



**Dominion
Energy®**

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

**Before the State Corporation
Commission of Virginia**

**Daves Store 230 kV Line
Extension**

Application No. 331

Case No. PUR-2024-00021

Filed: February 9, 2024

Volume 2 of 3

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

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

Daves Store 230 kV Line Extension

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DEQ Supplement

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Based on 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 Project by DEQ and other relevant agencies.

1. Project Description

In order to provide service requested by a data center customer (the “Customer”), to maintain reliable service for overall load growth in the area, and to comply with mandatory North American Electric Corporation (“NERC”) Reliability Standards, Virginia Electric and Power Company (“Dominion Energy Virginia” or the “Company”) proposes in Prince William County, Virginia to:

- (1) Cut existing 230 kV Line #2161 (Gainesville – Wheeler) near the Northern Virginia Electric Cooperative’s (“NOVEC”) Atlantic DP Substation to create Lines #2161 (Stinger – Wheeler) and #2346 (Gainesville – Trident). Extend 230 kV Line #2161 on new, double-circuit 230 kV structures approximately 0.53 mile northwest to Stinger Switching Station. Extend 230 kV Line #2346 on new, double-circuit 230 kV structures approximately 0.55 mile northwest to Trident Switching Station.
- (2) Construct 230 kV Line #2347 on new, double-circuit 230 kV structures approximately 0.31 mile from Trident Switching Station to Stinger Switching Station. This line shares double-circuit structures with 230 kV Lines #2161 and #2346.
- (3) Construct 230 kV Line #2337 on new, double-circuit 230 kV structures approximately 1.56 miles (Proposed Route) or 1.75 miles (Alternative Route) from Stinger Switching Station to Daves Store Substation.
- (4) Construct 230 kV Line #2350 on new, double-circuit 230 kV structures approximately 1.73 miles (Proposed Route) or 1.92 miles (Alternative Route) from Stinger Switching Station to Gemini Substation. This line shares double-circuit structures with Line #2337 for most of the route lengths. This line will be re-routed into Atlas Substation at a future date, and this re-route will occur entirely within the substation fence line.
- (5) Construct 230 kV Line #2338 on new, single-circuit 230 kV structures approximately 0.10 mile from Daves Store Substation to Gemini Substation.
- (6) Construct 230 kV Line #2339 on new, single-circuit 230 kV structures approximately 0.10 mile from Daves Store Substation to Gemini Substation.

The total length of the Proposed Route is approximately 2.5 miles from the Atlantic DP Substation to the Daves Store Substation. The new 230 kV line extension (Lines #2161, #2346, #2347, #2337, and #2350) will be constructed entirely within a new 100-foot right-of-way. The total length of the Alternative Route is approximately 2.7 miles from the Atlantic DP Substation to Daves Store Substation. The new 230 kV line extension following the Alternative Route (Lines #2161, #2346, #2347, #2337, and #2350) would also be constructed entirely within a new 100-foot right-of-way. Line #2350 will follow the same route as Line #2337 until it separates and continues for 0.2 mile to enter into Gemini Substation. The total route length for Lines #2338 and #2339 (Daves Store – Gemini) is 0.1 mile and will be constructed entirely within a new 325-foot-right of way.

Collectively, the Daves Store 230 kV line extension and related transmission projects are referred to as the “Project.”¹

The Project is necessary to assure that Dominion Energy Virginia can provide service requested by the Customer in Prince William County, Virginia, maintain reliable service for the overall growth in the load area, and comply with mandatory NERC Reliability Standards. Discussion of the proposed Project and its need is further discussed in the Company’s Application.

For the purposes of this Supplement, the Company identified an approximately 2.5 mile overhead Proposed Route (Overhead Route 1) (the “Proposed Route”) from the Atlantic DP to Daves Store Substation for this project, as well as an approximately 2.7 mile overhead Alternative Route (Route 2) (the “Alternative Route”). Additionally, the Company identified a 0.1-mile route for the Daves Store – Gemini Route which includes two, 0.1-mile single circuit segments to connect the Daves Store, Atlas and Gemini Substations. No feasible alternatives were reviewed for the Daves Store – Gemini Route given its short and direct interconnection to the Atlas, Gemini, and Daves Store Substations. The Company is proposing the Proposed Route, the Alternative Route and the Daves Store – Gemini Route for notice and Commission consideration. Discussion of these routes, as well as other underground and overhead routes that the Company studied, but ultimately rejected, is provided in Section II of the Appendix and in the Environmental Routing Study included with the Application.

For this Project, the Company retained the services of Environmental Resources Management (“ERM”) to help collect information within the study area, identify potential routes, perform a routing analysis comparing route alternatives, and document the routing efforts in an Environmental Routing Study.

A description of the Proposed Route, Alternative Route, and Daves Store-Gemini Route is as follows.

Proposed Route (Route 1)

The Proposed Route, consisting of Lines #2161, #2346, #2347, #2337, and #2350 would construct an overhead double-circuit 230 kV line from the Daves Store Substation to the existing NOVEC-owned Atlantic DP Substation. Additionally, the proposed double-circuit 230 kV line will tie into the Stinger and Trident Switching Stations, which are located on two adjacent parcels, north of Wellington Road, and proposed with data center development. The length of the corridor for the Proposed Route is approximately 2.5 miles. Beginning at the Daves Store Substation, sited next to the Company’s existing Heathcote

¹ There are no proposed substations or switching stations proposed as a part of this filing. Daves Store Substation, Gemini Substation, Stinger Switching Station, and Trident Switching Station are planned substations (“Planned Substations”) and Atlas Substation will be constructed in the future after the Planned Substations. Currently, the Planned Substations have target dates in 2025 - 2026 and Atlas Substation has a target date of 2028.

