Dominion Energy®

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

Before the State Corporation Commission of Virginia

Fredericksburg-Aquia Harbour Lines #29, #2104, and #2157 Partial Rebuild

Application No. 333

Case No. PUR-2024-00035

Filed: March 14, 2024

Volume 2 of 2

BEFORE THE
STATE CORPORATION COMMISSION
OF VIRGINIA

APPLICATION OF
VIRGINIA ELECTRIC AND POWER COMPANY
FOR APPROVAL OF ELECTRIC FACILITIES

Fredericksburg-Aquia Harbor

Lines #29, #2104, and #2157 Partial Rebuild

Application No. 333

DEQ Supplement

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Based upon consultations with the Virginia Department of Environmental Quality ("DEQ"), Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") has developed this DEQ Supplement to facilitate review and analysis of the proposed Fredericksburg-Aquia Harbor Lines #29, #2104, and #2157 Partial Rebuild Project ("Rebuild Project") by DEQ and other relevant agencies.

1. Rebuild Project Description

In order to: (a) maintain the structural integrity and reliability of the networked transmission system; (b) resolve identified violations of the mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards; and (c) provide for future load growth in the area, Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") proposes, in Stafford County and the City of Fredericksburg, to partially rebuild its Fredericksburg to Possum Point transmission corridor by:

(i) Partially rebuilding, entirely within existing right-of-way or on Company-owned property, except for an approximately one-acre right-of-way near Dogwood Airpark, approximately 12.5 miles of 115 kV Line #29 on double circuit monopole structures utilizing current 230 kV standards, between the Company's existing Fredericksburg Substation and Aquia Harbour Switching Station ("Aquia Harbour Station").

(ii) Rebuilding, entirely within existing right-of-way or on Company-owned property, approximately 8.0 miles of 230 kV Line #2104 on double-circuit monopole structures between the Company's existing Cranes Corner Substation and Aquia Harbour Station.

(iii) Removing two 500 kV structures and installing two 500 kV single circuit H-frame structures and two 500 kV single circuit monopoles.[1]

(iv) Rebuilding, entirely within existing right-of-way or on Company-owned property, approximately 3.8 miles of 230 kV Line #2157 on double circuit monopole structures between the Company's existing Fredericksburg and Cranes Corner Substations.

(collectively, the "Rebuild Project").[2]

The Rebuild Project is necessary to maintain reliable service for the Company's customers. Specifically, the Rebuild Project is necessary to: (1) comply with the Company's mandatory electric transmission planning criteria (the "Planning Criteria"); (2) comply with mandatory NERC Reliability Standards, and (3) to continue to provide reliable service for the significant load growth anticipated load growth anticipated in the area. Nearly the entire Rebuild Project will be located on Company-owned property or existing right-of-way except for approximately one acre required to accommodate the structure reconfiguration near

[1] The existing structures will be removed and new structures will be added to allow the Company to relocate Line #586 to create space for the two additional 230 kV circuits. The new structures are: #568/76, #568/76A, #568/75A, and #568/77.

[2] The Company will also perform work associated with the Rebuild Project at the Fredericksburg, Cranes Corner, and Stafford Substations, and Aquia Harbour Station to support the new line ratings. This work, while not included as part of the Rebuild Project, is discussed in Section II.C of the Appendix.

Dogwood Airpark.

2. Environmental Analysis

The Company originally solicited comments from all relevant state and local agencies in January 2024. Copies of these letters are included as Attachment 2. At the time of filing of this Application, the Company had not yet received a response from DEQ regarding its request for comments on the proposed Rebuild Project or the agency's Scoping Response Letter.

A. Air Quality

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

The entire width of the existing transmission corridor is currently maintained for transmission line operations; however, the Rebuild Project may require some trimming of tree limbs along the existing transmission line corridor edges to support construction activities. To accommodate continued use of the Dogwood Airpark private runway, the Company will be clearing approximately one acre of new right-of-way. The Company does not expect to burn cleared material but, if necessary, the Company will coordinate with the responsible locality to ensure all local ordinances are met. The Company's tree clearing methods are described in Section 2.L.

B. Water Source (No water source is required for transmission lines so this discussion will focus on potential waterbodies to be crossed by the proposed transmission line rebuild).

The Rebuild Project is located within the Lower Rappahannock (Hydrologic Unit Code 02080104) and Lower Potomac (Hydrologic Unit Code 02070011) watersheds. The U.S. Geological Survey ("USGS") topographic quadrangles for Stafford and Fredericksburg depict the study area as existing, cleared transmission line traversing through gently to steeply sloping terrain.

Any clearing required in the vicinity of streams will be performed by hand within 100 feet of both sides, and vegetation less than three inches in diameter will be left undisturbed.

Section 28.2-1203 of the Code of Virginia recently was amended by the Virginia General Assembly through the passage of House Bill 2181 ("HB 2181") and identical Senate Bill 1074 ("SB 1074"), which were signed into law by Governor Glenn Youngkin, effective July 1, 2023.[3] With the passage of HB 2181 and SB 1074, the Virginia Marine Resources Commission ("VMRC") will no longer have jurisdiction over non-tidal waters with a drainage area greater than 5.0 square miles. On June 23, 2023, the VMRC and DEQ issued a Memorandum of Agreement for implementing Chapters 258 and 259 of the 2023 Session of the Virginia Acts of Assembly to document this transition of permitting authority in non-tidal waters of the Commonwealth.[4]

The Company solicited comments from the Virginia Marine Resources Commission ("VMRC") regarding the proposed Rebuild Project in January 2024. The Company received a response from VMRC on February 9, 2024. According to the VMRC, the proposed Rebuild Project may impact resources within the jurisdictional areas of the agency and may thus require a permit from the VMRC. The VMRC will review any jurisdictional impacts during a Joint Permit Application ("JPA") process. A copy of the letter is included as Attachment 2.B.1.

Based on the Company's review, the Rappahannock River, Potomac Creek, Accokeek Creek, and Austin Run are present within the Rebuild Project area and considered state-owned submerged lands. The Rappahannock River is also regulated by the U.S. Army Corps of Engineers ("Corps") under Section 10 of the Rivers and Harbors Act of 1899. Since aerial crossings of these waterbodies are proposed, a Joint Permit Application ("JPA") will be submitted for review by the VMRC, DEQ, and Corps for authorization under state subaqueous bottom law and Section 10 of the Rivers and Harbors Act. Discussion of this coordination is included in the non-tidal wetlands section (Section D) below.

C. Discharge of Cooling Waters

No discharge of cooling waters is associated with the Rebuild Project.

D. Tidal and Non-tidal Wetlands

[3] *See* Chapter 258 of the 2023 Session of the Virginia Acts of Assembly (effective July 1, 2023) available at *https://lis.virginia.gov/cgi-bin/legp604.exe?231+ful+CHAP0258*, and Chapter 259 of the 2023 Session of the Virginia Acts of Assembly (effective July 1, 2023), available at *https://lis.virginia.gov/cgi-bin/legp604.exe?231+ful+CHAP0259*.

[4] *See https://www.wetlands.com/vmrc-deq-moa/* for changes to VMRC permitting in non-tidal waters, and *https://www.wetlands.com/wp-content/uploads/FINAL-MOANontidal-Permitti.pdf* for a copy of the Memorandum of Agreement.

Based upon desktop analysis further described below, Palustrine Emergent Wetland (PEM) seasonally flooded tidal wetlands were identified within the proposed Rebuild Project area, associated with Aquia Creek, south of Stafford Substation. Acreages are provided in Table 1 below. Because these wetlands are not subject to the ebb and flood regular tides, these wetlands are not regulated by the Corps under Section 10 of the Rivers and Harbors Act of 1899, but rather only Sections 401 and 404 of the Clean Water Act of 1972, as amended. However, as these wetlands are expected to be within 1.5 times of the mean tidal range, they are under the jurisdiction of the Stafford County Wetlands Board and VMRC.

Non-Tidal Wetlands Impact Consultation

Within the Rebuild Project corridor, the Company performed an off-site analysis of wetlands and other potential waters of the United States (WOTUS) using current and historic aerial imagery, topographic quadrangles, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI), and the Natural Resources Conservation Service (NRCS) Soil Survey. The study determined the approximate locations and extents of potential WOTUS. These areas were assigned a probability ranking ranging from high probability to low probability using criteria described below.

- Low probability: Areas that demonstrate positive indicators for potential wetlands based on one of the above-mentioned off-site resources.

- Medium probability: Areas that demonstrate positive indicators for potential wetlands based on two or three of the above-mentioned off-site resources.

- High probability: Areas that demonstrate positive indicators for potential wetlands based on all four of the above-mentioned off-site resources.

A map depicting the potential limits of wetlands and other waters is provided as Attachment 2.D.1. Potential jurisdictional resources within the proposed Rebuild Project Corridor are provided in Table 1 and detailed in Attachment 2.D.1.

Table 1. Potential Jurisdictional Resources within Rebuild Project Corridor

Resource Type	Probability			Total
	Low	Medium	High	
Palustrine Emergent and Scrub/Shrub Wetlands – Non-Tidal	11.58 Acres	18.17 Acres	36.28 Acres	66.03 Acres
Palustrine Emergent and Scrub/Shrub Wetlands – Tidal	N/A	N/A	4.43 Acres	4.43 Acres
Forested Wetlands	0.06 Acres	N/A	0.16 Acres	0.22 Acres
Tidal Water	N/A	N/A	0.65 Acres	0.65 Acres
Open Water Non-tidal	N/A	N/A	1.20 Acres	1.20 Acres
Stream	N/A	N/A	4.89 Acres 15,261 Linear Feet	4.89 Acres 15,261 Linear Feet

The Company will conduct a field delineation of the Rebuild Project right-of-way and submit to the Corps for verification. As with waters, if impacts to wetlands are proposed, a JPA will be submitted for review by the VMRC, DEQ, and Corps for authorization under Sections 404/401 of the Clean Water Act.

The Company solicited comments from the DEQ Office of Wetlands and Stream Protection and the Corps in January 2024. Comments were received on February 12, 2024, and are included as Attachment 2.D.2. DEQ recommendations among others include that prior to commencing the Rebuild Project work, delineate all surface waters by a qualified professional; wetland and stream impacts should be avoided and minimized to the maximum extent practicable; and temporary impacts to surface waters should be restored to pre-existing conditions. Based on DEQ's review, the Rebuild Project will require a Construction General Permit and may require a VWP individual or general permit.

E. Floodplains

As depicted on the Federal Emergency Management Agency's ("FEMA") online Flood Insurance Rate Maps #5100650036D and #5100650028D (effective dates 4/5/2023), and #51179C0203F, #51179C0201F, #51179C0202F, #51179C0143F, #51179C0142F, and #51179C0134G (effective dates 6/21/2023), the majority of the Rebuild Project area lies within Zone X, which is

an area of minimal flood hazard, outside of the 100-year floodplain. The following 100-year floodplains mapped as Zone AE are crossed by the Rebuild Project:

- Rappahannock River: Between structures #29/1693 and #29/1694, and #2157/5413 and #2157/5414.
- Falls Run: Between structures #29/1704 and #29/1705, and #2157/5424 and #2157/5425.
- Claiborne Run: Between structures #29/1716 and #29/1717, and #2157/5437 and #2157/5438.
- Potomac Creek: Between structures #29/1733 and #29/1736, #2104/5456 and #2104/5460.
- Accokeek Creek: Between structures #29/1753 and #29/1755, #2104/5479 and #2104/5481.
- Austin Run: Between structures #29/1781 and #29/1782, #2104/5514 and #2104/5515.

The Company will coordinate with the local floodplain coordinators as required.

F. Solid and Hazardous Waste

On behalf of the Company, Stantec Consulting Services Inc. ("Stantec") conducted database searches for solid and hazardous wastes and petroleum release sites within a 0.5-mile radius (the "search radius") of the proposed Rebuild Project to identify sites that may impact the proposed Rebuild Project. This report is included as Attachment 2.F.1.

Publicly available data from the U.S. Environmental Protection Agency's ("EPA") Facility Registry System was obtained, which provides information about facilities, sites, or places subject to environmental regulation or of environmental interest. Although this data set contains all sites subject to environmental regulation by the EPA or other regulatory authorities, including sites that fall under air emissions or wastewater programs, the results reported here only include those sites which fall under the EPA's hazardous waste, solid waste, remediation, and underground storage tank programs (i.e., Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), Resource Conservation and Recovery Act ("RCRA"), or brownfield sites).

In summary, a total of 26 RCRA sites, four solid waste sites, 64 petroleum release sites, and 21 state-registered storage tanks are located within a 0.5-mile radius of the Rebuild Project site; however, none of the sites are located within the Rebuild Project transmission corridor nor are expected to affect the Rebuild Project. No EPA registered Brownfield sites or CERCLA/Superfund sites are located within 0.5 miles of the Project area.

G. Natural Heritage, Threatened and Endangered Species

On behalf of the Company, Stantec conducted online database searches for threatened and endangered species in the vicinity of the Project, including the U.S.

Fish and Wildlife Service's ("USFWS") Information, Planning, and Conservation ("IPaC") system, the Virginia Department of Wildlife Resources' ("DWR") Virginia Fish and Wildlife Information Service ("VAFWIS"), the DWR Northern Long-Eared Bat (NLEB) Regulatory Buffer Interactive Tool, the Virginia Department of Conservation and Recreation's ("DCR") Natural Heritage Data Explorer ("NHDE"), and the Center for Conservation Biology's ("CCB") Bald Eagle Nest Locator. The results of the database searches are included as Attachment 2.G.1 and are summarized in the table below.

Table 2. Threatened and Endangered Species within the Rebuild Project Vicinity

Species	Status	Database	Results
Northern long-eared bat *(Myotis septentrionalis)*	FE ST	USFWS, DWR	No hibernacula or maternal roost trees identified in the vicinity of the Rebuild Project.
Tricolored bat (*Perimyotis subflavus*)	PFE SE	USFWS	No hibernacula or maternal roost trees identified in the vicinity of the Rebuild Project.
Dwarf wedgemussel *(Alasmidonta heterodon)*	FE SE	USFWS, DWR	Identified as potentially occurring within or near the Rebuild Project area.
Green floater *(Lasmigona subvirdis)*	PFT ST	USFWS, DWR, DCR	Identified as potentially occurring within or near the Rebuild Project area.
Yellow lance *(Elliptio lanceolata)*	FT SE	USFWS, DCR	Identified as potentially occurring within or near the Rebuild Project area.
Harperella *(Ptilimnium nodosum)*	FE SE	USFWS	Identified as potentially occurring within or near streams near the Rebuild Project area.
Atlantic sturgeon *(Acipenser oxyrinchus)*	FE SE	DWR	This species has been documented downstream in the Rappahannock River.
American burying beetle *(Nicrophorus americanus)*	FT	DCR	May be present within the subwatershed in a variety of habitats including grasslands and open forests.
Small whorled pogonia *(Isotria medeoloides)*	FT SE	USFWS, DCR	May be present within the subwatershed in acidic mixed damp woods.
Sensitive joint vetch *(Aeschynomene virginica)*	FT ST	DCR	Identified as potentially occurring within freshwater marshes near the Rebuild Project area.
Bald eagle *(Haliaeetus leucocephalus)*	BGEPA	USFWS, CCB	Bald eagle nest ST1301 is located 845 feet from the ROW, along the Rappahannock River.
Monarch butterfly (*Danaus plexippus*)	FC	USFWS, DWR	Identified as potentially occurring within or near the Rebuild Project area.

FT: federally threatened, FE: federally endangered, FC: federal candidate species, ST: state threatened, SE: state endangered; PFE: proposed federally threatened; PFT: proposed federally endangered, BGEPA: Bald & Golden Eagle Protection Act

The Company submitted a Rebuild Project Review request to DCR on December 5, 2023. On January 4, 2024, the Company received correspondence from DCR that two state or federally listed species, the green floater and Atlantic sturgeon, are documented within the project vicinity along with several conservation sites. Comments from the DCR concerning other natural heritage resources are discussed further below. Correspondence from DCR is included in Attachment 2.G.2. Additionally, the Company requested comments from the USFWS, DWR, and DCR regarding the proposed Rebuild Project in January 2024. Agency comments, if received prior to filing, will be included as Attachment 2.G.3.

Because the Company will obtain all necessary permits prior to construction, such as authorization from the Corps, coordination with the USFWS, DWR, and DCR

will take place through the respective permit processes to avoid and minimize impacts to listed species.

Bats

The majority of the work will take place within existing cleared and maintained transmission line ROW where tree limbing and removal would be limited to danger trees and construction access. Approximately one acre of new ROW will be cleared around Dogwood Airpark. The Company intends to conduct any tree clearing activities outside of any required time-of-year restrictions to protect listed bat species or conduct surveys to document presence or absence of the species.

Aquatic Species

Construction access will avoid stream crossings where practical or use crane mats to span stream crossings with no in-stream work required. Erosion and sediment controls would be used as appropriate throughout the Rebuild Project. Under these conditions, impacts to listed aquatic species are not expected. Therefore, there should be no effect to the dwarf wedgemussel, yellow lance, Atlantic sturgeon, and green floater.

Listed Plants

Three listed plant species have been observed in the subwatershed: harperella, small whorled pogonia, and sensitive joint vetch. Harperella are generally found along the rocky shoals and margins of clear, swift-flowing streams but were not noted by the DCR in the natural heritage review as potentially being present in the Rebuild Project vicinity. Small whorled pogonia inhabits upland mixed hardwood and hardwood stands where there are long-persistent breaks in canopy cover. Potential habitat for small whorled pogonia would only occur within the forested area of expanded right-of-way at the Dogwood Airpark. The Company will undertake a small whorled pogonia habitat survey to determine if the area is appropriate habitat, and if so, conduct a species survey.

Bald Eagle

The nearest identified bald eagle nest, ST1301, is located 0.16 miles (845 feet) from the Rebuild Project area along the Rappahannock River. The second closest bald eagle nest, ST1609, is located 0.63 miles from the Rebuild Project area near Aquia Creek. Both nests are outside of the 660-foot buffer recommended under the National Bald Eagle Guidelines to avoid disturbance to eagles; therefore, the Rebuild Project is not expected to impact bald eagles.

Natural Heritage Resources

An initial project review of the DCR Natural Heritage Data Explorer identified natural heritage resources within the project area. The Company submitted the project to DCR for a more detailed review. The response from DCR was received on January 4, 2024, and is included as Attachment 2.G.2.

DCR has identified two conservation sites within the Rebuild Project Area. The Rappahannock River-Hazel Run-Claiborne Run Stream Conservation Site (SCS) has been assigned a biodiversity rank of B2, which represents a site of very high significance. The natural heritage resource associated with this site is green floater (*Lasmigona subviridis*). This species has a state conservation ranking of S2, which is state imperiled and is federally proposed threatened and state threatened. As described above, no impacts to aquatic species are expected.

The Aquia Creek – Rt. 1 – Government Landing SCS has been assigned a biodiversity rank of B2, which represents a site of very high significance. The natural heritage resource associated with this site is Parker's pipewort (*Eriocaulon parkeri*). This species has a state conservation ranking of S2, which is state imperiled; however, this species has no legal status. DCR did not recommend any specific protections for this species.

In addition, the Rappahannock River was designated by DWR as a "Threatened and Endangered Species Water" for the green floater and Atlantic sturgeon. As described above, no impacts to aquatic species are expected.

DCR's comments in response to the Company's Project Review request also recommend that the Company develop and implement and invasive species plan to be included as part of the maintenance practices for the entirety of the ROW for the Rebuild Project. Additionally, based on a discussions between the Company and DCR DNH representatives, the Company reviewed its Integrated Vegetation Management Plan ("IVMP") for application to both woody and herbaceous species, based on the species list available on the DCR website. The Company continues to coordinate with DCR on an addendum to the IVMP to further explain how the Company's operations and maintenance forestry program addresses invasive species. In November 2023, the Company submitted the addendum draft to DCR for review and continued discussions. DCR provided initial response to the addendum in January 2024. The Company will continue to meet with DCR to further discuss the documentation provided. Once the addendum is finalized, the Company will report on the results of its communications with DCR in future transmission certificate of public convenience and necessity filings.

DCR also recommends that ROW restoration and maintenance practices include appropriate vegetation using native species in a mix of grasses and forbs, robust monitoring and an adaptive management plan to provide guidance if initial revegetation efforts are unsuccessful or if invasive species outbreaks occur. The Company's restoration and maintenance practices are dictated by the requirements of the DEQ Construction General Permit for the discharge of stormwater associated with construction as well as the approved Annual Standards and Specifications (see sections 2.H and 2.J). The seed mixes, which include native species, and inspection requirements are stipulated by DEQ through those approvals.

New and updated information is continually added to the DCR's Biotics database. Following the DCR-DNH SCC planning stage project review, the Company will re-submit project information with a completed information services order form and a map or submit the project on-line through the Natural Heritage Data Explorer. This review will occur during the final stage of engineering and upon any major modifications of the project during construction (i.e., deviations, permanent, or temporary, from the original study area and/or the relocation of a structure(s) into sensitive areas) for an update on natural heritage information and coordination of potential project modifications to avoid and minimize impacts to natural heritage resources.

H. Erosion and Sediment Control

The DEQ approved the Company's Annual *Standards & Specification for Erosion & Sediment Control and Stormwater Management for Construction and Maintenance of Linear Electric Transmission Facilities (TE VEP 8000)* in February 2024. These specifications are given to the Company's contractors and require erosion and sediment control measures to be in place before construction of the proposed Project begins and specify the requirements for rehabilitation of the transmission corridor. A copy of the current DEQ approval letter dated February 27, 2024, is provided as Attachment 2.H.1. According to the approval letter, coverage is effective through February 26, 2025.

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

The Company solicited comments from the Virginia Department of Historic Resources ("VDHR)" in January 2024. Agency comments, if received prior to filing, will be included as Attachment 2.I.1. The Company expects the VDHR to recommend that the Company follow the *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* to minimize impacts to historic resources. Stantec was retained by the Company to conduct a Stage I Pre-Application Analysis, which is included as Attachment 2.I.2. As detailed by VDHR guidance, consideration was given to: National Historic Landmark ("NHL") properties located within a 1.5-mile radius of the Project centerline; National Register of Historic Places ("NRHP") listed properties, battlefields, and historic landscapes located within a 1.0-mile radius of the Project centerline; NRHP-eligible sites located within a 0.5-mile radius of the Project centerline; and archaeological sites located within the Project Corridor. A Phase I Archaeological Survey will be conducted in the field prior to construction.

Archaeological Resources

Fourteen unevaluated archaeological resources were identified within the transmission corridor. One eligible resource is located within the transmission corridor. It is identified as Civil War Camp and Cemetery (VDHR #44ST0625).

One potentially eligible resource is also identified within the transmission corridor. It is identified as a Mid-to Late 19th Century Camp (VDHR #44ST0865). These resources are provided in Table 3 below.

Table 3. Archaeological Resources Considered in the Stage I

DHR #	Resource Name	NRHP Status	Impact
44SP0571	Mid-19th Century Earthworks	Not Evaluated	Investigate During Archaeological Survey
44SP0574	Civil War Earthworks	Not Evaluated	Investigate During Archaeological Survey
44SP0640	Pre-1817 Old Fall Hill Road Trace	Not Evaluated	Investigate During Archaeological Survey
44ST0072	Late 18th /Early 19th Century Canal	Not Evaluated	Investigate During Archaeological Survey
44ST0101	Prehistoric Temporary Camp, Indeterminant	Not Evaluated	Investigate During Archaeological Survey
44ST0102	Prehistoric Temporary Camp, Indeterminant	Not Evaluated	Investigate During Archaeological Survey
44ST0109	Middle Archaic Camp	Not Evaluated	Investigate During Archaeological Survey
44ST0241	Early 20th Century Quarry	Not Evaluated	Investigate During Archaeological Survey
44ST0279	Mid-to Late 19th Century Military Base/Facility	Not Evaluated	Investigate During Archaeological Survey
44ST0280	Mid-to Late 19th Century Military Base/Facility	Not Evaluated	Investigate During Archaeological Survey
44ST0625	Civil War Camp and Cemetery	Eligible	Investigate During Archaeological Survey
44ST0677	Prehistoric Lithic Scatter, Indeterminant	Not Evaluated	Investigate During Archaeological Survey
44ST0782	Pre-Contact Lithic Scatter	Not Evaluated	Investigate During Archaeological Survey
44ST0783	Pre-Contact Temporary Camp	Not Evaluated	Investigate During Archaeological Survey
44ST0787	Late Archaic, Indeterminate/ Late 18th to Mid-19th Century Domestic Site	Not Evaluated	Investigate During Archaeological Survey
44ST0865	Mid-to Late 19th Century Camp	Potentially Eligible	Investigate During Archaeological Survey

Architectural Resources

Eighteen resources are listed on the NRHP, including 3 NHLs, some of which are located within the transmission corridor. Five NRHP eligible resources, including two battlefields, and two potentially eligible battlefields, are located within the ROW or within 1-mile of the transmission corridor. Two potentially eligible non-battlefield resources have also been identified in the ROW. The Stage I report recommends there will be no impacts to historic properties from the proposed Rebuild project when no proposed structures will be visible. For all but two resources with views of the project, Stantec has recommended minimal visual impact. For the two resources determined to have moderate visual impact, height increases within the properties will make the structures more prominent and may adversely affect the setting and feeling of the resources. The Stage I report was sent to VDHR in March 2024 for concurrence. These resources are provided in Table 4 below.

Table 4. Architectural Resources Considered in the Stage I

DHR #	Resource Name	NRHP Status	Distance to Closest Existing Structure (Feet)	Impact
088-0088	Embrey Dam/VEPCO Power Dam (demolished)	NRHP Eligible	N/A	N/A
088-5180	Chancellorsville Battlefield	NRHP Eligible	0	Minimal
088-5181	Bank's Ford/Salem Church Battlefield	NRHP Eligible	0	Minimal
089-0008	Aquia Church, 2938 Jefferson Davis Highway	NHL Listed; NRHP Listed	5,981	None
089-0010	Carlton, 501 Melchers Drive	NRHP Listed	2,588	Minimal
089-0012	Clearview, 420 Forbes Street	NRHP Listed	4,875	Minimal
089-0020	Glencairne, 559 Cambridge Street	NRHP Eligible	0	Moderate
089-0022	Belmont/Gari Melchers Home, 226 Washington Street	NHL Listed; NRHP Listed	2,913	None
089-0061	Cedar Hill Farm	Potentially Eligible	0	Minimal
089-0067	Falmouth Historic District	NRHP Listed	2,440	Minimal
089-0067-0031	Conway House, 305 King Street	NRHP Listed	4,573	None

DHR #	Resource Name	NRHP Status	Distance to Closest Existing Structure (Feet)	Impact
089-0103	Aquia Creek Quarries/ Brent's Island	NRHP Listed	1,692	Minimal
089-0247	H.H. Poole High School/ Stafford Training School, 1739 Jefferson Davis Highway	NRHP Listed	2,677	None
111-0008	Brompton/President's Residence, Mary Washington College, Hanover Street	NRHP Listed	4,502	None
111-0047	Kenmore Plantation/ Millbrook, 1201 Washington Avenue	NHL Listed; NRHP Listed	4,593	Minimal
111-0107	John Lewis House/Rowe House/War Hospital, 801 Hanover Street	NRHP Listed	5,176	None
111-0132	Fredericksburg Historic District	NRHP Listed	5,093	None
111-0147	Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park and Cemetery	NRHP Listed	47	Minimal
111-0149	Fall Hill, 3315 Fall Hill Avenue	NRHP Listed	0	Minimal
111-5007	Carl's Frozen Custard Stand, 2200 Princess Anne Street	NRHP Listed	3,980	None
111-5262	Washington Avenue Historic District	NRHP Listed	3,814	None
111-5265	Fredericksburg City and Confederate Cemeteries	NRHP Listed	4,390	None
111-5267	Elmhurst, 2010 Fall Hill Avenue	NRHP Listed	3,628	None
111-5295	Battle of Fredericksburg I	Potentially Eligible	0	Minimal
111-5296	Battle of Fredericksburg II	Potentially Eligible	0	Minimal
111-5297	Old Mill Historic District	Potentially Eligible	16	Moderate
111-5473	Allman's Bar-B-Que, 2000 Augustine Avenue	NRHP Eligible	557	Minimal

J. Chesapeake Bay Preservation Areas

The proposed Rebuild Project is located in Stafford County and the City of Fredericksburg. Both jurisdictions are subject to the Chesapeake Bay Preservation

Act; however, construction, installation, operation, and maintenance of electric transmission lines are conditionally exempt from the Chesapeake Bay Preservation Act as stated in the exemption for public utilities, railroads, public roads, and facilities in 9 VAC 25-830-150. If DEQ provides a memorandum response prior to filing, it will be included as Attachment 2.J.1. The Company will meet any requirements and conditions as applicable and in accordance with the Dominion Energy Virginia *Standards & Specifications for Erosion & Sediment Control and Stormwater Management for Construction and Maintenance of Linear Electric Transmission Facilities* as approved by DEQ.

K. Wildlife Resources

Relevant agency databases were reviewed and requests for comments from the USWFS, DWR, and DCR were submitted to determine if the proposed Rebuild Project has the potential to affect any threatened or endangered species, as described in Section 2.G and included as Attachment 2.G.2. As discussed in Section 2.G and identified in Attachment 2.G.1, certain federal and state listed species were identified as potentially occurring in the Rebuild Project area. The majority of the Rebuild Project will be located within existing, maintained transmission line corridor, with limited removal of danger trees. Approximately one acre of additional ROW will need to be cleared near Dogwood Airpark. Species surveys will be completed in this area prior to clearing. Where the future clearing will occur, the current cleared ROW is approximately 126 feet from a DCR ecological core with a rank of 3. Given the minimal area of new clearing, no significant loss of wildlife habitat is expected.

In addition, the Company is actively monitoring regulatory changes and requirements associated with the Northern long-eared bat ("NLEB") and how it could potentially impact construction timing associated with time of year restrictions ("TOYRs"). The U.S. Fish and Wildlife Service ("USFWS") has indicated that it plans to issue final NLEB guidance to replace the interim guidance, which expires on March 31, 2024. The Company actively is tracking updates from the USFWS with respect to the final guidance. Once issued, the Company plans to review and follow the final guidance to the extent it applies to the Company's projects. Until the final guidance is issued, the Company will continue following the interim guidance. For projects that may require additional coordination, the Company will coordinate with the USFWS.

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 ("ESA"). USFWS recently extended its Final Rule issuance target from September 2023 to September 2024. 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.

L. Recreation, Agricultural and Forest Resources

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. There are approximately 68.5 acres of land designated as prime farmland within the Rebuild Project Corridor. Land that does not meet the criteria for prime farmland can be considered to be "farmland of statewide importance." The criteria for defining and delineating farmland of statewide importance are determined by the Virginia Department of Agriculture and Consumer Services. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. There are approximately 80.4 acres designated as farmland of statewide importance within the Rebuild Project area. Other areas that are not identified as having national or statewide importance can be considered to be "farmland of local importance". This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance. Stafford County and the City of Fredericksburg have not designated farmlands of local importance.

Farming operations currently exist within the Rebuild Project's right-of-way; however, the Company utilizes timber mats to access transmission structures within agricultural fields, and pads for structure erection. These will minimize the impact to the soil to result in only a temporary impact, thereby avoiding permanent impacts to farmlands from construction access. The Company will work with landowners on final structure placement to minimize the effect on farming operations. Due to the structure type changing from H-frames to monopoles, the Rebuild Project will reduce the structure footprint and allow more room for farming operations within the ROW. As such, prime farmland and agricultural and forestal districts should not be incrementally impacted by the construction of the Rebuild Project. Therefore, the Rebuild Project is not expected to affect agricultural land.

Under the Virginia Open-Space Land Act, any public body can acquire title or rights to real property to provide means of preservation of open-space land. Such conservation easements must be held for no less than five years in duration, and can be held in perpetuity. The Nature Conservancy holds an easement adjacent to the Rebuild Project right-of-way and along the Rappahannock River, north of Fall Hill Avenue in the vicinity of structures #2157/5409, #2157/5410, and #29/1690. The VDHR holds an easement adjacent to the west side of right-of-way at this location. Virginia Outdoors Foundation ("VOF") easements #STF-VOF-2347 and #STF-VOF-3779 are present on the property parcels that existing structures #29/1709 through #29/1715 and #2157/5430 through #2157/5435 are situated on. Both conservation easements were established after the Company's easements with #STF-VOF-2347 established in 2006 and #STF-VOF-3779 established in

2013. In January 2024, the Company solicited Virginia Outdoors Foundation ("VOF") and the Virginia Department of Forestry ("VDOF") for comments on the proposed Rebuild Project. If comments are received from VOF prior to filing, they will be included in Attachment 2.L.1.

The Virginia Scenic Rivers Act seeks to identify, designate, and protect rivers and streams that possess outstanding scenic, recreational, historic, and natural characteristics of statewide significance for future generations. The Rappahannock River is designated as a state scenic river from Chester Gap at its headwaters to the Route 3 Bridge Fredericksburg, east of the Rebuild Project. The Rebuild Project crosses the Rappahannock River where it has been designated a state scenic river. Because this is a rebuild project and no in-stream work is proposed, minimal impacts are anticipated.

There are no scenic byways within the Rebuild Project area. Approximately 1.8 miles west of Fredericksburg Substation, River Road (Route 618) is a designated Virginia byway. Due to the distance and type of work completed, the Rebuild Project will have no impact on scenic byways. The National Park Service's Battlefield Boundaries Map shows a Civil War Battlefield area in the City of Fredericksburg vicinity of the Rebuild Project. However, review of tax records confirms that there is no land owned by the National Park Service within the Rebuild Project area.

Since the project is a rebuild of existing transmission lines, the Rebuild Project would not be expected to interfere with any proposed trail plans by the City of Fredericksburg or Stafford County. There is a proposed Civil War Park to Hospital Trail that crosses the ROW. The existing Rappahannock River Heritage Trail runs through the City of Fredericksburg along the Rappahannock River. There may be temporary trail closures during active construction of the Rebuild Project. The Company will work with the City of Fredericksburg on any trail closure plans. The Belmont Ferry Farm, Cannon Ridge Extension, Trail also crosses the ROW. The trails should not be permanently impacted by the Rebuild Project.

There are numerous Stafford County Parks in the area including Civil War Park, which contains a few trails within the ROW. Government Island is located near Stafford Substation and Aquia Harbour Station. The Aquia Harbour Dog Park is located west of the ROW, between Stafford Substation and Aquia Harbour Station. The Company will coordinate with Stafford County Parks and Recreation on construction within the ROW at these locations to minimize disruption to users of the parks. The existing transmission ROW is currently cleared and maintained for 230 kV transmission line operations. The Rebuild Project will require approximately one acre of new permanent ROW, which is currently forested. The forested area is located in a low density residential area. Because of the minimal area and location of the clearing, the Rebuild Project is not expected to significantly impact forest resources. The clearing area is in a low-density

residential area. DCR has designated this area's forest conservation value as average to moderate.

M. Use of Pesticides and Herbicides

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

DEQ has previously requested that only herbicides approved for aquatic use by the EPA or the USFWS be used in or around any surface water; the Company intends to comply with this request. See Section G for discussion of the Compnay's IVMP.

N. Geology and Mineral Resources

According to the Division of Geology and Mineral Resources Interactive Geologic Map, the Rebuild Project is underlain by unconsolidated sediments of the Atlantic Coastal Plain. The Rebuild Project sits atop Lower Tertiary Deposits and the Potomac Formation which consists of sands with clays, mud, and silt.

According to the USGS topographic maps and aerial imagery, there are no active mines or stone quarries within the proposed Rebuild Project area. A search of the Virginia Department of Energy map confirms there are no active or abandoned mines within the transmission line corridor. There is one sand and one granite mine within 1-mile of the corridor in the City of Fredericksburg. The sand mine is approximately 0.36 miles from the Rebuild Project Area while the granite mine is approximately 0.58 miles from the corridor. In Stafford County, there is one limestone and one sandstone mine within 1-mile of the Rebuild Project area. The limestone mine is approximately 0.61 miles from the corridor while the sandstone mine is approximately 0.36 miles. Therefore, it is not anticipated that the Rebuild Project will result in negative impacts on the geology or mineral resources.

O. Transportation Infrastructure

The existing corridor for Lines #29, #2104, and #2157 crosses several VDOT maintained, mid- to high-volume roadways in Stafford County, including Route 17 Business (Warrenton Road), Route 1 (Cambridge Street), and Route 630 (Courthouse Road), along with numerous low-volume secondary roadways. The Company plans to apply for land use permits from the Virginia Department of Transportation ("VDOT") for any aerial crossings of VDOT maintained roads and any construction entrances from the VDOT right-of-way. The Company also plans to apply for permits from the City of Fredericksburg for any aerial crossings or construction entrances off of city-maintained roads. All permits will be obtained prior to construction. In January 2024, the Company solicited comments from VDOT regarding the proposed Rebuild Project. Comments were received on February 6, 2024. This correspondence is included in Attachment 2.O.1.

The Stafford Regional Airport is located approximately 1.3 miles northwest of the Structures #2104/5465 and #29/1741, Shannon Airport is located approximately 3.2 miles southeast of the Fredericksburg Substation, and the Marine Corps Air Facility Quantico is approximately 5.5 miles northeast of Aquia Harbour Station. Stafford County has designated an Airport Overlay District for the Stafford Regional Airport, which extends into the Rebuild Project area. Portions of the Rebuild Project fall within the Conical Zone, Horizontal Zone, Transitional Zone, and Approach Zone. A map of these zones is included in Attachment 2.O.3. Proposed structure heights for the Rebuild Project will comply with required maximum heights defined for these zones by the Federal Aviation Administration. The design of the proposed Rebuild Project must not prevent interference with pilots' safe ingress and egress at the airports. Such hazard or impediments include interference with navigation and communication equipment and glare from materials and external lights. The Company solicited comments from the Virginia Department of Aviation ("DOAv") regarding the proposed Rebuild Project. Comments were received on January 29, 2024, and are included in Attachment 2.O.2. Due to the proximity of the Rebuild Project to the Stafford Regional Airport and information contained within the FAA Notice Criteria Tool, the Company will submit a 7460 form to the FAA to initiate airspace study to evaluate whether the project will create a hazard to navigation.

The proposed Rebuild Project runs perpendicular to Dogwood Airpark in Stafford County. This private runway was built after the original line was constructed. Aviation take-off and landing occurs directly over the ROW and Lines #29 and #2104. Due to the strict height requirements to safely land on the private airfield, the Company is working with members of the Airpark to minimize effects on the private runway. The Company's proposed design at this location includes utilizing single circuit structures and obtaining additional ROW to allow for shorter structures in order to maintain the existing glide slope for safe landings and takeoffs.

The proposed Rebuild Project does not cross any active or inactive railroad corridors.

The Company will secure all necessary permits from VDOT, the City of Fredericksburg, DOAv, and FAA prior to construction in the respective rights-of-way.

P. Drinking Water Wells

In January 2024, the Company solicited comments on the proposed Rebuild Project from various DEQ entities. DEQ forwarded the Company's request to the Virginia Department of Health's Office of Drinking Water ("VDH-ODW"), which responded on February 8, 2024, regarding the proximity of the Rebuild Project to public drinking water sources (groundwater wells, springs and surface water intakes). VDH-ODW stated that there are no public groundwater wells within a 1-mile radius of the Rebuild Project. There are six surface water intakes located within a five-mile radius of the Rebuild Project. The Rebuild Project is not within the watershed of any public surface water intakes. A copy of that correspondence is included as Attachment 2.P.1.

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

Q. Pollution Prevention

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

Attachments

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

January 25, 2024

BY EMAIL

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICATION

Project: **Dominion Energy Virginia's Proposed Fredericksburg-Aquia Harbour Lines #29, #2104, and #2157 Partial Rebuild**

To Whom it May Concern:

Dominion Energy Virginia (the "Company") is proposing to wreck and rebuild existing transmission Lines #29, #2104, and #2157, primarily within approximately 12 miles of existing right-of-way between our Fredericksburg Substation and Aquia Harbour Substation in the City of Fredericksburg and Stafford County. The Company proposes to rebuild the transmission lines primarily on two parallel double-circuit weathering steel monopoles capable of 230 kV capacity. Line #29, which currently operates at 115 kV, will be uprated to 230 kV standards. Approximately one acre of new right-of-way will be required where several spans of four parallel single-circuit monopoles are proposed. Collectively this work is referred to as the "Rebuild Project."

The Rebuild Project is needed to maintain the structural integrity and reliability of the networked transmission system, resolve identified violations of the mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, and provide for future load growth in the area.

The Company is preparing to file an application for a Certificate of Public Convenience and Necessity ("CPCN") with the State Corporation Commission ("SCC"). At this time, in advance of filing an application with the Commission, the Company respectfully requests a scoping review of the Rebuild Project. Any comments or additional information you can provide would be beneficial to the Rebuild Project. Please submit comments within 30 days of the date of this letter.

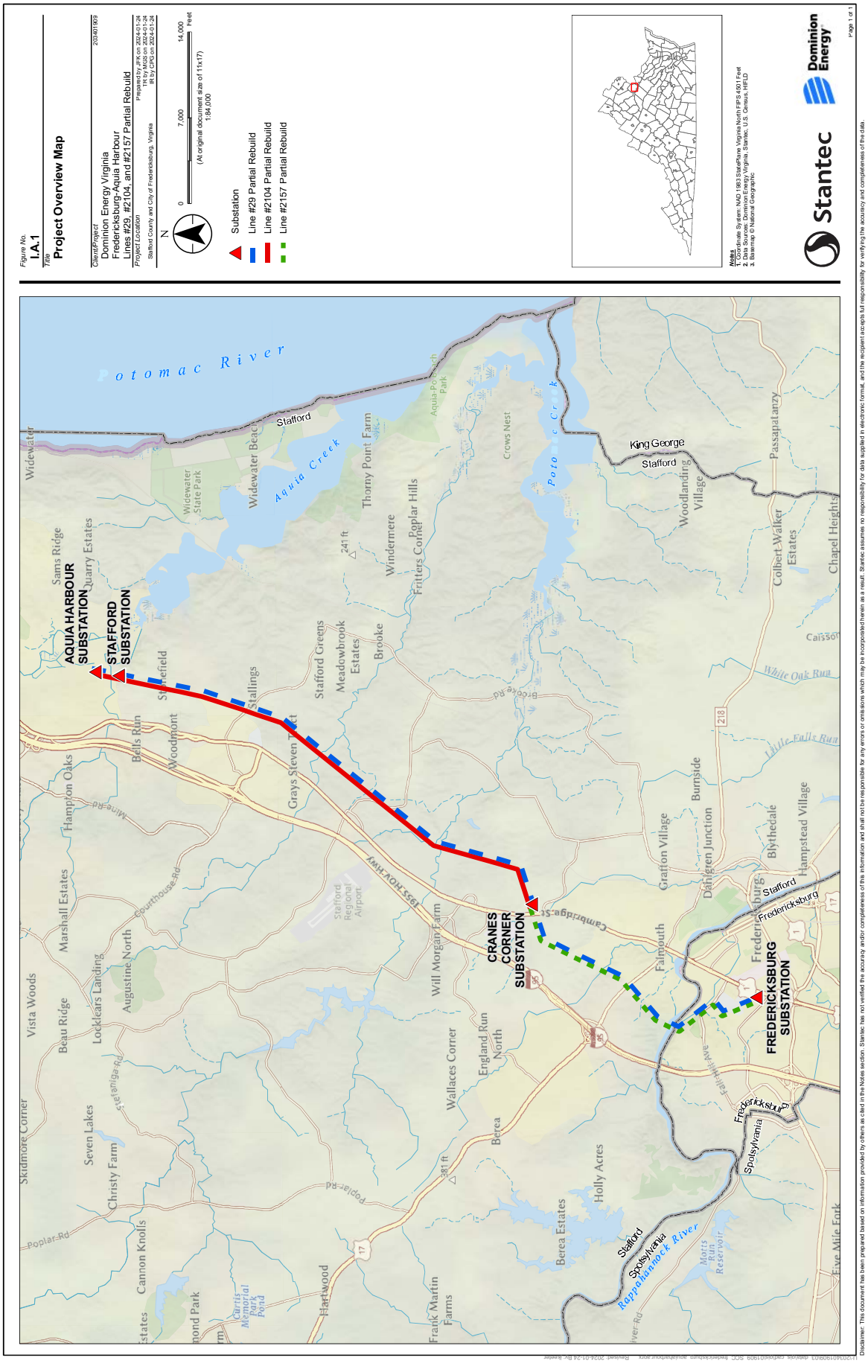
Enclosed is a Project Overview Map and associated GIS shapefile depicting the proposed Rebuild Project, as well as its general location. Please note that the Project Overview Map and route description depicted therein are preliminary in nature and subject to final engineering. All final materials, including maps, will be available in the Company's application filing to the SCC. Please refer to the CPCN application for any updates to the Rebuild Project description. If there are any questions, please do not hesitate to contact Stacey Ellis (434) 532-9034 or stacey.t.ellis@dominionenergy.com.

The Company appreciates your assistance with this project review and looks forward to any additional information you may have to offer.

Thank you,

Elizabeth “Tibby” L. Hester
Authorized Representative
Manager, Environmental and Sustainability

Enclosure: Project Overview Map



Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

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

January 25, 2024

BY EMAIL

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICATION
Project: **Dominion Energy Virginia's Proposed Fredericksburg-Aquia Harbour Lines #29, #2104, and #2157 Partial Rebuild**

Dear Ms. Henicheck:

Dominion Energy Virginia (the "Company") is proposing to wreck and rebuild existing transmission Lines #29, #2104, and #2157, primarily within approximately 12 miles of existing right-of-way between our Fredericksburg Substation and Aquia Harbour Substation in the City of Fredericksburg and Stafford County. The Company proposes to rebuild the transmission lines primarily on two parallel double-circuit weathering steel monopoles capable of 230 kV capacity. Line #29, which currently operates at 115 kV, will be uprated to 230 kV standards. Approximately one acre of new right-of-way will be required where several spans of four parallel single-circuit monopoles are proposed. Collectively this work is referred to as the "Rebuild Project."

The Rebuild Project is needed to maintain the structural integrity and reliability of the networked transmission system, resolve identified violations of the mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, and provide for future load growth in the area.

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

An off-site analysis has been conducted using available resources such as National Wetlands Inventory (NWI), National Resource Conservation Service soils, aerial photography, and topographic data to determine the potential for wetlands and other waters of the U.S. to occur within the project area. A field delineation will be conducted using the U.S. Army Corps of Engineers (Corps) 1987 Wetlands Delineation Manual and applicable regional supplement prior to permitting and then submitted to the Corps for confirmation. Table 1 below provides a summary of potential wetlands and other waters that may be present within the Rebuild Project.

Table 1. Estimate of Jurisdictional Resources within Rebuild Project Corridor

Resource Type	Probability			Total
	Low	Medium	High	
Palustrine Emergent and Scrub/Shrub Wetlands – Non-Tidal	11.58 Acres	18.17 Acres	36.28 Acres	66.03 Acres
Palustrine Emergent and Scrub/Shrub Wetlands – Tidal	N/A	N/A	4.43 Acres	4.43 Acres
Forested Wetlands	0.06 Acres	N/A	0.16 Acres	0.22 Acres
Tidal Water	N/A	N/A	0.65 Acres	0.65 Acres
Stream	N/A	N/A	4.89 Acres	4.89 Acres

At this time, in advance of filing an application with the Commission, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Rebuild Project within 30 days of the date of this letter.

Enclosed is a Project Overview Map and associated GIS shapefile depicting the proposed Rebuild Project, as well as its general location. Please note that the Project Overview Map and route description depicted therein are preliminary in nature and subject to final engineering. All final materials, including maps, will be available in the Company's application filing to the SCC. If there are any questions, please do not hesitate to contact Stacey Ellis at (434) 532-9034 or stacey.t.ellis@dominionenergy.com. The Company appreciates your assistance with this project review and looks forward to any additional information you may have to offer.

Sincerely,

Elizabeth "Tibby" L. Hester
Authorized Representative
Manager, Environmental and Sustainability

Enclosure: Project Overview Map

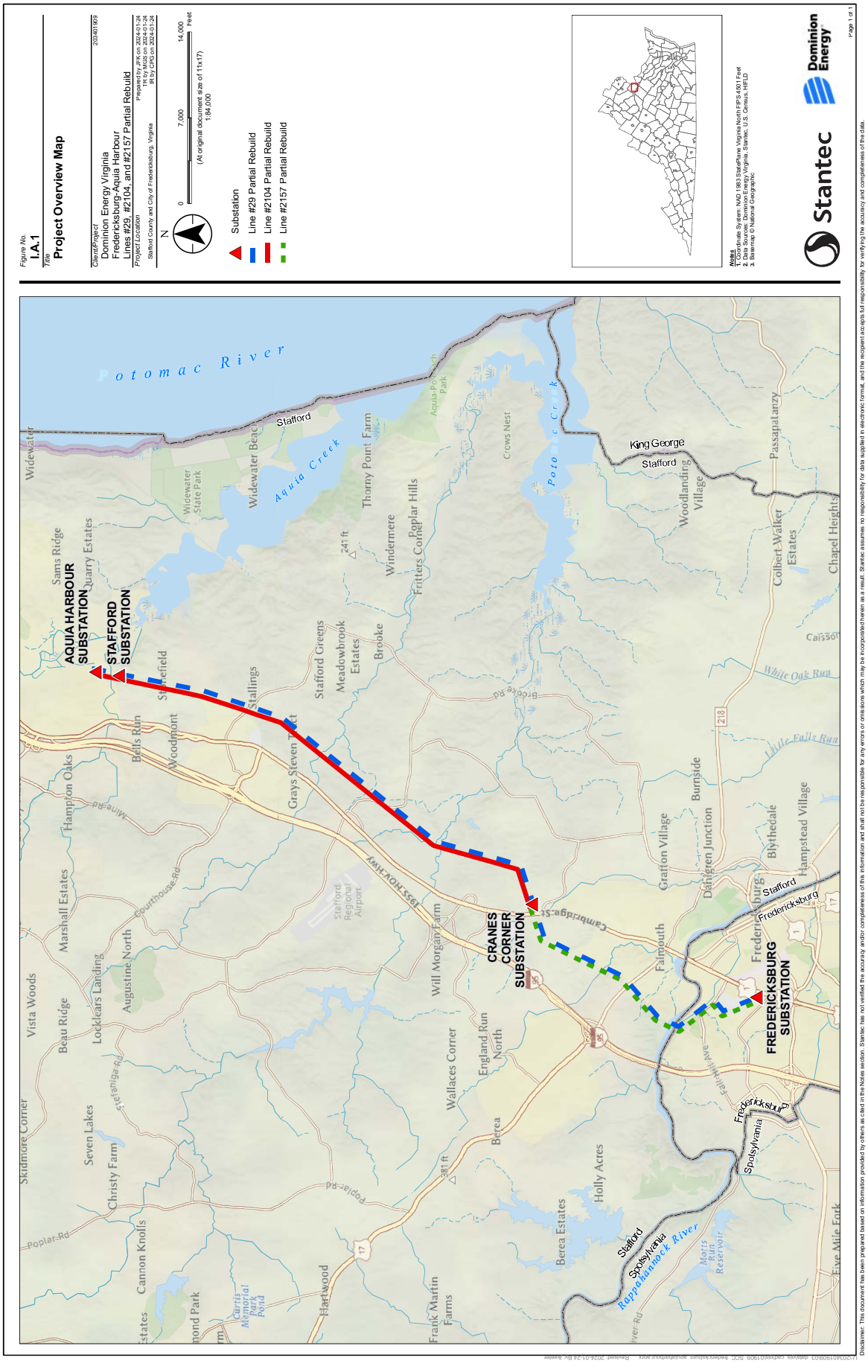


Figure No.
I.A.1
Title
Project Overview Map
Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
Project Location
Stafford County and City of Fredericksburg, Virginia
Prepared by PK on 2024-01-24
TR by MSB on 2024-01-24
IR by DPG on 2024-01-24
N
0
7,000
14,000
Feet
(At original document size of 11x17)
1:84,000
Substation
Line #29 Partial Rebuild
Line #2104 Partial Rebuild
Line #2157 Partial Rebuild
Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, U.S. Census, HIFLD
3. Basemap © National Geographic
AQUIA HARBOUR SUBSTATION
STAFFORD SUBSTATION
CRANES CORNER SUBSTATION
FREDERICKSBURG SUBSTATION
Potomac River
Aquia Creek
Rappahannock River
Stafford
King George
Fredericksburg
Spotsylvania
Dominion Energy
Stantec
Page 1 of 1
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COMMONWEALTH of VIRGINIA

Marine Resources Commission
380 Fenwick Road
Bldg 96
Fort Monroe, VA 23651-1064

Travis A. Voyles
Secretary of Natural and Historic Resources

Jamie L. Green
Commissioner

February 9, 2024

Dominion Energy Services, Inc.
Attn: Stacey Ellis
120 Tredegar Street
Richmond, VA 23219

Re: Fredericksburg to Aquia Harbour Electric Transmission Project

Dear Ms. Ellis:

This will respond to the request for comments regarding the State Corporation Commission (SCC) Project Notification for the Fredericksburg to Aquia Harbour Electric Transmission Project, prepared by Dominion Energy. Specifically, Dominion Energy has proposed to rebuild existing 230kV transmission lines within approximately 12 miles of existing right-of-way between the Fredericksburg and Aquia Harbour Substations in the City of Fredericksburg and Stafford County, Virginia.

We reviewed the provided project documents and found the proposed project may impact resources within the jurisdictional areas of the Virginia Marine Resources Commission (VMRC) and may require a permit from this agency. Please be advised that the VMRC, pursuant to §28.2-1200 et seq of the Code of Virginia, has jurisdiction over encroachments in, on, or over the beds of the bays, ocean, rivers, streams, or creeks which are the property of the Commonwealth. Accordingly, if any portion of the subject project involves any encroachments channelward of ordinary high water along non-tidal, natural rivers and streams with a drainage area greater than 5-square miles, a permit may be required from our agency or the Department of Environmental Quality. Any jurisdictional impacts will be reviewed by the VMRC during the JPA process.

Please contact me at (757) 247-2285 or by email at claire.gorman@mrc.virginia.gov if you have questions. Thank you for the opportunity to comment.

Sincerely,

Claire Gorman
Environmental Engineer, Habitat Management

CG/dd
HM

Stantec Consulting Services Inc.
5209 Center Street, Williamsburg Virginia 23188-2680

March 1, 2024
File: 203401909

Ms. Stacey Ellis
Dominion Environmental & Sustainability
120 Tredegar Street
Richmond, VA 23219

Reference: **Desktop Wetland Review**
Fredericksburg to Aquia Harbour Lines #29, 2104 & 2157 Partial Rebuild
City of Fredericksburg and Stafford County, VA

Start: Latitude: 38.303697° Longitude: -77.482906° **Terminus: Latitude: 38.453999° Longitude: -77.387139°**

Dear Ms. Ellis:

The following report presents the results of a desktop wetland review conducted by Stantec Consulting Services Inc. (Stantec) for the Fredericksburg to Aquia Harbour Partial Rebuild Lines #29, 2104 & 2157 Project from the Fredericksburg substation in the City of Fredericksburg to the Aquia Harbour substation in Stafford County, Virginia (Figure 1). The purpose of this study is to determine the approximate location and extent of areas that have the potential of containing jurisdictional wetlands and other surface waters using available off-site resources.

The project area (approximately 384.43 acres) consists of an existing, variable width transmission line right-of-way (ROW) beginning at the Fredericksburg substation, north of Powhatan Street in the City of Fredericksburg, Virginia and extending approximately 12.80 miles north to the Aquia Harbor substation, east of Aquia Drive in Stafford County, Virginia.

Due to the preliminary nature of this study, the field methods outlined in the *1987 Corps of Engineers Delineation Manual* and the 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (version 2.0)* were not applied to determine the limits of wetlands and other water features on-site. Rather, U.S. Geological Survey (USGS) Quadrangle Maps, current and historical web-based aerial imagery, wetland photo interpretation techniques, soil surveys, and the National Wetlands Inventory (NWI) were used to ascertain the approximate limits of wetlands and other surface waters. For an evaluation of this type, the dimensions of these features are difficult to determine using even the highest resolution and most recent off-site reference materials. Large floodplains containing broad, flat topography can be assessed fairly accurately using aerial photography. However, smaller secondary drainages containing lower order streams and headwater wetlands are more difficult to evaluate and could contain a high degree of deviation when compared to field conditions. Therefore, all site conditions predicted as a part of this analysis and in the mapping provided are considered preliminary, and without site reconnaissance should only be utilized for early-stage planning purposes.

Reference: Fredericksburg – Aquia Harbor Lines #29, 2104 & 2157 Partial Rebuild

Multiple off-site resources were reviewed to determine areas that have the potential to contain jurisdictional wetlands or other surface waters within the project area described above. These materials include the U.S. Geological Survey 7.5-minute Topographic Quadrangle Maps (Quads) for Fredericksburg, Virginia (1994) and Stafford, Virginia (1994); the National Wetlands Inventory Interactive Mapper (NWI), administered by the U.S. Fish and Wildlife Service (USFWS); the SSURGO Soils Survey, administered by the Natural Resources Conservation Service (NRCS); and web-based aerial images.

USGS Quads

The Quads depict most of the project area as an existing transmission line ROW traversing through gentle to moderately sloping terrain. The Rappahannock River as well as perennial streams, Falls Run, Claiborne Run, Potomac Creek, Accokeek Creek, and Austin Run are depicted within the project area along with numerous other unnamed perennial and intermittent streams.

NWI Maps

The NWI maps administered by USFWS are useful in the identification of potential wetland areas. The maps are compiled through photo interpretation techniques with limited field verification. Large floodplain and regularly inundated wetlands are easily illustrated and are often mapped with reasonable accuracy, while certain forested wetlands (e.g., seasonally saturated, groundwater driven, and evergreen dominated) and other drier-end wetlands tend to be either conservatively mapped or not shown at all.

The NWI maps depict multiple freshwater forested/shrub wetlands, freshwater emergent wetlands, freshwater ponds, and riverine systems within the project area. It should be noted that most wetlands within the project area are presumed to be scrub-shrub or emergent due to regular maintenance of the ROW. The NWI identifies all wetlands within the proposed project area as palustrine, which includes all non-tidal wetlands and wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.05%. Most wetlands within the project area are classified as non-tidal, however, some of the palustrine wetlands at the northern end of the project area associated with Austin Run and nearby Aquia Creek, are classified by the NWI as seasonally flooded tidal wetlands.

Digital Aerial Imagery

Web-based aerial images of the project area were reviewed to determine the approximate location and extent of areas that have the potential of containing jurisdictional wetlands and other surface waters. Historical and current aerial imagery can be compared across seasons and year-over-year to determine the potential occurrence of jurisdictional features. Seasonal variations in deciduous vegetation and the presence of stream channels, as well as inundated or saturated areas were all evaluated for their resource potential.

Based on this review of current and historical digital aerial imagery, jurisdictional features are likely present at most Quad mapped stream crossings, NWI mapped wetland features, and are potentially present in some of the secondary drainage features within the project area, as shown on the attached Wetland and Surface Water Desktop Analysis Maps (Figure 1).

Reference: Fredericksburg – Aquia Harbor Lines #29, 2104 & 2157 Partial Rebuild

Soil Survey

The Natural Resources Conservation Service (NRCS) Web Soil Survey shows numerous soil types within the project area. For the purpose of this report, the location of hydric and partially hydric soils is of particular interest, as areas mapped with these soils generally have a high potential to contain jurisdictional features. It should be noted that areas mapped with non-hydric soils could also contain jurisdictional features.

A significant portion of the soils mapped within the study area are classified by the NRCS as non-hydric or predominately non-hydric. The hydric soils present include Alluvial land, wet; Bibb fine sandy loam; Bladen loam; Cartecay fine sandy loam; Fresh water swamp; and Wehadkee very fine sandy loam. The partially hydric soils listed within the project area are Dystrudepts-Udults complex, Udorthents-Udifluvents complex, Wickham loam, Louisburg sandy loam, Augusta loam, Congaree loam, Craven loam, and Iuka fine sandy loam.

Results

The following table presents the approximate extents of potential jurisdictional features based on the desktop wetland review for the project. These features are shown on the attached Wetland and Surface Water Desktop Analysis Maps (Figure 1). As discussed above, most wetland features present within the project limits would likely be classified in the field as palustrine emergent (PEM) or scrub shrub (PSS) due to regular maintenance within the ROW. However, it should be noted that the distinction between emergent wetlands and scrub-shrub wetlands is often very difficult to ascertain using even the highest resolution aerial images. Additionally, there are a few areas where project limits extend beyond the maintained ROW and desktop resources suggest potential palustrine forested (PFO) wetlands.

PEM/PSS Non-tidal (Acres)	**PEM/PSS Tidal** (Acres)	**PFO Non-tidal** (Acres)	**Stream Channels** Acres (LF)	**Tidal Water** Acres (LF)	**Open Water Non-tidal** Acres
66.03	4.43	0.22	4.89 (15,261)	0.65 (1,171)	1.20

In addition, the probability of wetland occurrence was determined based upon the number of off-site resources giving a positive indication within a given area. The off-site resources considered for this probability analysis include current and historical aerial imagery, NWI mapping, hydric soil data, and Quad mapping/topography. The probability was determined as follows and results are summarized in the table below:

- High probability: Areas that demonstrate positive indicators for potential wetlands on all four of the above-mentioned off-site resources.
- Medium probability: Areas that demonstrate positive indicators for potential wetlands on two or three of the above-mentioned off-site resources.
- Low probability: Areas that demonstrate positive indicators for potential wetlands on one of the above-mentioned off-site resources.

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March 1, 2024
Ms. Stacey Ellis
Page 4 of 4

Reference: Fredericksburg – Aquia Harbor Lines #29, 2104 & 2157 Partial Rebuild

High Probability PEM/PSS Non-tidal (acres)	**Medium Probability PEM/PSS Non-tidal** (acres)	**Low Probability PEM/PSS Non-tidal** (acres)	**High Probability PEM/PSS Tidal** (acres)	**High Probability PFO Non-tidal** (acres)	**Low Probability PFO Non-tidal** (acres)
36.28	18.17	11.58	4.43	0.16	0.06

Conclusion

Based on Stantec's interpretation of the above-mentioned off-site resources, the potential exists for jurisdictional features to occur in association with all major drainage features (including floodplains), and secondary drainages within the project area.

In order to verify the findings described in this report, Stantec recommends a detailed delineation of wetlands and surface waters be performed within the final, approved project area followed by confirmation by the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality, if necessary.

If you have any questions regarding the findings presented in this report, please feel free to contact me at your convenience.

