEAVY ANGLES TO OPTIMIZE POLE/FOUNDATION SIZE AND COST
C. LENGTH OF R/W (STRUCTURE QTY):	6.5 MILES (12) - SEE NOTE 1
D. STRUCTURE MATERIAL:	WEATHERING STEEL
RATIONALE FOR STRUCTURE MATERIAL:	WEATHERING STEEL WAS SELECTED TO MATCH THE RURAL NATURE OF THE PROPOSED RIGHT OF WAY
E. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 2
F. AVERAGE WIDTH BETWEEN POLE EDGES:	36'
G. AVERAGE WIDTH AT BASE:	34' - SEE NOTE 3
H. MINIMUM STRUCTURE HEIGHT (SEE NOTE 4):	97'
MAXIMUM STRUCTURE HEIGHT (SEE NOTE 4):	127'
AVERAGE STRUCTURE HEIGHT (SEE NOTE 4):	110'
I. AVERAGE SPAN LENGTH (RANGE):	562' (355' - 756') - SEE NOTE 5
J. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES: 1. ROW LENGTH & STRUCTURE QUANTITY ARE EXCLUSIVE OF COMPANY-OWNED SUBSTATION PROPERTIES
 2. MINIMUM FOUNDATION REVEAL SHALL BE 1.5'
 3. FOUNDATION DIAMETER SHALL BE BASED ON GEOTECHNICAL FINDINGS DURING FINAL ENGINEERING
 4. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE AND INCLUDE FOUNDATION REVEAL
 5. THE SPAN LENGTHS ASSOCIATED WITH THIS STRUCTURE TYPE ARE THE AHEAD SPANS

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



**Dominion
Energy**

Dominion Energy
 5000 Dominion Blvd.
 Glen Allen, VA 23060

LINES 2009,2510

TYPICAL DC ENGINEERED 2-POLE
 DOUBLE DEADEND STRUCTURE

84

ATTACHMENT NO.

II.B.3.c

DRAWN BY: LJC



Attachment II.B.3.d Structure Locations Along the Proposed Route

230 kV West Creek Loop and Substation
Dominion Energy Virginia
Goochland County, Virginia

PROJECT DATA

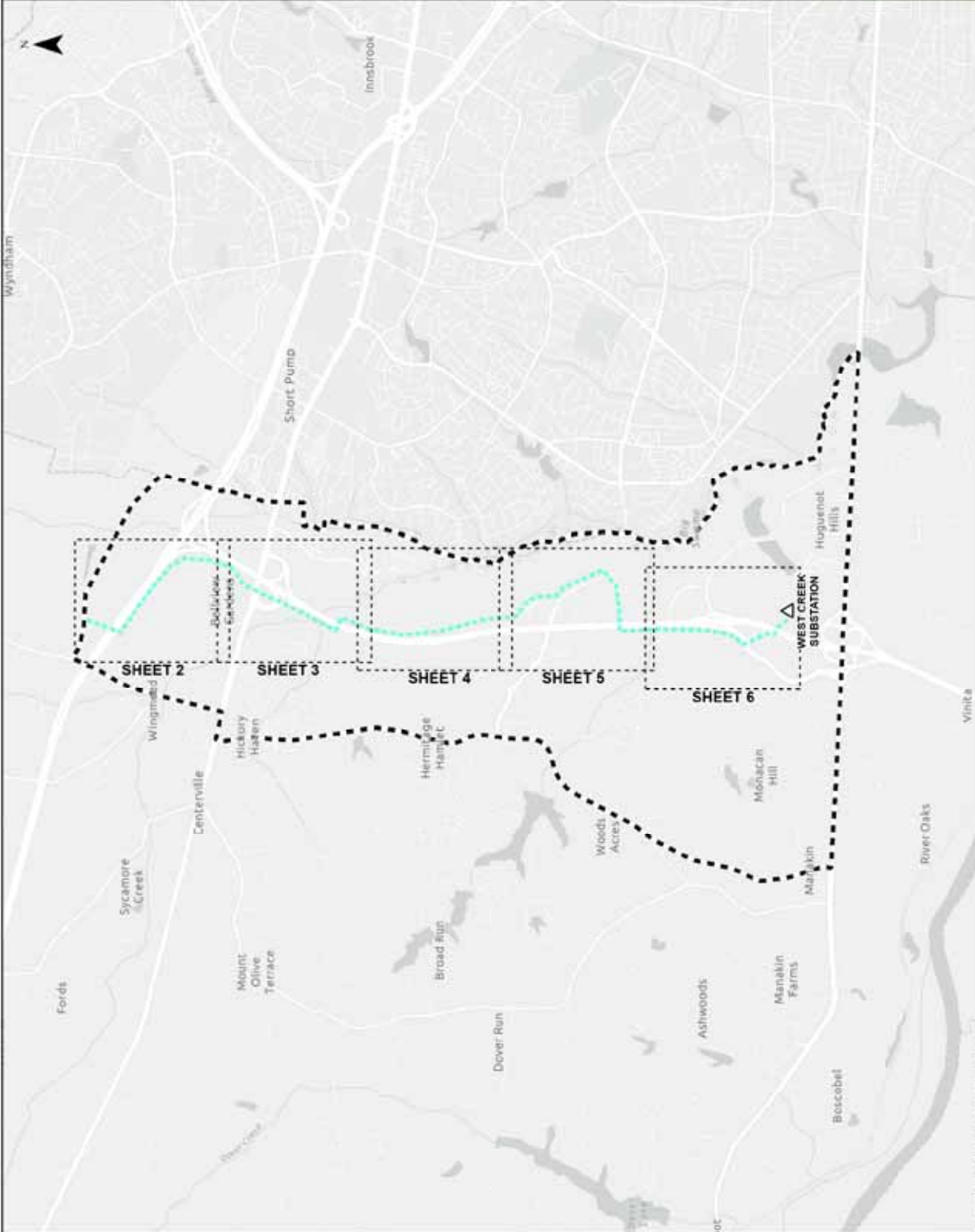
- Proposed Route (Route 3)
- Study Area
- Proposed Substation
- Map Sheet

0 4,000 8,000
Feet



1:48,000

SHEET
1 OF 6





Attachment II.B.3.d Structure Locations Along the Proposed Route

230 kV West Creek Loop and Substation
Dominion Energy Virginia
Goochland County, Virginia

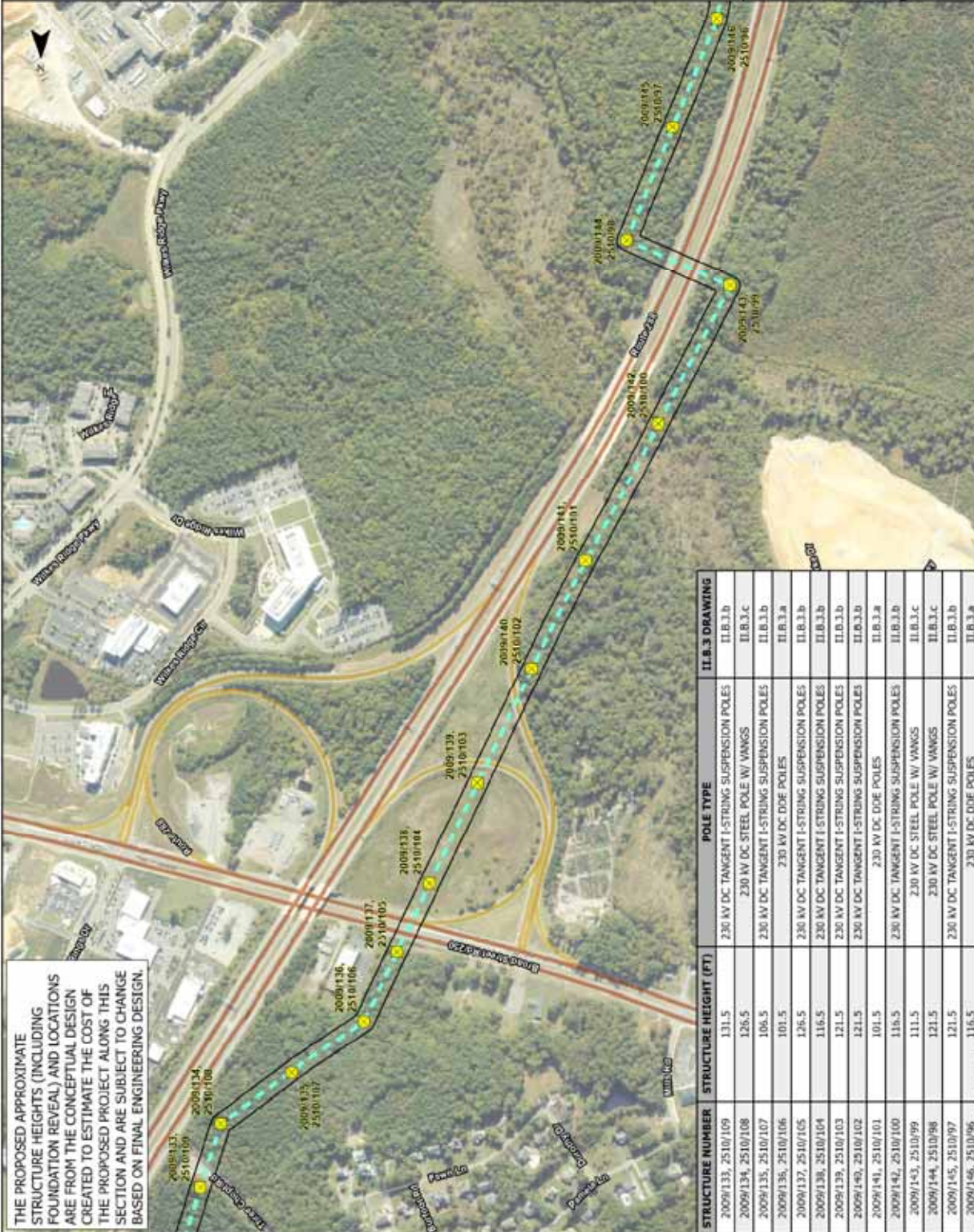
PROJECT DATA

- Proposed Structure
- Proposed Route (Route 3)
- Existing Dominion Transmission Line
- Study Area
- Proposed Right-of-Way
- Proposed Substation
- Proposed Substation Footprint

0 500 1,000
Feet



1:6,000
SHEET
3 OF 6



THE PROPOSED APPROXIMATE
STRUCTURE HEIGHTS (INCLUDING
FOUNDATION REVEAL) AND LOCATIONS
ARE FROM THE CONCEPTUAL DESIGN
CREATED TO ESTIMATE THE COST OF
THE PROPOSED PROJECT ALONG THIS
SECTION AND ARE SUBJECT TO CHANGE
BASED ON FINAL ENGINEERING DESIGN.

STRUCTURE NUMBER	STRUCTURE HEIGHT (FT)	POLE TYPE	II.B.3 DRAWING
2009/133, 2510/109	131.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/134, 2510/108	126.5	230 kV DC STEEL POLE W/ WINGS	II.B.3.c
2009/135, 2510/107	106.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/136, 2510/106	101.5	230 kV DC DOE POLES	II.B.3.a
2009/137, 2510/105	126.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/138, 2510/104	116.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/139, 2510/103	121.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/140, 2510/102	121.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/141, 2510/101	101.5	230 kV DC DOE POLES	II.B.3.a
2009/142, 2510/100	116.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/143, 2510/99	111.5	230 kV DC STEEL POLE W/ WINGS	II.B.3.c
2009/144, 2510/98	121.5	230 kV DC STEEL POLE W/ WINGS	II.B.3.c
2009/145, 2510/97	121.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/146, 2510/96	116.5	230 kV DC DOE POLES	II.B.3.a



Attachment II.B.3.d Structure Locations Along the Proposed Route

230 kV West Creek Loop and Substation
Dominion Energy Virginia
Goochland County, Virginia

PROJECT DATA

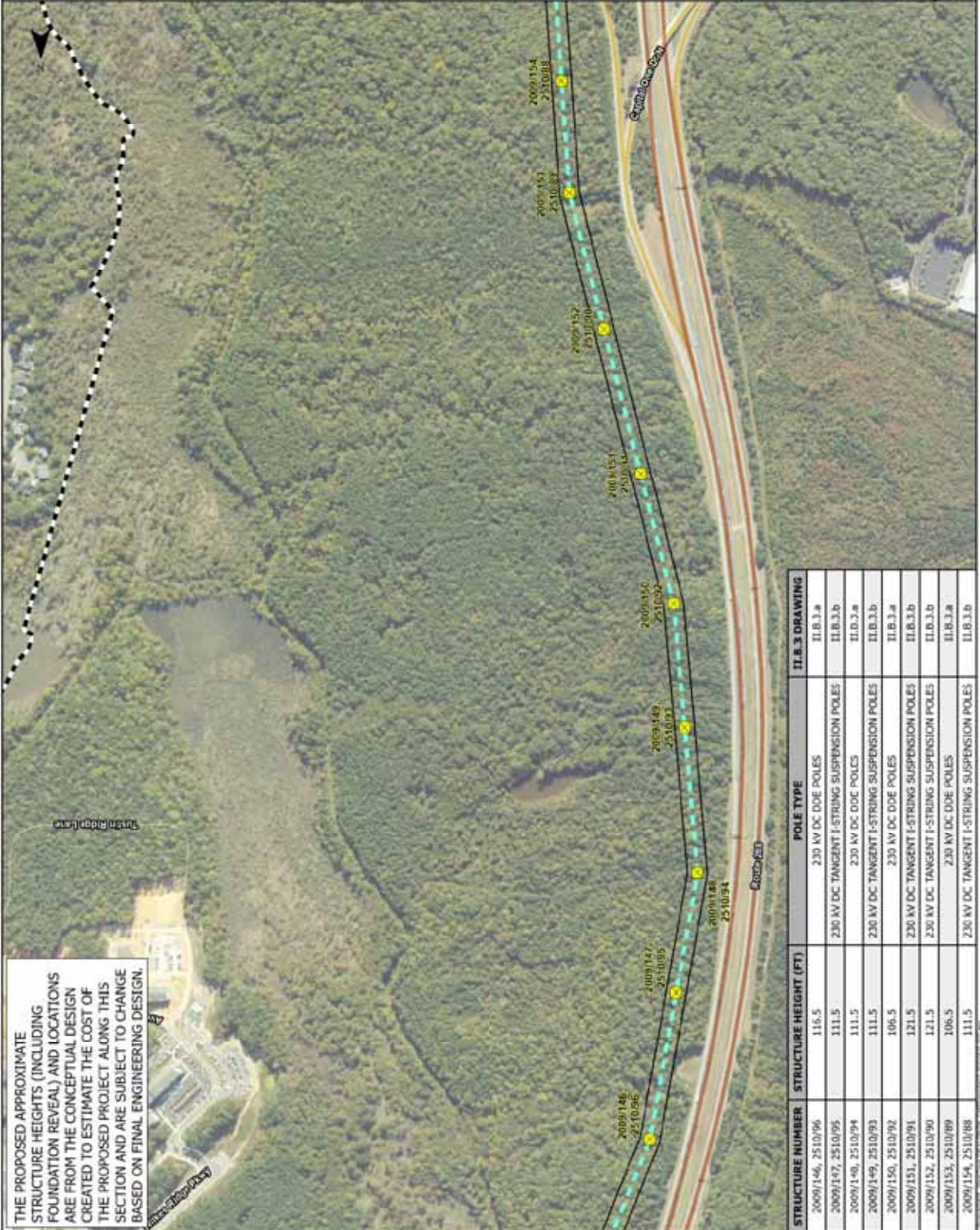
- Proposed Structure
- Proposed Route (Route 3)
- Existing Dominion Transmission Line
- Study Area
- Proposed Right-of-Way
- Proposed Substation
- Proposed Substation Footprint

0 500 1,000
Feet



1:6,000

SHEET
4 OF 6



THE PROPOSED APPROXIMATE
STRUCTURE HEIGHTS (INCLUDING
FOUNDATION REVEAL) AND LOCATIONS
ARE FROM THE CONCEPTUAL DESIGN
CREATED TO ESTIMATE THE COST OF
THE PROPOSED PROJECT ALONG THIS
SECTION AND ARE SUBJECT TO CHANGE
BASED ON FINAL ENGINEERING DESIGN.