Substation, the overhead route extends east for approximately 0.2 mile. The route then crosses US 29 (Lee Highway) and Norfolk Southern Railway for 0.2 mile. After crossing the highway and railroad, the Proposed Route turns east and collocates the transmission right-of-way south of and adjacent to the railroad for approximately 0.3 mile. Next, the Proposed Route turns south for less than 0.1 mile, before veering east and continuing approximately 0.4 mile to a crossing of Rail Court Lane. The Proposed Route passes between commercial and industrial buildings and crosses parking lots before crossing a forested parcel along the north edge of a construction materials processing facility (“Vulcan Materials Company” or “Vulcan”) west of Rail Line Court. The Proposed Route next heads approximately 0.2 mile to the southeast, crossing University Boulevard and partially forested and cleared lands along commercial property boundaries and the future Skylark View Way roadway. The Proposed Route then turns south and enters the area planned for the Gainesville west data center development that will contain the Stinger Switching Station. It heads approximately 0.2 mile southeast crossing the Stinger Switching Station, before continuing another 0.1 miles to a split at the future Deacon Falls Drive roadway on the north side of Wellington Road. From here, one segment of the Proposed Route continues east for approximately 0.2 mile, terminating within the Trident Switching Station site. The other segment continues approximately 0.1 mile south across Wellington Road, then parallels the south side of the road for approximately 0.3 mile to NOVEC’s Atlantic DP Substation, entering the substation at its northwest corner.

The route turns south to avoid an existing building and traverses east through a commercial and industrial area for approximately 0.5 mile. The Proposed Route crosses University Boulevard near an industrial site entrance and continues east along the property boundary of business-zoned parcels for about 0.3 mile. The Proposed Route turns south and crosses the data center properties for approximately 0.5 mile to interconnect the Stinger and Trident Switching Stations. Exiting the switching stations, the Proposed Route crosses Wellington Road in a non-perpendicular alignment to avoid sensitive environmental resources and existing ponds. The Proposed Route continues along the south side of Wellington Road for approximately 0.3 mile to terminate at NOVEC’s Atlantic DP Substation.

The Proposed Route includes an additional 0.2-mile segment to connect the Atlas Substation, where proposed Line #2350 does not share double-circuit structures with proposed Line #2337. Line #2350 will follow the same route as Line #2337 until it separates and continues for 0.2 mile to enter into Gemini Substation. South of the Heathcote Substation, this segment would continue generally southwest and follow the southern boundary of the Atlas and Gemini Substation sites before turning north to enter the Gemini Substation site. Line #2350 will be re-routed into Atlas Substation at a future date, and this re-route will occur entirely within the substation fence line.

For the Proposed Route, the minimum structure height is 57 feet, the maximum structure height is 121 feet, and the average structure height is 102 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.

Alternative Route (Route 2)

The Alternative Route, consisting of Lines #2161, #2346, #2347, #2337, and #2350, would construct an overhead double-circuit 230 kV line from the Daves Store Substation to the NOVEC-owned Atlantic DP Substation. The length of the corridor for the Alternative Route is approximately 2.7 miles. The Alternative Route is identical to the Proposed Route with the exception of a segment along the Norfolk Southern Railway. It initially follows the same alignment as the Proposed Route to the south/southeast for approximately 0.4 mile from the Daves Store Substation site to the crossing of the railroad. Unlike the Proposed Route, which heads east along the south side of the railroad, the Alternative Route instead continues south/southeast for approximately 0.1 mile, crossing a parking lot and Wellington Branch Drive. It then parallels the south side of the road for approximately 0.3 mile across mostly commercial lands with a crossing of Limestone Drive. The Alternative Route next turns north, continuing for approximately 0.2 mile across developed commercial lands to an intersection with the Proposed Route near an Amazon distribution facility. It then follows the same alignment as the Proposed Route for approximately 1.5 miles to NOVEC's existing Atlantic DP Substation via the Company's Stinger and Trident Switching Stations.

Similar to the Proposed Route, the Alternative Route includes an additional 0.2-mile segment to connect the Atlas Substation, where Proposed Line #2350 does not share double-circuit structures with proposed Line #2337. Line #2350 will follow the same route as Line #2337 until it separates and continues for 0.2 mile to enter into Gemini Substation. South of the Heathcote Substation, this segment would continue southwest and follow the southern boundary of the Atlas and Gemini Substation sites before turning north to enter the Gemini Substation site. Line #2350 will be re-routed into Atlas Substation at a future date, and this re-route will occur entirely within the substation fence line.

For the Alternative Route, the minimum structure height is 57 feet, the maximum structure height is 122 feet, and the average structure height is 102 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.

Daves Store-Gemini Route

This route would construct two overhead single-circuit 230 kV lines from the Daves Store Substation to the Atlas and Gemini Substations (Lines #2338 and #2339). The length of the corridor for the Daves Store - Gemini Route is approximately 0.1 mile, and connects the Atlas, Gemini, and Daves Store Substations, which are generally in-line of each other in the northwest portion of the study area.

The minimum, maximum, and average structure heights for the Proposed Route and the Alternative Route are inclusive of the Daves Store – Gemini Route.

2. Environmental Analysis

The Company solicited comments from all relevant state and local agencies about the proposed Project in letters dated January 9, 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 Project or the agency's Scoping Response Letter.