Regards,

Mack McGraw
Ecologist
Phone: (540) 785-5544
mack.mcgraw@stantec.com

Jason Mann
Senior Ecologist
Phone: (540) 785-5544
jason.mann@stantec.com

Attachment: Figure 1

cc. Ms. Tracey McDonald – Dominion Energy Virginia

Desktop Analysis Site Data	
Project Area	384.43 Acres ±
Project Length	12.80 Miles ±
PEM/PSS Wetland Non-Tidal: High Probability	36.28 Acres ±
PEM/PSS Wetland Non-Tidal: Medium Probability	18.17 Acres ±
PEM/PSS Wetland Non-Tidal: Low Probability	11.58 Acres ±
PEM/PSS Wetland Tidal: High Probability	4.43 Acres ±
PFO Wetland Non-Tidal: High Probability	0.16 Acres ±
PFO Wetland Non-Tidal: Low Probability	0.06 Acres ±
Open Water Non-Tidal	1.20 Acres ±
Tidal Water	0.65 Acres ± (1,171 L.F. ±)
Stream Channels	4.89 Acres ± (15,261 L.F. ±)

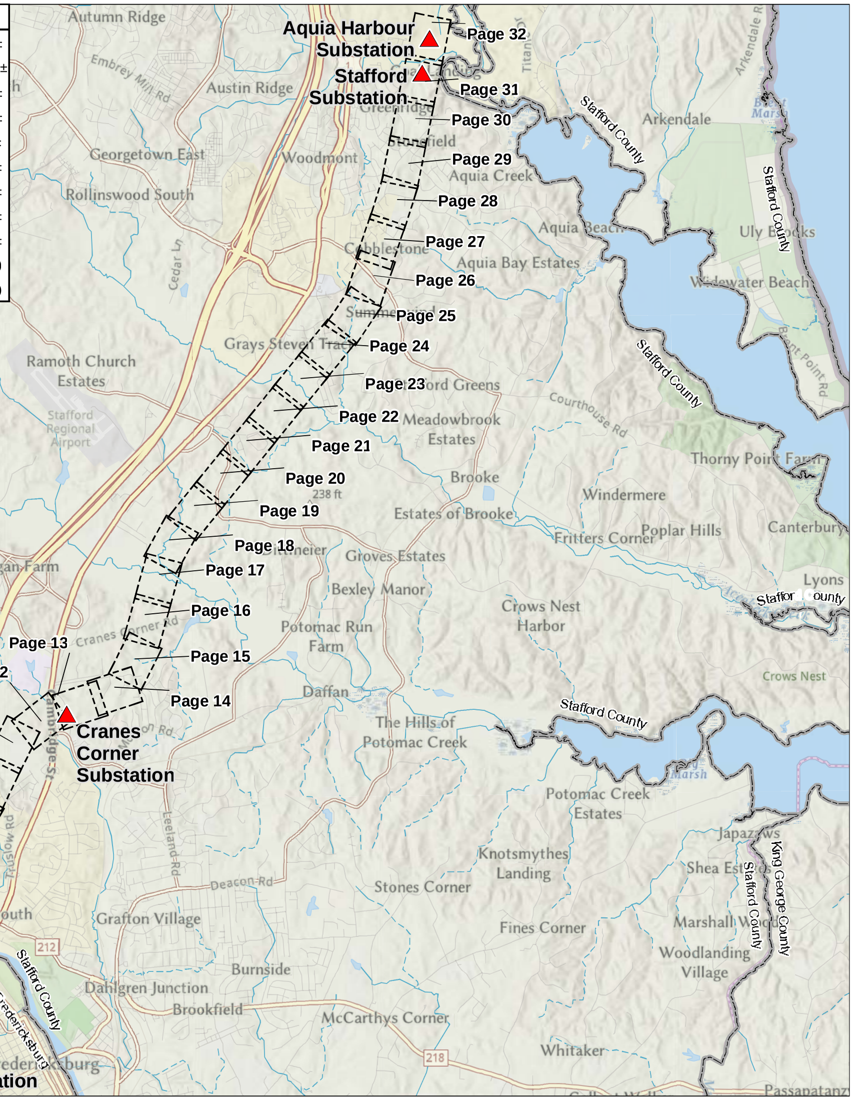

Figure No.
1

Title
Wetland and Surface Water Desktop Analysis

Client/Project 203401909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Line #29, #2104, #2157 Partial Rebuild

Project Location
Stafford County and City of Fredericksburg, VA

Prepared by JBB on 2024-01-24
TR by BJW on 2024-01-25
IR by CPG on 2024-01-25

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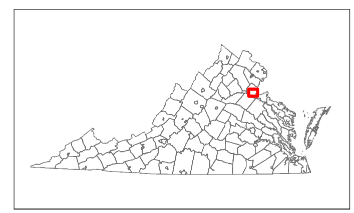
Substation
Page Index



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, U.S Census Bureau
3. Basemap © ESRI

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Page 1 of 32

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Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
203401909

Project Location
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(At original document size of 11x17)
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- Existing Structure
- Project Limits
- Substation
- Approximate PEM/PSS Wetland Non-Tidal: Low Probability
- Approximate PEM/PSS Wetland Non-Tidal: Medium Probability
- Non-Tidal Stream Channel
- 2-Foot Contour

Notes
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2. Data Sources: Dominion Energy Virginia, Stantec, VGIN, USGS Lidar Point Cloud
3. The limits of potential waters of the U.S., including wetlands, have been identified using desktop analysis techniques and have not been confirmed or been field survey located and are for planning purposes only.
4. Orthoimagery © VGIN

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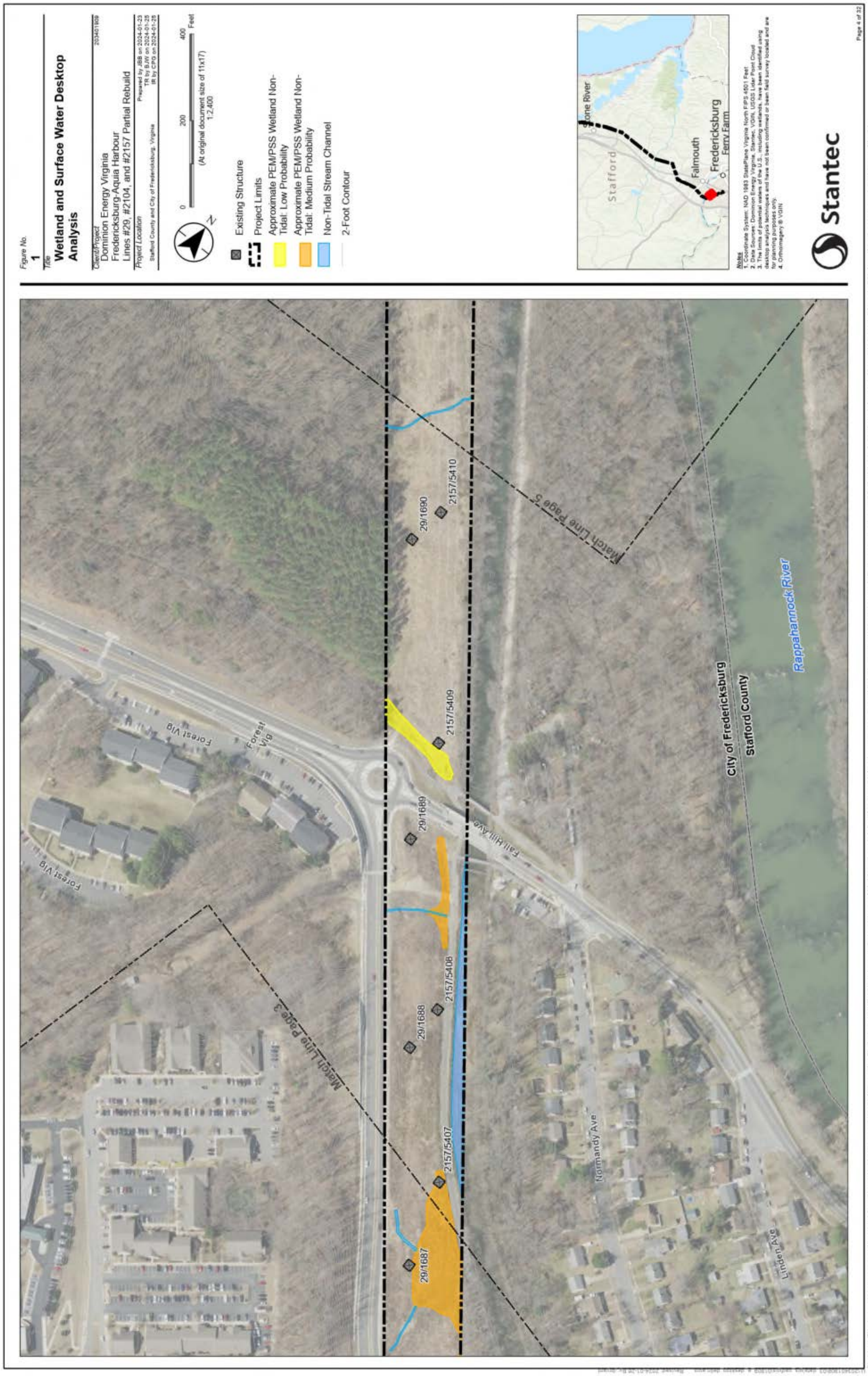
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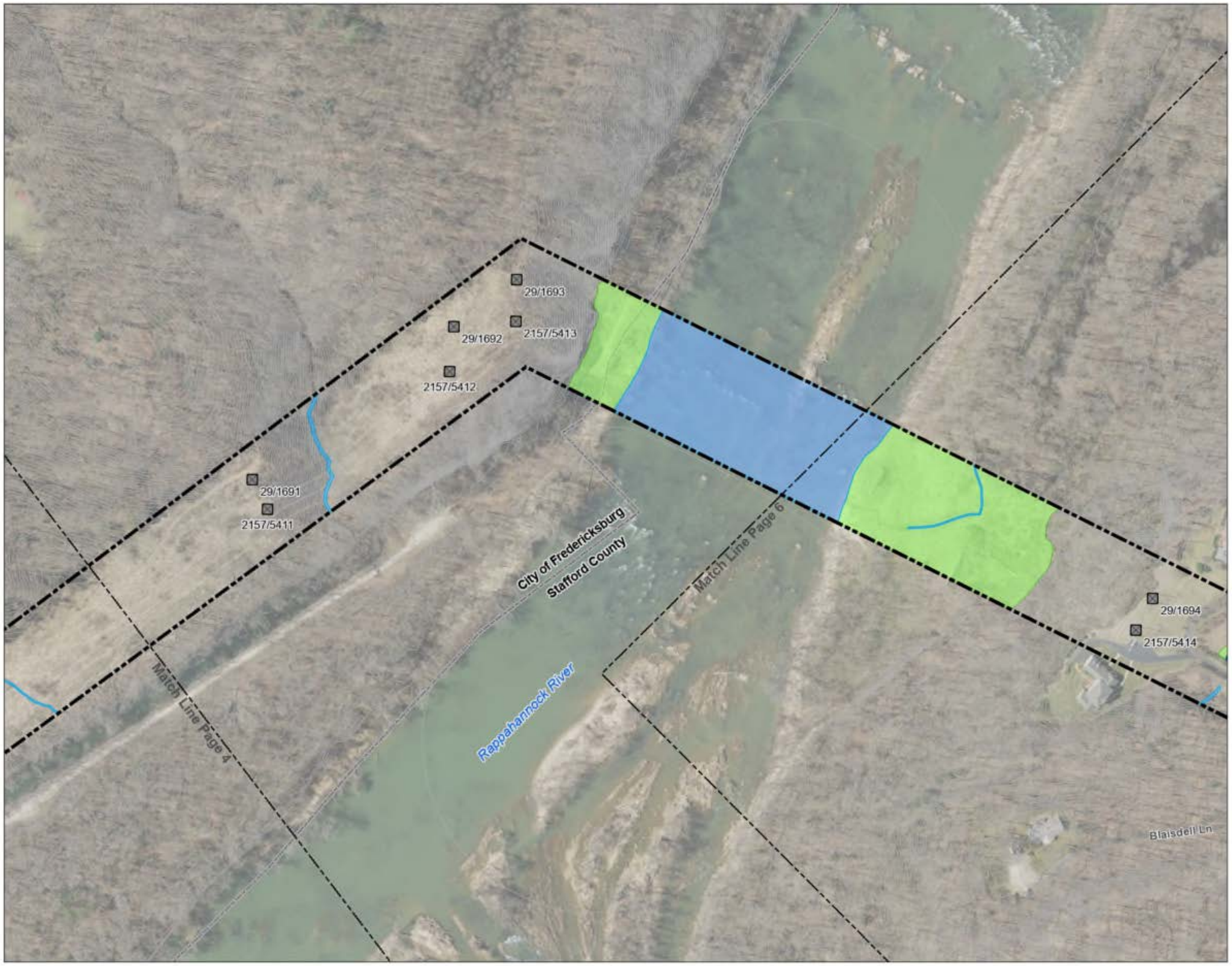

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Non-Tidal Stream Channel
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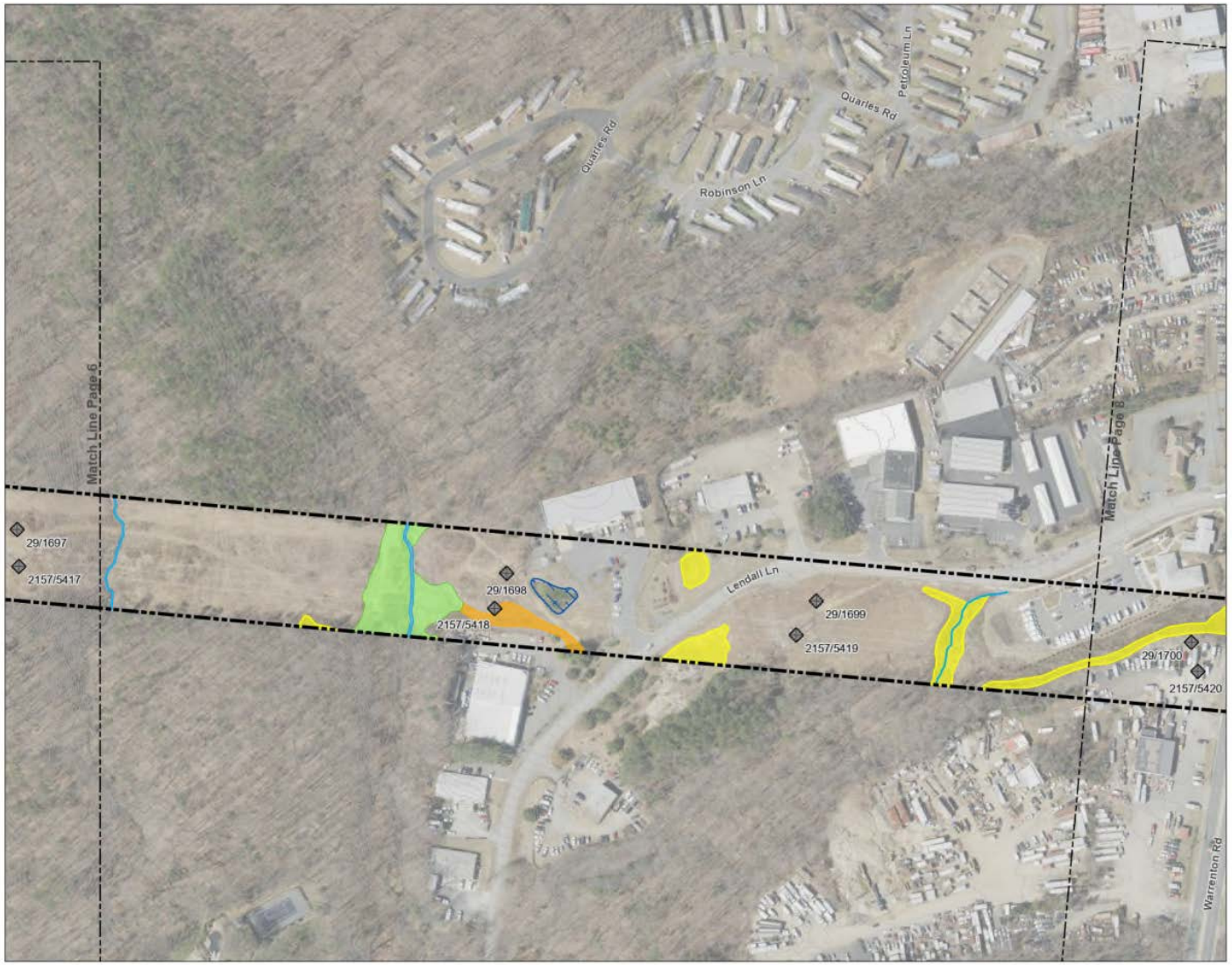

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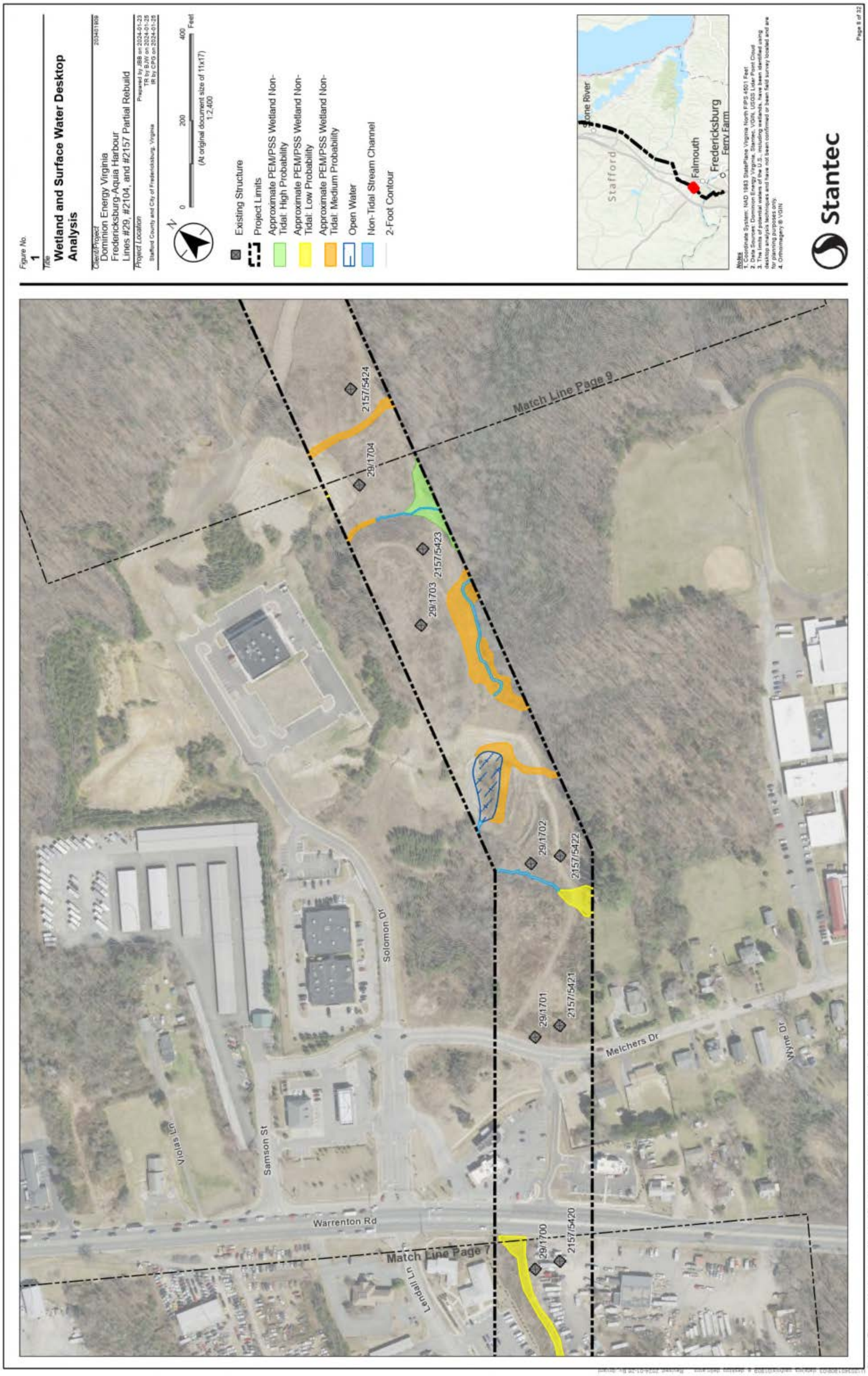
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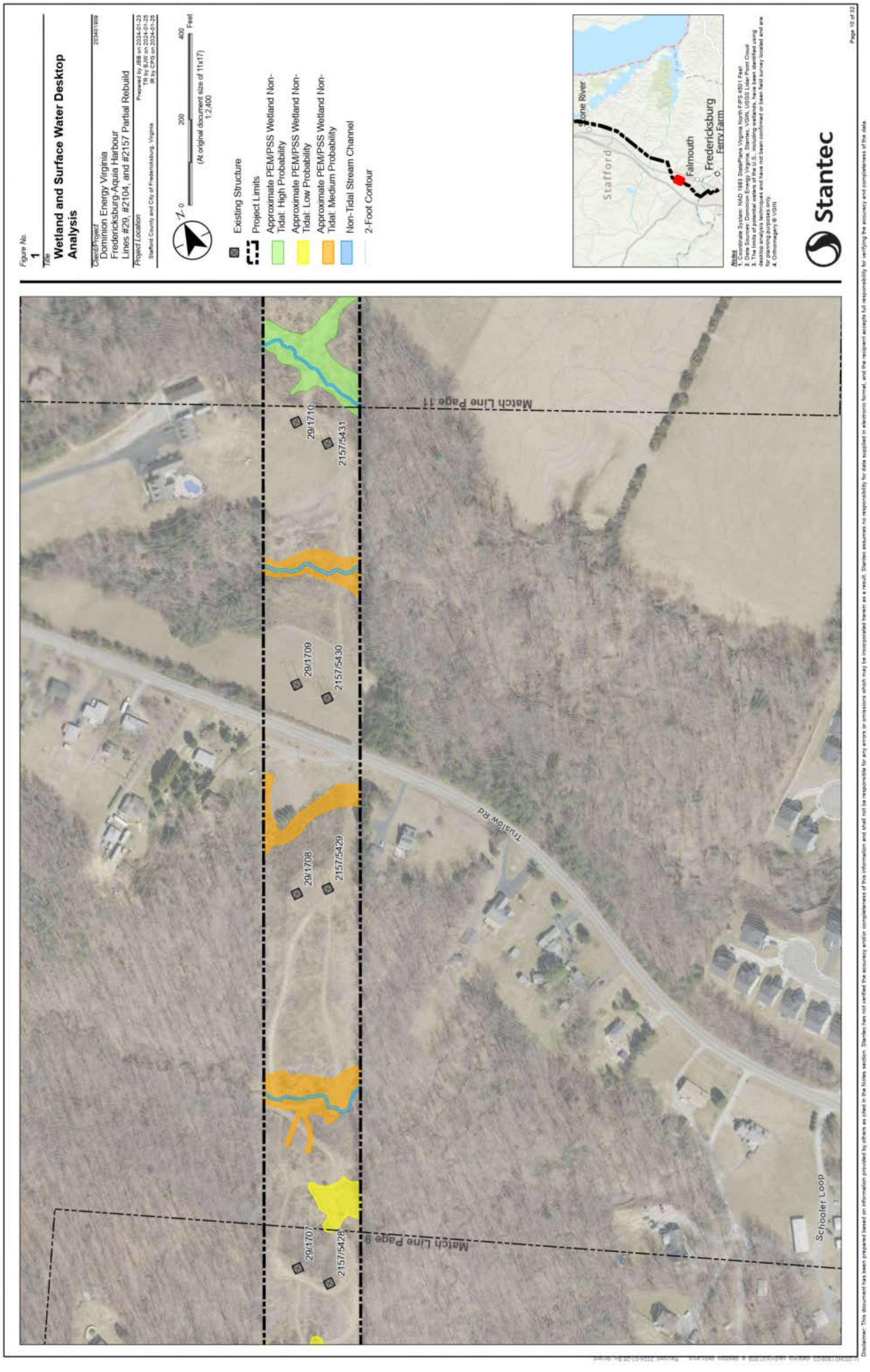
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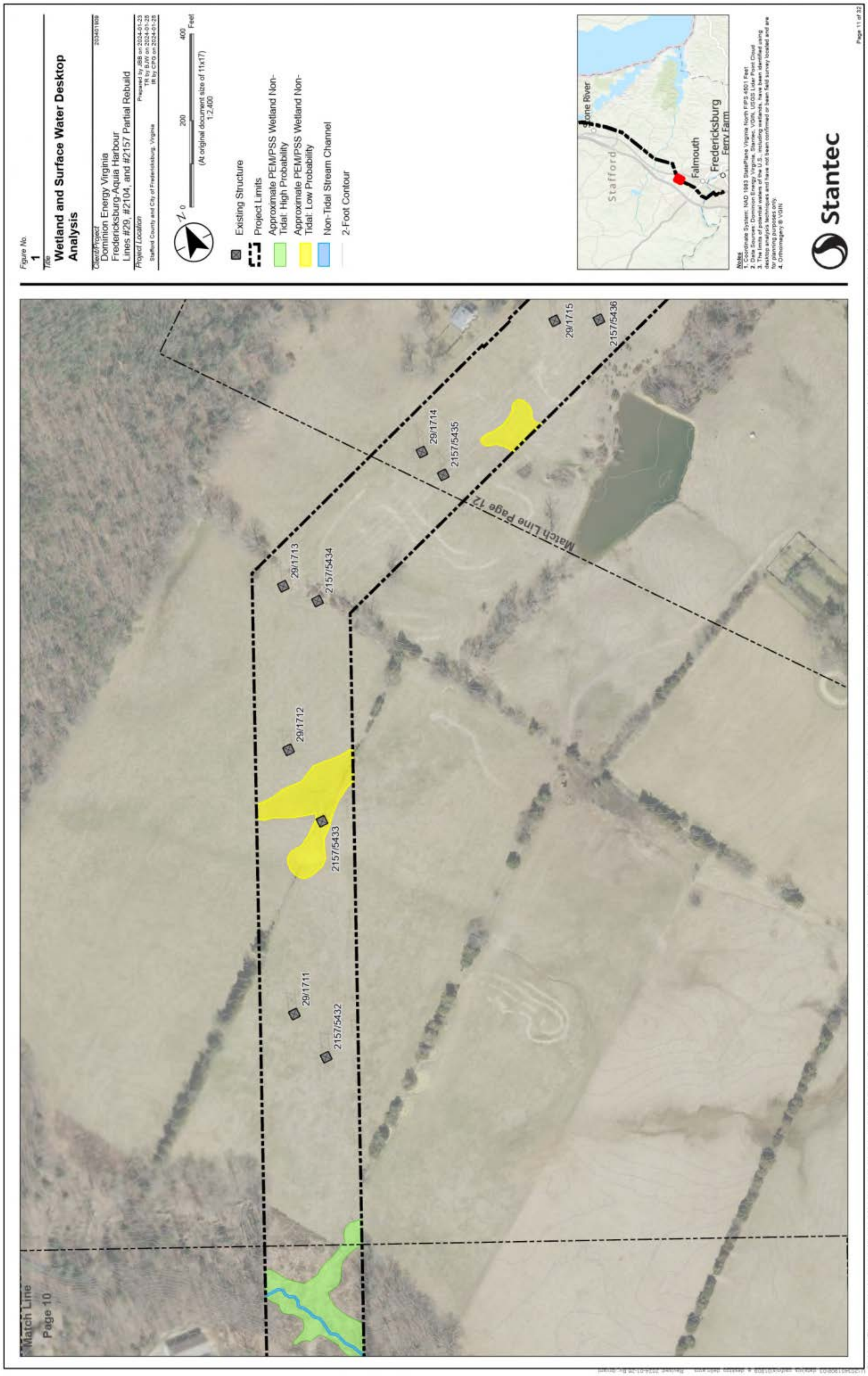
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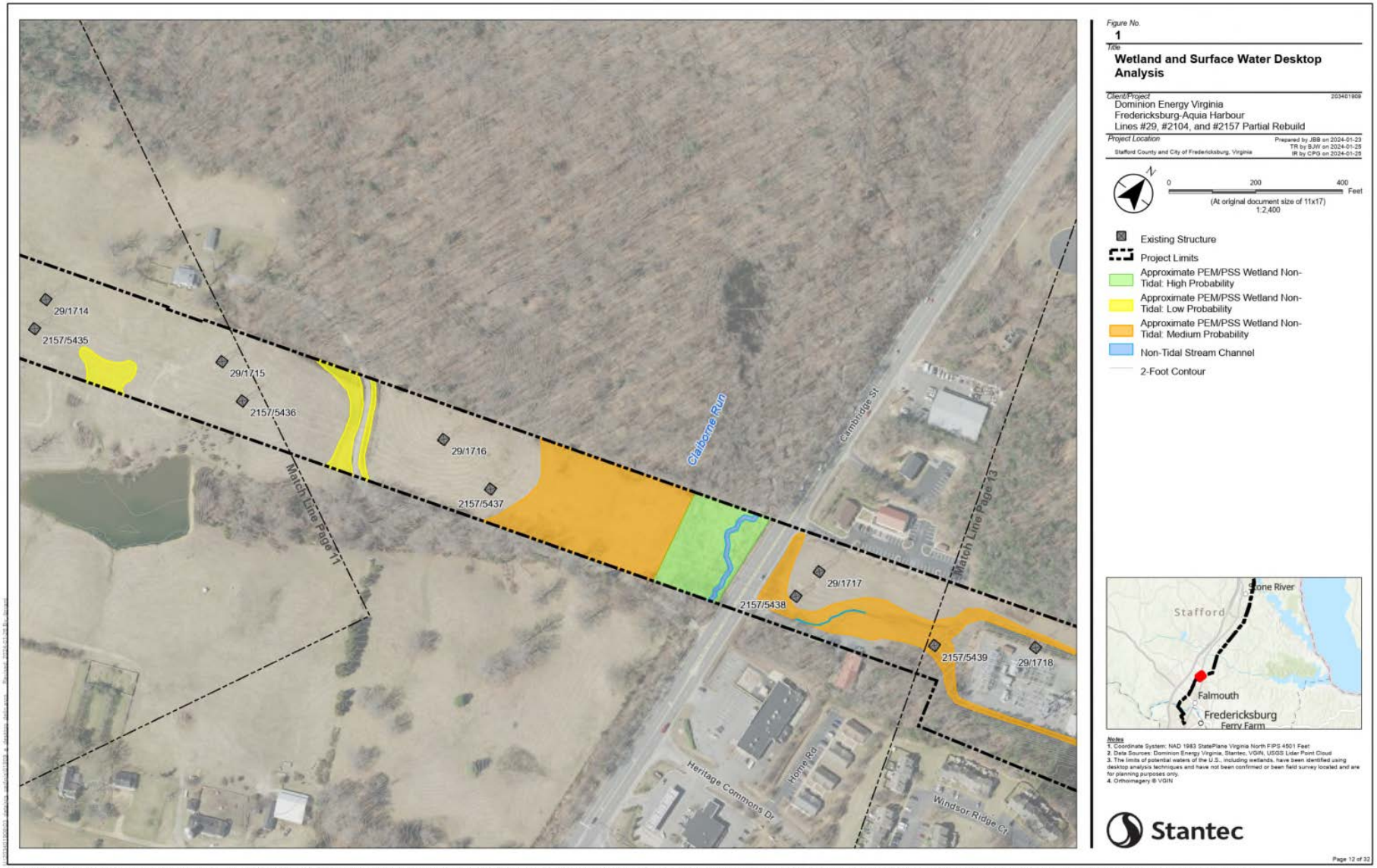

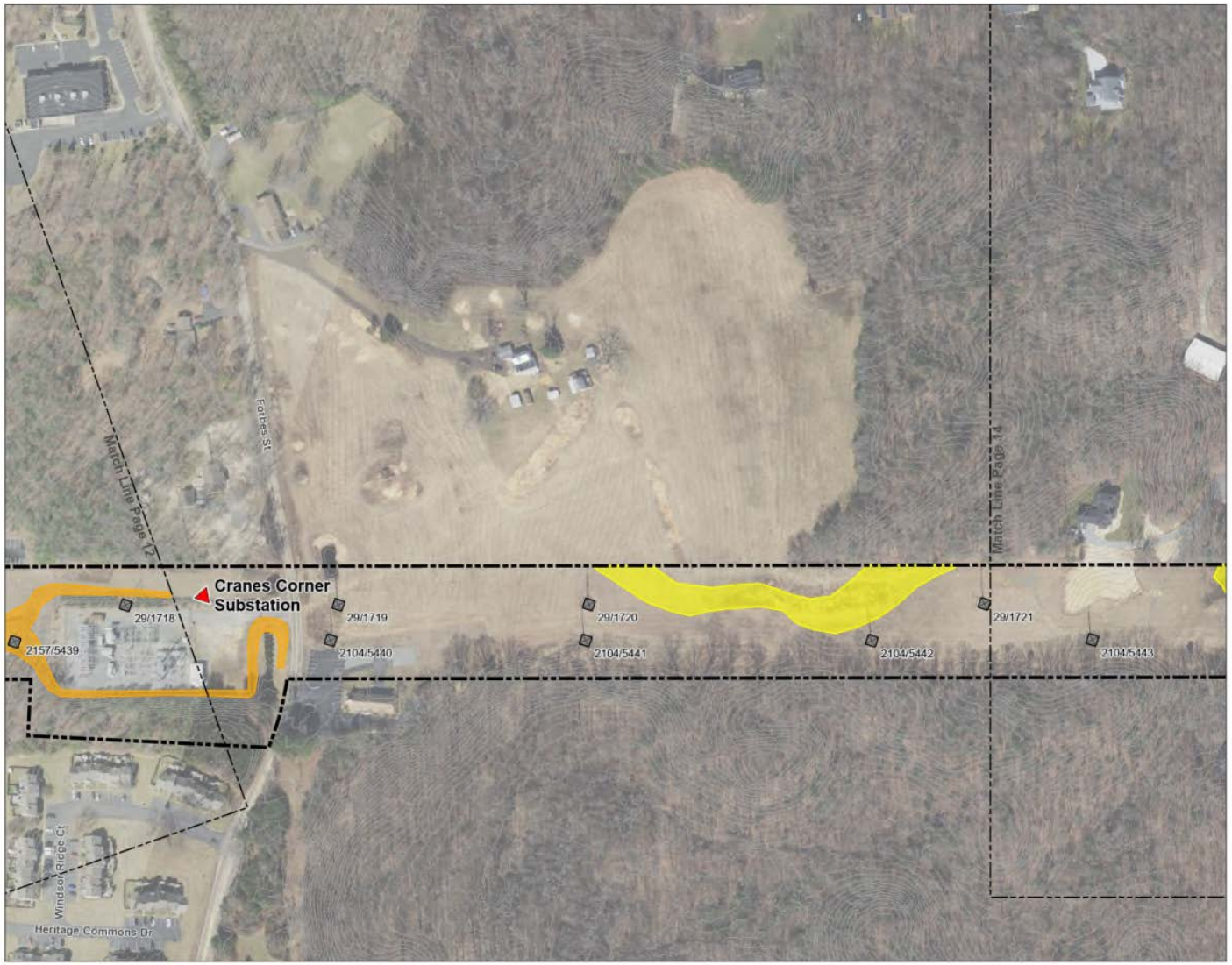

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Lines #29, #2104, and #2157 Partial Rebuild

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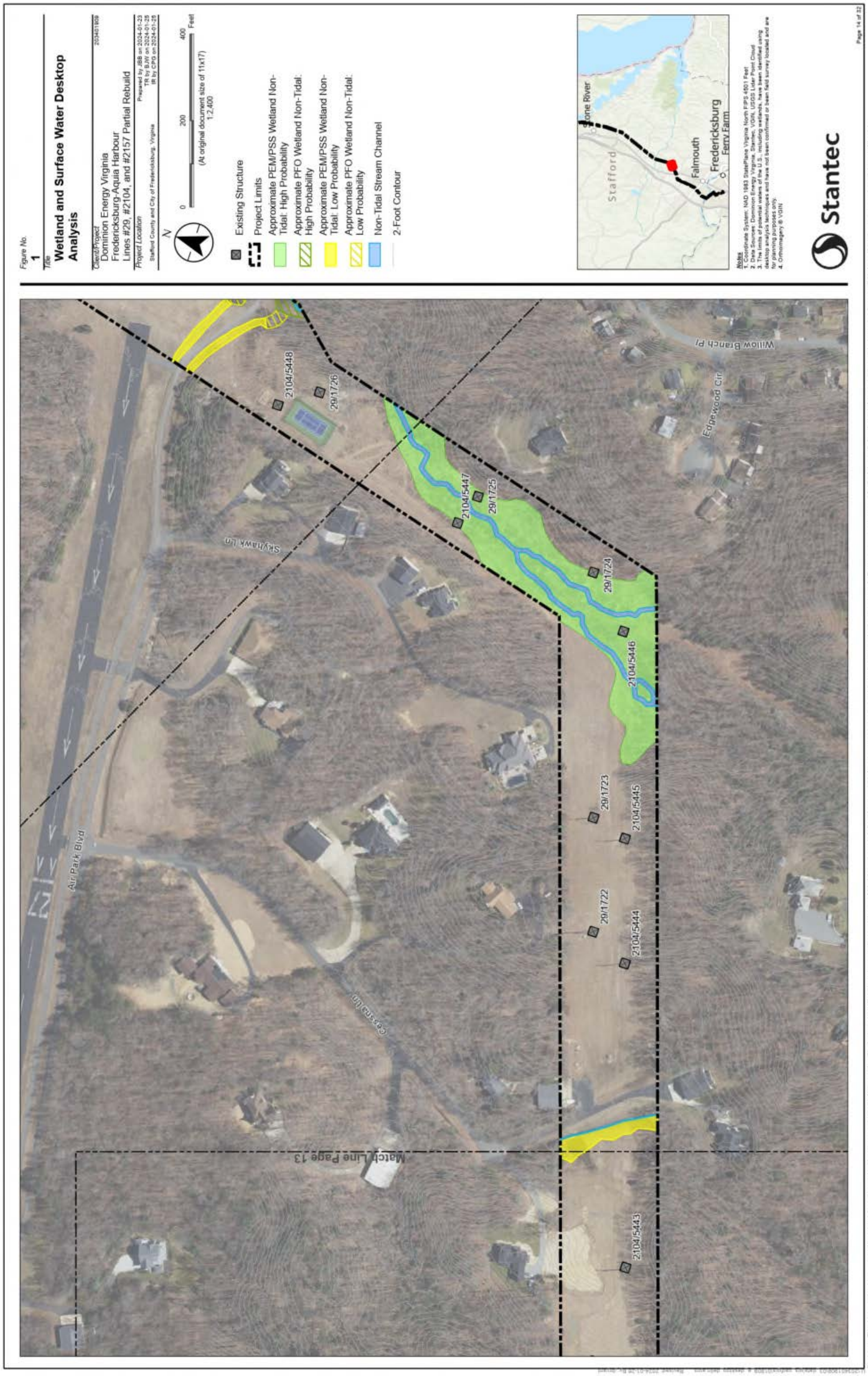
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Fredericksburg
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Notes
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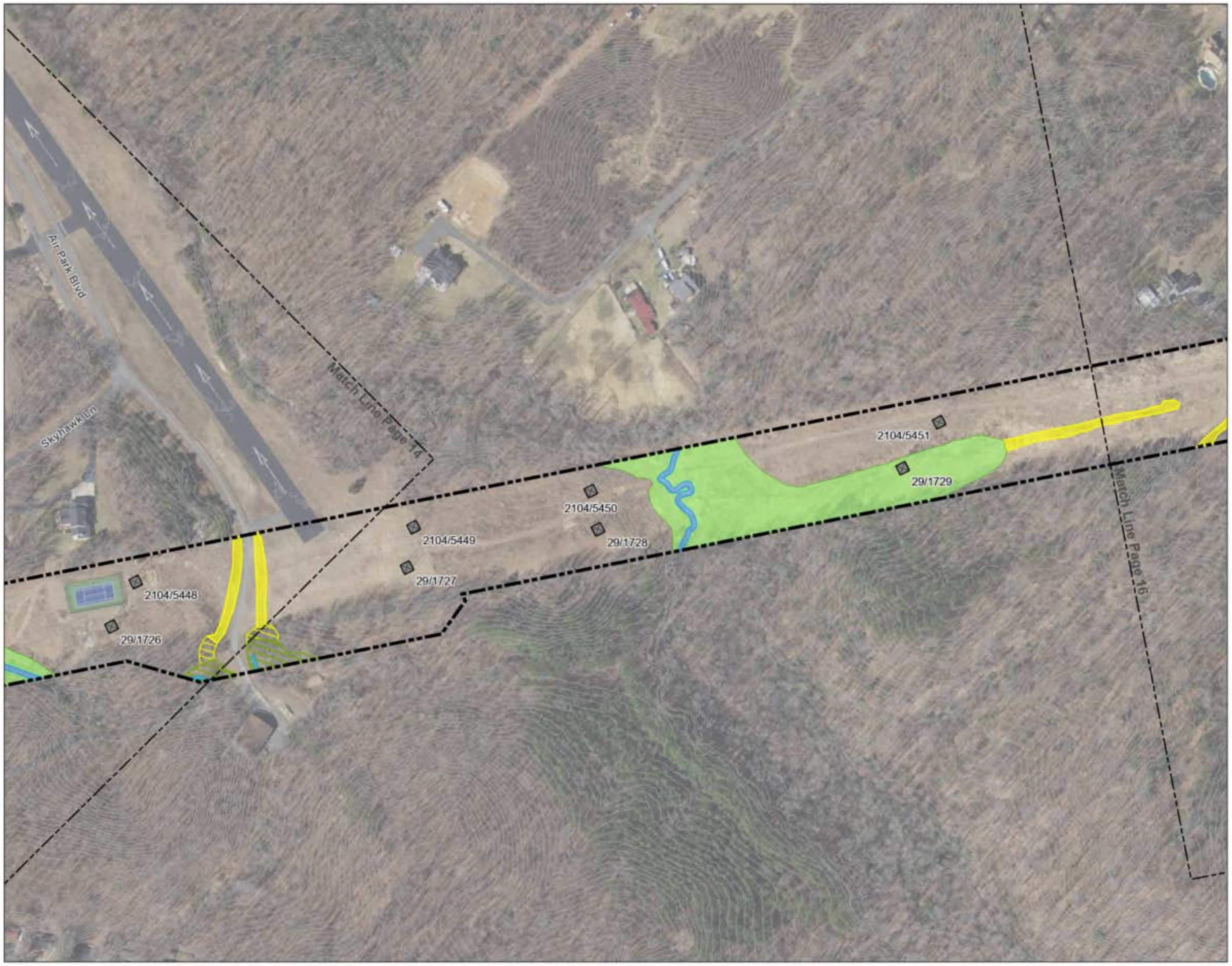

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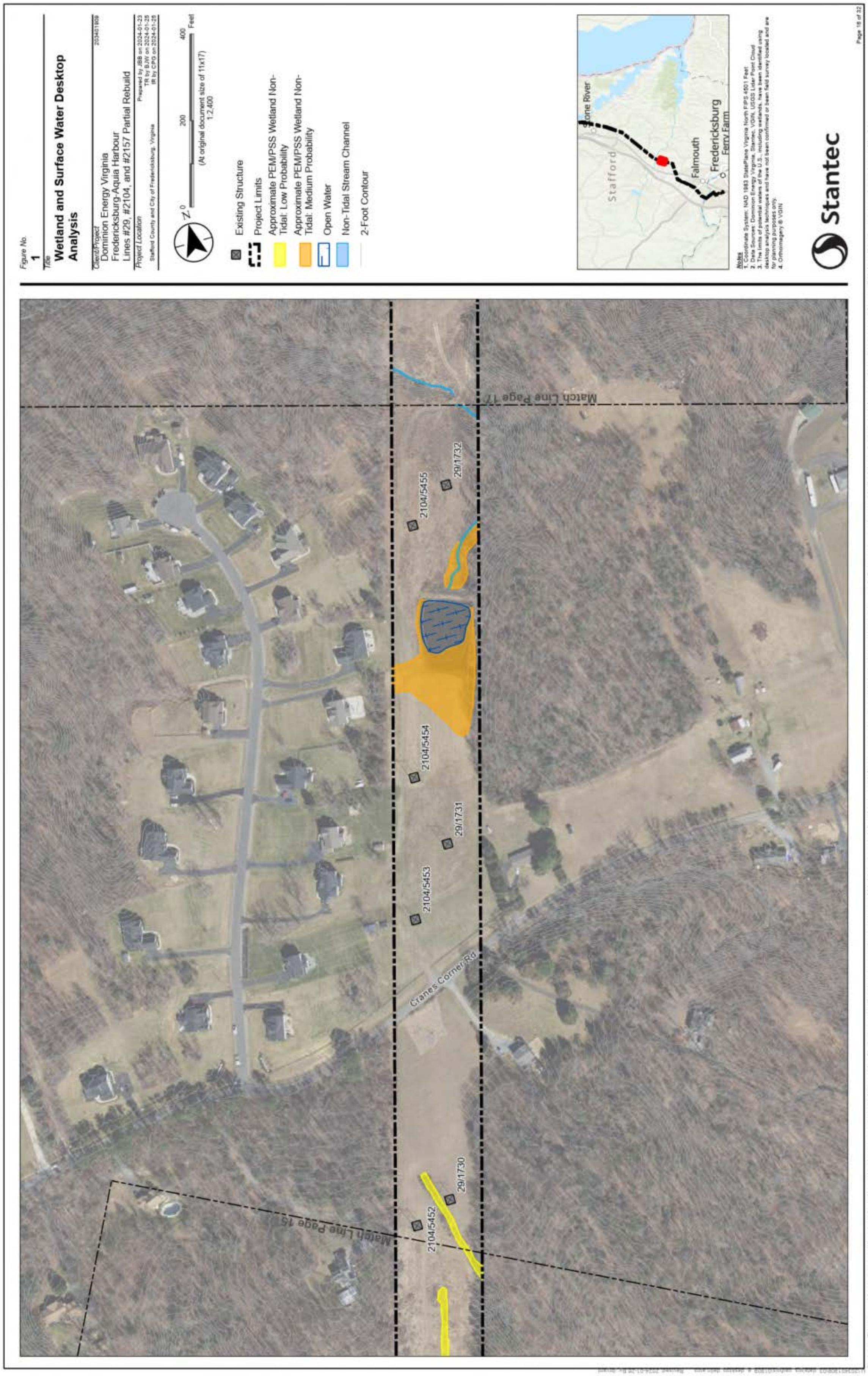
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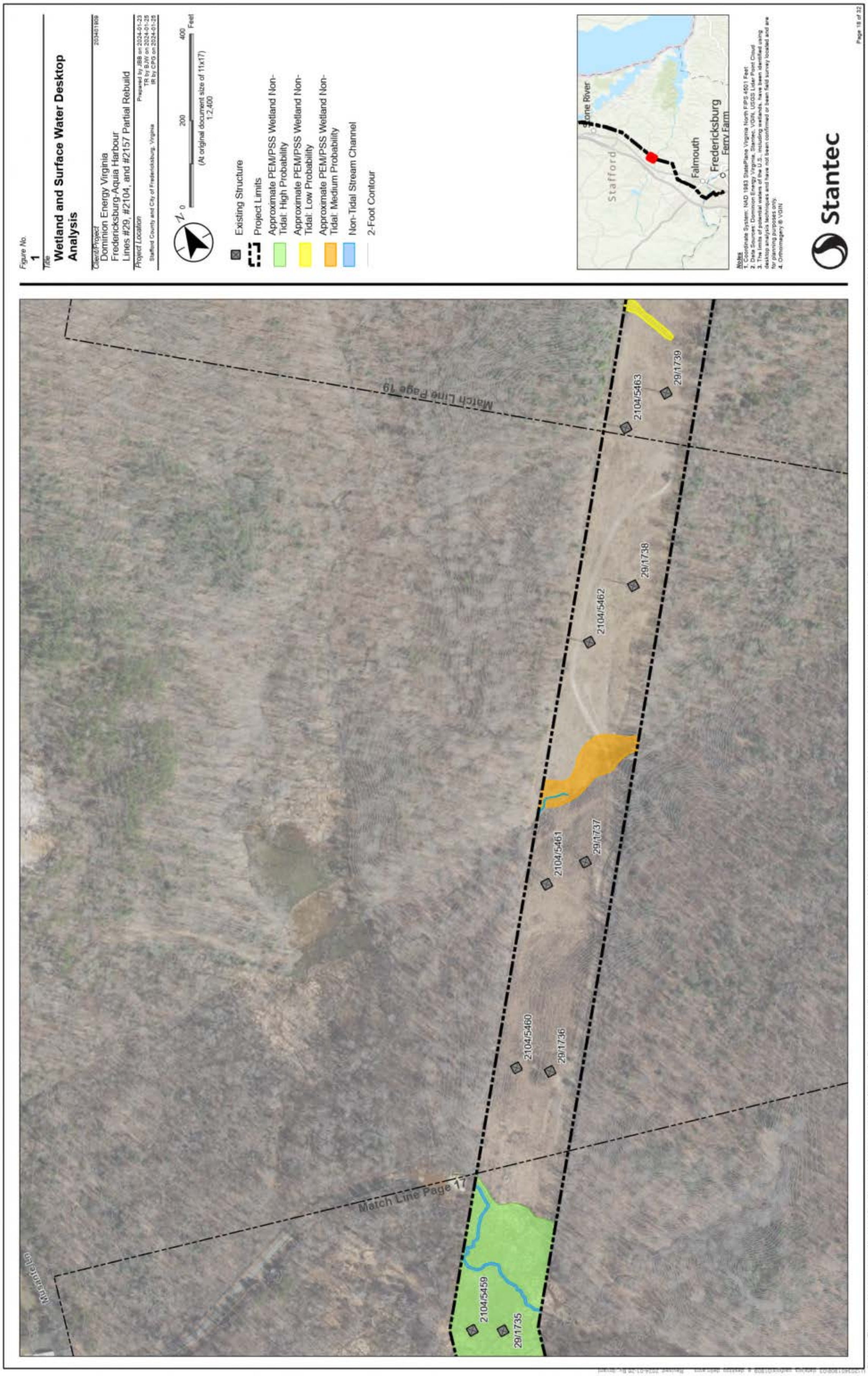
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Approximate PEM/PSS Wetland Non-Tidal: High Probability
Approximate PEM/PSS Wetland Non-Tidal: Low Probability
Approximate PEM/PSS Wetland Non-Tidal: Medium Probability
2-Foot Contour
Match Line Page 22
Match Line Page 20
Eskimo Hill Rd
2104/5471
29/1746
2104/5472
29/1747
2104/5473
29/1748
2104/5474
29/1749
Stafford
Falmouth
Fredericksburg
Ferry Farm
Stone River
Stantec
Page 21 of 32

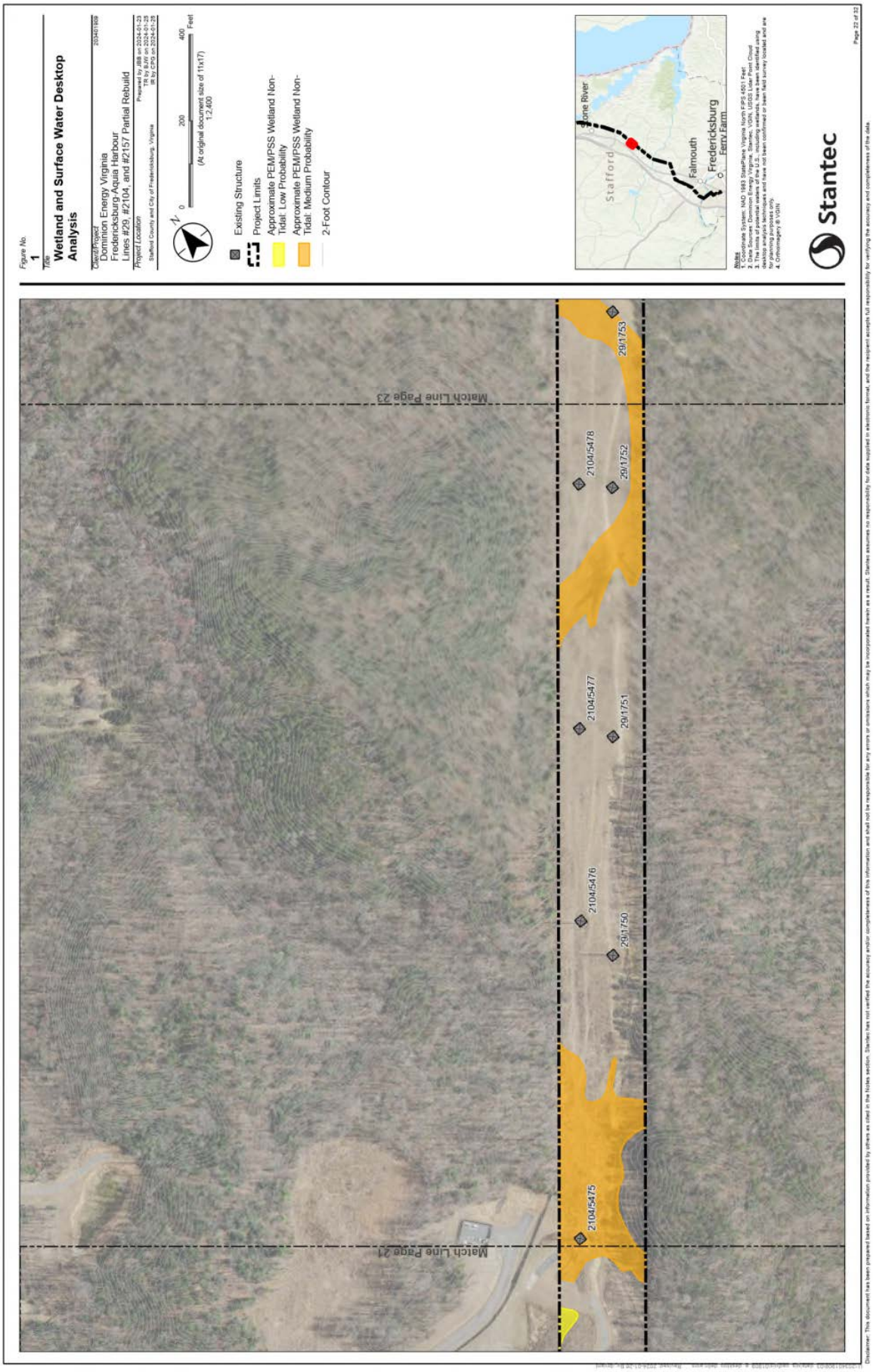

Figure No.
1
Title
Wetland and Surface Water Desktop Analysis
Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour Lines #29, #2104, and #2157 Partial Rebuild
Project Location
Stafford County and City of Fredericksburg, Virginia
Prepared by JBB on 2024-01-23
TR by JBB on 2024-01-25
IR by CFG on 2024-01-29
0
200
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Feet
(At original document size of 11x17)
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Existing Structure
Project Limits
Approximate PEM/PSS Wetland Non-Tidal: High Probability
Approximate PEM/PSS Wetland Non-Tidal: Low Probability
Approximate PEM/PSS Wetland Non-Tidal: Medium Probability
Non-Tidal Stream Channel
2-Foot Contour
Match Line Page 24
Match Line Page 22
Juniping Branch Rd
Accokeek Creek
2104/5482
29/1755
2104/5481
2104/5480
29/1754
2104/5479
29/1753
Rappahannock River
Stafford
Falmouth
Fredericksburg Ferry Farm
Stantec
Page 23 of 32

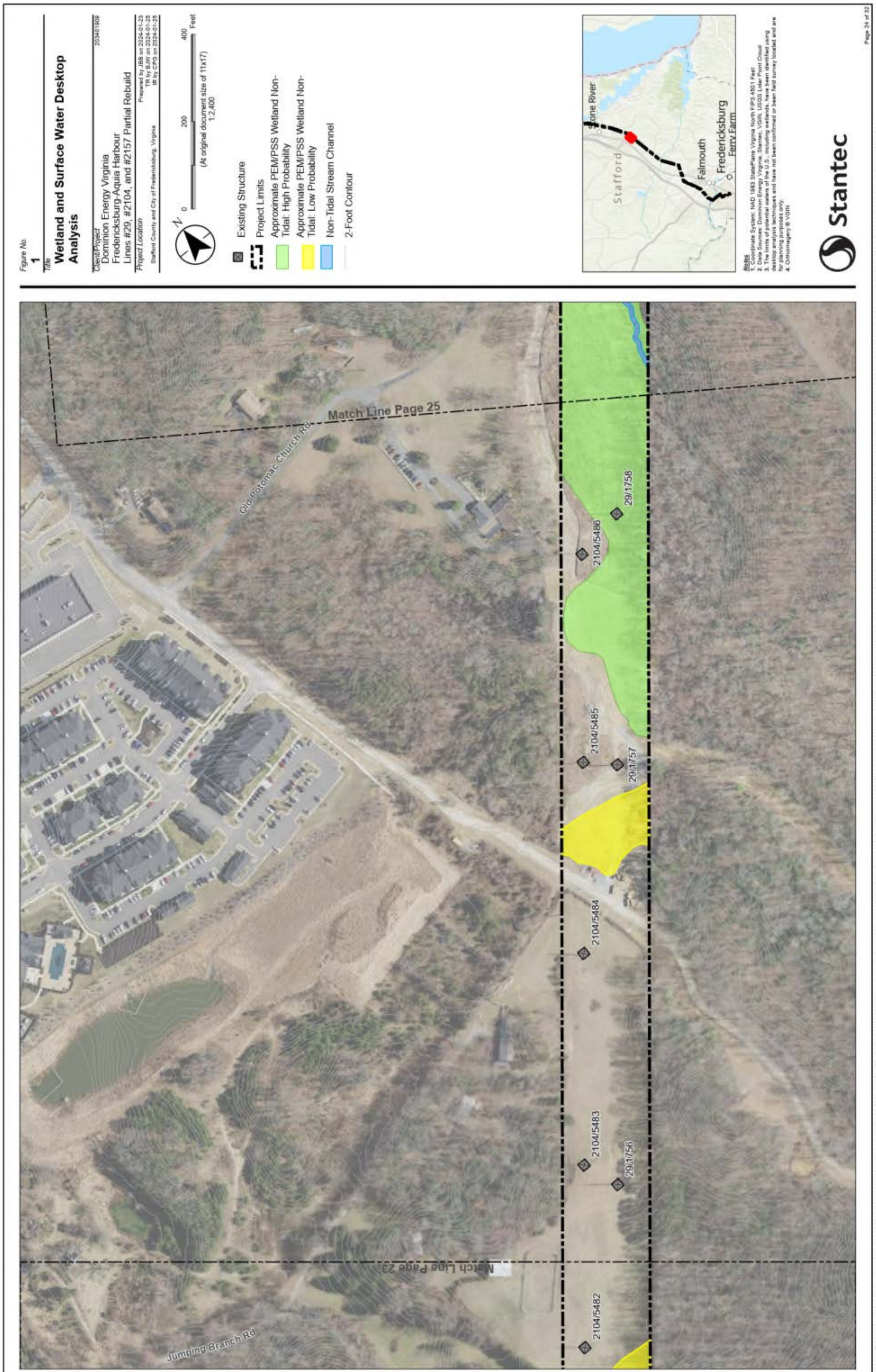
Figure No.
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Title
Wetland and Surface Water Desktop Analysis
Client/Project
203401909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
Project Location
Stafford County and City of Fredericksburg, Virginia
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Feet
(At original document size of 11x17)
1:2,400
Existing Structure
Project Limits
Approximate PEM/PSS Wetland Non-Tidal: High Probability
Approximate PEM/PSS Wetland Non-Tidal: Low Probability
Non-Tidal Stream Channel
2-Foot Contour
Stafford
Falmouth
Fredericksburg
Ferry Farm
Stantec
Match Line Page 25
Old Potomac Church Rd
2104/5486
29/1758
2104/5485
29/1757
2104/5484
2104/5483
29/1756
2104/5482
Match Line Page 23
Jumping Branch Rd

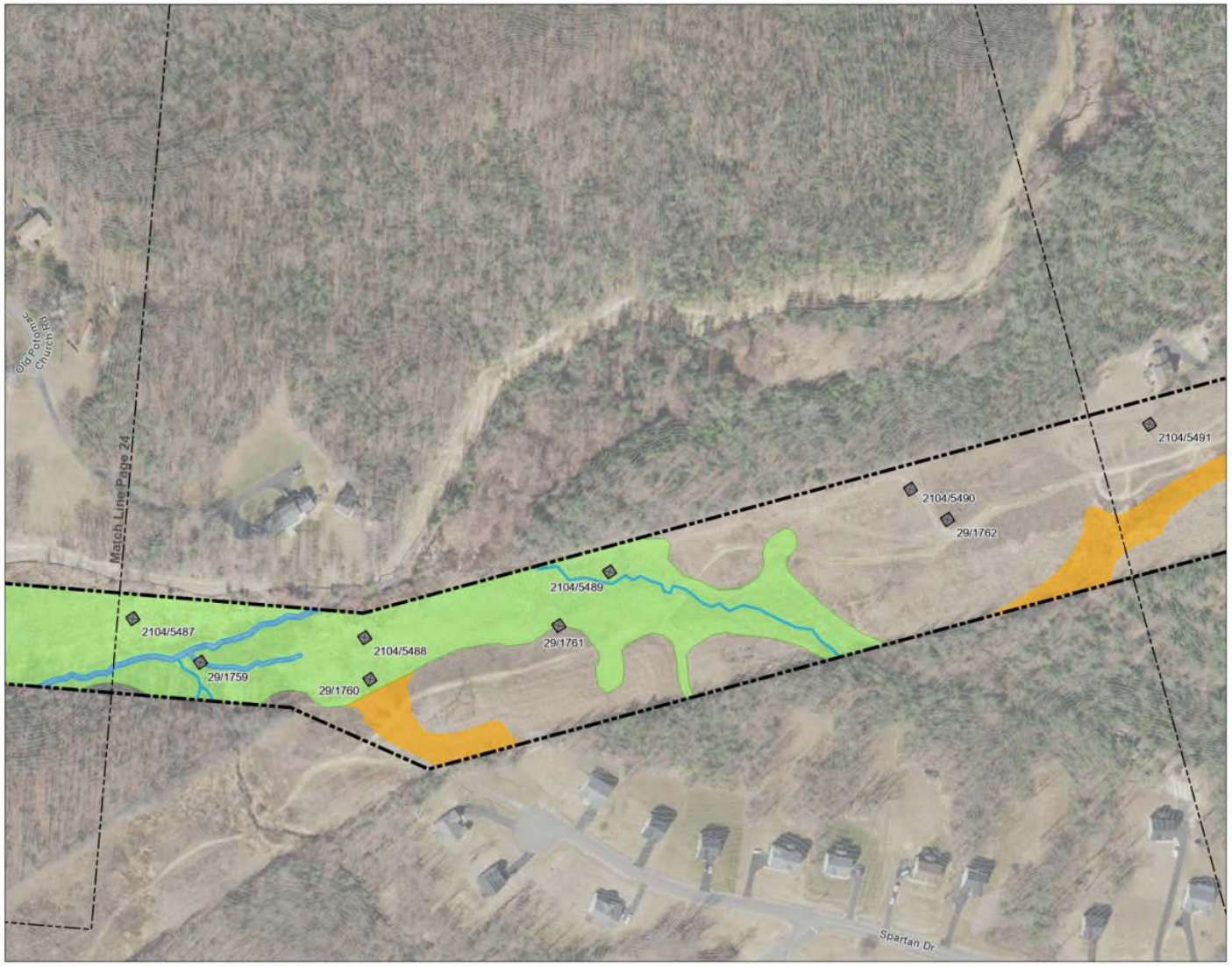

Figure No.
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Title
Wetland and Surface Water Desktop Analysis

Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
203401909

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by JBB on 2024-01-23
TR by BJW on 2024-01-25
IR by CPG on 2024-01-25

0 200 400 Feet
(At original document size of 11x17)
1:2,400

- Existing Structure
- Project Limits
- Approximate PEM/PSS Wetland Non-Tidal: High Probability
- Approximate PEM/PSS Wetland Non-Tidal: Medium Probability
- Non-Tidal Stream Channel
- 2-Foot Contour

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, VGIN, USGS Lidar Point Cloud
3. The limits of potential waters of the U.S., including wetlands, have been identified using desktop analysis techniques and have not been confirmed or been field survey located and are for planning purposes only.
4. Orthoimagery © VGIN

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Page 25 of 32

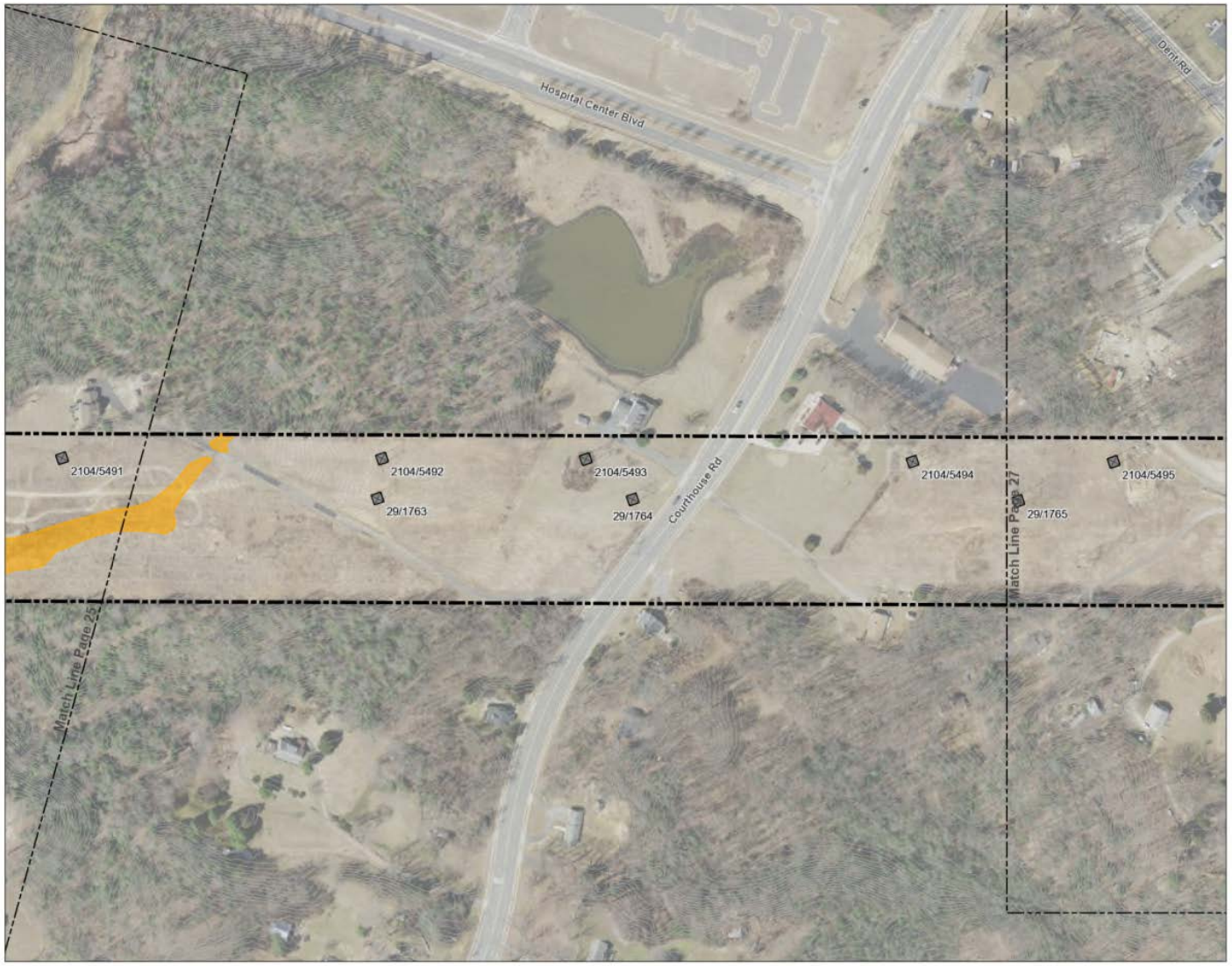

Figure No.
1

Title
Wetland and Surface Water Desktop Analysis

Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
203401909

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by JBB on 2024-01-23
TR by BJW on 2024-01-25
IR by CPG on 2024-01-25

0 200 400 Feet
(At original document size of 11x17)
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- Existing Structure
- Project Limits
- Approximate PEM/PSS Wetland Non-Tidal: Medium Probability
- 2-Foot Contour

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, VGIN, USGS Lidar Point Cloud
3. The limits of potential waters of the U.S., including wetlands, have been identified using desktop analysis techniques and have not been confirmed or been field survey located and are for planning purposes only.
4. Orthoimagery © VGIN

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Page 28 of 32

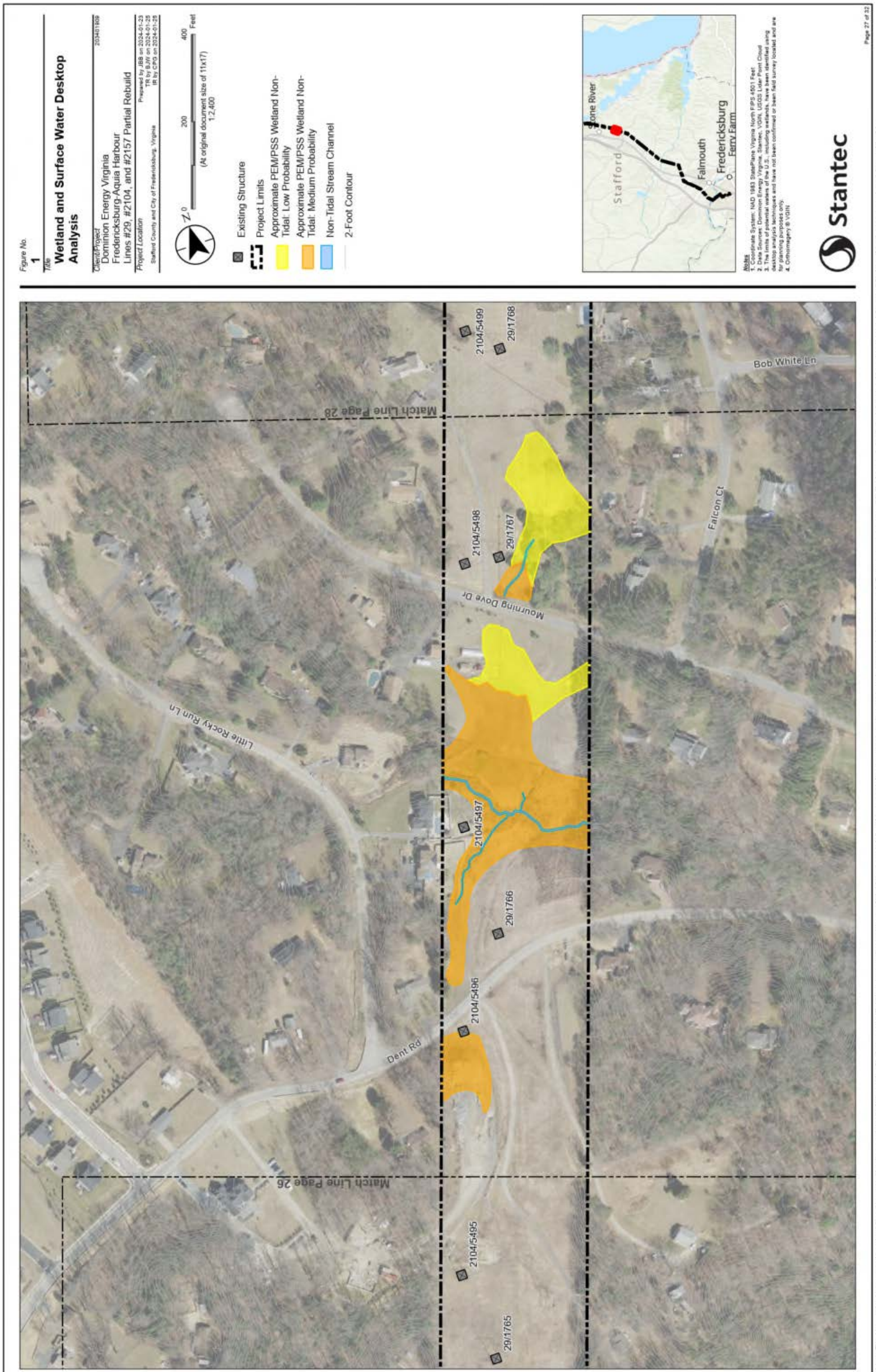

Figure No.
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Title
Wetland and Surface Water Desktop Analysis
Client/Project
203401909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
Project Location
Stafford County and City of Fredericksburg, Virginia
Prepared by JBB on 2024-01-23
TR by BJW on 2024-01-25
IR by CPG on 2024-01-25
N
0
200
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Feet
(At original document size of 11x17)
1:2,400
Existing Structure
Project Limits
Approximate PEM/PSS Wetland Non-Tidal: Low Probability
Approximate PEM/PSS Wetland Non-Tidal: Medium Probability
Non-Tidal Stream Channel
2-Foot Contour
Stafford
Falmouth
Fredericksburg
Ferry Farm
Stantec
Page 27 of 32
Match Line Page 26
Match Line Page 28
Little Rocky Run Ln
Mourning Dove Dr
Dent Rd
Falcon Ct
Bob White Ln
2104/5499
29/1768
2104/5498
29/1767
2104/5497
29/1766
2104/5496
2104/5495
29/1765

Figure No.
1
Title
Wetland and Surface Water Desktop Analysis
Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour Lines #29, #2104, and #2157 Partial Rebuild
Project Location
Stafford County and City of Fredericksburg, Virginia
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TR by JBB on 2024-01-25
IR by CPG on 2024-01-29
0
200
400
Feet
(At original document size of 11x17)
1:2,400
Existing Structure
Project Limits
Approximate PEM/PSS Wetland Non-Tidal: Low Probability
Approximate PEM/PSS Wetland Non-Tidal: Medium Probability
Open Water
Non-Tidal Stream Channel
2-Foot Contour
Match Line Page 29
Match Line Page 27
Opportunity Ln
Sanctuary Ln
Olde Concord Rd
Parker Pl
Lovelace Ln
Hope Rd
Stones Throw Way
Falcon Ct
Bob White Ln
2104/5503
29/1772
2104/5502
29/1771
2104/5501
29/1770
2104/5500
29/1769
2104/5499
29/1768
Rappahannock River
Stafford
Falmouth
Fredericksburg Ferry Farm
Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia; Stantec; VGIN; USGS Lidar Point Cloud
3. This document has been prepared based on information provided by others as listed in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.
4. Orthoimagery: VGIN
Stantec
Page 28 of 32