STRUCTURE NUMBER	STRUCTURE HEIGHT (FT)	POLE TYPE	II.B.3 DRAWING
2009/146, 2510/96	116.5	230 kV DC DDE POLES	II.B.3.a
2009/147, 2510/95	111.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/148, 2510/94	111.5	230 kV DC DDE POLES	II.B.3.a
2009/149, 2510/93	111.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/150, 2510/92	106.5	230 kV DC DDE POLES	II.B.3.a
2009/151, 2510/91	121.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/152, 2510/90	121.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/153, 2510/89	106.5	230 kV DC DDE POLES	II.B.3.a
2009/154, 2510/88	111.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b



Attachment II.B.3.d Structure Locations Along the Proposed Route

230 kV West Creek Loop and Substation
Dominion Energy Virginia
Goochland County, Virginia

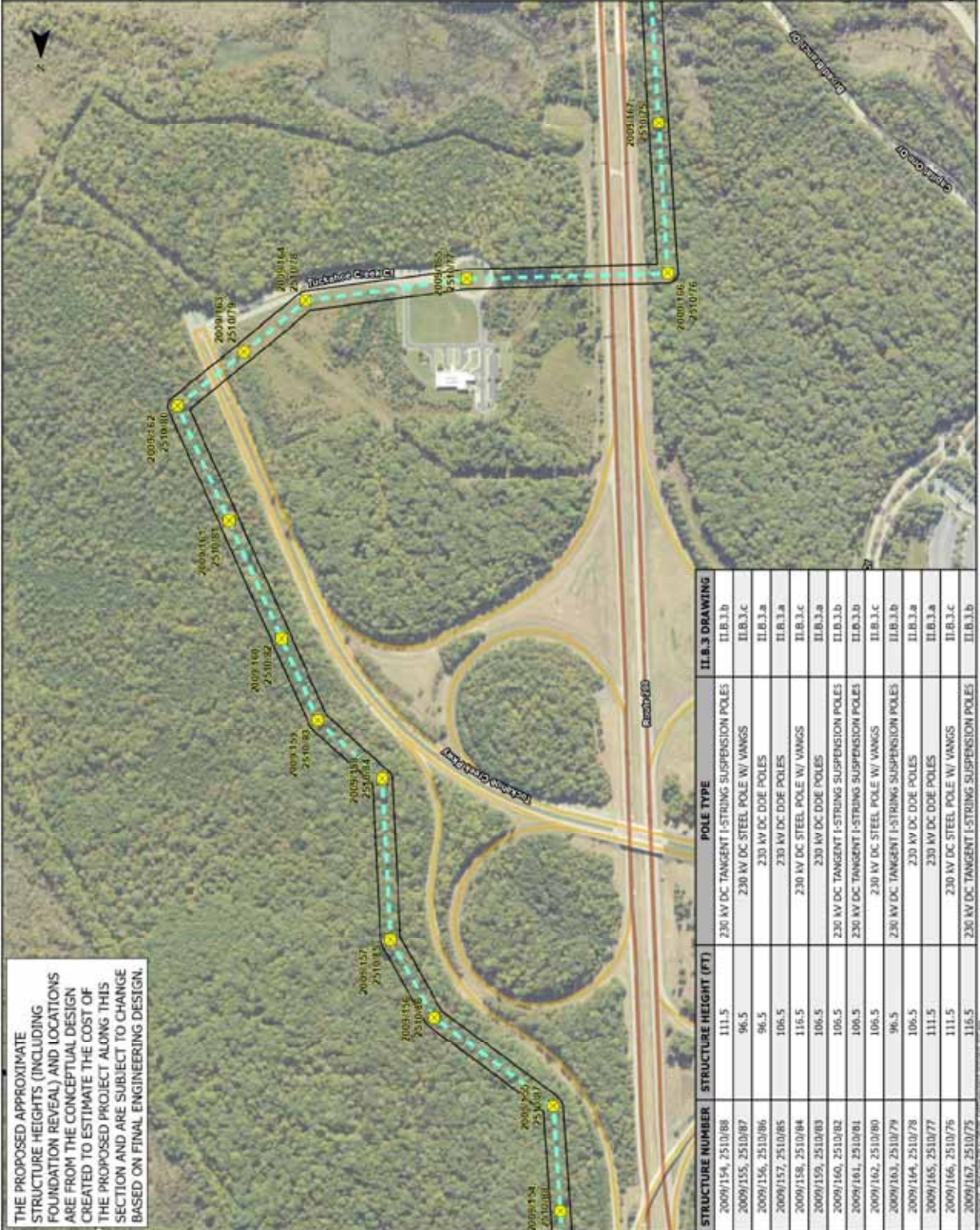
PROJECT DATA

- Proposed Structure
- Proposed Route (Route 3)
- Existing Dominion Transmission Line
- Study Area
- Proposed Right-of-Way
- Proposed Substation
- Proposed Substation Footprint

0 500 1,000
Feet



1:6,000
SHEET
5 OF 6



THE PROPOSED APPROXIMATE
STRUCTURE HEIGHTS (INCLUDING
FOUNDATION REVEAL) AND LOCATIONS
ARE FROM THE CONCEPTUAL DESIGN
CREATED TO ESTIMATE THE COST OF
THE PROPOSED PROJECT ALONG THIS
SECTION AND ARE SUBJECT TO CHANGE
BASED ON FINAL ENGINEERING DESIGN.

STRUCTURE NUMBER	STRUCTURE HEIGHT (FT)	POLE TYPE	II.B.3 DRAWING
2009/154, 2510/88	111.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/155, 2510/87	96.5	230 kV DC STEEL POLE W/ WINGS	II.B.3.c
2009/156, 2510/86	96.5	230 kV DC DOE POLES	II.B.3.a
2009/157, 2510/85	106.5	230 kV DC DOE POLES	II.B.3.a
2009/158, 2510/84	116.5	230 kV DC STEEL POLE W/ WINGS	II.B.3.c
2009/159, 2510/83	106.5	230 kV DC DOE POLES	II.B.3.a
2009/160, 2510/82	106.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/161, 2510/81	106.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/162, 2510/80	106.5	230 kV DC STEEL POLE W/ WINGS	II.B.3.c
2009/163, 2510/79	96.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b
2009/164, 2510/78	106.5	230 kV DC DOE POLES	II.B.3.a
2009/165, 2510/77	111.5	230 kV DC DOE POLES	II.B.3.a
2009/166, 2510/76	111.5	230 kV DC STEEL POLE W/ WINGS	II.B.3.c
2009/167, 2510/75	116.5	230 kV DC TANGENT I-STRING SUSPENSION POLES	II.B.3.b

II. DESCRIPTION OF THE PROPOSED PROJECT

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 3)	95	130	108
Alternative Route 2	95	130	110
Alternative Route 5	95	130	111

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] *Photographs for typical existing facilities to be removed*

Not applicable.

[b] *Comparable photographs or representations for proposed structures*

See Attachment II.B.6.b.i-iii for representative photographs of the proposed structures.

[c] *Visual simulations from historic and other key locations*

Visual simulations showing the appearance of the proposed transmission structures at identified historic locations within 1.0 mile of the proposed centerline of the Proposed and Alternative Routes are provided. See Attachment II.B.6.c.i for a map of the simulation locations, the existing views at the historic locations, and simulated proposed views. These simulations were created using Geographic Information Systems modeling to depict whether the proposed structures will be visible from the identified historic locations. The historic locations 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
Farm, 2105 Rockville Road (VDHR ID# 037-5238)	1	The Proposed Route 3, Alternative Route 2, and Alternative Route 5 would have no impact on 037-5238.

See Attachment II.B.6.c.ii for visual simulations and renderings of key locations evaluated.







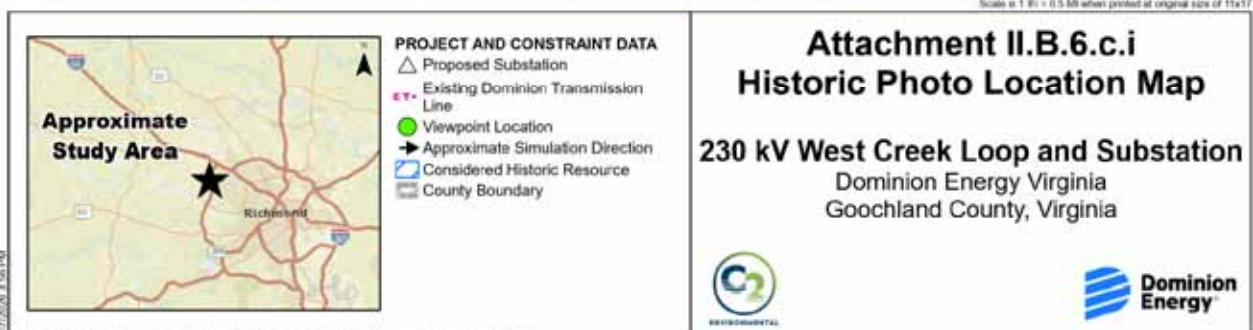




Photo Simulation 1 – Existing (above) and proposed (below) view from Rockville Road in front of 2105 Rockville Road property, facing east. Proposed view models structures on all route alternatives. All structures (shown in route color) are to remain screened behind vegetation.

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 construction of the new 230-34.5 kV West Creek Substation in Goochland County, Virginia, as well as minor substation-related work at the Company's existing North Pole, Rockville, Short Pump and Midlothian Substation.

West Creek Substation

The proposed West Creek Substation initially will be constructed with an AIS 230 kV ring bus with four 4000A circuit breakers, two 230 kV line terminals, and other associated equipment, including a control enclosure to accommodate the protective relay, communications, and security cabinets. The total area of the proposed West Creek Substation within the substation fence is approximately 5.1 acres.

The design will accommodate future expansion, ultimately supporting a 230 kV ring bus with a six-circuit breaker configuration and four 230 kV line terminals.

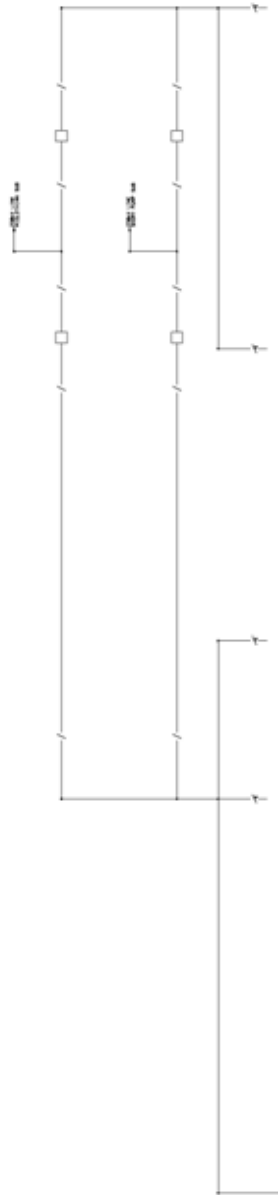
The one-line diagram and general arrangement for the proposed West Creek Substation are provided as Attachment II.C.1 and Attachment II.C.2, respectively.

Additional Substation-Related Work

In addition to the construction described above, the Company anticipates performing the following tasks:

- Relay resets at the existing North Pole, Rockville, and Midlothian substations
- Removal of one wave trap at the Short Pump Substation

Cost details associated with the substation work are provided in Section I.I.



PRELIMINARY NOT FOR CONSTRUCTION

[illegible]



PRELIMINARY NOT FOR CONSTRUCTION



WEST CREEK SUB

[illegible][illegible]

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: Descriptions of the lands crossed by the routes and number of dwellings within proximity of the routes are described below for each Proposed and Alternative Route.

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

See Attachment III.A.1 for a map depicting prime farmland and farmland of statewide importance, and Section 2.L of the DEQ Supplement for the estimated amount of farmland and forestland within the right-of-way of each route alternative.

Proposed Route (Route 3)

The Proposed Route is approximately 6.5 miles in length and is located entirely within Goochland County, extending south from the Company's existing Line #2009 located north of I-64 and east of Ashland Road, to the proposed West Creek Substation site, east of Route 288 and south of West Creek Parkway, and within the Customer's proposed development. The Proposed Route crosses mostly forested lands (about 81% of its total construction footprint), which include lands associated with two planned developments that have applications in various stages of review and approval per Goochland County's website, and three future developments which have yet to be filed with the County. These planned developments include the West Creek Commerce Center (Plan of Development has been approved by the County and the Proposed Route crosses approximately 0.2 mile of the development avoiding building conflicts) and Mosaic at West Creek Section 9 (Plan of Development has been approved, crosses approximately 0.1 mile avoiding building conflicts). Future developments crossed include Asgard Property (0.3 mile crossed), West Creek Industrial (0.3 mile crossed), and the Eli Lilly and Company development (0.1 mile crossed).

For additional information on these planned and future developments, see Sections 3.1.7 and 4.1.6 of the Routing Study and Section III.E of this Appendix.

The Proposed Route crosses about 19% of open space, agricultural, and developed

lands combined, particularly around Tuckahoe Creek where non-forested wetlands are present, an agricultural field on the south side of I-64, all VDOT crossings, and maintained turf areas along roadways. Overall, the Proposed Route impacts approximately 6 to 7 acres more forested areas than Alternative Routes 2 and 5, respectively. While the Proposed Route would require more acres of forest clearing when compared with Alternative Routes 2 and 5, when looking at the overall percentage of each route that is comprised of forested land, the route alternatives are very similar (81 percent for the Proposed Route and Alternative Route 2 and 80 percent for Alternative Route 5). The majority of forested land that would be cleared for the Proposed Route would be in areas where the alignment is collocated with existing roadways, clearing near the edges of forest, thereby reducing potential impacts associated with forest fragmentation.

Based on the Desktop Wetland Review completed for the project, the Proposed Route crosses 23 waterbodies, of which 10 are NHD-mapped intermittent or perennial streams, including Tuckahoe Creek, Readers Branch, Broad Branch, and unnamed tributaries. The Proposed Route crosses approximately 9.7 acres of wetlands, 8.4 acres of which are forested wetlands.

According to County parcel data, zoning data, and aerial photo analysis, there is one residential dwelling within 500 feet of the centerline of the Proposed Route, one dwelling within 250 feet of the centerline, zero dwellings within 100 feet of the centerline, and zero buildings within the right-of-way of the Proposed Route. The one dwelling that is within both 500 and 250 feet of the centerline is uninhabited and associated with an unevaluated aboveground historic resource.

Alternative Route 2

Alternative Route 2 is approximately 5.9 miles in length and is located entirely within Goochland County, extending south from the Company's existing Line #2009 located north of I-64 and east of Ashland Road, to the proposed West Creek Substation, east of Route 288 and south of West Creek Parkway and located within the Customer's proposed development. The Alternative Route 2 crosses mostly forested lands (about 81% of its total construction footprint), which include lands associated with two planned developments and one future development (Eli Lilly, West Creek Commerce Center, and Mosaic at West Creek Section 9). Alternative Route 2 follows the same alignment as the Proposed Route across these planned and future developments. For additional information on these planned and future developments, see Sections 3.1.7 and 4.1.6 of the Routing Study and Section III.E of this Appendix. Alternative Route 2 crosses 19% of open space, agricultural, and developed lands combined. Consisting of multiple agricultural fields on either side of Three Chopt Road, non-forested wetland areas around Tuckahoe Creek, all VDOT crossings, and maintained turf areas along roadways. Of all routes considered, Alternative Route 2 impacts the smallest amount of forested lands (approximately 61.3 acres), however, the percentage of the route that is comprised

of forested land is the same (81 percent) as the Proposed Route, and similar (80 percent) to Alternative Route 5.

Alternative Route 2 crosses 33 waterbodies, of which 10 are NHD-mapped intermittent or perennial streams, including Tuckahoe Creek, Readers Branch, Broad Branch, and unnamed tributaries. Alternative Route 2 crosses the greatest number of streams compared to the other route alternatives and impacts the greatest amount of wetland at 14.4 acres, 12.3 of which are forested.

According to County parcel data, zoning data, and aerial photo analysis, there are five residential dwellings within 500 feet and two residential dwellings within 250 feet of the proposed centerline of Alternative Route 2. There are zero residential dwellings within 100 feet of the centerline, and zero residential dwellings within the right-of-way. Alternative Route 2 is closer to both Readers Branch and Bellview Gardens when compared to the other route alternatives.

Alternative Route 5

Alternative Route 5 is approximately 6.0 miles in length and is located entirely within Goochland County, extending south from the Company's existing Line #2009, located north of I-64 and east of Ashland Road, to the proposed West Creek Substation site, east of Route 288 and south of West Creek Parkway and located within the Customer's proposed development. Alternative Route 5 crosses mostly forested lands (about 80% of its total construction footprint), which include lands associated with two planned developments (West Creek Commerce Center and Mosaic at West Creek Section 9) and two future developments (Elli Lily and Asgard Property). Alternative Route 5 follows the same alignment as the Proposed Route across all of these planned and future developments. For additional information on these planned and future developments, see Sections 3.1.7 and 4.1.6 of the Routing Study and Section III.E of this Appendix. Alternative Route 5 crosses 20% of open space, agricultural, and developed lands combined. These areas consist primarily of areas along Tuckahoe Creek where non-forested wetlands are present, an agricultural field on the south side of I-64, all VDOT crossings, and maintained turf areas along roadways and within cloverleafs. Alternative Route 5 crosses 22 waterbodies, of which 7 are NHD-mapped intermittent or perennial streams, including Tuckahoe Creek, Readers Branch, Broad Branch, and unnamed tributaries. Alternative Route 5 crosses the least amount of wetlands at 8.6 acres, 7.6 acres of which are forested.

According to County parcel data, zoning data, and aerial photo analysis, there are zero dwellings located within 500 feet of the proposed centerline, 250 feet of the proposed centerline, 100 feet of the proposed centerline, or within the right-of-way of Alternative Route 5.

West Creek Substation

The West Creek Substation encompasses approximately 5.1 acres of forested area on the east side of Route 288 and south of West Creek Parkway within the Eli Lilly planned development within the Goochland County TOD. Based on desktop review, no streams or wetlands were identified within the proposed substation footprint. According to County parcel data, zoning data, and aerial photo analysis, there are zero residential dwellings within 500 feet, or within the proposed West Creek Substation site.



Attachment III.A.1 Prime Farmland and Farmland of Statewide Importance

230 kV West Creek Loop and Substation
Dominion Energy Virginia
Goochland County, Virginia

PROJECT DATA

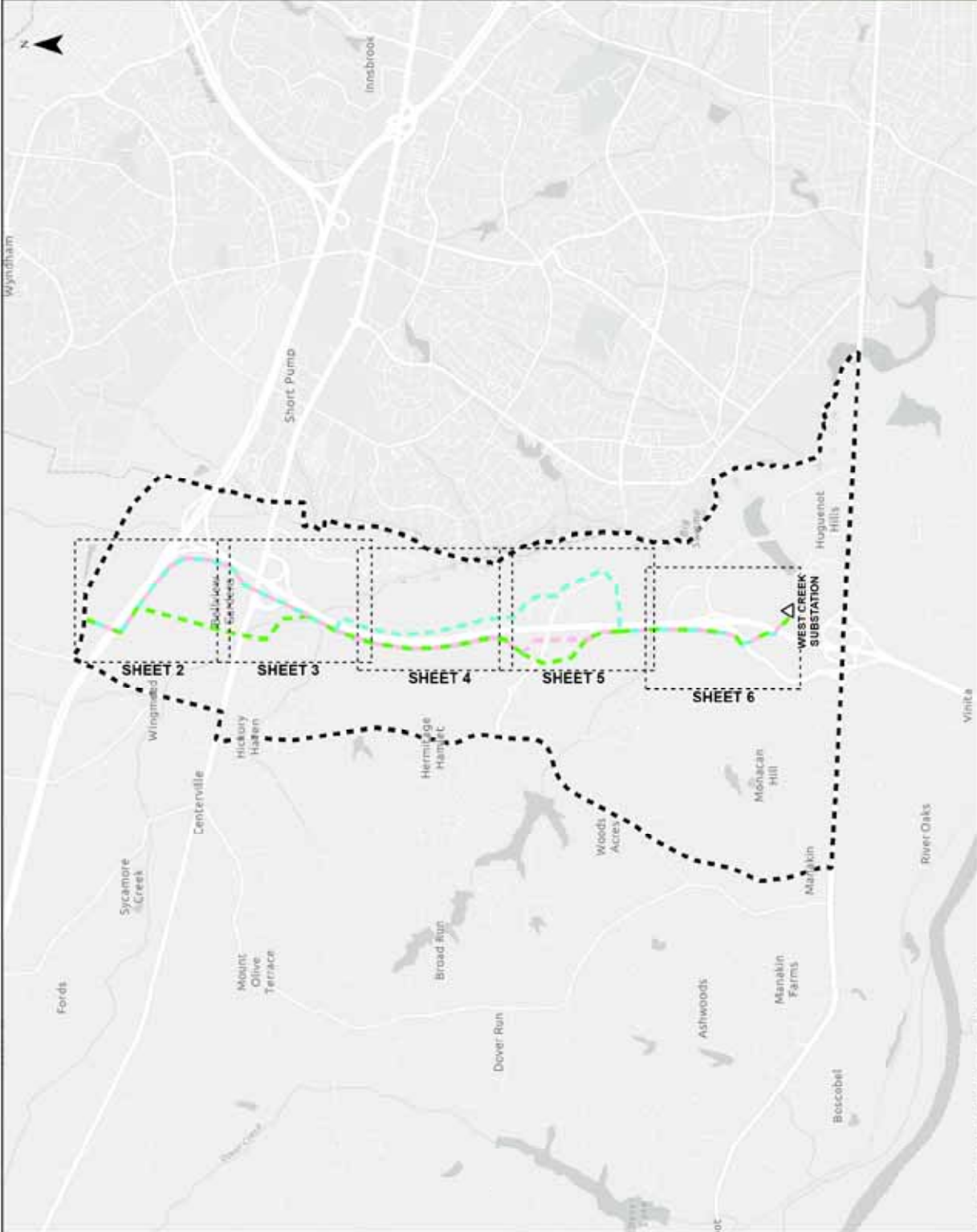
- Proposed Route (Route 3)
- Alternative Route 2
- Alternative Route 5
- Study Area
- Proposed Substation
- Map Sheet