A. Air Quality

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

Tree clearing within the new rights-of-way will be required as part of this Project. The Company does not expect to burn cleared material, but, if necessary, the Company will coordinate with the responsible locality to obtain required burn permits and will comply with any conditions set forth by the locality, or take actions as otherwise set forth in the Company's right-of-way easements. The Company's tree clearing methods are described in Section 2.L.

B. Water Source

No water source is required for transmission lines. The discussion below focuses on water bodies that would be crossed by the proposed transmission lines.

On behalf of the Company, ERM identified and mapped waterbodies in the vicinity of the routes using publicly available geographic information system ("GIS") databases, U.S. Geological Survey ("USGS") National Hydrography Dataset Plus High Resolution ("NHD"), the United States Fish and Wildlife Service ("USFWS") National Wetland Inventory ("NWI"), Prince William County contours (2-foot intervals) and recent (December 2023) and historic (1937-2023) aerial photography (Planet Imagery 2023, Prince William County Imagery 2023, and Google Earth 2022). The Proposed and Alternative Routes cross perennial and intermittent tributaries to the Rocky Branch tributary and recently constructed open waterbody features (identified in December 2023 aerial imagery). The Daves Store – Gemini Route crosses no waterbodies. All route alternatives utilize an overhead configuration that would span waterbodies; no transmission structures are planned to be installed within waterbodies.

The distance between transmission line structures proposed by Dominion Energy Virginia would be adequate to span the waterbodies identified along the Proposed and Alternative Routes. Based on current (December 2023) aerial imagery, none of the waterbodies have

adjacent forested riparian buffers. No tree clearing adjacent to waterbodies would be required for the Project.

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

Proposed Route

The Proposed Route would have a total of six waterbody crossings. Of these, two are NHD-mapped waterbody crossings, including an unnamed perennial tributary and an unnamed intermittent tributary to Rocky Branch. There are three unmapped open waterbody features and a recently constructed channel (tributary to Rocky Branch) identified within the right-of-way using recent aerial imagery (December 2023).

Alternative Route

The Alternative Route would have a total of six waterbody crossings. Of these, two are NHD-mapped waterbody crossings, including an unnamed perennial and an unnamed intermittent tributary to Rocky Branch. There are three unmapped open waterbody features and a recently constructed channel (tributary to Rocky Branch) identified within the right-of-way using recent aerial imagery (December 2023).

Daves Store - Gemini Route

There are no waterbodies crossed by the Daves Store - Gemini Line right-of-way.

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

Section 28.2-1203 of the Code of Virginia recently was amended by the Virginia General Assembly through the passage of House Bill 2181 (“HB 2181”) and identical Senate Bill 1074 (“SB 1074”), which were signed into law by Governor Glenn Youngkin, effective

July 1, 2023.² 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.³

The Company solicited comments from the Corps and VMRC regarding the proposed Project by letters dated January 9, 2024. VMRC responded by letter dated January 30, 2024, noting that the Project is within jurisdictional areas of the VMRC and may require a permit. A copy of this response is included as Attachment 2.B.1. If necessary, a Joint Permit Application (“JPA”) will be submitted for review by the VMRC, DEQ, and the Corps to authorize jurisdictional crossings and for any impacts to jurisdictional features.

C. Discharge of Cooling Waters

No discharge of cooling waters is associated with the Project.

D. Tidal and Non-tidal Wetlands

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

On behalf of the Company, ERM identified wetlands along the Project routes using GIS and remote sensing data sources to conduct an offsite desktop wetlands delineation. A copy of ERM’s Wetland and Waterbody Desktop Summary for the Project is included in Attachment 2.D.1. Sources for this desktop summary include the USGS NHD, the USFWS NWI, Prince William County contours (2-foot intervals), recent (December 2023) and historic (1937-2023) aerial imagery (Planet Imagery, Prince William County Imagery, and Google Earth), the Natural Resources Conservation Service (“NRCS”) Web Soil Survey, and National Agricultural Imagery Program (“NAIP”) and Virginia Base Mapping Program (“VBMP”) Digital Ortho-Rectified Infrared Images dating from 2023.

ERM did not field delineate wetlands along the Project routes. A field wetland delineation would be completed for the approved route selected by the Commission upon the Company receiving a final order for the Project.

² 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>.

³ 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.

ERM used a stepwise process to identify probable wetland and waterbody areas along the Proposed and Alternative Routes and the Daves Store – Gemini Route as follows:

1. Infrared and natural color aerial photography was used in conjunction with USGS topographic maps, soils maps, and other data sources to identify potential wetland areas. Boundaries were assigned to the areas that appeared to exhibit wetland signatures based on this review (referred to here as “Interpreted Wetlands”), and a cover type was determined based on aerial photo interpretation.
2. To further determine the probability of a wetland occurring within a given location, polygon shapefiles for Interpreted Wetlands were digitally layered with NWI and NHD mapping and hydric soils information from the NRCS soil survey database.
3. ERM assigned a probability of wetland occurrence based on the number of overlapping data layers (i.e., indicators of potential wetland presence) in any given area (Table D-1).

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

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

Proposed Route

Based on the wetland desktop delineation method described above, there are approximately 5.5 acres of wetlands within the right-of-way for the Proposed Route. Of these, approximately 2.9 acres consist of palustrine forested (“PFO”) wetlands, 1.6 acres consist of palustrine emergent (“PEM”) wetlands, 0.8 acre consist of palustrine unconsolidated bottom (“PUB”) wetlands, and 0.2 acre consists of riverine/stream (“RVR”) wetlands.