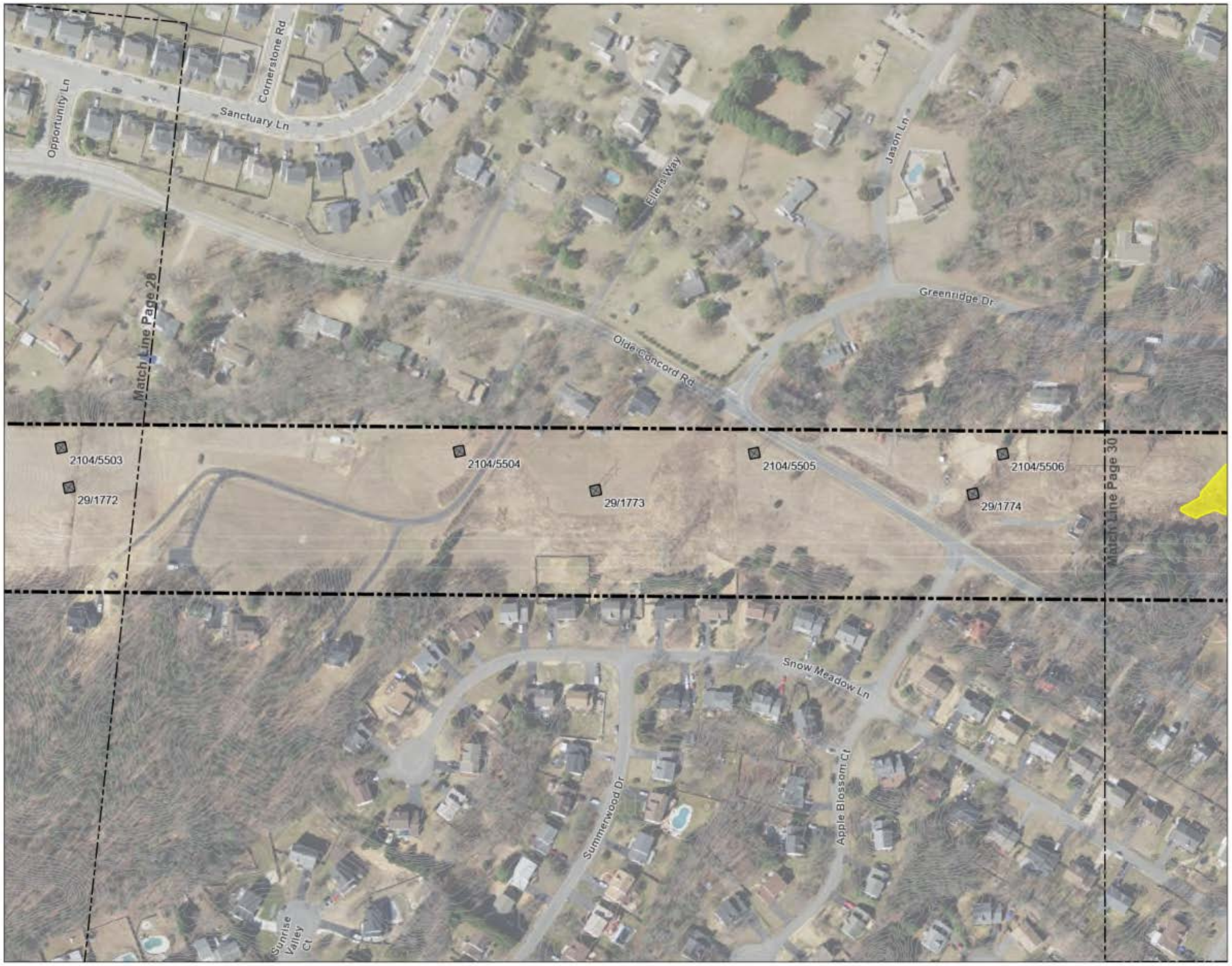

Figure No. 1

Title
Wetland and Surface Water Desktop Analysis

Client/Project 203401909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by JBB on 2024-01-23
TR by BJW on 2024-01-25
IR by CPG on 2024-01-25

0 200 400 Feet
(At original document size of 11x17)
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Existing Structure
Project Limits
Approximate PEM/PSS Wetland Non-Tidal: Low Probability
2-Foot Contour

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, VGIN, USGS Lidar Point Cloud
3. The limits of potential waters of the U.S., including wetlands, have been identified using desktop analysis techniques and have not been confirmed or been field survey located and are for planning purposes only.
4. Orthoimagery © VGIN

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Page 29 of 32

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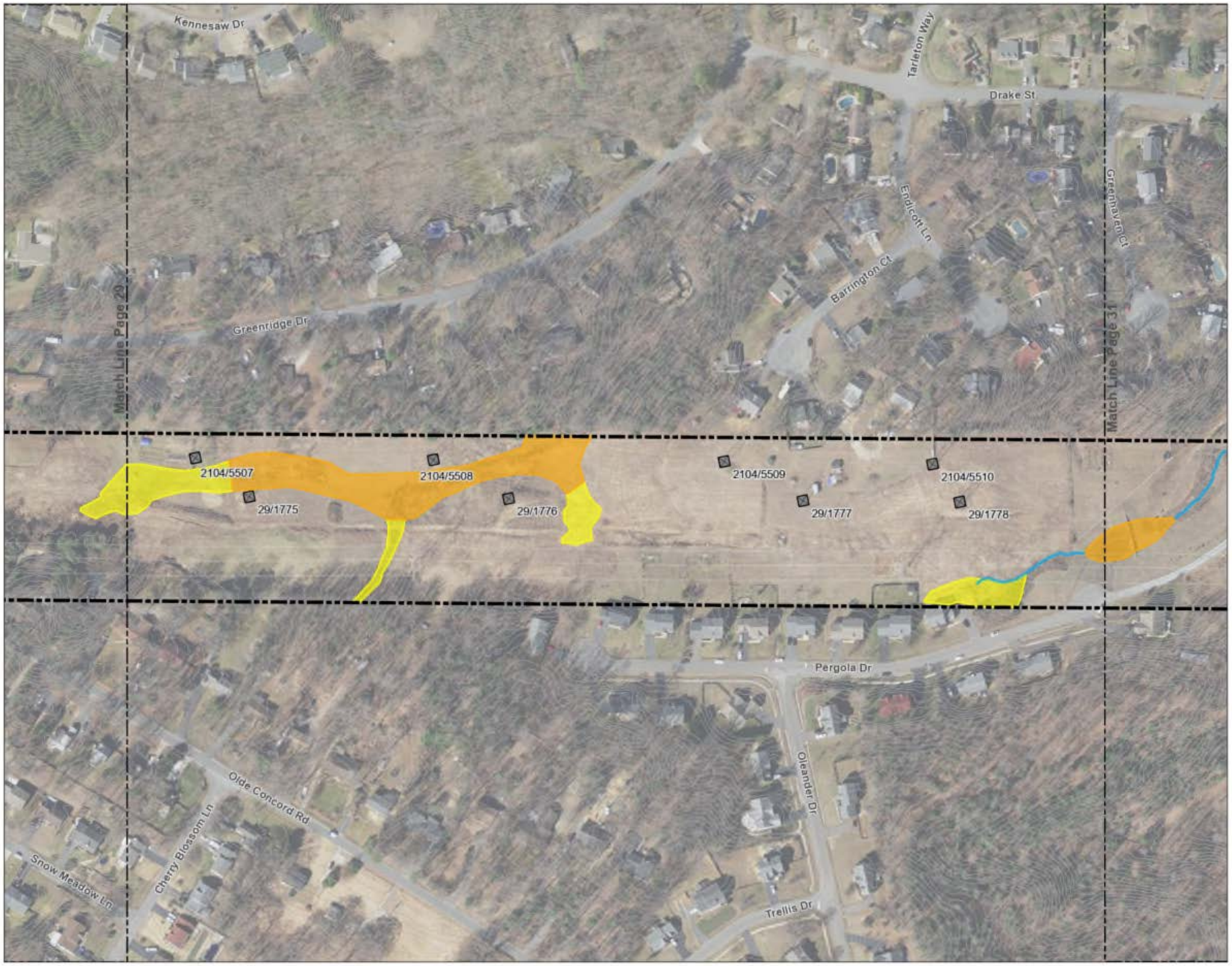

Figure No.
1

Title
Wetland and Surface Water Desktop Analysis

Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

203401909

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by JBB on 2024-01-23
TR by BJW on 2024-01-25
IR by CPG on 2024-01-25

0 200 400 Feet
(At original document size of 11x17)
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- Existing Structure
- Project Limits
- Approximate PEM/PSS Wetland Non-Tidal: Low Probability
- Approximate PEM/PSS Wetland Non-Tidal: Medium Probability
- Non-Tidal Stream Channel
- 2-Foot Contour

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, VGIN, USGS Lidar Point Cloud
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4. Orthoimagery © VGIN

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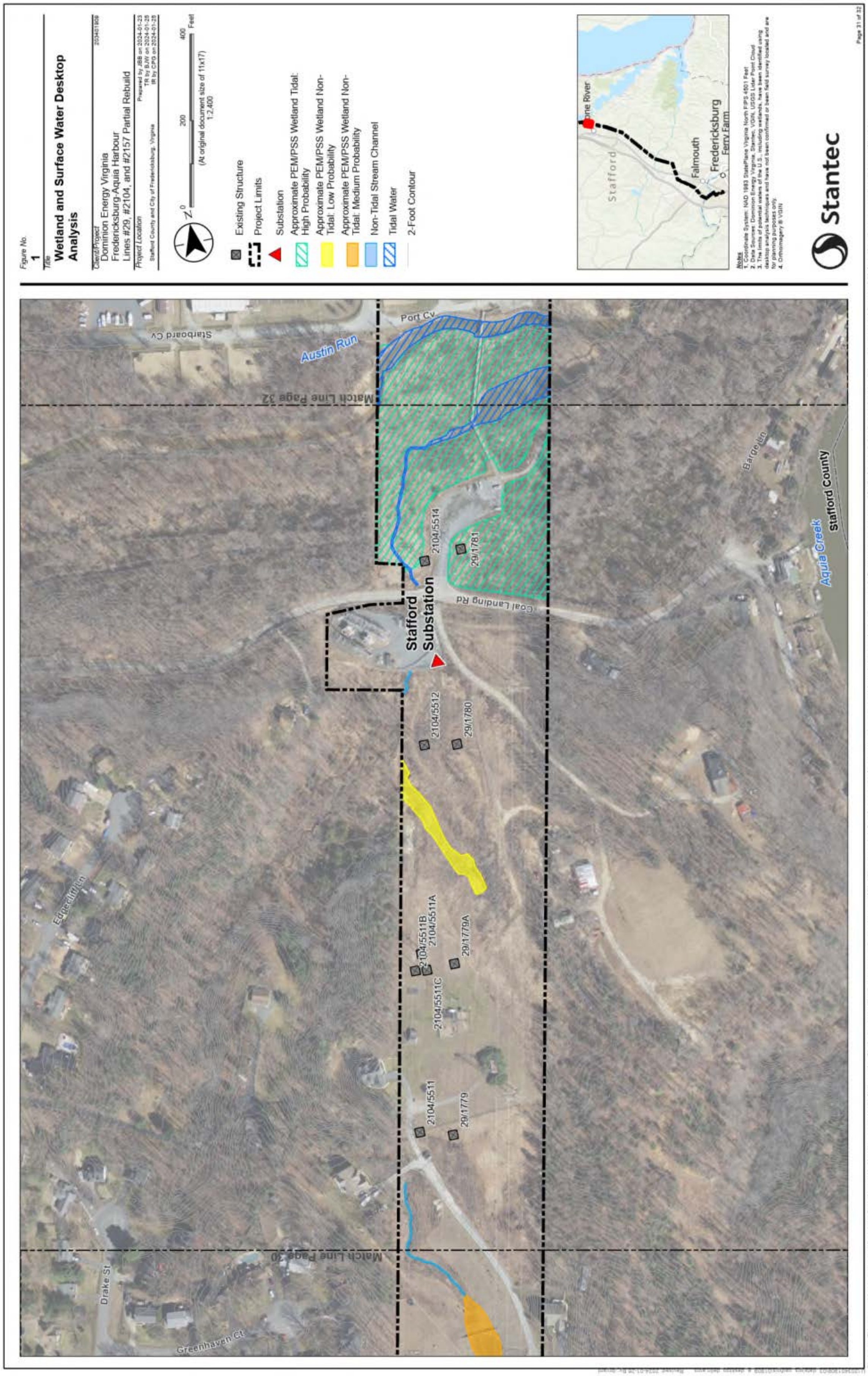
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Title
Wetland and Surface Water Desktop Analysis
Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
203401906
Project Location
Stafford County and City of Fredericksburg, Virginia
Prepared by JBB on 2024-01-25
TR by BJW on 2024-01-26
IR by CPG on 2024-01-26
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200
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Feet
(At original document size of 11x17)
1:2,400
Existing Structure
Project Limits
Substation
Approximate PEM/PSS Wetland Tidal: High Probability
Approximate PEM/PSS Wetland Non-Tidal: Low Probability
Approximate PEM/PSS Wetland Non-Tidal: Medium Probability
Non-Tidal Stream Channel
Tidal Water
2-Foot Contour
Stafford Substation
Coal Landing Rd
Austin Run
Port Cv
Starboard Cv
Match Line Page 32
Match Line Page 30
2104/5514
29/1781
2104/5512
29/1780
2104/5511B
2104/5511A
2104/5511C
29/1779A
2104/5511
29/1779
Edgehill Ln
Drake St
Greenhaven Ct
Barge Ln
Aquia Creek
Stafford County
Stafford
Falmouth
Fredericksburg
Ferry Farm
Stantec
Page 31 of 32

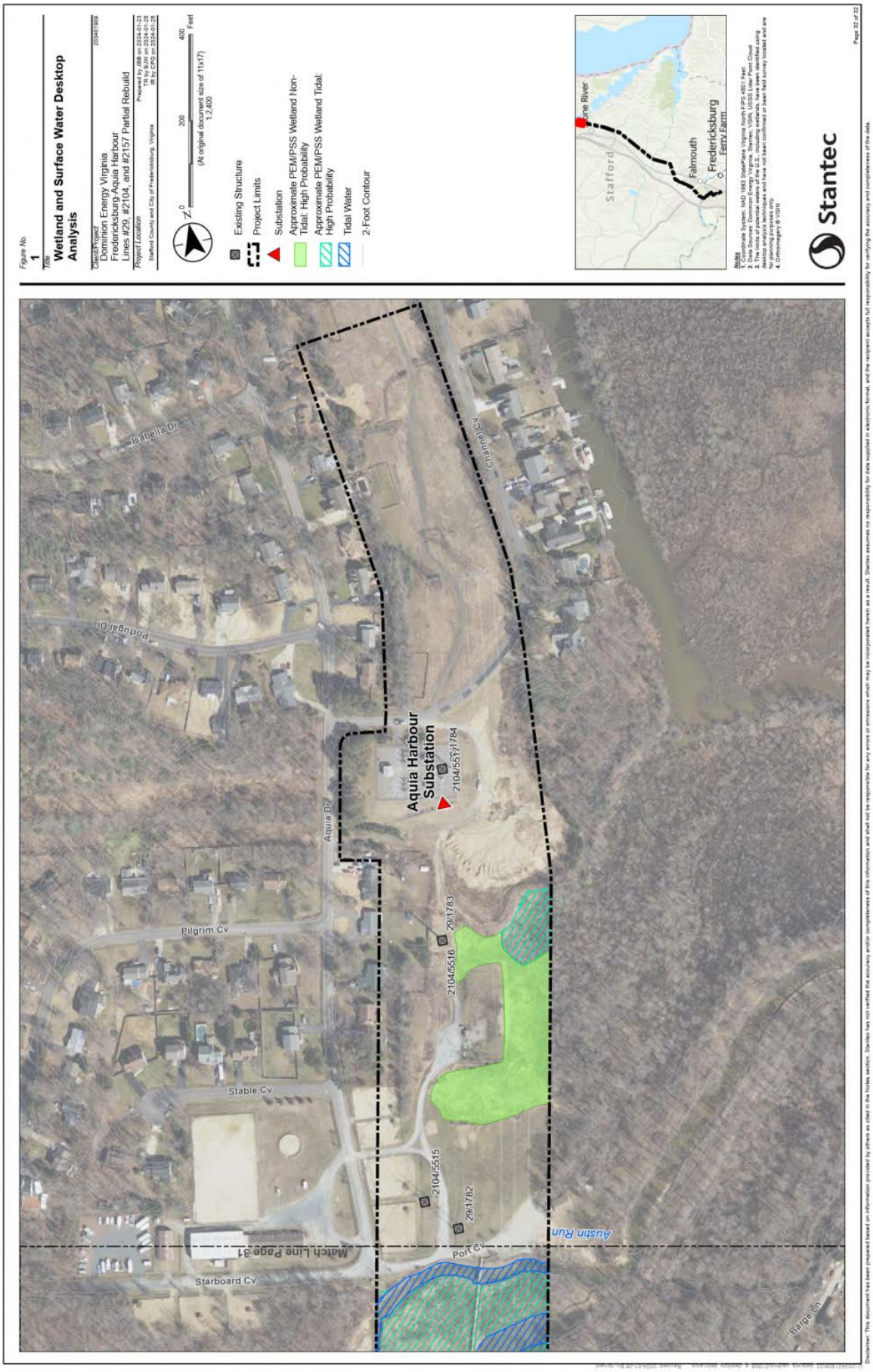
Figure No.
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Title
Wetland and Surface Water Desktop Analysis
Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour Lines #29, #2104, and #2157 Partial Rebuild
Project Location
Stafford County and City of Fredericksburg, Virginia
0
200
400
Feet
(At original document size of 11x17)
1:2,400
Existing Structure
Project Limits
Substation
Approximate PEM/PSS Wetland Non-Tidal: High Probability
Approximate PEM/PSS Wetland Tidal: High Probability
Tidal Water
2-Foot Contour
Aquia Harbour Substation
2104/5517/1784
29/1783
2104/5516
2104/5515
29/1782
Isabella Dr
Portugal Dr
Aquia Dr
Channel Cv
Pilgrim Cv
Stable Cv
Starboard Cv
Port Cv
Austin Run
Barge Ln
Match Line Page 31
Rappahannock River
Stafford
Falmouth
Fredericksburg Ferry Farm
Stantec

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
P.O. Box 1105, Richmond, Virginia 23218
(800) 592-5482
www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

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

February 12, 2024

Stacey T. Ellis
Dominion Energy Environmental Services
120 Tredegar Street,
Richmond, VA 23219

RE: Dominion Energy Virginia's Proposed Fredericksburg-Aquia Harbour Lines #29, #2104, and #2157 Partial Rebuild, City of Fredericksburg and Stafford County, Virginia

Dear Ms. Ellis,

In accordance with the Department of Environmental Quality-State Corporation Commission *Memorandum of Agreement Regarding Wetland Impact Consultation* (July 2003), we have reviewed the information submitted by Dominion Energy Virginia (here after, Dominion) regarding potential wetland impacts on the above referenced project. Dominion is proposing to wreck and rebuild existing transmission Lines #29, #2104, and #2157, primarily within approximately 12 miles of existing right-of-way between our Fredericksburg Substation and Aquia Harbour Substation in the City of Fredericksburg and Stafford County. The Company proposes to rebuild the transmission lines primarily on two parallel double-circuit weathering steel monopoles capable of 230 kV capacity. Line #29, which currently operates at 115 kV, will be uprated to 230 kV standards. Approximately one acre of new right-of-way will be required where several spans of four parallel single-circuit monopoles are proposed. Collectively this work is referred to as the "Rebuild Project."

Summary of Findings

Based on the wetland desktop analysis provided by Dominion, Waters of the U.S. (WOUS) are located within the corridor alignments. An off-site analysis has been conducted using available resources such as National Wetlands Inventory (NWI), National Resource Conservation Service soils, aerial photography, and topographic data to determine the potential for wetlands and other waters of the U.S. to occur within the project area. A field delineation will be conducted using the U.S. Army Corps of Engineers (Corps) 1987 Wetlands Delineation Manual and applicable regional supplement prior to permitting and then submitted to the Corps for confirmation. Table 1 below provides a summary of potential wetlands and other waters that may be present within the Rebuild Project.

Table 1: Summary of wetland and other waters of the U.S. along the proposed project

Resource Type	Probability			Total
	Low	Medium	High	
Palustrine Emergent and Scrub/Shrub Wetlands – Non-Tidal	11.58 Acres	18.17 Acres	36.28 Acres	66.03 Acres
Palustrine Emergent and Scrub/Shrub Wetlands – Tidal	N/A	N/A	4.43 Acres	4.43 Acres
Forested Wetlands	0.06 Acres	N/A	0.16 Acres	0.22 Acres
Tidal Water	N/A	N/A	0.65 Acres	0.65 Acres
Stream	N/A	N/A	4.89 Acres	4.89 Acres

Water Quality and Wetlands. Measures such as but not limited to Best Management Practices (BMPs) must be taken to avoid and minimize impacts to surface waters during construction activities, including potential water quality impacts resulting from construction site runoff. The disturbance of land and surface waters, which include wetlands, open water, and streams, may require prior approval by DEQ; the U.S. Army Corps of Engineers; the Virginia Marine Resources Commission (VMRC); and/or local government wetlands boards (generally in the northern and piedmont regions of Virginia). The Army Corps of Engineers and DEQ work in conjunction to provide official confirmation of whether there are federal and/or state jurisdictional surface waters that may be impacted by the proposed project. DEQ may confirm additional waters as jurisdictional beyond those under federal authority. VMRC provides its own review to determine its agency jurisdiction. Review of National Wetland Inventory maps or topographic maps for locating wetlands, open waters, or streams may not be sufficient; there may need to be a site-specific review by a qualified professional. If construction activities will occur in or along any streams (perennial, intermittent, or ephemeral), open water or wetlands, the applicant should contact the DEQ-VWP manager at our Northern Regional Office (NRO) to determine the need for any permits prior to commencing work that could impact surface waters. Even if there will be no intentional placement of fill material in jurisdictional waters, potential water quality impacts resulting from construction site surface runoff must be minimized. This can be achieved by using Best Management Practices (BMPs). DEQ's permit need decisions neither replace nor supersede requirements set forth by other local, state, federal, and Tribal laws, nor eliminate the need to obtain additional permits, approvals, consultations, or authorizations as required by law before proposed activities may commence.

If the project qualifies for a Nationwide Permit that DEQ has provided 401 certification, then a Virginia Water Protection (VWP) permit is not necessary. If the applicant does not obtain a NWP, then a VWP permit may be necessary. The DEQ Piedmont Regional Office (PRO) will make the final permitting decisions for state waters.

Erosion and Sediment Control and Storm Water Management. DEQ has regulatory authority for the Virginia Pollutant Discharge Elimination System (VPDES) programs related to municipal separate storm sewer systems (MS4s) and construction activities. Erosion and sediment control measures are addressed in local ordinances and State regulations. Additional information is available at

https://www.deq.virginia.gov/permits/water/stormwater-construction. Non-point source pollution resulting from this project should be minimized by using effective erosion and sediment control practices and structures. Consideration should also be given to denuded areas to be promptly revegetated following construction work. If the total land disturbance exceeds 10,000 square feet, an erosion and sediment control plan will be required. Some localities also require an E&S plan for disturbances less than 10,000 square feet. A stormwater management plan may also be required. For any land disturbing activities equal to one acre or more, you are required to apply for coverage under the VPDES General Permit for Discharges of Storm Water from Construction Activities. The Virginia Stormwater Management Permit Authority may be DEQ or the locality.

Recommendations and Potential Permits:

Based upon review of the information provided, DEQ's OWSP offers the following general recommendations concerning potential surface water impacts:

1. Prior to commencing project work, all surface waters on the project site should be delineated by a qualified professional and verified by the U.S. Army Corps of Engineers (the Corps) for federal jurisdictional waters and by DEQ for state jurisdictional waters.
2. Wetland and stream impacts should be avoided and minimized to the maximum extent practicable.
3. If the scope of the project changes, additional review will be necessary by one or more offices in the Commonwealth's Secretariat of Natural Resources and/or the Corps.
4. At a minimum, any required compensation for impacts to State Waters, including the compensation for permanent conversion of forested wetlands and scrub-shrub wetlands to emergent wetlands, should be in accordance with all applicable state regulations and laws. Secondary impacts (e.g. loss of hydrology) should also be considered and would require compensatory mitigation at standard ratios. Consider mitigating impacts to forested or converted wetlands by establishing new forested wetlands within the impacted watershed.
5. Any temporary impacts to surface waters associated with this project should be restored to pre-existing conditions.
6. No activity may substantially disrupt the movement of aquatic life indigenous to the water body, including those species, which normally migrate through the area, unless the primary purpose of the activity is to impound water. Culverts placed in streams must be installed to maintain low flow conditions. No activity may cause more than minimal adverse effect on navigation. Furthermore the activity must not impede the passage of normal or expected high flows and the structure or discharge must withstand expected high flows.
7. Erosion and sedimentation controls should be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. These controls should be placed prior to clearing and grading and maintained in good working order to minimize impacts to state waters. These controls should also remain in place until the area is stabilized and should then be removed. Any exposed slopes and streambanks should be stabilized immediately upon completion of work in each permitted area. All denuded areas should be properly stabilized in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. Please note that on June 22, 2023, Virginia's State Water Control Board adopted new Virginia Erosion and Stormwater Management Regulations (9VAC25-875) to consolidate program requirements and correct inconsistencies between erosion and sediment control and stormwater management program regulations. Additionally, the

project will require coverage under the new Construction General Permit. These changes will become effective on July 1, 2024.

8. No machinery may enter surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage.
9. Heavy equipment in temporarily impacted surface waters should be placed on mats, geotextile fabric, or other suitable material, to minimize soil disturbance to the maximum extent practicable. Equipment and materials should be removed immediately upon completion of work.
10. Activities should be conducted in accordance with any time-of-year restriction(s) as recommended by the Department of Wildlife Resources, the Department of Conservation and Recreation, the Virginia Marine Resources Commission, and the U.S. Fish and Wildlife Service. The permittee should retain a copy of the agency correspondence concerning the time-of-year restriction(s), or the lack thereof, for the duration of the construction phase of the project.
11. All construction, construction access, and demolition activities associated with this project should be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage. Wet, excess, or waste concrete should be prohibited from entering surface waters.
12. Herbicides used in or around any surface water should be approved for aquatic use by the United States Environmental Protection Agency (EPA) or the U.S. Fish & Wildlife Service. Use of herbicides in state waters shall be performed in accordance with Code of Virginia Chapter 39 - Pesticide Control (§§ 3.2-3900 through 3.2-3947) and 9VAC25-800 et. seq. These herbicides should be applied according to label directions by a licensed herbicide applicator by the Virginia Department of Agriculture and Consumer Services, Office of Pesticide Services. A non-petroleum-based surfactant should be used in or around any surface waters.

Permits:

Based on DEQ's review of Dominion's letter dated January 25, 2024, the proposed project may require a Virginia Water Protection (VWP) individual permit or general permit coverage. The applicant may submit a Joint Permit Application (JPA) in accordance with form instructions for further evaluation and final permit need determination by DEQ.

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

Sincerely,

Michelle Henicheck

Michelle Henicheck, PWS
Senior Wetland Ecologist
Office of Wetlands & Stream Protection

Cc: Natasha Nahas, DEQ- NRO
Bettina Sullivan, DEQ - Office of Environmental Review

Stantec

Memo

To:	Ms. Stacey T. Ellis Dominion Energy Virginia 120 Tredegar Street Richmond, VA 23219	From:	Corey P. Gray Stantec Consulting Services, Inc. 5209 Center Street Williamsburg VA 23188
File:	203401909	Date:	January 17, 2024

Reference: Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo

Stantec conducted database searches for solid and hazardous wastes and petroleum release sites within a 0.5-mile radius of the right-of-way (ROW) between the Fredericksburg substation in the City of Fredericksburg, Virginia and Aquia Harbour substation in Stafford County, Virginia. The Fredericksburg to Aquia Harbour Project will involve a wreck and rebuild of three electric transmission lines:

- 3.75 miles of Line #2157 from Fredericksburg substation to Cranes Corner substation,
- 7.6 miles of Line #2104 from Cranes Corner substation to Aquia Harbour substation, and
- 12.0 miles of Line #29 from Fredericksburg substation to Aquia Harbour substation, sharing ROW with lines #2157 and #2104.

New transmission lines will be rebuilt on two sets of double circuit 230 kV monopoles, with Line #29 on one structure and the other existing 230 kV line (#2157 or #2104) on the other. Substation upgrades will also be performed as a part of the work. All line construction work will take place within the existing, cleared and maintained transmission line ROW with the exception of the addition of new ROW near Dogwood Air Park in Stafford County.

Stantec obtained publicly available data from the Environmental Protection Agency (EPA) Facility Registry System (FRS), which provides information about facilities, sites, or places subject to environmental regulation or of environmental interest. Although this dataset includes all sites subject to environmental regulation by the EPA or other state authority, such as sites that fall under air emissions or wastewater programs, the results reported here only include those sites which fall under the EPA's hazardous waste, solid waste, remediation, and underground storage tank programs. These sites include Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Superfund; Resource Conservation and Recovery Act (RCRA); and brownfield sites. Per this database, there are 26 registered RCRA sites present within a 0.5-mile radius of the Fredericksburg to Aquia Harbour Lines (Table 1). Seven (7) of the 26 sites are listed as inactive and none of the sites are documented within the project ROW. The closest active site is a very small quantity generator with Virginia Semiconductor Inc., located 253 feet from the closest portion of the project, near Fredericksburg substation.

The Virginia Department of Environmental Quality (DEQ) records were also searched for the presence of solid waste management facilities, Voluntary Remediation Program sites, and petroleum releases within 0.5 mile of the proposed project. There are four solid waste permit sites within 0.5-mile of the Fredericksburg to Aquia Harbor lines. Permit Numbers 9000000001703, 900000000726, 900000000286, and 900000000416 are located 1,331, 628, 628, and 2,597 feet from the ROW respectively (Table 2), and all are listed as closed.

For the Fredericksburg to Aquia Harbour project, 64 petroleum release sites were identified within 0.5 mile of the ROW (Table 3). Heflins Garage petroleum release site (PC Number 19891102) is located 215 feet from Line #29 and is classified as open. This release occurred on March 19, 1989. Another petroleum release site

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

at Heflins Garage (PC Number 19921524) is located 378 feet from the ROW; however, this project was closed in 1996. No petroleum release sites identified within 0.5 mile of the Fredericksburg to Aquia Harbour intersect with the ROW and none of the other sites remain open. Dominion has a procedure in place to handle petroleum contaminated soil, if encountered; however, as all but one of the release sites are closed or located outside of the ROW, none of the petroleum release sites are expected to have an impact on the proposed project.

The Virginia DEQ records were also searched for State Registered Petroleum Tank Facilities occurring within a 0.5-mile radius of the proposed projects. The Fredericksburg to Aquia Harbour project 0.5-mile radius search revealed 21 state registered petroleum tank facilities of which 6 are active (Table 4). The closest active tank facilities are Facility ID Number: 3041816 and 3021041, located 368 and 605 linear feet from the ROW.

In summary, a total of 26 RCRA sites, 4 solid waste permit sites, 64 petroleum release sites and 21 state-registered storage tanks located within a 0.5-mile radius of the Fredericksburg to Aquia Harbour project. Throughout the project, no sites are documented as being located within the project ROW; therefore, the sites are not anticipated to have an impact on the proposed project. The Fredericksburg to Aquia Harbour project had 1 petroleum release located approximately 215 linear feet from the project, however, it is not expected to adversely affect the project. The Company has a procedure in place should petroleum contaminated sediments be encountered during construction. No EPA registered brownfield sites, or CERCLA/Superfund sites are located within 0.5 mile of the project area.

Table 1. RCRA Sites identified by the EPA as occurring within 0.5 mile of the Fredericksburg to Aquia Harbour Lines

Site Name	Permit Number	Interest Type	Location	Latitude	Longitude	Status	Generator Type	Project Segment	Proximity to Closest Line
University of Mary Washington	VAD988170973	RCRA	Fredericksburg	38.300042	-77.474904	Active	Small Quantity Generator	Fredericksburg to Cranes Corner	3,046 ft
CVS Pharmacy #10454	VAR000529784	RCRA	Fredericksburg	38.302772	-77.481144	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	1,633 ft
Chesapeake Wood Treating Co	VAD981744444	RCRA	Fredericksburg	38.299456	-77.486614	Inactive	Unspecified Universe	Fredericksburg to Cranes Corner	2,329 ft
Virginia Semiconductor Inc	VAR000000299	RCRA	Fredericksburg	38.303306	-77.483395	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	253 ft
Highs #28430	VAD988192258	RCRA	Fredericksburg	38.307135	-77.479521	Inactive	Unspecified Universe	Fredericksburg to Cranes Corner	1,812 ft
Kaiser Permanente Fredericksburg Medical Office Building	VAR000525352	RCRA	Fredericksburg	38.310009	-77.486895	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	280 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	Permit Number	Interest Type	Location	Latitude	Longitude	Status	Generator Type	Project Segment	Proximity to Closest Line
CVS Pharmacy #1565	VAR000522573	RCRA	Fredericksburg	38.302772	-77.481144	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	2,667 ft
Mary Washington Hospital	VAR000000661	RCRA	Fredericksburg	38.311563	-77.480687	Active	Small Quantity Generator	Fredericksburg to Cranes Corner	1,348 ft
Cardinal Cleaners	VAD101713618	RCRA	Fredericksburg	38.31425	-77.4749	Inactive	Unspecified Universe	Fredericksburg to Cranes Corner	3,223 ft
Firestone Complete Auto Care	VA0000902312	RCRA	Fredericksburg	38.314396	-77.475201	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	2,927 ft
Fas Mart Store #50	VAR000007492	RCRA	Fredericksburg	38.315788	-77.491984	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	1,834 ft
Stafford DPW	CTR000004226	RCRA	Stafford	38.330276	-77.47659	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	1,206 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	Permit Number	Interest Type	Location	Latitude	Longitude	Status	Generator Type	Project Segment	Proximity to Closest Line
Racetrac #253	VAD988208245	RCRA	Fredericksburg	38.33127	-77.477634	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	533 ft
Gayle Middle School	VAR000503680	RCRA	Fredericksburg	38.367036	-77.496711	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	1,205 ft
Stafford Schools Main Department	VAD988222451	RCRA	Falmouth	38.331869	-77.474285	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	1,205 ft
Q Card Site 01 & Plt	VAD988225306	RCRA	Fredericksburg	38.336912	-77.484614	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	1,866 ft
Virginia Tank Lines	VAD988221982	RCRA	Falmouth	38.33549	-77.48229	Inactive	Unspecified Universe	Fredericksburg to Cranes Corner	1,866 ft
Colonial Concrete – Falmouth	VAP404201207	RCRA	Falmouth	38.33599	-77.48307	Inactive	Unspecified Universe	Fredericksburg to Cranes Corner	2,240 ft
PRC Realty Systems	VAD093562635	RCRA	Fredericksburg	38.318363	-77.401922	Inactive	Unspecified Universe	Fredericksburg to Cranes Corner	2,629 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	Permit Number	Interest Type	Location	Latitude	Longitude	Status	Generator Type	Project Segment	Proximity to Closest Line
Drew Middle School	VAR000014100	RCRA	Fredericksburg	38.345835	-77.458343	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	3,260 ft
Fas Mart Inc Store #19	VAR000003186	RCRA	Fredericksburg	38.351637	-77.457245	Active	Very Small Quantity Generator	Fredericksburg to Cranes Corner	776 ft
R&J Automotive Rebuilders	VAD981102668	RCRA	Falmouth	38.380797	-77.444168	Active	Very Small Quantity Generator	Cranes Corner to Aquia Harbour	1,952 ft
Stafford Community Corrections Alternative	VAR000540336	RCRA	Stafford	38.38086	-77.42126	Active	Very Small Quantity Generator	Cranes Corner to Aquia Harbour	2,836 ft
Tridex Associates	VAR000538306	RCRA	Stafford	38.426389	-77.420083	Active	Very Small Quantity Generator	Cranes Corner to Aquia Harbour	920 ft
Stafford Middle School	VAR000007591	RCRA	Stafford	38.411008	-77.397946	Active	Very Small Quantity Generator	Cranes Corner to Aquia Harbour	1,086 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	Permit Number	Interest Type	Location	Latitude	Longitude	Status	Generator Type	Project Segment	Proximity to Closest Line
Aquia Wastewater Treatment Plant	VAD000779835	RCRA	Stafford	38.44636	-77.39547	Inactive	Unspecified Universe	Cranes Corner to Aquia Harbour	2,267 ft

Table 2. Solid waste sites identified by the DEQ as occurring within 0.5 mile of the Fredericksburg to Aquia Harbour Lines

Site Name	Solid Waste Facility	Interest Type	Location	Latitude	Longitude	Status	Project Segment	Proximity to Closest Line
University of Mary Washington	900000001703	Permit-by-Rule	Fredericksburg	38.304903	-77.478896	Closed	Fredericksburg to Cranes Corner	1,331 ft
Mary Washington Hospital	900000000726	Permit-by-Rule	Fredericksburg	38.311038	-77.483613	Closed	Fredericksburg to Cranes Corner	628 ft
Mary Washington Hospital	900000000286	Permit-by-Rule	Fredericksburg	38.311038	-77.483613	Closed	Fredericksburg to Cranes Corner	628 ft
Stafford Correctional Unit #21	900000000416	Permit-by-Rule	Stafford	38.380245	-77.420924	Closed	Cranes Corner to Aquia Harbour	2,597 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Table 3. Petroleum releases identified by the DEQ as occurring within 0.5 mile of the Fredericksburg to Aquia Harbour Lines

Site Name	PC Number	Location	Latitude	Longitude	Status	Type of Release	Federally Registered Tank?	Project Segment	Proximity to Closest Line
Christ Lutheran Church	19891586	Fredericksburg	38.299134	-77.477114	Closed	Confirmed	No	Fredericksburg to Cranes Corner	2,383 ft
Christ Lutheran Church Office	20133167	Fredericksburg	38.299235	-77.477304	Closed	Confirmed	No	Fredericksburg to Cranes Corner	2,309 ft
Guardiani Sheryl G John C and Daniel C Property	20183030	Fredericksburg	38.298998	-77479910	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,970 ft
Lindblom Dolores A Residence	20113240	Fredericksburg	38.299119	-77.479277	Closed	Confirmed	No	Fredericksburg to Cranes Corner	2,019 ft
Davis Carolyn Residence	19983733	Fredericksburg	38.299825	-77.477885	Closed	Confirmed	No	Fredericksburg to Cranes Corner	2,061 ft
Strentz Stacey N Property	20193202	Fredericksburg	38.299852	-77.477765	Closed	Confirmed	No	Fredericksburg to Cranes Corner	2,068 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	PC Number	Location	Latitude	Longitude	Status	Type of Release	Federally Registered Tank?	Project Segment	Proximity to Closest Line
Virginia Home Buyers LLC Property	2023163	Fredericksburg	38.300376	-77.476626	Closed	Confirmed	No	Fredericksburg to Cranes Corner	2,179 ft
Christian Reading Room	19940484	Fredericksburg	38.3006317	-77.475895	Closed	Confirmed	No	Fredericksburg to Cranes Corner	2,293 ft
Mitchell Elizabeth W Residence	20153004	Fredericksburg	38.299685	-77.480154	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,721 ft
Conway David L and Gail W Residence	20143059	Fredericksburg	38.299694	-77.479564	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,786 ft
Tucker Bill Residence	20103013	Fredericksburg	38.300303	-77.477924	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,915 ft
Pates James M Property	20103151	Fredericksburg	38.300438	-77.478112	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,849 ft
Henninger Jacqueline P Property	20133103	Fredericksburg	38.300442	-77.478957	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,666 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	PC Number	Location	Latitude	Longitude	Status	Type of Release	Federally Registered Tank?	Project Segment	Proximity to Closest Line
Frelick Donna S and Graeme P Residence	20153038	Fredericksburg	38.300700	-77.478191	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,765 ft
Faltum Andrew and Sherryl Residence	20013079	Fredericksburg	38.300766	-77.478254	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,711 ft
Null Vicky Residence	20073190	Fredericksburg	38.300920	-77.477943	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,760 ft
Jones Living Trust	20203082	Fredericksburg	38.300752	-77.479777	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,441 ft
AGM Properties LLC – Fredericksburg Property	20123154	Fredericksburg	38.301060	-77.479930	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,341 ft
Mastin Ronald R Property	20103052	Fredericksburg	38.301123	-77.479471	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,396 ft
Carder Florance Residence	20013057	Fredericksburg	38.301516	-77.478756	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,454 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	PC Number	Location	Latitude	Longitude	Status	Type of Release	Federally Registered Tank?	Project Segment	Proximity to Closest Line
Meriwether Thomas N Property	20183249	Fredericksburg	38.301532	-77.479774	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,234 ft
Sauer-Park LLC Property	20223137	Fredericksburg	38.302102	-77.477389	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,678 ft
Kingdom Baptist Church Property	20103175	Fredericksburg	38.302254	-77.480478	Closed	Confirmed	No	Fredericksburg to Cranes Corner	896 ft
Glynn Edward J and Heather M Property	20173091	Fredericksburg	38.302333	-77.480377	Closed	Confirmed	No	Fredericksburg to Cranes Corner	897 ft
Bridgewater Pamela Residence	20083163	Fredericksburg	38.299949	-77.487034	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,754 ft
Witt William Properties	20113138	Fredericksburg	38.304338	-77.478952	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,120 ft
Continental Baking - Fredericksburg	19880566	Fredericksburg	38.304303	-77.481349	Closed	Confirmed	No	Fredericksburg to Cranes Corner	464 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	PC Number	Location	Latitude	Longitude	Status	Type of Release	Federally Registered Tank?	Project Segment	Proximity to Closest Line
First Union National Bank	19954042	Fredericksburg	38.304475	-77.480893	Closed	Confirmed	No	Fredericksburg to Cranes Corner	559 ft
Mary Washington College	19983748	Fredericksburg	38.304981	-77.478717	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,135 ft
McDonalds 1603	20113032	Fredericksburg	38.3051945	-77.479975	Closed	Confirmed	No	Fredericksburg to Cranes Corner	847 ft
Waite Jeanne H Property	20163170	Fredericksburg	38.307655	-77.475763	Closed	Confirmed	No	Fredericksburg to Cranes Corner	2,439 ft
Hollister William Jr and Jacqueline W Property	20183038	Fredericksburg	38.307983	-77.476131	Closed	Confirmed	No	Fredericksburg to Cranes Corner	2,363 ft
Former 7 Eleven 28430	19973179	Fredericksburg	38.307305	-77.479744	Closed	Confirmed	Yes	Fredericksburg to Cranes Corner	1,302 ft
Home Investors of America Property	20133108	Fredericksburg	38.316794	-77.477145	Closed	Confirmed	No	Fredericksburg to Cranes Corner	2,332 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	PC Number	Location	Latitude	Longitude	Status	Type of Release	Federally Registered Tank?	Project Segment	Proximity to Closest Line
Schlemm Rose Marie Residence	20123080	Falmouth	38.326378	-77.482061	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,034 ft
Heflins Garage	19921524	Falmouth	38.331243	-77.478233	Closed	Confirmed	Yes	Fredericksburg to Cranes Corner	378 ft
Ellington Dorothy Residence	20033086	Falmouth	38.331436	-77.477323	Closed	Confirmed	No	Fredericksburg to Cranes Corner	495 ft
Heflins Garage	19891102	Falmouth	38.331717	-77.478322	Open	Confirmed	Yes	Fredericksburg to Cranes Corner	215 ft
Purks Joyce E and James M Property	20183020	Fredericksburg	38.332308	-77.476914	Closed	Confirmed	No	Fredericksburg to Cranes Corner	278 ft
Gary Melchers Complex	20113012	Fredericksburg	38.332383	-77.473267	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,013 ft
Childers Property	19963055	Falmouth	38.333464	-77.483491	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,186 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	PC Number	Location	Latitude	Longitude	Status	Type of Release	Federally Registered Tank?	Project Segment	Proximity to Closest Line
Quarles – Qcard 1 – Stafford Terminal	19963130	Fredericksburg	38.334031	-77.482048	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,083 ft
Aggregate Industries Falmouth Plant	20153097	Falmouth	38.334826	-77.483766	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,604 ft
Woodfin Watchcard	20083077	Fredericksburg	38.335248	-77.483450	Closed	Confirmed	Yes	Fredericksburg to Cranes Corner	1,708 ft
Q Card 1	19922035	Fredericksburg	38.335095	-77.482354	Closed	Confirmed	Yes	Fredericksburg to Cranes Corner	1,454 ft
QFN 952	20173013	Fredericksburg	38.335719	-77.483088	Closed	Confirmed	Yes	Fredericksburg to Cranes Corner	1,772 ft
DeBarnard Carl J Residence	20013040	Falmouth	38.336005	-77.481921	Closed	Confirmed	No	Fredericksburg to Cranes Corner	1,620 ft
Virginia Dynamics	19963516	Fredericksburg	38.337119	-77.482997	Closed	Confirmed	No	Fredericksburg to Cranes Corner	2,137 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	PC Number	Location	Latitude	Longitude	Status	Type of Release	Federally Registered Tank?	Project Segment	Proximity to Closest Line
Federal Home Loan Mortgage Corporation Property	20083213	Fredericksburg	38.3460499	-77.471051	Closed	Confirmed	No	Fredericksburg to Cranes Corner	584 ft
Xtra Mart 337	19993378	Fredericksburg	38.352096	-77.457718	Closed	Suspected	Yes	Fredericksburg to Cranes Corner	300 ft
In and Out Pizza – Kaul Petro	20113006	Fredericksburg	38.352135	-77.457702	Closed	Confirmed	Yes	Fredericksburg to Cranes Corner	300 ft
6 12 Store	19890472	Fredericksburg	38.352203	-77.457626	Closed	Confirmed	Yes	Fredericksburg to Cranes Corner	300 ft
C T Park Incorporated Property – Forbes Street	20063127	Fredericksburg	38.352463	-77.454432	Closed	Confirmed	No	Cranes Corner to Aquia Harbour	526 ft
DOC – Stafford Diversion Center	20113129	Stafford	38.380076	-77.420997	Closed	Confirmed	No	Cranes Corner to Aquia Harbour	2,600 ft
DOC – Stafford Diversion Center	20063227	Stafford	38.381216	-77.421135	Closed	Confirmed	No	Cranes Corner to Aquia Harbour	2,287 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	PC Number	Location	Latitude	Longitude	Status	Type of Release	Federally Registered Tank?	Project Segment	Proximity to Closest Line
DOC – Stafford Diversion Center	20053248	Stafford	38.381388	-77.421257	Closed	Confirmed	No	Cranes Corner to Aquia Harbour	2,238 ft
VDOT Eskimo Area Headquarters	19973127	Stafford	38.392936	-77.429787	Closed	Confirmed	Yes	Cranes Corner to Aquia Harbour	2,293 ft
VDOT Eskimo Area Headquarters	19869980	Stafford	38.392902	-77.429609	Closed	Confirmed	No	Cranes Corner to Aquia Harbour	2,293 ft
VDOT Eskimo Area Headquarters	20023184	Stafford	38.393009	-77.429703	Closed	Confirmed	No	Cranes Corner to Aquia Harbour	2,293 ft
Atchison, William Properties	19740117	Stafford	38.393723	-77.426223	Closed	Confirmed	No	Cranes Corner to Aquia Harbour	1,684 ft
7k Investments LLC Property	20233114	Stafford	38.394826	-77.428860	Closed	Confirmed	No	Cranes Corner to Aquia Harbour	2,537 ft
Brooke Point Highschool	20123211	Stafford	38.406967	-77.396578	Closed	Confirmed	No	Cranes Corner to Aquia Harbour	1,742 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Site Name	PC Number	Location	Latitude	Longitude	Status	Type of Release	Federally Registered Tank?	Project Segment	Proximity to Closest Line
Medicorp Health System Property	20083098	Stafford	38.417370	-77.401350	Closed	Confirmed	No	Cranes Corner to Aquia Harbour	782 ft
Arington Property	19993249	Stafford	38.420582	-77.399584	Closed	Confirmed	No	Cranes Corner to Aquia Harbour	663 ft

Table 4. State registered storage tanks identified to occur within 0.5 mile of the Fredericksburg to Aquia Harbour Lines

Facility ID Number	AST or UST	Site Name	Location	Latitude	Longitude	Status	Project Segment	Proximity to Closest Line
3014091	UST	The Clean Machine	Fredericksburg	38.304076	-77.480682	Not Active	Fredericksburg to Cranes Corner	581 ft
3007932	UST	Continental Baking Fredericksburg	Fredericksburg	38.304315	-77.481082	Not Active	Fredericksburg to Cranes Corner	444 ft
3014414	UST	7-Eleven #28430	Fredericksburg	38.305677	-77.480099	Not Active	Fredericksburg to Cranes Corner	1,030 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Facility ID Number	AST or UST	Site Name	Location	Latitude	Longitude	Status	Project Segment	Proximity to Closest Line
3023631	UST	Fas Mart #50	Fredericksburg	38.314200	-77.475299	Active	Fredericksburg to Cranes Corner	2,429 ft
3001211	UST	Firestone Store #0247/002607	Fredericksburg	38.314355	-77.475778	Not Active	Fredericksburg to Cranes Corner	2,323 ft
3022198	UST	Roadway Express	Fredericksburg	38.314965	-77.476272	Not Active	Fredericksburg to Cranes Corner	2,193 ft
3007082	UST	Service Transportation Inc	Fredericksburg	38.315426	-77.476220	Not Active	Fredericksburg to Cranes Corner	2,268 ft
3003988	UST	Heflins Garage	Falmouth	38.331661	-77.478302	Not Active	Fredericksburg to Cranes Corner	227 ft
3020791	UST	Stafford County Maintenance Department	Falmouth	38.331512	-77.474832	Not Active	Fredericksburg to Cranes Corner	938 ft
3041816	UST	7 Eleven 33605	Falmouth	38.333405	-77.479133	Active	Fredericksburg to Cranes Corner	368 ft
3011701	UST	QFN 952	Falmouth	38.335310	-77.483502	Not Active	Fredericksburg to Cranes Corner	1,695 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Facility ID Number	AST or UST	Site Name	Location	Latitude	Longitude	Status	Project Segment	Proximity to Closest Line
3009691	AST, UST	Falmouth Ready-Mix Concrete	Falmouth	38.335911	-77.483218	Active	Fredericksburg to Cranes Corner	1,821 ft
3021041	UST	FAS MART #19	Fredericksburg	38.351490	-77.457404	Active	Fredericksburg to Cranes Corner	605 ft
3018623	UST	Ravi Petro	Fredericksburg	38.352155	-77.457684	Not Active	Fredericksburg to Cranes Corner	336 ft
3001297	UST	W. L. Allen Concrete Works; Inc	Fredericksburg	38.359627	-77.457650	Not Active	Cranes Corner to Aquia Harbour	2,168 ft
3039111	AST	Stafford Detention Center Unit 21	Stafford	38.381321	-77.421247	Active	Cranes Corner to Aquia Harbour	2,180 ft
3019763	UST	VDOT – Eskimo Area Headquarters	Stafford	38.392962	-77.429741	Active	Cranes Corner to Aquia Harbour	2,280 ft
3013171	UST	Brooke Point High School	Stafford	38.405966	-77.393680	Not Active	Cranes Corner to Aquia Harbour	2,516 ft
3011505	UST	Stafford Elementary School	Stafford	38.409876	-77.396046	Not Active	Cranes Corner to Aquia Harbour	1,407 ft

Reference: **Fredericksburg to Aquia Harbour Partial Rebuild Project; Stafford County and the City of Fredericksburg, Virginia: Solid & Hazardous Waste Memo**

Facility ID Number	AST or UST	Site Name	Location	Latitude	Longitude	Status	Project Segment	Proximity to Closest Line
3003088	UST	Parker W F	Stafford	38.428233	-77.39602987	Not Active	Cranes Corner to Aquia Harbour	576 ft

If you have any questions regarding the details presented in this report, please feel free to contact me at your convenience.

Stantec Consulting Services Inc.

Corey Gray
Principal, Senior Environmental Scientist
Phone: 757-812-0158
Corey.Gray@stantec.com

United States Department of the Interior

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

In Reply Refer To: December 07, 2023
Project Code: 2024-0024267
Project Name: Fredericksburg to Aquia Harbour Partial Rebuild

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

To Whom It May Concern:

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

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

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

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

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

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

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

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

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

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

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

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds

OFFICIAL SPECIES LIST

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

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

PROJECT SUMMARY

Project Code: 2024-0024267
Project Name: Fredericksburg to Aquia Harbour Partial Rebuild
Project Type: Transmission Line - Maintenance/Modification - Above Ground
Project Description: Wreck and rebuild of several cohabitated electric transmission OH lines within this existing right-of-way. This project is within the City of Fredericksburg and Stafford County, Virginia.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.39213575,-77.42001300918027,14z

Counties: Fredericksburg and Stafford counties, Virginia

ENDANGERED SPECIES ACT SPECIES

There is a total of 8 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

MAMMALS

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

CLAMS

NAME	STATUS
Dwarf Wedgemussel *Alasmidonta heterodon* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/784	Endangered
Green Floater *Lasmigona subviridis* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7541	Proposed Threatened
Yellow Lance *Elliptio lanceolata* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4511	Threatened

INSECTS

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

FLOWERING PLANTS

NAME	STATUS
Harperella *Ptilimnium nodosum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3739	Endangered
Small Whorled Pogonia *Isotria medeoloides* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1890	Threatened

CRITICAL HABITATS

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

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

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

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

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

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

There are bald and/or golden eagles in your project area.

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

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

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

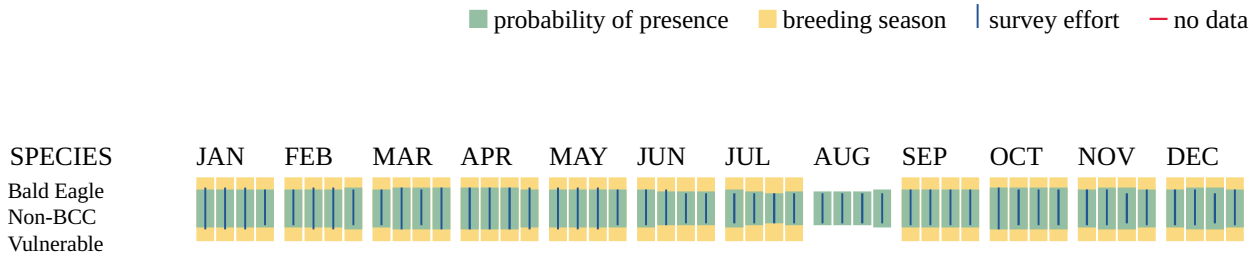
Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

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

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

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25

NAME	BREEDING SEASON
Kentucky Warbler *Oporornis formosus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9443	Breeds Apr 20 to Aug 20
King Rail *Rallus elegans* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

IPAC USER CONTACT INFORMATION

Agency: Stantec
Name: Bethany Mizelle
Address: 1011 Boulder Springs Drive
Address Line 2: Suite 225
City: Richmond
State: VA
Zip: 23225
Email bethany.mizelle@stantec.com
Phone: 8046530616

United States Department of the Interior

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

In Reply Refer To: December 07, 2023
Project code: 2024-0024267
Project Name: Fredericksburg to Aquia Harbour Partial Rebuild

Federal Nexus: no
Federal Action Agency (if applicable):

Subject: Technical assistance for 'Fredericksburg to Aquia Harbour Partial Rebuild'

Dear Bethany Mizelle:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on December 07, 2023, for 'Fredericksburg to Aquia Harbour Partial Rebuild' (here forward, Project). This project has been assigned Project Code 2024-0024267 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Dwarf Wedgemussel *Alasmidonta heterodon* Endangered
- Green Floater *Lasmigona subviridis* Proposed Threatened
- Harperella *Ptilimnium nodosum* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate
- Small Whorled Pogonia *Isotria medeoloides* Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- Yellow Lance *Elliptio lanceolata* Threatened

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species and/or critical habitat listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Steps

Coordination with the Service is complete. This letter serves as technical assistance. All conservation measures should be implemented as proposed. Thank you for considering federally listed species during your project planning.

We are uncertain where the northern long-eared bat occurs on the landscape outside of known locations. Because of the steep declines in the species and vast amount of available and suitable forest habitat, the presence of suitable forest habitat alone is a far less reliable predictor of their presence. Based on the best available information, most suitable habitat is now expected to be unoccupied. During the interim period, while we are working on potential methods to address this uncertainty, we conclude take is not reasonably certain to occur in areas of suitable habitat where presence has not been documented.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the Virginia Ecological Services Field Office and reference Project Code 2024-0024267 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Fredericksburg to Aquia Harbour Partial Rebuild

2. Description

The following description was provided for the project 'Fredericksburg to Aquia Harbour Partial Rebuild':

> Wreck and rebuild of several cohabitated electric transmission OH lines within this existing right-of-way. This project is within the City of Fredericksburg and Stafford County, Virginia.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.39213575,-77.42001300918027,14z

DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of "may affect, but not likely to adversely affect" for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

3. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   No

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency: Stantec
Name: Bethany Mizelle
Address: 1011 Boulder Springs Drive
Address Line 2: Suite 225
City: Richmond
State: VA
Zip: 23225
Email bethany.mizelle@stantec.com
Phone: 8046530616

VaFWIS Initial Project Assessment Report Compiled on 12/18/2023, 5:06:39 PM

Help

Known or likely to occur within a **2 mile buffer around polygon; center 38,22,50.7 -77,25,59.8** in **177 Spotsylvania County, 179 Stafford County, 630 Fredericksburg City, VA**

View Map of Site Location

538 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 22) (22 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
050022	FEST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
060003	FESE	Ia	Wedgemussel, dwarf	Alasmidonta heterodon	Yes	BOVA,TEWaters,Habitat
010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes	BOVA,TEWaters
060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		BOVA
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050027	FPSE	Ia	Bat, tri-colored	Perimyotis subflavus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
060081	ST	IIa	Floater, green	Lasmigona subviridis	Yes	BOVA,TEWaters,Habitat,SppObs
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
100079	FC	IIIa	Butterfly, monarch	Danaus plexippus		BOVA
030063	CC	IIIa	Turtle, spotted	Clemmys guttata		BOVA
010077		Ia	Shiner, bridle	Notropis bifrenatus	Yes	BOVA,Habitat,SppObs
100248		Ia	Fritillary, regal	Speyeria idalia idalia		BOVA
040213		Ic	Owl, northern saw-whet	Aegolius acadicus		BOVA
040052		IIa	Duck, American black	Anas rubripes		BOVA
040036		IIa	Night-heron, yellow-crowned	Nyctanassa violacea violacea		BOVA
040181		IIa	Tern, common	Sterna hirundo		BOVA
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA
040140		IIa	Woodcock, American	Scolopax minor	Yes	BOVA,SppObs
040203		IIb	Cuckoo, black-billed	Coccyzus erythropthalmus		BOVA
040105		IIb	Rail, king	Rallus elegans		BOVA,Habitat
060175		IIb	Slabshell, Roanoke	Elliptio roanokensis		BOVA

To view **All 538 species** View 538

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

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need
Virginia Widlife Action Plan Conservation Opportunity Ranking:
a - On the ground management strategies/actions exist and can be feasibly implemented.;
b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;
c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

View Map of All Query Results from All Observation Tables

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams (7 records)

View Map of All Anadromous Fish Use Streams

Stream ID	Stream Name	Reach Status	Anadromous Fish Species			View Map
			Different Species	Highest TE*	Highest Tier**	
C102	Rappahannock river	Confirmed	1		IV	Yes
C30	Hazel Run	Confirmed	2		IV	Yes
C4	Aquia creek	Confirmed	4		IV	Yes
C47	Claiborne Run	Confirmed	5		IV	Yes
C69	Rappahannock river 1	Confirmed	6		IV	Yes
C84	Rappahannock river 2	Confirmed	4		IV	Yes
P190	Claiborne Run	Potential	0			Yes

Impediments to Fish Passage (4 records)

View Map of All Fish Impediments

ID	Name	River	View Map
98	EMBREY DAM	RAPPAHANNOCK RIVER	Yes
1278	HENDERSON DAM	TR-POTOMAC CREEK	Yes
1277	POTOMAC CREEK DAM #2	TR-POTOMAC CREEK	Yes
119	raised culvert	CLAIBORN RUN	Yes

Colonial Water Bird Survey (1 records)

View Map of All Query Results Colonial Water Bird Survey

Colony_Name	N Obs	Latest Date	N Species			View Map
			Different Species	Highest TE*	Highest Tier**	
Western Shore, Widewater, Stafford	1	May 12 2013	1			Yes

Displayed 1 Colonial Water Bird Survey

Threatened and Endangered Waters (18 Reaches)

View Map of All Threatened and Endangered Waters

Stream Name	T&E Waters Species						View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name					
Rappahannock River (041302)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (041499)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes

		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (042547)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (046621)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (047347)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (047692)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (051290)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (052426)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (054920)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (057005)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (061300)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (062295)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (067493)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (074928)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (075790)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060003	FESE	Ia	Wedgemussel,	Alasmidonta	

					dwarf	heterodon	
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (075791)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060003	FESE	Ia	Wedgemussel, dwarf	Alasmidonta heterodon	
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (080548)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060003	FESE	Ia	Wedgemussel, dwarf	Alasmidonta heterodon	
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (080549)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
		060003	FESE	Ia	Wedgemussel, dwarf	Alasmidonta heterodon	
		060081	ST	IIa	Floater, green	Lasmigona subviridis	

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

are present. View Map of Bald Eagle Concentration Areas and Roosts

(3 records)

BECAR ID	Observation Year	Authority	Type	Comments	View Map
53	2006 - 2007	VDGIF, Center for Conservation Biology	Summer Concentration Area	Eagle_use High	Yes
54	2006 - 2007	VDGIF, Center for Conservation Biology	Summer Concentration Area	Eagle_use Low	Yes
58	2006 - 2007	VDGIF, Center for Conservation Biology	Winter Concentration Area	Eagle_use Moderate	Yes

Bald Eagle Nests (4 records)

View Map of All Query Results
Bald Eagle Nests

Nest	N Obs	Latest Date	DGIF Nest Status	View Map
ST0003	2	Mar 1 2000	HISTORIC	Yes
ST0101	8	Apr 24 2006	HISTORIC	Yes

ST0802	2	Apr 24 2008	HISTORIC	Yes
ST9401	16	Apr 26 2000	HISTORIC	Yes

Displayed 4 Bald Eagle Nests

Habitat Predicted for Aquatic WAP Tier I & II Species (6 Reaches)

View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species

Stream Name	Highest TE*	Tier Species: BOVA Code, Status*, Tier**, Common & Scientific Name					View Map
Aquia Creek (20700112)	FESE	060003	FESE	Ia	Wedgemussel, dwarf	Alasmidonta heterodon	Yes
Austin Run (20700112)	FESE	060003	FESE	Ia	Wedgemussel, dwarf	Alasmidonta heterodon	Yes
Rappahannock River (20801041)	ST	010077		Ia	Shiner, bridle	Notropis bifrenatus	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (20801041)	FESE	060003	FESE	Ia	Wedgemussel, dwarf	Alasmidonta heterodon	Yes
		060081	ST	IIa	Floater, green	Lasmigona subviridis	
Rappahannock River (20801041)	ST	060081	ST	IIa	Floater, green	Lasmigona subviridis	Yes
tributary (20700112)	FESE	060003	FESE	Ia	Wedgemussel, dwarf	Alasmidonta heterodon	Yes
tributary (20700112)	FESE	060003	FESE	Ia	Wedgemussel, dwarf	Alasmidonta heterodon	Yes

Habitat Predicted for Terrestrial WAP Tier I & II Species (3 Species)

View Map of Combined Terrestrial Habitat Predicted for 3 WAP Tier I & II Species Listed Below

ordered by Status Concern for Conservation

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
040105		IIb	Rail, king	Rallus elegans	Yes
040038			Bittern, American	Botaurus lentiginosus	Yes
040093			Eagle, bald	Haliaeetus leucocephalus	Yes

Public Holdings: (1 names)

Name	Agency	Level
Fredericksburg & Spotsylvania National Military Park	National Park Service	Federal

Compiled on 12/18/2023, 5:06:40 PM I1619046.0 report=IPA searchType= P dist= 3218 poi= 38,22,50.7 -77,25,59.8 siteDD= 38.3038888 -77.4822221;38.3113888 -77.4863887;38.3136111 -77.4830554;38.3213888 -77.4905554;38.3261111 -77.4877776;38.3336111 -77.4761110;38.3511111 -77.4649998;38.3563888 -77.4441665;38.3752777 -77.4372221;38.4094444 -77.4013887;38.4094444 -77.4008332;38.4272222 -77.3933332;38.4505555 -77.3866665;38.4513888 -77.3866665;38.4516666 -77.3880554;38.4508333 -77.3880554;38.4508333 -77.3877776;38.4480555 -77.3886110;38.4480555 -77.3888887;38.4458333 -77.3899998;38.4455555 -77.3894443;38.4275000 -77.3941665;38.4094444 -77.4022221;38.3755555 -77.4377776;38.3566666 -77.4447221;38.3516666 -77.4655554;38.3338888 -77.4766665;38.3263888 -77.4883332;38.3213888 -77.4913887;38.3136111 -77.4838887;38.3113888 -77.4872221;38.3036111 -77.4836110;38.3033333 -77.4833332;;

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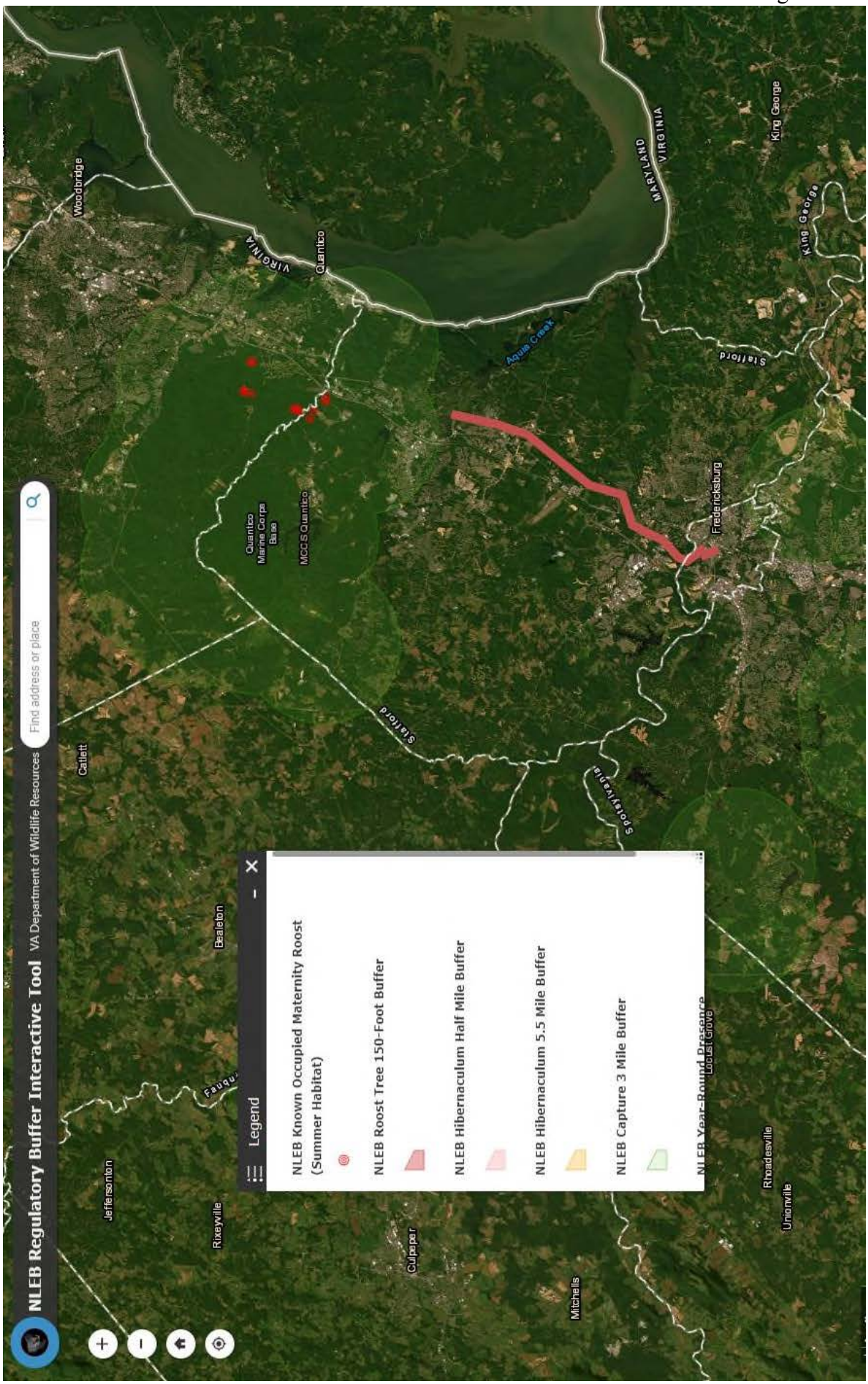
NLEB Regulatory Buffer Interactive Tool
VA Department of Wildlife Resources
Find address or place
Legend
NLEB Known Occupied Maternity Roost (Summer Habitat)
NLEB Roost Tree 150-Foot Buffer
NLEB Hibernaculum Half Mile Buffer
NLEB Hibernaculum 5.5 Mile Buffer
NLEB Capture 3 Mile Buffer
NLEB Year-Round Presence
Woodbridge
Quantico
Quantico Marine Corps Base
MCCS Quantico
Aquia Creek
Fredericksburg
Stafford
King George
MARYLAND
VIRGINIA
Jefferson
Rixeyville
Culpeper
Mitchells
Rhoadesville
Unionville
Locust Grove
Bealeton
Catlett

Natural Heritage Resources

Your Criteria

Watershed (8 digit HUC): 02080104 - Lower Rappahannock River

Subwatershed (12 digit HUC): RA46 - Rappahannock River-Hazel Run-Claiborne Run

Search Run: 12/7/2023 15:46:33 PM

Result Summary

Total Species returned: 4

Total Communities returned: 7

Click scientific names below to go to NatureServe report.

Click column headings for an explanation of species and community ranks.