0 4,000 8,000
Feet



1:48,000

SHEET
1 OF 6





Attachment III.A.1 Prime Farmland and Farmland of Statewide Importance

230 kV West Creek Loop and Substation
Dominion Energy Virginia
Goochland County, Virginia

PROJECT DATA

- Proposed Route (Route 3)
- Alternative Route 2
- Alternative Route 5
- Existing Dominion Transmission Line

CONSTRAINT DATA

- Study Area
- Proposed Right-of-Way
- Proposed Substation
- Proposed Substation Footprint
- Prime Farmland
- Farmland of Statewide Importance
- Prime Farmland if Drained

0 500 1,000
Feet



1:6,000

SHEET
2 OF 6





Attachment III.A.1 Prime Farmland and Farmland of Statewide Importance

230 kV West Creek Loop and Substation
Dominion Energy Virginia
Goochland County, Virginia

PROJECT DATA

- Proposed Route (Route 3)
- Alternative Route 2
- Alternative Route 5
- Existing Dominion Transmission Line

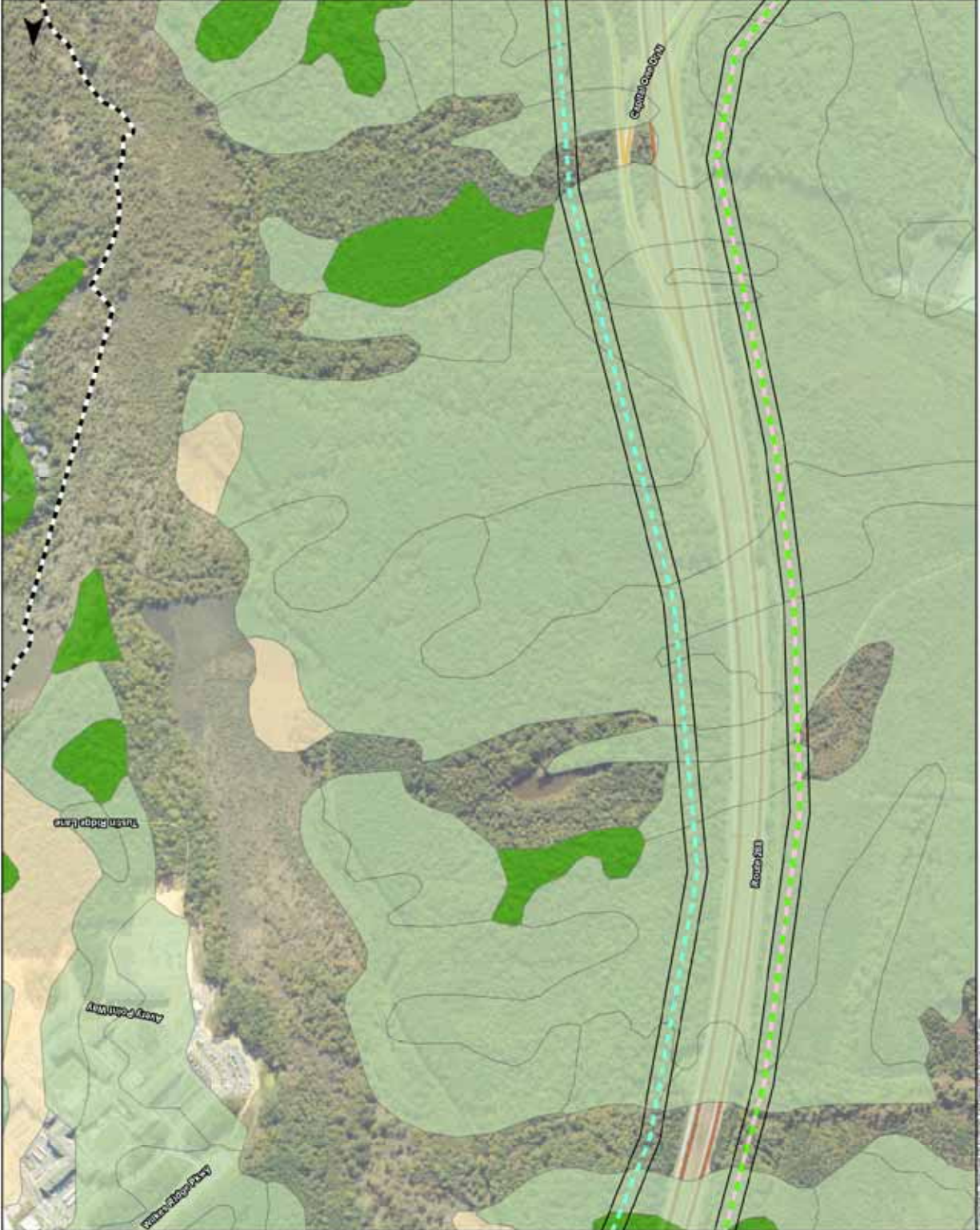
CONSTRAINT DATA

- Study Area
- Proposed Right-of-Way
- Proposed Substation
- Proposed Substation Footprint
- Prime Farmland
- Farmland of Statewide Importance
- Prime Farmland if Drained

0 500 1,000
Feet



1:6,000
SHEET
4 OF 6





Attachment III.A.1 Prime Farmland and Farmland of Statewide Importance

230 kV West Creek Loop and Substation Dominion Energy Virginia Goochland County, Virginia

PROJECT DATA

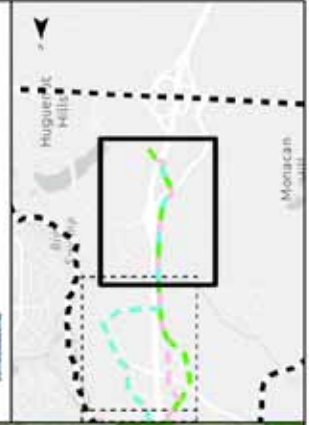
- Proposed Route (Route 3)
- Alternative Route 2
- Alternative Route 5
- Existing Dominion Transmission Line
- Study Area
- Proposed Right-of-Way
- Proposed Substation
- Proposed Substation Footprint

CONSTRAINT DATA

- Prime Farmland
- Farmland of Statewide Importance
- Prime Farmland if Drained



1:6,000

SHEET
6 OF 6

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: Stakeholder Engagement

In November 2025, the Company announced the proposed Project to the public with a letter and launched an internet website dedicated to the proposed Project: www.dominionenergy.com/westcreek. The website includes a description and benefits of the proposed Project, an explanation of need, route map, copies of letters and postcards mailed to the community, information on the Commission review process, and a Spanish translated tab. Additionally, to facilitate the review of the Project area and routes under consideration, the Company launched GeoVoice, an interactive mapping tool on the project website in November 2025. GeoVoice enables community members to view routes, zoom in, search by address, measure distances, and leave comments with the Project team.

The Company's November 2025 Project announcement letters were sent to approximately 1,558 property owners and residents within the Project study area, which included information about the need for the Project, and a project study area map. In addition, the communication indicated that detailed materials would be posted to the dedicated Project website and explained how to contact the Project team to provide any feedback or questions. Copies of the announcement letter, project study area map, reminder postcard and route map are available on the Project website. The Company also reached out to stakeholders with impacted parcels and community members and offered to meet with the Project team to learn more about the Project.

In November 2025, the Company mailed a reminder postcard to property owners and residents within the study area for the Project to provide additional details about the December 4, 2025 community meeting, along with the route map. A copy of the November 2025 postcard is available on the Project website.

Additionally, from November 24, 2025 to December 11, 2025, the Company used paid digital and social media campaigns to drive awareness and educate the public regarding the Company's Project and the community meeting. Copies of those digital advertisements are included as Attachment III.B.1. The event campaigns ran on Instagram, Facebook and Nextdoor. All phases urged local residents to visit the Project website to learn more about Project, the community meeting, and to participate virtually. See Attachment III.B.2 for the campaign results.

A community meeting was held on December 4, 2025, with two sessions from 1-3 p.m. and 5-7 p.m. at which 183 community members were in attendance. Both sessions used an open house format, where community members could speak with

project team members. Community meeting materials have been posted on the website for the proposed Project, simulation photos, and informational boards about the Project.

Newspaper print advertisements regarding the Project and the community meeting on December 4, 2025 were placed in the Richmond Times Dispatch. A copy of the advertisements is included as Attachment III.B.3.

The Project team continued to meet with property owners before, during, and after the community meeting, including more than five (5) virtual meetings with property owners.

Environmental Justice

As set forth in Sections 3.2 and 4.2 of the Routing Study, the Company researched the demographics of the surrounding communities using data from the U.S. Census Bureau's American Community Survey 5-Year Estimates (2019-2023). This screening identified 15 Census Block Groups ("CBGs") located within one mile of the Proposed and Alternative Routes and proposed West Creek Substation. A review of census data for several demographic characteristics identified populations within the Project study area that meet the Virginia Environmental Justice Act ("VEJA") thresholds for Environmental Justice Communities ("EJ Communities") (Va. Code §§ 2.2-234, 2.2-235).

Of the 15 CBGs within the Project study area, three CBGs are crossed by all route alternatives. Two of the CBGs crossed appear to contain populations of color, while none of the CBGs crossed meet low-income thresholds. None of the three CBGs crossed by the route alternatives meet the Limited English-Speaking threshold. See Sections 3.2 and 4.2 in the Environmental Routing Study for additional information on the Company's Environmental Justice analysis for the Project.

As set forth above in this Section III.B, the Company has extensively engaged all communities within the Project study area, including people in the EJ Community CBGs discussed herein. The Company believes that its work has allowed for the fair treatment and meaningful involvement of all interested people, regardless of race, color, national origin, income, faith, or disability; and the Project's Proposed Route minimizes potential impacts to EJ Communities and other populations and will not result in a significantly adverse and disproportionate impact on EJ Communities.

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.4 for a copy of the Company's Environmental Justice Policy.



Dominion Energy Electric Transmission Contact:
 Janae Johnson, janae.p.johnson@dominionenergy.com

Dominion Energy Electric Transmission

West Creek Pre-Event

Display



**Dominion Energy
Electric Transmission**

West Creek
Social Videos

[Pre-Event A \(Click to Play\)](#)



[Pre-Event B \(Click to Play\)](#)



**Dominion Energy
Electric Transmission**

West Creek
Social Videos

[Post-Event A \(Click to Play\)](#)



[Post-Event B \(Click to Play\)](#)



**Dominion Energy
Electric Transmission**

West Creek Pre-Event

Responsive and
Nextdoor

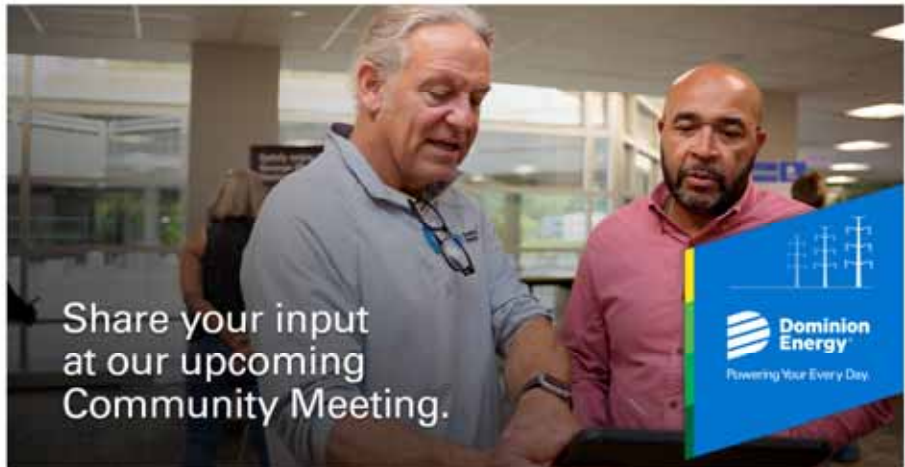
Responsive 1200x627



Responsive 1200x1200



Nextdoor 1200x627



**Dominion Energy
Electric Transmission**

West Creek Post-Event
Responsive and
Nextdoor

Responsive 1200x627



Responsive 1200x1200



Nextdoor 1200x627





**Dominion Energy
Electric Transmission**

West Creek Pre-Event

Print Ad

**We're working to meet
Virginia's energy needs.**

We'd like your input on an upcoming electric transmission line project in your area.

Join us for a Community Meeting
Thursday, December 4, 1-3 p.m. or 5-7 p.m.
Residence Inn – Short Pump at the Notch
1800 Wilkes Ridge Circle
Richmond, VA 23233

Learn more at
DominionEnergy.com/WestCreek

Use your phone's camera or QR reader app to visit the project page directly.

Dominion Energy
Powering Your Every Day.

The advertisement features a photograph of two men, one older and one younger, looking at a tablet together. The older man is wearing a light blue polo shirt and glasses, while the younger man is wearing a pink button-down shirt. They are in an indoor setting, possibly a community center or office. The text is overlaid on the left side of the image, and the Dominion Energy logo is on the right. A QR code is located in the bottom left corner.

DE Transmission

West Creek

Report Date: November 25, 2025 – December 11, 2025

DET | West Creek | 11/25/25 – 12/11/25 | Overall Report

The West Creek campaigns ran on Facebook, Google and Nextdoor through 12/11/25. These campaigns were targeted at customers over the age of 25 who resided in and around Goochland County, Virginia.

302,115 impressions

of ads were delivered to target audiences.

6,408 clicks

have taken audiences to the landing pages.

34,188 video views with an average 19.26% VCR.

2.12% CTR

Most CTRs near or above benchmarks.

29,097 ad engagements

such as reactions, likes, comments, shares and saves have been made on the ads.

Notable Creative

The DET West Creek Pre-Event ad had the highest CTR at 4.44%, which is 865% higher than the 0.46% Responsive Display benchmark.



Notable Insights

- Facebook ads had a CTR of 1.75% and 4,322 completed video views for a 16.19% VCR.
- Nextdoor ads performed well with a CTR of 0.86%, which is 473% above benchmark.
- Google Display ads had a CTR of 3.93%, which is 754% above benchmark.
- Ads are engaging with males and females aged 65+ on Facebook and females 35-44 on Google.

DET | West Creek | 11/25/25 – 12/4/25 | English Pre-Event

The West Creek campaigns ran on Facebook, Google and Nextdoor through 12/4/25. These campaigns were targeted at customers over the age of 25 who resided in and around Goochland County, Virginia.

155,709 impressions

of ads were delivered to target audiences.

3,462 clicks

have taken audiences to the landing pages.

19,623 video views with an average 18.55% VCR.

2.22% CTR

Most CTRs near or above benchmarks.

16,516 ad engagements

such as reactions, likes, comments, shares and saves have been made on the ads.

Notable Creative

The DET West Creek Pre-Event ad had the highest CTR at 4.44%, which is 865% higher than the 0.46% Responsive Display benchmark.



Notable Insights

- Facebook ads had a CTR of 1.82% and 2,311 completed video views for a 15.16% VCR.
- Nextdoor ads performed well with a CTR of 0.88%, which is 487% above benchmark.
- Google Display ads had a CTR of 4.44%, which is 865% above benchmark.
- Ads are engaging with males aged 65+ on Facebook and females 35-44 on Google.

Facebook CTR Benchmark: 0.90% | Google Responsive Display CTR Benchmark: 0.46% | Nextdoor CTR Benchmark: 0.15%

DET | West Creek | 12/5/25 – 12/11/25 | English Post-Event

The West Creek campaigns ran on Facebook, Google and Nextdoor through 12/11/25. These campaigns were targeted at customers over the age of 25 who resided in and around Goochland County, Virginia.

146,406 impressions
of ads were delivered to target audiences.
2,946 clicks
have taken audiences to the landing pages.

14,565 video views with an average 20.23% VCR.

2.01% CTR
Most CTRs near or above benchmarks.

12,581 ad engagements
such as reactions, likes, comments, shares and saves have been made on the ads.

Notable Creative

The DET West Creek Post-Event ad had the highest CTR at 3.49%, which is 659% higher than the 0.46% Responsive Display benchmark.



Notable Insights

- Facebook ads had a CTR of 1.67% and 2,011 completed video views for a 17.56% VCR.
- Nextdoor ads performed well with a CTR of 0.83%, which is 453% above benchmark.
- Google Display ads had a CTR of 3.49%, which is 659% above benchmark.
- Ads are engaging with females aged 65+ on Facebook and females 35-44 on Google.

Facebook CTR Benchmark: 0.90% | Google Responsive Display CTR Benchmark: 0.46% | Nextdoor CTR Benchmark: 0.15%

Summary:

- The DET West Creek Pre-Event ad had the highest CTR at 4.44%, which is 865% higher than the 0.46% Responsive Display benchmark.
- The ads in this campaign were most engaged with males and females aged 65+ on Facebook and females aged 35-44 on Google.
- All campaigns were over the platform benchmarks in both phases. Google Display was the top-performing platform for the campaign and ended the campaign with a CTR 754% over the 0.46% Responsive Display benchmark.
- The shoppers, food & dining, and media & entertainment audience segments had the highest number of clicks on Google.
- The Jenna video performed best in the pre-event campaign while the Blair video performed best within the post-event campaign.

December 19, 2025

Facebook CTR Benchmark: 0.90% | Google Responsive Display CTR Benchmark: 0.46% | Nextdoor CTR Benchmark: 0.15%





**Dominion Energy
Electric Transmission**

West Creek Pre-Event

Print Ad

**We're working to meet
Virginia's energy needs.**

We'd like your input on an upcoming electric transmission line project in your area.