Alternative Route

Based on the wetland desktop delineation method described above, there are approximately 5.4 acres of wetlands within the right-of-way for the Alternative Route. Of these, approximately 3.1 acres consist of PFO, 1.3 acres consist of PEM, 0.8 acre consists of PUB, and 0.2 acre consists of RVR wetlands.

Daves Store - Gemini Route

Based on the wetland desktop delineation method described above, no wetlands are crossed by the Daves Store - Gemini Route right-of-way.

All wetlands will require protective matting to be installed to support construction vehicles, equipment, and materials during construction. While wetlands are anticipated to be spanned and direct impacts associated with structure placement avoided, PFO and PSS wetlands will be cleared and converted to PSS or PEM type wetlands within the maintained right-of-way. This will reduce PFO wetland functions such as water filtration, storage, carbon sequestration, and diversity of habitat. Outside of any required structure placement, construction impacts from the transmission lines on PEM and riverine wetlands would be temporary and would be restored to pre-construction conditions when construction is complete. Within PFO and PSS wetlands, vegetation will be allowed to return to maintained right-of-way heights consistent with open meadow and/or shrub habitat after construction is completed.

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

The Company solicited comments from the Corps and the DEQ Office of Wetlands and Stream Protection (“OWSP”) by letters dated January 9, 2024.

The Company has sited structures to avoid wetlands and streams to the extent practicable. Temporary impacts will be restored to pre-existing conditions, and permanent impacts will be compensated for in accordance with all applicable state regulations and laws. The Project is expected to require a Virginia Water Protection general permit and a Nationwide Permit 57. A JPA will be submitted for further evaluation and a final permit need determination by DEQ, VMRC, and the Corps.

E. Floodplains

As depicted on the Federal Emergency Management Agency’s (“FEMA”) online Flood Insurance Rate Maps # 51153C0086D (effective date 1/4/1995), # 51059C0225E (effective date 9/16/2010), and #51153C0089D (effective date 1/4/1995), the Project study area

contains Zone A, areas of a 1% annual chance flood hazard, and Zone X, areas of minimal flood hazard. The Company will coordinate with the local floodplain coordinators as required.

F. Solid and Hazardous Waste

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

A summary of the information from the EPA and DEQ databases within a 1.0-mile buffer of the Project’s route alternatives centerlines is provided in Table F-1 below. The locations of the sites are depicted in [Attachment 2.F.1](#).

TABLE F-1 Daves Store 230 kV Line Extension Environmental Regulated Facilities and Hazardous Waste/Petroleum Release Sites within 1.0 Mile			
Site Type	Proposed Route (Route 1)	Alternative Route (Route 2)	Daves Store - Gemini Route
Waste	34	34	24
Toxics	3	3	2
Land	31	31	23
Air	36	36	22
Water	22	22	11
Solid Waste Facilities	2	2	0
Petroleum Facilities	37	37	30
Petroleum Releases	50	50	42
Total *	215	215	154
*A single facility may be associated with multiple environmental permits; as such, the sum of sites listed above indicates the number of permits and releases mapped in EPA and DEQ databases within the specified distance from the Project. Notes Waste (Active and Inactive RCRA Facilities that handle or generate hazardous wastes) Toxics (TRI Regulated facilities that handle and release toxic substances to the environment) Land (Site cleanup under CERCLA, RCRA, Superfund, or Brownfield programs, and/or DEQ VRP or Pollution Response program) Air (EPA and DEQ regulated facilities with a release of pollutants to the air) Water (EPA and DEQ regulated facilities that discharge or process water to surface water) Solid Waste Facilities (Former and existing landfills) Petroleum Facilities (Regulated petroleum storage facilities) Petroleum Releases (Typically associated with storage tank releases)			

To evaluate the potential impact to the routes, ERM further assessed the sites within 1,000 feet of the Project's route alternatives (Table F-2).

TABLE F-2 Daves Store 230 kV Line Extension Environmental Regulated Facilities and Hazardous Waste/Petroleum Release Sites within 1,000 feet			
Site Type	Proposed Route (Route 1)	Alternative Route (Route 2)	Daves Store - Gemini Route
Waste	13	15	1
Toxics	2	3	0
Land	4	6	0
Air	11	12	1
Water	12	14	0
Solid Waste Facilities	0	0	0
Petroleum Facilities	9	11	4
Petroleum Releases	23	23	9
Total *	74	84	15
*A single facility may be associated with multiple environmental permits; as such, the sum of sites listed above indicates the number of permits and releases mapped in EPA and DEQ databases within the specified distance from the Project. Notes Waste (Active and Inactive RCRA Facilities that handle or generate hazardous wastes) Toxics (TRI Regulated facilities that handle and release toxic substances to the environment) Land (Site cleanup under Superfund, RCRA or Brownfield programs, and/or DEQ VRP or Pollution Response program) Air (EPA and DEQ regulated facilities with a release of pollutants to the air) Water (EPA and DEQ regulated facilities that discharge or process water to surface water) Solid Waste Facilities (Former and existing landfills) Petroleum Facilities (Regulated petroleum storage facilities) Petroleum Releases (Typically associated with storage tank releases)			

ERM conducted a review of regulated facilities and remediation sites as summarized in Tables F-1 and F-2. Sites regulated by the EPA under the Clean Air Act (CAA) Compliance Monitoring Program, Toxic Release Inventory (TRI), National Pollutant Discharge Elimination System (NPDES) and Resource Conservation and Recovery Act (RCRA), and sites regulated by the DEQ under the Air, Solid Waste, Virginia Pollutant Discharge Elimination System (VPDES), and Registered Petroleum Tank Facilities programs that were not associated with a petroleum leak, site assessment, remediation, corrective action or emergency response case are anticipated to have no effect on, and will not be affected by, the Project.