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Lower Rappahannock								
Rappahannock River-Hazel Run-Claiborne Run								
AQUATIC NATURAL COMMUNITY								
NC-Lower Rappahannock Second Order Stream	NC-Lower Rappahannock Second Order Stream	*NC-Lower Rappahannock Second Order Stream*	G2G3	S2S3	None	None	13	Y
NC-Lower Rappahannock Third Order Stream	NC-Lower Rappahannock Third Order Stream	*NC-Lower Rappahannock Third Order Stream*	G2G3	S2S3	None	None	6	Y
NP-Lower Rappahannock First Order Stream	NP-Lower Rappahannock First Order Stream	*NP-Lower Rappahannock First Order Stream*	G2G3	S2S3	None	None	1	Y
NP-Lower Rappahannock Second Order Stream	NP-Lower Rappahannock Second Order Stream	*NP-Lower Rappahannock Second Order Stream*	G2?	S2?	None	None	2	Y
BIVALVIA (MUSSELS)								
Yellow Lance	Elliptio lanceolata	Elliptio lanceolata	G2	S2	LT	LT	46	Y
Green Floater	Lasmigona subviridis	Lasmigona subviridis	G3	S2	None	LT	67	Y
COLEOPTERA (BEETLES)								
Black Lordithon	Lordithon niger	Lordithon niger	GU	S2?	None	None	5	Y

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Rove Beetle								
American Burying Beetle	Nicrophorus americanus	Nicrophorus americanus	G3	SH	LT	None	5	Y
TERRESTRIAL NATURAL COMMUNITY								
Coastal Plain / Outer Piedmont Acidic Seepage Swamp	Acer rubrum - Nyssa sylvatica - Magnolia virginiana / Viburnum nudum / Osmundastrum cinnamomeum - Lorinseria areolata Forest	Acer rubrum - Nyssa sylvatica - Magnolia virginiana / Viburnum nudum / Osmundastrum cinnamomeum - Lorinseria areolata Forest	G3?	S3	None	None	39	Y
Water-Willow Rocky Bar and Shore	Justicia americana Herbaceous Vegetation	Justicia americana Herbaceous Vegetation	G4G5	S4	None	None	3	Y
Non-Riverine Wet Hardwood Forest (Northern Coastal Plain Type)	Quercus (phellos, pagoda, michauxii) / Ilex opaca - Clethra alnifolia / Lorinseria areolata Forest	Quercus (phellos, pagoda, michauxii) / Ilex opaca - Clethra alnifolia / Lorinseria areolata Forest	G2?	S2	None	None	15	Y

Note: On-line queries provide basic information from DCR's databases at the time of the request. They are NOT to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

For Additional Information on locations of Natural Heritage Resources please submit an information request.

To Contribute information on locations of natural heritage resources, please fill out and submit a rare species sighting form.

Natural Heritage Resources

Your Criteria

Watershed (8 digit HUC): 02070011 - Lower Potomac River

Subwatershed (12 digit HUC): PL60 - Potomac Creek-Beaverdam Creek

Search Run: 12/7/2023 15:47:53 PM

Result Summary

Total Species returned: 1

Total Communities returned: 7

Click scientific names below to go to NatureServe report.

Click column headings for an explanation of species and community ranks.

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Lower Potomac								
Potomac Creek-Beaverdam Creek								
OTHER								
Colonial Wading Bird Colony	Colonial Wading Bird Colony	*Colonial Wading Bird Colony*	G5	S2	None	None	12	Y
TERRESTRIAL NATURAL COMMUNITY								
Coastal Plain / Outer Piedmont Basic Mesic Forest	Fagus grandifolia - Liriodendron tulipifera - Carya cordiformis / Lindera benzoin / Podophyllum peltatum Forest	Fagus grandifolia - Liriodendron tulipifera - Carya cordiformis / Lindera benzoin / Podophyllum peltatum Forest	G4?	S3	None	None	10	Y
Northern Coastal Plain / Piedmont Oak - Beech / Heath Forest	Fagus grandifolia - Quercus (alba, montana, rubra) / Kalmia latifolia Forest	Fagus grandifolia - Quercus (alba, montana, rubra) / Kalmia latifolia Forest	G4	S3	None	None	22	Y
Northern Coastal Plain / Piedmont Mesic Mixed Hardwood Forest	Fagus grandifolia - Quercus (alba, rubra) - Liriodendron tulipifera / (Ilex	Fagus grandifolia - Quercus (alba, rubra) - Liriodendron tulipifera / (Ilex	G5	S5	None	None	28	Y

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
	opaca) / Polystichum acrostichoides Forest	opaca) / Polystichum acrostichoides Forest						
Tidal Freshwater Marsh (Mixed High Marsh Type)	Impatiens capensis - Persicaria arifolia - Peltandra virginica - (Typha angustifolia) Tidal Herbaceous Vegetation	Impatiens capensis - Persicaria arifolia - Peltandra virginica - (Typha angustifolia) Tidal Herbaceous Vegetation	G3	S3	None	None	3	Y
Freshwater Tidal Hardwood Swamp	Nyssa biflora - Fraxinus profunda - (Fraxinus pennsylvanica) / Ilex verticillata / Persicaria arifolia Tidal Forest	Nyssa biflora - Fraxinus profunda - (Fraxinus pennsylvanica) / Ilex verticillata / Persicaria arifolia Tidal Forest	G3	S3	None	None	6	Y
Central Appalachian / Inner Piedmont Chestnut Oak Forest	Quercus montana - (Quercus coccinea, Quercus rubra) / Kalmia latifolia / Vaccinium pallidum Forest	Quercus montana - (Quercus coccinea, Quercus rubra) / Kalmia latifolia / Vaccinium pallidum Forest	G5	S5	None	None	11	Y
Coastal Plain Dry Calcareous Forest	Quercus muehlenbergii - Carya cordiformis / Cercis canadensis / Dichanthelium boscii - Erigeron pulchellus Forest	Quercus muehlenbergii - Carya cordiformis / Cercis canadensis / Dichanthelium boscii - Erigeron pulchellus Forest	G1	S1	None	None	16	Y

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Natural Heritage Resources

Your Criteria

Watershed (8 digit HUC): 02070011 - Lower Potomac River

Subwatershed (12 digit HUC): PL58 - Accokeek Creek

Search Run: 12/7/2023 15:51:33 PM

Result Summary

Total Species returned: 4

Total Communities returned: 7

Click scientific names below to go to NatureServe report.

Click column headings for an explanation of species and community ranks.

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Lower Potomac								
Accokeek Creek								
BIRDS								
King Rail	Rallus elegans	Rallus elegans	G4	S2B,S3N	None	None	12	Y
TERRESTRIAL NATURAL COMMUNITY								
Piedmont / Northern Coastal Plain Basic Seepage Swamp	Acer rubrum - Fraxinus (pennsylvanica, americana) / Lindera benzoin / Symplocarpus foetidus Forest	Acer rubrum - Fraxinus (pennsylvanica, americana) / Lindera benzoin / Symplocarpus foetidus Forest	G4G5	S2?	None	None	7	Y
Coastal Plain / Outer Piedmont Basic Mesic Forest	Fagus grandifolia - Liriodendron tulipifera - Carya cordiformis / Lindera benzoin / Podophyllum peltatum Forest	Fagus grandifolia - Liriodendron tulipifera - Carya cordiformis / Lindera benzoin / Podophyllum peltatum Forest	G4?	S3	None	None	10	Y
Northern Coastal Plain / Piedmont Oak - Beech / Heath	Fagus grandifolia - Quercus (alba, montana, rubra) /	Fagus grandifolia - Quercus (alba, montana, rubra) /	G4	S3	None	None	22	Y

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Forest	Kalmia latifolia Forest	Kalmia latifolia Forest						
Northern Coastal Plain / Piedmont Mesic Mixed Hardwood Forest	Fagus grandifolia - Quercus (alba, rubra) - Liriodendron tulipifera / (Ilex opaca) / Polystichum acrostichoides Forest	Fagus grandifolia - Quercus (alba, rubra) - Liriodendron tulipifera / (Ilex opaca) / Polystichum acrostichoides Forest	G5	S5	None	None	28	Y
Tidal Freshwater Marsh (Mixed High Marsh Type)	Impatiens capensis - Persicaria arifolia - Peltandra virginica - (Typha angustifolia) Tidal Herbaceous Vegetation	Impatiens capensis - Persicaria arifolia - Peltandra virginica - (Typha angustifolia) Tidal Herbaceous Vegetation	G3	S3	None	None	3	Y
Freshwater Tidal Hardwood Swamp	Nyssa biflora - Fraxinus profunda - (Fraxinus pennsylvanica) / Ilex verticillata / Persicaria arifolia Tidal Forest	Nyssa biflora - Fraxinus profunda - (Fraxinus pennsylvanica) / Ilex verticillata / Persicaria arifolia Tidal Forest	G3	S3	None	None	6	Y
Central Appalachian / Inner Piedmont Chestnut Oak Forest	Quercus montana - (Quercus coccinea, Quercus rubra) / Kalmia latifolia / Vaccinium pallidum Forest	Quercus montana - (Quercus coccinea, Quercus rubra) / Kalmia latifolia / Vaccinium pallidum Forest	G5	S5	None	None	11	Y
VASCULAR PLANTS								
River Bulrush	Bolboschoenus fluviatilis	Bolboschoenus fluviatilis	G5	S2	None	None	17	Y
Small Whorled Pogonia	Isotria medeoloides	Isotria medeoloides	G2G3	S2	LT	LE	70	Y
Marsh pea	Lathyrus palustris	Lathyrus palustris	G5	S1	None	None	9	Y

Note: On-line queries provide basic information from DCR's databases at the time of the request. They are NOT to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

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Natural Heritage Resources

Your Criteria

Watershed (8 digit HUC): 02070011 - Lower Potomac River

Subwatershed (12 digit HUC): PL57 - (Lower) Aquia Creek-Austin Run

Search Run: 12/7/2023 15:52:52 PM

Result Summary

Total Species returned: 4

Total Communities returned: 3

Click scientific names below to go to NatureServe report.

Click column headings for an explanation of species and community ranks.

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Lower Potomac								
(Lower) Aquia Creek-Austin Run								
AQUATIC NATURAL COMMUNITY								
NC-Lower Potomac Fourth Order Stream	NC-Lower Potomac Fourth Order Stream	*NC-Lower Potomac Fourth Order Stream*	G1?	S1?	None	None	1	Y
NP-Lower Potomac Fourth Order Stream	NP-Lower Potomac Fourth Order Stream	*NP-Lower Potomac Fourth Order Stream*	G1	S1	None	None	1	Y
TERRESTRIAL NATURAL COMMUNITY								
Coastal Plain Depression Swamp (Willow Oak - Red Maple - Sweetgum Type)	Quercus phellos - Acer rubrum - Liquidambar styraciflua / Vaccinium (formosum, fuscatum) Forest	Quercus phellos - Acer rubrum - Liquidambar styraciflua / Vaccinium (formosum, fuscatum) Forest	G3	S2	None	None	19	Y
VASCULAR PLANTS								
Sensitive Joint-vetch	Aeschynomene virginica	Aeschynomene virginica	G2	S2	LT	LT	22	Y
Parker's Pipewort	Eriocaulon parkeri	Eriocaulon parkeri	G3	S2	None	None	18	Y
Marsh pea	Lathyrus palustris	Lathyrus palustris	G5	S1	None	None	9	Y
Northern Winged loosestrife	Lythrum alatum	Lythrum alatum	G5	S2	None	None	17	Y

Note: On-line queries provide basic information from DCR's databases at the time of the request. They are NOT to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

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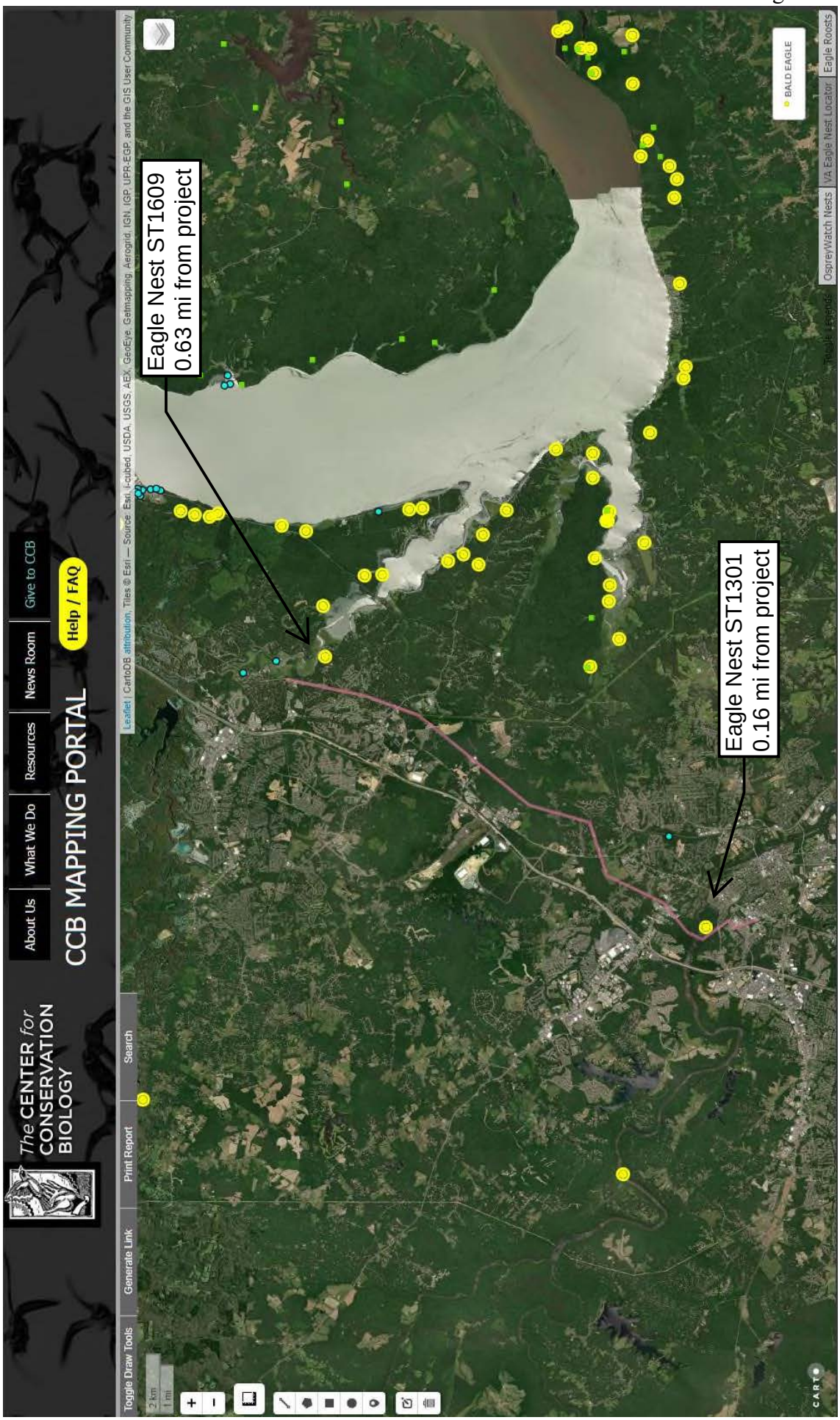
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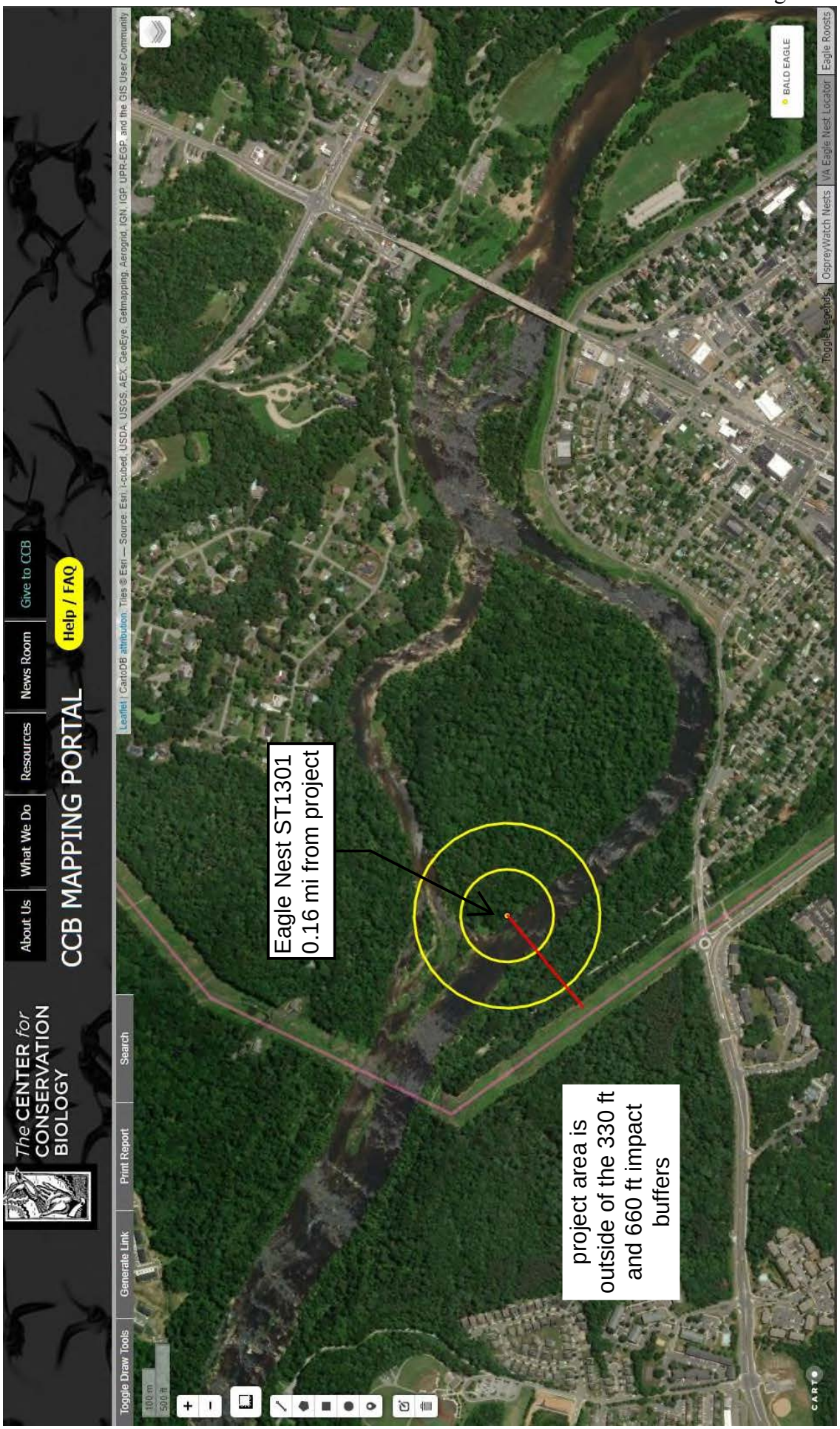
Print Report
Search
Eagle Nest ST1609
0.63 mi from project
Eagle Nest ST1301
0.16 mi from project
BALD EAGLE
OspreyWatch Nests
VA Eagle Nest Locator
Eagle Roosts
Leaflet | CartoDB attribution, Tiles @ Esri — Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, UPR-EGP, and the GIS User Community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Eagle Nest ST1301
0.16 mi from project
project area is outside of the 330 ft and 660 ft impact buffers
BALD EAGLE
Toggle Legends
OspreyWatch Nests
VA Eagle Nest Locator
Eagle Roosts

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

January 4, 2024

Corey Gray
Stantec Consulting Services, Inc.
5209 Center Street
Williamsburg, VA 23188

Re: 203401909, Fredericksburg-Aquia Harbour Transmission Line

Dear Mr. Gray:

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

According to the information in our files, the Rappahannock River-Hazel Run-Claiborne Run Stream Conservation Site (SCS) and the Aquia Creek-Rt. 1-Government Landing SCS are located within the project area (Figure 1). SCSs encompass stream/river reaches, waterbodies, and terrestrial contributing areas containing or associated with aquatic or semi-aquatic resources, including upstream and downstream reaches and tributaries up to 3-km stream distance from the aquatic resources. The size and dimensions of a SCS are based on the hydrology of the waterway and surrounding landscape, taking into consideration dam locations and whether the waterway is tidal. SCSs are given a biodiversity significance ranking (B-rank) based on the rarity, quality, and number of natural heritage resources they contain.

The Rappahannock River-Hazel Run-Claiborne Run SCS has been given a B-rank of B2, which represents a site of very high significance. The natural heritage resources associated with this site are:

Lasmigona subviridis	Green floater	G3/S2/NL/LT
Aquatic Natural Community (NC-Lower Rappahannock Second Order Stream)		G2G3/S2S3/NL/NL
Aquatic Natural Community (NP-Lower Rappahannock First Order Stream)		G2G3/S2S3/NL/NL
Aquatic Natural Community (NP-Lower Rappahannock Second Order Stream)		G2?/S2?/NL/NL

The Aquia Creek - Rt. 1 - Government Landing SCS has been given a B-rank of B2, which represents a site of very high significance. The natural heritage resources associated with this site are:

Eriocaulon parkeri	Parker's pipewort	G3/S2/NL/NL
Aquatic Natural Community (NC-Lower Potomac Fourth Order Stream)		G1?/S1?/NL/NL
Aquatic Natural Community (NP-Lower Potomac Fourth Order Stream)		G1/S1/NL/NL

In addition, the Rappahannock River has been designated by the Virginia Department of Wildlife Resources (VDWR) as a "Threatened and Endangered Species Water" for the Green floater and the Atlantic sturgeon.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations, establishment/enhancement of riparian buffers with native plant species and maintaining natural stream flow. Due to the legal status of the Green floater, DCR recommends coordination with the VDWR, and due to the legal status of the Atlantic sturgeon, DCR recommends coordination with the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) and Virginia's regulatory authority for the management and protection of this species, the VDWR, to ensure compliance with protected species legislation.

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

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

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

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

A fee of $250.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24th Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

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

Should you have any questions or concerns, please contact me at 804-225-2429. Thank you for the opportunity to comment on this project.

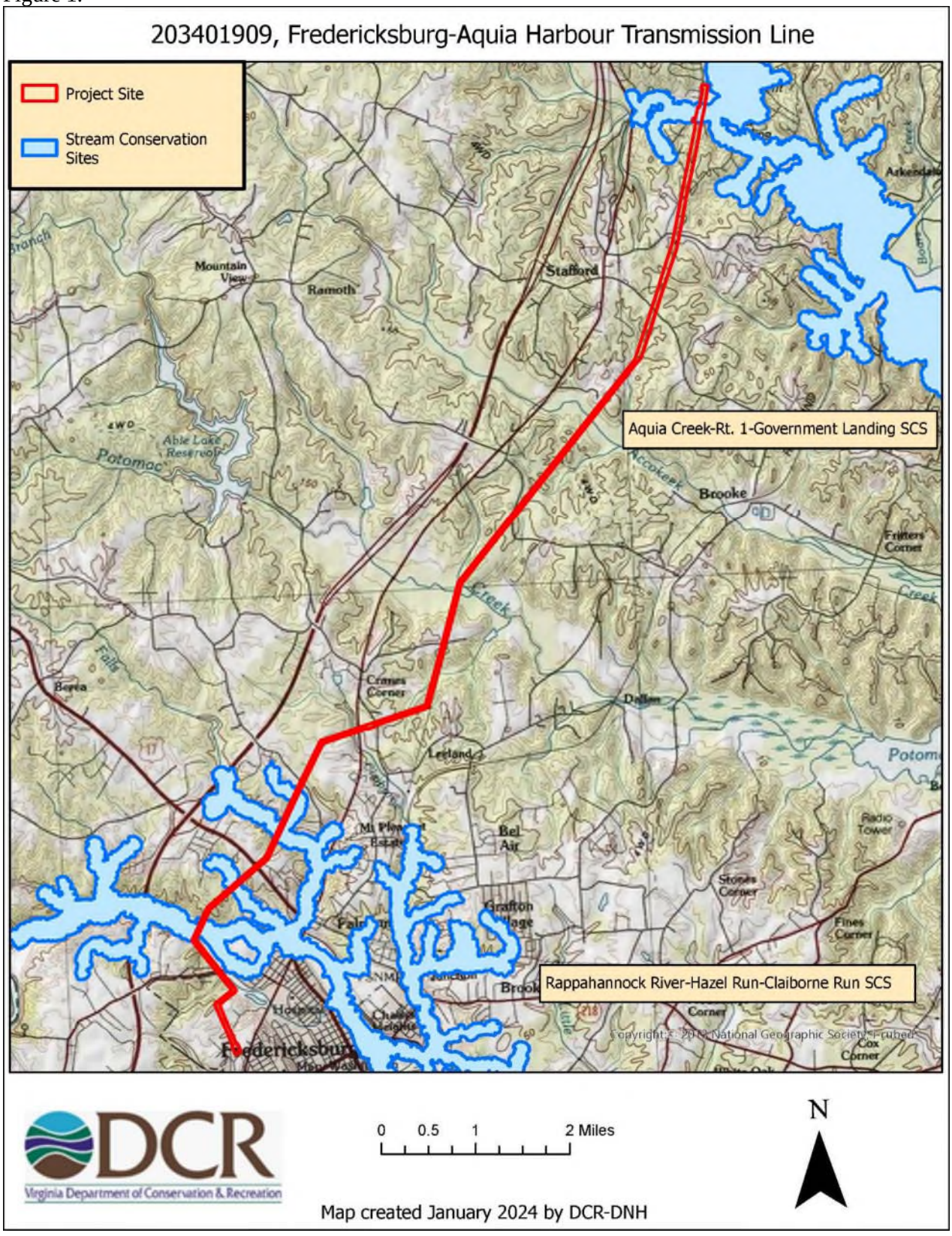
Sincerely,

Tyler Meader

Tyler Meader
Natural Heritage Locality Liaison

Cc: Brian Hopper, NOAA Fisheries-Protected Resources Division
Amy Martin, VDWR

Figure 1.


203401909, Fredericksburg-Aquia Harbour Transmission Line
Project Site
Stream Conservation Sites
Aquia Creek-Rt. 1-Government Landing SCS
Rappahannock River-Hazel Run-Claiborne Run SCS
Stafford
Mountain View
Ramoth
Able Lake Reservoir
Potomac
Brooke
Leeland
Bel Air
Fredericksburg
Radio Tower
Fines Corner
Cox Corner
Copyright © 2013 National Geographic Society, i-cubed
DCR
Virginia Department of Conservation & Recreation
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Map created January 2024 by DCR-DNH

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
P.O. Box 1105, Richmond, Virginia 23218
(800) 592-5482
www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

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

February 27, 2024

Dominion Energy
120 Tredegar Street
Richmond, VA 23219
Attn: Elizabeth L. Hester

Transmitted Via Email: (Elizabeth.l.hester@dominionenergy.com)

Re: Dominion Energy (Electric Transmission) - AS&S - Program Renewal – 2024/2025

Dear Ms. Hester:

The Virginia Department of Environmental Quality (DEQ) hereby approves the Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management for Construction and Maintenance of Linear Electric Transmission Facilities for Dominion Energy's document dated "February 2024". This coverage is effective from February 27, 2024, to February 26, 2025.

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

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

1. Variance, exception, and deviation requests must be submitted to DEQ separately from this Annual Standards and Specifications' submission. DEQ may require project-specific plans associated with such requests to be submitted for review and approval.

2. The following information must be submitted to DEQ for each project at least two weeks in advance of the commencement of regulated land-disturbing activities. Notifications shall be sent by email to: StandardsandSpecs@deq.virginia.gov
    a. Project name or project number;
    b. Project location (including nearest intersection, latitude and longitude, access point);
    c. On-site project manager name and contact info;

d. Responsible Land Disturber (RLD) name and contact info;
e. Project description;
f. Acreage of disturbance for project;
g. Project start and finish date; and
h. Any variances/exceptions/deviations associated with this project.

3. Project tracking of all regulated land disturbing activities (LDA) must be submitted to DEQ once per 6-month period. Project tracking records shall contain the same information as required in the two week e-notifications for each regulated LDA.

4. Erosion & Sediment Control and Stormwater Management plans must be reviewed by DEQ-certified Plan Reviewers. Dominion Energy, as the AS&S holder, retains the authority to approve plans and must do so in writing. Should an AS&S holder contract out to a third-party to fulfill the plan review function, the third-party Plan Reviewer may recommend approval of the plan, but final approval must come from the AS&S holder.

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

Please contact Abigail Snider at 804-486-0365 or Abigail.Snider@deq.virginia.gov if you have any questions about this letter.

Respectfully,

Kyle Kennedy, Manager
Office of Stormwater Management

Cc: Larry Gavan, DEQ-CO
Antony Angueira, DEQ-CO

STAGE I PRE-APPLICATION ANALYSIS FOR THE PROPOSED DOMINION ENERGY VIRGINIA FREDERICKSBURG TO AQUIA HARBOUR LINES #29, #2104, AND #2157 PARTIAL REBUILD, STAFFORD COUNTY AND THE CITY OF FREDERICKSBURG, VIRGINIA

March 8, 2024

Prepared for:

Dominion Energy Virginia
Attention: Tracey McDonald
5000 Dominion Boulevard
Glen Allen, VA 23060

Prepared by:

Sandra DeChard
Senior Architectural Historian

and

Ellen M. Brady
Technical Discipline Leader

Stantec Consulting Services Inc.
1011 Boulder Springs Drive, Suite 225,
Richmond VA 23225-4951
(804) 267-3474

Sign-off Sheet

The conclusions in the Report are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from the Client and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

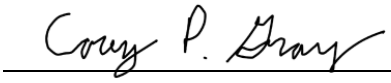
This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided to applicable authorities having jurisdiction and others for whom the Client is responsible, Stantec does not warrant the services to any third party. The report may not be relied upon by any other party without the express written consent of Stantec, which may be withheld at Stantec's discretion.

Prepared by 

Sandra DeChard, Senior Architectural Historian

Reviewed by 

Ellen Brady, Principal, Technical Discipline Leader, Cultural and Social Sciences, US

Approved by 

Corey Gray, Principal, Senior Environmental Scientist

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Executive Summary

Stantec Consulting Services Inc. (Stantec) was retained by Dominion Energy Virginia (Dominion Energy) to conduct a Stage I Pre-Application Analysis for the proposed partial rebuild of transmission lines between the Fredericksburg substation and the Aquia Harbour substation in the City of Fredericksburg and Stafford County, Virginia. Dominion Energy, in order to maintain the structural integrity and reliability of its transmission system to comply with mandatory North American Electric Reliability Corporation (NERC) Reliability Standards, proposes to:

- Partially rebuild, primarily within existing right-of-way (ROW)[1], approximately 12.5 miles of existing 115 kV transmission Line #29 utilizing current 230 kV standards[2] from the existing Fredericksburg substation to the existing Aquia Harbour substation. The existing structures, mainly wood H-frames, will be primarily replaced by 230 kV double-circuit weathering steel monopoles.
- Rebuild, entirely within existing ROW or on Company-owned property, approximately 3.75 miles of 230 kV Line #2157 from the existing Fredericksburg Substation to the existing Cranes Corner substation. The existing structures, mainly wood H-frames, will be primarily replaced by 230 kV double-circuit weathering steel monopoles.
- Rebuild, primarily within existing ROW or on Company-owned property, approximately 7.6 miles of 230 kV Line #2104 from the existing Cranes Corner substation to the existing Aquia Harbour substation. The existing structures, mainly wood H-frames will be primarily replaced by 230 kV double-circuit weathering steel monopoles.
- Rebuild two 500 kV structures and add two new 500 kV structures near Aquia Harbour Substation on Line #568.

(collectively, the “Rebuild Project”).

All proposed structure heights and locations provided in this report are based upon preliminary engineering and are subject to final design. Based on this information, the proposed average structure height increase is 28 feet with the maximum structure height increase of 47 feet. Three structures will decrease in height.

Background research for the Stage I Pre-Application Analysis was conducted in January 2023 by Stantec staff. The preliminary background research and a field study was conducted pursuant to the *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic*

[1] A short segment of 70 feet of expanded ROW along approximately 1,000 feet at the Dogwood Airpark will be required to rebuild the transmission lines in order to allow continued safe use of a private airfield.
[2] The Line #29 circuit will ultimately be renamed Line #2305; however, the rebuilt Line #2305 will be located where existing Line #29, Line #2157, or Line #2104 structures are currently present so that proposed structure numbering cannot be easily compared to the existing structure numbering. Therefore, the structure tables in Appendix A should be referenced.

Resources in the Commonwealth of Virginia (Virginia Department of Historic Resources [DHR] 2008) for proposed transmission line improvements.

As detailed by DHR guidance, consideration was given to National Historic Landmark (NHL) properties located within a 1.5-mile radius of the project centerline; National Register of Historic Places (NRHP)-listed properties, battlefields, and historic landscapes located within a 1.0-mile radius of the project centerline; NRHP-eligible sites located within a 0.5-mile radius of the project centerline; and archaeological sites located within the project ROW. Twenty-seven previously recorded architectural resources were identified for inclusion in the Stage I analysis. Research revealed a total of 16 previously recorded archaeological resources within the existing ROW.

Recommendations

Architectural Resources

Three NHL-listed architectural resources are located within the 1.5-mile buffer. Fourteen NRHP-listed resources are located in the 1.0-mile radius including the Falmouth, Fredericksburg, and Washington Avenue historic districts (DHR #089-00067, #111-0132, and #111-5262) and five NRHP-eligible resources are located in the 0.5-mile radius including the NRHP-eligible Embrey Dam (DHR #088-0088) which has been demolished. In addition, four NRHP potentially eligible resources, one farm, two battlefields and an historic district, are located within the 1.0-radius and cross the transmission line corridor.

Based on preliminary proposed structure heights, the proposed Rebuild Project will have **No Visual Impact** to Aquia Church (DHR #089-0008), Belmont (DHR #089-0022), the Conway House (DHR #089-0067-0031), H. H. Poole High School (DHR #089-0247), Brompton (DHR #111-0008), the John Lewis House (DHR #111-0107), Fredericksburg Historic District (DHR #111-0132), Carl's Frozen Custard Stand (DHR #111-5007), the Washington Avenue Historic District (DHR #111-5262), Fredericksburg City and Confederate Cemeteries (DHR #111-5265), and Elmhurst (DHR #111-5267). The proposed Rebuild Project will have a **Minimal Visual Impact on the** Chancellorsville Battlefield (DHR #088-5180), Bank's Ford/Salem Church Battlefield (DHR #088-5181), Carlton (DHR #089-0010), Clearview (DHR #089-0012), Cedar Hill Farm (DHR #089-0061), the Falmouth Historic District (DHR #089-0067), the Aquia Creek Quarries/Brent's Island (DHR #089-0103), Kenmore Plantation (DHR #111-0047), Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park and Cemetery (DHR #111-0147), the Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296), Fall Hill (DHR #111-0149), and Allman's Bar-B-Que (DHR #111-5473). The proposed Rebuild Project will have a **Moderate Visual Impact** to Glencairne (DHR #089-0020) and the Old Mill Historic District (DHR #111-5297). The following table details the potential impacts to historic resources.

Previously Recorded Architectural Resources Considered under the Stage I Pre-Application Guidelines

DHR #	Resource Name	NRHP Status	Distance to Line (Feet)	Impact
088-0088	Embrey Dam/VEPCO Power Dam (demolished)	NRHP Eligible	N/A	N/A

DHR #	Resource Name	NRHP Status	Distance to Line (Feet)	Impact
088-5180	Chancellorsville Battlefield	NRHP Eligible	0	Minimal
088-5181	Bank's Ford/Salem Church Battlefield	Federal Det. Of Eligibility	0	Minimal
089-0008	Aquia Church, 2938 Richmond Highway	NHL Listed; NRHP Listed	5,981	None
089-0010	Carlton, 501 Melchers Drive	NRHP Listed	2,588	Minimal
089-0012	Clearview, 420 Forbes Street	NRHP Listed	4,875	Minimal
089-0020	Glencairne, 559 Cambridge Street	NRHP Eligible	0	Moderate
089-0022	Belmont/Gari Melchers Home, 226 Washington Street	NHL Listed; NRHP Listed	2,193	None
089-0061	Cedar Hill Farm	Determined Potentially Eligible	0	Minimal
089-0067	Falmouth Historic District	NRHP Listed	2,440	Minimal
089-0067-0031	Conway House, 305 King Street	NRHP Listed	4,573	None
089-0103	Aquia Creek Quarries/ Brent's Island	NRHP Listed	1,692	Minimal
089-0247	H.H. Poole High School/ Stafford Training School, 1739 Richmond Highway	NRHP Listed	2,677	None
111-0008	Brompton/President's Residence, Mary Washington College, Hanover Street	NRHP Listed	4,502	None
111-0047	Kenmore Plantation/ Millbrook, 1201 Washington Avenue	NHL Listed; NRHP Listed	4,593	Minimal
111-0107	John Lewis House/Rowe House/War Hospital, 801 Hanover Street	NRHP Listed	5,176	None
111-0132	Fredericksburg Historic District	NRHP Listed	5,093	None
111-0147	Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park and Cemetery	NRHP Listed	47	Minimal
111-0149	Fall Hill, 3315 Fall Hill Avenue	NRHP Listed	0	Minimal
111-5007	Carl's Frozen Custard Stand, 2200 Princess Anne Street	NRHP Listed	3,980	None
111-5262	Washington Avenue Historic District	NRHP Listed	3,814	None
111-5265	Fredericksburg City and Confederate Cemeteries	NRHP Listed	4,390	None
111-5267	Elmhurst, 2010 Fall Hill Avenue	NRHP Listed	3,628	None
111-5295	Battle of Fredericksburg I	Determined Potentially Eligible	0	Minimal
111-5296	Battle of Fredericksburg II	Determined Potentially Eligible	0	Minimal
111-5297	Old Mill Historic District	Determined Potentially Eligible	16	Moderate
111-5473	Allman's Bar-B-Que, 2000 Augustine Avenue	Determined Eligible	557	Minimal

Archaeological Resources

Sixteen previously identified archaeological resources are located either within or immediately adjacent to the project ROW. One site, Site 44ST0625, a Civil War camp and cemetery, has been determined eligible for listing in the NRHP and Site 44ST0865, a mid-to late nineteenth century camp, has been determined potentially eligible for listing in the NRHP by the DHR. The remaining 14 sites are currently unevaluated. ***It is recommended that archaeological sites located within the ROW be investigated and evaluated as appropriate during future investigations.***

Previously Recorded Archaeological Resources Considered under the Stage I Pre-Application Guidelines

DHR #	Resource Name	NRHP Status	Impact
44SP0571	Mid-19th Century Earthworks	Not Evaluated	Investigate During Archaeological Survey
44SP0574	Civil War Earthworks	Not Evaluated	Investigate During Archaeological Survey
44SP0640	Pre-1817 Old Fall Hill Road Trace	Not Evaluated	Investigate During Archaeological Survey
44ST0072	Late 18th /Early 19th Century Canal	Not Evaluated	Investigate During Archaeological Survey
44ST0101	Pre-Contact Temporary Camp, Indeterminant	Not Evaluated	Investigate During Archaeological Survey
44ST0102	Pre-Contact Temporary Camp, Indeterminant	Not Evaluated	Investigate During Archaeological Survey
44ST0109	Middle Archaic Camp	Not Evaluated	Investigate During Archaeological Survey
44ST0241	Early 20th Century Quarry	Not Evaluated	Investigate During Archaeological Survey
44ST0279	Mid-to Late 19th Century Military Base/Facility	Not Evaluated	Investigate During Archaeological Survey
44ST0280	Mid-to Late 19th Century Military Base/Facility	Not Evaluated	Investigate During Archaeological Survey
44ST0625	Civil War Camp and Cemetery	NRHP Eligible	Investigate During Archaeological Survey
44ST0677	Pre-Contact Lithic Scatter, Indeterminant	Not Evaluated	Investigate During Archaeological Survey
44ST0782	Pre-Contact Lithic Scatter	Not Evaluated	Investigate During Archaeological Survey
44ST0783	Pre-Contact Temporary Camp	Not Evaluated	Investigate During Archaeological Survey
44ST0787	Late Archaic, Indeterminate/ Late 18th to Mid-19th Century Domestic Site	Not Evaluated	Investigate During Archaeological Survey
44ST0865	Mid-to Late 19th Century Camp	Determined Potentially Eligible	Investigate During Archaeological Survey

Abbreviations

ABPP	American Battlefield Protection Program
DHR	Virginia Department of Historic Resources
Dominion Energy	Dominion Energy Virginia
kV	Kilovolt
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PotNR	Potential National Register
ROW	Right-of-Way
SCC	State Corporation Commission
Stantec	Stantec Consulting Services, Inc.
USDI	United States Department of the Interior
V-CRIS	Virginia Cultural Resources Information System
VEPCO	Virginia Electric Power Company
VHLC	Virginia Historic Landmarks Commission
VLR	Virginia Landmarks Register
WHF	Wood H-Frame Structure
WSTL	Weathering Steel Monopole Structure

1.0 INTRODUCTION

1.1 OVERVIEW

Stantec Consulting Services Inc. (Stantec) was retained by Dominion Energy Virginia (Dominion Energy) to conduct a Stage I Pre-Application Analysis for the proposed partial rebuild of transmission lines between the Fredericksburg substation and the Aquia Harbour substation in the city of Fredericksburg and Stafford County, Virginia. Dominion Energy, in order to maintain the structural integrity and reliability of its transmission system to comply with mandatory North American Electric Reliability Corporation (NERC) Reliability Standards, proposes to:

- Partially rebuild, primarily within existing right-of-way (ROW)[3], approximately 12.5 miles of existing 115 kV transmission Line #29 utilizing current 230 kV standards[4] from the existing Fredericksburg substation to the existing Aquia Harbour substation. The existing structures, mainly wood H-frames, will be primarily replaced by 230 kV double-circuit weathering steel monopoles.
- Rebuild, entirely within existing ROW or on Company-owned property, approximately 3.75 miles of 230 kV Line #2157 from the existing Fredericksburg Substation to the existing Cranes Corner substation. The existing structures, mainly wood H-frames, will be primarily replaced by 230 kV double-circuit weathering steel monopoles.
- Rebuild, primarily within existing ROW or on Company-owned property, approximately 7.6 miles of 230 kV Line #2104 from the existing Cranes Corner substation to the existing Aquia Harbour substation. The existing structures, mainly wood H-frames will be primarily replaced by 230 kV double-circuit weathering steel monopoles.
- Rebuild two 500 kV structures and add two new 500 kV structures near Aquia Harbour Substation on Line #568.

(collectively, the “Rebuild Project”) (Appendix A).

1.2 STAGE I PRE-APPLICATION ANALYSIS

The *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (Virginia Department of Historic Resources [DHR] 2008) were developed by the DHR to assist the State Corporation Commission (SCC) and their applicants to address and minimize potential impacts to historic resources associated with the construction of large-scale transmission lines and associated facilities. In consideration to the general

[3] A short segment of 70 feet of expanded ROW along approximately 1,000 feet at the Dogwood Airpark will be required to rebuild the transmission lines in order to allow continued safe use of a private airfield.
[4] The Line #29 circuit will ultimately be renamed Line #2305; however, the rebuilt Line #2305 will be located where existing Line #29, Line #2157, or Line #2104 structures are currently present so that proposed structure numbering cannot be easily compared to the existing structure numbering. Therefore, the structure tables in Appendix A should be referenced.

project design, as described above, and other elements associated with the proposed undertaking, including current ROW conditions within the Rebuild Project area, Stantec designed the present study to identify all previously recorded architectural and archaeological resources requiring inclusion in a formal Stage I Pre-Application Analysis, as defined by the 2008 *Guidelines*.

As detailed by DHR guidance, consideration was given to National Historic Landmarks (NHL) properties located within a 1.5-mile radius of the project centerline; National Register of Historic Places (NRHP)-listed properties, battlefields, and historic landscapes located within a 1.0-mile radius of the project centerline; NRHP-eligible sites located within a 0.5-mile radius of the project centerline; and archaeological sites located within the project ROW. This document includes a viewshed analysis to address potential visual impacts to the 27 resources considered during the Stage I study.

This Stage I Pre-Application Analysis project was directed by Senior Environmental Scientist Corey Gray and the report co-authored by Senior Architectural Historian Sandra DeChard and Architectural Historian Sonja Lengel. The visual effects survey was conducted by Assistant Architectural Historian Olivia McCarty under the supervision of Ms. DeChard. Olivia McCarty photographed the resource viewsheds and Audrey Cropp prepared the photo simulations. Visual modeling was prepared by GIS Coordinator, Melissa Sanderson and support graphics were prepared by GIS Coordinator Melissa Sanderson, GIS Analysts Elise Ljiko and Elisa Barrios, and Environmental Scientist Jordan Bryant.

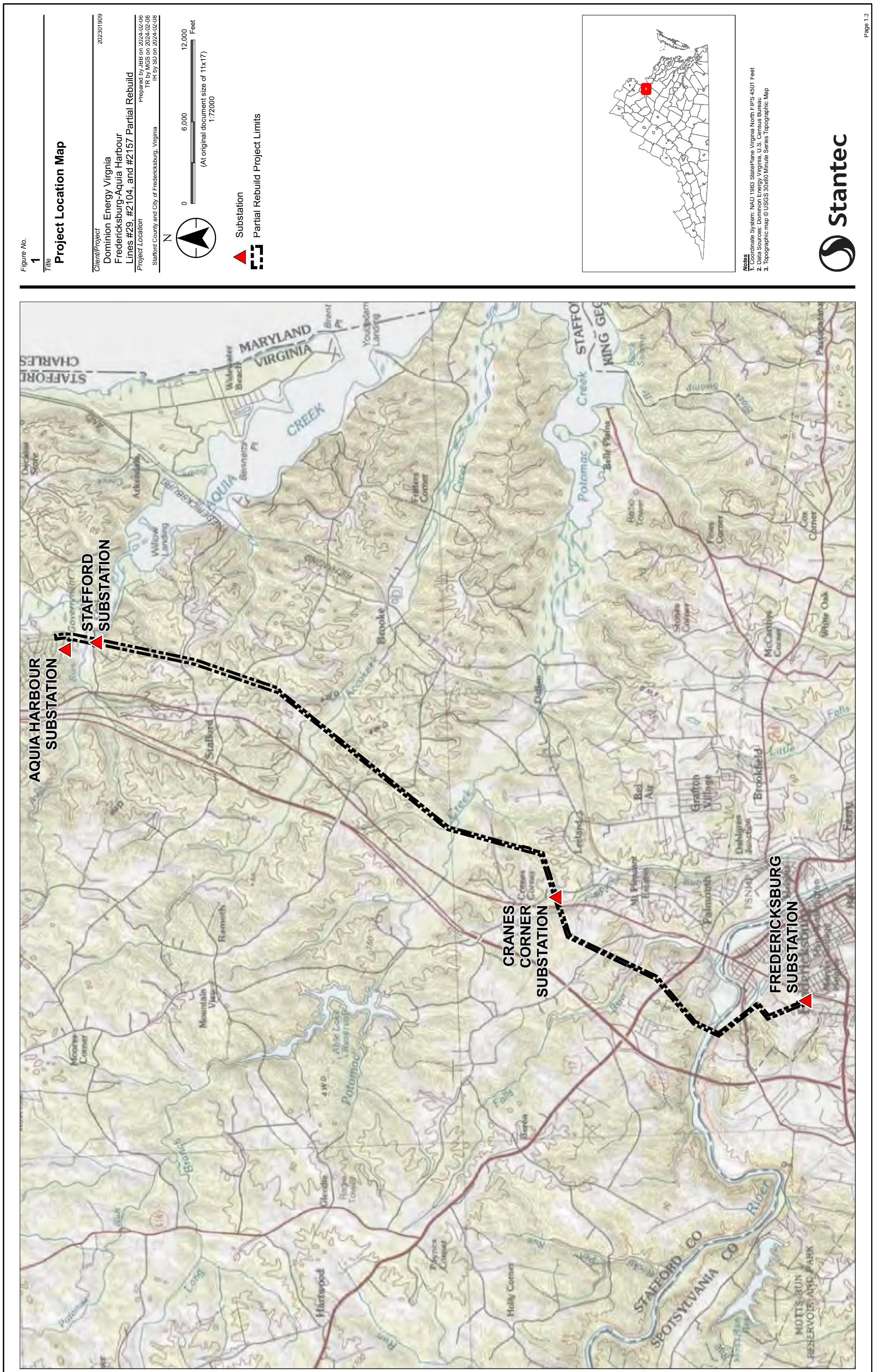
Figure No.
1
Title
Project Location Map
Client/Project
Dominion Energy Virgnia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
Project Location
Stafford County and City of Fredericksburg, Virginia
N
0
6,000
12,000
Feet
(At original document size of 11x17)
1:72000
Substation
Partial Rebuild Project Limits
Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, U.S. Census Bureau
3. Topographic map © USGS 30x60 Minute Series Topographic Map
Stantec
AQUIA HARBOUR SUBSTATION
STAFFORD SUBSTATION
CRANES CORNER SUBSTATION
FREDERICKSBURG SUBSTATION
MARYLAND
VIRGINIA
AQUIA CREEK
STAFFORD CO
SPOTSYLVANIA CO
MOTTS RUN RESERVOIR AND PARK
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2.0 BACKGROUND RESEARCH

As part of the Stage I Pre-Application Analysis effort, DHR guidance recommends a four-tier study area strategy to be considered for each alternative alignment for the proposed undertaking (Table 1). Per this guidance consideration was given to NHL properties located within a 1.5-mile radius of the project centerline; NRHP-listed properties, battlefields, and historic landscapes located within a 1.0-mile radius of the project centerline; NRHP-eligible resources located within a 0.5-mile radius of the project centerline; and archaeological sites located within the project ROW.

Table 1 Study Areas as Defined by DHR Guidelines for Transmission Lines

Radial Buffer (in miles)	Considered Resources
1.5	National Historic Landmarks
1.0	Above resources and: National Register Properties (listed), Battlefields, Historic Landscapes (e.g. Rural HD)
0.5	Above resources and: National Register-eligible (as determined by DHR)
0.0 (Within ROW)	Above resources and Archaeological Sites

The background research included a review of the DHR archives and of data collected from the DHR's Virginia Cultural Resource Information System (V-CRIS) database using the most current data as provided by the DHR. The DHR files of archaeological sites and historic structures were examined and information was retrieved on all archaeological sites located up to a 0.5-mile radius of the project area and all previously recorded architectural resources up to a 1.5-mile radius of the project. ESRI ArcGIS Online aerial photography of current conditions was examined for the entire project area. Photographs of the viewshed of each of the architectural resources under consideration were taken from the public ROW.

2.1 RESULTS OF THE BACKGROUND RESEARCH

2.1.1 Architectural Resources

Three NHL-listed architectural resources are located within the 1.5-mile buffer. Fourteen NRHP-listed resources are located in the 1.0-mile buffer including the Falmouth, Fredericksburg, and Washington Avenue historic districts (DHR #089-0067, #111-0132, and #111-5262) and five NRHP-eligible resources are located in the 0.5-mile radius. The NRHP-eligible Embrey Dam (DHR #088-0088); however, has been demolished. In addition, four NRHP potentially eligible resources, one farm, two battlefields and an historic district, were also located within the 1.0-radius and cross the transmission line corridor (Appendix B). See Table 2 for a listing of the architectural resources considered for the entire Rebuild Project.

Table 2 Previously Recorded Architectural Resources Considered under the Stage I Pre-Application Guidelines

DHR #	Resource Name	DHR/NRHP Status	Distance to Closest Existing Line (Feet)	Closest Existing Structure(s)
088-0088	Embrey Dam/VEPCO Power Dam (demolished)	NRHP Eligible	N/A	N/A
088-5180	Chancellorsville Battlefield	NRHP Eligible	0	29/1700 to 29/1702 & 2157/5420 to 2157/5422
088-5181	Bank's Ford/Salem Church Battlefield	Federal Det. Of Eligibility	0	29/1675 to 29/1693 & 2157/5397 to 2157/5413
089-0008	Aquia Church, 2938 Richmond Highway	NHL Listed; NRHP Listed	5,981	29/1784
089-0010	Carlton, 501 Melchers Drive	NRHP Listed	2,588	2157/5421
089-0012	Clearview, 420 Forbes Street	NRHP Listed	4,875	2157/5422
089-0020	Glencairne, 559 Cambridge Street	NRHP Eligible	0	29/1710 to 29/1716 & 2157/5431 to 2157/5437
089-0022	Belmont/Gari Melchers Home, 226 Washington Street	NHL Listed; NRHP Listed	2,193	2157/5419
089-0061	Cedar Hill Farm	Determined Potentially Eligible	0	29/1755
089-0067	Falmouth Historic District	NRHP Listed	2,440	2157/5419
089-0067-0031	Conway House, 305 King Street	NRHP Listed	4,573	2157/5420
089-0103	Aquia Creek Quarries/ Brent's Island	NRHP Listed	1,692	29/1784
089-0247	H.H. Poole High School/ Stafford Training School, 1739 Richmond Highway	NRHP Listed	2,677	2104/5479
111-0008	Brompton/President's Residence, Mary Washington College, Hanover Street	NRHP Listed	4,502	2157/5397
111-0047	Kenmore Plantation/ Millbrook, 1201 Washington Avenue	NHL Listed; NRHP Listed	4,593	29/1675
111-0107	John Lewis House/Rowe House/War Hospital, 801 Hanover Street	NRHP Listed	5,176	29/1675
111-0132	Fredericksburg Historic District	NRHP Listed	5,093	29/1675
111-0147	Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park and Cemetery	NRHP Listed	47	29/1690
111-0149	Fall Hill, 3315 Fall Hill Avenue	NRHP Listed	0	29/1690 to 29/1693 & 2157/5409 to 2157/5413
111-5007	Carl's Frozen Custard Stand, 2200 Princess Anne Street	NRHP Listed	3,980	2157/5406
111-5262	Washington Avenue Historic District	NRHP Listed	3,814	29/1675

DHR #	Resource Name	DHR/NRHP Status	Distance to Closest Existing Line (Feet)	Closest Existing Structure(s)
111-5265	Fredericksburg City and Confederate Cemeteries	NRHP Listed	4,390	29/1675
111-5267	Elmhurst, 2010 Fall Hill Avenue	NRHP Listed	3,628	2157/5406
111-5295	Battle of Fredericksburg I	Determined Potentially Eligible	0	29/1675 to 29/1697 & 2157/5397 to 2157/5417
111-5296	Battle of Fredericksburg II	Determined Potentially Eligible	0	29/1675 to 29/1691 & 2157/5397 to 2157/5411
111-5297	Old Mill Historic District	Determined Potentially Eligible	16	2157/5408
111-5473	Allman's Bar-B-Que, 2000 Augustine Avenue	Determined Eligible	557	29/1675

2.1.2 Archaeology Resources

Sixteen previously identified archaeological resources are located either within or immediately adjacent to the project ROW (Appendix C). One site, Site 44ST0625, a Civil War camp and cemetery, has been determined eligible and Site 44ST0865, a mid-to late nineteenth century camp, has been determined potentially eligible for listing in the NRHP by DHR. The remaining 14 sites are currently unevaluated (Table 3).

Table 3 Previously Recorded Archaeological Resources Considered under the Stage I Pre-Application Guidelines

DHR #	Resource Name	NRHP Status	Impact
44SP0571	Mid-19th Century Earthworks	Not Evaluated	Investigate During Archaeological Survey
44SP0574	Civil War Earthworks	Not Evaluated	Investigate During Archaeological Survey
44SP0640	Pre-1817 Old Fall Hill Road Trace	Not Evaluated	Investigate During Archaeological Survey
44ST0072	Late 18th /Early 19th Century Canal	Not Evaluated	Investigate During Archaeological Survey
44ST0101	Pre-Contact Temporary Camp, Indeterminant	Not Evaluated	Investigate During Archaeological Survey
44ST0102	Pre-Contact Temporary Camp, Indeterminant	Not Evaluated	Investigate During Archaeological Survey
44ST0109	Middle Archaic Camp	Not Evaluated	Investigate During Archaeological Survey
44ST0241	Early 20th Century Quarry	Not Evaluated	Investigate During Archaeological Survey
44ST0279	Mid-to Late 19th Century Military Base/Facility	Not Evaluated	Investigate During Archaeological Survey
44ST0280	Mid-to Late 19th Century Military Base/Facility	Not Evaluated	Investigate During Archaeological Survey
44ST0625	Civil War Camp and Cemetery	NRHP Eligible	Investigate During Archaeological Survey
44ST0677	Pre-Contact Lithic Scatter, Indeterminant	Not Evaluated	Investigate During Archaeological Survey

STAGE I PRE-APPLICATION ANALYSIS FOR THE PROPOSED DOMINION ENERGY VIRGINIA FREDERICKSBURG TO AQUIA HARBOUR LINES #29, #2104, AND #2157 PARTIAL REBUILD, PRINCE WILLIAM AND STAFFORD COUNTIES AND CITY OF FREDERICKSBURG, VIRGINIA

BACKGROUND RESEARCH

DHR #	Resource Name	NRHP Status	Impact
44ST0782	Pre-Contact Lithic Scatter	Not Evaluated	Investigate During Archaeological Survey
44ST0783	Pre-Contact Temporary Camp	Not Evaluated	Investigate During Archaeological Survey
44ST0787	Late Archaic, Indeterminate/ Late 18th to Mid-19th Century Domestic Site	Not Evaluated	Investigate During Archaeological Survey
44ST0865	Mid-to Late 19th Century Camp	Determined Potentially Eligible	Investigate During Archaeological Survey

3.0 STAGE I PRE-APPLICATION ANALYSIS RESULTS

3.1 VISUAL EFFECTS METHODOLOGY

Fieldwork for the proposed transmission line project was undertaken by Stantec's Assistant Architectural Historian Olivia McCarty under the direction of Senior Architectural Historian, Sandra DeChard from January 23 to 28, 2023. The fieldwork for the assessment entailed photographing the resources requiring viewshed analysis according to the Stage I Pre-Application guidelines and examining the potential views from the resources towards the proposed transmission line improvements. As the fieldwork was conducted prior to a formal SCC application submittal, all photographs were taken from public ROW locations with aerial photography utilized to supplement the analysis of project visibility and potential visual effects. As the proposed line is a rebuild of an existing transmission line and the proposed new line will be located within the existing alignment, the existing line was utilized to assist with the assessment of potential visual effects.

A detailed viewshed was modeled for the existing and proposed structures. This analysis required the creation of two datasets, a digital elevation model (DEM) which provided base ground elevations, and a digital surface model (DSM) which provided overall elevations for features on the terrain, such as trees and buildings. Using the existing structure heights and preliminary proposed structure heights provided by Dominion Energy, two viewshed analyses were run using these datasets to determine where the existing and proposed structures are or will be visible in the landscape surrounding the proposed transmission line improvements. The visibility is illustrated by three color shadings:

- Orange - where both existing and proposed structures are/will be visible,
- Burgundy - where the existing structures are visible, but the proposed structures will not be, and
- Blue - where the existing structures are not visible, but the proposed structures will be.

3.2 INDIVIDUAL ARCHITECTURAL RESOURCES CONSIDERED

Nineteen individual architectural resources within the limits of the Stage I study area were considered for visual effects for the proposed Rebuild Project (Appendix B). Three resources, Aquia Church (DHR #089-0002), Belmont/Geri Melcher's Home (DHR #089-0022), and Kenmore Plantation (DHR #111-0047) have been designated NHL properties. Eleven of the individual resources are listed in the NRHP (DHR #089-0010, #089-0012, #089-0067-0031, #089-0103, #089-0247, #111-0008, #111-0107, #111-0149, #111-5007, #111-5265, and #111-5267). Three resources have been determined eligible for listing in the NRHP by DHR and are DHR #088-0088, #089-0069, and #111-5473, and one resource (DHR #089-0061), which is partially located within the transmission line corridor, has been determined potentially eligible by DHR (Table 2). The resources are further described below along with a discussion and recommendation of potential effects resulting from the proposed Rebuild Project.

3.2.1 Embrey Dam/VEPCO Dam (DHR #088-0088)

Embrey Dam/VEPCO Dam (DHR #088-0088) has been demolished. This resource has been removed from consideration in this analysis.

3.2.2 Aquia Church (DHR #089-0008)

Constructed circa 1751, Aquia Church is a two-story, Georgian style, Greek Cross plan church constructed of brick laid in a Flemish bond pattern. The church has a hipped roof with a tower topped by a cupola. Fenestration comprises nine-over-nine wood sash windows on the first floor and arched nine-over-six wood sash windows on the second floor. Quoins and door surrounds are carved from local Aquia stone. The double paneled door is topped by a pediment (Figure 2). There are four secondary resources including an eighteenth-century cemetery, a nineteenth century fence, undated parsonage, and a circa 1700 dwelling within the resource boundary. The cemetery is contributing to the church's eligibility and the NRHP boundary follows the boundaries of the church parcel. The church was listed in the NRHP in 1969. It was designated an NHL in 1991 as a nationally significant example of architecture under Criterion C and Criteria Consideration A, with a Period of Significance of 1751 to 1757 (DHR Site Files; Driggs 1990).

Figure 2 View of Aquia Church (DHR #089-0008), View Looking East.

3.2.2.1 Visual Effects

Aquia Church is located at the northeast corner of Richmond Highway (Route 1) and Washington Drive within 1.5 miles of the Rebuild Project (Appendix B). The church is set within an open, level landscape with an asphalt parking lot in front and a cemetery located to the north, east, and south. Several large trees dot the landscape within the cemetery. Beyond the cemetery and the church are dense areas of

woods which shield the resource from modern residential and commercial development on the adjacent parcels (Appendix B).

Aquia Church is located 5,981 feet to the northwest of the nearest point of the existing Line #568 and Line #29 transmission line corridor. The site visit indicates that, under current conditions, there is no visibility of the existing transmission line structures (Figure 3). Visual modeling for the Rebuild Project further confirms that there is no visibility of the current transmission line structures and that, based on the preliminary design, there would be no visibility of the proposed Line #568 replacement structures or structures associated with Lines #2305 and #2297 (Figure 4; Appendix C). It is therefore anticipated that the proposed Rebuild Project will have ***No Visual Impact on the Aquia Church (DHR #089-0008)***.

Figure 3 View from Aquia Church (DHR #089-0008; Photo Location 1) Looking Southeast. Existing Transmission Lines are Not Visible.

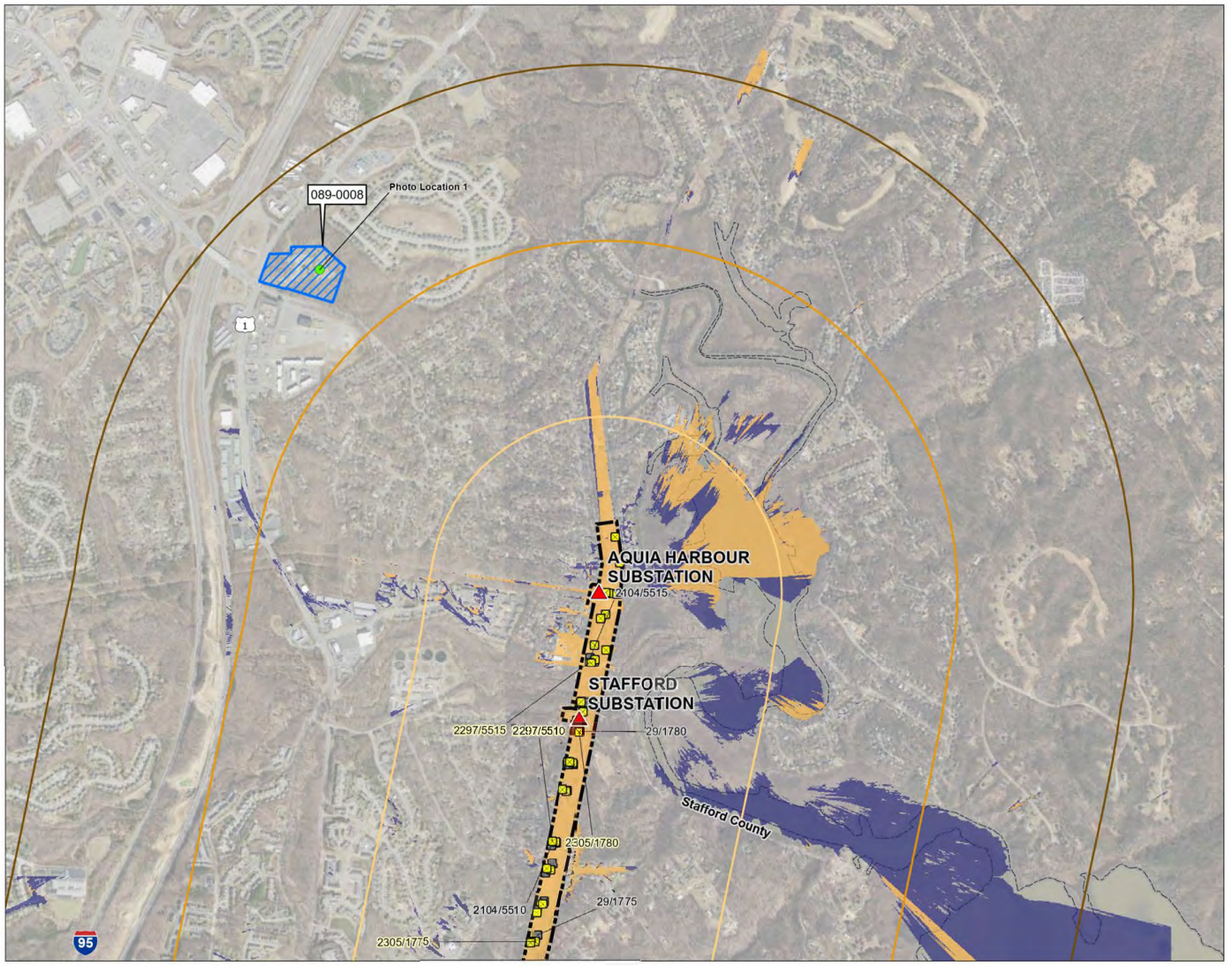

Figure No.
4

Title
Viewshed Analysis and Photo Location Map for Aquia Church (DHR#089-0008)

Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
202301909

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 1,000 2,000 Feet
(At original document size of 11x17)
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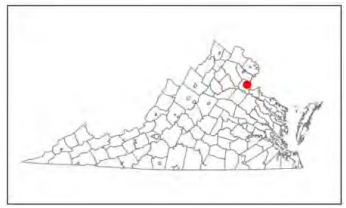
- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

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3.2.3 Carlton (DHR #089-0010)

Carlton, constructed around 1785, is a two-story, Georgian-style, five-bay, frame dwelling. The house is raised on an English basement with its foundation constructed of stone. The exterior walls are sided in weatherboards and the hipped roof in asphalt shingles. An exterior brick chimney is located on each end of the dwelling. The dwelling also features a one-story addition, a single-bay entry porch supported by Tuscan-style columns, multi-light transom over the entry, and nine-over-nine and nine-over-six wood sash windows. Secondary resources located on the property include a late eighteenth century dairy barn, smokehouse, and slave quarters, a turn-of-the-twentieth century shed, and two cemeteries, one dating to around 1800 and the second to around 1891. The c. 1800 cemetery contains the graves of the Carlton's slaves. The resource, however, was not visible from the public ROW during the site visit (Figure 5). Carlton was listed in the NRHP in 1973 under Criterion C for its architectural merit and is a contributing resource to the NRHP-listed Falmouth Historic District (DHR #089-0067; DHR Site Files; Virginia Historic Landmarks Commission (VHLC) 1973).

Figure 5 View of Carlton (DHR #089-0010), Looking Southeast.

3.2.3.1 Visual Effects

Carlton is located within 1.0 mile of the Rebuild Project on the north side of Melchers Drive. The house sits back from the road on an approximately 14.7-acre parcel within a manicured landscape and is surrounded by a lawn dotted with trees. At the periphery of the lawn are dense areas of woods. The house is accessed by a gravel driveway flanked by woods and is not visible from the road (see Figure 5; Appendix B).

The closest existing structures to the resource, 29/1697 through 29/1700 and 2157/5417 through 2157/5420, range in height from approximately 53 feet to 75 feet and under current conditions, were not

visible from the resource (Figure 6; Appendix A). Based on preliminary design, the proposed structures, 2157/5417 through 2157/5420 and 2305/1697 through 2305/1700 will range in height from approximately 100 feet to 120 feet and will be, on average, 45 feet taller than the existing structures (Appendix A). Viewshed modeling and visual simulations prepared for the Rebuild Project indicate that proposed Structure #2305/1700 (OP12) will be visible on the northwest side of Warrenton Road/Route 1 (Figure 7; Appendix C/OP12). Since this structure will be the only proposed structure visible, it is anticipated that the proposed Rebuild Project will have a ***Minimal Visual Impact to Carlton (DHR #089-0010)***.

Figure 6 View from Carlton (DHR #089-0010), Falmouth Historic District (DHR #089-0067) and Chancellorsville Battlefield (DHR #089-5180; Photo Location 2; OP12) Looking Northwest. Existing Transmission is Not Visible.