Join us for a Community Meeting
Thursday, December 4, 1-3 p.m. or 5-7 p.m.
Residence Inn – Short Pump at the Notch
1800 Wilkes Ridge Circle
Richmond, VA 23233

Learn more at
DominionEnergy.com/WestCreek

Use your phone's camera or QR reader app to visit the project page directly.

Dominion Energy
Powering Your Every Day.

The advertisement features a background image of two men, one older and one younger, looking at a tablet together. The older man is wearing a light blue polo shirt and glasses, while the younger man is wearing a pink shirt. The text is overlaid on the left side of the image. The Dominion Energy logo is in the bottom right corner, featuring a stylized sun icon and the text "Dominion Energy" with the tagline "Powering Your Every Day." below it.



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: The Company did not identify any buildings that would have to be demolished or relocated to construct the proposed Project along the Proposed Route.

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: Approximately 84% (5.4 miles) of the Proposed Route for the West Creek Lines collocates, or is parallel to, existing infrastructure. Of these 5.4 miles, approximately 5.3 miles would be collocated with roadways and 0.1 mile would be collocated with both roadways and other existing utility easements.

Alternative Route 2 is collocated with existing infrastructure for approximately 68% (4.0 miles) of the route. Of these 4.0 miles, approximately 2.2 miles would be collocated with roadways, and 1.8 miles would be collocated with both roadways and other existing utility easements

Alternative Route 5 is collocated with existing infrastructure for approximately 84% (5.1 miles) of the route. Of these 5.1 miles, approximately 3.3 miles would be collocated with roadways, and 1.7 miles would be collocated with both roadways and other existing utility easements.

No existing transmission lines within the study area provide collocation opportunities as there are no existing transmission lines that extend south towards the proposed West Creek Substation. As such, the Proposed and Alternative Routes do not parallel existing transmission lines. See Section II.A.4.

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: C2 reviewed the Goochland County 3035 Comprehensive Plan (the “Comprehensive Plan”), adopted August 2015,⁷ to evaluate the potential effect the Proposed Route (Route 3) could have on future development in the area. The Comprehensive Plan provides a blueprint for the future by establishing a framework for growth and development over 20 years. The plan provides the County guidance in the formation and implementation of various tools that guide growth and development decisions. Tools discussed in this comprehensive plan include zoning ordinance, subdivision ordinance, erosion and sediment control ordinance, utilities ordinance and master plan, parks and recreation master plan, schools strategic plan, economic development strategic plan, and several others. Amongst these, the comprehensive plan prioritizes rewriting the zoning ordinance to make it more business/user friendly, identify ways to allow varied housing types and expand housing options in the county, review and update landscaping requirements, consider funding to install public amenities within the county villages, and utilize all the implementation tools and plans to further land use planning.

The Comprehensive Plan does not include any specific goals or policies regarding electric transmission lines. As described in more detail in Section 3.1.3 of the Routing Study, Goochland County recently approved a TOD and Technology Zone and are in the process of implementing it into the 2035 Comprehensive Plan. The TOD is a zoning tool that adds additional guidelines to the existing county zoning, allowing the existing zoning to remain. It will become part of the zoning ordinance and will regulate uses and development standards. The Technology Zone is a complementary designation to the TOD and is designed to offer targeted incentives that encourage private investment and job creation within the designated boundaries. The Technology Zone serves as the fiscal and economic catalyst while a TOD provides the regulatory framework.

The Company attempted to maximize a route alternative’s crossing length on parcels within the recently approved TOD. As described in Section 3.1.3 of the Routing Study, the TOD approves certain users (including data centers) by right and development within the TOD is expected to increase. Approximately 74% (4.8 miles) of the Proposed Route is located within the TOD.⁸ For Route Alternative 2, approximately 80% (4.7 miles) of the route is located within the TOD and for Route

⁷ See The 2035 Comprehensive Plan for Goochland County, available at <https://www.goochlandva.us/250/2035-Comprehensive-Plan>.

⁸ Based on the current TOD boundary (which excludes roadways), 74 percent of Route 3 is located within the TOD. On the east side of Route 288 there is an interior “paper road” that is not included in the TOD; however, it is the Company’s understanding that the location of this road is subject to change based on future development. As such, when including crossings of this road within the TOD, 79 percent (5.1 miles) of Route 3 is in the TOD.

Alternative 5, approximately 73% (4.4 miles) of the route is located within the TOD.

Over the course of the Project, the Company has been meeting with the Goochland County EDA and Planning and Zoning staff regarding the proposed Project. During the route development process, County staff did not identify any conflicting land uses; however, they provided information on multiple planned developments within the study area and indicated support of the West Creek Lines crossing the TOD to serve future uses, and paralleling Route 288.

Dominion met with VDOT during the planning phase of the Project to discuss planned road projects and any concerns with potential crossings of Route 28 and I-64. VDOT representatives shared information on two planned road projects within the study area, the Route 250 & Route 288 Interchange Project and the Route 288 Southbound Auxiliary Lane Project. The two planned road projects (Route 288 Southbound Auxiliary Lane Project and Route 250 & Route 288 Interchange Project) are generally avoided by the Proposed and Alternative Routes. The Proposed Route and Alternative Route 5 would cross Route 250 in an area where improvements are proposed on the north side of the street, however, no structures would be placed in areas proposed for improvements. All route alternatives are in close proximity to these planned road projects and the Company will continue to coordinate with VDOT regarding the timing of these projects in relation to the timing of construction of the transmission line.

Route 250 & Route 288 Interchange Project

The preliminary plans for improvements at the Route 250 (West Broad Street) and Route 288 interchange in Goochland County, Virginia, focus on enhancing traffic flow, reducing congestion, and improving multimodal safety. Key components include widening the eastbound off-ramps from Route 288 to West Broad Street, as well as broadening Broad Street from Wilkes Ridge Parkway to Bon Secours Parkway to accommodate increased traffic volumes. These enhancements aim to reduce bottlenecks within this heavily traveled corridor. Additionally, the plans incorporate sidewalk improvements along westbound Broad Street and signal modifications at crucial intersections, which will help synchronize traffic flow and enhance pedestrian safety.

Route 288 Southbound Auxiliary Lane Project

The plans for the Southbound Route 288 Auxiliary Lane project in Goochland County aim to improve traffic flow and enhance safety along one of the region's key transportation corridors. This project focuses on adding an auxiliary lanes on the southbound side of Route 288 between the Broad Street (Route 250) interchange and the Route 6 interchange to facilitate smoother merging, lane changes, and overall traffic movement. The auxiliary lane will provide drivers with more options for entering and exiting the highway, which is expected to reduce congestion during peak travel times. Preliminary engineering is ongoing and based

on preliminary designs the auxiliary lane will fit within the existing VDOT right-of-way. Construction of the project is currently anticipated to occur between 2029 and 2030.

The Proposed and Alternative Routes all cross the same two planned developments for a total of 0.3 mile. The Proposed Route crosses three future developments for a total of 0.7 mile, Alternative Route 2 crosses one future development for 0.1 mile, and Alternative Route 5 crosses two future developments for a total of 0.4 mile. In developing the Proposed and Alternative Routes, the Company considered input from affected landowners and other stakeholders, such as developers, to determine a feasible path for the transmission lines to cross cohesively around and through planned and future⁹ developments within the study area. See Sections 3.1.7 and 4.1.6 in the Environmental Routing Study for further discussion. In particular, the Company met with the following developers and/or property owners to discuss the following Goochland County active and future planning and zoning cases:

- Eli Lilly – (Future Development - Parcel 64-20-0-4-T) - The Company participated in regular meetings with the Customer to discuss their site layout and the location of the proposed West Creek Substation. The Proposed and Alternative Routes follow the same alignment across Route 288, onto the Eli Lilly parcel, and into the proposed West Creek Substation.
- West Creek Business Park (Existing Commercial Subdivision)– The Company met with representatives of West Creek Business Park (Michael and Thomas Pruitt) in September and October 2025. During these discussions, the Company reviewed the study area for the proposed Project and to gain insight on any planned developments within West Creek Business Park. The Proposed and Alternative routes all cross portions of West Creek Business Park. Two planned and two future developments were discussed in the conversations with the Pruitt's (Sheltering Arms Master Plan [future development], Tuckahoe Creek Court [future development], West Creek Commerce Center, and West Creek Industrial.
- West Creek Commerce Center – (Planned Development - Parcel 63-37-1-1-0) - The Company met with representatives from Summit Real Estate in November 2025 to discuss the Proposed and Alternative Routes crossing of the planned development. During this meeting the Company showed that the Project would not conflict with any buildings; however, the right-of-way does overlap with County setback requirements, and no trees would be allowed within the right-of-way of the transmission line. The Company made minor adjustments to the alignment of the route crossing this parcel to bring the centerline closer to the edge of the parcel boundary, reducing

⁹ Planned developments (developments where required zoning is in place and the developer has filed a site plan with proposed building layouts with the County for review) were considered routing constraints. Where feasible, future development (developments where no formal site plan with building layouts has been submitted to the County or where filed plans have expired) were considered during routing, however they were not factored as a formal constraint.

the amount of right-of-way impacts on the parcel. The Company also met with Goochland County Zoning representatives in November 2025 to discuss this crossing. All routes require the same crossing of this planned development, and the County indicated that they would be able to reach a solution with the developer on changes to their vegetation plans and landscape buffers. The Company will continue to coordinate with the developer and the County on the plant species allowable within the transmission line right-of-way.

- Mosaic at West Creek Section 9 – (Planned Development - Parcel 58-54-0-4-0) - The Company met with representatives from Youngblood and Tyler in January 2026 to discuss the Proposed and Alternative Routes crossing of the planned development.
- West Creek Industrial (Future Development – Parcels 64-25-3-23-0, 64-25-3-22-0, and 64-25-3-21-0) - The Company met with representatives from Summit Real Estate in November 2025 to discuss the Project as it relates to the future development on three parcels on the south side of Tuckahoe Creek Court. The Proposed and Alternative Routes do not cross this property. Rejected Route 4 (see Environmental Routing Study) did cross these parcels.
- Sheltering Arms Master Plan (Future Development – Parcel 59-6-0-A-0) - The Company met with representatives from Sheltering Arms in November 2025 to discuss the Project as it relates to the future development on one parcel adjacent to Sheltering Arms current facilities. The Proposed Route initially crossed this parcel; however, due to construction access and line maintenance concerns, the route was adjusted off this parcel.
- West Creek Industrial (Future Development - Parcel 59-3-3-26-0) - The Company met with representatives from Manakin Companies in December 2025. The Company had previously spoken with this representative at the Project open house held on December 4, 2025. These conversations led to a route adjustment along the Proposed Route to not conflict with buildings within the initial site plan layout. The developer did not have any concerns with the modified alignment as it avoids impacts to building layouts. The Company will continue to coordinate with the developer on this crossing if the Proposed Route is selected as the preferred route by the State Corporation Commission of the Virginia (“Commission”).
- Asgard Properties (Future Development - Parcels 59-1-0-1-0, 59-1-0-3-0, 59-1-0-5-B, 59-1-0-6-0, 59-1-0-6-B, 59-1-0-8-0, 59-1-0-9-0, 59-1-0-11-0, and 48-1-0-35-A) - The Company met with representatives in January 2026 to discuss concerns with the routes going over their property and their plan for the property. The Proposed Route and Alternative Route 5 cross parcels owned by Asgard Properties in the same alignment. During this meeting,

the Company was provided with a preliminary conceptual site plan with building layouts. Based on this site plan, the Proposed Route and Alternative Route 5 conflict with seven potential buildings (one commercial and six residential). Adjusting the routes to avoid direct conflicts with potential future buildings would cause the routes to conflict with an existing commercial building. As the Company has not received any formal documentation that this building will be demolished, the alignment through this future development has not been adjusted. The Company and representatives from Asgard Properties continued discussions after the meeting regarding the status of the planned development. On January 14, 2026, representatives told the Company they planned to move forward with development of commercial properties facing Broad Street which will require rezoning the parcels under existing business zoning districts (requiring a public meeting and a Board of Supervisors vote) and then filing a Plan of Development for the development. As of January 15, 2026, no pre-application meeting regarding any future development had been scheduled with the relevant Goochland County officials. The Company will continue to coordinate with the developer on this crossing to minimize impacts on the future development if the Proposed route or Alternative Route 5 are selected as the preferred route by the Commission and if the future development moves forward through County permitting processes.

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) Goochland County designates important farmland based on soil type. The Company coordinated with Goochland County staff who did not identify any important farmlands that the Project will impact.

(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. One previously recorded aboveground architectural resource potentially eligible for listing on the National Register is located within 0.5 mile of the Proposed Route and all route alternatives. This resource (DHR #037-5238) is a single dwelling farm on the west side of Ashland Road in an area where the Proposed and Alternative Routes share a common alignment. The edge of the property is approximately 0.4 mile from the Proposed and Alternative Routes and the home is set further away at approximately 0.8 mile from the Proposed and Alternative Routes.
3. None
4. None. See Section 4.5.2 of the Environmental Routing Study for information on unevaluated archaeological resources within the right-of-way of the Proposed and Alternative Routes.
5. None
6. None
7. None
8. None
9. None
10. None
11. None
12. No existing recreation areas are crossed by the Proposed or Alternative Routes. See Section 4.1.8 of the Routing Study for information about potential impacts on recreation areas near the Project.

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 website¹⁰ to identify airports within 10.0 nautical miles of the proposed Project. Based on this review, the following FAA-registered aeronautical facilities are located within 10.0 nautical miles of the Project:

Airport Name	Approximate Nearest Distance and Direction from Proposed Project (nautical miles (“nm”) (approx.))	Use
Sabot Airport (1VA0)	3.8 nm west of the Alternative Route 2 and Alternative Route 5.	Private
Innsbrook Technical Center Heliport (VG02)	3.5 nm east of Proposed Route	Private
H D H Heliport (60VA)	5.8 nm east of Proposed and Alternative Routes	Private
St Mary’s Hospital Heliport (37VA)	7.3 nm from Proposed and Alternative Routes	Private
Johnston Willis Heliport (VG41)	6.7 nm southeast of Proposed and Alternative Routes	Private
Bon Secours St Francis Medical Center (VG68)	8.3 nm south of Proposed and Alternative Routes	Private
Chippenham Hospital Heliport (6VA3)	8.5 nm southeast of Proposed and Alternative Routes	Private
Mayers Airport (VG24)	9.9 nm northeast of Proposed and Alternative Routes	Private

¹⁰ See <https://ocaaa.faa.gov/ocaaa/external/portal.jsp> and <https://adip.faa.gov/agis/public/#/public>.

Airport Name	Approximate Nearest Distance and Direction from Proposed Project (nautical miles (“nm”) (approx.))	Use
Virginia DMV Headquarters Heliport (7VA7)	10.0 nm southeast of Proposed and Alternative Routes	Private

Based on this review, there are no public or private airports or heliports located within three nautical miles of the proposed alignment, and no impacts to FAA regulated airspace from the proposed structures are anticipated. The Company does not anticipate needing to file an FAA Form 7460-1, Notice of Proposed Construction or Alteration; however, during the permitting phase of the project, the Company will utilize the FAA’s Obstruction Evaluation pre-screening tool to confirm and will file Form 7460-1 if required.

In summary, none of the structures along the Proposed and Alternative Routes are anticipated to penetrate civil airport imaginary surfaces or interfere with terminal instrument procedures established by the FAA. Therefore, no impacts to navigable airspace from the Project are anticipated, and no special features or design alterations are expected to be required for the transmission structures installed for the Project.

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: River Road (Route 6) is located along the southwestern border of the study area and was designated a Virginia Byway in 1987. The two-lane rural scenic corridor is lined with mature trees, large estate homes, and open pastures and provides views of the James River valley. The West Creek Substation (the nearest Project facility) is approximately 1.2 miles from River Road and given the topography and mature tree growth, no visual impacts are anticipated.

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

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

Response: Below is a list of coordination that has occurred or will occur with municipal, state, and federal agencies regarding the proposed Project:

- Coordination with the U.S. Army Corps of Engineers, DEQ, Virginia Marine Resources Commission, and VDOT will take place as appropriate to obtain necessary approvals for the Project.
- A letter dated December 28, 2025, was submitted to Goochland County to describe the Project and request comments. See Section V.D.
- Company representatives presented the Project to the Goochland County Administrator in November 2025 and had additional coordination meetings with the County.
- Coordination with Goochland County's Planning and Zoning department took place on November 14, 2025, as discussed in Section III.E.
- Company representatives met with VDOT on October 2, 2025, to determine if there were any proposed road projects within the study area for the proposed Project. The Company met with VDOT again on October 23, 2025 to present preliminary route alternatives and discuss crossings of VDOT rights-of-way.
- A Stage I Pre-Application Analysis has been prepared and was submitted to VDHR on January 27, 2026. See Attachment 2.I.1 to the DEQ Supplement.
- On November 18, 2025, the Company solicited comments via letter from several state and federally recognized Native American tribes, including:

Name	Tribe
Chief Walt "Red Hawk" Brown	Cheroenhaka (Nottoway) Indian Tribe
Mary Frances Wilkerson	Cheroenhaka (Nottoway) Indian Tribe
Chief Stephen Adkins	Chickahominy Indian Tribe
Assistant Chief Reginald Stewart	Chickahominy Indian Tribe
Chief Joanne Howard	Chickahominy Indian Tribe Eastern Division
Jessica Phillips	Chickahominy Indian Tribe Eastern Division
Dana Adkins	Chickahominy Tribe
Chief Mark Custalow	Mattaponi Tribe
Chief Diane Shields	Monacan Indian Nation

Name	Tribe
Chief Keith Anderson	Nansemond Indian Nation
Chief Lynette Allston	Nottoway Indian Tribe of Virginia
Ms. Beth Roach	Nottoway Indian Tribe of Virginia
Chief Kevin Brown	Pamunkey Indian Tribe
Kendall Stevens	Pamunkey Indian Tribal Resource Office
Chief Charles (Bootsie) Bullock	Patawomeck Indian Tribe of Virginia
Chief G. Anne Richardson	Rappahannock Tribe
Assistant Chief	Rappahannock Tribe
Chief W. Frank Adams	Upper Mattaponi Indian Tribe
Desiree Dyer	Upper Mattaponi Indian Tribe
Dr. Wenonah G. Haire	Catawba Indian Nation
Caitlin Rogers	Catawba Indian Nation
Katelyn Lucas Carissa Speck	Delaware Nation, Oklahoma

A copy of the letter template and map is included as Attachment III.J.1 and Attachment III.J.2, respectively.