Sites regulated by the EPA as Superfund, Brownfield, and RCRA Corrective Action or Emergency Response sites within one mile of the Project, and sites regulated by the DEQ as Petroleum Release, Voluntary Remediation Program (VRP), and Pollution Response Program (PREP) sites within 1,000 feet of the Project were evaluated for potential impacts. Additional information on these sites is summarized below.

EPA Regulated Sites

Based on the most recently available data in the EPA's "Cleanups in My Community" database, no Brownfield or Superfund sites are located within 1.0 mile of the Proposed or Alternative Routes or the Daves Store - Gemini Route. The Proposed and Alternative

Routes are located within the property boundaries of one RCRA Corrective Action and Emergency Response site, referred to as the Atlantic Research Corp – Gainesville (ARC) site. Additional information on this site is provided below.

Atlantic Research Corporation – Gainesville site

The ARC EPA and DEQ Corrective Action and Emergency Response site is on the property bound by Wellington Road, University Boulevard, Penny Branch Lane, and the Norfolk Southern Railway. ERM obtained case files from the EPA and DEQ via Freedom of Information Act (FOIA) requests and used the files to review the site's history and current conditions. The site previously operated as a U.S. Department of Defense solid fuel rocket propellant and rocket motor production plant. Operations at the site historically included rocket and missile production, on-site disposal of waste propellant via thermal treatment, as well as development, storage, and/or testing of hazardous chemical materials. Since 1992, the site has been operating under an EPA Administrative Order on Consent, overseen by the DEQ, which requires soil and groundwater to be remediated to unrestricted use (EPA, 1992). In addition, the site is associated with five DEQ Petroleum Release cases (Pollution Complaint [PC] Numbers 19870484, 19901131, 19920629, 19930299, and 20083094). Currently, the site is planned to be redeveloped into data center campuses (refer to the Environmental Routing Study).

Based on available DEQ and EPA documentation, previously observed contaminants of concern in soil and groundwater have included radioactive materials (cobalt-60), debris associated with chemical and biological agents (including BX and BG biological agents, BZ and CS incapacitation agents, and VX and GB nerve agents), energetic materials and associated propellant chemicals (primarily perchlorate and RDX), various industrial manufacturing chemicals and solvents (primarily PCB, chlorobenzene, PCE, TCE, vinyl chloride, 1,1,1-TCA, 1,1-DCE, cis-1,2-DCE, 1,1-DCA, and 1,4-dioxane), heavy metals (primarily beryllium, as well as arsenic, chromium, lead, and mercury), and petroleum related chemicals (benzene, toluene, ethylbenzene, and xylenes [collectively referred to as BTEX]) (Geosyntec Consultants, 2009; Integral Consulting, 2016).

Based on a review of available DEQ and EPA documentation, it appears that all known areas of hazardous debris and chemical burials have been removed from the site (Geosyntec Consultants, 2009). In addition, contaminated soil has been removed or remediated to concentrations below industrial use thresholds across the site. According to a 2021 Soil Management Status Report, soils containing minor concentrations of perchlorate (above 0.0037 milligrams per kilogram [mg/kg] but below 5.5 mg/kg) may still be present at the site (SCS Engineers, 2021). Based on a review of 2021 groundwater monitoring results, soil vapor and shallow groundwater (1.5 to 14 feet below ground surface [bgs]) impacted by perchlorate and chlorinated solvents (primarily PCE and TCE) is present within the proposed Project area in concentrations that exceed DEQ Construction Worker Direct Contact Screening Levels (TRC Environmental Corporation, 2022). The Proposed and Alternative Routes are adjacent to, or overlap, the shallow groundwater contamination plume. Groundwater has been observed generally flowing to the southeast; however, no offsite impacts have been observed.

All underground and aboveground petroleum storage tanks had been removed from the site, and the DEQ issued case closures for all petroleum release cases by 2007. Closure documents note that no sensitive receptors were at risk from the releases (VDEQ 2007). The DEQ deems a petroleum release closed once no further risk to the general public has been identified; however, risk assessments do not always consider the risk to temporary excavations and construction. Based on available DEQ site files, it appears contaminated soils were excavated where encountered prior to the case closures; however, groundwater impacted by benzene and ethylbenzene at concentrations that exceeded their respective Construction Worker Direct Contact Screening Levels were previously observed (Groundwater Technology, 1993 and 1994; Halliburton Nus, 1991 and 1992), though no additional information regarding the outcome of groundwater contamination associated with the leak sites was readily available in the DEQ documents provided to ERM. As such, the possibility exists that residual or previously unidentified petroleum-related soil and/or groundwater contamination may be present at the ARC site.

According to a 2018 Corrective Measures Implementation Plan developed for the site, the following institutional and engineering controls are required to be implemented for construction activities at the ARC site (TRC Environmental Corporation, 2018):

- Future excavation, drilling and earth moving activities are required to follow a facility specific Soil Management Plan.
- Construction activities shall be conducted in compliance with facility-specific health and safety protocols.
- Any new structures capable of containing vapors from the subsurface that are built within 100 feet of the shallow groundwater plume and vapor impacted area, are required to have EPA-approved vapor mitigation measures installed, unless it can be demonstrated to the EPA and DEQ that vapor intrusion does not pose a threat to human health, and the EPA and DEQ provides prior written approval that no vapor intrusion control system is needed.
- Groundwater at the Facility may not be used for any purpose, including, but not limited to, use as a potable water source, other than to conduct the maintenance and monitoring activities required by the EPA consent order.