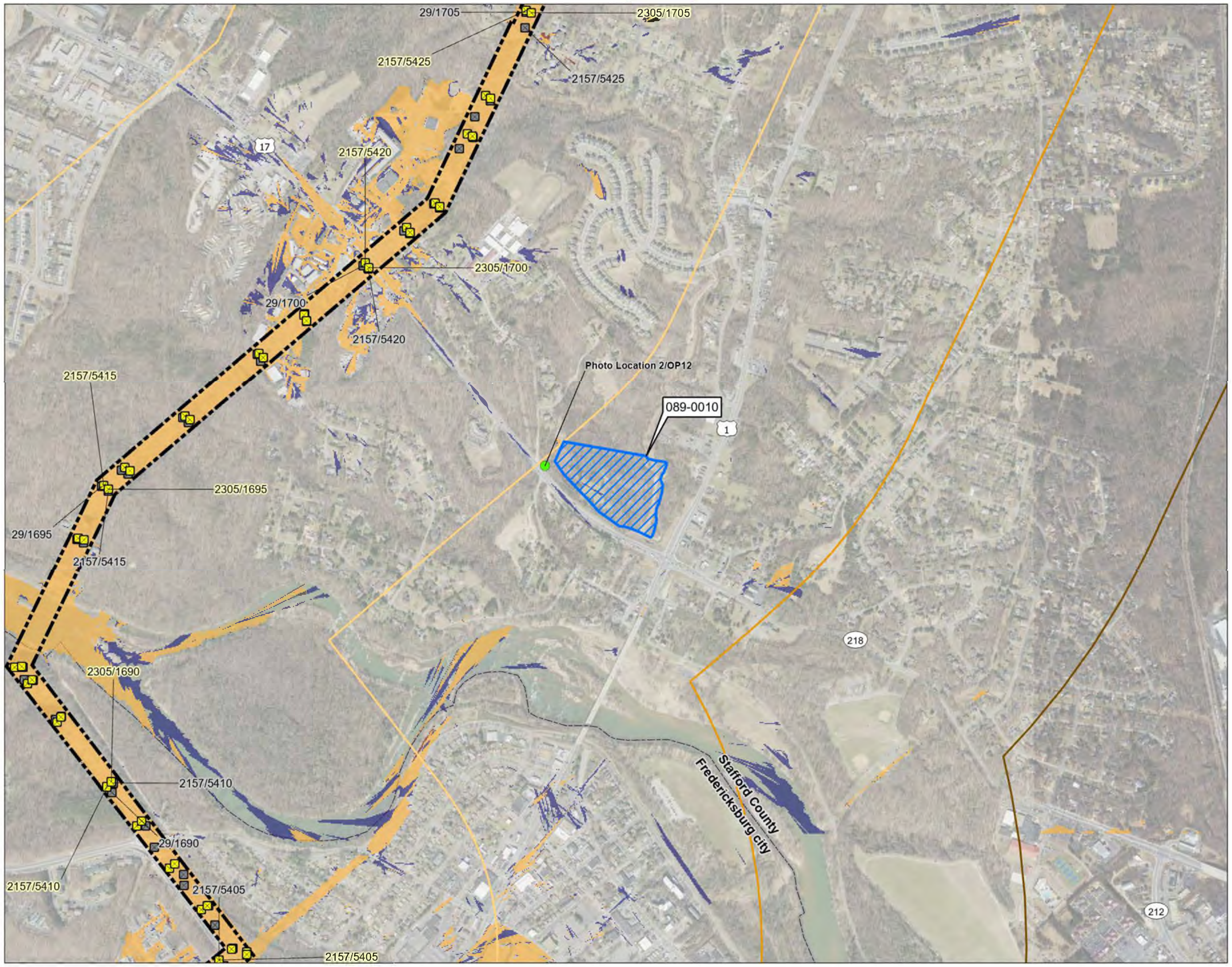

Figure No.
7

Title
Viewshed Analysis and Photo Location Map for Carlton (DHR#089-0010)

Client/Project 202301909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 1,000 2,000 Feet
(At original document size of 11x17)
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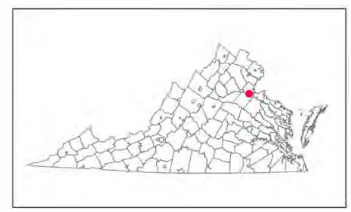
- Photo Location/Observation Point
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

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Page 3 7

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3.2.4 Clearview (DHR #089-0012)

Clearview, a Georgian-style dwelling, was constructed around 1770. The center hall, frame dwelling is two stories with five bays and is supported by a stone foundation. The exterior walls are sided in weatherboards and the dwelling is surmounted by a hipped roof clad in asphalt shingles. Brick exterior chimneys are located on each end of the building and the cornice is ornamented with dentils. A full-width porch is located on the east elevation and a smaller, single-bay porch shelters the entry door on the west elevation. Both porches are supported by Tuscan-style columns. Fenestration includes single-leaf entry doors flanked by sidelights and transom, and nine-over-nine and nine-over-six wood sash windows (Figure 8). Eight secondary resources were noted during past surveys; however, only four remain and include a c. 1880 smokehouse and secondary dwelling, a c. 1920 barn, and a mid-twentieth century shed. The property was listed in the NRHP in 1975 under Criterion C for its architectural merit and is considered a contributing resource to the NRHP-listed Falmouth Historic District (DHR #089-0067; DHR Site Files; VHLC 1974).

Figure 8 View of Clearview (DHR #089-0012), Looking Northeast.

3.2.4.1 Visual Effects

Clearview is located within 1.0 mile of the proposed Rebuild Project and sits back from the road on a 22-acre parcel on the south side of Forbes Street. The dwelling is accessed by a curved gravel driveway and is surrounded by a manicured lawn with woods and tree lines at the edge of the property. Beyond the parcel are areas of mid-twentieth century and later residential development (Appendix B). The closest existing structures to the resource, 29/1697 through 29/1702 and 2157/5417 through 2157/5422, range in height from approximately 53 feet to 76 feet and, under current conditions, were not visible from the resource during the site visit (Figures 9 and 10; Appendix A). Based on preliminary design, the proposed structures, 2157/5417 through 2157/5422 and 2305/1697 through 2305/1702 will range in height from

Figure 9 View from Clearview (DHR #089-0012) and Falmouth Historic District (DHR #089-0067; Photo Location 3) Looking Northwest. Existing Transmission is Not Visible.

Figure 10 View from Clearview (DHR #089-0012) and Falmouth Historic District (DHR #089-0067; Photo Location 3/OP17) Looking West. Existing Transmission is Not Visible.

approximately 100 feet to 120 feet and will be, on average, 45 feet taller than the existing structures (Appendix A). Viewshed modeling and visual simulations conducted for the Rebuild Project indicate that proposed structures 2305/1694 and 2305/1698 and the associated wires, will be visible just above the tree line and only from the southwest corner of the property (Figure 11; Appendix C/OP17). Due to limited accessibility to points within the resource boundary, OP17 is located to the southwest to serve as a proxy location to conservatively simulate views. Since the structures may be only slightly visible from a distance along the ridge of the hill, it is anticipated that the proposed Rebuild Project will have a ***Minimal Visual Impact to Clearview (DHR #089-0012)***.

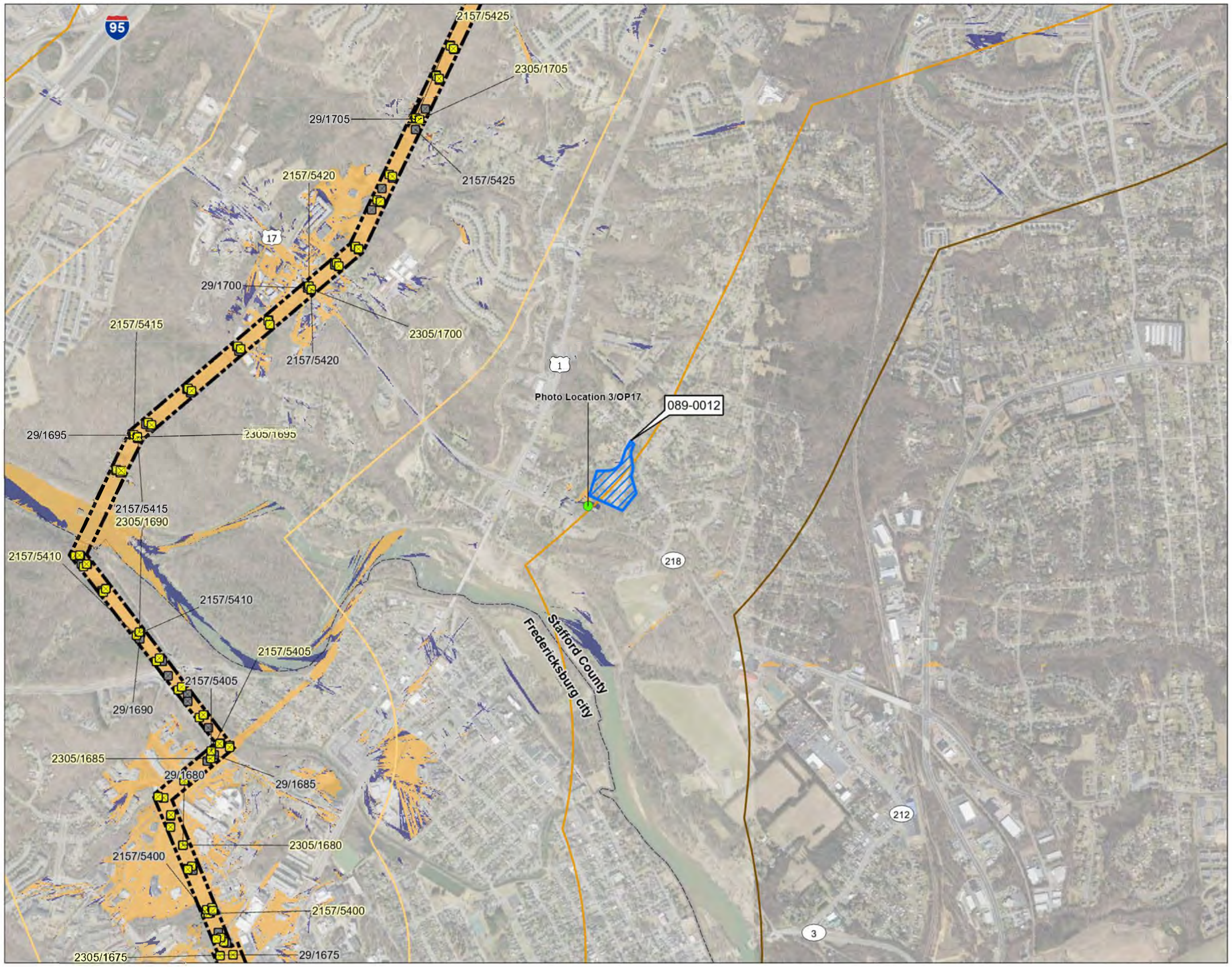

Figure No.
11

Title
Viewshed Analysis and Photo Location Map for Clearview (DHR#089-0012)

Client/Project
202301909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 1,000 2,000 Feet
(At original document size of 11x17)
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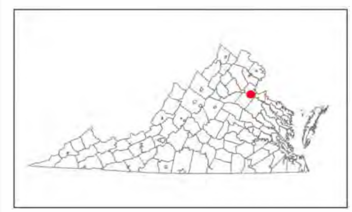
- Photo Location/Observation Point
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: , Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

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3.2.5 Glencairne (DHR #089-0020)

The c. 1820 residence of Glencairne is a two-and-a-half-story, five-bay, frame, Federal-style dwelling. The dwelling is supported by a stone foundation and has brick exterior end chimneys on each gable end. The dwelling also features beaded weatherboard siding and a metal clad gable roof. Additional architectural features noted during previous surveys include nine-over-nine wood sash windows, a porch supported by Doric-style columns, and a fanlight over the front entry door (Figure 12). Secondary resources present on the property at the time of the previous survey included a dairy and dairy barn, well, silo, carriage house, two sheds, and a cemetery. The property was determined eligible for listing in the NRHP by DHR in 1994 under Criterion B for its association with and residence of Judge R. C. L. Moncure (DHR Site Files).

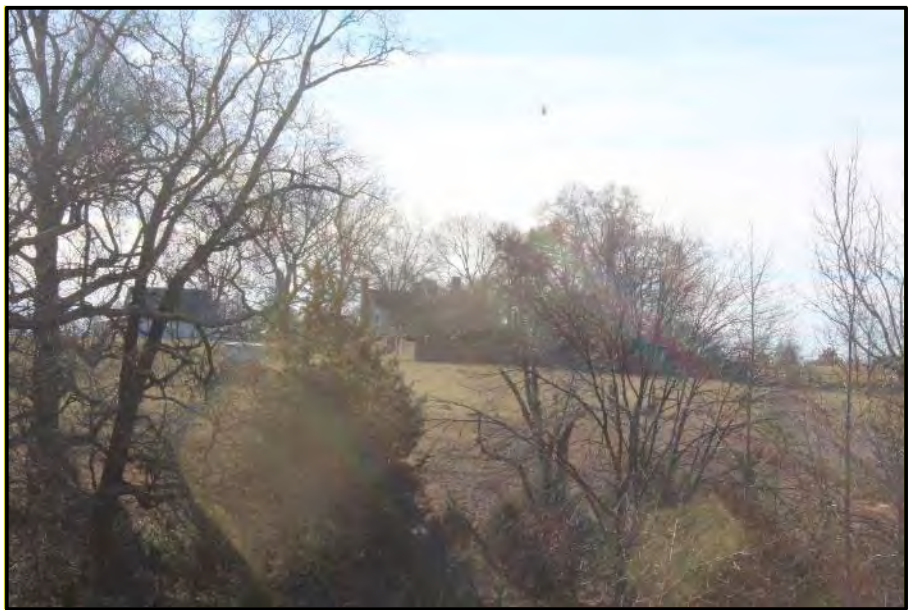


Figure 12 View of Glencairne (DHR #089-0020), Looking South (Photograph taken from the Transmission Line Corridor ROW).

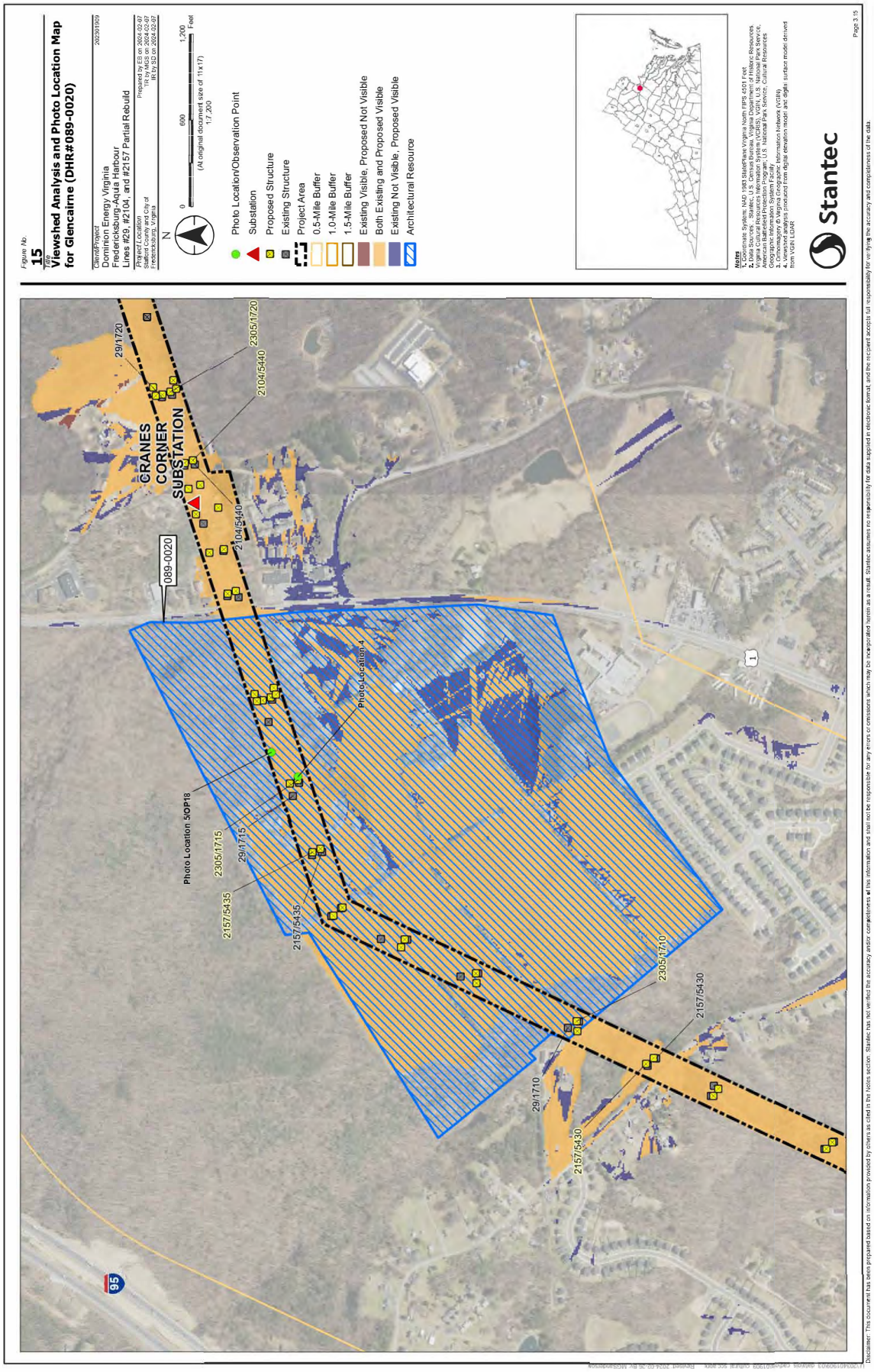
3.2.5.1 Visual Effects

The house and agricultural buildings are located down a long gravel driveway within a gently rolling landscape. The house is surrounded by a manicured lawn with large trees, which partially shield the dwelling from view. Beyond the house are open agricultural fields enclosed by tree lines. Areas of woods are located to the east and southeast of the house adjacent to the road. To the north/northwest of the property is a large area of woods, to the southwest, a modern residential development, and to the south is the Edward E. Drew Middle School. The existing Line #29 and Line #2157 transmission line corridor crosses through the north/northwestern area of the property (Appendix B). The existing structures present within the property boundary, 29/1710 through 29/1716 and 2157/5431 through 2157/5437, range in height from approximately 56 feet to 80 feet and, under current conditions, were visible from the primary resource (Figures 13 and 14; Appendix A). Based on preliminary design, the proposed structures, 2157/5430 through 2157/5436B and 2305/1711 through 2305/1717 will range in height from

Figure 13 View from Glencairne (DHR #089-0020; Photo Location 4) Looking Northwest. Existing Transmission Structures are Visible.

Figure 14 View from Glencairne (DHR #089-0020; Photo Location 5) Looking Southwest. Existing Transmission Structures are Visible.

approximately 105 feet to 125 feet and will be, on average, 46 feet taller than the existing structures (Appendix A). Viewshed modeling and visual simulations conducted for the Rebuild Project indicates that the proposed structures replacing them will remain visible (Figure 15 and Appendix C/OP18). The proposed structures will be weathered steel monopoles, instead of wood H-frame structures, and have a narrower visual imprint from the resource. However, the structures are within a raised open landscape and additional areas in the southern portion of the property which did not view the existing structures, will view the proposed. As such, it is anticipated that the proposed Rebuild Project will have a ***Moderate Visual Impact to Glencairne (DHR #089-0020)***.



Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

3.2.6 Belmont/Geri Melchers Home (DHR #089-0022)

The dwelling of Belmont, also known as the Geri Melchers Home, was constructed around 1761. It was purchased by the painter Geri Melchers in 1916 and was his residence and studio until his death in 1932. Belmont is a two-and-a-half story, five bay, Georgian-style frame dwelling, capped by a wood shingle gable roof with cupola, and is supported by a parged foundation. The exterior is clad in weatherboards and each gable end has two brick exterior chimneys. On the west elevation, there is a two-story gable roof one-bay porch with Ionic columns on the first floor and Tuscan columns on the second floor. On the east elevation is a one-story, one-bay porch with Ionic columns and a flat roof, which shelters a single leaf door with sidelights and a transom. Fenestration comprises nine-over-six and six-over-nine wood sash double-hung windows with operable wood shutters. A two-story, semi-hexagonal sun porch is located on the south elevation and a two-story addition with an inset dormer is located on the north addition (Figure 16). The previous survey noted nine secondary resources including a c. 1870 garage, a c. 1880 stable and smoke/meat house, a c. 1900 spring house, and a c. 1920 gazebo, barn, administration building, and workshop, as well as an unknown number of small frame buildings. The house was designated an NHL in 1965 and was listed in the NRHP in 1966 for its significance in art and science and its association with Geri Melchers with a Period of Significance of 1916 to 1932. Additionally, the house is a contributing resource to the NRHP-listed Falmouth Historic District (DHR #089-0067; DHR Site Files; Lissandrello 1975; Melvin 1972).

Figure 16 View of Belmont/Geri Melchers Home (DHR #089-0022), Looking South.

3.2.6.1 Visual Effects

Belmont/Geri Melcher's Home is located within 1.0 mile of the Rebuild Project and is sited on a 27-acre parcel on the southwest side of Washington Street. The dwelling and most of the outbuildings are set back from the road, although several are adjacent or in view of visitor parking areas to the north of the resource. The lawn surrounding the house and outbuildings is dotted with large trees. To the northwest, west, southwest, and south of the core buildings are areas of dense woods which back up to a modern residential neighborhood. Additional areas of woods are located to the northeast across Washinton Street (Appendix B).

Belmont/Geri Melcher's Home is located 2,193 feet to the southeast of the existing Line #29 and Line #2157 transmission line corridor at its closest point. The site visit indicates that, under current conditions, there is no visibility of the existing transmission line structures. Visual modeling and visual simulations prepared for the Rebuild Project further confirm that there is no visibility of the current transmission line structures and that there would be no visibility of proposed structures associated with Lines #2305 and #2157 based on the preliminary design (Figures 17 and 18; Appendix C/OP 14). It is anticipated, therefore, that the proposed Rebuild Project will have ***No Visual Impact on Belmont/Geri Melchers Home (DHR #089-0022)***.

Figure 17 View from Belmont/Geri Melchers Home (DHR #089-0022) and Falmouth Historic District (DHR #089-0067), Chancellorsville Battlefield (DHR #089-5180), and Battle of Fredericksburg II (DHR #111-5296; Photo Location 6) Looking Northwest. Existing Transmission is Not Visible.

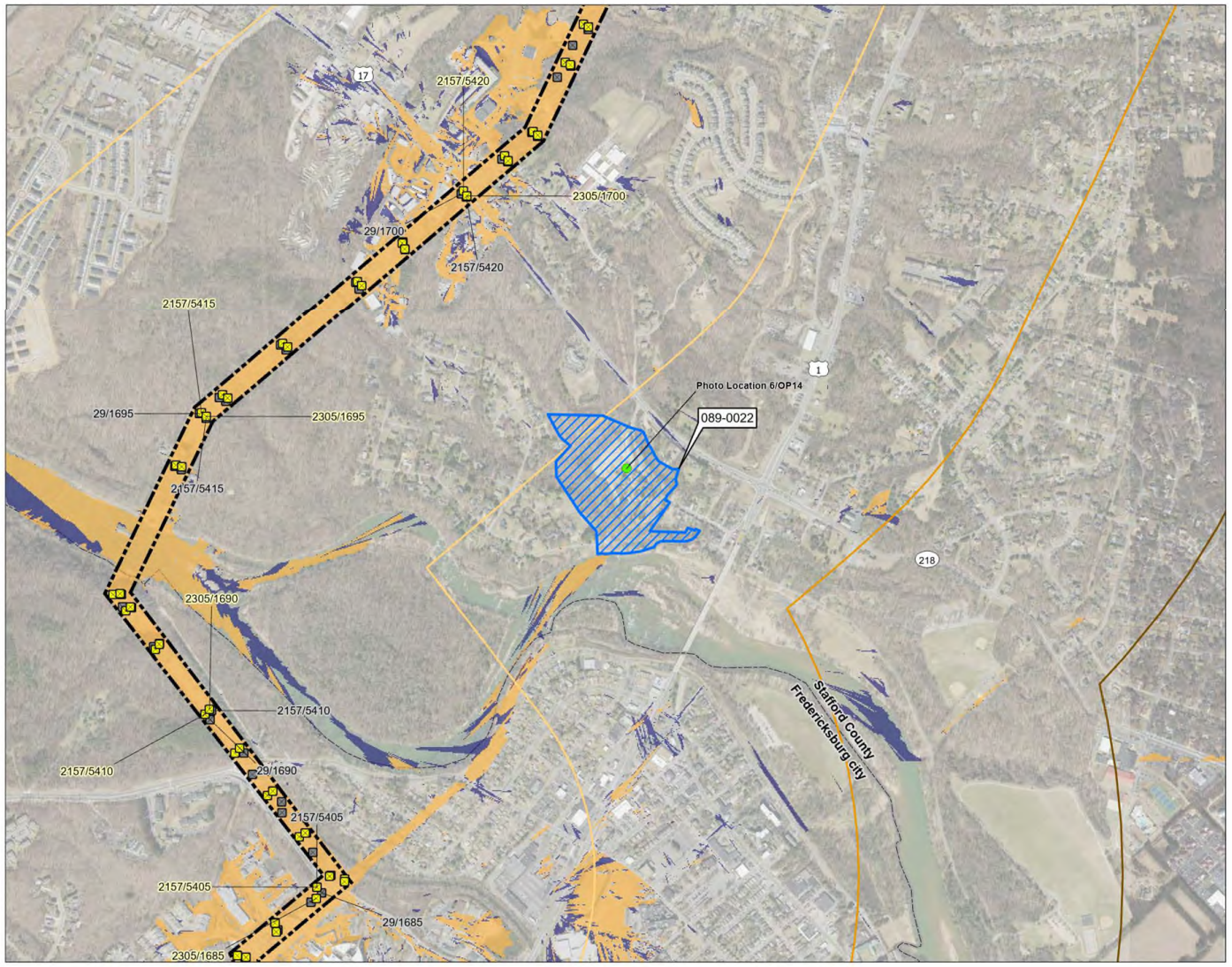


Figure No.

18

Title

Viewshed Analysis and Photo Location Map for Belmont/Geri Melchers Home (DHR#089-0022)

Client/Project 202301909

Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

Project Location
Stafford County and City of Fredericksburg, Virginia

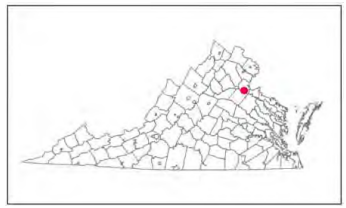
Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 1,000 2,000 Feet

(At original document size of 11x17)
1:12,000

- Photo Location/Observation Point
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: , Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

Stantec

3.2.7 Cedar Hill Farm (DHR #089-0061)

Cedar Hill Farm, constructed around 1750, was originally built as a one-and-a-half-story, frame dwelling surmounted by a steeply pitched side-gable roof. In the early nineteenth century, the dwelling was expanded by a two-story addition. Additional architectural features included stone exterior chimneys, a stone foundation, and wood sash and casement windows (Figure 19). Secondary resources noted during the previous survey include a 1920s garage and shed as well as an early twentieth century cemetery. The dwelling was determined potentially eligible for listing in the NRHP in 1994 under Criterion C for its architectural merit (DHR Site Files).

Figure 19 View of Cedar Hill Farm (DHR #089-0061), Looking Northwest (Photograph Taken from the Transmission Line Corridor ROW).

3.2.7.1 Visual Effects

Cedar Hill Farm is located within 0.5 mile of the Rebuild Project and is set back from the road on an approximately 14.2-acre parcel(Appendix B). The resource is mostly obscured from the photo location by a tree line along the transmission line ROW to the southeast of the resource. Additionally, an area of woods is located to the south of the house which aides in partially shielding the resource from view of the transmission line structures in that direction as well. To the southeast of the existing transmission line corridor is a modern housing development which is currently under construction.

The closest existing structures to the resource, 29/1754 through 29/1756 and 2104/5480 range in height from approximately 61 feet to 71 feet and, under current conditions, were not visible from the resource (Figures 20 and 21; Appendix A).

Figure 20 View from Cedar Hill Farm (DHR #089-0061; Photo Location 7) Looking South. Existing Transmission is Visible from the Southeastern Boundary of the Property.

Figure 21 View from Cedar Hill Farm (DHR #089-0061; Photo Location 7; OP20) Looking Northeast. Existing Transmission is Visible from the Southeast Property Boundary.

STAGE I PRE-APPLICATION ANALYSIS RESULTS

Based on preliminary design, the proposed structures, 2104/5480 through 2104/5483 and 2305/1754 through 2305/1756 will range in height from approximately 115 feet to 125 feet and will be, on average, 52 feet taller than the existing structures (Appendix A).

Viewshed modeling and visual simulations conducted for the Rebuild Project indicate that proposed structures #2305/1756 through #2305/1698 and 2104/5483 through 2104/, will be visible from the southeastern-most section of the property and where the transmission line crosses the property's southeast corner (Figure 22; Appendix C/OP20). The proposed structures will be weathered steel monopoles instead of wood H-frame structures resulting in a narrower visual imprint from the primary resource. The proposed structures will have a longer span between structures minimizing the number of structures within the resource's viewshed. Although the proposed structures will be taller, it is anticipated that the overall change in the visual impact will be minimal. As such, it is anticipated that the proposed Rebuild Project will have a ***Minimal Visual Impact on Cedar Hill Farm (DHR #089-0061).***

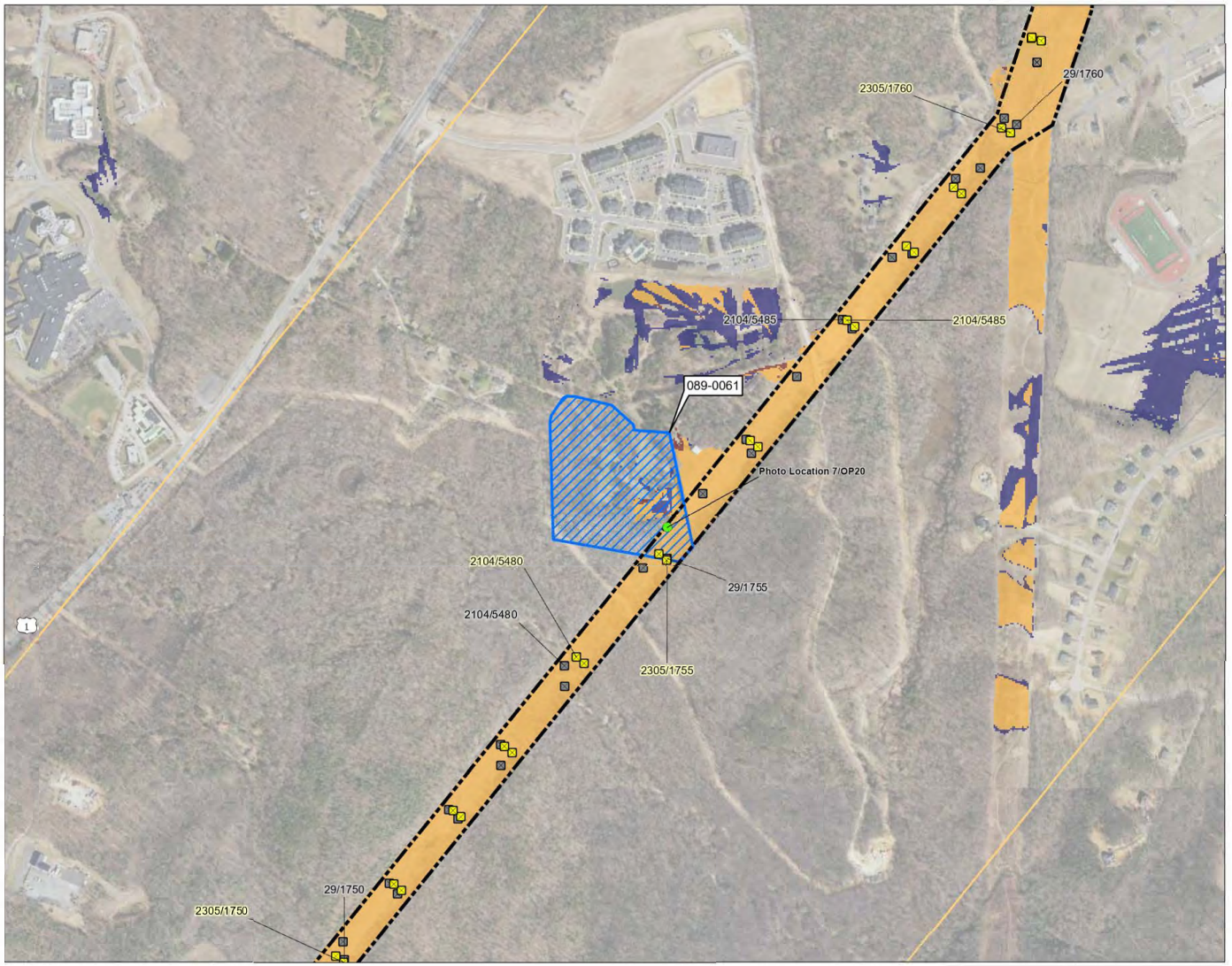


Figure No.
22

Title
Viewshed Analysis and Photo Location Map for Cedar Hill Farm (DHR#089-0061)

Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
202301909

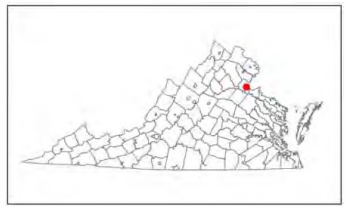
Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 600 1,200 Feet
(At original document size of 11x17)
1:7,200

- Photo Location/Observation Point
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: , Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

Stantec

3.2.8 Conway House (DHR #089-0067-0031)

The Conway House, constructed in 1807, is a two-story, five-bay, brick, Federal style dwelling. The bricks are laid in a Flemish bond pattern on the façade with three-course American bond pattern on the remaining elevations. The dwelling also features three interior chimneys, a corbelled brick cornice, brick foundation, and six-over-nine and nine-over-nine wood sash windows with splayed brick lintels (Figure 23). The dwelling was listed in the NRHP in 2003 under Criterion C for its architectural merit (DHR Site Files; Schools and Schools 2003).

Figure 23 View of Conway House (DHR #089-0067-0031), Looking Northwest.

3.2.8.1 Visual Effects

The Conway House is within 1.0 mile of the Rebuild Project and is set close to the road on an approximately 2.5-acre parcel. The dwelling fronts King Street and is surrounded by a lawn on three sides with a low stone wall along the front boundary of the property. Several large trees are present in the rear yard. To the southwest of the dwelling, across King Street, is the Port of Falmouth Park with the Rappahannock River beyond. To the northwest, between the resource and the proposed Rebuild Project are woods as well as residential development and a small area of commercial buildings along Cambridge Street (Appendix B).

The Conway House is located 4,573 feet to the southeast of the existing Line #29 and Line #2157 transmission line corridor. The site visit indicates that, under current conditions, there is no visibility of the existing transmission line structures (Figures 24 and 25).

Figure 24 View from Conway House (DHR #089-0067-0031), Falmouth Historic District (DHR #089-0067), Chancellorsville Battlefield (DHR #088-5180), and Battle of Fredericksburg I (DHR #111-5295; Photo Location 8) Looking Southwest. Existing Transmission is not Visible.

Figure 25 View from Conway House (DHR #089-0067-0031), Falmouth Historic District (DHR #089-0067), Chancellorsville Battlefield (DHR #088-5180), and Battle of Fredericksburg I (DHR #111-5295; Photo Location 8) Looking Northwest. Existing Transmission is not Visible.

Visual modeling for the Rebuild Project further confirms that there is no visibility of the current transmission line structures and that there would be no visibility of proposed structures associated with Lines #2305 and #2157 based on the preliminary design (Figure 26; Appendix C). It is anticipated, therefore, that the proposed Rebuild Project will have ***No Visual Impact on the Conway House (DHR #089-0067-0031)***.

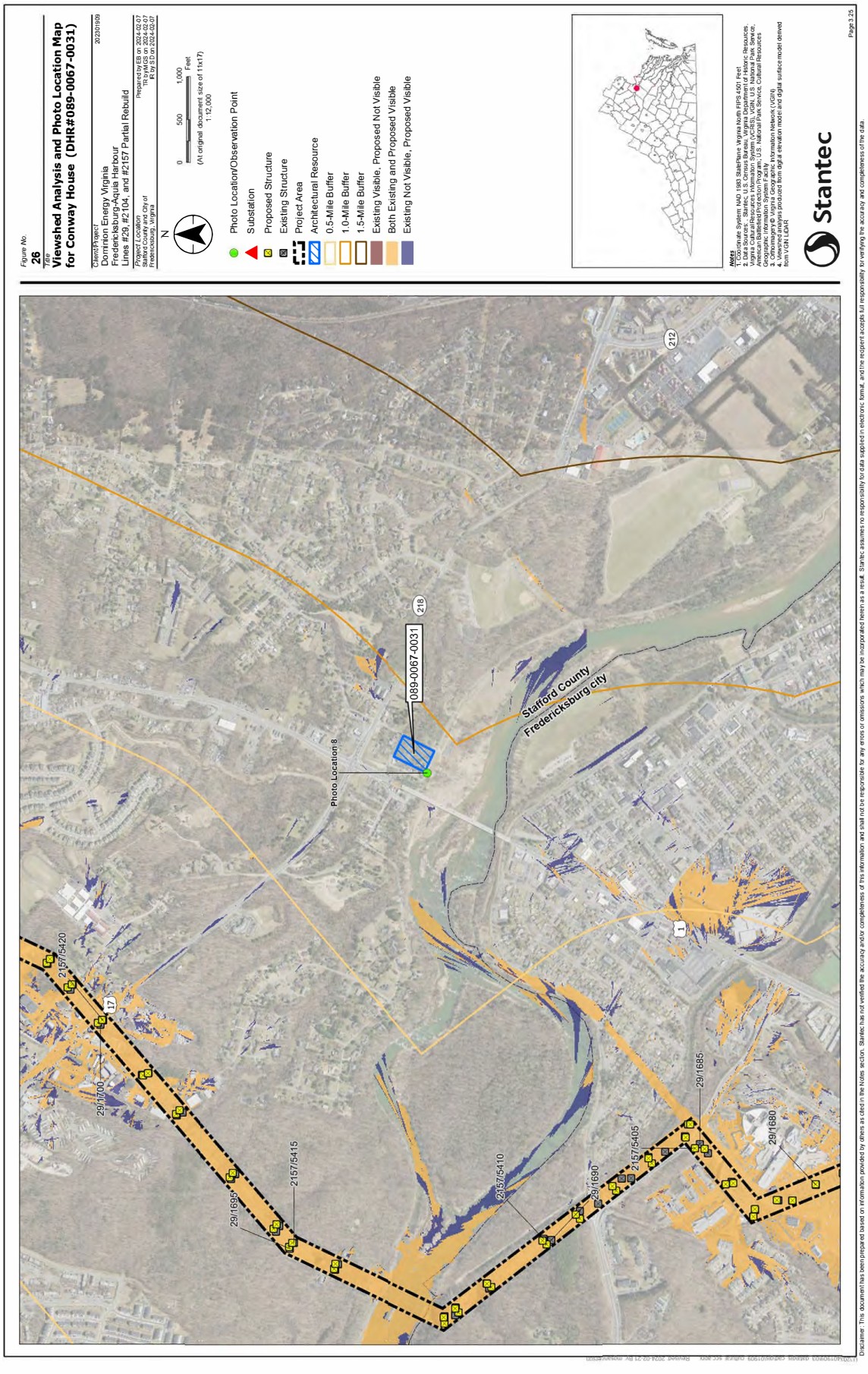


Figure No.
26
Title
Viewshed Analysis and Photo Location Map
for Conway House (DHR#089-0067-0031)
Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #28, #2104, and #2157 Partial Rebuild
Project Location
Stafford County and City of
Fredericksburg, Virginia
Prepared by EB on 2024-02-07
TR by MG on 2024-02-07
IR by SG on 2024-02-07
N
0
500
1,000
Feet
(At original document size of 11x17)
1:12,000
Photo Location/Observation Point
Substation
Proposed Structure
Existing Structure
Project Area
Architectural Resource
0.5-Mile Buffer
1.0-Mile Buffer
1.5-Mile Buffer
Existing Visible, Proposed Not Visible
Both Existing and Proposed Visible
Existing Not Visible, Proposed Visible
Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec; U.S. Census Bureau; Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS); VGIN; U.S. National Park Service, Civil War Battlefield Preservation Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery© Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR
Stantec
Page 3 25
Photo Location 8
089-0067-0031
Stafford County
Fredericksburg city
218
212
17
1
2157/5420
29/1700
2157/5415
29/1695
2157/5410
29/1690
2157/5405
29/1685
29/1680

3.2.9 Aquia Creek Quarry/Brent's Island (DHR #089-0103)

The Aquia Creek Quarry, dating to approximately 1791, is located on Government Island and encompasses approximately 17 acres (Figure 27). Within the 17 acres are five quarry sites and a foundation of a building whose function is currently unknown. The quarry functioned as a public quarry and the sandstone extracted from the site was used in the construction of the White House and the Capitol Building among other prominent buildings in Washington, DC, and areas of Virginia. The quarry was listed in the NRHP in 2007 under Criterion A for its significance in industry and Criterion D for its archaeological potential. The Period of Significance for Criterion A eligibility is 1791 to 1825 and for Criterion D eligibility is the Paleolithic to Woodland periods (DHR Site Files; Orient and Wheatcraft 2007).

Figure 27 View of Aquia Creek Quarry/Brent's Island (DHR #089-0103), Looking East.

3.2.9.1 Visual Effects

Aquia Creek Quarry/Brent's Island is located within 1.0 mile of the Rebuild Project. A large area of the resource is tree covered to the east of the Aquia Creek. A wood deck with rails extends into the creek as an observation point and interpretive location. An area of woods is located to the northwest, west, and southwest between the resource and the existing transmission line corridor carrying Lines #29, 2104, and 568 (Appendix B). The closest existing structures to the resource, 29/1782 through 29/1785, 2104/5515 through 2104/5518, 568/77, and 568/76, range in height from approximately 80 feet to 147 feet and, under current conditions, were only visible from the resource looking to the west/northwest (Figures 28 and 29; Appendix A). Based on preliminary design, the proposed structures, 2305/1782 through 2305/1784, 2297/5515A through 2297/5517, 568/76A, and 568/76 will range in height from approximately 95 feet to 165 feet and will be, on average, 53 feet taller than the existing structures (Appendix A).

Figure 28 View from Aquia Creek Quarry/Brent's Island (DHR #089-0103; Photo Location 9; OP21) Looking Northwest. Existing Line #568 Structures are Visible.

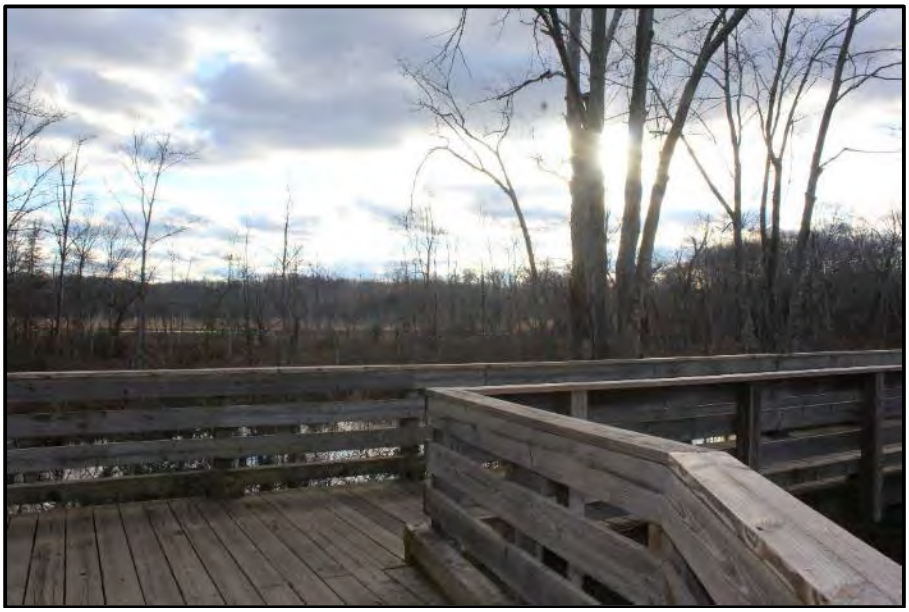


Figure 29 View from Aquia Creek Quarry/Brent's Island (DHR #089-0103; Photo Location 9) Looking Southwest. Existing Transmission is Not Visible.

STAGE I PRE-APPLICATION ANALYSIS RESULTS

Viewshed modeling and visual simulations prepared for the Rebuild Project indicate that proposed structures 2305/1784 and 568/76A will be visible from the western-most point of the resource in the open area on and near the observation deck (Figure 30; Appendix C/OP21). The proposed structures will be weathered steel monopoles instead of wood H-frame structures resulting in a narrower visual imprint. The proposed structures will have a longer span between structures minimizing the number of structures within the resource's viewshed. Although the proposed structures will be taller, it is anticipated that the overall change in the visual impact will be minimal. As most of the resource will be shielded from the proposed Rebuild Project with only a small area within the viewshed, it is anticipated that the proposed Rebuild Project will have a ***Minimal Visual Impact on Aquia Creek Quarry/Brent's Island (DHR #089-0103)***.

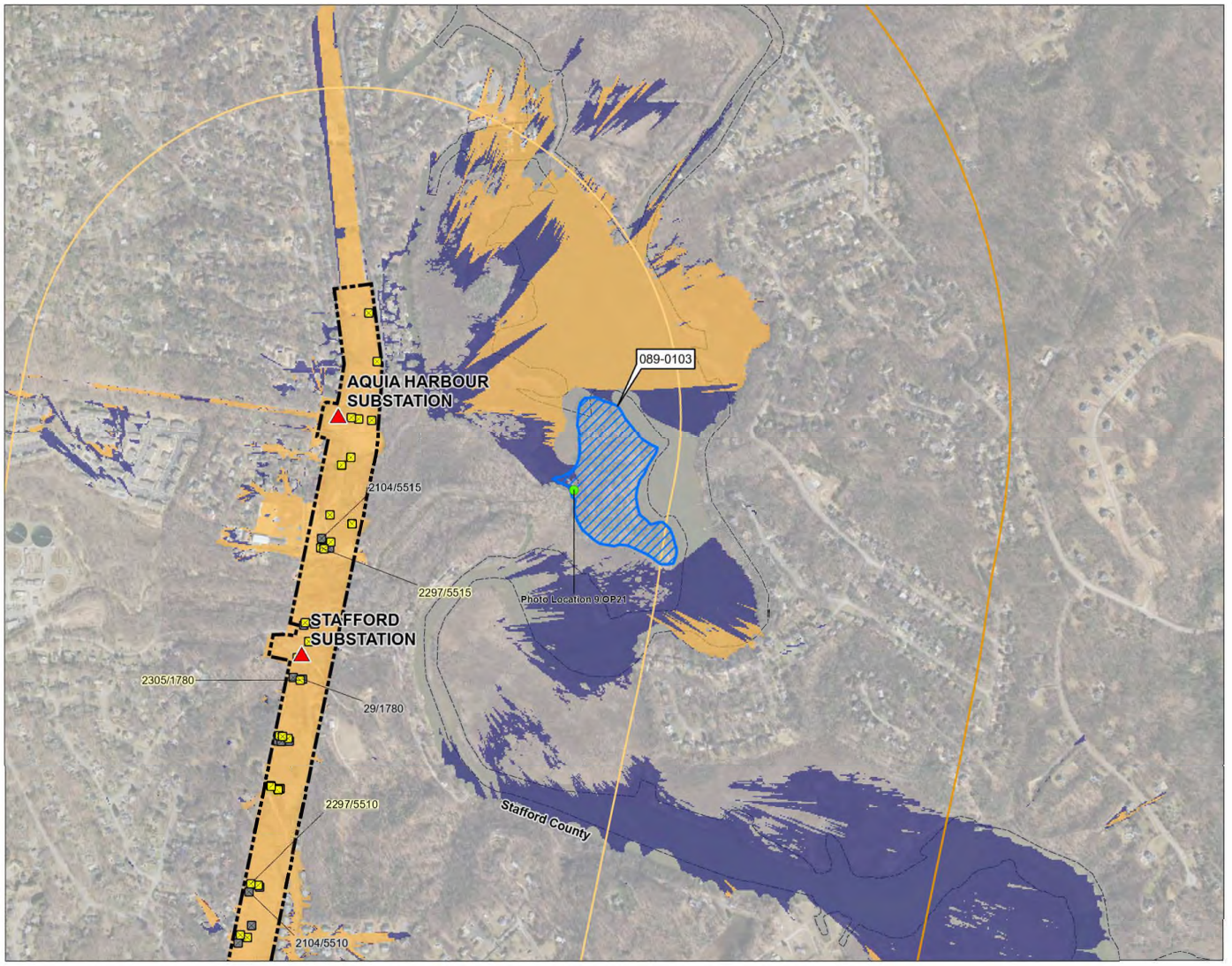


Figure No.
30

Title
Viewshed Analysis and Photo Location Map for Aquia Creek Quarry/Brent's Island (DHR#089-0103)

Client/Project 202301909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

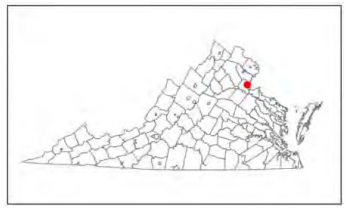
Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 800 1,600 Feet
(At original document size of 11x17)
1:9,600

- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

Stantec

3.2.10 H.H. Poole High School/Stafford Training School (DHR #089-0247)

The Colonial Revival style H. H. Poole High School/Stafford Training School was constructed in 1939 for African American students. The H.H. Poole High School/Stafford Training School, now Rowser Building, played a significant role in African American education and, during the Civil Rights era, integration in the Fredericksburg region. Prior to the establishment of the Stafford Training School, the highest level of education available to African American students was 7th Grade. Although a high school, grades 1 through 7 were still taught at H. H. Poole and in 1961, two elementary students from H.H. Poole successfully enrolled in Stafford Elementary School, marking the first successful integration in the Fredericksburg area. In 1966, the school closed and reopened in the same year as the Stafford Vocational Annex and was renamed In honor of African American teacher Ella Rowser in 1976. The building was converted into offices for the Stafford County Board of Supervisors in 1981 at which time the resources no longer served as a school.

The building in which the school was housed is a one-story, three-bay, brick structure with one-story, gable-roofed wings. The building sits on a poured concrete foundation and features interior end brick chimneys. The banks of windows comprise triple, six-over-six wood sashes. Centered on the main block is a Colonial Revival recessed entry with masonry surround and double doors (Figure 31). The building also features several later twentieth century additions. Several secondary resources were also noted and include a ditch constructed in 1939 to prevent flooding, a mid-twentieth century office and pump house, and three resources with unknown date which include a playing field and two storage buildings. The school was listed in the NRHP in 2013 under Criterion A for its significance in African American Education and Heritage and for its role in Civil Rights (DHR Site Files; Schools 2012).

3.2.10.1 Visual Effects

The H. H. Poole High School is located within 1.0 mile of the Rebuild Project and sits back from the road on a relatively level lot. The lawn that surrounds the school is dotted with small trees and shrubs with paved parking lots and driveways beyond. To the northwest of the building is a playing field and to the northeast and southwest are woods. Across Richmond Highway to the southeast of the building is 2,430 feet of dense woods (Appendix B).

The H. H. Poole High School is located 2,677 feet to the north of the existing Line #29 and Line #2104 transmission line corridor at its closest point. The site visit indicates that, under current conditions, there is no visibility of the existing transmission line structures (Figures 32 and 33). Visual modeling for the Rebuild Project further suggests that there is no visibility of the current transmission line structures and that there would be no visibility of proposed structures associated with Lines #2305 and #2104 based on the preliminary design (Figure 34; Appendix C). It is therefore anticipated that the proposed Rebuild Project will have ***No Visual Impact on H.H. Poole High School/Stafford Training School (DHR #089-0247)***.

Figure 31 View of H.H. Poole High School/Stafford Training School (DHR #089-0247), Looking Northwest.

Figure 32 View from H.H. Poole High School/Stafford Training School (DHR #089-0247; Photo Location 10) Looking East. Existing Transmission is Not Visible.

Figure 33 View from H.H. Poole High School/Stafford Training School (DHR #089-0247; Photo Location 10) Looking Southeast. Existing Transmission is Not Visible.

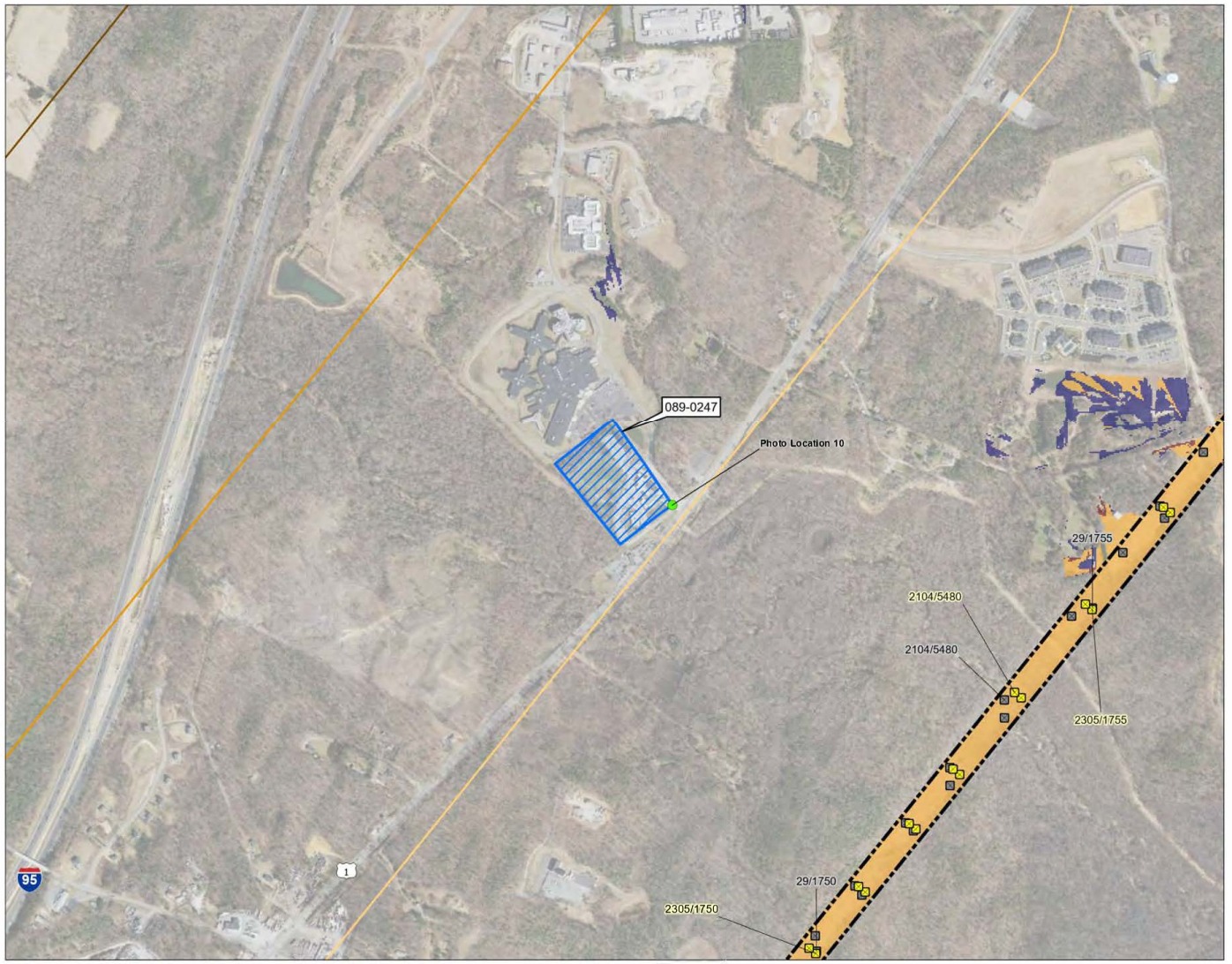


Figure No.
34

Title
Viewshed Analysis and Photo Location Map
H.H. Poole High School/Stafford Training School (DHR#089-0247)

Client/Project 202301909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

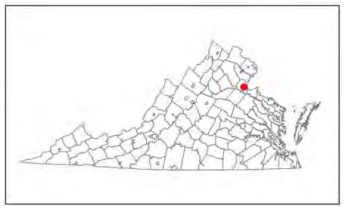
Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 700 1,400 Feet
(At original document size of 11x17)
1:8,400

- Photo Location/Observation Point
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: , Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

Stantec

3.2.11 Brompton (DHR #111-0008)

Brompton is an imposing, two-story, three-bay, Greek Revival-style dwelling with one-story wings and currently serves as the residence for the President of Mary Washington College. The dwelling was constructed prior to 1820 and features a later, ornate pedimented portico with full-height Ionic columns. The pediment was reportedly added after the Civil War as the house had sustained heavy damage. The exterior walls are brick laid in a Flemish bond on the façade and three-course American bond pattern on the remaining elevations. Two large, brick chimneys are visible above the ridge line of the front gable roof. Additional architectural features include an elliptical light over the front entry, which is flanked by sidelights, and six-over-six wood sash windows (Figure 35). Brompton was listed in the NRHP in 1979 under Criterion A for its significance in Civil War history and Education and under Criterion C for its architectural merit (DHR Site Files; VHLC 1979).

Figure 35 View of Brompton (DHR #111-0008), Looking West.

3.2.11.1 Visual Effects

Brompton is located within 1.0 mile of the Rebuild Project and sits on a hill above Hanover Street in the City of Fredericksburg on approximately 11 acres. Surrounding the dwelling is a manicured lawn dotted with mature trees. A stone wall and a tree line extends along the Hanover Street side of the property. A modern sports complex, part of the University of Mary Washington, is located to the southwest. Across Sunken Road is an area of early to mid-twentieth century development with some modern in-fill. To the south is the site of the 1862 battle of Marye's Heights and the Willis Cemetery (Appendix B).

Brompton is located 4,502 feet to the southeast of the existing Line #29 and Line #2157 transmission line corridor. The site visit indicates that, under current conditions, there is no visibility of the existing transmission line structures (Figure 36). Visual modeling and visual simulations for the Rebuild Project

further suggest that there is no visibility of the current transmission line structures and that there would be no visibility of proposed structures associated with Lines #2305 and #2157 based on the preliminary design (Figure 37; Appendix C/OP 1). It is anticipated, therefore, that the proposed Rebuild Project will have ***No Visual Impact to Brompton (DHR #111-0008)***.

Figure 36 View from Brompton (DHR #111-0008), Bank's Ford Battlefield (DHR #088-5181), and Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296; Photo Location 11) Looking Northwest. Existing Transmission Line is Not Visible.

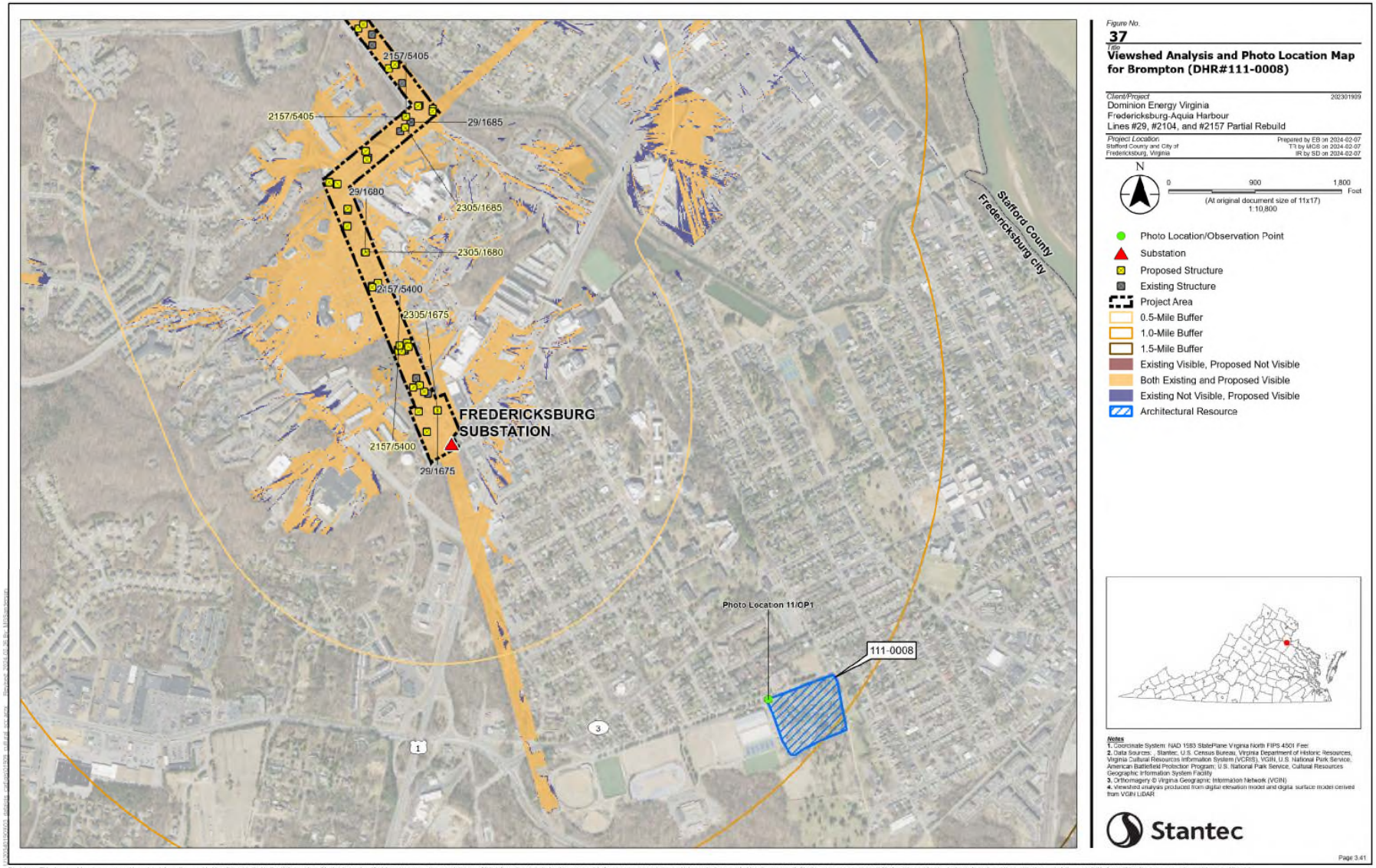


Figure No.
37

Title
Viewshed Analysis and Photo Location Map for Brompton (DHR#111-0008)

Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

202301909

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MCS on 2024-02-07
IR by SD on 2024-02-07

N

0 900 1,800 Feet
(At original document size of 11x17)
1:10,800

- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec; U.S. Census Bureau; Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN; U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthomagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

Stantec

Page 3.41

3.2.12 Kenmore Plantation/Millbrook (DHR #111-0047)

Kenmore Plantation was constructed around 1775 by Fielding Lewis for his wife Betty Washington, the sister of George Washington. The two-story, five-bay, brick residence is designed in the Georgian style and features a jerkin head roof clad in slate shingles. The exterior walls are laid in a Flemish bond pattern with a three-course string course between the first and second floors. Four brick chimneys extend above the roof line, two in each end of the dwelling. The dwelling also features a dentiled cornice, center entry with transom, and nine-over-nine and six-over-nine wood sash windows (Figure 38). The kitchen and office on the parcel were reconstructed around 1929 after the Kenmore Association took ownership of the property. The museum/visitor's center was added in 1974. The resource was listed in the NRHP in 1969 for its significance in art, architecture, and history and designated an NHL property in 1970. Kenmore is also considered a contributing resource to the Washington Avenue Historic District (DHR #111-5262; DHR Site Files; VHLC 1969).

Figure 38 View of Kenmore Plantation/Millbrook (DHR #111-0047), Looking Northeast.

3.2.12.1 Visual Effects

Kenmore Plantation is located within 1.0 mile of the Rebuild Project in the City of Fredericksburg and sits back from the road within an open landscape with a manicured lawn surrounding the dwelling. Large trees dot the landscape beyond the house and a brick wall encloses the property. The tree-lined street of Washington Avenue with center grass median runs past the dwelling. Providing access to the dwelling is a wide brick sidewalk. Beyond the property are late nineteenth to early twentieth century residences (Appendix B).

Kenmore Plantation is located 4,593 feet to the east of the existing Line #29 and Line #2157 transmission line corridor at its nearest point. The closest existing structures to the resource, 29/1675, 2157/5397, and 2157/5398, are within the existing Fredericksburg Substation and range in height from approximately 71 feet to 104 feet. Under current conditions the existing structures were not visible during the stie visit (Figures 39 and 40; Appendix A).

Based on preliminary design, the proposed structures, 2305/1680, 2157/5397, and 2157/5398 will range in height from approximately 71 feet to 104 feet and will be similar in height, if not identical, to the existing structures (Appendix A). Visual modeling for the Rebuild Project suggests that there is no visibility of the current transmission line structures and that there would be no visibility of proposed structures associated with Lines #2305 and #2157 based on the preliminary design (Figure 41; Appendix C). However, visual simulations prepared for the resource from OP 5, suggest that there may be limited visibility of structures 2305/1680 and 2306/1696 (Appendix C/OP 5). However, given the distance and built environment present between Kenmore Plantation and the Rebuild Project, it is likely that the change in viewshed due to the taller structures would be negligible. It is anticipated, therefore, that the proposed Rebuild Project will have ***a Minimal Impact on Kenmore Plantation/Millbrook (DHR #111-0047)***.

Figure 39 View from Kenmore Plantation/Millbrook (DHR #111-0047), Bank's Ford Battlefield (DHR #088-5181), Washington Avenue Historic District (DHR #111-5262) and Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296; Photo Location 12; OP5) Looking West. Existing Transmission Line is Not Visible.

Figure 40 View from Kenmore Plantation/Millbrook (DHR #111-0047), Bank's Ford Battlefield (DHR #088-5181), Washington Avenue Historic District (DHR #111-5262) and Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296; Photo Location 12) Looking North. Existing Transmission Line is Not Visible.

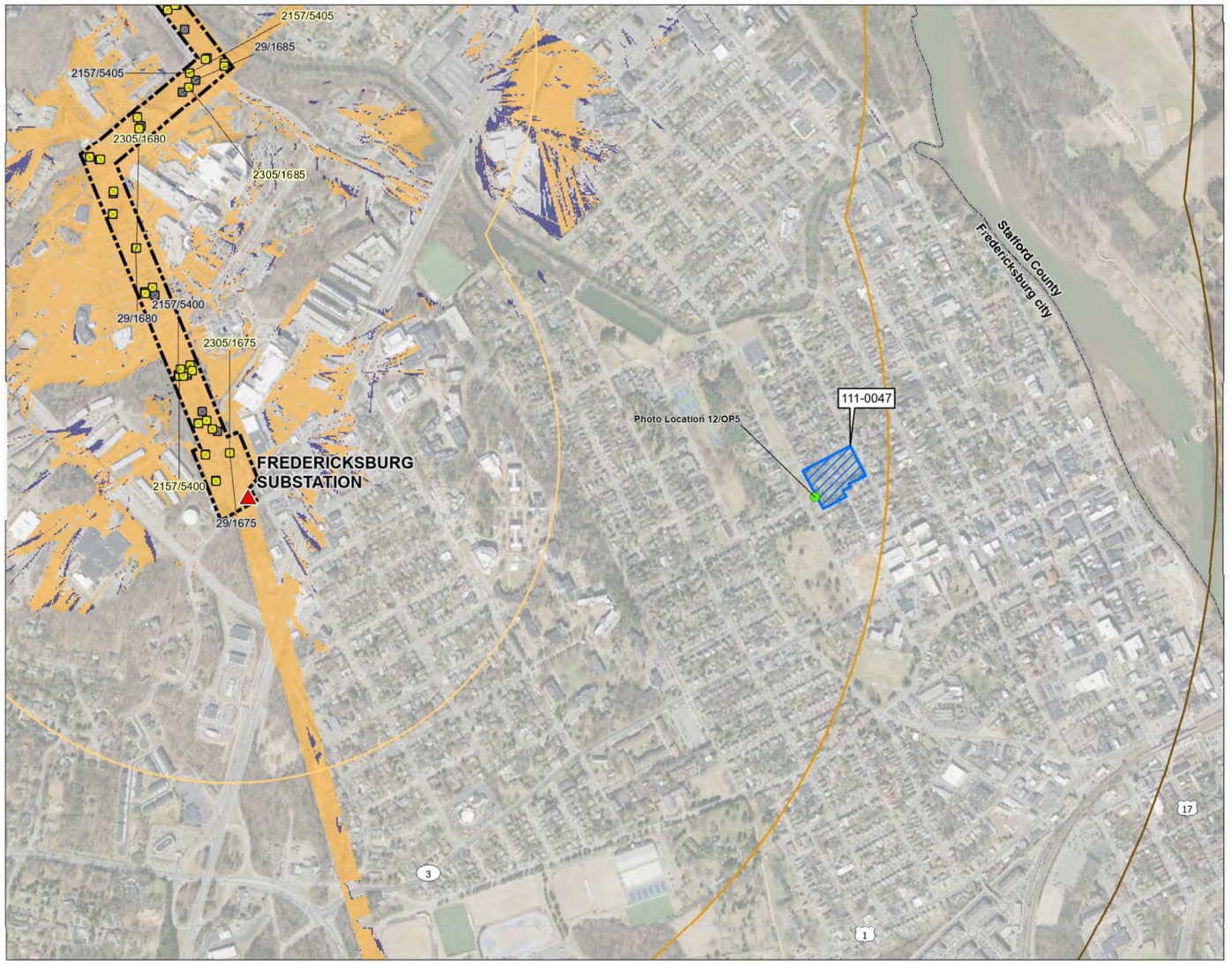


Figure No.