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

Dominion Energy Virginia
Electric Transmission
5000 Dominion Boulevard
Glen Allen, VA 23060



November 18, 2025

West Creek 230 kV Electric Transmission Project

Dear Chief Red Hawk,

Dominion Energy is dedicated to maintaining safe, reliable, and affordable electric service in the communities we serve. You are receiving this project announcement letter as part of our efforts to proactively communicate early with Tribal Nations who may have an interest in this area. With your unique perspective, you can help us better plan projects in their earliest stages. Please note, this letter is not a notification of formal government-to-government consultation from any state or federal agency. Dominion Energy has been and continues to be committed to creating and maintaining strong, open, supportive, and mutually beneficial relationships with Tribal Nations.

We are reaching out to you now as we have an upcoming project in Goochland County, Virginia, and you may have an interest in this area. Dominion Energy is proposing new electric infrastructure to serve the growing needs of the region and maintain reliable electric service with the proposed West Creek 230 kV Electric Transmission Project.

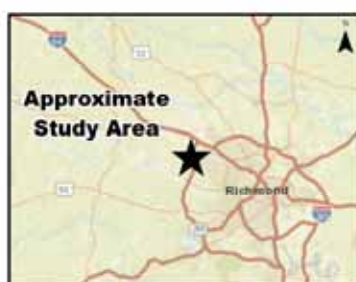
This project requires review by the Virginia State Corporation Commission (SCC). We are still in the conceptual phase of the project and more details will be provided as activities progress. Enclosed is a project study area map for your reference. Providing your input now allows us to consider any concerns you may have as we work to meet the project's needs. Please feel free to notify other relevant organizations that may have an interest in the project area. For reference, other recipients of this letter include county and state historic, cultural, and scenic organizations.

If you have questions or would like to set up a meeting to discuss the project, contact me by calling 804-944-5313 or sending an email to Janae.p.johnson@dominionenergy.com. You may also contact Tribal Relations Manager Ken Custalow by emailing Ken.Custalow@dominionenergy.com or calling 804-837-2067.

Sincerely,

A handwritten signature in black ink that reads "Janae Johnson". The signature is fluid and cursive, with the first name "Janae" and last name "Johnson" clearly distinguishable.

Janae Johnson
Communications Consultant
The Electric Transmission Project Team



**Dominion
Energy®**

Client/Applicant:
Dominion Energy Virginia

C2 Project:	Prepared By:	Date:
0415	ELW	09/17/25



SHEET 1 OF 1

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

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

Response: On November 18, 2025, the Company solicited comments via letter from the community leaders, environmental groups, and business groups identified in the table below. A copy of the letter template and map is included as Attachment III.K.1 and Attachment III.K.2.

Name	Organization
Mr. Will Glasco	Preservation Virginia
Mr. Dave Brown	Council of Virginia Archaeologists
Ms. Leighton Powell	Scenic Virginia
Ms. Elaine Chang	National Trust for Historic Preservation
Mr. John McCarthy	Piedmont Environmental Council
Ms. Julie Bolthouse	Piedmont Environmental Council
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
Dr. Cassandra Newby-Alexander	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 and Associates, LLC

Dominion Energy Virginia
Electric Transmission
5000 Dominion Boulevard
Glen Allen, VA 23060



November 18, 2025

West Creek 230 kV Electric Transmission Project

Dear Mr. Glasco,

Dominion Energy is dedicated to maintaining safe, reliable, and affordable electric service in the communities we serve. As a valued stakeholder with a unique perspective, you can help us meet these objectives as we plan necessary electric infrastructure projects.

We are reaching out to you now as we have an upcoming project in Goochland County, Virginia, and you may have an interest in this area. Dominion Energy is proposing new electric infrastructure to serve the growing needs of the region and maintain reliable electric service with the West Creek 230 kV Electric Transmission Project.

Enclosed is a project study area map for your reference. This project requires review by the Virginia State Corporation Commission (SCC). Providing your input now allows us to consider any concerns you may have as we work to meet the project's needs. Please feel free to notify other relevant organizations that may have an interest in the project area. For reference, other recipients of this letter include county and state historic, cultural, and scenic organizations, as well as Tribal Nations.

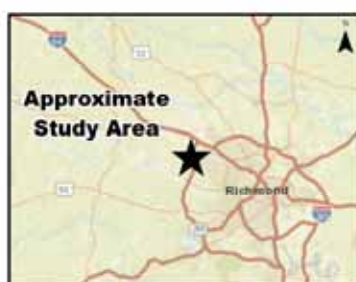
We will host an in-person community meeting prior to submitting to the SCC in early 2026. Please visit the project webpage at DominionEnergy.com/WestCreek for meeting updates and more project information.

If you have questions or would like to set up a meeting to discuss the project, contact me by calling 804-944-5313 or sending an email to Janae.p.johnson@dominionenergy.com.

Sincerely,

A handwritten signature in black ink that reads "Janae Johnson". The signature is fluid and cursive, with the first name "Janae" and last name "Johnson" clearly distinguishable.

Janae Johnson
Communications Consultant
The Electric Transmission Project Team



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Client/Applicant:
Dominion Energy Virginia

C2 Project:	Prepared By:	Date:
0415	ELW	09/17/25



SHEET 1 OF 1

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 under Section 404 and 401	Virginia Water Protection Permit Waiver	Virginia Department of Environmental Quality
Discharge of stormwater from construction activities	Construction General Permit	Virginia Department of Environmental Quality
Work within, over or under state subaqueous bottom	VGP 5 Utility Crossing General Permit	Virginia Marine Resources Commission
Work within VDOT rights-of-way	Land Use Permit and Traffic Control Plans	Virginia Department of Transportation
Airspace obstruction evaluation	FAA 7460-1	Federal Aviation Administration
Work within gas pipeline right-of-way	Encroachment Agreement	Columbia Gas Transmission

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 after the new line is operational.

Response: Public exposure to magnetic fields associated with high voltage power lines is best estimated by field levels 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 (2029) annual average and maximum (peak) loading conditions. The EMF values provided in this section were calculated based on the Company's proposed line characteristics of a typical span in both average and peak loading conditions.

Proposed Project – Projected average loading in 2029

EMF levels were calculated for the proposed Project at the *projected average* load condition (239.58 amps for Line #2009 and 135.72 amps for Line #2510) and at an operating voltage of 241.5 kV when supported on the proposed Project structures – see [Attachment II.A.5.a](#).¹¹

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.

Proposed Project - Projected Average Loading (2029)				
Attachment	Left Edge		Right Edge	
	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.a	0.967	16.984	0.971	14.912

Proposed Project – Projected peak loading in 2029

EMF levels were calculated for the proposed Project at the *projected peak* load condition (399.30 amps for Line #2009 and 226.20 amps for Line #2510) and at an operating voltage of 241.5 kV when supported on the proposed Project structures –

¹¹ The EMF calculations provided in this section are based on the 160-foot-wide right-of-way illustrated in [Attachment II.A.5.a](#).

see Attachment II.A.5.a.

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.

Proposed Project - Projected Peak Loading (2029)				
Attachment	Left Edge		Right Edge	
	<u>Electric Field</u> (kV/m)	<u>Magnetic Field</u> (mG)	<u>Electric Field</u> (kV/m)	<u>Magnetic Field</u> (mG)
II.A.5.a	0.953	29.011	0.957	25.373

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 few 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 extremely low frequency (“ELF”) EMF, also referred to as power-frequency (50/60 Hertz [“Hz”]) 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 on biological responses of high, short-term EMF exposure not typically found in people’s day-to-day lives, while others evaluate the effects of common, low 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 100 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 scientific agencies to identify, review, and summarize the results of this large and diverse research.

The reviews of biological and health research related to ELF EMF 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 Institute of Electrical and Electronics Engineers (“IEEE”)’s International Committee on Electromagnetic Safety (“ICES”), the Scientific Committee on Health, Environmental and Emerging Risks (“SCHEER”) (formerly 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, 2024a, 2024b; ICES, 2019; SCHEER, 2024). 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 and 2024 reports by SCENIHR and SCHEER, respectively, and annual reviews published by SSM (*i.e.*, for the years 2015 through 2024). 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.

WHO has recommended that countries adopt recognized international standards published by ICNIRP and ICES. Typical levels of EMF from Dominion Energy Virginia's high voltage 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.

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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.”¹²

The continuing scientific research on ELF 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:

- WHO, which published one of the most comprehensive and detailed reviews of the relevant scientific peer-reviewed literature in 2007;
- SCHEER (formerly SCENIHR), a committee of the European Commission, which published its assessments in 2009, 2015, and 2024;
- The SSM, which has published annual reviews of the relevant peer-reviewed scientific literature since 2003, with its most recent reviews published in 2024; 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

¹² 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). In their 2024 report providing an update on the potential health effects of exposure to electromagnetic fields in the 1 Hz to 100 kilohertz (“kHz”) range, SCHEER concluded that “overall, there is weak evidence concerning the association of ELF-MF [magnetic field] exposure with childhood leukaemia” (SCHEER 2024, p. 9).

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 February 15, 2025, provide additional evidence and contribute to clarification of previous findings. Overall, new research studies have not provided evidence to alter the previous conclusions of scientific and health organizations, including 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 tumors, 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 and after) and reported no overall associations between exposure categories and childhood leukemia for the later periods (1980 and after), 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 Quebec. 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 exposure to high calculated magnetic fields (≥ 0.4 microtesla [μT]) (*i.e.*, ≥ 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 $> 0.4 \mu\text{T}$ (4 mG); no statistically significant overall associations were reported between childhood leukemia and lower magnetic-field exposure ($< 0.4 \mu\text{T}$ [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.
- Guo et al. (2023) reported conducting a systematic review and meta-analysis of studies published from 2015 to 2022 that evaluated associations between magnetic-field exposure and childhood leukemia development. Three meta-analyses were conducted to evaluate the relationship using different exposure metrics. In the first meta-analysis, magnetic-field levels ranging from 0.4 μT (4 mG) to 0.2 μT (2 mG) were associated with a statistically significant reduced risk of childhood leukemia development (*i.e.*, a protective association). In the second meta-analysis, exposure was based on wiring configuration codes, and the reported pooled relative risk estimates demonstrated a statistically significant increased association with childhood leukemia. In the third meta-analysis, exposure was categorized into groupings of magnetic-field strength; no statistically significant associations with childhood leukemia were reported for any of the groupings, including for magnetic-field levels $\geq 0.4 \mu\text{T}$ (4 mG). There are significant limitations of this study that prevent meaningful interpretations of the results. Most of the analyses of magnetic fields did not state whether measurements and calculations were included, and the authors provided no description of the methods used for their analyses, no data tables to support their findings, and no references to the number and type of studies included. In fact, much of the article’s introduction discusses ionized radiation. The authors also do not report relevant metrics for evaluating meta-analyses such as study heterogeneity.
- Malagoli et al. (2023) examined associations between exposure to magnetic fields from high voltage power lines ($\geq 132 \text{ kV}$) and childhood leukemia development in a case-control study of children in Italy. The study included 182 cases diagnosed with childhood leukemia between 1998 and 2019 and 726 controls matched based on age, sex, and Italian province. The authors assessed

magnetic-field exposure by calculating the distance from each participant's residence to the nearest high voltage power line and classifying that distance into one of three exposed categories (participants living < 100 meters, 100 to < 200 meters, or 200 to < 400 meters from the power lines) or as unexposed (participants living $\geq$ 400 meters from the power lines). The authors reported a non-statistically significant association between childhood leukemia and a residence distance of <100 meters; no statistically significant associations were reported for any distance, including when stratifying by age (< 5 or $\geq$ 5 years) or when restricting to acute lymphoblastic leukemia ("ALL").

- Nguyen et al. (2023) extended their previous investigation (Nguyen et al., 2022) into whether pesticide exposure was an independent risk factor or confounder for childhood leukemia in the presence of magnetic-field exposure from high voltage power lines by examining the potential impact of specific pesticide exposure factors (*e.g.*, intended use, chemical class, active ingredient). The authors found no statistically significant associations between distance to high voltage power lines or magnetic-field exposure and childhood leukemia, including when adjusting for pesticide exposures. Several of the examined pesticides were determined by the authors to be potential independent risk factors 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 μ T [$<$ 1 mG] to $\geq$ 0.4 μ T [$\geq$ 4 mG]) 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.
- Crespi et al. (2024) assessed the association between residential proximity to electricity transformers in multi-story residential buildings and childhood leukemia development in the International Transformer Exposure study. Participants were required to live in an apartment building that contained a built-in transformer; exposure was estimated using the participants' apartment location relative to the transformer and categorized as high exposure (located above or adjacent to the transformer), intermediate exposure (located on the same floor as apartments in the high exposure category), or unexposed (all other apartments). In the pooled analyses of five countries' data, a total of 74 cases and 20,443 controls were included; 18 of the 74 cases were identified in the intermediate or high exposure categories. No significant associations were reported between proximity to residential transformers and childhood leukemia. Sensitivity analyses performed using the data from one of the five countries (Finland) where a cohort study design was used, also reported no significant associations. The authors concluded that the evidence for an elevated risk of

childhood leukemia from proximity to residential transformers was “weak.”

- Duarte-Rodríguez et al. (2024) conducted a population-based case-control study to examine the geographical distribution of childhood ALL cases in Mexico City, Mexico. Cases and controls were geolocated using the most recent residential address, and a spatial scan statistic was used to detect spatial clusters of cancer cases. The authors identified eight spatial clusters of cases, representing nearly 40% of all cases included in the study (n=1,054 cases). The authors noted that six of the eight spatial clusters were located in proximity to high voltage power lines and high voltage electric installations (distances not specified), and that the remaining two clusters were located near former petrochemical industrial facility sites. Since the study did not directly assess magnetic-field exposure and made no conclusions about magnetic-field exposure and cancer development, this study adds little value to the existing literature regarding a potential association between exposure to ELF EMF and childhood leukemia development.
- Malavolti et al. (2024) examined the association between magnetic-field exposure from transformer stations and childhood leukemia in the same Italian study population as Malagoli et al. (2023). Magnetic-field exposure was estimated based on residential distance to the nearest transformer station, and participants were then categorized as exposed or unexposed using two different distance cut-points: residing within a radius of 15 or 25 meters from the transformer station (exposed); residing ≥ 15 meters or ≥ 25 meters from the transformer station (unexposed). No significant associations were reported for all leukemias, or ALL specifically, when either distance cut-point was used, and in fact no association at all (an odds ratio = 1.0) was observed when the more stringent cut-point of 15 meters was used. In sub-analyses that stratified by participant age (< 5 years vs. ≥ 5 years), no significant associations were reported for either age category.
- Norzaee et al. (2024) conducted a hospital-based case-control study that investigated the association between residential proximity to urban land uses (such as highways, petrol stations, power lines, and bus stations) and childhood leukemia and lymphoma in Tehran, Iran. The study population included 428 childhood leukemia and 428 childhood lymphoma cases, diagnosed between 2016 and 2021, and 428 controls, selected from the same hospitals as the cases. To be eligible for inclusion in the study, cases and controls had to have been living at their residence for at least 1 year prior to enrollment and be between 1 and 15 years of age. Logistic regression models adjusting for parental smoking, sex, birth year, and family history of cancer, indicated some statistically significant associations with proximity to petrol stations and highways but not with proximity to power lines. Children living within 100 meters of highways had increased odds of developing leukemia and lymphoma compared to children living at a further distance from highways, while proximity to petrol stations (< 100 meters) was associated with leukemia development but not lymphoma. The authors reported an association between

childhood leukemia development and living within 50 meters of power lines compared to living further away, but contrary to the authors' description, this finding was not statistically significant.¹³ The authors also noted that this evaluation was based on a limited sample size of only 12 cases. No associations were observed between proximity to power lines and childhood lymphoma development.

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.

¹³ In Table 2 of the paper, the reported adjusted odds ratio for living within 50 meters of power lines was 2.90, with a 95% confidence interval ranging from 0.92 to 9.14. An odd ratio with a 95% confidence interval including 1.0 is considered statistically non-significant. A 95% confidence interval reflects a range of values that is expected to include the true value 95% of the times.

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 Parkinsonism¹⁴ 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.
- 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.
- Rösli 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

¹⁴ 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).

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.”

- Goutman et al. (2022) examined occupational exposures, including “electromagnetic radiation” exposure, and associations with ALS in a case-control study of Michigan workers across various industries. The study included 381 cases diagnosed with ALS, all patients at the University of Michigan’s Pranger ALS clinic, and 272 controls recruited from an online database for the University of Michigan. Participants were enrolled from 2010 to 2020 and completed a written survey of their work history and occupational exposures to nine exposure categories, including electromagnetic fields, particulate matter (“PM”), and pesticides. Exposure to electromagnetic fields was ascertained with a binary question asking whether they were “[e]xposed to power lines, transformation [*sic*] stations or other EM [electromagnetic radiation]?” The analysis was adjusted for age, sex, and military service. No association was observed between electromagnetic field exposure and ALS, while exposure to PM, pesticides, and metals, among others, were determined by the authors to be “associated with an increased ALS risk in this cohort.”
- Sorahan and Nichols (2022) investigated magnetic-field exposure 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.
- Duan et al. (2023) conducted a meta-summary of ALS and exposure to magnetic fields, which was 1 of 22 non-genetic risk factors evaluated across 67 studies for its association with ALS. Six of the 67 studies examined magnetic-field exposure and associations with ALS; of the six studies identified, the authors included four case-control studies and one cohort study in their meta-analysis. Pooling results from these studies resulted in significant increased odds of ALS among individuals with higher (but undefined) exposure to magnetic fields. However, this pooled odds ratio for magnetic-field exposure (1.22) was below the minimum odds ratio threshold of 1.3 set by the authors as the criterion for defining an exposure as an ALS risk factor. In addition, the authors identified “substantial” heterogeneity between studies evaluating magnetic-field exposure and ALS.