Proper procedures will be followed to safely identify, manage, and dispose of any suspected hazardous and contaminated media that may be encountered during Project activities in accordance with applicable federal, state, local, and site-specific regulations. For the purpose of protecting the health and safety of those on site, the potential hazards and facility specific requirements listed above will be communicated to the construction crew per OSHA guidelines. Care will be taken while operating and maintaining construction equipment to prevent and/or clean up spills. Any waste created by the construction crews will be disposed of in a proper manner and detailed in the Company's stormwater pollution prevention plan.

DEQ Regulated Sites

ERM reviewed DEQ Petroleum Release, VRP, and PREP databases to identify sites within 1,000 feet of the routes. No VRP sites are located within 1,000 feet of the Project's routes.

Four PREP cases are within 1,000 feet of the Proposed Route, six are within 1,000 feet of the Alternative Route, and none are within 1,000 feet of the Daves Store – Gemini Route. Based on available DEQ case files, all PREP sites were determined to be related to minor, nonhazardous spills and discharges (e.g., a small oil spill in a parking lot, sediment laden discharge to a wetland, etc.). As such, no further review of PREP sites was conducted.

Petroleum Release cases within 1,000 feet of the routes are summarized in Table F-2. ERM identified eleven cases associated with four sites within 200 feet of the Project's routes. Case files were obtained via FOIA requests to the DEQ for further review. Refer to the case summaries below for additional information.

All of the Petroleum Release cases within close proximity to the routes and substations have been issued case closures by the DEQ. The DEQ deems a petroleum release closed once no further risk to the general public has been identified; however, risk assessments do not always consider the risk associated with temporary excavations and construction. Proper procedures will be followed to safely identify, manage, and dispose of any suspected hazardous and contaminated media that may be encountered during Project activities in accordance with applicable federal, state, and local regulations. Care will be taken while operating and maintaining construction equipment to prevent and/or clean up spills. Any waste created by the construction crews will be disposed of in a proper manner and detailed in the Company's stormwater pollution prevention plan.

Atlantic Research Corporation – Gainesville

As discussed in the "EPA Regulated Sites" section, the ARC site is associated with five Petroleum Release cases (PC Numbers 19870484, 19901131, 19920629, 19930299, and 20083094). Refer to the previous section above for additional information.

John C. Louis Company

The John C. Louis Company DEQ Petroleum Release site is located on the northeast corner of Wellington Branch Drive and Limestone Drive. The site is associated with one Petroleum Release case (PC 19930786). Based on a review of case files obtained from the DEQ, the case was opened in 1992 after removal of a tank. Soil sampling results in 1992 detected total petroleum hydrocarbons (TPH) at a maximum concentration of 7,500 mg/kg near a former diesel tank located within 100 feet of Wellington Road on the southern end of the property, and at 8,290 mg/kg in stormwater pond sediments on the west side of the property. Groundwater was observed flowing to the southeast at a depth of approximately 9 feet bgs in 1993; however, no groundwater impacts were detected, and no groundwater monitoring or additional soil sampling was reported at the site after 1994 (Applied Environmental, 1993; PMT, 1992). The DEQ issued a case closure in 1997.

The Alternative Route is anticipated to cross the on-site stormwater pond in which sediment impacts were previously observed. As such, the site may have impacted soil and/or groundwater along this route. Due to distance, this site is unlikely to have affected the Proposed Route or the Daves Store – Gemini Route.

NOVEC - Gainesville Facility

The NOVEC– Gainesville Facility DEQ Petroleum Release site is located on the east-central portion of the Northern Virginia Electric Cooperative (NOVEC)-owned property bound by Wellington Branch Drive and the Norfolk Southern Railway. The site is associated with three petroleum release cases (PC 19954223, 19993131, and 20043025) related to an on-site storage tank field. Based on a review of case files obtained from the DEQ, the first release case (PC 19954223) was opened in 1995, and case closure was issued by the DEQ in 1996. The second release (PC 19993131) was opened in 1998 and closed in 1999. Groundwater impacts were observed during investigations for both cases (ECC, 1996). The third release (PC 20043025) was reported to the DEQ in 2003 after detection of a subsurface product loss that caused aboveground odors. Results from a 2003 sampling event identified BTEX concentrations in two groundwater wells at concentrations exceeding DEQ Screening Levels for Construction Worker Direct Contact (maximum concentration of 17,490 µg/L) [Environmental Consultants and Contractors, Inc. (ECC), 2003]. Follow-up sampling in 2006 indicated BTEX concentrations for the two impacted wells had fallen below detection limits, and the DEQ subsequently issued final case closure later that year. Limited information exists regarding monitoring and remediation efforts between 2003 and 2006. Based on recent compliance investigations, no additional releases have been reported since the case was closed. Groundwater was observed flowing to the south and/or west at a depth of approximately 4 feet bgs.

The site is estimated to be located hydraulically down or side-gradient of the Alternative Route; however, due to the lack of available documentation regarding investigations and cleanup, the site may have impacted soil and/or groundwater along this route. Due to distance, the site is unlikely to have affected the Proposed Route or the Daves Store – Gemini Route.