41

Title

Viewshed Analysis and Photo Location Map for Kenmore Plantation/Millbrook (DHR#111-0047)

Client/Project 202301909

Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

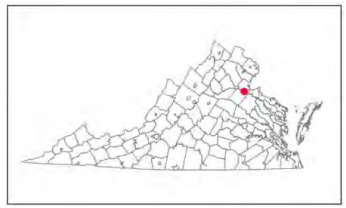
Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 800 1,600 Feet
(At original document size of 11x17)
1:9,600

- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

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3.2.13 John Lewis House/Rowe House/War Hospital (DHR #111-0107)

The John Lewis House is a raised, two-story, four-bay, brick, Federal-style duplex. The dwelling was constructed around 1820 and features a two-story, full-width porch with stairs leading down to the English basement. The brick walls are laid in a Flemish bond on the façade and four-course American bond on the gable ends and rear. Two interior end brick chimneys are located in the northeast gable end. Added to the northeast gable end is a two-story wing with shed-roofed ell. The dwelling also features six-over-six, nine-over-nine, and nine-over-six wood sash windows (Figure 42). The only secondary resource noted on the property was a c. 1910 shed. The John Lewis House was listed in the NRHP in 2008 under Criterion C at a local level for its architectural merit. The dwelling is also considered a contributing resource to the Fredericksburg Historic District (DHR #111-0132; DHR Site Files; Worsham 2008).

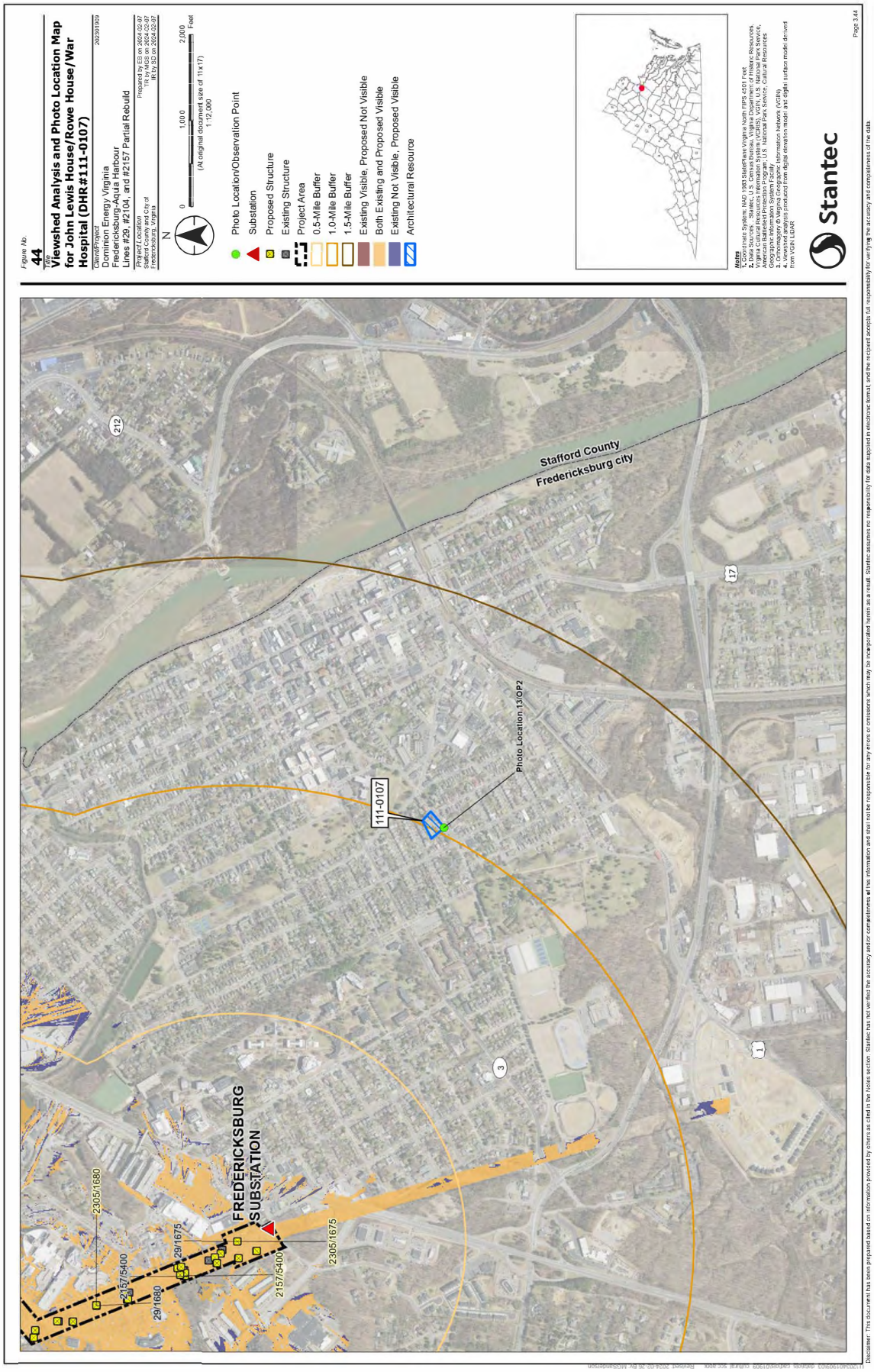
Figure 42 View of John Lewis House/Rowe House/War Hospital (DHR #111-0107), Looking North.

3.2.13.1 Visual Effects

The John Lewis House/Rowe House/War Hospital is located within 1.0 mile of the Rebuild Project and sits close to Hanover Street in the City of Fredericksburg on a level lot. Several shrubs are located on the property of the John Lewis House with several larger trees located to the southwest and west of the house towards the edge of the lot. The lot is surrounded by early twentieth century dwellings with manicured lawns and large trees (Appendix B).

The John Lewis House/Rowe House/War Hospital is located 5,176 feet to the southeast of the existing Line #29 and Line #2157 transmission line corridor. The site visit indicates that, under current conditions, there is no visibility of the existing transmission line structures (Figure 43). Visual modeling and visual simulations prepared for the Rebuild Project further suggest that there is no visibility of the current transmission line structures and that there would be no visibility of proposed structures associated with Lines #2305 and #2157 based on the preliminary design (Figure 44; Appendix C/OP2). It is therefore anticipated that the proposed Rebuild Project will have ***No Visual Impact on the John Lewis House/Rowe House/War Hospital (DHR #111-0107)***.

Figure 43 View from John Lewis House/Rowe House/War Hospital (DHR #111-0107), Chancellorsville Battlefield (DHR #088-5180), and Battle of Fredericksburg I and II (DHR #111-5295 and #111-5296; Photo Location 13) Looking Northeast. Existing Transmission Line is Not Visible.



3.2.14 Fall Hill (DHR #111-0149)

The residence of Fall Hill was constructed around 1779 and is a two-story, three-bay, Georgian-style dwelling with brick exterior walls and a hipped roof sheathed in slate shingles. The brick walls are laid in a Flemish bond pattern on all four sides. The dwelling also features two large brick chimneys projecting through the southwest and northwest roof slope, respectively, as well as a one-story, three-bay, hipped roof porch centered on the façade and a second, smaller porch centered on the southwest elevation. A one-story addition was added to the building's northeast end. The windows and doors including their surrounds were replaced in the 1830s. More recently, the house experienced extensive damage, including a partially collapsed chimney as a result of the 2011 Mineral earthquake. The resource, however, was not visible from the public ROW during the site visit (Figure 45). The property was listed in the NRHP in 1973 for its significance in social and military history as well as for its architectural merit (DHR Site Files; VHLC 1973).

Figure 45. View of Fall Hill (DHR #111-0149), Looking Southwest (Photo is taken from the Transmission Line ROW Corridor).

3.2.14.1 Visual Effects

Fall Hill is located within the 0.5-mile radius of the Project corridor, sits back from the road on an approximately 70-acre parcel, and was not visible from the public ROW. A long circular gravel driveway provides access to the property and is flanked by dense areas of woods. Immediately surrounding the dwelling is a manicured lawn. The existing transmission line corridor crosses the property near its northeastern boundary. Between the proposed Rebuild Project transmission line corridor and the resource is approximately 615 feet of dense woodlands (Appendix B).

The existing structures present within the resources boundary, 29/1690 through 29/1693 and 2157/5409 through 2157/5413, range in height from approximately 52 feet to 75 feet (Appendix A). As evidenced from the site visit and the visual modeling, the existing transmission line structures are only visible from the cleared ROW along the edge of the property (Figures 46 and 47; Appendix C).

Based on preliminary design, the proposed structures, 2157/5409 through 2157/5413 and 2305/1689 through 2305/1693 will range in height from approximately 100 feet to 130 feet and will be, on average, 50 feet taller than the existing structures (Appendix A). Viewshed modeling and visual simulations conducted for the Rebuild Project indicate that proposed structures #2305/1694, #2157/5414,and #2305/1698, will be visible only within the transmission line corridor where the line crosses the property (Figure 48; Appendix C/OP10).

The proposed structures will be weathered steel monopoles instead of wood H-frame structures resulting in a narrower visual imprint from the primary resource. The proposed structures will have a longer span between structures minimizing the number of structures within the resource's viewshed. Although the proposed structures will be taller, it is anticipated that the overall change in the visual impact will be minimal and that the landscape present between the primary resource and the transmission line corridor will shield a majority of the property from view. As such, it is anticipated that the proposed Rebuild Project will have ***a Minimal Visual Impact on Fall Hill (DHR #111-0149)***.

Figure 46 View from the Eastern Edge of the Fall Hill Property (DHR #111-0149), Fredericksburg and Spotsylvania Battlefield NMP (DHR #111-0147), Bank's Ford Battlefield (088-5181) and Battle of Fredericksburg I and II (DHR #111-5295 and #111-5296; Photo Location 14) Looking Southeast. Existing Transmission is Visible.

Figure 47 View from the Eastern Edge of the Fall Hill Property (DHR #111-0149), Fredericksburg and Spotsylvania Battlefield NMP (DHR #111-0147), Bank's Ford Battlefield (088-5181) and Battle of Fredericksburg I and II (DHR #111-5295 and #111-5296; Photo Location 14; OP10) Looking Northwest. Existing Transmission is Visible.

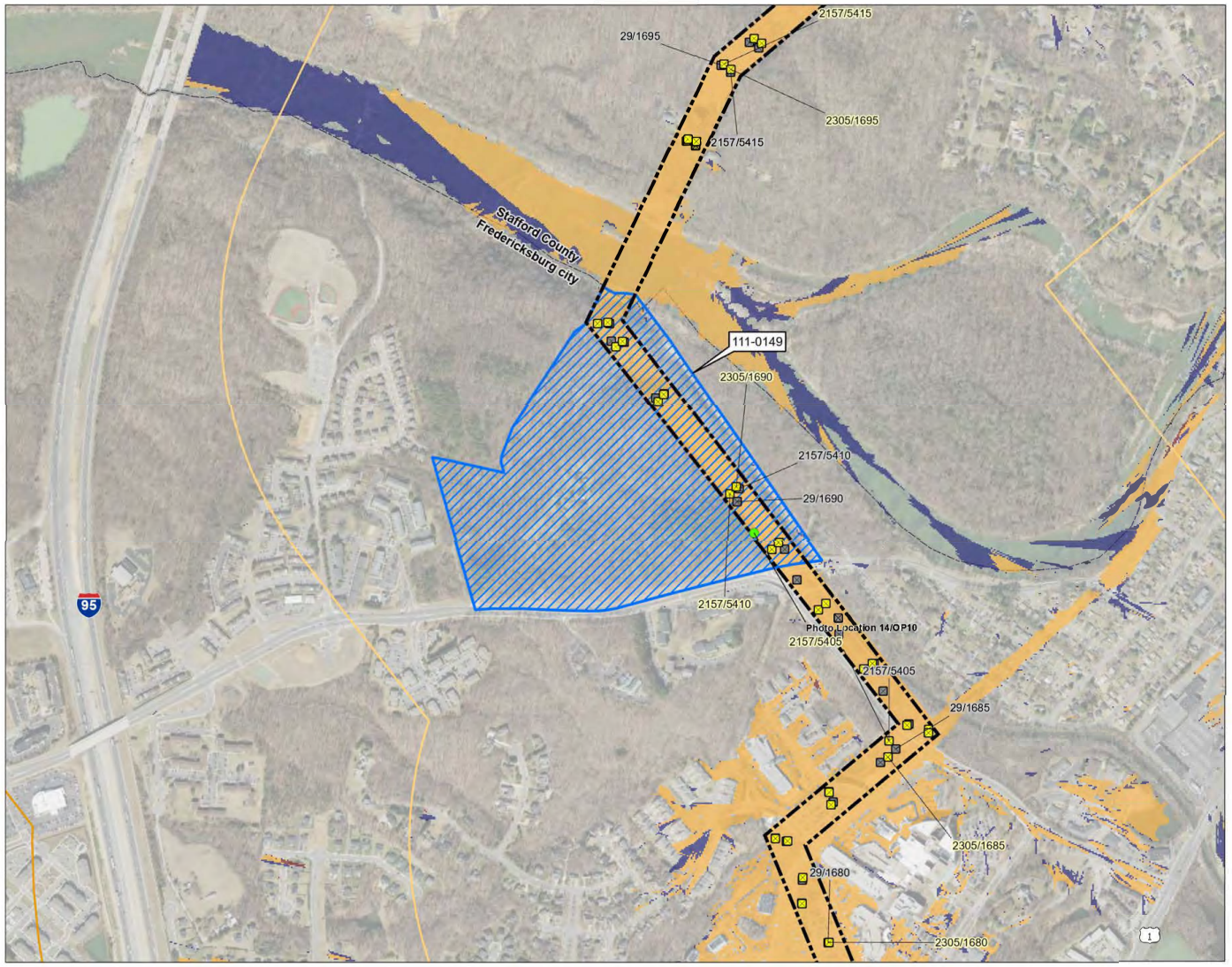


Figure No.
48

Title
Viewshed Analysis and Photo Location Map for Fall Hill (DHR#111-0149)

Client/Project 202301909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

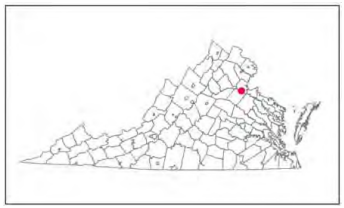
Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 700 1,400 Feet
(At original document size of 11x17)
1:8,400

- Photo Location/Observation Point
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: , Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

Stantec

3.2.15 Carl's Frozen Custard Stand (DHR #111-5007)

Carl's Frozen Custard Stand is an Art Moderne-style restaurant built by Ashton Skinner in 1953, although Carl's Frozen Custard Stand has operated since 1947 in this location. The one-story restaurant is constructed of concrete block with a stucco finish and has a flat roof with a wide overhanging eave. A neon sign affixed to the roof reads, "Carl's" with "Crème Shakes Sundaes" underneath and a tilted ice cream cone at front where the two sides of the sign meet. Fenestration comprises stainless-steel framed-glass windows, with a central sliding glass service window, and three exterior doors of wood, metal, and glass. The service window has a cantilevered stainless-steel counter (Figure 49). Carl's Frozen Custard Stand was listed in the VLR in 2000 and in the NRHP in 2005 as a locally significant resource under Criteria A and C with a period of significance of 1947 to 1953 (Carison 2005; DHR Site Files).

Figure 49 View of Carl's Frozen Custard Stand (DHR #111-5007), Looking West.

3.2.15.1 Visual Effects

Carl's Frozen Custard Stand is located within 1.0 mile of the Rebuild Project at the corner of Princess Anne and Hunter streets in the City of Fredericksburg. The building is sited on a level lot and is surrounded by a paved parking lot. This portion of Princess Anne Street comprises a commercial strip with residential areas off the secondary roads to the southwest, west, and northwest. Areas of residential development in this area have been demolished and replaced by asphalt parking lots (Appendix B). Carl's Frozen Custard is located 3,980 feet to the east of the existing Line #29 and Line #2157 transmission line corridor The site visit indicates that there is no visibility of the existing transmission line structures (Figures 50 and 51). Visual modeling and visual simulations prepared for the Rebuild Project further suggest that there is no visibility of the current transmission line structures and that there would be no visibility of proposed structures associated with Lines #2305 and #2157 based on the preliminary design (Figure 52; Appendix C/OP9). It is anticipated, therefore, that the proposed Rebuild Project will have ***No Visual Impact on Carl's Frozen Custard Stand (DHR #111-5007)***.

Figure 50 View from Carl's Frozen Custard Stand (DHR #111-5007) and Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296; Photo Location 15; OP9) Looking Southwest. Existing Transmission is Not Visible.

Figure 51 View from Carl's Frozen Custard Stand (DHR #111-5007) and Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296; Photo Location 15; OP9) Looking Northwest. Existing Transmission is Not Visible.

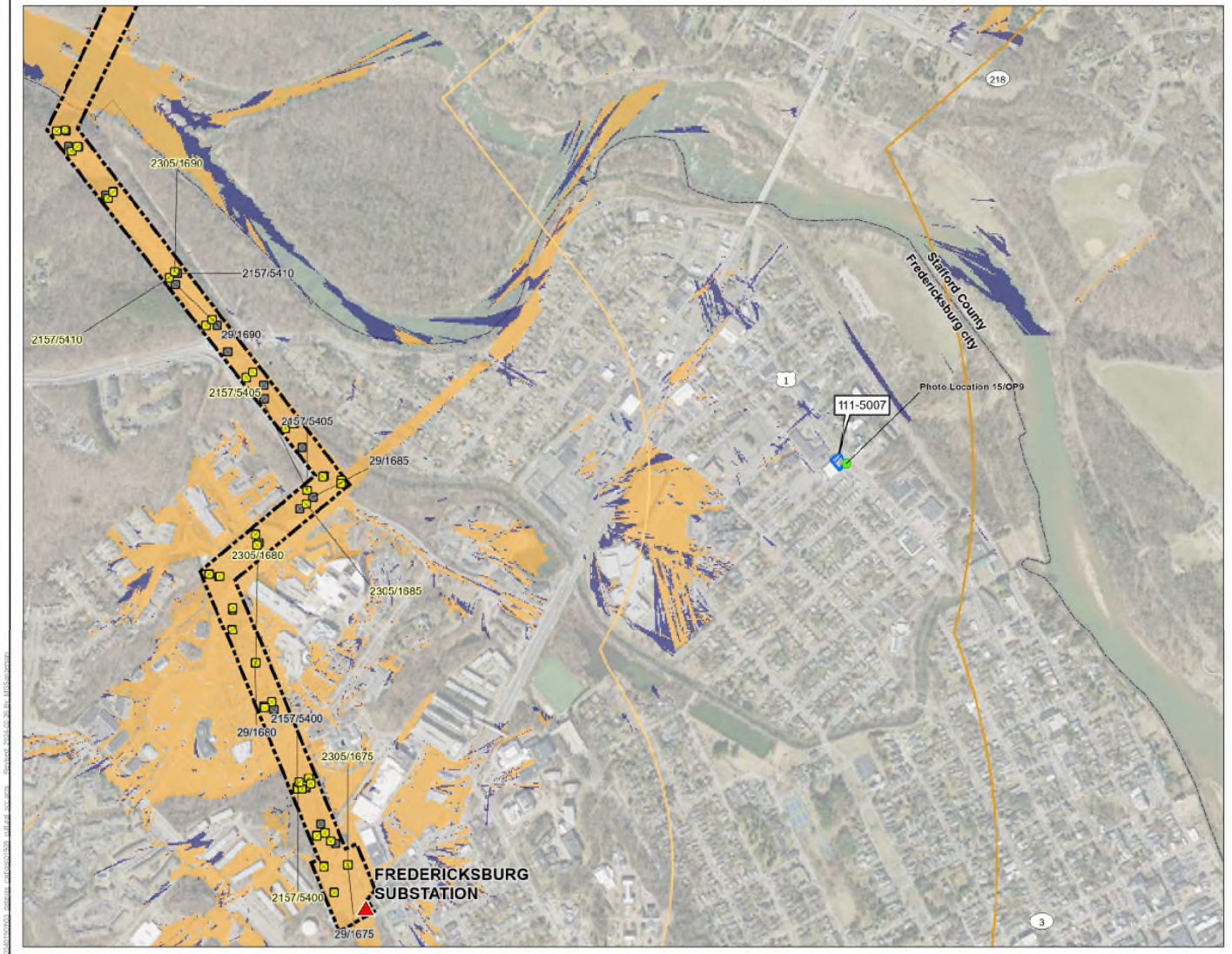


Figure No.
52

Title
Viewshed Analysis and Photo Location Map for Carl's Frozen Custard Stand (DHR#111-5007)

Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
202301909

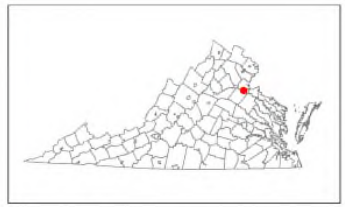
Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MCS on 2024-02-07
IR by SD on 2024-02-07

N

0 800 1,600 Feet
(At original document size of 11x17)
1:9,600

- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program, U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

Stantec

3.2.16 Fredericksburg City and Confederate Cemeteries (DHR #111-5265)

The Fredericksburg City and Confederate Cemeteries comprise two cemeteries: the Fredericksburg Cemetery and the Confederate Cemetery (Figure 53). The lot is enclosed by a brick wall and entry is through a wrought iron arch. The Fredericksburg City Cemetery was established in 1844 by a group of local entrepreneurs and included over 3,400 burials. The Confederate Cemetery, established in 1866 by the Ladies Memorial Association of Fredericksburg, is the final resting place of over 2,000 unidentified Confederate soldiers who died during the Civil War. The Monument to the Confederate Dead was completed in 1891. In addition, there are local citizens buried in this cemetery. A number of the grave markers reflect stylistic elements popular in the late nineteenth century including Gothic, Egyptian, Classical Revivals styles as well as early to mid-twentieth century designs reflecting the Arts and Crafts, Art Deco, and Modern movements. The Fredericksburg City and Confederate Cemeteries were listed in the VLR in 2018 and the NRHP 2019 as locally significant under Criteria A and C and Criteria Consideration D with a period of significance of 1844 to 1968 (DHR Site Files; Pecker 2018).

Figure 53. View of Fredericksburg City and Confederate Cemeteries (DHR #111-5265), Looking West.

3.2.16.1 Visual Effects

The cemetery is located within 1.0 mile of the Rebuild Project and is sited on a gently rolling landscape within a dense area of the City of Fredericksburg on the southwest side of Washington Avenue. The cemetery is bounded by Williams Street to the southeast, Kenmore Avenue to the southwest, and Cornell Street to the northwest. A number of large trees dot the cemetery's landscape. Beyond the cemeteries' brick wall enclosure are areas of residential and modern commercial development (Appendix B).

STAGE I PRE-APPLICATION ANALYSIS RESULTS

The cemetery is located 4,390 feet to the southeast of the existing Line #29 and Line #2157 transmission line corridor at its closest point. The site visit indicates that, under current conditions, there is no visibility of the existing transmission line structures (Figure 54).

Visual modeling for the Rebuild Project further indicates that there is no visibility of the current transmission line structures and that there would be no visibility of proposed structures associated with Lines #2305 and #2157 based on the preliminary design (Figure 55; Appendix C/OP3). It is anticipated, therefore, that the proposed Rebuild Project will have ***No Visual Impact on the Fredericksburg City and Confederate Cemeteries (DHR #111-5265)***.

Figure 54 View from the Fredericksburg City and Confederate Cemeteries (DHR #111-5265), Bank's Ford Battlefield (088-5181) and Battle of Fredericksburg I and II (DHR #111-5295 and #111-5296; Photo Location 16) Looking Northwest. Existing Transmission is Not Visible.

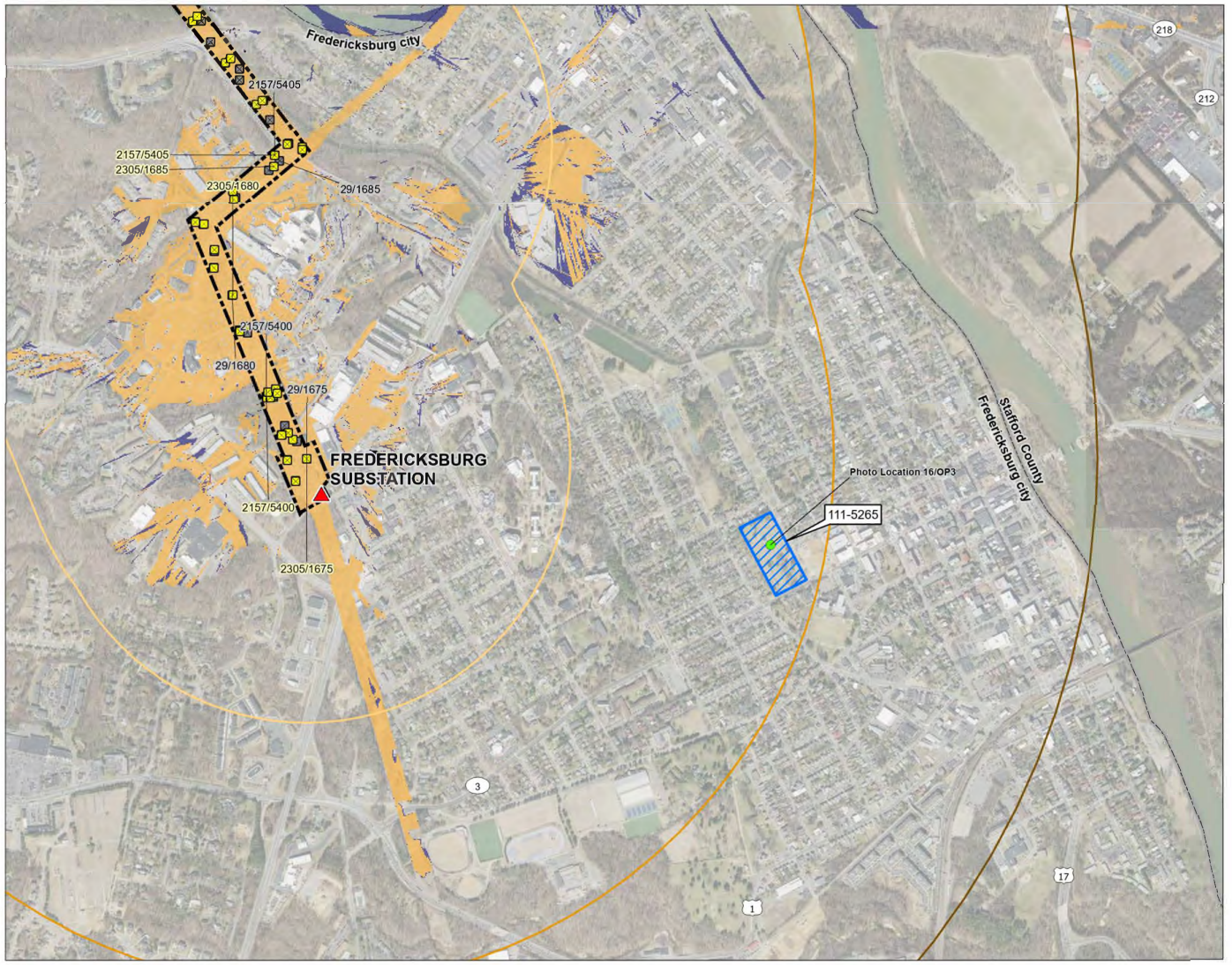


Figure No.

55

Title

Viewshed Analysis and Photo Location Map for the Fredericksburg City and Confederate Cemeteries (DHR#111-5265)

Client/Project

202301909

Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

Project Location

Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 1,000 2,000 Feet

(At original document size of 11x17)
1:12,000

- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource

Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

Stantec

3.2.17 Elmhurst (DHR #111-5267)

Elmhurst is a two-and-a-half story, three-bay, double-pile Italianate style dwelling built in 1871. The L-plan dwelling, with an English basement, is constructed of brick laid in a five-course American bond pattern. The dwelling has a standing seam metal pyramidal roof with wide overhanging eaves supported by elaborate brackets within a wide cornice board. The roof is pierced by a square belvedere as well as three brick chimneys. The additions to the dwelling have shallow shed roofs. Fenestration comprises two-over-two double-hung wood sash windows with elliptical arches, three bay windows, a modern six-over-six window, a paired entry door with single lights. The one-story, full-width porch, which was added between 1912 and 1921, is supported by brick piers and features Tuscan-style wood columns (Figure 56). Elmhurst was listed in the VLR in 2007 and the NRHP in 2008 under Criterion C with a Period of Significance from 1871 to 1921 (DHR Site Files; Dollins and Barile 2007).

Figure 56. View of Elmhurst (DHR #111-5267), Looking Southwest.

3.2.17.1 Visual Effects

Elmhurst is located within 1.0 mile of the Rebuild Project and is set close to the road on a level 0.44-acre lot at the corner of Fall Hill Avenue and Bunker Hill Street in the City of Fredericksburg. A fence encloses the lot, and a partial hedge delineates a portion of the parcel's front boundary. Several larger trees are also present within the property. A vacant lot is located across Bunker Hill Street and to the northeast, southeast, and southwest of the dwelling are blocks of mid-twentieth century residential development. To the northwest is a large, modern school (Appendix B).

Elmhurst is located 3,628 feet to the east of the existing Line #29 and Line #2157 transmission line corridor. The site visit indicates that, under current conditions, there is no visibility of the existing transmission line structures (Figure 57). Visual modeling and visual simulations prepared for the Rebuild Project further suggest that there is no visibility of the current transmission line structures and that there would be no visibility of proposed structures associated with Lines #2305 and #2157 based on the preliminary design (Figure 58; Appendix C/OP8). It is anticipated, therefore, that the proposed Rebuild Project will have ***No Visual Impact on Elmhurst (DHR #111-5267)***.

Figure 57 View from Elmhurst (DHR #111-5267) and Battle of Fredericksburg I and II (DHR #111-5295 and #111-5296; Photo Location 17; OP8) Looking Southwest. Existing Transmission is Not Visible.

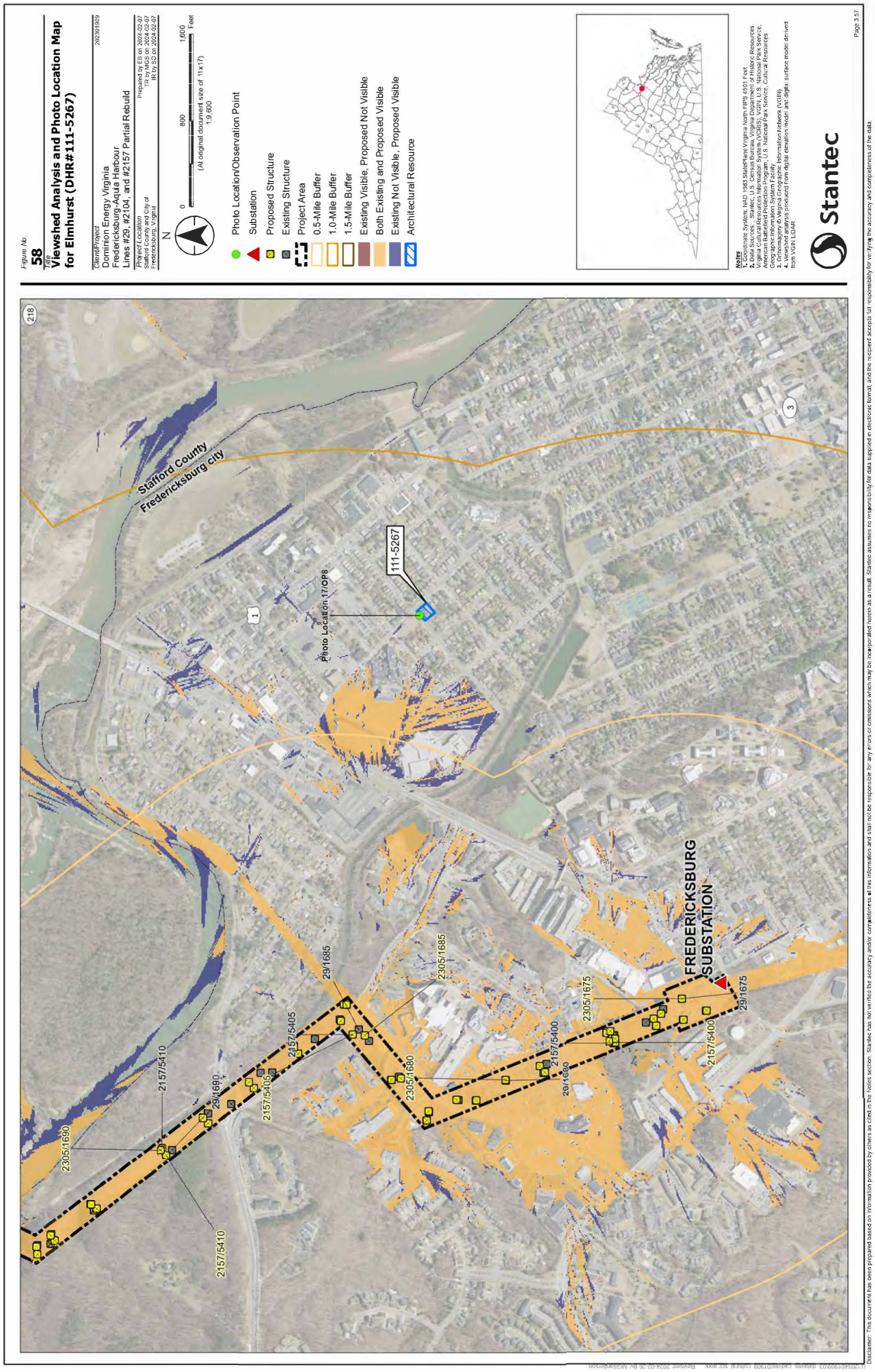


Figure No.
58
Title
Viewshed Analysis and Photo Location Map for Elmhurst (DHR#111-5267)
Client/Project
Dominion Energy Virginia
Fredericksburg-Aqua Harbour
Lines #29, #2104, and #2157 Partial Rebuild
Project Location
Stafford County and City of Fredericksburg, Virginia
Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
MK by SG on 2024-02-07
N
0
800
1,600
Feet
(At original document size of 11x17)
1:9,600
Photo Location/Observation Point
Substation
Proposed Structure
Existing Structure
Project Area
0.5-Mile Buffer
1.0-Mile Buffer
1.5-Mile Buffer
Existing Visible, Proposed Not Visible
Both Existing and Proposed Visible
Existing Not Visible, Proposed Visible
Architectural Resource
Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, Virginia Department of Historic Resources Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program, U.S. National Park Service, Cultural Resources Geographic Information System (CRGIS)
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analyses produced from digital elevation model and digital surface model derived from VGIN LiDAR
Stantec
Page 3.57
Stafford County
Fredericksburg city
111-5267
Photo Location 17/OP8
FREDERICKSBURG SUBSTATION
2305/1690
2157/5410
29/1690
2157/5405
29/1685
2305/1680
2305/1685
2157/5400
29/1680
2305/1675
29/1675
218
1
3
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3.2.18 Allman's Bar-B-Que (DHR #111-5473)

Originally constructed as a market in 1949, Allman's Bar-B-Que opened in 1954. The restaurant is a one-story, concrete block building with brick veneer exterior. The building has a flat roof with metal coping and an exterior concrete block chimney. The front entry is located at the chamfered northeast corner and is recessed with a standing seam metal roof. Fixed single-light aluminum windows flank the front entry. Two frame, shed-roof additions clad in vertical wood siding are located off the south and west elevations. A shed roof porch with a standing seam metal roof is supported by wood posts (Figure 59). Allman's Bar-B-Que was determined eligible for listing in the NRHP in 2022 under Criterion A and potentially eligible for listing in the NRHP under Criterion C as a locally significant, mid-twentieth century commercial building which served tourists along Route 1 and is reflective of the growing automobile culture during this time period (DHR Site Files).

Figure 59. View of Allman's Bar-B-Que (DHR #111-5473), Looking Northwest.

3.2.18.1 Visual Effects

The resource is set close to the road on a level lot at the corner of Augustine Avenue, Powhatan Street, and Route 1 in the City of Fredericksburg. To the north and southwest are small, paved parking lots and immediately to the northwest is a commercial building. The area beyond the resource comprises modern commercial development and several small dwellings. To the southwest, behind the two dwellings along Powhatan Street, is the existing Fredericksburg substation (Appendix B). The closest existing structures to the resources, located within and around Fredericksburg Substation are 29/1675 through 29/1678 and 2157/5397 through 2157/5400. These structures range in height from approximately 53 feet to 104 feet and, under current conditions, were only visible from a location to the side of the building (Figure 60; Appendix A).

Figure 60 View from Allman's Bar-B-Que (DHR #111-5473), Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296), and Bank's Ford/Salem Church Battlefield (DHR#088-5181; Photo Location 18; OP7) Looking Northwest. Existing Transmission is Visible.

Based on preliminary design, the proposed structures, 2305/1675 through 2305/1678 and 2157/5397 through 2157/5400D will range in height from approximately 53 feet to 115 feet and will be, on average, 20 feet taller than the existing structures (Appendix A).

Viewshed modeling suggests that there would be no visibility of the existing or proposed structures from Allman's Bar-B-Que restaurant. However, as illustrated in Figure 60, there is visibility of the existing Line #29 structures in the vicinity of the photo location and at the property boundary on the north side of the resource. Visual simulations prepared for the Rebuild Project further illustrate that the proposed structures will be visible from the northernmost corner of the property (Appendix C/OP7). The adjacent building to the northwest and the built environment to the southwest blocks the view of the existing Fredericksburg Substation and the structures extending from the substation to the northwest (Figure 61; Appendix C/OP7). It is anticipated, therefore, that the proposed Rebuild Project will have ***Minimal Visual Impact on Allman's Bar-B-Que (DHR #111-5473)***.

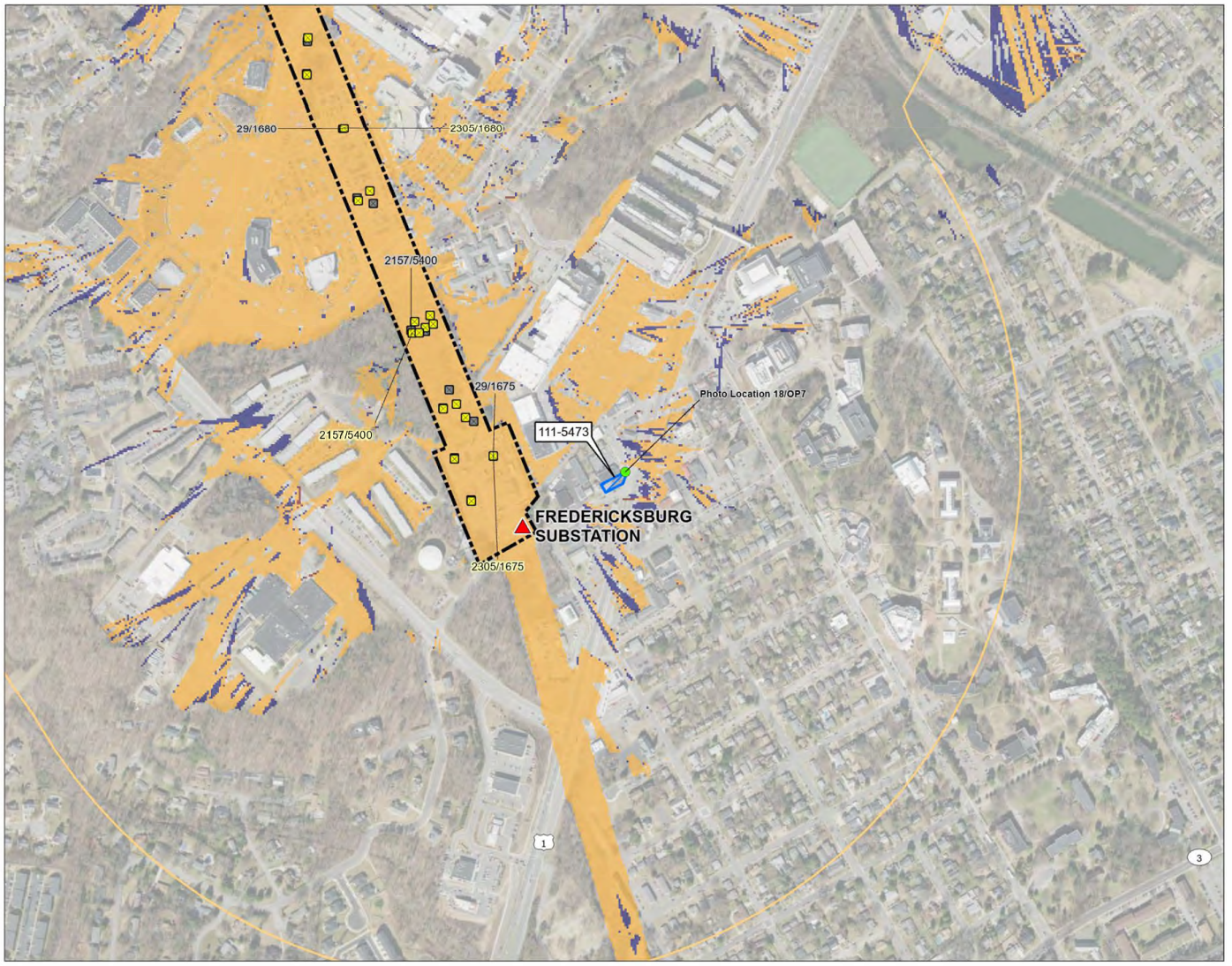


Figure No.

61

Title

Viewshed Analysis and Photo Location Map for Allman's Bar-B-Que (DHR#111-5473)

Client/Project

Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

202301909

Project Location

Stafford County and City of Fredericksburg, Virginia

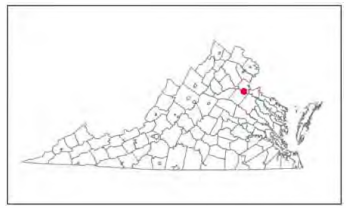
Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 500 1,000 Feet

(At original document size of 11x17)
1:6,000

- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

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3.3 HISTORIC DISTRICTS CONSIDERED

Four historic districts identified within the limits of the Stage I study area were considered for visual effects from the Rebuild Project (Appendix C). The districts include the NRHP-listed Falmouth Historic District (DHR #089-0067), the Fredericksburg Historic District (DHR #111-0132) and the Washington Avenue Historic District (DHR #111-5262) as well as the potentially eligible Old Mill Historic District (DHR #111-5297). The resources are described below with a discussion and recommendation of potential visual effects.

3.3.1 Falmouth Historic District (DHR #089-0067)

The Falmouth Historic District comprises approximately 225 acres and is located in the City of Falmouth on the north side of the Rappahannock River. The district is bounded to the north by Cambridge Street and east and west by Route 17 and Butler Road and encompasses a small village which dates to around 1727 (Figure 62). The district comprises vernacular eighteenth and nineteenth century dwellings, commercial brick buildings, five churches, and the NRHP-listed Belmont (DHR #089-0022), Carlton (DHR #089-0010), and Clearview (DHR #089-0012). The Falmouth Historic District was listed in the VLR in 1967 and the NRHP in 1970 for its significance in the areas of art and commerce. The original NRHP nomination form was updated in 2013 to include a Period of Significance of 1760 to 1781; however, the updated form was not formally submitted to the NPS or DHR (DHR Site Files).

Figure 62 View of Falmouth Historic District (DHR #089-0067; Photo Location 20), View Looking West.

3.3.1.1 Visual Effects

The Falmouth Historic District is located within 1.0 mile of the Rebuild Project and also extends into the 1.5-mile project radius. The district comprises a gently rolling landscape with some relatively flat areas to the southeast of the intersection of Route 1 and Butler Road. To the northwest of the intersection Warrenton Road is a four-lane divided highway with wooded areas on either side. To the southeast of the historic district is a modern residential development and to the south/southwest is the Rappahannock River. The district also contains several parks with open playing fields (Appendix B).

Three properties within the district are individually listed or eligible for listing on the NRHP and hold easements and are Carlton (DHR #089-0010), the Conway House (DHR #089-0067-0031), and DHR #089-0067-0026. The closest existing structures to the historic district, 29/1697 through 29/1701 and 2157/5417 through 2157/5421, range in height from approximately 53 feet to 85 feet and, under current conditions, were not visible from the photo locations identified within the historic district boundary (Figures 6, 17, 24-25, and 63-64; Appendix A).

Based on preliminary design, the proposed structures, 2157/5417 through 2157/5421 and 2305/1697 through 2305/1701 will range in height from approximately 100 feet to 120 feet and will be, on average, 49 feet taller than the existing structures (Appendix A). Viewshed modeling and visual simulations prepared for the Rebuild Project illustrate that proposed structures #2305/1694 and #2305/1698, may be visible in small areas within the district such as the more open parcels on the northeast side of Butler Road and in the far southwest corner where in the vicinity of the Rappahannock River (Figure 65; Appendix C/OP15). Since the structures may be visible in very limited areas within the district, it is anticipated that the proposed Rebuild Project will have a ***Minimal Visual Impact on the Falmouth Historic District (DHR #089-0067)***.

Figure 63 View from Falmouth Historic District (DHR #089-0067; Photo Location 19), Chancellorsville Battlefield (DHR #088-5180), and Battle of Fredericksburg I and II (DHR #111-5295 and #111-5296), View Looking Northwest. Existing Transmission Line is Not Visible.

Figure 64 View from Falmouth Historic District (DHR #089-0067; Photo Location 20; OP15), Chancellorsville Battlefield (DHR #088-5180), and Battle of Fredericksburg II (DHR #111-5296) View Looking Northwest. Existing Transmission Line is Not Visible.

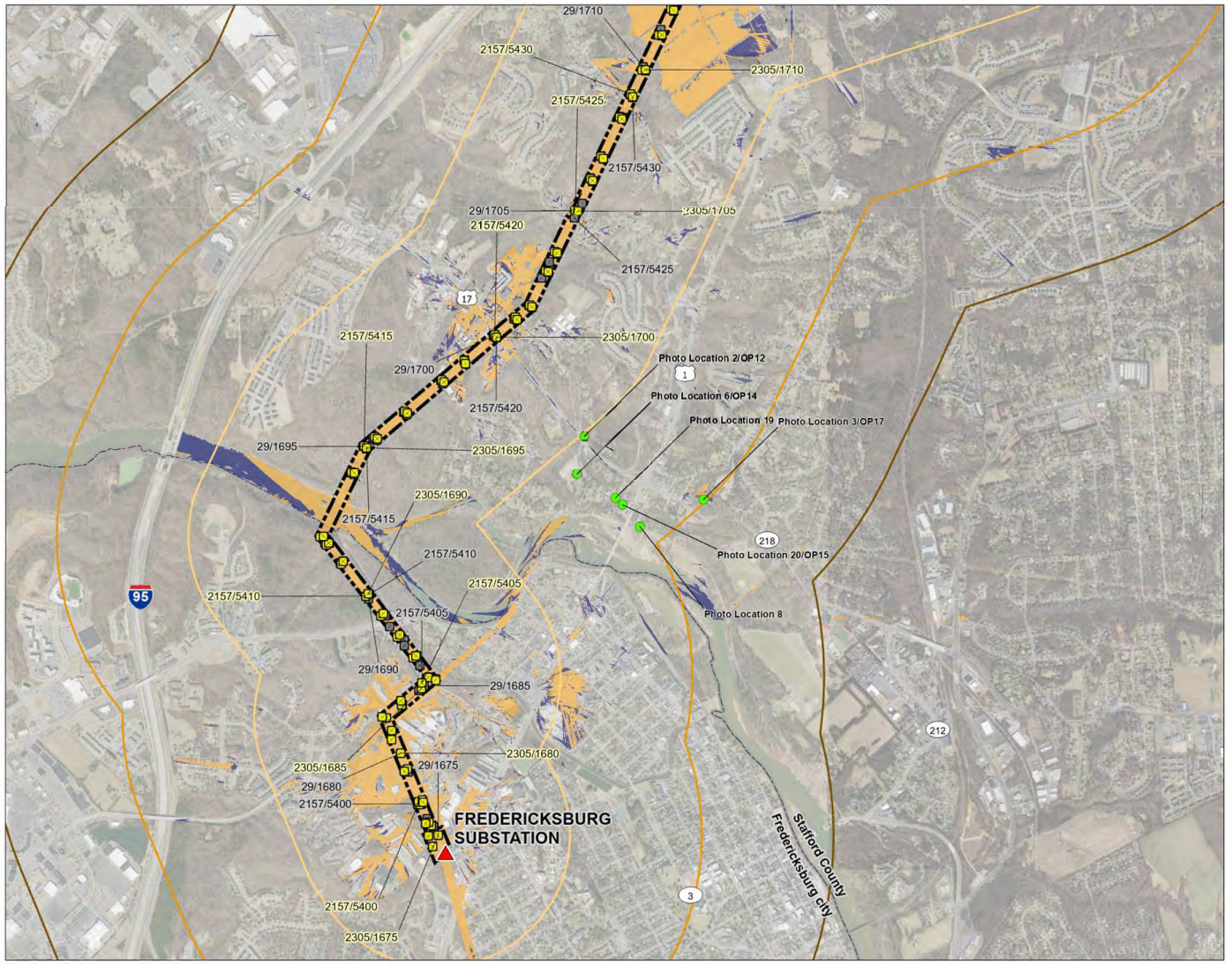

Figure No.

65

Title

Viewshed Analysis and Photo Location Map for the Falmouth Historic District (DHR#089-0067)

Client/Project

Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

202301909

Project Location

Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 1,000 2,000 Feet
(At original document size of 11x17)
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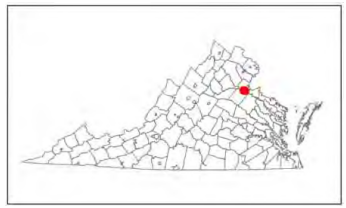
- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

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3.3.2 Fredericksburg Historic District (DHR #111-0132)

The Fredericksburg Historic District comprises approximately 200 acres and is situated on the south bank of the Rappahannock River. Fredericksburg was established in 1671 and chartered in 1727. The city developed along a series of terraces that rise as high as 60 feet above the banks of the river (Figure 66). Resources within the district include religious, social, ethnic, educational, governmental, health care, industrial, recreational, technological, and transportation-related resources. Architectural styles within the district include Georgian, Federal, Greek Revival, Italianate, Gothic Revival, Romanesque Revival, Beaux Arts, Craftsman, Second Empire, Victorian/Queen Anne, Art Deco, Modern, and Colonial Revival. The Fredericksburg Historic District was listed in the VLR and the NRHP in 1971 under Criterion C, with a period of significance of the eighteenth century to 1958 (DHR Site Files; Worsham 2008).

Figure 66 View of Fredericksburg Historic District (DHR #111-0132; Photo Location 21), View Looking Southeast.

3.3.2.1 Visual Effects

The Fredericksburg Historic District is located within 1.0 mile of the Rebuild Project and comprises a grided street system within a relatively level landscape. A majority of the buildings sit close to the established roads and feature lawns and mature trees. On street parking appears to be common on both sides of the streets within the district (Appendix B). The Fredericksburg Historic District is located 5,093 feet to the east of the existing Line #29 and Line #2157 transmission line corridor. The site visit indicates that, under current conditions, there is no visibility of the existing transmission line structures from the historic district (Figures 67 and 68). Visual modeling and simulations prepared for the Rebuild Project further illustrate that there is no visibility of the current transmission line structures and that there would be no visibility of proposed structures associated with Line #2157 based on the preliminary design (Figure 69; Appendix C/OP4). It is anticipated, therefore, that the proposed Rebuild Project will have ***No Visual Impact on the Fredericksburg Historic District (DHR #111-0132)***.

Figure 67 View from Fredericksburg Historic District (DHR #111-0132; Photo Location 21; OP4), Bank's Ford Battlefield (DHR #088-5181), and Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296) View Looking West. Existing Transmission Line is Not Visible.

Figure 68 View from Fredericksburg Historic District (DHR #111-0132; Photo Location 21; OP4), Bank's Ford Battlefield (DHR #088-5181), and Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296) View Looking Northwest. Existing Transmission Line is Not Visible.

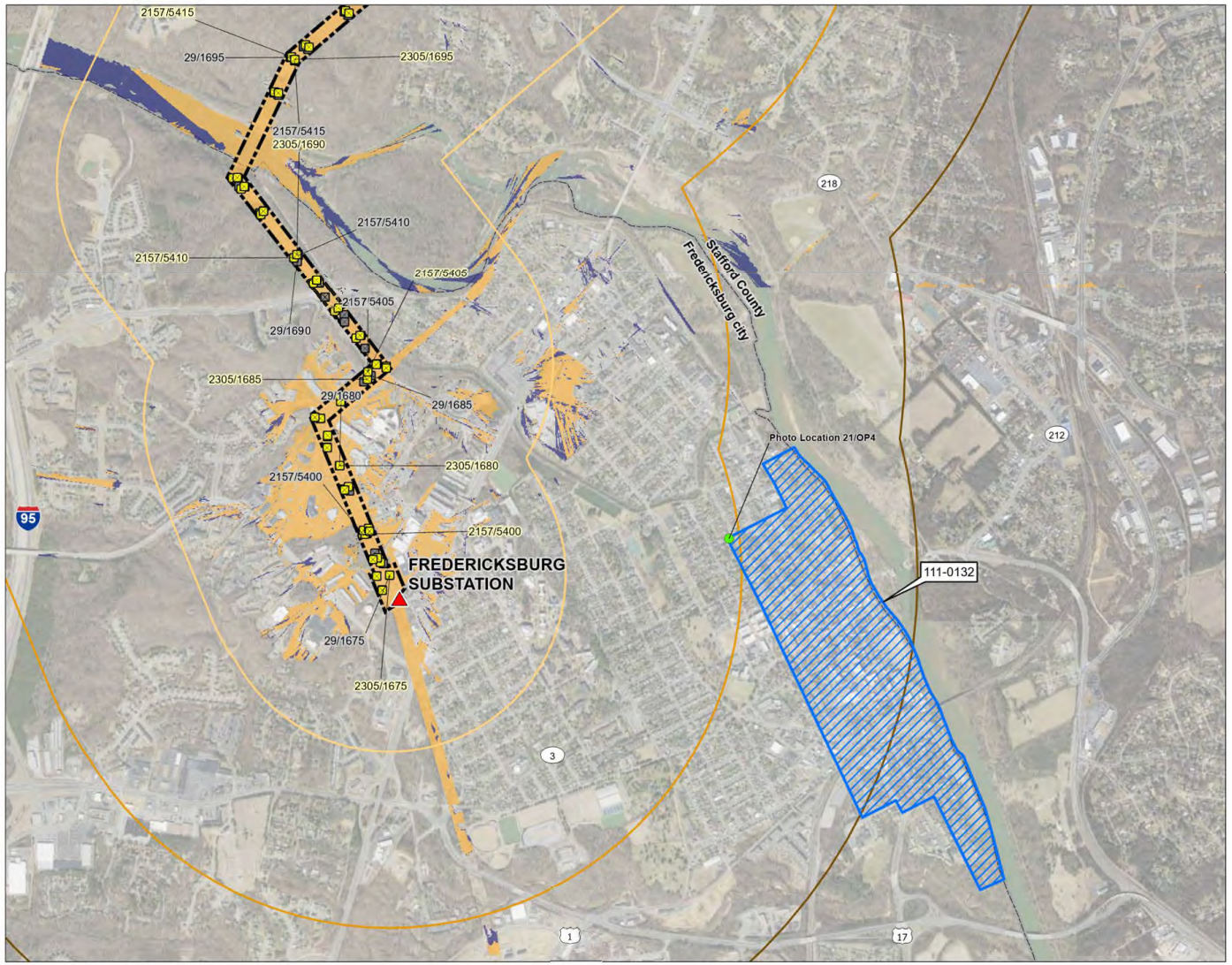

Figure No.

69

Title

Viewshed Analysis and Photo Location Map for the Fredericksburg Historic District (DHR#111-0132)

Client/Project 202301909

Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 1,000 2,000 Feet
(At original document size of 11x17)
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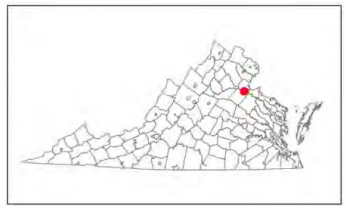
- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec; U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

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3.3.3 Fredericksburg and Spotsylvania Battlefields National Military Park (DHR #111-0147)

The Fredericksburg and Spotsylvania Battlefields Memorial National Military Park (MNMP) was established in 1927 by the United States Congress and transferred from the War Department to the National Park Service in 1933. The district was the site of the Battles of Fredericksburg (December 11 to 15, 1862), Chancellorsville (April 27 to May 6, 1863), the Wilderness (May 4 to 7, 1864), and Spotsylvania Court House (May 8 to 21, 1864). In total, the battles occurred over a 17-mile radius, resulted in over 100,000 casualties, and took place in one of the most contested territories of the Civil War. The district boundary comprises approximately 7,326 acres of land owned by the NPS and includes 171 contributing and 37 non-contributing resources (Figure 70). The district includes land Congressionally authorized to become part of the park but not currently owned by the NPS, such as Fall Hill (DHR #111-0149). The park was originally listed in the NRHP in 1966. In 2018, the NRHP listing was updated to include an expanded boundary. The MNMP is listed in the NRHP for its significance under Criteria A, B, C, and D and Criteria Consideration D and F at a national, statewide, and local level (DHR Site Files; Krick 1966 and 1976; Olausen et al. 2017).

Figure 70 View of Fredericksburg and Spotsylvania Battlefields Memorial National Military Park (DHR #111-0147; Photo Location 22), View Looking South.

3.3.3.1 Visual Effects

The MNMP comprises four separate areas. Two of the four areas are beyond 1.0 mile from the Rebuild Project and did not meet the criteria for consideration for visual effects evaluation. The section of the resource southeast of the Fredericksburg Substation is mostly outside the 1.0-mile study area with only the upper northwestern area within 1.0 mile. The existing transmission line corridor in which the Rebuild

STAGE I PRE-APPLICATION ANALYSIS RESULTS

Project is planned crosses the fourth section of the resource at Structures 29/1690 and 2157/5410 and extends to the southwest within 0.5-mile of the Rebuild Project (Appendix B).

The closest existing structures to the MNMP and within its boundary, 29/1688 through 29/1693 and 2157/5408 through/5413, range in height from approximately 52 feet to 80 feet and, under current conditions, were visible from the resource only through the existing transmission line ROW at Fall Hill (Figures 46, 47 and 71; Appendix A). Based on preliminary design, the proposed structures, 2305/1688 through 2305/1693 and 2157/5408 through 2157/5413 will range in height from approximately 100 feet to 130 feet and will be, on average, 46 feet taller than the existing structures (Appendix A).

Viewshed modeling and visual simulations prepared for the Rebuild Project illustrate that only the area of the resource crossed by the transmission line corridor at Fall Hill will be visible (Figure 72; Appendix C/OP1 and OP10). It is anticipated, therefore, that the proposed Rebuild Project will have ***Minimal Visual Impact on the Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park and Cemetery (DHR #111-0147).***

Figure 71 View from Fredericksburg and Spotsylvania Battlefields Memorial National Military Park (DHR #111-0147), Bank's Ford Battlefield (DHR #088-5181), and Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296; Photo Location 11/OP1), View Looking Northwest. Existing Transmission Line is Not Visible.

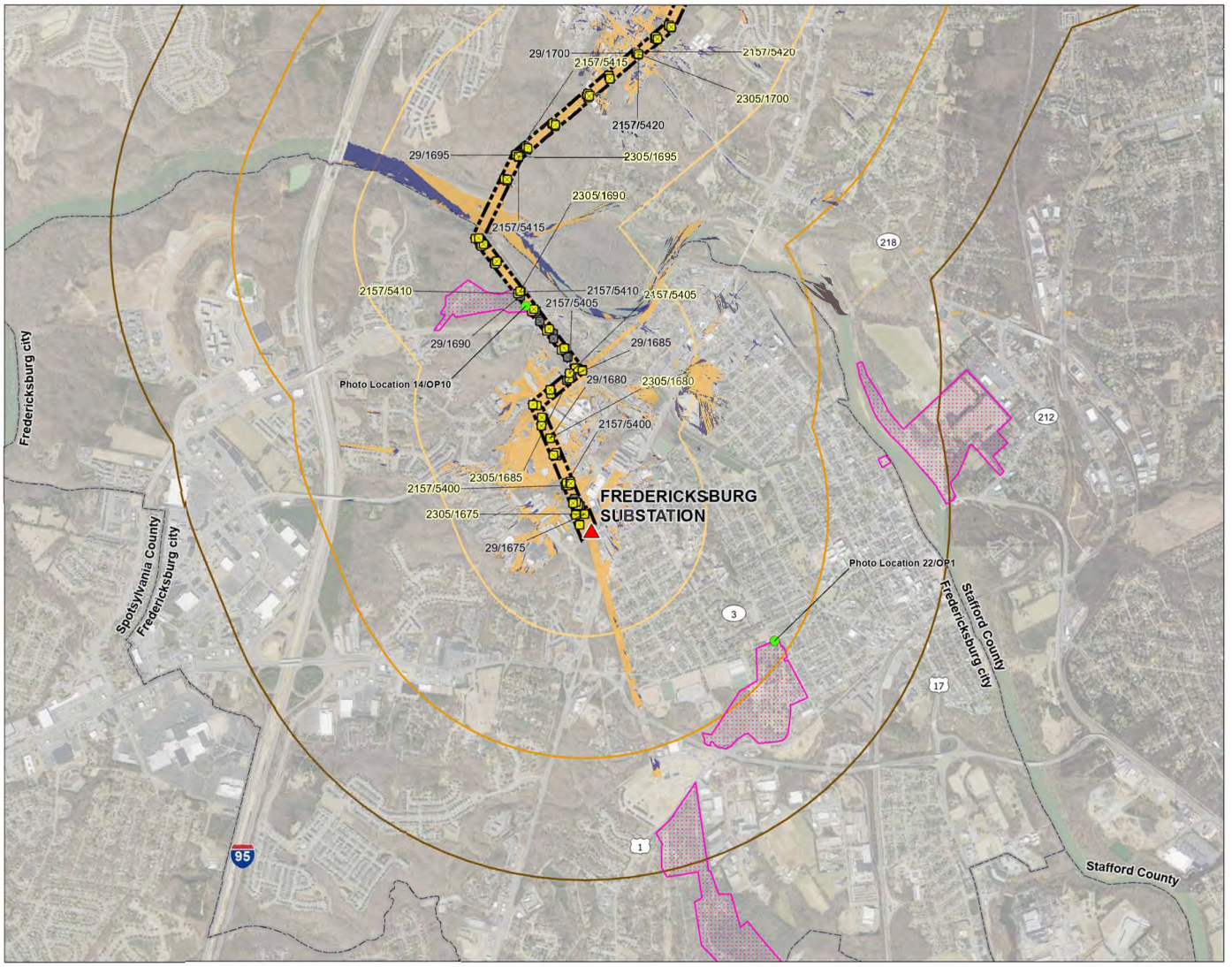

Figure No.
72

Title
Viewshed Analysis and Photo Location Map for the Fredericksburg and Spotsylvania Battlefields Memorial National Military Park (DHR# 111-0147)

Client/Project 202301909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 1,000 2,000 Feet
(At original document size of 11x17)
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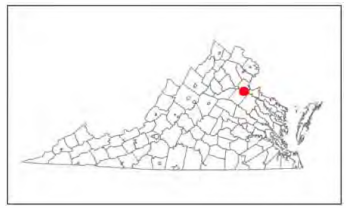
- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 111-0147
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

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3.3.4 Washington Avenue Historic District (DHR #111-5262)

The Washington Avenue Historic District is located mainly along Washington Avenue in the City of Fredericksburg. The district has 48 resources that includes 36 contributing buildings, one site, four objects, and seven non-contributing buildings. Lined by mature trees, the four-block district features high-style Italianate, Queen Anne, Shingle, Colonial Revival, and Craftsman residences from the late nineteenth to the early twentieth century (Figure 73). The district also includes Kenmore (DHR #111-0047; see Figure 38). The Washington Avenue Historic District was listed in the VLR in 2001 and in the NRHP in 2002 under Criteria A and C and Criteria Consideration C and F with a Period of Significance from c. 1775 to 1951 (DHR Site Files; Johnson and Smith 2001).

Figure 73 View of Washington Avenue Historic District (DHR #111-5262; Photo Location 31), View Looking Southwest.

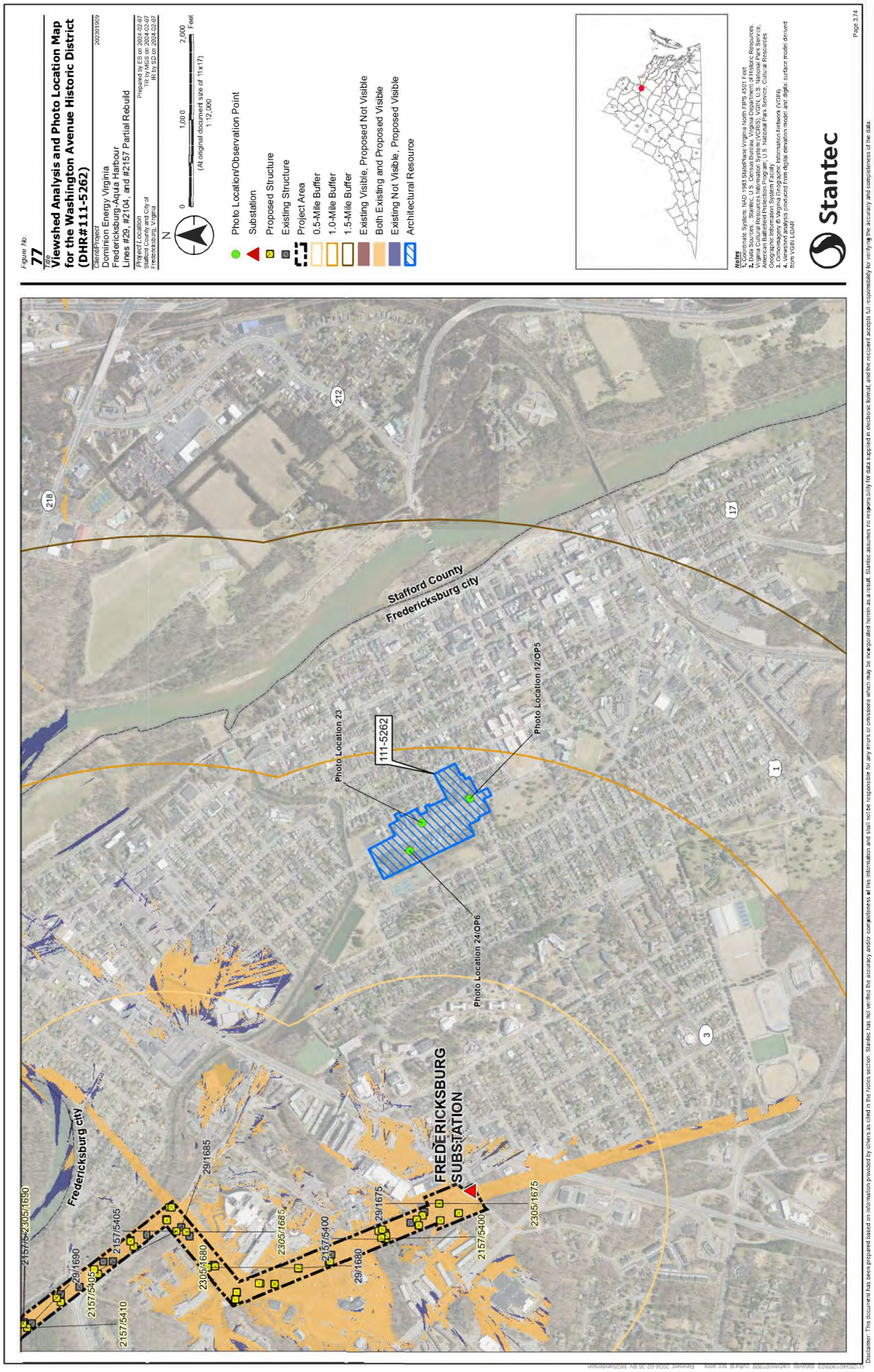
3.3.4.1 Visual Effects

The Washington Avenue Historic District is located 1.0 mile to the southwest of the Rebuild Project and comprises approximately 18 acres. The landscape within the district is relatively flat with a center green dividing the northeast and southwest lanes of Washington Avenue. The properties along the avenue are dotted with mature trees with smaller shrubs (Appendix B). The Washington Avenue Historic District is located 3,814 feet to the east of the existing Line #29 and Line #2157 transmission line corridor. The site visit indicates that, under current conditions, there is no visibility of the existing transmission line structures (Figures 74-76). Visual modeling and visual simulations prepared for the Rebuild Project further suggest that there is no visibility of the current transmission line structures and that there would be no visibility of proposed structures associated with Lines #2305 and #2157 based on the preliminary design (Figure 77; Appendix C/OP6). It is anticipated, therefore, that the proposed Rebuild Project will have ***No Visual Impact on the Washington Avenue Historic District (DHR #111-5262)***.