- In a subsequent publication of the same study as Goutman et al. (2022), Goutman et al. (2023) assessed the potential for the same nine exposure categories, including “electromagnetic radiation” exposure, to be risk factors for ALS progression, including survival and onset segment (bulbar, cervical, lumbar). Electromagnetic field exposure was not significantly associated with ALS survival or with bulbar onset compared to lumbar, but was significantly associated with cervical onset compared to lumbar. It is worth noting that an association with cervical onset compared to lumbar was observed in the majority (7/9) of the exposure categories. The authors make no concluding statements on electromagnetic field exposure and ALS and instead emphasize that occupational pesticide exposure and working in military operations were significantly associated with worse ALS survival.
- Saucier et al. (2023) carried out three systematic reviews of studies that evaluated relationships between urbanization, air pollution, and water pollution, and ALS development. The authors identified five studies that assessed whether electromagnetic fields (of varying frequencies) and high voltage infrastructure were significant urbanization risk factors for ALS, but make no conclusion about magnetic-field exposure and ALS development based on these studies, therefore adding little value to the existing literature.
- 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.
- Vitturi et al. (2023) conducted a systematic review and meta-analysis of case-control studies examining potential occupational risk factors related to multiple sclerosis, including solvents, mercury, pesticides, and low-frequency magnetic fields. The authors included 24 studies in their review, but only one of the included studies investigated exposure to magnetic fields (Pedersen et al., 2017, discussed above), thereby adding little new information to the existing body of research.
- Jones et al. (2025) conducted an “umbrella review,” which is a review of systematic reviews and meta-analyses of environmental risk factors for various types of dementia and mild cognitive impairment. The authors included 19 review articles, containing 37 meta-analyses, published between 2008 and 2023, in their analysis, and identified nine exposures associated with higher risk of all-cause dementia, including particulate matter, carbon monoxide, shift work, chronic noise, and ELF magnetic fields; several of these exposures, including ELF magnetic fields, were also identified as being associated with Alzheimer’s disease dementia. The authors’ analysis of ELF magnetic-field exposure and all-cause dementia, however, was based on a single study, and the

analysis of ELF magnetic-field exposure and Alzheimer's disease dementia was based on only four studies, three of which were rated as being of "low" or "moderate" study quality, thereby adding little valuable information to the existing body of research. The authors did not identify any systematic reviews reporting associations between any of these environmental factors and mild cognitive impairment.

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Vinceti M, Malagoli C, Fabbi S, Kheifets L, Violi F, Poli M, Caldara S, Sesti D, Violanti S, Zanichelli P, Notari B, Fava R, Arena A, Calzolari R, Filippini T, Iacuzio L, Arcolin E, Mandrioli J, Fini N, Odone A, Signorelli C, Patti F, Zappia M, Pietrini V, Oleari P, Teggi S, Ghermandi G, Dimartino A, Ledda C, Mauceri C, Sciacca S, Fiore M, Ferrante M. Magnetic fields exposure from high voltage power lines and risk of amyotrophic lateral sclerosis in two Italian populations. *Amyotroph Lateral Scler Frontotemporal Degener* 18:583-589, 2017.

Vitturi BK, Montecucco A, Rahmani A, Dini G, Durando P. Occupational risk factors for multiple sclerosis: a systematic review with meta-analysis. *Front Public Health* 11:1285103, 2023.

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

Zagar T, Valic B, Kotnik T, Korat S, Tomsic S, Zadnik V, Gajsek P. Estimating exposure to extremely low frequency magnetic fields near high voltage power lines and assessment of possible increased cancer risk among Slovenian children and adolescents. *Radiol Oncol* 57(1):59-69, 2023.

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: Dominion Energy Virginia's 230 kV West Creek Loop and Substation Project includes construction of a new double circuit overhead 230 kV transmission line in new right-of-way (West Creek Lines) and a new substation (West Creek Substation) in Goochland County, Virginia.

A map is provided in Attachment V.A showing the route alternatives of the West Creek Lines, including the overhead Proposed Route (Route 3) and overhead Alternative Routes 2 and 5, as well as the location of the proposed West Creek Substation and existing Line #2009. While the Company is proposing only overhead construction of the West Creek Lines, this serves as notice of the Proposed Route (Route 3) of the Project regardless of whether the proposed West Creek Lines utilize overhead construction, underground construction, or a hybrid combination thereof along that route. A written description of the overhead Proposed and Alternative Routes is as follows:

Proposed Route (Route 3)

The Proposed Route (Route 3) is approximately 6.5 miles in length. Beginning at the cut-in location along the Company's existing Line #2009, located north of I-64 and east of Ashland Road, the Proposed Route heads south for about 0.3 mile and crosses I-64. Turning southeast, the Proposed Route is then collocated with I-64 for approximately 0.6 mile before turning south and paralleling the I-64 and Route 288 interchange for another 0.5 mile. The Proposed Route then crosses Three Chopt Road and turns slight southwest for about 0.2 mile. Continuing south for about 0.5 mile, the Proposed Route then crosses Broad Street (250) and the Broad Street / Route 288 Interchange. Turning east, the Proposed Route then crosses Route 288 (0.1 mile) and then heads south paralleling the east side of Route 288 for about 1.5 miles, crossing Tuckahoe Creek. Continuing generally south, the route traverses the outside of the Route 288 / Tuckahoe Creek Parkway interchange and Tuckahoe Creek Parkway for about 0.9 mile. The route then crosses Tuckahoe Creek Parkway and heads west for approximately 0.4 mile before crossing Route 288 (0.1 mile) for a second time. Turning south, the route then parallels the west side of Route 288 for about 0.8 mile, crossing Broad Branch and Broad Branch Drive. Continuing in a generally southerly direction for the remaining 0.6 mile, the Proposed Route crosses West Creek Parkway and Route 288 before terminating at the substation site, located east of Route 288 and south of West Creek Parkway.

The Proposed Route will be constructed on new 100-foot-wide right-of-way primarily supported by double circuit weathering steel monopoles with a minimum

structure height of 95 feet, a maximum structure height of 130 feet, and an average structure height of 108 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.

Alternative Route 2

Alternative Route 2 is approximately 5.9 miles in length. Beginning at the cut-in location along the Company's existing Line 2009, located north of I-64 and east of Ashland Road, Alternative Route 2 heads south for about 0.3 mile and crosses I-64. Turning southeast, Alternative Route 2 is then collocated with I-64 for approximately 0.2 mile before heading south for approximately 1.0 mile, crossing Three Chopt Road and Broad Street (250). Alternative Route 2 then turns southeast for an additional 0.4 mile, crossing Tuckahoe Creek in two locations and Readers Branch, before paralleling with the west side of Route 288 for approximately 1.6 miles. Continuing generally south, Alternative Route 2 then traverses the outside of the Route 288 / Tuckahoe Creek Parkway interchange for about 0.7 mile, crossing Tuckahoe Creek Parkway and Capital One Drive. Alternative Route 2 then continues south, paralleling the west side of Route 288 for another 1.1 miles, crossing Broad Branch, and Broad Branch Drive. Continuing in a generally southerly direction for the remaining 0.6 mile, Alternative Route 2 crosses West Creek Parkway and Route 288 before terminating at the substation site, located east of Route 288 and south of West Creek Parkway.

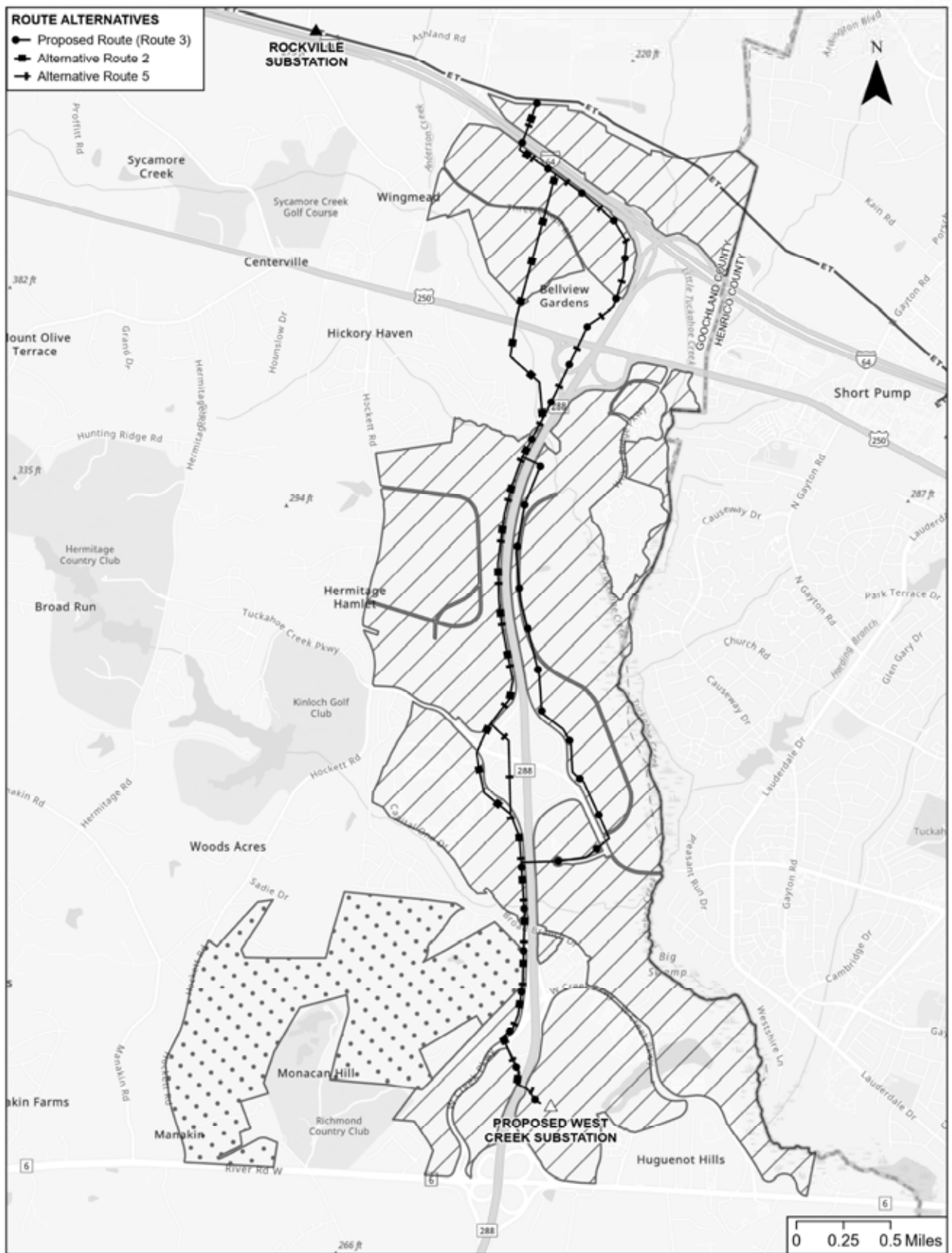
Alternative Route 2 will be constructed on new 100-foot-wide right-of-way primarily supported by double circuit weathering steel monopoles with a minimum structure height of 95 feet, a maximum structure height of 130 feet, and an average structure height of 110 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.

Alternative Route 5

Alternative Route 5 is approximately 6.0 miles in length. Beginning at the cut-in location along the Company's existing Line 2009, located north of I-64 and east of Ashland Road, Alternative Route 5 heads south for about 0.3 mile and crosses I-64. Turning southeast, Alternative Route 5 is then collocated with I-64 for approximately 0.6 mile before turning south and paralleling the I-64 and Route 288 interchange for another 0.5 mile. Alternative Route 5 then crosses Three Chopt Road and turns slight southwest for about 0.2 mile. Continuing south, Alternative Route 5 then crosses Broad Street (250) and the Broad Street / Route 288 Interchange, and parallels the west side of Route 288 for approximately 2.2 miles. This segment of the route crosses Tuckahoe Creek and Readers Branch. Alternative Route 5 then crosses a ramp to Route 288 (0.1 mile) and crosses through the Route 288 / Tuckahoe Creek Parkway interchange for about 0.4 mile. Continuing generally south, Alternative Route 5 then continues to parallel the west side of Route 288 for another 1.1 miles crossing Broad Branch and Broad Branch Drive. Continuing in a generally southerly direction for the remaining 0.6 mile,

Alternative Route 5 crosses West Creek Parkway and Route 288 before terminating at the substation site located east of Route 288 and south of West Creek Parkway.

Alternative Route 5 will be constructed on new 100-foot-wide right-of-way primarily supported by double circuit weathering steel monopoles with a minimum structure height of 95 feet, a maximum structure height of 130 feet, and an average structure height of 111 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.



1/6/2026 11:23 AM

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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: Shortly after filing, the Application will be made available electronically for public inspection at: <https://www.dominionenergy.com/about/delivering-energy/electric-projects/power-line-projects/west-creek>.

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
Virginia Department of Environmental Quality
Office of Environmental Impact Review
1111 East Main Street, Suite 1400
Richmond, Virginia 23219
bettina.rayfield@deq.virginia.gov

Ms. Michelle Henicheck
Virginia Department of Environmental Quality
Office of Wetlands and Streams
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

Environmental Reviewer
Virginia Department of Conservation and Recreation
Planning & Recreation Bureau
600 East Main Street, 17th Floor
Richmond, Virginia 23219

Ms. Hannah Schul
Virginia Department of Wildlife Resources
Wildlife Information and Environmental Services
7870 Villa Park, Suite 400
Henrico, Virginia 23228

Mr. Keith Tignor
Virginia Department of Agriculture and Consumer Services
Office of Plant Industry Services
102 Governor Street
Richmond, Virginia 23219

Mr. Clint Folks
Virginia Department of Forestry
Forestland Conservation Division
900 Natural Resources Drive, Suite 800
Charlottesville, Virginia 22903

Scoping at VMRC
Virginia Marine Resources Commission
Habitat Management Division
Building 96, 380 Fenwick Road
Ft. Monroe, Virginia 23651

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

Ms. Regena Bronson
U.S. Army Corps of Engineers
Fredericksburg Field Office
10300 Spotsylvania Parkway, Suite 230
Fredericksburg, Virginia 22408

Mr. Phil Skorupa
Virginia Department of Energy
1100 Bank Street
Washington Building, 8th Floor
Richmond, Virginia 23219

Ms. Arlene Fields Warren
Virginia Department of Health
Office of Drinking Water
109 Governor Street, 6th Floor
Richmond, Virginia 23219

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

Virginia Outdoors Foundation
39 Garrett Street, Suite 200
Warrenton, Virginia 20186

Mr. Stephen Smiley
Mr. Bill LaManque
Airport Services Division
Virginia Department of Aviation
5702 Gulfstream Road
Richmond, Virginia 23250

Mr. Dale Totten, P.E.
District Engineer
Virginia Department of Transportation,
Richmond District
2430 Pine Forest Drive
South Chesterfield, Virginia 23834

Phillip Frazer
Ashland Residency
523 N. Washington Highway
Ashland, VA 23005

Dr. Jeremy Raley
County Administrator
1800 Sandy Hook Road
P.O. Box 10
Goochland, VA 23063

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 December 28, 2025, was delivered to Dr. Jeremy Raley, County Administrator of Goochland 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.

Dr. Jeremy Raley
County Administrator, Goochland County
1800 Sandy Hook Road
PO Box 10
Goochland, VA 23063

December 28, 2025

**RE: Dominion Energy Virginia's Proposed West Creek 230kV Loop
Transmission Project**

Notice Pursuant to Va. Code § 15.2-2202 E

Dear Dr. Raley:

In order to ensure that Dominion Energy Virginia (the "Company") can maintain reliable service for the overall growth in the area and to comply with the North American Electric Reliability Corporation ("NERC") Reliability Standards, the Company is proposing the West Creek 230kV Loop Transmission Project in Goochland County, Virginia (the "Project").

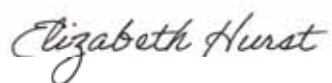
The Company is preparing to file an application for a certificate of public convenience and necessity ("CPCN") from the State Corporation Commission (the "Commission"). Pursuant to § 15.2-2202 of the Code of Virginia, the Company is writing to notify Goochland County of the proposed Project in advance of the CPCN filing and respectfully requests that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter.

Enclosed is a Project Overview Map depicting the Project's route alternatives, as well as the general Project location. All final materials, including maps, will be available in the Company's CPCN filing to the Commission.

If you would like to receive a GIS shapefile of the route alternatives to assist in your Project review or if you have any questions, please do not hesitate to contact me at (804) 298-5646 or Hannah.hurst@dominionenergy.com.

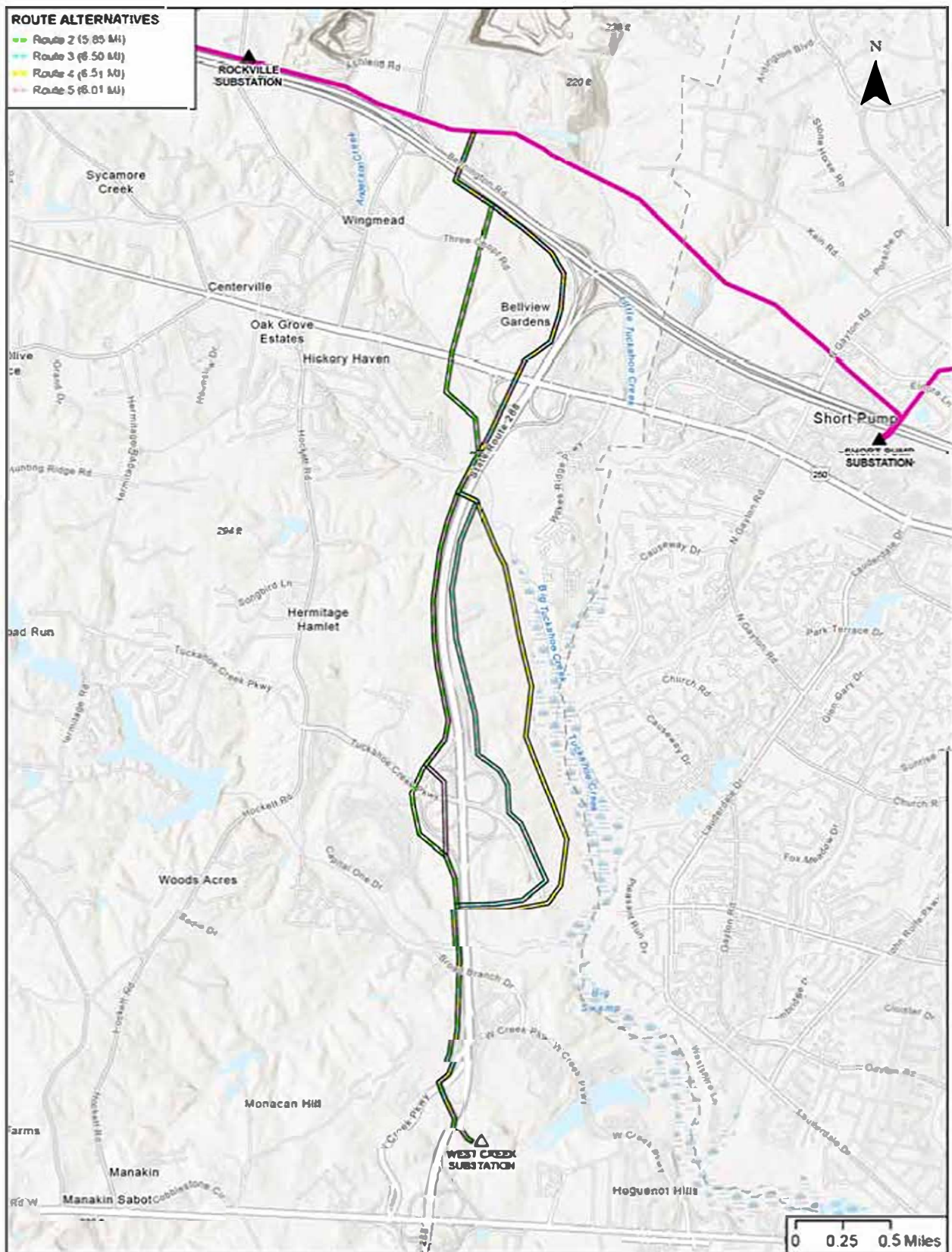
Dominion Energy Virginia appreciates your assistance with this Project review and looks forward to any additional information you may have to offer.