Betco Block and Products Incorporated

The Betco Block and Products Incorporated DEQ Petroleum Release site is located on the property east of the Wellington Branch Drive and Norfolk Southern Railway intersection. The site is associated with two Petroleum Release cases (PC 20063230 and 20163027). Based on a review of case files obtained from the DEQ, the first petroleum release case (PC 20063230), located on the south end of the property near Wellington Branch Drive, was opened in 2006 during a tank removal. Approximately 191 tons of contaminated soil and 12,000 gallons of contaminated groundwater were removed from the tank pits and transferred offsite for disposal. Sampling after the cleanup event indicated that no BTEX or TPH impacts remained; however, negligible concentrations of MTBE in groundwater (24 µg/L), and TPH in soil (40 mg/kg) were observed in one location near the northern right-of-way along Wellington Branch Drive (AETI, 2006). The DEQ issued a case closure in 2006. Due to the documented extent of contamination, this release case is unlikely to have affected soil and/or groundwater along the routes or associated substation sites.

The second release case (PC 20163027) is situated at the northern end of the property near the Norfolk Southern Railway. It was opened in 2015 when a previously unidentified heating oil tank was uncovered and damaged during facility redevelopment. A total of

4,285 gallons of impacted groundwater and 125 tons of soil was removed and transferred offsite for disposal. Minor concentrations of naphthalene (2.7 micrograms per kilogram [µg/kg] maximum) and diesel range organics (DRO; 17 mg/kg) were observed in soil, and naphthalene (1.5 µg/L), MTBE (1.8 µg/L), and DRO (0.14 µg/L) were observed in groundwater after the cleanup event (ECC, 2015 and 2016). The DEQ issued final case closure in 2016. In 2006 and 2016, groundwater was reported to flow to the south at depths of approximately 2.5 to 10 feet bgs.

The location of this case is estimated to be hydraulically down gradient of the Proposed Route; however, due to the proximity, the site may have impacted soil and/or groundwater along or near the Proposed Route at negligible concentrations. Due to distance, this case is unlikely to have affected the Proposed Route or Daves Store – Gemini Route.

G. Natural Heritage, Threatened and Endangered Species

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

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

Based on queries of the above referenced sources, six federally and/or state-listed threatened and endangered species were identified that may have the potential to occur within the study area (Table G-1). In addition to the six federally and/or state-listed species, the IPaC database also identified the Monarch butterfly (*Danaus plexippus*) as a candidate species. According to the IPaC database review, none of these species have confirmed occurrences in the study area. For additional information, see Section 5.2.5 of the Environmental Routing Study.

TABLE G-1 Daves Store 230 kV Line Extension				
Potential Federal-and State-Listed Species in the Project Area				
Species	Status	Database	Habitat	Results
Northern long-eared bat (<i>Myotis septentrionalis</i>)	FE, ST	USFWS IPaC, DWR-NLEB Winter Habitat and Roost Tree Map	Generally associated with old-growth or late successional interior forests. Partially dead or decaying trees are used for breeding, summer day roosting, and foraging. Hibernation occurs primarily in caves, mines, and tunnels.	Species not confirmed as present, and no known hibernacula or maternity roost trees are documented within the Project area. The Project would require clearing of forested areas; however, given the lack of confirmed species presence, impacts are not anticipated.
Tricolored bat (<i>Perimyotis subflavus</i>)	FPE, SE	USFWS IPaC, DWR Tri-colored Bat Winter Habitat and Roost Tree Map	Typically roost in trees near forest edges during summer. Hibernate deep in caves or mines in areas with warm, stable temperatures during winter.	Species not confirmed as present, and no hibernaculum identified within a 0.5-mile-radius of the Project. No impacts are anticipated.
Brook Floater (<i>Alasmidonta varicosa</i>)	SE	VaFWIS	Creeks and small rivers, found among rocks in gravel substrates and in sandy shoals, flowing water habitats only.	No documented occurrences; however, potential suitable habitat could be present in streams crossed by the routes. Coordination with the VDCR and VDWR may be needed.
Yellow lance (<i>Elliptio lanceolata</i>)	FT, ST	USFWS IPaC	Main channels of drainage and streams as small as one meter across with clean, coarse, medium-sized sand or gravel substrate.	No documented occurrences; however, potential suitable habitat could be present in streams crossed by the routes. Coordination with the VDCR and VDWR may be needed.
Henslow's Sparrow (<i>Ammodramus henslowii</i>)	ST	DWR VaFWIS,	Open country with scattered shrubs and trees or other tall structures for perching.	No documented occurrences; however, potential suitable habitat could be present. Coordination with the VDCR and VDWR may be needed.

TABLE G-1 Daves Store 230 kV Line Extension				
Potential Federal-and State-Listed Species in the Project Area				
Species	Status	Database	Habitat	Results
Wood turtle (<i>Glyptemys insculpta</i>)	ST	VaFWIS	Forested floodplains, fields, wet meadows, and farmland with a perennial stream nearby.	No documented occurrences; however, potential suitable habitat could be present in wetlands crossed by the routes. Coordination with the VDCR and VDWR may be needed.
Federal/State Status:				
FE Federally listed as endangered	FT Federally listed as threatened	FPE Federally proposed as endangered		
SE State listed as endangered	ST State listed as threatened	FPT Federally proposed as threatened		

Database queries identified two federally listed species protected under the Endangered Species Act (“ESA”) that could potentially occur in the study area: Northern long-eared bat (*Myotis septentrionalis*) and Yellow lance (*Elliptio lanceolata*). In addition, there are four state-listed species identified by queries that have not been federally listed, including Tricolored bat (*Perimyotis subflavus*), Brook Floater (*Alasmidonta varicose*), Wood Turtle (*Glyptemys insculpta*), and Henslow’s Sparrow (*Ammodramus henslowii*). The federal-listing of the Tri-colored bat has been proposed, but this species has not been officially listed.