Figure 74 View from Washington Avenue Historic District (DHR #111-5262), Bank's Ford Battlefield (DHR #088-5181), and Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296; ; Photo Location 23), View Looking West. Existing Transmission Line is Not Visible.

Figure 75 View from Washington Avenue Historic District (DHR #111-5262), Bank's Ford Battlefield (DHR #088-5181), and Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296; Photo Location 23), View Looking Northwest. Existing Transmission Line is Not Visible.

Figure 76 View from Washington Avenue Historic District (DHR #111-5262), Bank's Ford Battlefield (DHR #088-5181), and Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296; Photo Location 24), View Looking Northwest. Existing Transmission Line is Not Visible.



3.3.5 Old Mill Historic District (DHR #111-5297)

This district is located along the Rappahannock River in downtown Fredericksburg and includes numerous archaeological sites, landscapes, structures, and buildings that were part of Fredericksburg's 200-year milling industry which began around 1740 (Figure 78). There are 11 contributing resources to the district including Lower Canal, Thornton's Mill, Bridgewater and Germania mill sites, Rappahannock Canal, Klotz Throwing Company, Virginia Electric Power Company (VEPCO) Station Site Complex, Washington Woolen Mills, and the Rappahannock Electric Light and Power Company and Municipal Power Plant site complexes. The district also includes nine non-contributing resources. In 2021, DHR determined the Old Mill Historic District potentially eligible for the NRHP under Criteria A and D for its importance in Fredericksburg's industrial development with a Period of Significance between 1740 and 1960 (DHR Site Files).

Figure 78 View of the Old Mill Historic District (DHR #111-5297; Photo Location 25), View Looking Northwest.

3.3.5.1 Visual Effects

The Old Mill Historic District abuts the northeast edge of the Rebuild Project and extends to just outside 1.0 mile from the existing transmission line ROW. The district is located partly along the Rappahannock River and encompasses the Rappahannock Canal which runs through a portion of the City of Fredericksburg. A trail, formerly a tow path, parallels the canal and features remnants of mills and other industrial structures. Small saplings and other vegetation are located along the banks of the canal and river beyond the more densely populated city area (Appendix B). The closest existing structures to the historic district boundary, 29/1684 through 29/1694 and 2157/5405 through 2157/5414, range in height from approximately 48 feet to 125 feet and, under current conditions, were only visible where the transmission line crosses the district (Figures 79 and 80; Appendix A).

Figure 79 View from Old Mill Historic District (DHR #111-5297) and Fredericksburg Battlefield II (DHR #111-5296; Photo Location 25), Looking Southwest. Transmission Line is Visible.

Figure 80 View from Old Mill Historic District (DHR #111-5297; Photo Location 25), Looking North. Transmission Line is Visible.

STAGE I PRE-APPLICATION ANALYSIS RESULTS

Based on preliminary design, the proposed structures, 2305/1685 through 2305/1694 and 2157/5405 through 2157/5414 will range in height from approximately 100 feet to 125 feet and will be, on average, 31 feet taller than the existing structures (Appendix A).

Viewshed modeling and visual simulations prepared for the Rebuild Project illustrate that the proposed structures associated with Lines #2305 and #2157 will be visible where the line crosses the district at the Rappahannock River and within the river to the northwest of Hanson Avenue. Visual modeling suggests that, due to the density of tree cover and distance from portions within the district, the remaining areas within the district would not view the Rebuild Project (Figure 81; Appendix C/OP11). It is anticipated that the proposed Rebuild Project will have ***a Moderate Visual Impact on the Old Mill Historic District (DHR #111-5297)***.

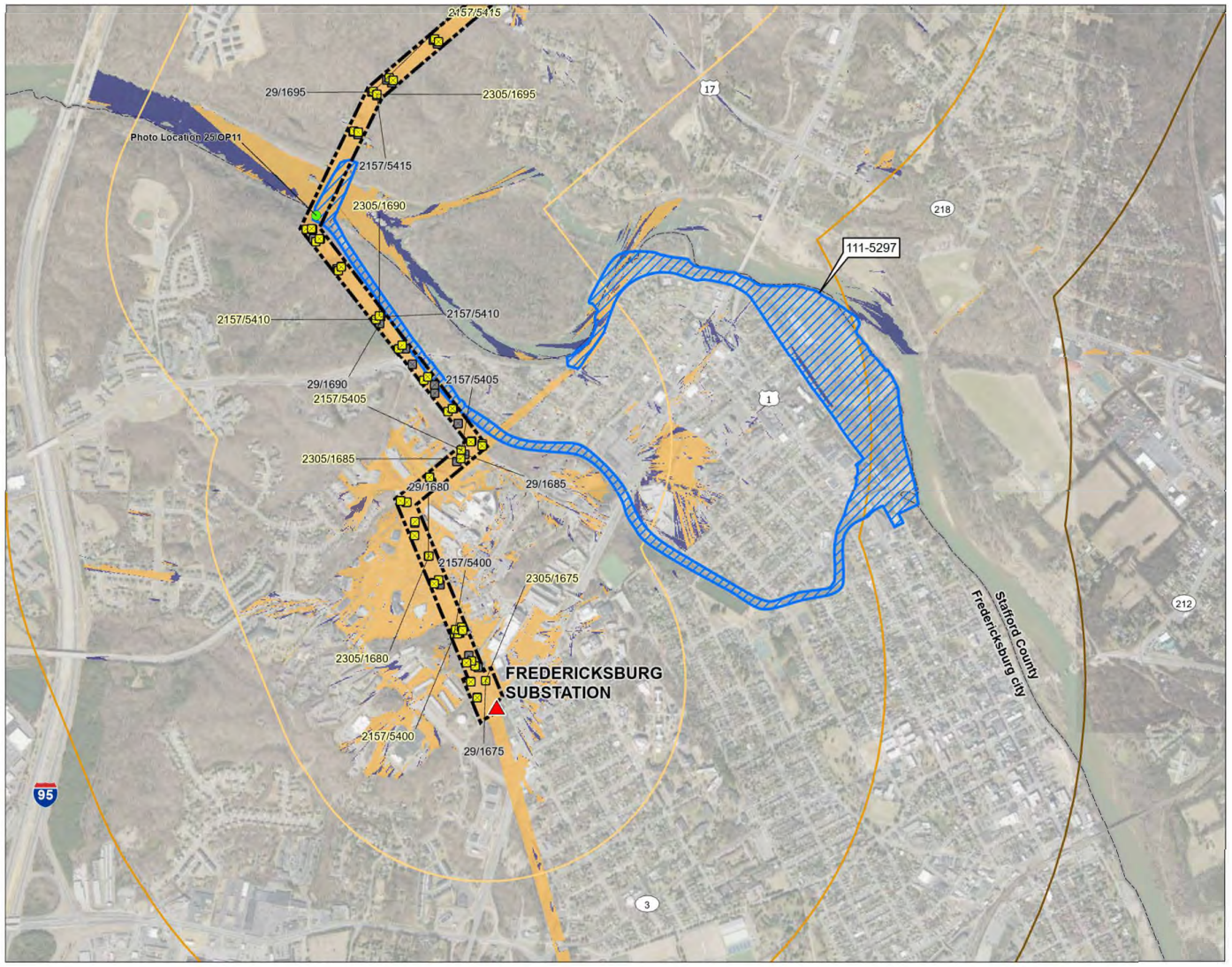


Figure No.

81

Title

Viewshed Analysis and Photo Location Map for the Old Mill Historic District (DHR#111-5297)

Client/Project 202301909

Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

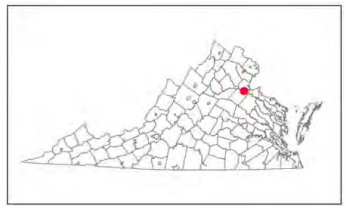
Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 1,000 2,000 Feet
(At original document size of 11x17)
1:15,840

- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible
- Architectural Resource



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

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3.4 BATTLEFIELD RESOURCES CONSIDERED

Battlefields and associated fortifications present within the limits of the Stage I analysis area were considered for visual effects for the Rebuild Project. Portions of four battlefield resources are located within the Stage I buffers and are listed in Table 4 (Appendix B and C). The resources are described in the following sections with a discussion of potential effects resulting from the Rebuild Project. Many of the Civil War battlefields overlap significantly, particularly in the location of roads. Therefore, many of the photograph locations presented in Appendix C are shared by multiple resources.

For the assessment of battlefield resources, Stantec took into consideration the guidance and recommendations of the American Battlefield Protection Program's (ABPP's) 2009 assessment of Virginia's Civil War period battlefield resources and subsequent updates. In 2009, the ABPP revised the 1992 Civil War Sites Advisory Commission (CWSAC) boundaries for Virginia, and many of the battlefields were greatly expanded in size. For each battlefield, the ABPP defined Study Areas and Core Areas. The larger Study Area contains all resources known to relate to or contribute to the battlefield event, such as where troops maneuvered and deployed, immediately before or after combat, and where they fought during combat. Within the Study Area are Core Areas, which denote the actual fighting areas located within the larger battlefield. In addition, the ABPP defined Potential National Register (PotNR) areas for each battlefield. The PotNR boundary represents the ABPP's assessment of a Study Area's current integrity. The PotNR area may include all or some of the Study Area, or all or some of the Core Area, associated with a battlefield engagement. The PotNR boundary does not constitute a formal determination of eligibility by the Keeper of the NRHP; however, it is a recommendation of potential eligibility.

Table 4 Battlefield Resources Considered under the Stage I Pre-Application Guidelines

DHR #	Resource Name	Total Acreage of Battlefield	Acreage of Battlefield within 1.0-Mile	Acreage of Core Area within 1.0 Mile	Acreage of PotNR Area within 1.0 Mile
088-5180	Chancellorsville Battlefield	41,463	427	-	-
088-5181	Bank's Ford/Salem Church Battlefield	8,087	2,323	848	-
111-5295	Battle of Fredericksburg I	13,182	2,786	1,792	707
111-5296	Battle of Fredericksburg II	12,644	1,774	1,052	-

3.4.1 Chancellorsville Battlefield (DHR #088-5180)

The Battle of Chancellorsville took place from April 30 to May 6, 1863, between the Union forces commanded by Major General Joseph Hooker and Confederate forces under the command of General Robert E. Lee. The battle was one of the bloodiest of the Civil War and General Stonewall Jackson's last as he succumbed to wounds received during the fighting. Though Lee's army was substantially

outnumbered (130,000 Union troops verses 60,000 Confederate troops), he did not retreat. During the battle, Major General Joseph Hooker crossed the Rappahannock and positioned his troops on the flanks of Lee's army. Under Stonewall Jackson, a portion of Lee's army separated and secretly marched to confront Hooker's right flank in a daring move which, if discovered, would have meant defeat. However, the risk paid off and the battle resulted in a victory for the Confederacy but not without heavy casualties which included over 17,300 for the Union side and 13,460 for the Confederate side (American Battlefield Trust 2024; DHR Site Files).

The NPS owns a 2,114-acre portion of the battlefield, which includes the Chancellor House, Lee-Jackson Bivouac and the Burton Farm sites, Jackson's flank march route, Fairview, Catherine Furnace, and portions of Hazel Grove. Outside the NPS boundary, but within the battlefield's ABPP-defined boundaries includes the final Union line, and Ely's and U.S. Fords. Contributing resources to the battlefield include earthworks and trenches, monuments and plaques, road traces, rifle pits, archaeological sites, and a cemetery. In 2000, DHR determined the Chancellorsville Battlefield to be potentially eligible for listing in the NRHP under Criterion A. The battlefield has undergone multiple reviews for a variety of projects since its initial recommendation of eligibility and is currently considered eligible for listing in the NRHP (DHR Site Files).

The ABPP has designated approximately 41,463 acres of Study Area for the Chancellorsville Battlefield (DHR Site Files; ABPP 2009). Of the 41,463 acres, 427 acres are located within 1.0 mile of the Rebuild Project. There are no ABPP-designated Core or PotNR areas within the analysis area associated with the Chancellorsville Battlefield. This battlefield overlaps with portions of these battlefields and historic districts:

- Banks Ford Battlefield (DHR #088-5181)
- Battle of Fredericksburg I (DHR #111-5295)
- Battle of Fredericksburg I (DHR #111-5296)
- Falmouth Historic District (DHR #089-0067)

3.4.1.1 Visual Effects

The portion of the Chancellorsville Battlefield within 1.0-mile of the Rebuild Project and considered in this Stage I analysis includes two areas of troop movements. The northern-most area terminates within the Falmouth Historic District at the intersection of Warrenton Road and Cambridge Street. This area comprises both modern and historic residential and commercial development. The southwestern area of the battlefield runs along Williams Street/VA Route 3 in the southern portion of the City of Fredericksburg terminating at Route 1 and is characterized by modern commercial development and a four lane road for most of the area. The segment of the battlefield north of the Rappahannock River follows Route 1/Route 17, which is a four lane road, and is flanked by woods, residential, and commercial development in various locations (Appendix B; Figures 82 and 83).

Figure 82 View of the Chancellorsville Battlefield (DHR #088-5180; Photo Location 26), View Looking West.

Figure 83 View of the Chancellorsville Battlefield (DHR #088-5180; Photo Location 26), View Looking East.

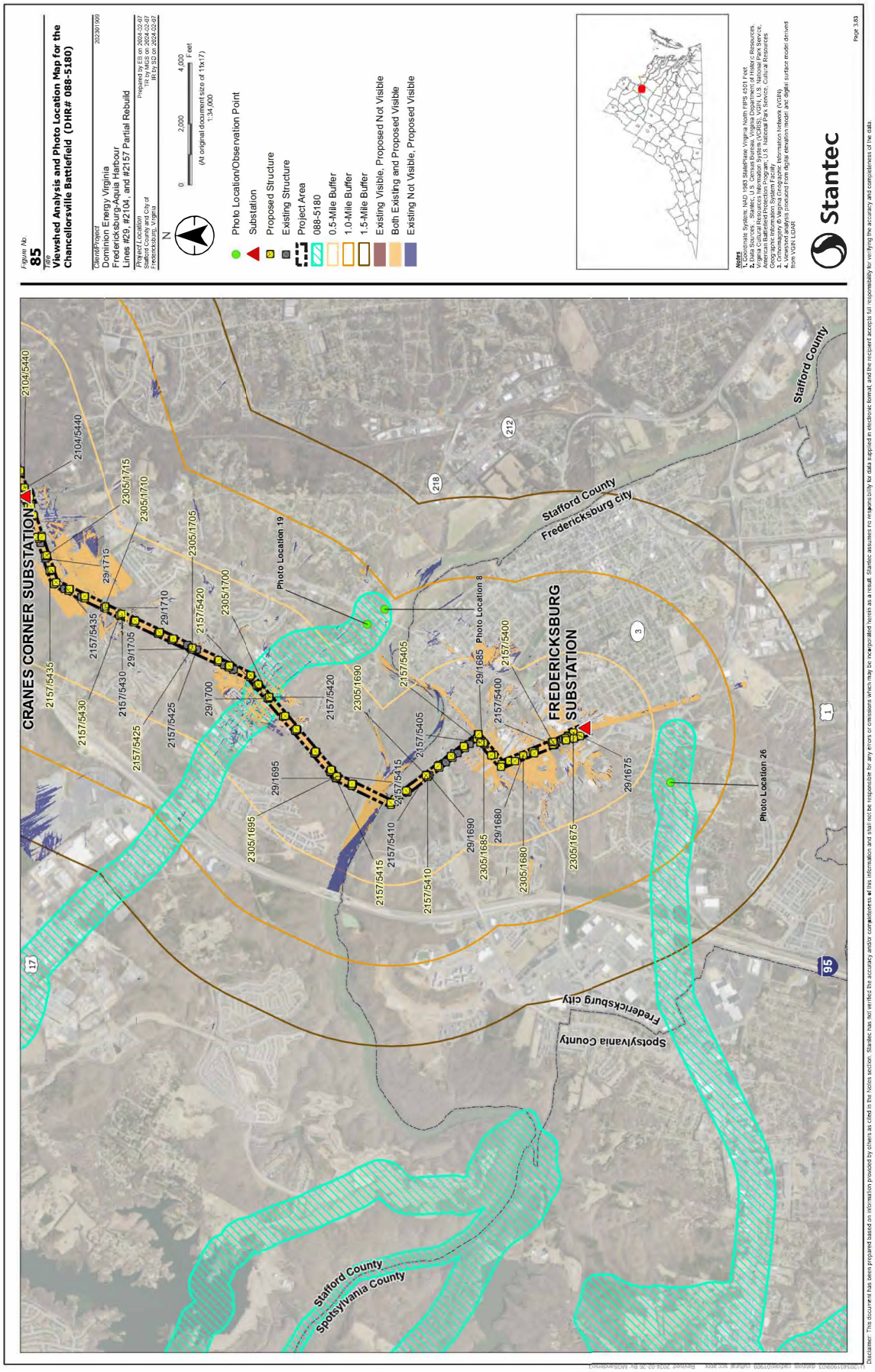
STAGE I PRE-APPLICATION ANALYSIS RESULTS

The existing Line #29 and Line #2157 transmission line corridor crosses the battlefield between Structures 29/1699 and 2157/5419 on the southwest side and 29/1703 and 2157/5423 on the northeast side. The existing structures present within the battlefield and within view of the battlefield, 29/1699 through 29/1702 and 2157/5419 through 2157/5422, range in height from approximately 54 feet to 75 feet and, under current conditions, were not visible from Photo Location 19 were visible where the line crosses the resource (Appendix A). Based on preliminary design, the proposed structures, 2305/1699 through 2305/1702 and 2157/5419 through 2157/5422, will range in height from approximately 115 feet to 120 feet and will be, on average, 50 feet taller than the existing structures (Appendix A).

The existing structures closest to the southern area of troop movements are within Fredericksburg Substation, are structures 29/1675, 2157/5397, and 2157/5398, and range in height from approximately 75 feet to 104 feet (Appendix A). Under current conditions, the structures were not visible from the resource (Figures 6, 17, 24-25, 43, 63-64, 74-76, and 84; Appendix C). Based on preliminary design, the proposed structures, 2305/1675, 2157/5397, and 2157/5398 will range in height from approximately 75 feet to 104 feet and will be, similar in heigh to the existing structures (Appendix A).

Viewshed modeling and visual simulations prepared for the Rebuild Project suggest that none of the proposed structures will be visible from the southern area of troop movements but will be visible where the transmission line corridor crosses the northern troop movement area and from the area immediately to the northwest (Figure 85; Appendix C/OP12). However, the integrity of the resource along Route 17 and Williams Street has been compromised by modern commercial development. It is anticipated, therefore, that the proposed Rebuild Project will have ***a Minimal Visual Impact on the Chancellorsville Battlefield (DHR #088-5180).***

Figure 84 View from the Chancellorsville Battlefield (DHR #088-5180), Bank's Ford/Salem Church Battlefield (DHR #088-5181) and the Fredericksburg Battlefield II (DHR #111-5296; Photo Location 26), Looking Northeast. Transmission Line is not Visible.



3.4.2 Bank's Ford/Salem Church Battlefield (DHR #088-5181)

The Bank's Ford/Salem Church Battle, part of the Battle of Chancellorsville, took place on May 4, 1863, at Salem Church which sits on a rise approximately four miles from the city of Fredericksburg. After the occupation of Marye's Heights, Major General John Sedgewick's army marched down Plank Road towards Major General Joseph Hooker's position but was met by a small band of Confederate troops under the command of Brigadier General Cadmus M. Wilcox. In order to reinforce Confederate troops, General Robert E. Lee dispatched two divisions to Salem Church for a counterattack. The battle was a Confederate victory though with heavy casualties. The battlefield received a Federal Determination of Eligibility designation in 2000 and in 2016, DHR determined that the Bank's Ford/Salem Church Battlefield was eligible for inclusion in the NRHP under Criterion A (DHR Site Files).

The ABPP has designated approximately 8,087 acres of Study Area for the Bank's Ford/Salem Church Battlefield (DHR Site Files; ABPP 2009). Of the 8,087 acres, 2,323 acres are located within 1.0 mile of the Rebuild Project and includes 848 acres of the battlefield's Core Area. There are no ABPP-defined PotNR areas within the analysis area for the Bank's Ford/Salem Church Battlefield. This battlefield overlaps with portions of these battlefields and historic districts:

- Chancellorsville Battlefield (DHR #088-5180)
- Battle of Fredericksburg I (DHR #111-5295)
- Battle of Fredericksburg I (DHR #111-5296)
- Fredericksburg Historic District (DHR #111-0132)
- Washington Avenue Historic District (DHR #111-5262)

3.4.2.1 Visual Effects

The existing Fredericksburg Substation and Line #29 and Line #2157 transmission line corridor are wholly within the battlefield boundaries until reaching the point in the line at which it turns to the north south of existing structure 2157/5413 and the Rappahannock River (see Figure 91; Appendix C). The existing structures within the resource boundaries, 29/1675 through 29/1693 and 2157/5397 through 2157/5413, range in height from approximately 48 feet to 125 feet and, under current conditions, were not visible from Photo Locations 28, and 29 but were visible where the line crosses the resource and from Photo Location 27 (Figures 36, 39-40, 46-47, 54, 60, 67-68, 71, 74-76, 84, and 87-90; Appendix A). Based on preliminary design, the proposed structures, 2305/1675 through 2305/1693 and 2157/5397 through 2157/5413 will range in height from approximately 71 feet to 130 feet and will be, on average, 32 feet taller than the existing structures (Appendix A).

Figure 86 View of the Bank's Ford/Salem Church Battlefield (DHR #088-5181; Photo Location 28), View Looking Southwest.

Figure 87 View from Bank's Ford/Salem Church Battlefield (DHR #088-5181) and the Fredericksburg Battlefield I (DHR #111-5295; Photo Location 27), Looking Northeast. Transmission Line is Visible.

Figure 88 View from Bank's Ford/Salem Church Battlefield (DHR #088-5181) and the Fredericksburg Battlefield I (DHR #111-5295; Photo Location 28), Looking Northeast. Transmission Line is not Visible.

Figure 89 View from Bank's Ford/Salem Church Battlefield (DHR #088-5181; Photo Location 29), Looking East. Transmission Line is not Visible.

Figure 90 View from Bank's Ford/Salem Church Battlefield (DHR #088-5181), and the Fredericksburg Battlefield I & II (DHR #111-5295 and #111-5296; Photo Location 30), Looking East. Rebuild Project Transmission Line is Visible in Background).

Viewshed modeling and visual simulations prepared for the Rebuild Project illustrate that the proposed structures will be visible from within the transmission line corridor which is wholly within the limits of the battlefield and from Photo Locations 14/OP10, 18/OP7, 27, and 28 as well as from the campus of University of Mary Washington, Cowan Boulevard, Hospital Drive, and areas to the west of Sunken Road, all within the limits of the battlefield. The proposed Rebuild Project would not be visible from Photo Locations 21/OP4, 11/OP1, 23, 24/OP6, 26 and 29 (Figure 91 and Appendix C/OP1, OP4, OP6, OP7 and OP10). The ABPP-designated Core Area of the battlefield within proximity to the Rebuild Project is limited to the southern terminus at the Fredericksburg Substation (Figure 91; Appendix C). Visibility from the Core Area appears to be limited to the structures within and proposed within the existing substation. It should be noted, however, that large areas of the battlefield within 1.0 mile of the Rebuild Project have diminished integrity due to modern residential and commercial development. It is therefore anticipated due to the compromised integrity of the resource in the area of the transmission line Rebuild Project and limited areas of visibility, that the Project will have ***a Minimal Visual Impact on the Bank's Ford/Salem Church Battlefield (DHR #088-5181)***.

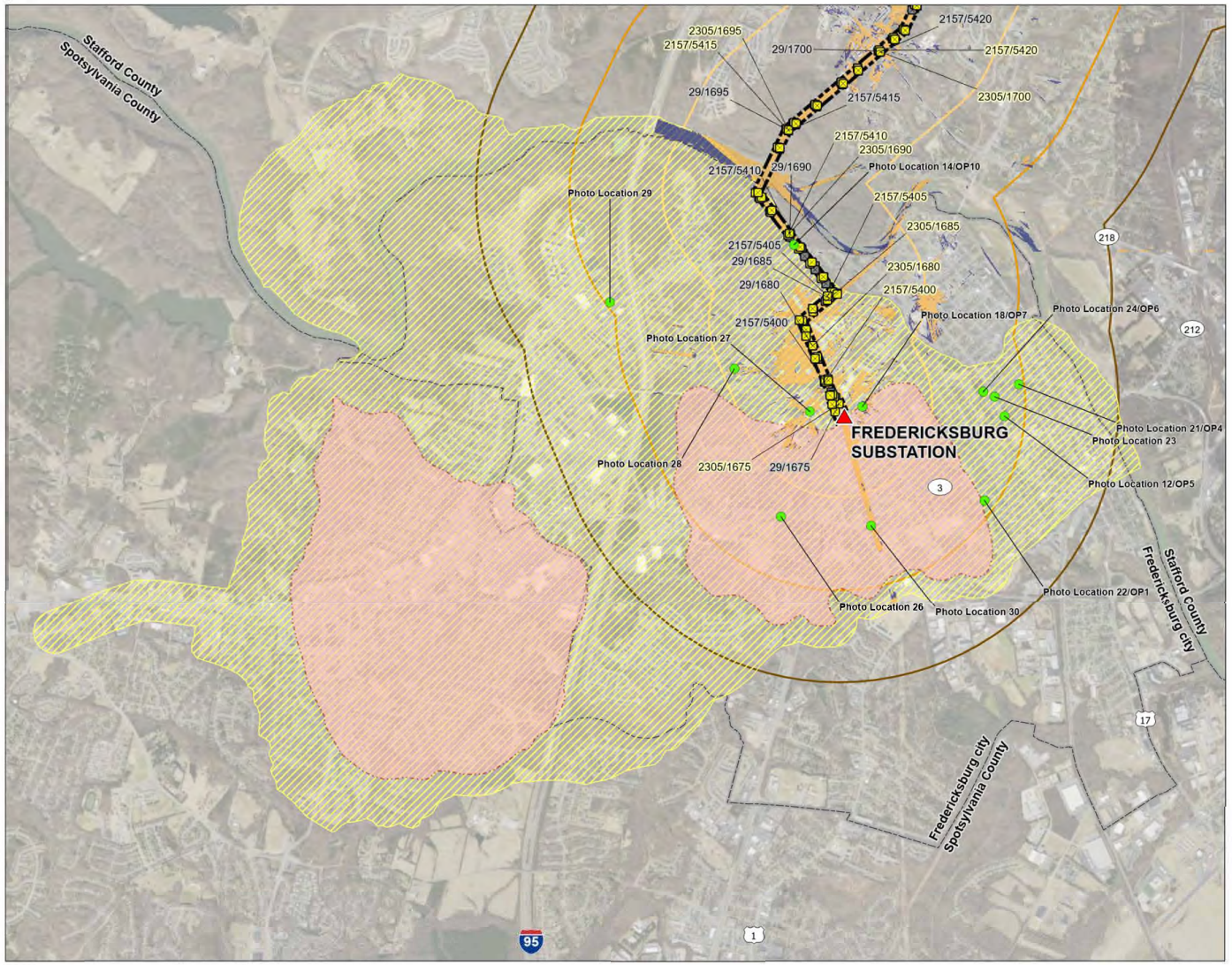


Figure No.
91

Title
Viewshed Analysis and Photo Location Map for the Bank's Ford/Salem Church Battlefield (DHR# 088-5181)

Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
202301909

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 2,000 4,000 Feet
(At original document size of 11x17)
1:34,000

- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 088-5181
- ABPP Core Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

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3.4.3 Battle of Fredericksburg I (DHR #111-5295)

The Battle of Fredericksburg I took place from December 11 to 15, 1862, with 72,497 Confederate forces commanded under General Robert E. Lee and 100,007 Union troops under Major General Ambrose E. Burnside. The Union Army attempted to occupy the vicinity of Falmouth near Fredericksburg and the Confederates reacted by entrenching on the heights behind the town. The Union Army crossed the Rappahannock River and mounted several direct assaults on the Confederate lines on Prospect Hill and Marye's Heights that resulted in 13,353 Union casualties and 4,576 Confederate casualties (Figures 92 and 93). The battle was decidedly a Confederate victory. In 2017, DHR determined the Battle of Fredericksburg potentially eligible for the NRHP (DHR Site Files).

The ABPP has designated approximately 13,182 acres of Study Area for the Fredericksburg I Battlefield (DHR Site Files; ABPP 2009). Of the 13,182 acres, 2,786 acres are located within 1.0 mile of the Rebuild Project which includes 1,792 acres of the battlefield's Core Area and 707 acres which is considered PotNR land by the ABPP. This battlefield overlaps with portions of these battlefields and historic districts:

- Chancellorsville Battlefield (DHR #088-5180)
- Bank's Ford/Salem Church Battlefield (DHR #088-5181)
- Battle of Fredericksburg II (DHR #111-5296)
- Fredericksburg Historic District (DHR #111-0132)
- Washington Avenue Historic District (DHR #111-5262)

Figure 92 View of the Fredericksburg Battlefield I & II (DHR #111-5295 and #111-5296; Photo Location 31) at the Rappahannock River, View Looking Northwest.

Figure 93 View from the Fredericksburg Battlefield I & II (DHR #111-5295 and #111-5296; Photo Location 31), Looking North. Rebuild Project Transmission Line is Visible.

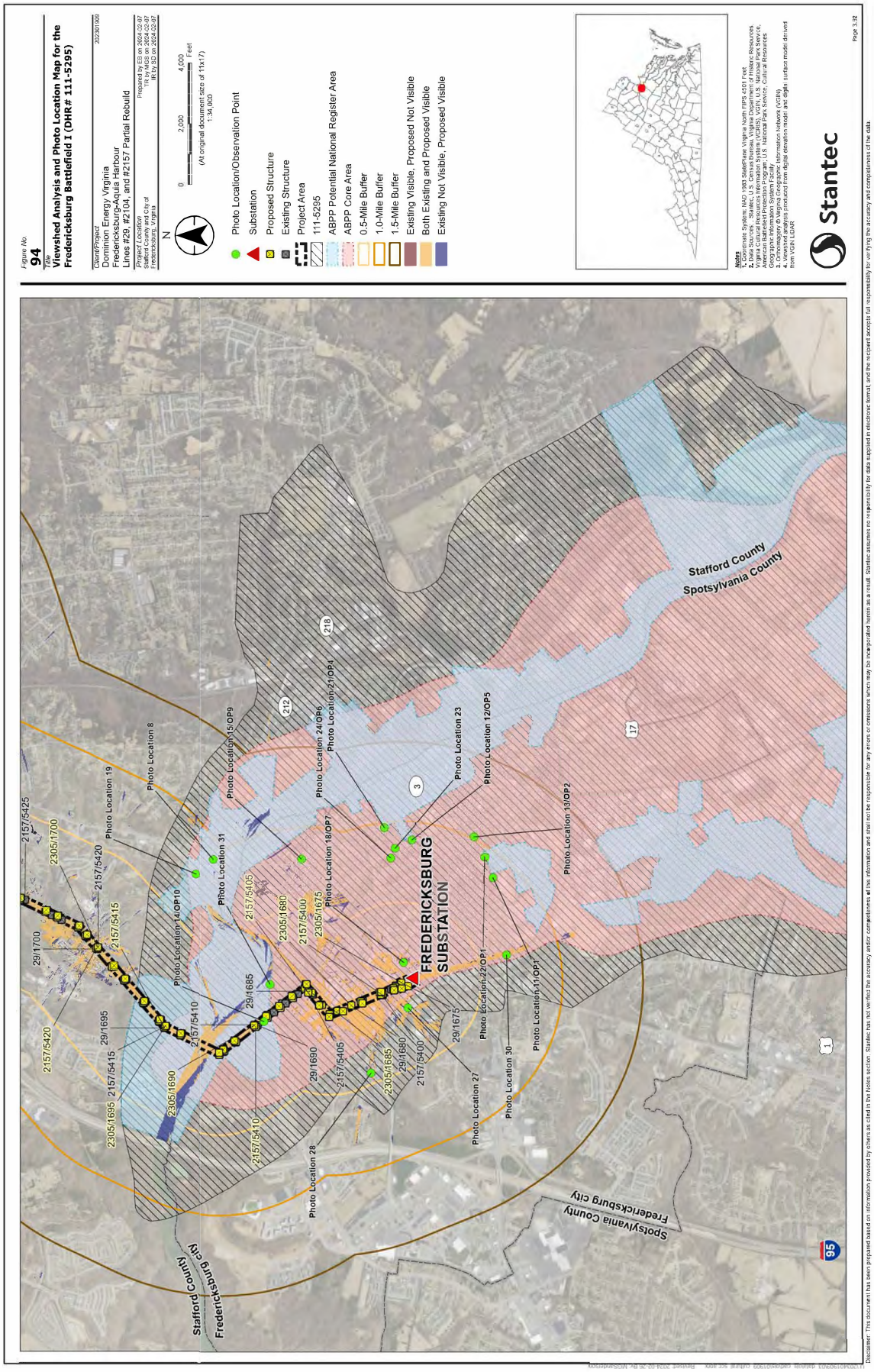
3.4.3.1 Visual Effects

The existing Fredericksburg Substation and Line #29 and Line #2157 transmission line corridor are wholly within the battlefield boundaries until reaching existing structure 2157/5417 to the north of Blaisdell Lane (see Figure 94; Appendix C). The transmission line corridor crosses the Rappahannock River within the boundaries of the battlefield. The Rebuild Project intersects with both Core and PotNR areas as defined by the ABPP. The structures present within the battlefield including the Fredericksburg Substation and associated with the existing transmission line, 29/1675 through 29/1697 and 2157/5397 through 2157/5417, range in height from approximately 48 feet to 125 feet (Appendix A). From the photo locations within the battlefield boundaries utilized during the site visit, the transmission line structures were visible from within the transmission line corridor and from Photo Locations 27 and 31 (Figures 24-25, 36, 39-40, 43, 46-47, 50-51, 54 57, 60, 63, 68, 71, 74-76, 87-88, 90 and 92-93; Appendix A) and it would be visible from the channel of the Rappahannock River. Based on preliminary design, the proposed structures, 2305/1675 through 2305/1697 and 2157/5397 through 2157/5417 will range in height from approximately 71 feet to 130 feet and will be, on average, 35 feet taller than the existing structures (Appendix A).

Viewshed modeling and visual simulations conducted for the Rebuild Project indicate that the proposed structures will be visible from within the transmission line corridor, where the transmission line crosses major roads and the Rappahannock River, and from Photo Locations 14/OP10, 18/OP7, 27, 28, and 31. The Rebuild Project will also be visible from points within the battlefield boundaries including from the campus of University of Mary Washington, Cowan Boulevard, Hospital Drive, and areas to the west of Sunken Road, all of which are located within the battlefield boundaries.

The proposed Rebuild Project would not be visible from Photo Locations 13/OP2, 15/OP9, 19, 21/OP4, 11/OP1, and 23, 24/OP6 (Figure 94 and Appendix C/OP1, OP2, OP4, OP6, OP7, OP9, OP10, and

OP25). Additionally, large areas of the battlefield within 1.0 mile of the Rebuild Project have diminished integrity due to modern residential and commercial development. Visibility of the Rebuild Project outside of the existing transmission line corridor is limited, given the overall size of the battlefield resource. Visible locations are primarily within developed areas and along roadways. It is anticipated, therefore, due to the compromised integrity of the resource in the area of the transmission line Rebuild Project and limited areas of visibility, that the Project will have ***a Minimal Visual Impact on the Fredericksburg Battlefield I (DHR #111-5295)***.



3.4.4 Battle of Fredericksburg II (DHR #111-5296)

The Battle of Fredericksburg II took place on May 3, 1863, and pitted Confederate forces under Major General Jubal A. Early and Union forces under Major General John Sedgwick in battle. During the battle, the Union's 6th and 2nd Corps crossed the Rappahannock River and attacked the Confederate entrenchments on Marye's Heights, forcing the Confederates to withdraw and regroup to the west and southeast of town. The estimated casualties were 2,000 total and resulted in a Union victory. In 2007, DHR determined the Battle of Fredericksburg II potentially eligible for the NRHP (DHR Site Files).

The ABPP has designated approximately 12,644 acres of Study Area for the Fredericksburg II Battlefield (DHR Site Files; ABPP 2009). Of the 12,644 acres, 1,774 acres are located within 1.0 mile of the Rebuild Project which includes 1,052 acres of the battlefield's Core Area. There are no ABPP-designated PotNR areas within the analysis area for the Battle of Fredericksburg II. This battlefield overlaps with portions of these battlefields and historic districts:

- Chancellorsville Battlefield (DHR #088-5180)
- Bank's Ford/Salem Church Battlefield (DHR #088-5181)
- Battle of Fredericksburg I (DHR #111-5295)
- Fredericksburg Historic District (DHR #111-0132)
- Washington Avenue Historic District (DHR #111-5262)

3.4.4.1 Visual Effects

The existing Fredericksburg Substation and Line #29 and Line #2157 transmission line corridor are wholly within the battlefield boundaries until reaching the point in the line at which it turns to the northeast south of existing structures 29/1691 and 2157/5411 (see Figure 95; Appendix C). The existing structures within the battlefield, 29/1675 through 29/1693 and 2157/5397 through 2157/5413, range in height from approximately 53 feet to 125 feet and, under current conditions, were not visible from Photo Locations 28 and 29 but were visible where the line crosses the resource and from Photo Locations 27 and 31 (Figures 17, 36, 39-40, 43, 46-47, 50-51, 54, 57, 60, 63, 67-68, 71, 74-76, 79, 84, 90, and 93-94; Appendix A).

Based on preliminary design, the proposed structures, 2305/1675 through 2305/1693 and 2157/5397 through 2157/5413 will range in height from approximately 71 feet to 125 feet and will be, on average, 27 feet taller than the existing structures (Appendix A). Viewshed modeling and visual simulations conducted for the Rebuild Project indicate that the proposed structures will be visible from within the transmission line corridor, where the transmission line crosses major roads and the Rappahannock River, and from Photo Locations 14/OP10, 18/OP7, 27 and 31. The Rebuild Project will also be visible from points within the battlefield boundaries including from the campus of University of Mary Washington, Hospital Drive, and areas to the west of Sunken Road, all of which are located within the battlefield boundaries.

The proposed Rebuild Project would not be visible from Photo Locations 6/OP14, 11/OP1, 13/OP2, 19, 20/OP15, 21/OP4, ,23, 24/OP6, 25/OP11, and 26 (Figure 95 and Appendix C/OP1, OP2, OP4, OP6,

OP11, OP14, and OP15). Additionally, large areas of the battlefield within 1.0 mile of the Rebuild Project have diminished integrity due to residential and commercial development. Visibility of the Rebuild Project outside of the existing transmission line corridor is limited, given the overall size of the battlefield resource. Visible locations are primarily within developed areas and along roadways. It is anticipated, therefore, due to the compromised integrity of the resource in the area of the transmission line Rebuild Project and limited areas of visibility, that the Project will have ***a Minimal Visual Impact on the Fredericksburg Battlefield II (DHR #111-5296)***.

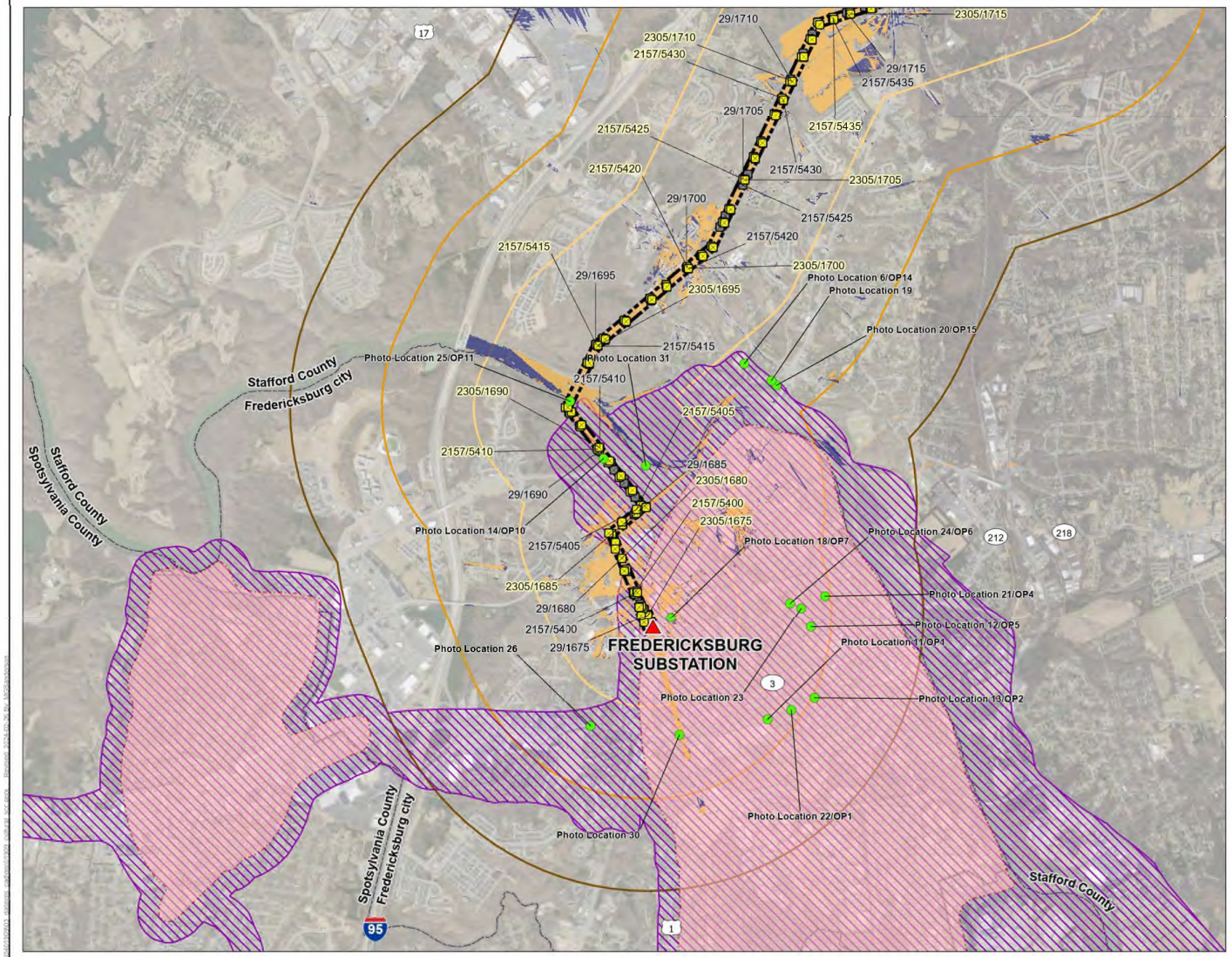


Figure No.
95

Title
Viewshed Analysis and Photo Location Map for the Fredericksburg Battlefield II (DHR# 111-5296)

Client/Project 202301909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

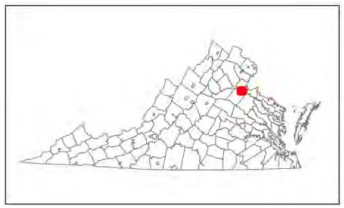
Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by EB on 2024-02-07
TR by MGS on 2024-02-07
IR by SD on 2024-02-07

N

0 2,000 4,000 Feet
(At original document size of 11x17)
1:34,000

- Photo Location/Observation Point
- Substation
- Proposed Structure
- Existing Structure
- Project Area
- 111-5296
- ABPP Core Area
- 0.5-Mile Buffer
- 1.0-Mile Buffer
- 1.5-Mile Buffer
- Existing Visible, Proposed Not Visible
- Both Existing and Proposed Visible
- Existing Not Visible, Proposed Visible



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Stantec, U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS), VGIN, U.S. National Park Service, American Battlefield Protection Program; U.S. National Park Service, Cultural Resources Geographic Information System Facility
3. Orthoimagery © Virginia Geographic Information Network (VGIN)
4. Viewshed analysis produced from digital elevation model and digital surface model derived from VGIN LiDAR

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4.0 CONCLUSIONS

4.1 OVERVIEW

Stantec was retained by Dominion Energy Virginia (Dominion Energy) to conduct a Stage I Pre-Application Analysis for the proposed partial rebuild of transmission lines between the Fredericksburg substation and the Aquia Harbour substation in the city of Fredericksburg and Stafford County, Virginia. Dominion Energy, in order to maintain the structural integrity and reliability of its transmission system to comply with mandatory North American Electric Reliability Corporation (NERC) Reliability Standards, proposes to:

- Partially rebuild, primarily within existing right-of-way (ROW)[5], approximately 12.5 miles of existing 115 kV transmission Line #29 utilizing current 230 kV standards[6] from the existing Fredericksburg substation to the existing Aquia Harbour substation. The existing structures, mainly wood H-frames, will be primarily replaced by 230 kV double-circuit weathering steel monopoles.
- Rebuild, entirely within existing ROW or on Company-owned property, approximately 3.75 miles of 230 kV Line #2157 from the existing Fredericksburg Substation to the existing Cranes Corner substation. The existing structures, mainly wood H-frames, will be primarily replaced by 230 kV double-circuit weathering steel monopoles.
- Rebuild, primarily within existing ROW or on Company-owned property, approximately 7.6 miles of 230 kV Line #2104 from the existing Cranes Corner substation to the existing Aquia Harbour substation. The existing structures, mainly wood H-frames will be primarily replaced by 230 kV double-circuit weathering steel monopoles.
- Rebuild two 500 kV structures and add two 500 kV structures near Aquia Harbour Substation on Line #568.

4.1.1 Recommendations - Architectural Resources

Three NHL-listed architectural resources are located within the 1.5-mile buffer. Fourteen NRHP-listed resources are located in the 1.0-mile buffer including the Falmouth, Fredericksburg, and Washington Avenue historic districts (DHR #089-00067, #111-0132, and #111-5262) and five NRHP-eligible resources including are located in the 0.5-mile radius. The NRHP-eligible Embrey Dam (DHR #088-0088);

[5] A short segment of 70 feet of expanded ROW along approximately 1,000 feet at the Dogwood Airpark will be required to rebuild the transmission lines in order to allow continued safe use of a private airfield.
[6] The Line #29 circuit will ultimately be renamed Line #2305; however, the rebuilt Line #2305 will be located where existing Line #29, Line #2157, or Line #2104 structures are currently present so that proposed structure numbering cannot be easily compared to the existing structure numbering. Therefore, the structure tables in Appendix A should be referenced.

has been demolished. Four NRHP potentially eligible resources, one farm, two battlefields and an historic district, were also located within the 1.0-mile radius and are intersected by the transmission line corridor (Appendix B).

Based on preliminary proposed structure heights, the proposed Rebuild Project will have **No Visual Impact** to Aquia Church (DHR #089-0008), Belmont (DHR #089-0022), the Conway House (DHR #089-0067-0031), H. H. Poole High School (DHR #0247), Brompton (DHR #111-0008), the John Lewis House (DHR #111-0107), Fredericksburg Historic District (DHR #111-0132), Carl's Frozen Custard Stand (DHR #111-5007), the Washington Avenue Historic District (DHR #111-5262), Fredericksburg City and Confederate Cemeteries (DHR #111-5265), and Elmhurst (DHR #111-5267). The proposed Rebuild Project will have a **Minimal Visual Impact on the** Chancellorsville Battlefield (DHR #088-5180), Bank's Ford/Salem Church Battlefield (DHR #088-5181), Carlton (DHR #089-0010), Clearview (DHR #089-0012), Cedar Hill Farm (DHR #089-0061), the Falmouth Historic District (DHR #089-0067), the Aquia Creek Quarries/Brent's Island (DHR #089-0103), Kenmore Plantation (DHR #111-0047), Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park and Cemetery (DHR #111-0147), and the Battle of Fredericksburg I & II (DHR #111-5295 and #111-5296), Fall Hill (DHR #111-0149) and Alman's Bar-B-Que (DHR #111-5473). The proposed Rebuild Project will have a **Moderate Visual Impact** on Glencairne (DHR #089-0020) and the Old Mill Historic (DHR #111-5297; Table 5).

Table 5 Previously Recorded Architectural Resources Considered under the Stage I Pre-Application Guidelines

DHR #	Resource Name	NRHP Status	Distance to Line (Feet)	Impact
088-0088	Embrey Dam/VEPCO Power Dam (demolished)	NRHP Eligible	N/A	N/A
088-5180	Chancellorsville Battlefield	NRHP Eligible	0	Minimal
088-5181	Bank's Ford/Salem Church Battlefield	Federal Determination of Eligibility	0	Minimal
089-0008	Aquia Church, 2938 Richmond Highway	NHL Listed; NRHP Listed	5,981	None
089-0010	Carlton, 501 Melchers Drive	NRHP Listed	2,588	Minimal
089-0012	Clearview, 420 Forbes Street	NRHP Listed	4,875	Minimal
089-0020	Glencairne, 559 Cambridge Street	NRHP Eligible	0	Moderate
089-0022	Belmont/Gari Melchers Home, 226 Washington Street	NHL Listed; NRHP Listed	2,193	None
089-0061	Cedar Hill Farm	Determined Potentially Eligible	0	Minimal
089-0067	Falmouth Historic District	NRHP Listed	2,440	Minimal
089-0067-0031	Conway House, 305 King Street	NRHP Listed	4,573	None

CONCLUSIONS

DHR #	Resource Name	NRHP Status	Distance to Line (Feet)	Impact
089-0103	Aquia Creek Quarries/ Brent's Island	NRHP Listed	1,692	Minimal
089-0247	H.H. Poole High School/ Stafford Training School, 1739 Richmond Highway	NRHP Listed	2,677	None
111-0008	Brompton/President's Residence, Mary Washington College, Hanover Street	NRHP Listed	4,502	None
111-0047	Kenmore Plantation/ Millbrook, 1201 Washington Avenue	NHL Listed; NRHP Listed	4,593	Minimal
111-0107	John Lewis House/Rowe House/War Hospital, 801 Hanover Street	NRHP Listed	5,176	None
111-0132	Fredericksburg Historic District	NRHP Listed	5,093	None
111-0147	Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park and Cemetery	NRHP Listed	47	Minimal
111-0149	Fall Hill, 3315 Fall Hill Avenue	NRHP Listed	0	Minimal
111-5007	Carl's Frozen Custard Stand, 2200 Princess Anne Street	NRHP Listed	3,980	None
111-5262	Washington Avenue Historic District	NRHP Listed	3,814	None
111-5265	Fredericksburg City and Confederate Cemeteries	NRHP Listed	4,390	None
111-5267	Elmhurst, 2010 Fall Hill Avenue	NRHP Listed	3,628	None
111-5295	Battle of Fredericksburg I	Determined Potentially Eligible	0	Minimal
111-5296	Battle of Fredericksburg II	Determined Potentially Eligible	0	Minimal
111-5297	Old Mill Historic District	Determined Potentially Eligible	16	Moderate
111-5473	Allman's Bar-B-Que, 2000 Augustine Avenue	Determined Eligible	557	Minimal

4.1.2 Recommendations - Archaeological Resources

Sixteen previously identified archaeological resources are located either within or immediately adjacent to the project ROW (Appendix C; Table 6). One site, Site 44ST0625, a Civil War camp and cemetery, has been determined eligible and Site 44ST0865, a mid-to late nineteenth century camp, has been determined potentially eligible for listing in the NRHP by DHR. The remaining 14 sites are currently unevaluated. ***It is recommended that the archaeological sites be investigated and evaluated as appropriate during future investigations.***

CONCLUSIONS

Table 6 Previously Recorded Archaeological Resources Considered under the Stage I Pre-Application Guidelines

DHR #	Resource Name	NRHP Status	Impact
44SP0571	Mid-19th Century Earthworks	Not Evaluated	Investigate During Archaeological Survey
44SP0574	Civil War Earthworks	Not Evaluated	Investigate During Archaeological Survey
44SP0640	Pre-1817 Old Fall Hill Road Trace	Not Evaluated	Investigate During Archaeological Survey
44ST0072	Late 18th /Early 19th Century Canal	Not Evaluated	Investigate During Archaeological Survey
44ST0101	Pre-Contact Temporary Camp, Indeterminant	Not Evaluated	Investigate During Archaeological Survey
44ST0102	Pre-Contact Temporary Camp, Indeterminant	Not Evaluated	Investigate During Archaeological Survey
44ST0109	Middle Archaic Camp	Not Evaluated	Investigate During Archaeological Survey
44ST0241	Early 20th Century Quarry	Not Evaluated	Investigate During Archaeological Survey
44ST0279	Mid-to Late 19th Century Military Base/Facility	Not Evaluated	Investigate During Archaeological Survey
44ST0280	Mid-to Late 19th Century Military Base/Facility	Not Evaluated	Investigate During Archaeological Survey
44ST0625	Civil War Camp and Cemetery	NRHP Eligible	Investigate During Archaeological Survey
44ST0677	Pre-Contact Lithic Scatter, Indeterminant	Not Evaluated	Investigate During Archaeological Survey
44ST0782	Pre-Contact Lithic Scatter	Not Evaluated	Investigate During Archaeological Survey
44ST0783	Pre-Contact Temporary Camp	Not Evaluated	Investigate During Archaeological Survey
44ST0787	Late Archaic, Indeterminate/ Late 18th to Mid-19th Century Domestic Site	Not Evaluated	Investigate During Archaeological Survey
4ST0865	Mid-to Late 19th Century Camp	Determined Potentially Eligible	Investigate During Archaeological Survey

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APPENDIX A EXISTING AND PROPOSED STRUCTURE HEIGHTS AND STRUCTURE DETAILS

Appendix A1: Existing and Proposed Structure Heights – Fredericksburg to Aquia Harbour

Proposed Line 2305						
Existing Structure #	Existing Structure Type	Existing Structure Height (ft)	Proposed Structure #	Proposed Structure Type	Proposed Structure Height (ft)	Height Change (ft)
Fredericksburg Substation						
29/1675	Backbone	75	2305/1675	Backbone	75	0
29/1676	Wood 3-Pole	79	2305/1676	Weathering Steel Monopole	79	0
29/1677	Wood 3-Pole	68	2305/1677	Weathering Steel Monopole	115	47
29/1678	Wood 3-Pole	65	2305/1678	Weathering Steel Monopole	115	50
29/1679	Wood H-Frame	66	2305/1679	Weathering Steel Monopole	120	54
29/1680	Wood H-Frame	53	2305/1680	Weathering Steel Monopole	100	48
29/1681	Wood H-Frame	50	2305/1681	Weathering Steel Monopole	100	50
29/1682	Wood 3-Pole	63	2305/1682	Weathering Steel Monopole	100	37
29/1683	Wood H-Frame	70	2305/1683	Weathering Steel Monopole	110	41
29/1684	Wood H-Frame	67	Structure Removed		N/A	N/A
29/1685	Wood 3-Pole	48	2305/1685	Weathering Steel Monopole	115	67
2157/5406	Weathering Steel Monopole	115	2305/1686	Weathering Steel Monopole	115	0
N/A	N/A	N/A	2305/1686A	Weathering Steel Monopole	110	N/A

Proposed Line 2157/2104/2297						
Existing Structure #	Existing Structure Type	Existing Structure Height (ft)	Proposed Structure #	Proposed Structure Type	Proposed Structure Height (ft)	Height Change (ft)
Fredericksburg Substation						
2157/5397	Backbone	71	2157/5397	Backbone	71	0
2157/5398	Weathering Steel Monopole	104	2157/5398	Weathering Steel Monopole	104	0
2157/5399	Weathering Steel Monopole	90	2157/5399	Weathering Steel Monopole	90	0
2157/5400	Weathering Steel Monopole	97	2157/5400	Weathering Steel Monopole	115	18
N/A	N/A	N/A	2083/3A	Weathering Steel Monopole	97	N/A
N/A	N/A	N/A	2083/3B	Weathering Steel Monopole	89	N/A
N/A	N/A	N/A	2083/3C	Weathering Steel Monopole	89	N/A
N/A	N/A	N/A	2083/3D	Weathering Steel Monopole	97	N/A
2157/5401	Weathering Steel Monopole	119	2157/5401	Weathering Steel Monopole	115	-4
2157/5402	Weathering Steel Monopole	114	2157/5402	Weathering Steel Monopole	114	0
2157/5403	Weathering Steel Monopole	108	2157/5403	Weathering Steel Monopole	108	0
2157/5404	Weathering Steel Monopole	115	2157/5404	Weathering Steel Monopole	115	0
2157/5405	Weathering Steel Monopole	125	2157/5405	Weathering Steel Monopole	125	0
29/1686	Wood 3-Pole	54	2157/5406	Weathering Steel Monopole	120	66
29/1687	Wood H-Frame	58	2157/5407	Weathering Steel Monopole	120	62

Proposed Line 2305						
Existing Structure #	Existing Structure Type	Existing Structure Height (ft)	Proposed Structure #	Proposed Structure Type	Proposed Structure Height (ft)	Height Change (ft)
2157/5407	Weathering Steel H-Frame	54	2305/1687	Weathering Steel Monopole	115	61
2157/5408	Weathering Steel H-Frame	70	2305/1688	Weathering Steel Monopole	115	45
2157/5409	Wood H-Frame	65	2305/1689	Weathering Steel Monopole	120	55
2157/5410	Wood H-Frame	73	2305/1690	Weathering Steel Monopole	105	32
2157/5411	Wood H-Frame	75	2305/1691	Weathering Steel Monopole	110	36
2157/5412	Wood H-Frame	54	2305/1692	Weathering Steel Monopole	120	66
2157/5413	Wood 3-Pole	56	2305/1693	Weathering Steel 2-Pole	130	74
2157/5414	Wood H-Frame	67	2305/1694	Weathering Steel Monopole	130	64
2157/5415	Wood 3-Pole	56	2305/1695	Weathering Steel Monopole	105	49
2157/5416	Wood H-Frame	52	2305/1696	Weathering Steel Monopole	100	48
2157/5417	Wood H-Frame	66	2305/1697	Weathering Steel Monopole	100	35
2157/5418	Weathering Steel H-Frame	76	2305/1698	Weathering Steel Monopole	120	44
2157/5419	Wood H-Frame	71	2305/1699	Weathering Steel Monopole	120	49
2157/5420	Wood H-Frame	75	2305/1700	Weathering Steel Monopole	120	45
2157/5421	Wood H-Frame	62	2305/1701	Weathering Steel Monopole	115	54
2157/5422	Wood 3-Pole	54	2305/1702	Weathering Steel Monopole	115	61
2157/5423	Wood H-Frame	70	2305/1703	Weathering Steel Monopole	110	40
2157/5424	Wood H-Frame	66	2305/1704	Weathering Steel Monopole	125	59

Proposed Line 2157/2104/2297						
Existing Structure #	Existing Structure Type	Existing Structure Height (ft)	Proposed Structure #	Proposed Structure Type	Proposed Structure Height (ft)	Height Change (ft)
29/1688	Wood H-Frame	63	2157/5408	Weathering Steel Monopole	115	53
29/1689	Wood H-Frame	65	2157/5409	Weathering Steel Monopole	115	51
29/1690	Wood H-Frame	71	2157/5410	Weathering Steel Monopole	105	34
29/1691	Wood H-Frame	63	2157/5411	Weathering Steel Monopole	100	37
29/1692	Wood H-Frame	63	2157/5412	Weathering Steel Monopole	120	58
29/1693	Wood 3-Pole	52	2157/5413	Weathering Steel 2-Pole	130	79
29/1694	Wood H-Frame	63	2157/5414	Weathering Steel Monopole	130	67
29/1695	Wood 3-Pole	55	2157/5415	Weathering Steel Monopole	105	50
29/1696	Wood H-Frame	54	2157/5416	Weathering Steel Monopole	100	46
29/1697	Wood H-Frame	53	2157/5417	Weathering Steel Monopole	100	48
29/1698	Wood H-Frame	68	2157/5418	Weathering Steel Monopole	120	52
29/1699	Wood H-Frame	58	2157/5419	Weathering Steel Monopole	120	63
29/1700	Wood H-Frame	74	2157/5420	Weathering Steel Monopole	120	47
29/1701	Wood H-Frame	73	2157/5421	Weathering Steel Monopole	115	43
29/1702	Wood 3-Pole	61	2157/5422	Weathering Steel Monopole	115	54
29/1703	Wood H-Frame	63	2157/5423	Weathering Steel Monopole	110	47
29/1704	Wood H-Frame	63	2157/5424	Weathering Steel Monopole	125	62

Proposed Line 2305						
Existing Structure #	**Existing Structure Type**	**Existing Structure Height (ft)**	**Proposed Structure #**	**Proposed Structure Type**	**Proposed Structure Height (ft)**	**Height Change (ft)**
2157/5425	Wood H-Frame	73	2305/1705	Weathering Steel Monopole	125	52
2157/5426	Wood H-Frame	58	Structure Removed		N/A	N/A
2157/5427	Wood H-Frame	72	2305/1706	Weathering Steel Monopole	110	38
2157/5428	Wood H-Frame	52	2305/1707	Weathering Steel Monopole	100	49
2157/5429	Wood H-Frame	71	2305/1708	Weathering Steel Monopole	115	44
2157/5430	Wood H-Frame	70	2305/1709	Weathering Steel Monopole	115	45
2157/5431	Weathering Steel H-Frame	70	2305/1710	Weathering Steel Monopole	120	50
2157/5432	Wood H-Frame	71	2305/1711	Weathering Steel Monopole	115	44
2157/5433	Wood H-Frame	80	2305/1712	Weathering Steel Monopole	115	36
2157/5434	Wood 3-Pole	56	2305/1713	Weathering Steel Monopole	105	49
2157/5435	Wood H-Frame	57	2305/1714	Weathering Steel Monopole	105	48
2157/5436	Wood H-Frame	65	2305/1715	Weathering Steel Monopole	105	40
2157/5437	Wood H-Frame	69	2305/1716	Weathering Steel Monopole	125	56
29/1717	Wood H-Frame	68	2305/1717	Weathering Steel Monopole	120	53

Proposed Line 2157/2104/2297						
Existing Structure #	**Existing Structure Type**	**Existing Structure Height (ft)**	**Proposed Structure #**	**Proposed Structure Type**	**Proposed Structure Height (ft)**	**Height Change (ft)**
29/1705	Wood H-Frame	63	2157/5425	Weathering Steel Monopole	125	62
29/1706	Wood H-Frame	57	2157/5427	Weathering Steel Monopole	100	44
29/1707	Wood H-Frame	53	2157/5428	Weathering Steel Monopole	100	48
29/1708	Wood H-Frame	63	2157/5429	Weathering Steel Monopole	115	53
29/1709	Wood H-Frame	71	2157/5430	Weathering Steel Monopole	115	44
29/1710	Wood H-Frame	67	2157/5431	Weathering Steel Monopole	120	53
29/1711	Wood H-Frame	63	2157/5432	Weathering Steel Monopole	115	52
29/1712	Wood H-Frame	63	2157/5433	Weathering Steel Monopole	115	52
29/1713	Wood 3-Pole	59	2157/5434	Weathering Steel Monopole	105	46
29/1714	Wood H-Frame	66	2157/5435	Weathering Steel Monopole	105	40
29/1715	Wood H-Frame	68	2157/5436	Weathering Steel Monopole	105	38
29/1716	Wood H-Frame	68	2157/5437	Weathering Steel Monopole	125	57
N/A	N/A	N/A	2157/5437A	Weathering Steel Monopole	97	N/A
N/A	N/A	N/A	2157/5437B	Weathering Steel Monopole	90	N/A
N/A	N/A	N/A	2157/5437C	Weathering Steel Monopole	89	N/A
N/A	N/A	N/A	2157/5437D	Weathering Steel Monopole	97	N/A
2157/5438	Wood H-Frame	70	2157/5438	Weathering Steel Monopole	120	50

Proposed Line 2305						
Existing Structure #	**Existing Structure Type**	**Existing Structure Height (ft)**	**Proposed Structure #**	**Proposed Structure Type**	**Proposed Structure Height (ft)**	**Height Change (ft)**
29/1718	Wood H-Frame	63	2305/1718	Weathering Steel Monopole	125	62
N/A	N/A	N/A	2305/1718A	Backbone	95	N/A
Cranes Corner Substation						
N/A	N/A	N/A	2305/1719A	Weathering Steel Monopole	115	N/A
29/1719	Wood H-Frame	67	2305/1719	Weathering Steel Monopole	115	48
2104/5441	Wood H-Frame	71	2305/1720	Weathering Steel Monopole	120	49
[redacted]						
2104/5442	Wood H-Frame	66	2305/1721	Weathering Steel Monopole	110	44
[redacted]						
2104/5444	Wood H-Frame	61	2305/1722	Weathering Steel Monopole	105	44
29/1723	Wood H-Frame	58	Structure Removed		N/A	N/A
29/1724	Wood 3-Pole	47	2305/1724	Weathering Steel Monopole	125	78
29/1725	Wood H-Frame	71	Structure Removed		N/A	N/A
29/1726	Wood H-Frame	55	2305/1726	Weathering Steel Monopole	90	35
N/A	N/A	N/A	2305/1726A	Weathering Steel 2-Pole	76	N/A
N/A	N/A	N/A	2305/1727	Weathering Steel 2-Pole	75	N/A

Proposed Line 2157/2104/2297						
Existing Structure #	**Existing Structure Type**	**Existing Structure Height (ft)**	**Proposed Structure #**	**Proposed Structure Type**	**Proposed Structure Height (ft)**	**Height Change (ft)**
2157/5439	Wood 3-Pole	71	2157/5439	Weathering Steel Monopole	125	55
2157/5439A	Backbone	70	2157/5439A	Backbone	70	0
Cranes Corner Substation						
N/A	N/A	N/A	2104/5440A	Weathering Steel Monopole	115	N/A
2104/5440	Wood H-Frame	74	2104/5440	Weathering Steel Monopole	125	51
29/1720	Wood H-Frame	62	2104/5441	Weathering Steel Monopole	120	58
N/A	N/A	N/A	2104/5441A	Weathering Steel Monopole	97	N/A
N/A	N/A	N/A	2104/5441B	Weathering Steel Monopole	88	N/A
N/A	N/A	N/A	2104/5441C	Weathering Steel Monopole	89	N/A
N/A	N/A	N/A	2104/5441D	Weathering Steel Monopole	97	N/A
29/1721	Wood H-Frame	57	2104/5442	Weathering Steel Monopole	110	53
2104/5443	Wood H-Frame	71	Structure Removed		N/A	N/A
29/1722	Wood H-Frame	54	2104/5444	Weathering Steel Monopole	105	51
2104/5445	Wood H-Frame	61	Structure Removed		N/A	N/A
2104/5446	Wood 3-Pole	78	2104/5446	Weathering Steel Monopole	125	47
2104/5447	Wood H-Frame	71	Structure Removed		N/A	N/A
2104/5448	Wood H-Frame	62	2104/5448	Weathering Steel Monopole	100	38
N/A	N/A	N/A	2104/5448A	Weathering Steel 2-Pole	64	N/A
2104/5449	Wood H-Frame	61	2104/5449	Weathering Steel 2-Pole	66	5

Proposed Line 2305						
Existing Structure #	Existing Structure Type	Existing Structure Height (ft)	Proposed Structure #	Proposed Structure Type	Proposed Structure Height (ft)	Height Change (ft)
29/1727	Wood H-Frame	57	2305/1727A	Weathering Steel Monopole	90	33
29/1728	Wood H-Frame	58	2305/1728	Weathering Steel Monopole	105	47
29/1729	Wood H-Frame	71	2305/1729	Weathering Steel Monopole	115	44
29/1730	Wood H-Frame	58	2305/1730	Weathering Steel Monopole	110	52
29/1731	Wood H-Frame	61	2305/1731	Weathering Steel Monopole	110	49
29/1732	Wood H-Frame	62	2305/1732	Weathering Steel Monopole	120	58
29/1733	Wood H-Frame	57	2305/1733	Weathering Steel Monopole	105	48
29/1734	Wood H-Frame	66	2305/1734	Weathering Steel Monopole	120	54
29/1735	Wood 3-Pole	54	2305/1735	Weathering Steel Monopole	125	71
29/1736	Wood H-Frame	60	2305/1736	Weathering Steel Monopole	110	50
29/1737	Wood H-Frame	60	2305/1737	Weathering Steel Monopole	110	50
29/1738	Wood H-Frame	62	2305/1738	Weathering Steel Monopole	105	43
29/1739	Wood H-Frame	59	2305/1739	Weathering Steel Monopole	100	41
29/1740	Wood H-Frame	57	2305/1740	Weathering Steel Monopole	105	49
N/A	N/A	N/A	2305/1740A	Weathering Steel Monopole	125	N/A
29/1741	Wood H-Frame	67	2305/1741	Weathering Steel 2-Pole	130	63