Regards,

A handwritten signature in cursive script that reads "Elizabeth Hurst".

Hannah Hurst
Senior Siting and Permitting Specialist
Electric Transmission
5000 Dominion Boulevard, 3rd Floor
Glen Allen, Virginia 23060
804-298-5646

Attachment: Project Overview Map



- SITE DATA**
- Proposed Substation
 - Existing Substation
 - Existing Dominion Transmission Line

Project Overview Map

230 kV West Creek Loop and Substation

Dominion Energy Virginia
Goochland County, Virginia



COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
VIRGINIA ELECTRIC AND POWER COMPANY	)	Case No. PUR-2026-00009
	)	
For approval and certification of electric transmission	)	
facilities: 230 kV West Creek Loop and Substation	)	

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

Jason S. Whitlow

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

Jeff L. Miller

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

Lucas J. Craft

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

Mohammad M. Othman

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

Hannah Hurst

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

Andrea Thornton

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Jason S. Whitlow

Title: Engineer III – Electric Transmission Planning

Summary:

Company Witness Jason S. Whitlow 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.G: This section provides a system map for the affected area.
- Section I.J: This section provides information about the project if approved by the RTO.
- Section I.K: 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: This section, when applicable, contains information for transmission lines interconnecting a non-utility generator.
- Section II.A.10: This section provides details of the construction plans for the proposed project, including requested line outage schedules.

Additionally, Company Witness Whitlow co-sponsors the following sections of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Jeff L. Miller, Lucas J. Craft, Mohammad M. Othman, Hannah Hurst, and Andrea Thornton): This section details the primary justifications for the proposed project.
- Section I.B (co-sponsored with Company Witness Jeff L. Miller): This section details the engineering justifications for the proposed project.
- Section I.C (co-sponsored with Company Witness Jeff L. Miller): 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 (co-sponsored with Company Witness Jeff L. Miller): This section, when applicable, describes critical contingencies and associated violations due to the inadequacy of the existing system.
- Section I.E (co-sponsored with Company Witnesses Jeff L. Miller and Andrea Thornton): This section explains feasible project alternatives, when applicable.
- Section I.H (co-sponsored with Company Witness Jeff L. Miller): This section provides the desired in-service date of the proposed project and the estimated construction time.
- Section I.L (co-sponsored with Company Witness Lucas J. Craft): This section, when applicable, provides details on the deterioration of structures and associated equipment.
- Section I.N (co-sponsored with Company Witness Jeff L. Miller): 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.

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

**DIRECT TESTIMONY
OF
JASON S. WHITLOW
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2026-00009**

1 **Q. Please state your name, position with Virginia Electric and Power Company**
2 **(“Dominion Energy Virginia” or the “Company”), and business address.**

3 A. My name is Jason S. Whitlow, and I am an Engineer III in the Electric Transmission
4 Planning Department for the Company. My business address is 5000 Dominion
5 Boulevard, Glen Allen, Virginia 23060. A statement of my qualifications and
6 background is provided as Appendix A.

7 **Q. Please describe your areas of responsibility with the Company.**

8 A. I am responsible for planning the Company’s electric transmission system for voltages of
9 69 kilovolt (“kV”) through 500 kV.

10 **Q. What is the purpose of your testimony in this proceeding?**

11 A. In order to provide service requested by a retail electric service customer located in
12 Goochland County (“Eli Lilly” or the “Customer”), to maintain reliable service for
13 overall growth in the area, and to comply with mandatory North American Electric
14 Reliability Corporation (“NERC”) Reliability Standards, Virginia Electric and Power
15 Company (“Dominion Energy Virginia” or the “Company”) proposes in Goochland
16 County, Virginia, to:

- 17 (1) Construct one new 230 kilovolt (“kV”) double circuit overhead transmission
18 line (for a total of two circuits) extending approximately 6.5 miles on new
19 primarily 100-foot-wide right-of-way by cutting the existing 230 kV Line
20 #2009 (Midlothian to Short Pump) and extending a new 230 kV double circuit

1 loop in and out of West Creek Substation (the “West Creek 230 kV Loop”),
2 resulting in new Line #2009 (Midlothian to West Creek) and Line #2510
3 (West Creek to Short Pump). The West Creek Lines will be constructed
4 primarily with double circuit weathering steel monopoles utilizing three-phase
5 twin-bundled 768.2 Aluminum Conductor Steel Supported/Trapezoidal
6 Wire/High Strength (“ACSS/TW/HS”) type conductor with a summer transfer
7 capability of 1,573 MVA.
8

- 9 (2) Construct a new 230 kV substation in Goochland County, Virginia designed to
10 accommodate an immediate four (4) 230 kV breaker ring-bus configuration,
11 expandable to an ultimate of six (6) 230 kV breakers for potential future needs,
12 on land provided by the Customer (“West Creek Substation”).

13 Collectively, the West Creek Lines and West Creek Substation, and related work are
14 referred to as the “230 kV West Creek Loop and Substation” or the “Project.”

15 The Project is necessary to ensure that Dominion Energy Virginia can provide electric
16 service requested by the Customer in Goochland County, Virginia, and maintain reliable
17 electric service consistent with NERC Reliability Standards for the overall load growth in
18 the Goochland County load area located in central Virginia (“the Goochland Load Area”)
19 and to comply with mandatory NERC Reliability Standards. Specifically, the Company
20 is proposing the Project to serve the projected load identified in the delivery point request
21 of approximately 37 MW for a new manufacturing facility and new warehouses in
22 Goochland County, Virginia, as well as to support future load growth in Goochland Load
23 Area.

24 The purpose of my testimony is to describe the Company’s electric transmission system
25 and the need for, and benefits of, the proposed Project. I sponsor Sections I.G, I.J, I.K,
26 I.M, and II.A.10 of the Appendix. Additionally, I co-sponsor the Executive Summary
27 and Section I.A with Company Witnesses Jeff L. Miller, Lucas J. Craft, Mohammad M.
28 Othman, Hannah Hurst, and Andrea Thornton; Sections I.B, I.C, I.D, I.H and I.N with

1 Company Witness Jeff L. Miller; Section I.E with Company Witnesses Jeff L. Miller and
2 Hannah Hurst; and Section I.L with Company Witness Lucas J. Craft.

3 **Q. Does this conclude your pre-filed direct testimony?**

4 A. Yes, it does.

**BACKGROUND AND QUALIFICATIONS
OF
JASON S. WHITLOW**

Jason Whitlow received a B.S. in Mechanical Engineering from Virginia Tech in 2007. Mr. Whitlow has been employed by the Company since 2013, where he has worked in both natural gas and electric transmission planning. Prior to joining the Company, he worked as a Project Manager for The Whiting-Turner Contracting Company.

Mr. Whitlow has previously submitted pre-filed testimony to the State Corporation Commission of Virginia.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Jeff L. Miller

Title: Regional Grid Planning Engineer - Distribution Planning Team

Summary:

Company Witness Jeff L. Miller co-sponsors those sections of the Appendix describing the Company's electric distribution system and the need for, and benefits of, the proposed project, as follows:

- Section I.A (co-sponsored with Company Witnesses Jason S. Whitlow, Lucas J. Craft, Mohammad M. Othman, Hannah Hurst, and Andrea Thornton): This section details the primary justifications for the proposed project.
- Section I.B (co-sponsored with Company Witness Jason S. Whitlow): This section details the engineering justifications for the proposed project.
- Section I.C (co-sponsored with Company Witness Jason S. Whitlow): 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 (co-sponsored with Company Witness Jason S. Whitlow): Although not applicable to the proposed project, this section, when applicable, describes critical contingencies and associated violations due to the inadequacy of the existing system.
- Section I.E (co-sponsored with Company Witnesses Jason S. Whitlow and Andrea Thornton): This section explains feasible project alternatives, when applicable.
- Section I.H (co-sponsored with Company Witness Jason S. Whitlow): This section provides the desired in-service date of the proposed project and the estimated construction time.
- Section I.N (co-sponsored with Company Jason S. Whitlow): 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.

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

**DIRECT TESTIMONY
OF
JEFF L. MILLER
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2026-00009**

1 **Q. Please state your name, business address and position with Virginia Electric and**
2 **Power Company (“Dominion Energy Virginia” or the “Company”).**

3 A. My name is Jeff L. Miller, and I am a Regional Grid Planning Engineer – Distribution
4 Planning for the Company. My business address is 750 West Broad, Richmond, Virginia
5 23294. A statement of my qualifications and background is provided as Appendix A.

6 **Q. Please describe your areas of responsibility with the Company.**

7 A. I am responsible for planning the Company’s electric distribution system that serves all
8 customers, in the Company’s Richmond office, for voltage under 69 kilovolt (“kV”).

9 **Q. What is the purpose of your testimony in this proceeding?**

10 A. In order to provide service requested by a retail electric service customer located in
11 Goochland County (“Eli Lilly” or the “Customer”), to maintain reliable service for
12 overall growth in the area, and to comply with mandatory North American Electric
13 Reliability Corporation (“NERC”) Reliability Standards, Virginia Electric and Power
14 Company (“Dominion Energy Virginia” or the “Company”) proposes in Goochland
15 County, Virginia, to:

- 16 (1) Construct one new 230 kilovolt (“kV”) double circuit overhead transmission
17 line (for a total of two circuits) extending approximately 6.5 miles on new
18 primarily 100-foot-wide right-of-way by cutting the existing 230 kV Line
19 #2009 (Midlothian to Short Pump) and extending a new 230 kV double circuit
20 loop in and out of West Creek Substation (the “West Creek 230 kV Loop”),
21 resulting in new Line #2009 (Midlothian to West Creek) and Line #2510

(West Creek to Short Pump). The West Creek Lines will be constructed primarily with double circuit weathering steel monopoles utilizing three-phase twin-bundled 768.2 Aluminum Conductor Steel Supported/Trapezoidal Wire/High Strength ("ACSS/TW/HS") type conductor with a summer transfer capability of 1,573 MVA.

- (2) Construct a new 230 kV substation in Goochland County, Virginia designed to accommodate an immediate four (4) 230 kV breaker ring-bus configuration, expandable to an ultimate of six (6) 230 kV breakers for potential future needs, on land provided by the Customer ("West Creek Substation").

Collectively, the West Creek Lines and West Creek Substation, and related work are referred to as the "230 kV West Creek Loop and Substation" or the "Project."

The Project is necessary to ensure that Dominion Energy Virginia can provide electric service requested by the Customer in Goochland County, Virginia, and maintain reliable electric service consistent with NERC Reliability Standards for the overall load growth in the Goochland County load area located in central Virginia ("the Goochland Load Area") and to comply with mandatory NERC Reliability Standards. Specifically, the Company is proposing the Project to serve the projected load identified in the delivery point request of approximately 37 MW for a new manufacturing facility and new warehouses in Goochland County, Virginia, as well as to support future load growth in Goochland Load Area.

The purpose of my testimony is to describe the Company's electric distribution system and the need for, and benefits of, the proposed Project. I co-sponsor the Executive Summary and Section I.A with Company Witnesses Jason S. Whitlow, Lucas J. Craft, Mohammad M. Othman, Hannah Hurst, and Andrea Thornton. Additionally, I co-sponsor Sections I.B, I.C, I.D, I.H, and I.N of the Appendix with Company Witness Jason

1 S. Whitlow; and Section I.E with Company Witnesses Jason S. Whitlow and Andrea
2 Thornton.

3 **Q. Does this conclude your pre-filed direct testimony?**

4 A. Yes, it does.

**BACKGROUND AND QUALIFICATIONS
OF
JEFF L. MILLER**

Jeff L. Miller received a Bachelor of Science degree in Electrical Engineering from Virginia Commonwealth University, Richmond, VA in 2017 and is a licensed Professional Engineer in the state of Virginia. He has been employed by the Company since 2015. Mr. Miller's experience with the Company includes Distribution Coordination and Protection, Distribution Design, and Distribution Regional Grid Planning.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Lucas J. Craft

Title: Engineer

Summary:

Company Witness Lucas J. Craft sponsors those sections 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, when applicable, describes any lines or facilities that will be removed, replaced, or taken out of service upon completion of 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.4: This section explains why the existing right-of-way is not adequate to serve the need.
- Section II.A.5: This section provides drawings of the right-of-way cross section showing typical transmission lines structure placements.
- Sections 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 Witness Craft co-sponsors the following sections of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Jason S. Whitlow, Jeff L. Miller, Mohammad M. Othman, Hannah Hurst, and Andrea Thornton): 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 Jason S. Whitlow): 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 Hannah Hurst): These sections, when applicable, provide supporting structure details along the proposed and alternative routes.
- Section II.B.6 (co-sponsored with Company Witnesses Hannah Hurst and Andrea Thornton): This section provides photographs of existing facilities, representations of proposed facilities, and visual simulations.
- Section V.A (co-sponsored with Company Witnesses Hannah Hurst and Andrea Thornton): This section provides the proposed route description and structure heights for notice purposes.

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

**DIRECT TESTIMONY
OF
LUCAS J. CRAFT
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2026-00009**

1 **Q. Please state your name, business address and position with Virginia Electric and**
2 **Power Company (“Dominion Energy Virginia” or the “Company”).**

3 A. My name is Lucas J. Craft, and I am an Engineer in the Electric Transmission Line
4 Engineering Department of the Company. My business address is 5000 Dominion
5 Boulevard, Glen Allen, Virginia 23060. A statement of my qualifications and
6 background is provided as Appendix A.

7 **Q. Please describe your areas of responsibility with the Company.**

8 A. I am responsible for the estimating and conceptual design of high voltage transmission
9 line projects from 69 kilovolt (“kV”) to 500 kV.

10 **Q. What is the purpose of your testimony in this proceeding?**

11 A. In order to provide service requested by a retail electric service customer located in
12 Goochland County (“Eli Lilly” or the “Customer”), to maintain reliable service for
13 overall growth in the area, and to comply with mandatory North American Electric
14 Reliability Corporation (“NERC”) Reliability Standards, Virginia Electric and Power
15 Company (“Dominion Energy Virginia” or the “Company”) proposes in Goochland
16 County, Virginia, to:

- 17 (1) Construct one new 230 kilovolt (“kV”) double circuit overhead transmission
18 line (for a total of two circuits) extending approximately 6.5 miles on new
19 primarily 100-foot-wide right-of-way by cutting the existing 230 kV Line
20 #2009 (Midlothian to Short Pump) and extending a new 230 kV double circuit

1 loop in and out of West Creek Substation (the “West Creek 230 kV Loop”),
2 resulting in new Line #2009 (Midlothian to West Creek) and Line #2510
3 (West Creek to Short Pump). The West Creek Lines will be constructed
4 primarily with double circuit weathering steel monopoles utilizing three-phase
5 twin-bundled 768.2 Aluminum Conductor Steel Supported/Trapezoidal
6 Wire/High Strength (“ACSS/TW/HS”) type conductor with a summer transfer
7 capability of 1,573 MVA.
8

- 9 (2) Construct a new 230 kV substation in Goochland County, Virginia designed to
10 accommodate an immediate four (4) 230 kV breaker ring-bus configuration,
11 expandable to an ultimate of six (6) 230 kV breakers for potential future needs,
12 on land provided by the Customer (“West Creek Substation”).

13 Collectively, the West Creek Lines and West Creek Substation, and related work are
14 referred to as the “230 kV West Creek Loop and Substation” or the “Project.”

15 The Project is necessary to ensure that Dominion Energy Virginia can provide electric
16 service requested by the Customer in Goochland County, Virginia, and maintain reliable
17 electric service consistent with NERC Reliability Standards for the overall load growth in
18 the Goochland County load area located in central Virginia (“the Goochland Load Area”)
19 and to comply with mandatory NERC Reliability Standards. Specifically, the Company
20 is proposing the Project to serve the projected load identified in the delivery point request
21 of approximately 37 MW for a new manufacturing facility and new warehouses in
22 Goochland County, Virginia, as well as to support future load growth in Goochland Load
23 Area.

24 The purpose of my testimony is to describe the design characteristics of the transmission
25 facilities for the proposed Project and to discuss electric and magnetic field levels. I
26 sponsor Sections I.F, II.A.3, II.A.4, II.A.5, II.B.1, II.B.2, and IV of the Appendix.
27 Additionally, I co-sponsor the Executive Summary and Section I.A with Company
28 Witnesses Jason S. Whitlow, Jeff L. Miller, Mohammad M. Othman, Hannah Hurst, and
29

1 Andrea Thornton; Section I.I with Company Witness Mohammad M. Othman; Section
2 I.L with Company Witness Jason S. Whitlow; Sections II.B.3 to II.B.5 with Company
3 Witness Hannah Hurst; and Sections II.B.6 and V.A with Company Witnesses Hannah
4 Hurst and Andrea Thornton.

5 **Q. Does this conclude your pre-filed direct testimony?**

6 A. Yes, it does.

**BACKGROUND AND QUALIFICATIONS
OF
LUCAS J. CRAFT**

Lucas Craft received a Bachelor of Science degree in Electrical Engineering from Virginia Commonwealth University in 2020. He has worked with Dominion since 2022. Mr. Craft's experience includes Overhead Transmission Engineering (2022-Present). Mr. Craft has held an Engineer in Training (EIT) Certificate in the State of Virginia since 2023.

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 Jason S. Whitlow, Jeff L. Miller, Lucas J. Craft, Hannah Hurst, and Andrea Thornton): This section details the primary justifications for the proposed project.
- Section I.I (co-sponsored with Company Witness Lucas J. Craft): 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-2026-00009**

1 **Q. Please state your name, business address and position with Virginia Electric and**
2 **Power Company (“Dominion Energy Virginia” or the “Company”).**

3 A. My name is Mohammad M. Othman, and I am an Engineer III in the Substation
4 Engineering section of the Electric Transmission group of the Company. My business
5 address is 5000 Dominion Boulevard, Glen Allen, Virginia 23060. A statement of my
6 qualifications and background is provided as Appendix A.