Proposed Line 2157/2104/2297						
Existing Structure #	Existing Structure Type	Existing Structure Height (ft)	Proposed Structure #	Proposed Structure Type	Proposed Structure Height (ft)	Height Change (ft)
2104/5450	Wood H-Frame	64	2104/5450	Weathering Steel Monopole	105	41
2104/5451	Wood H-Frame	72	2104/5451	Weathering Steel Monopole	115	43
2104/5452	Wood H-Frame	62	2104/5452	Weathering Steel Monopole	110	48
2104/5453	Wood H-Frame	62	Structure Removed		N/A	N/A
2104/5454	Wood H-Frame	61	2104/5454	Weathering Steel Monopole	110	49
2104/5455	Wood H-Frame	63	2104/5455	Weathering Steel Monopole	110	47
2104/5456	Wood H-Frame	64	2104/5456	Weathering Steel Monopole	115	51
2104/5457	Wood H-Frame	61	2104/5457	Weathering Steel Monopole	120	59
2104/5458	Wood H-Frame	51	Structure Removed		N/A	N/A
2104/5459	Wood 3-Pole	61	2104/5459	Weathering Steel Monopole	125	64
2104/5460	Wood H-Frame	59	2104/5460	Weathering Steel Monopole	110	51
2104/5461	Wood H-Frame	60	2104/5461	Weathering Steel Monopole	125	65
2104/5462	Wood H-Frame	63	2104/5462	Weathering Steel Monopole	105	42
2104/5463	Wood H-Frame	61	2104/5463	Weathering Steel Monopole	105	44
2104/5464	Wood H-Frame	60	2104/5464	Weathering Steel Monopole	115	55
2104/5465	Wood H-Frame	61	2104/5465	Weathering Steel Monopole	120	59
2104/5466	Wood H-Frame	58	2104/5466	Weathering Steel Monopole	120	63

Proposed Line 2305						
Existing Structure #	**Existing Structure Type**	**Existing Structure Height (ft)**	**Proposed Structure #**	**Proposed Structure Type**	**Proposed Structure Height (ft)**	**Height Change (ft)**
N/A	N/A	N/A	2305/1741A	Weathering Steel Monopole	108	N/A
29/1742	Wood H-Frame	69	2305/1742	Weathering Steel Monopole	110	41
29/1743	Wood H-Frame	56	2305/1743	Weathering Steel Monopole	110	54
29/1744	Wood H-Frame	55	2305/1744	Weathering Steel 2-Pole	99	44
29/1745	Wood H-Frame	65	2305/1745	Weathering Steel Monopole	110	45
29/1746	Wood H-Frame	70	2305/1746	Weathering Steel Monopole	125	55
29/1747	Wood H-Frame	57	2305/1747	Weathering Steel Monopole	105	48
29/1748	Wood H-Frame	62	2305/1748	Weathering Steel Monopole	115	53
29/1749	Wood H-Frame	63	2305/1749	Weathering Steel Monopole	110	48
N/A	N/A	N/A	2305/1749A	Weathering Steel Monopole	120	N/A
29/1750	Wood H-Frame	61	2305/1750	Weathering Steel Monopole	105	45
29/1751	Wood H-Frame	62	2305/1751	Weathering Steel Monopole	115	53
29/1752	Wood H-Frame	57	2305/1752	Weathering Steel Monopole	110	53
29/1753	Wood H-Frame	52	2305/1753	Weathering Steel Monopole	115	63
29/1754	Wood H-Frame	66	2305/1754	Weathering Steel Monopole	120	54
29/1755	Wood H-Frame	66	2305/1755	Weathering Steel Monopole	115	49

Proposed Line 2157/2104/2297						
Existing Structure #	**Existing Structure Type**	**Existing Structure Height (ft)**	**Proposed Structure #**	**Proposed Structure Type**	**Proposed Structure Height (ft)**	**Height Change (ft)**
2104/5467	Wood H-Frame	64	2104/5467	Weathering Steel 2-Pole	97	34
N/A	N/A	N/A	2104/5467A	Weathering Steel 2-Pole	99	N/A
2104/5468	Wood H-Frame	65	2104/5468	Weathering Steel Monopole	115	50
2104/5469	Wood H-Frame	61	2104/5469	Weathering Steel Monopole	110	49
2104/5470	Wood H-Frame	70	2104/5470	Weathering Steel Monopole	125	55
2104/5471	Wood H-Frame	66	2104/5471	Weathering Steel Monopole	125	59
2104/5472	Wood H-Frame	56	2104/5472	Weathering Steel Monopole	105	49
2104/5473	Wood H-Frame	66	2104/5473	Weathering Steel Monopole	100	34
2104/5474	Wood H-Frame	61	2104/5474	Weathering Steel Monopole	105	44
2104/5475	Wood H-Frame	66	2104/5475	Weathering Steel Monopole	120	54
2104/5476	Wood H-Frame	60	2104/5476	Weathering Steel Monopole	110	50
2104/5477	Wood H-Frame	61	2104/5477	Weathering Steel Monopole	115	54
2104/5478	Wood H-Frame	57	2104/5478	Weathering Steel Monopole	105	48
2104/5479	Wood H-Frame	57	2104/5479	Weathering Steel Monopole	120	64
2104/5480	Wood H-Frame	61	2104/5480	Weathering Steel Monopole	115	54
2104/5481	Wood H-Frame	58	2104/5481	Weathering Steel Monopole	120	62
2104/5482	Wood H-Frame	58	Structure Removed		N/A	N/A

Proposed Line 2305						
Existing Structure #	Existing Structure Type	Existing Structure Height (ft)	Proposed Structure #	Proposed Structure Type	Proposed Structure Height (ft)	Height Change (ft)
29/1756	Wood H-Frame	67	2305/1756	Weathering Steel Monopole	125	58
29/1757	Wood H-Frame	69	2305/1757	Weathering Steel Monopole	125	56
29/1758	Wood H-Frame	62	2305/1758	Weathering Steel Monopole	110	48
29/1759	Wood H-Frame	61	2305/1759	Weathering Steel Monopole	105	44
29/1760	Wood 3-Pole	63	2305/1760	Weathering Steel Monopole	105	42
29/1761	Wood H-Frame	64	2305/1761	Weathering Steel Monopole	110	46
29/1762	Wood H-Frame	58	2305/1762	Weathering Steel Monopole	100	42
N/A	N/A	N/A	2305/1762A	Weathering Steel Monopole	120	N/A
29/1763	Wood H-Frame	58	2305/1763	Weathering Steel Monopole	105	48
29/1764	Wood H-Frame	62	2305/1764	Weathering Steel Monopole	120	58
29/1765	Wood H-Frame	63	2305/1765	Weathering Steel Monopole	120	57
N/A	N/A	N/A	2305/1765A	Weathering Steel Monopole	125	N/A
29/1766	Wood H-Frame	73	2305/1766	Weathering Steel Monopole	135	62
29/1767	Wood H-Frame	62	2305/1767	Weathering Steel Monopole	105	43
29/1768	Wood H-Frame	52	2305/1768	Weathering Steel Monopole	100	48
29/1769	Wood H-Frame	58	2305/1769	Weathering Steel Monopole	115	57

Proposed Line 2157/2104/2297						
Existing Structure #	Existing Structure Type	Existing Structure Height (ft)	Proposed Structure #	Proposed Structure Type	Proposed Structure Height (ft)	Height Change (ft)
2104/5483	Wood H-Frame	60	2104/5483	Weathering Steel Monopole	125	65
2104/5484	Wood H-Frame	61	Structure Removed		N/A	N/A
2104/5485	Wood H-Frame	58	2104/5485	Weathering Steel Monopole	120	62
2104/5486	Wood H-Frame	64	2104/5486	Weathering Steel Monopole	110	46
2104/5487	Wood H-Frame	62	2104/5487	Weathering Steel Monopole	105	44
2104/5488	Wood 3-Pole	53	2104/5488	Weathering Steel Monopole	105	52
2104/5489	Wood H-Frame	64	2104/5489	Weathering Steel Monopole	110	46
2104/5490	Wood H-Frame	65	2297/5490	Weathering Steel Monopole	105	40
2104/5491	Wood H-Frame	60	2297/5491	Weathering Steel Monopole	110	50
2104/5492	Wood H-Frame	65	2297/5492	Weathering Steel Monopole	105	40
2104/5493	Wood H-Frame	74	2297/5493	Weathering Steel Monopole	130	57
2104/5494	Wood H-Frame	71	2297/5494	Weathering Steel Monopole	130	59
2104/5495	Wood H-Frame	66	Structure Removed		N/A	N/A
2104/5496	Wood H-Frame	64	2297/5496	Weathering Steel Monopole	125	61
2104/5497	Wood H-Frame	65	2297/5497	Weathering Steel Monopole	125	61
2104/5498	Wood H-Frame	66	2297/5498	Weathering Steel Monopole	105	39
2104/5499	Wood H-Frame	66	2297/5499	Weathering Steel Monopole	100	34
2104/5500	Wood H-Frame	62	2297/5500	Weathering Steel Monopole	115	54

Proposed Line 2305						
Existing Structure #	Existing Structure Type	Existing Structure Height (ft)	Proposed Structure #	Proposed Structure Type	Proposed Structure Height (ft)	Height Change (ft)
29/1770	Wood H-Frame	62	Structure Removed		N/A	N/A
29/1771	Wood H-Frame	63	2305/1771	Weathering Steel Monopole	110	47
29/1772	Wood H-Frame	53	2305/1772	Weathering Steel Monopole	100	47
N/A	N/A	N/A	2305/1772A	Weathering Steel Monopole	120	N/A
29/1773	Wood H-Frame	63	2305/1773	Weathering Steel Monopole	115	53
29/1774	Wood H-Frame	66	2305/1774	Weathering Steel Monopole	110	44
29/1775	Wood H-Frame	57	2305/1775	Weathering Steel Monopole	115	58
29/1776	Wood H-Frame	63	2305/1776	Weathering Steel Monopole	120	57
29/1777	Wood H-Frame	57	2305/1777	Weathering Steel Monopole	110	53
29/1778	Wood H-Frame	56	2305/1778	Weathering Steel Monopole	115	59
29/1779	Wood H-Frame	53	2305/1779	Weathering Steel Monopole	100	47
29/1779A	Wood H-Frame	62	2305/1779A	Weathering Steel Monopole	105	43
[redacted]						
29/1780	Wood H-Frame	67	2305/1780	Weathering Steel Monopole	100	34
29/1781	Weathering Steel H-Frame	65	2305/1781	Weathering Steel Monopole	130	65
[redacted]						

Proposed Line 2157/2104/2297						
Existing Structure #	Existing Structure Type	Existing Structure Height (ft)	Proposed Structure #	Proposed Structure Type	Proposed Structure Height (ft)	Height Change (ft)
2104/5501	Wood H-Frame	62	Structure Removed		N/A	N/A
2104/5502	Wood H-Frame	61	2297/5502	Weathering Steel Monopole	110	49
2104/5503	Wood H-Frame	52	2297/5503	Weathering Steel Monopole	100	48
2104/5504	Wood H-Frame	60	2297/5504	Weathering Steel Monopole	110	50
2104/5505	Wood H-Frame	66	2297/5505	Weathering Steel Monopole	115	49
2104/5506	Wood H-Frame	70	2297/5506	Weathering Steel Monopole	110	41
2104/5507	Wood H-Frame	69	2297/5507	Weathering Steel Monopole	115	46
2104/5508	Wood H-Frame	64	2297/5508	Weathering Steel Monopole	110	46
2104/5509	Wood H-Frame	56	2297/5509	Weathering Steel Monopole	110	54
2104/5510	Wood H-Frame	65	2297/5510	Weathering Steel Monopole	110	45
2104/5511	Wood H-Frame	58	2297/5511	Weathering Steel Monopole	115	57
2104/5511A	Switch	60	2297/5511A	Switch	135	75
2104/5511B	Wood H-Frame	80	2297/5511B	Weathering Steel Monopole	115	35
2104/5511C	Wood H-Frame	77	Structure Removed		N/A	N/A
2104/5512	Wood H-Frame	70	2297/5512	Weathering Steel Monopole	120	51
2104/5514	Switch	62	2297/5514	Weathering Steel Monopole	120	58
2104/5514A	Wood H-Frame	75	Structure Removed		N/A	N/A
2104/5514B	Wood H-Frame	75	Structure Removed		N/A	N/A

Proposed Line 2305						
Existing Structure #	**Existing Structure Type**	**Existing Structure Height (ft)**	**Proposed Structure #**	**Proposed Structure Type**	**Proposed Structure Height (ft)**	**Height Change (ft)**
29/1782	Weathering Steel H-Frame	80	2305/1782	Weathering Steel Monopole	130	50
N/A	N/A	N/A	2305/1783	Weathering Steel Monopole	130	N/A
N/A	N/A	N/A	2305/1784	Backbone	95	N/A
Aquia Harbour Substation						

Proposed Line 2157/2104/2297						
Existing Structure #	**Existing Structure Type**	**Existing Structure Height (ft)**	**Proposed Structure #**	**Proposed Structure Type**	**Proposed Structure Height (ft)**	**Height Change (ft)**
N/A	N/A	N/A	2297/5515	Weathering Steel Monopole	135	N/A
2104/5515	Weathering Steel H-Frame	84	2297/5515A	Weathering Steel Monopole	130	46
N/A	N/A	N/A	2297/5515B	Weathering Steel Monopole	115	N/A
2104/5516	Weathering Steel Monopole	110	2297/5516	Weathering Steel Monopole	110	0
2104/5517	Backbone	95	2297/5517	Backbone	95	0
Aquia Harbour Substation						

230 kV Rebuild Height Data

	Existing	**Proposed**
Minimum Structure Height (ft)	47	64
Maximum Structure Height (ft)	147	165
Average Structure Height (ft)	66	112
Average Height Change (ft)	47	

* Height data does not include backbone structures or the 500 kV structures below.

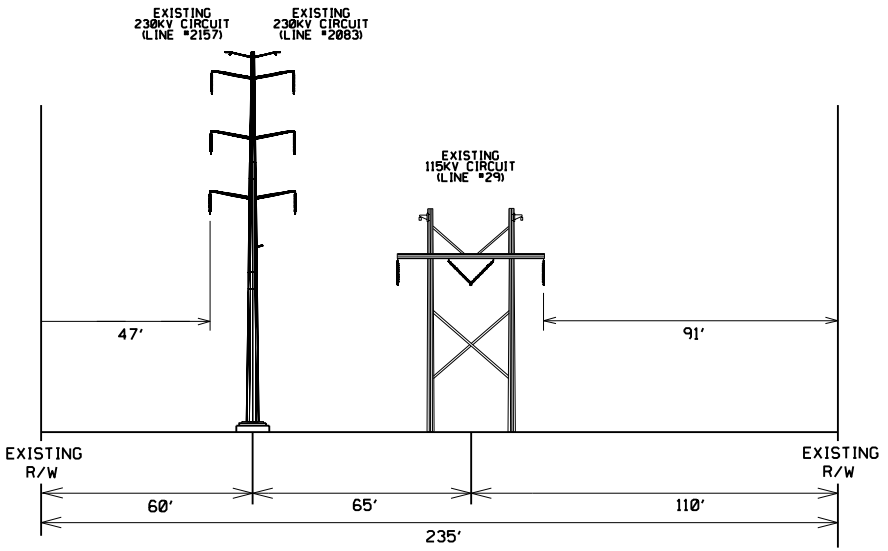
Line 568 Structures						
568/77	Galvanized Steel Tower	147	568/77	Weathering Steel H-Frame	152	5
N/A	N/A	N/A	568/76A	Weathering Steel Monopole	165	N/A
568/76	Galvanized Steel Tower	130	568/76	Weathering Steel Monopole	165	35
N/A	N/A	N/A	568/75A	Weathering Steel H-Frame	152	N/A

BB	Backbone
WHF	Wood H-Frame
W3P	Wood 3-Pole
WSTHF	Weathering Steel H-Frame
WSTMP	Weathering Steel Monopole
WST2P	Weathering Steel 2-Pole
SW	Switch
GSTWR	Galvanized Steel Tower

Appendix A2: Structure Details

LINE #2157 FREDERICKSBURG - CRANES CORNER
LINE #29 FREDERICKSBURG - POSSUM POINT
LINE #2083 FREDERICKSBURG - BIRCHWOOD

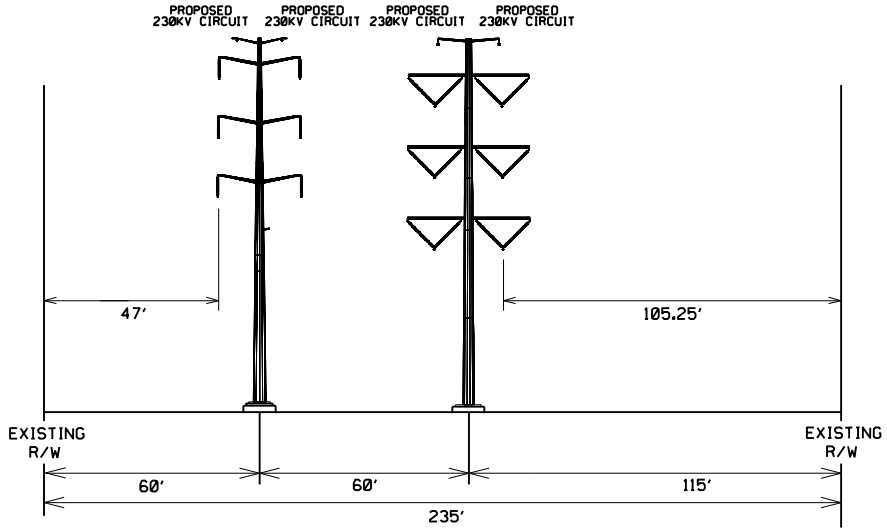
EXISTING CONFIGURATION



TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR
(FROM 2157/5399, 29/1677 TO 2157/5405, 29/1685)

LINE #2157 FREDERICKSBURG - CRANES CORNER
LINE #2XXX FREDERICKSBURG - AQUIA HARBOUR
LINE #2305 FREDERICKSBURG - POSSUM POINT
LINE #2083 FREDERICKSBURG - BIRCHWOOD

PROPOSED CONFIGURATION

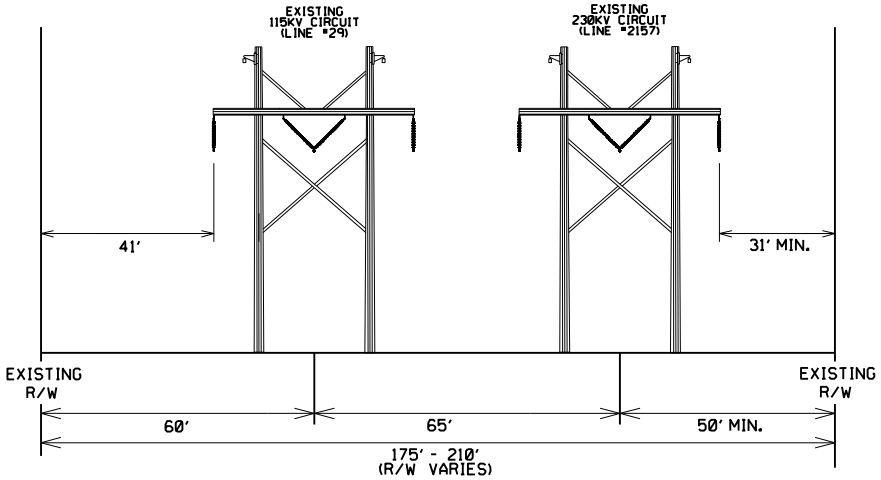


TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR
(FROM 2157/5399, 2305/1677 TO 2157/5405, 2305/1685)

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

LINE #29 FREDERICKSBURG - POSSUM POINT
LINE #2157 FREDERICKSBURG - CRANES CORNER

EXISTING CONFIGURATION

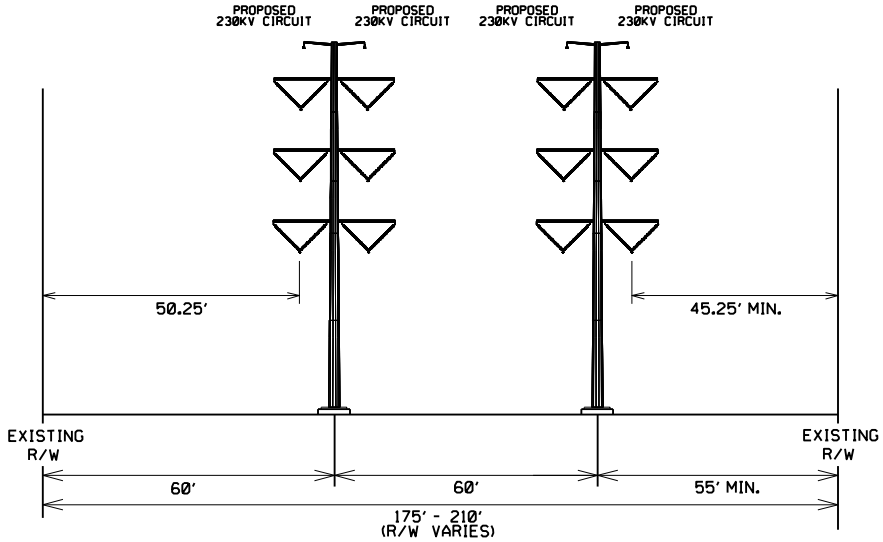


TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR

(FROM 2157/5406, 29/1685 TO 2157/5412, 29/1692)

LINE #2157 FREDERICKSBURG - CRANES CORNER
LINE #2XXX FREDERICKSBURG - AQUIA HARBOUR
LINE #2305 FREDERICKSBURG - POSSUM POINT
LINE #2YYY BIRCHWOOD - AQUIA HARBOUR

PROPOSED CONFIGURATION



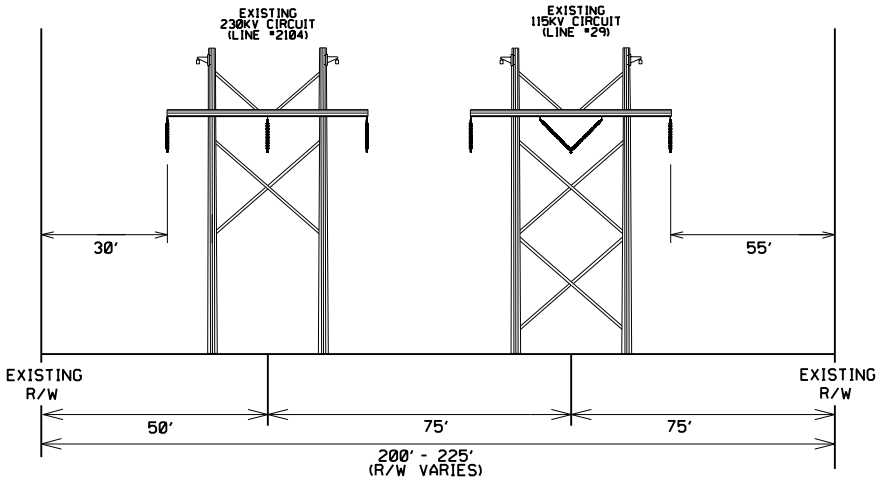
TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR

(FROM 2157/5406, 2305/1685 TO 2157/5412, 2305/1692)

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

LINE #2104 CRANES CORNER - AQUIA HARBOUR
LINE #29 FREDERICKSBURG - POSSUM POINT

EXISTING CONFIGURATION

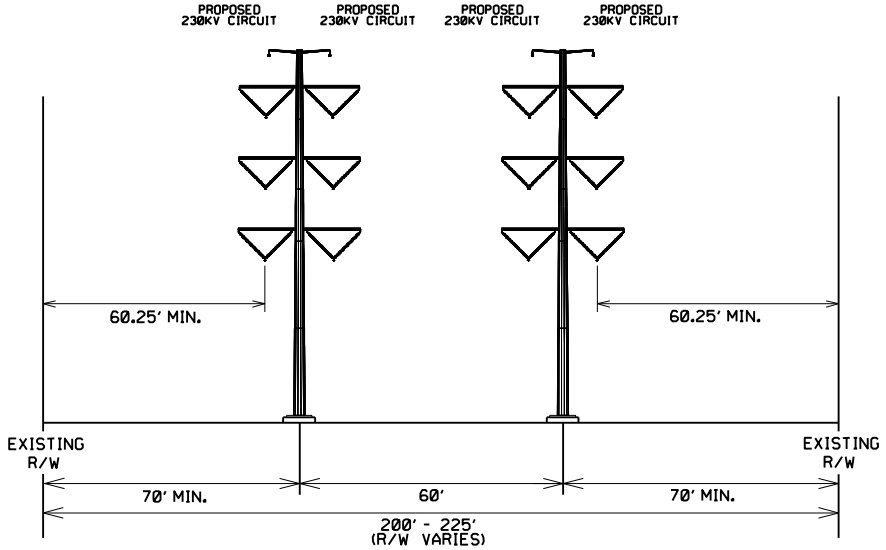


TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR

(FROM STRUCTURES 2157/5416, 29/1696 TO 2104/5487, 29/1759)

LINE #2104 CRANES CORNER - SPARTAN
LINE #2XXX FREDERICKSBURG - AQUIA HARBOUR
LINE #2305 FREDERICKSBURG - POSSUM POINT
LINE #2YYY BIRCHWOOD - AQUIA HARBOUR

PROPOSED CONFIGURATION



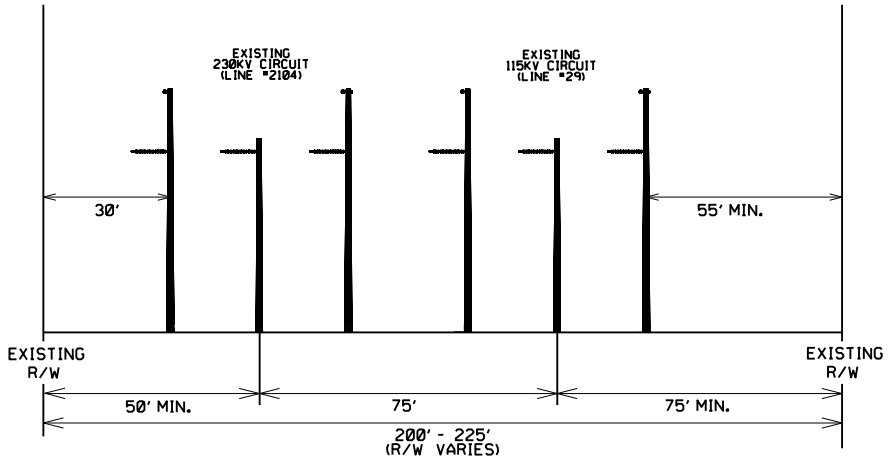
TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR

(FROM STRUCTURES 2157/5416, 2305/1696 TO 2104/5487, 2305/1759)

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

LINE #2104 CRANES CORNER - AQUIA HARBOUR
LINE #29 FREDERICKSBURG - POSSUM POINT

EXISTING CONFIGURATION

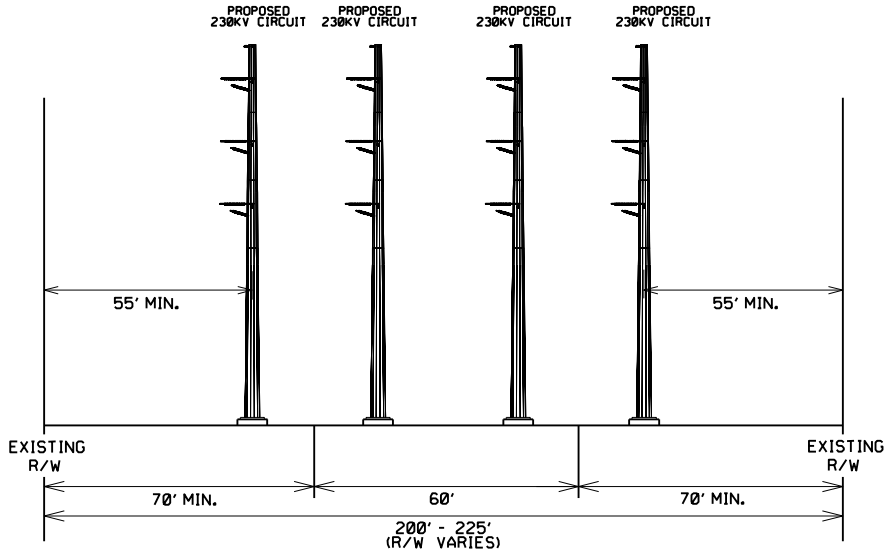


TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR

(HEAVY ANGLE STRUCTURES 2157/5413, 2104/5446, 29/1693, 29/1724)

LINE #2104 CRANES CORNER - SPARTAN
LINE #2XXX FREDERICKSBURG - AQUIA HARBOUR
LINE #2305 FREDERICKSBURG - POSSUM POINT
LINE #2YYY BIRCHWOOD - AQUIA HARBOUR

PROPOSED CONFIGURATION



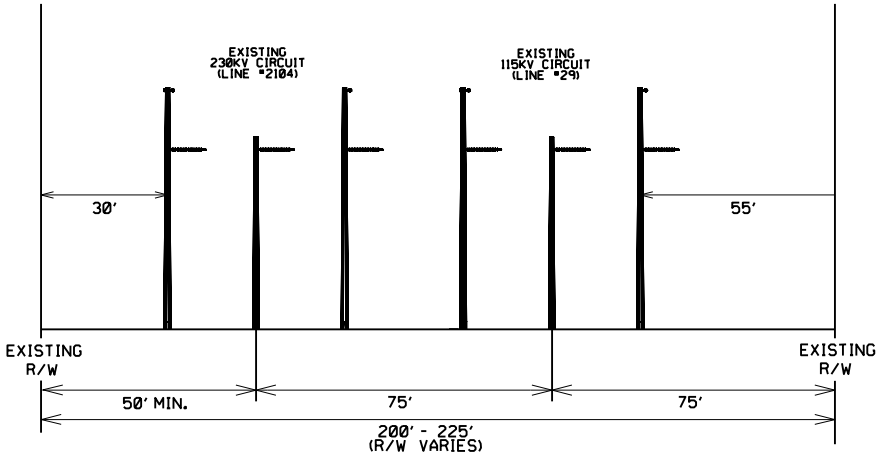
TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR

(HEAVY ANGLE STRUCTURES 2157/5413, 2104/5446, 2305/1693, 2305/1724)

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

LINE #2104 CRANES CORNER - AQUIA HARBOUR
LINE #29 FREDERICKSBURG - POSSUM POINT

EXISTING CONFIGURATION

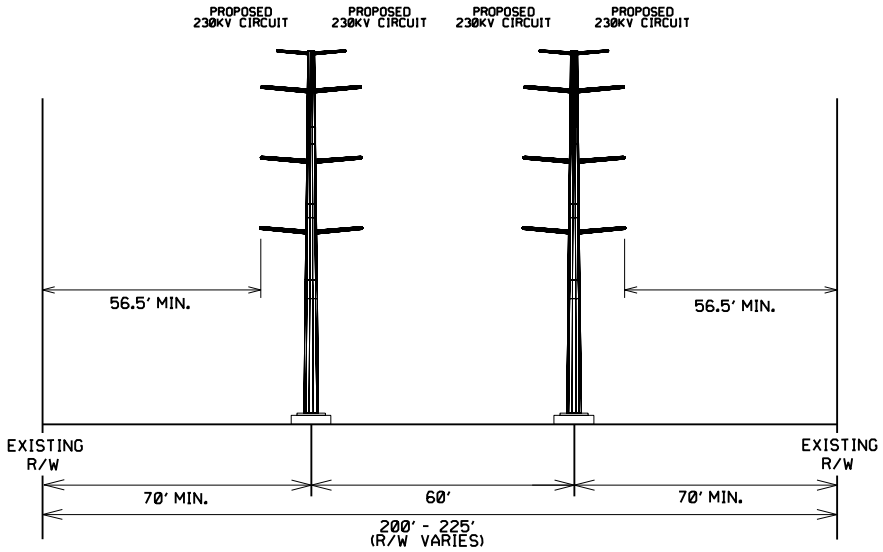


TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR
(LIGHT TO MEDIUM ANGLE STRUCTURES)

(FROM 2157/5414, 29/1694 TO 2104/5488, 29/1760)

LINE #2104 CRANES CORNER - SPARTAN
LINE #2XXX FREDERICKSBURG - AQUIA HARBOUR
LINE #2305 FREDERICKSBURG - POSSUM POINT
LINE #2YYY BIRCHWOOD - AQUIA HARBOUR

PROPOSED CONFIGURATION



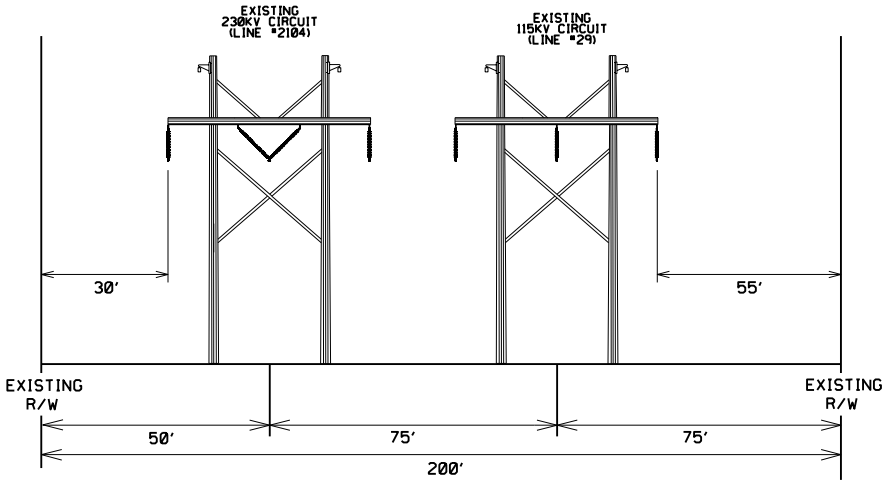
TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR
(LIGHT TO MEDIUM ANGLE STRUCTURES)

(FROM 2157/5414, 2305/1694 TO 2104/5488, 2305/1760)

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

LINE #2104 CRANES CORNER - AQUIA HARBOUR
LINE #29 FREDERICKSBURG - POSSUM POINT

EXISTING CONFIGURATION

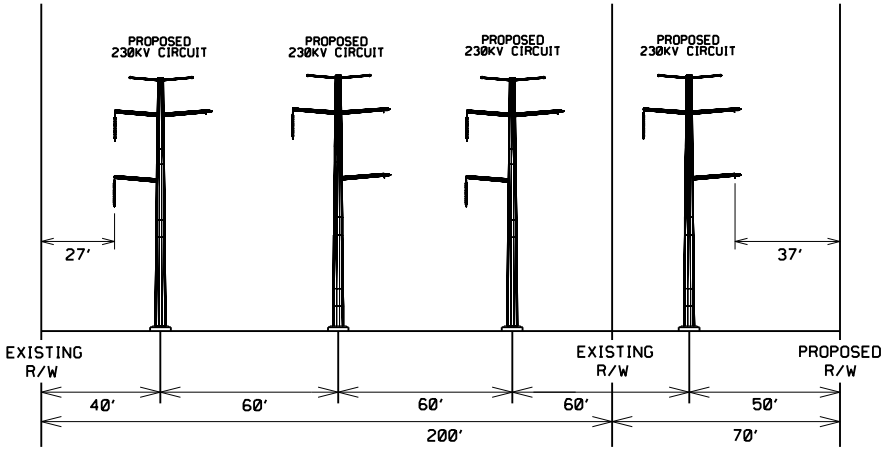


TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR
(DOGWOOD AIRPARK)

(FROM STRUCTURES 2104/5448, 29/1726 TO 2104/5449, 29/1727)

LINE #2104 CRANES CORNER - SPARTAN
LINE #2XXX FREDERICKSBURG - AQUIA HARBOUR
LINE #2305 FREDERICKSBURG - POSSUM POINT
LINE #2YYY BIRCHWOOD - AQUIA HARBOUR

PROPOSED CONFIGURATION



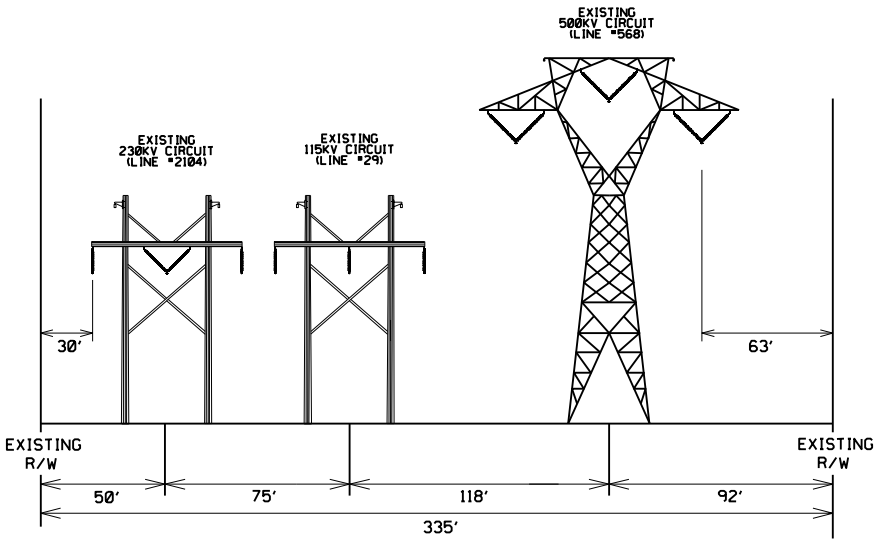
ROW LOOKING TOWARDS AQUIA HARBOUR
(DOGWOOD AIRPARK)

(FROM STRUCTURES 2104/5448A, 2305/1726A TO 2104/5449, 2305/1727)

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

LINE #2104 CRANES CORNER - AQUIA HARBOUR
LINE #29 FREDERICKSBURG - POSSUM POINT
LINE #568 POSSUM POINT - LADYSMITH

EXISTING CONFIGURATION

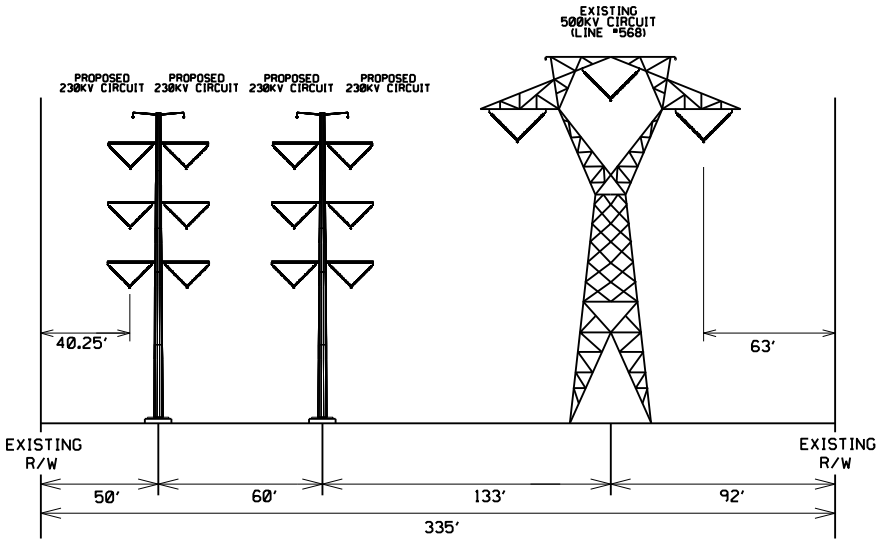


TYPICAL ROW LOOKING TOWARDS AQUA HARBOUR

(FROM STRUCTURE 2104/5489, 29/1761, 568/93 TO 2104/5495, 29/1765, 568/89)

LINE #2297 SPARTAN - AQUIA HARBOUR
LINE #2XXX FREDERICKSBURG - AQUIA HARBOUR
LINE #2305 FREDERICKSBURG - POSSUM POINT
LINE #2YYY BIRCHWOOD - AQUIA HARBOUR
LINE #568 POSSUM POINT - LADYSMITH

PROPOSED CONFIGURATION



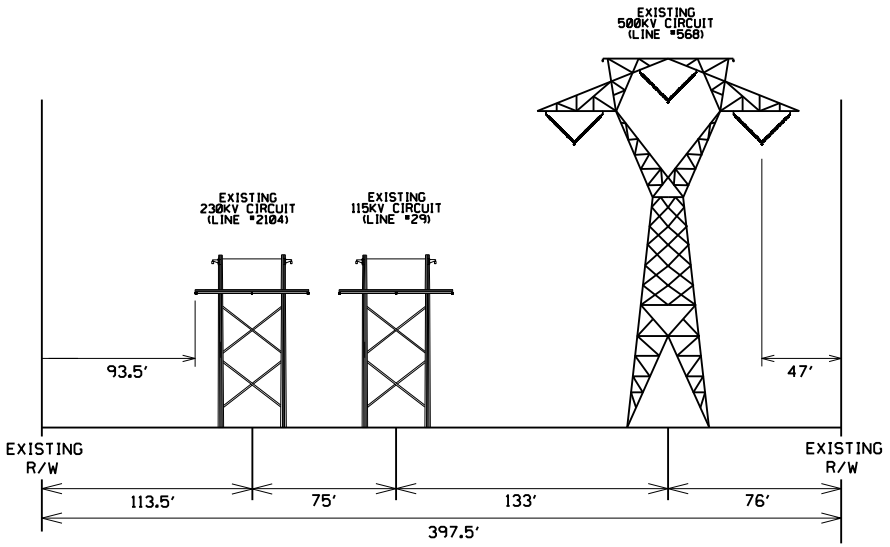
TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR

(FROM STRUCTURE 2104/5489, 2305/1761, 568/93 TO 2104/5495, 2305/1765, 568/89)

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

LINE #2104 CRANES CORNER - AQUIA HARBOUR
LINE #29 FREDERICKSBURG - POSSUM POINT
LINE #568 POSSUM POINT - LADYSMITH

EXISTING CONFIGURATION

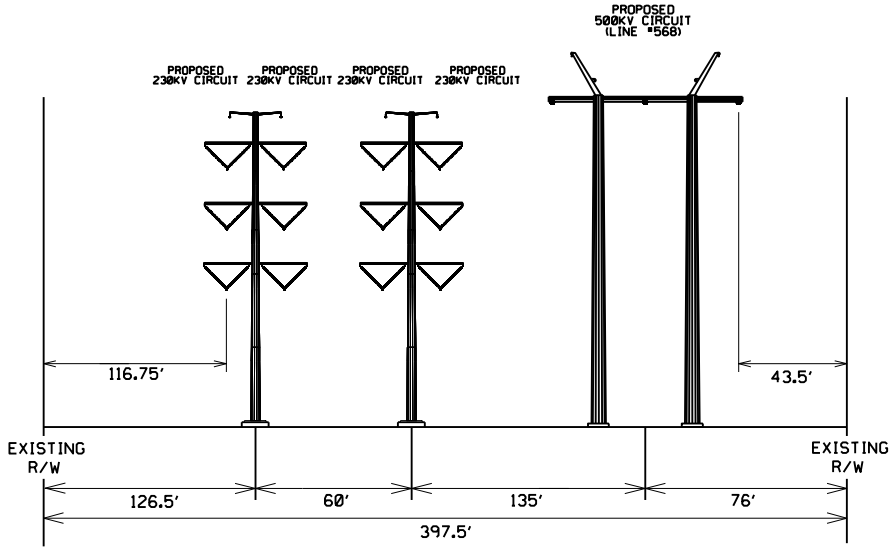


TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR

(FROM STRUCTURES 2104/5514, 29/1781, 568/78 TO 2104/5515, 29/1782, 568/77)

LINE #2297 SPARTAN - AQUIA HARBOUR
LINE #2XXX FREDERICKSBURG - AQUIA HARBOUR
LINE #2305 FREDERICKSBURG - POSSUM POINT
LINE #2YYY BIRCHWOOD - AQUIA HARBOUR
LINE #568 POSSUM POINT - LADYSMITH

PROPOSED CONFIGURATION



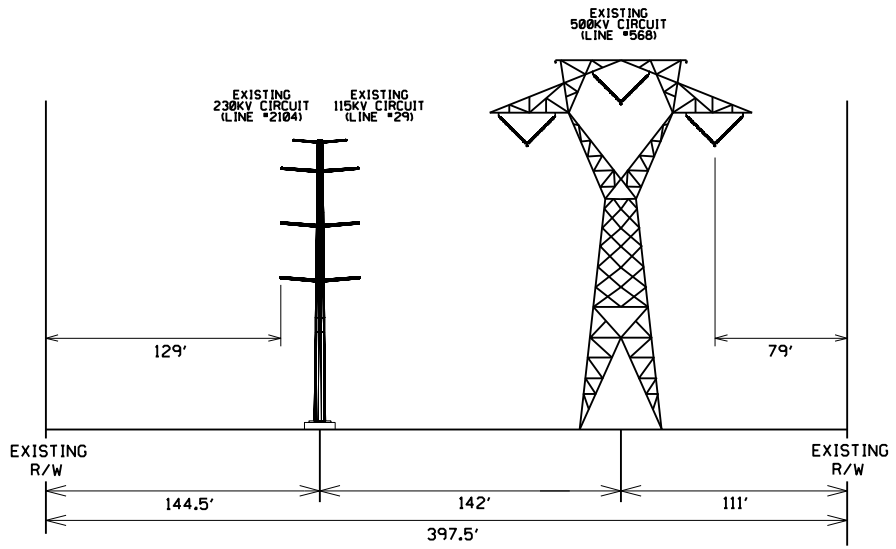
TYPICAL ROW LOOKING TOWARDS AQUIA HARBOUR

(FROM STRUCTURES 2297/5514, 2305/1781, 568/78 TO 2297/5515, 2305/1782, 568/77)

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

LINE #2104 CRANES CORNER - AQUIA HARBOUR
LINE #29 FREDERICKSBURG - POSSUM POINT
LINE #568 POSSUM POINT - LADYSMITH

EXISTING CONFIGURATION

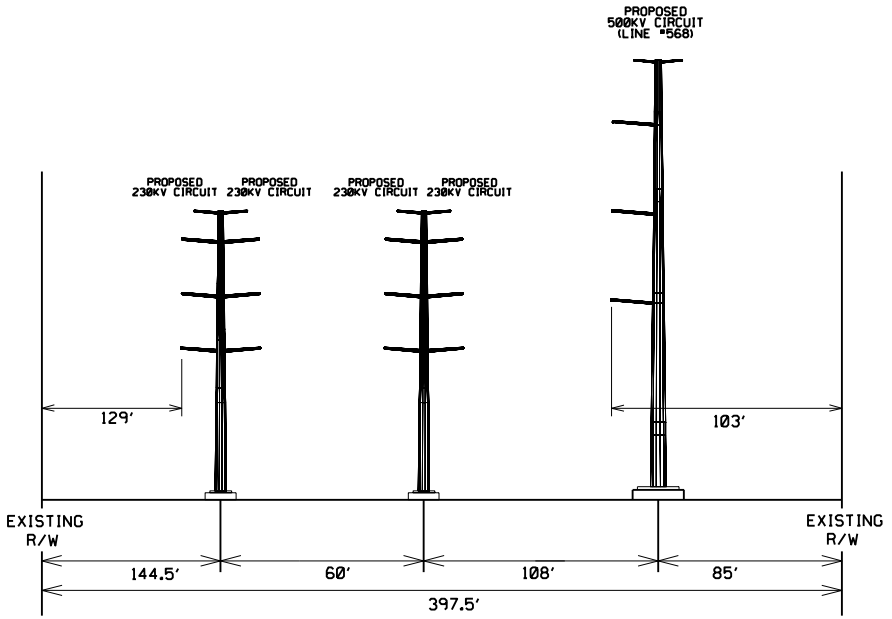


ROW LOOKING TOWARDS AQUIA HARBOUR
(SOUTH OF AQUIA HARBOUR SUBSTATION)

(FROM STRUCTURE 2104/5516, 29/1783, 568/77 TO 2104/5517, 29/1784, 568/76)

LINE #2297 SPARTAN - AQUIA HARBOUR
LINE #2XXX FREDERICKSBURG - AQUIA HARBOUR
LINE #2305 FREDERICKSBURG - POSSUM POINT
LINE #2YYY BIRCHWOOD - AQUIA HARBOUR
LINE #568 POSSUM POINT - LADYSMITH

PROPOSED CONFIGURATION



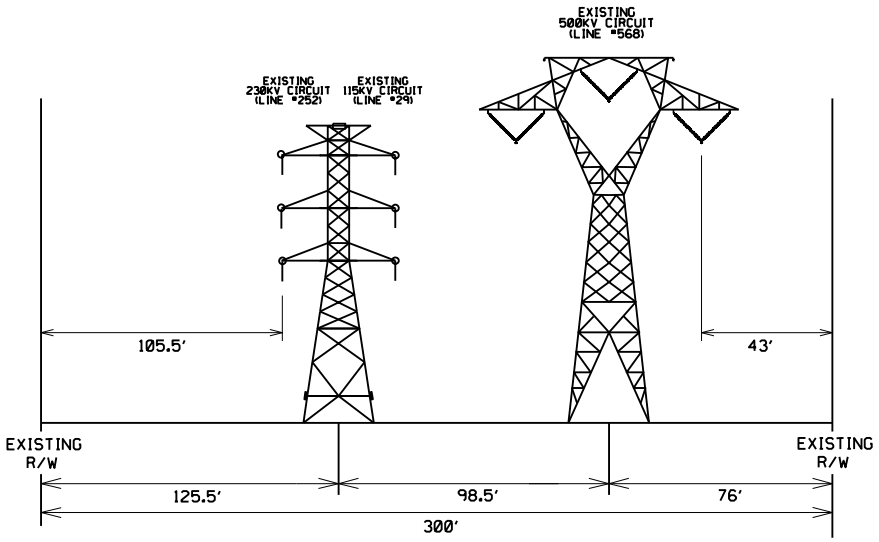
ROW LOOKING TOWARDS AQUIA HARBOUR
(SOUTH OF AQUIA HARBOUR SUBSTATION)

(FROM STRUCTURE 2104/5516, 2305/1783, 568/77 TO 2104/5517, 29/1784, 568/76A)

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

LINE #252 AQUIA HARBOUR - POSSUM POINT
LINE #29 FREDERICKSBURG - POSSUM POINT
LINE #568 POSSUM POINT - LADYSMITH

EXISTING CONFIGURATION

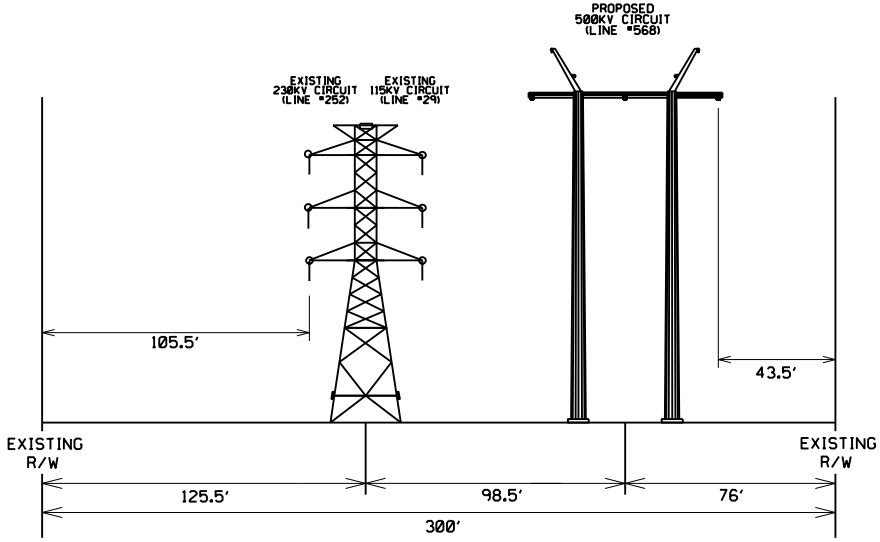


TYPICAL ROW LOOKING TOWARDS AQIUA SUBSTATION
(NORTH OF AQUIA HARBOUR SUBSTATION)

(FROM STRUCTURE 252/5518, 29/1785, 568/76 TO 252/5519, 29/1786, 568/75)

LINE #252 AQUIA HARBOUR - POSSUM POINT
LINE #29 FREDERICKSBURG - POSSUM POINT
LINE #568 POSSUM POINT - LADYSMITH

PROPOSED CONFIGURATION



TYPICAL ROW LOOKING TOWARDS AQUIA SUBSTATION
(NORTH OF AQUIA HARBOUR SUBSTATION)

(FROM STRUCTURE 252/5518, 29/1785, 568/76 TO 252/5519, 29/1786, 568/75A)

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

APPENDIX B ARCHITECTURAL RESOURCE MAPS

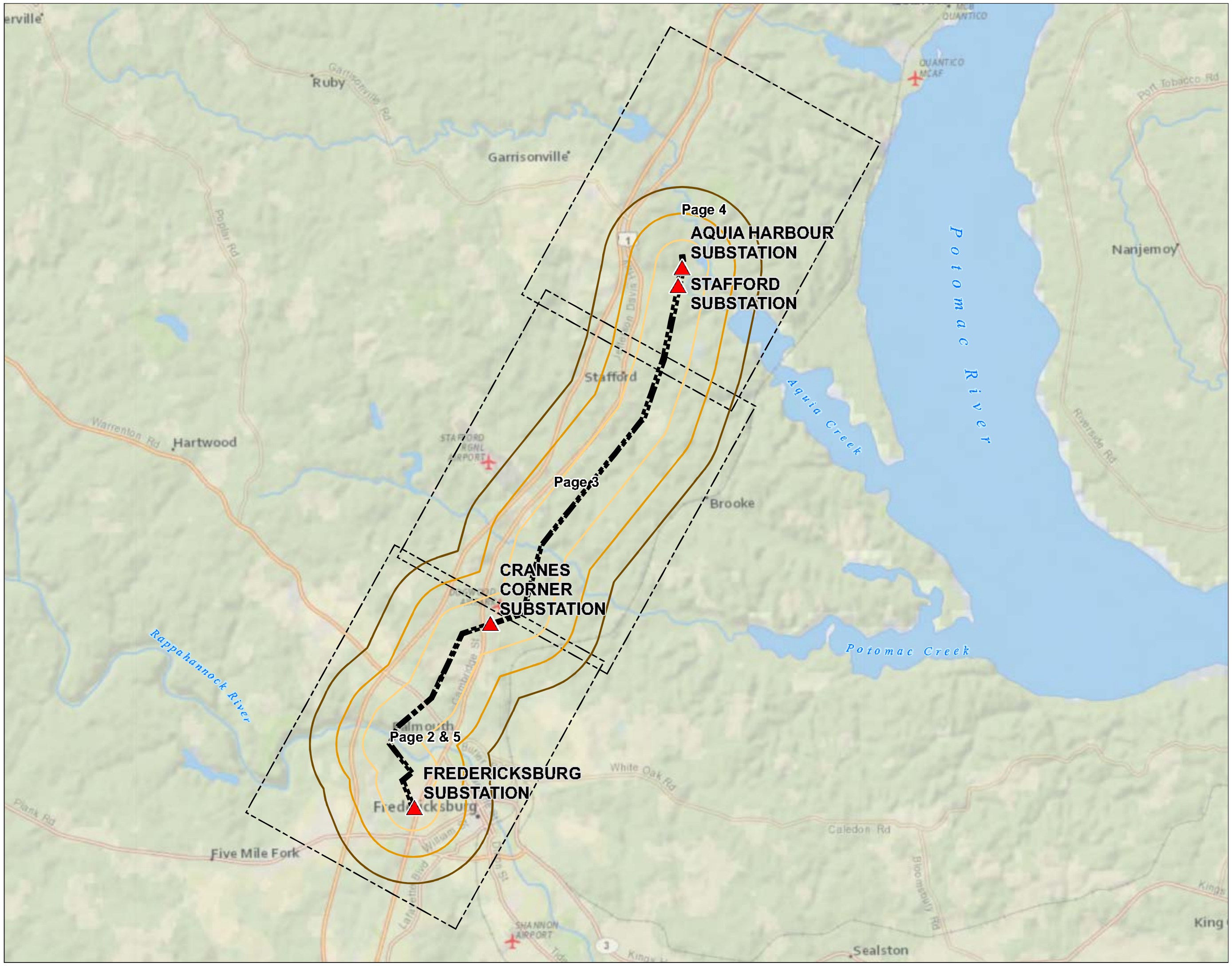


Figure No.
Appendix B

Title
Architectural Resources Map

Client/Project 203401909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

Project Location
Stafford County and City of Fredericksburg, Virginia

Prepared by JBB on 2023-10-24
TR by MGS on 2024-02-06
IR by SD on 2024-02-08

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(At original document size of 11x17)
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- Partial Rebuild Project Limits
- Page Index
- 1.5-Mile Buffer
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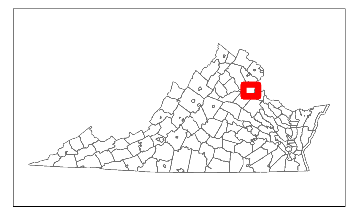

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR
3. Base Map © National Geographic

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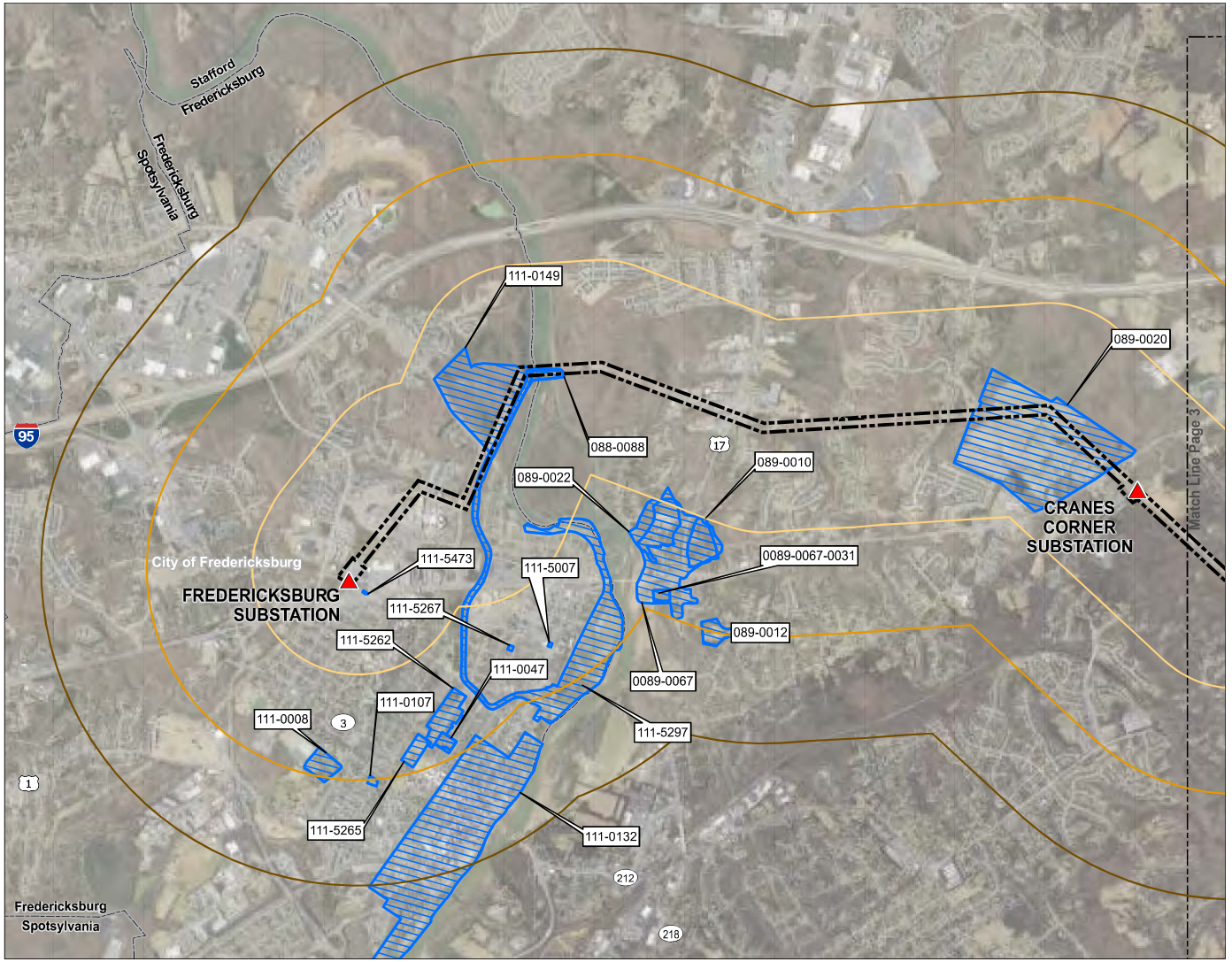

Figure No.
Appendix B

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Architectural Resources Map

Client/Project 203401909
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild

Project Location
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Prepared by JBB on 2024-02-06
TR by MGS on 2024-02-06
IR by SD on 2024-02-08

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- Substation
- Partial Rebuild Project Limits
- 1.5-Mile Buffer
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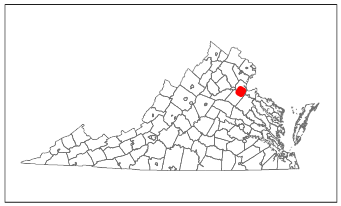
- Architectural Resource



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR, VGIN, VCRIS, National Hydrography Dataset (NHD)
3. Orthoimagery © VGIN

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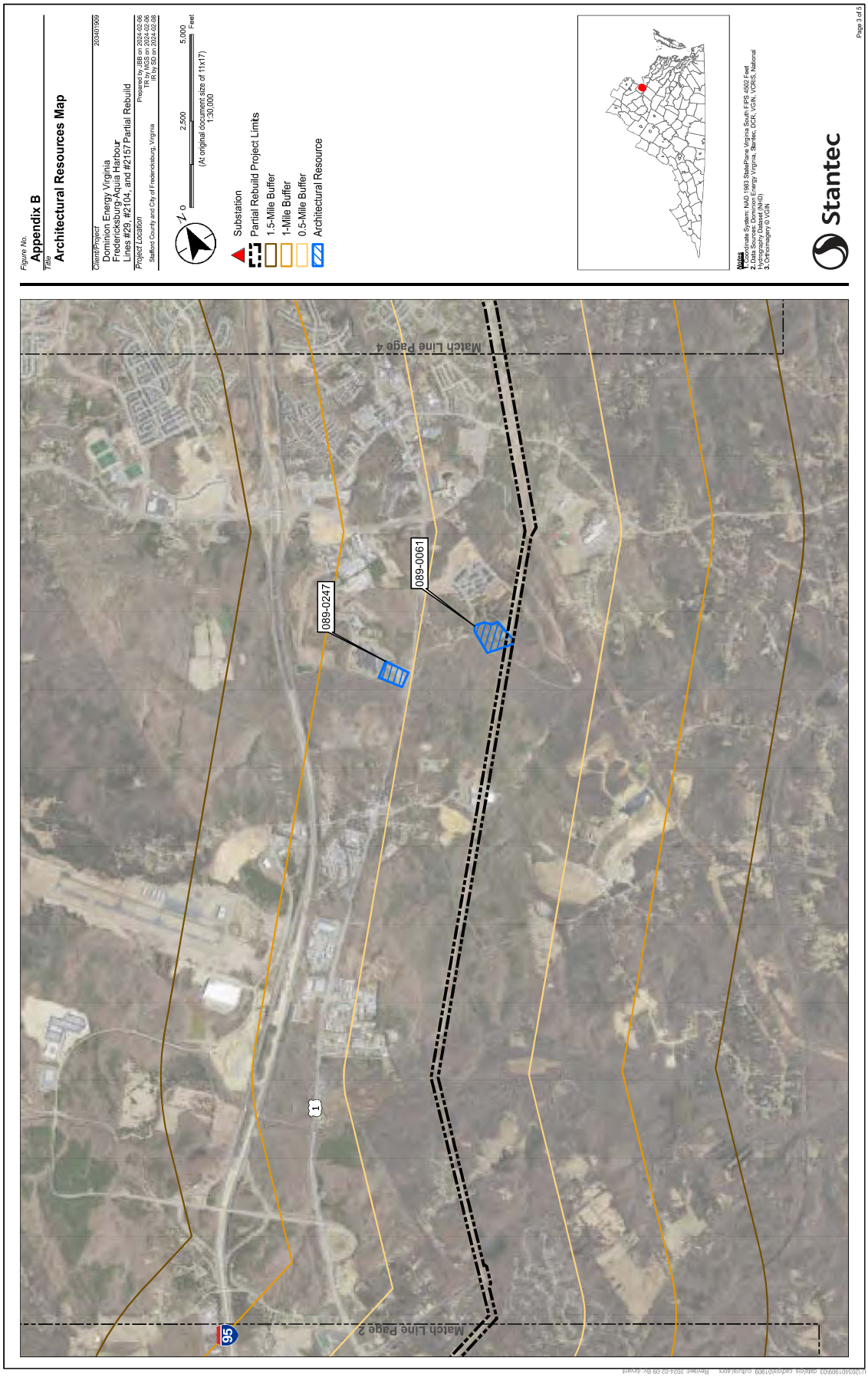
Figure No.
Appendix B
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Architectural Resources Map
Client/Project
Dominion Energy Virginia
Fredericksburg-Aquia Harbour
Lines #29, #2104, and #2157 Partial Rebuild
Project Location
Stafford County and City of Fredericksburg, Virginia
Prepared by JBB on 2024-02-06
TR by MGS on 2024-02-06
IR by SH on 2024-02-06
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Substation
Partial Rebuild Project Limits
1.5-Mile Buffer
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Architectural Resource
Notes
1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Source: Dominion Energy Virginia, Stantec, DCR, VGIN, VDHS, National Hydrography Dataset (NHD)
3. Orthoimagery © VGIN
Stantec
Page 3 of 5
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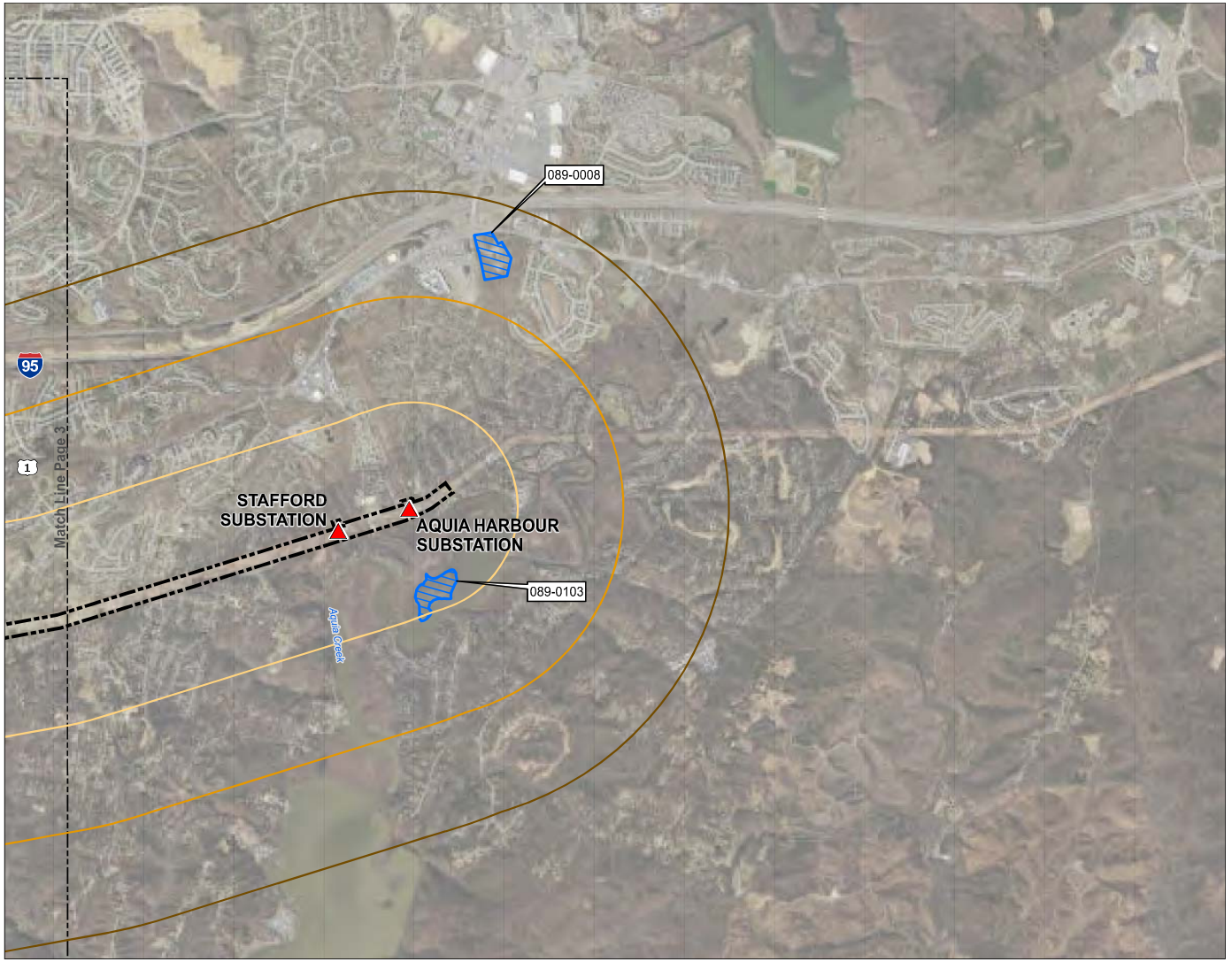

Figure No.
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Architectural Resources Map

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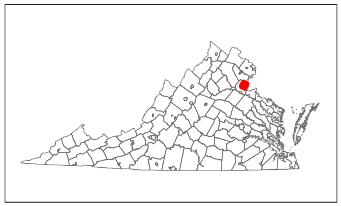

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3. Orthoimagery © VGIN

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