7 **Q. Please describe your areas of responsibility with the Company.**

8 A. I am responsible for evaluation of the substation project requirements, feasibility studies,
9 conceptual physical design, scope development, preliminary engineering, and cost
10 estimating for high voltage transmission and distribution substations.

11 **Q. What is the purpose of your testimony in this proceeding?**

12 A. In order to provide service requested by a retail electric service customer located in
13 Goochland County (“Eli Lilly” or the “Customer”), to maintain reliable service for
14 overall growth in the area, and to comply with mandatory North American Electric
15 Reliability Corporation (“NERC”) Reliability Standards, Virginia Electric and Power
16 Company (“Dominion Energy Virginia” or the “Company”) proposes in Goochland
17 County, Virginia, to:

- 18 (1) Construct one new 230 kilovolt (“kV”) double circuit overhead transmission
19 line (for a total of two circuits) extending approximately 6.5 miles on new

1 primarily 100-foot-wide right-of-way by cutting the existing 230 kV Line
2 #2009 (Midlothian to Short Pump) and extending a new 230 kV double circuit
3 loop in and out of West Creek Substation (the “West Creek 230 kV Loop”),
4 resulting in new Line #2009 (Midlothian to West Creek) and Line #2510
5 (West Creek to Short Pump). The West Creek Lines will be constructed
6 primarily with double circuit weathering steel monopoles utilizing three-phase
7 twin-bundled 768.2 Aluminum Conductor Steel Supported/Trapezoidal
8 Wire/High Strength (“ACSS/TW/HS”) type conductor with a summer transfer
9 capability of 1,573 MVA.

- 10
11 (2) Construct a new 230 kV substation in Goochland County, Virginia designed to
12 accommodate an immediate four (4) 230 kV breaker ring-bus configuration,
13 expandable to an ultimate of six (6) 230 kV breakers for potential future needs,
14 on land provided by the Customer (“West Creek Substation”).

15 Collectively, the West Creek Lines and West Creek Substation, and related work are
16 referred to as the “230 kV West Creek Loop and Substation” or the “Project.”

17 The Project is necessary to ensure that Dominion Energy Virginia can provide electric
18 service requested by the Customer in Goochland County, Virginia, and maintain reliable
19 electric service consistent with NERC Reliability Standards for the overall load growth in
20 the Goochland County load area located in central Virginia (“the Goochland Load Area”)
21 and to comply with mandatory NERC Reliability Standards. Specifically, the Company
22 is proposing the Project to serve the projected load identified in the delivery point request
23 of approximately 37 MW for a new manufacturing facility and new warehouses in
24 Goochland County, Virginia, as well as to support future load growth in Goochland Load
25 Area.

26 The purpose of my testimony is to describe the work to be performed as part of the
27 Project. As it pertains to station work, I sponsor Section II.C of the Appendix.

28 Additionally, I co-sponsor the Executive Summary and Section I.A with Company
29 Witnesses Jason S. Whitlow, Jeff L. Miller, Lucas J. Craft, Hannah Hurst, and Andrea
30 Thornton; and Section I.I of the Appendix with Company Witness Lucas J. Craft.

- 1 **Q.** **Does this conclude your pre-filed direct testimony?**
- 2 **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: Hannah Hurst

Title: Senior Siting and Permitting Specialist

Summary:

Company Witness Hannah Hurst sponsors 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, Company Witness Hurst co-sponsors the following portion of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Jason S. Whitlow, Jeff L. Miller, Lucas J. Craft, Mohammad M. Othman, and Andrea Thornton): This section details the primary justifications for the proposed project.
- Section II.A.1 (co-sponsored with Company Witness Andrea Thornton): 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 Andrea Thornton): This section provides a map showing the route of the proposed project in relation to notable points close to the proposed project.
- Sections II.A.6 to II.A.8 (co-sponsored with Company Andrea Thornton): These sections provide detail regarding the right-of-way for the proposed project.
- Section II.A.9 (co-sponsored with Company Witness Andrea Thornton): This section describes the proposed route selection procedures and details alternative routes considered.
- Section II.A.11 (co-sponsored with Company Witness Andrea Thornton): 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 Lucas J. Craft): These sections, when applicable, provide supporting structure details along the proposed and alternative routes.
- Section II.B.6 (co-sponsored with Company Witnesses Lucas J. Craft and Andrea Thornton): This section provides photographs of existing facilities, representations of proposed facilities, and visual simulations.
- Section III (co-sponsored with Company Witness Andrea Thornton): This section details the impact of the proposed project on scenic, environmental, and historic features.
- Section V.A (co-sponsored with Company Witnesses Lucas J. Craft and Andrea Thornton): This section provides the proposed route description and structure heights for notice purposes.

Finally, Ms. Hurst co-sponsors the DEQ Supplement filed with the Application with Company Witness Andrea Thornton. A statement of Ms. Hurst's background and qualifications is attached to her testimony as Appendix A.

**DIRECT TESTIMONY
OF
HANNAH HURST
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2026-00009**

1 **Q. Please state your name, position with Virginia Electric and Power Company**
2 **(“Dominion Energy Virginia” or the “Company”), and business address.**

3 A. My name is Hannah Hurst, and I serve as a Senior Siting and Permitting Specialist for the
4 Company. My business address is 5000 Dominion Boulevard, 3rd Floor, Glen Allen,
5 Virginia 23060. A statement of my qualifications and background is provided as
6 Appendix A.

7 **Q. Please describe your areas of responsibility with the Company.**

8 A. I am responsible for identifying appropriate routes for transmission lines and obtaining
9 necessary federal, state, and local approvals and environmental permits for those
10 facilities. In this position, I work closely with government officials, permitting agencies,
11 property owners, and other interested parties, as well as with other Company personnel,
12 to develop facilities needed by the public so as to reasonably minimize environmental
13 and other impacts on the public in a reliable, cost-effective manner.

14 **Q. What is the purpose of your testimony in this proceeding?**

15 A. In order to provide service requested by a retail electric service customer located in
16 Goochland County (“Eli Lilly” or the “Customer”), to maintain reliable service for
17 overall growth in the area, and to comply with mandatory North American Electric
18 Reliability Corporation (“NERC”) Reliability Standards, Virginia Electric and Power

Company (“Dominion Energy Virginia” or the “Company”) proposes in Goochland County, Virginia, to:

- (1) Construct one new 230 kilovolt (“kV”) double circuit overhead transmission line (for a total of two circuits) extending approximately 6.5 miles on new primarily 100-foot-wide right-of-way by cutting the existing 230 kV Line #2009 (Midlothian to Short Pump) and extending a new 230 kV double circuit loop in and out of West Creek Substation (the “West Creek 230 kV Loop”), resulting in new Line #2009 (Midlothian to West Creek) and Line #2510 (West Creek to Short Pump). The West Creek Lines will be constructed primarily with double circuit weathering steel monopoles utilizing three-phase twin-bundled 768.2 Aluminum Conductor Steel Supported/Trapezoidal Wire/High Strength (“ACSS/TW/HS”) type conductor with a summer transfer capability of 1,573 MVA.
- (2) Construct a new 230 kV substation in Goochland County, Virginia designed to accommodate an immediate four (4) 230 kV breaker ring-bus configuration, expandable to an ultimate of six (6) 230 kV breakers for potential future needs, on land provided by the Customer (“West Creek Substation”).

Collectively, the West Creek Lines and West Creek Substation, and related work are referred to as the “230 kV West Creek Loop and Substation” or the “Project.”

The Project is necessary to ensure that Dominion Energy Virginia can provide electric service requested by the Customer in Goochland County, Virginia, and maintain reliable electric service consistent with NERC Reliability Standards for the overall load growth in the Goochland County load area located in central Virginia (“the Goochland Load Area”) and to comply with mandatory NERC Reliability Standards. Specifically, the Company is proposing the Project to serve the projected load identified in the delivery point request of approximately 37 MW for a new manufacturing facility and new warehouses in Goochland County, Virginia, as well as to support future load growth in Goochland Load Area.

1 The purpose of my testimony is to provide an overview of the route and permitting for
2 the proposed Project. I sponsor Sections II.A.12 and V.B to V.D of the Appendix.
3 Additionally, I co-sponsor the Executive Summary and Section I.A with Company
4 Witnesses Jason S. Whitlow, Jeff L. Miller, Lucas J. Craft, Mohammad M. Othman, and
5 Andrea Thornton; Sections II.A.1, II.A.2, II.A.6 to II.A.9, II.A.11, and III with Company
6 Witness Andrea Thornton; Sections II.B.3 to II.B.5 with Company Lucas J. Craft; and
7 Sections II.B.6 and V.A with Company Witnesses Lucas J. Craft and Andrea Thornton.
8 Finally, I co-sponsor the DEQ Supplement with Company Witness Andrea Thornton.

9 **Q. Has the Company complied with Va. Code § 15.2-2202 E?**

10 A. Yes. In accordance with Va. Code § 15.2-2202 E, a letter dated December 28, 2025, was
11 sent to Dr. Jeremy Raley, County Administrator of Goochland County, where the Project
12 is located. The letter stated the Company's intention to file this Application and invited
13 the County to consult with the Company about the Project. A copy of the letter is
14 included as Appendix Attachment V.D.1.

15 **Q. Does this conclude your pre-filed direct testimony**

16 A. Yes, it does.

**BACKGROUND AND QUALIFICATIONS
OF
HANNAH HURST**

Ms. Hannah Hurst received a bachelor's degree in environmental Horticulture from Virginia Tech Polytechnic Institute in 2016. Ms. Hurst has been employed by the Company since 2022 as a Siting and Permitting Specialist. Prior to joining the Company, she worked as an Environmental Planner for New Kent County working on permitting procedures and inspections. Ms. Hurst's area of expertise is in local zoning, planning, and local environmental permitting.

Ms. Hurst has previously submitted pre-filed testimony to the State Corporation Commission of Virginia.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Andrea Thornton

Title: Senior Project Manager, C2 Environmental, Inc.

Summary:

Company Witness Andrea Thornton sponsors the Environmental Routing Study provided as part of the Company's Application.

Additionally, Ms. Thornton co-sponsors the following portion of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Jason S. Whitlow, Jeff L. Miller, Lucas J. Craft, Mohammad M. Othman, and Hannah Hurst): This section details the primary justifications for the proposed project.
- Section I.E (co-sponsored with Company Witnesses Jason S. Whitlow and Jeff L. Miller): This section explains feasible project alternatives, when applicable.
- Section II.A.1 (co-sponsored with Company Witness Hannah Hurst): 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 Hannah Hurst): This section provides a map showing the route of the proposed project in relation to notable points close to the proposed project.
- Sections II.A.6 to II.A.8 (co-sponsored with Company Witness Hannah Hurst): These sections provide detail regarding the right-of-way for the proposed project.
- Section II.A.9 (co-sponsored with Company Witness Hannah Hurst): This section describes the proposed route selection procedures and details alternative routes considered.
- Section II.A.11 (co-sponsored with Company Witness Hannah Hurst): 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 Lucas J. Craft and Hannah Hurst): This section provides photographs of existing facilities, representations of proposed facilities, and visual simulations.
- Section III (co-sponsored with Company Witness Hannah Hurst): This section details the impact of the proposed project on scenic, environmental, and historic features.
- Section V.A (co-sponsored with Company Witnesses Lucas J. Craft and Hannah Hurst): This section provides the proposed route description and structure heights for notice purposes.

Finally, Ms. Thornton co-sponsors the DEQ Supplement filed with this Application with Company Witness Hannah Hurst.

A statement of Ms. Thornton's background and qualifications is attached to her testimony as Appendix A.

**DIRECT TESTIMONY
OF
ANDREA THORNTON
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2026-00009**

1 **Q. Please state your name, position and place of employment and business address.**

2 A. My name is Andrea Thornton. I am employed as a Senior Project Manager with C2
3 Environmental, Inc. ("C2"). My business address is 11846 Rock Landing Dr. A,
4 Newport News, VA 23606. A statement of my qualifications and background is provided
5 as Appendix A.

6 **Q. What professional experience does C2 have with the routing of linear energy
7 transportation facilities?**

8 A. C2 has extensive experience in the permitting, feasibility assessments, and routing, of
9 transmission line projects. It has assisted its clients in the identification, evaluation and
10 development of linear energy facilities for the past 10 years. C2 has recently expanded
11 its services to include more transmission line routing and siting work with my joining the
12 company in 2024. In my previous experience, and since joining C2, I have developed a
13 consistent approach for linear facility routing and route selection based on the
14 identification, mapping and comparative evaluation of routing constraints and
15 opportunities within defined study areas. C2 uses data-intensive Geographic Information
16 System spatial and dimensional analysis and the most current and refined data layers and
17 aerial photography resources available for the identification, evaluation and selection of
18 transmission line routes.

1 C2 works on both small and large energy projects and has assisted in or conducted the
2 routing and route evaluation of some of the largest electric transmission line and pipeline
3 facilities in North America.

4 In Virginia, C2 served as a consultant to Virginia Electric and Power Company
5 (“Dominion Energy Virginia”) for many projects over the last 10 years with a primary
6 focus on permitting transmission line projects. Prior to joining C2, I worked as an
7 Associate Partner at Environmental Resources Management (“ERM”) where I worked as
8 a routing and siting specialist and consultant to Dominion Energy Virginia on a variety of
9 projects, including:

- 10 • Cannon Branch-Cloverhill 230 kilovolt (“kV”) transmission line project in the City of
11 Manassas and Prince William County (Case No. PUE-2011-00011);
- 12 • Surry-Skiffes Creek-Whealton 500 and 230 kV transmission lines (Case No.
13 PUE-2012-00029);
- 14 • Remington CT-Warrenton 230 kV double circuit transmission line (Case No.
15 PUE-2014-00025);
- 16 • Haymarket 230 kV Line and Substation Project (Case No. PUE-2015-00107);
- 17 • Idylwood-Tysons 230 kV single circuit underground transmission line, Tysons
18 Substation rebuild, and related transmission facilities (Case No. PUR-2017-00143);
- 19 • DTC 230 kV Line Loop and DTC Substation (Case No. PUR-2021-00280);
- 20 • Aviator 230 kV Line Loop and Substation (Case. No. PUR-2022-00012);
- 21 • 230 kV Altair Loop and Altair Switching Station (Case No. PUR-2022-00197);
- 22 • 500-230 kV Aspen Substation, 500 kV Aspen-Goose Creek Line #5002, 500 kV and
23 230 kV Aspen-Golden Lines #5001 and #2333, 500-230 kV Golden Substation, and
24 Lines #2081/#2150 Loop (Case No. PUR-2024-00032); and
- 25 • 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff
26 Substation (Case No. PUR-2024-00131).

1 **Q. What were you asked to do in connection with this case?**

2 A. In order to provide service requested by a retail electric service customer located in
3 Goochland County (“Eli Lilly” or the “Customer”), to maintain reliable service for
4 overall growth in the area, and to comply with mandatory North American Electric
5 Reliability Corporation (“NERC”) Reliability Standards, Virginia Electric and Power
6 Company (“Dominion Energy Virginia” or the “Company”) proposes in Goochland
7 County, Virginia, to:

- 8 (1) Construct one new 230 kilovolt (“kV”) double circuit overhead transmission
9 line (for a total of two circuits) extending approximately 6.5 miles on new
10 primarily 100-foot-wide right-of-way by cutting the existing 230 kV Line
11 #2009 (Midlothian to Short Pump) and extending a new 230 kV double circuit
12 loop in and out of West Creek Substation (the “West Creek 230 kV Loop”),
13 resulting in new Line #2009 (Midlothian to West Creek) and Line #2510
14 (West Creek to Short Pump). The West Creek Lines will be constructed
15 primarily with double circuit weathering steel monopoles utilizing three-phase
16 twin-bundled 768.2 Aluminum Conductor Steel Supported/Trapezoidal
17 Wire/High Strength (“ACSS/TW/HS”) type conductor with a summer transfer
18 capability of 1,573 MVA.
19
- 20 (2) Construct a new 230 kV substation in Goochland County, Virginia designed to
21 accommodate an immediate four (4) 230 kV breaker ring-bus configuration,
22 expandable to an ultimate of six (6) 230 kV breakers for potential future needs,
23 on land provided by the Customer (“West Creek Substation”).

24 Collectively, the West Creek Lines and West Creek Substation, and related work are
25 referred to as the “230 kV West Creek Loop and Substation” or the “Project.”

26 The Project is necessary to ensure that Dominion Energy Virginia can provide electric
27 service requested by the Customer in Goochland County, Virginia, and maintain reliable
28 electric service consistent with NERC Reliability Standards for the overall load growth in
29 the Goochland County load area located in central Virginia (“the Goochland Load Area”)
30 and to comply with mandatory NERC Reliability Standards. Specifically, the Company
31 is proposing the Project to serve the projected load identified in the delivery point request

1 of approximately 37 MW for a new manufacturing facility and new warehouses in
2 Goochland County, Virginia, as well as to support future load growth in Goochland Load
3 Area.

4 The purpose of my testimony is to introduce and sponsor the Environmental Routing
5 Study, which is included as part of the Application filed by the Company in this
6 proceeding. Additionally, I co-sponsor the Executive Summary and Section I.A with
7 Company Witnesses Jason S. Whitlow, Jeff L. Miller, Lucas J. Craft, Mohammad M.
8 Othman, and Hannah Hurst; Sections II.A.1, II.A.2, II.A.6 to II.A.9, II.A.11, and III with
9 Company Witness Hannah Hurst; and Sections II.B.6 and V.A with Company Witnesses
10 Lucas J. Craft and Hannah Hurst. Lastly, I co-sponsor the DEQ Supplement with
11 Company Witness Hannah Hurst.

12 **Q. Does this conclude your pre-filed direct testimony?**

13 **A.** Yes, it does.

**BACKGROUND AND QUALIFICATIONS
OF
ANDREA THORNTON**

Andrea Thornton earned a Bachelor of Arts degree from Northeastern University. She has approximately 18 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 with a focus on transmission line routing, siting, and permitting in Virginia. During this time, she was employed for 7.5 years with Natural Resource Group ,7.5 years with ERM, (a privately-owned consulting company specializing in the siting, licensing and environmental construction compliance of large, multi-state energy transportation facilities), 1 year with HDR, and 2 years with C2.

Ms. Thornton'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 she has managed the identification and evaluation of over 100 miles of 230 kV and 500 kV transmission line route alternatives in Virginia for Virginia Electric and Power Company.

Ms. Thornton has previously submitted pre-filed testimony to the State Corporation Commission of Virginia.