The review accounted for regulatory changes and requirements associated with the Northern long-eared bat (“NLEB”) and the USFWS up-listing of this species from federally threatened to federally endangered, per the existing interim guidance from the USFWS for the NLEB that expires on March 31, 2024. The review also accounted for regulatory changes and requirements associated with Tri-colored bat and the Project USFWS listing of this species to federally endangered.

While all six of these species were identified by the DWR, DCR-DNH, and/or USFWS as having potential occurrence within the Project study area, the DWR, VaFWIS, and Wildlife Environmental Review Map Service data shows that no occurrences of these species have been confirmed as present within study area. The DCR-DNH predicted suitable habitat model shows no suitable habitat along any of the proposed route alternatives.

On behalf of the Company, ERM submitted the Project to the DCR Division of Natural Heritage (“DNH”) for review. The DCR-DNH provided its review by letter dated October 5, 2023, (see [Attachment 2.G.1](#)).

DCR-DNH concluded that the Project will not affect any documented state-listed plants or insects and does not cross any State Natural Area Preserves under DCR’s jurisdiction. However, according to a DCR-DNH biologist, “several rare plants, which are typically associated with prairie vegetation and inhabit semi-open diabase glades in Virginia, may occur at this location if suitable habitat is present. Diabase glades are characterized by historically fire-dominated grassland vegetation on relatively nutrient-rich soils underlain

by Triassic bedrock. Diabase flatrock, a hard, dark-colored volcanic rock, is found primarily in northern Virginia counties and is located within the geologic formation known as the Triassic Basin. Where the bedrock is exposed, a distinctive community type of drought-tolerant plants occurs. Diabase flatrocks are extremely rare natural communities that are threatened by activities such as quarrying and road construction (Rawinski, 1995).” See Attachment 2.G.1.

Due to the potential for the study area to support populations of natural heritage resources, DCR-DNH recommends an inventory for rare plants associated with diabase glades and significant natural communities in the study area. With the survey results, DCR-DNH indicates that it can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

Diabase Glades

With regard to DCR-DNH’s recommendation for an inventory for rare plants associated with diabase glades, the Company notes, for context, that diabase refers to unique plant communities that form in certain circumstances in the presence of underlying igneous diabase rock. Diabase associated plant species, whose occurrence in Virginia is often associated with diabase derived soils, are not formally listed as endangered or threatened. These plants and associated habitat, while considered rare by DCR-DNH, are not protected by any regulations.

Impacts to the Diabase Flatrocks are primarily associated with quarrying and road construction, activities which have a direct permanent impact to the habitats. Electric transmission lines, like those proposed in this Application, typically do not have a significant permanent impact outside of structure foundation locations. Habitat conversion is possible, but the transmission line corridor would be maintained as a natural emergent/scrub shrub habitat that resembles successional conditions allowing for natural communities to exist within this converted habitat regime. The permanent impacts associated with the Project are discrete and limited to the structure foundation locations only.

Diabase communities are most likely to occur in semi-open areas that have a disturbance regime similar to that of pre-settlement wildfires, and that also have not been heavily infested by invasive plants. Areas that do not receive this type of intermediate disturbance (including areas that are subject to intense disturbance) typically do not provide high quality habitat for the diabase associated species. The Proposed Route and Alternative Route primarily cross developed lands, disturbed lands, or lands proposed for future development, and therefore there is a low likelihood of diabase plants in the Project area.

Dominion Energy Virginia strives to be in compliance with local, state, and federal regulations. Rare species are not classified as endangered or threatened, so are not protected by any regulations, and a requirement to inventory these resources prior

to construction would result in significant delay to the construction schedule, likely increasing Project costs.

Due to the low likelihood of diabase plants in the Project area, and the lack of any legal status via federal or state law, the Company concludes that DCR-DNH's recommendation for an inventory for rare plants associated with diabase glades in the Project area is not required. In lieu of conducting an inventory of these resources prior to construction, Dominion Energy Virginia suggests that it provide the Company's construction team with information about the rare diabase plant species and coordinate with DCR-DNH if a species of concern is observed.⁴

Significant Natural Communities

According to the DCR-DNH, the study area has the potential to support the following significant natural communities: Piedmont Hardpan Forest, Piedmont Upland Depression Swamp, and Basic Oak-Hickory Forest communities, which are significant natural communities in the Northern Piedmont province. The Piedmont Hardpan Forest is an ecological group of oak-hickory forests on mostly flat Piedmont uplands and impermeable clay subsoils. In Virginia, the Piedmont Hardpan Forest is considered uncommon to rare due to its reliance on specialized soil environments.

The Piedmont Upland Depression Swamp natural community most commonly occurs in Mesozoic basins and areas situated on mafic rocks and acidic slates. These swamp habitats include shallow, seasonally flooded upland basins and broad, shallow streams with sluggish, intermittent flows. The Piedmont Upland Depression Swamp communities in northern Virginia typically include tree species such as Pin oak (*Quercus palustris*), Swamp white oak (*Quercus bicolor*), Red maple (*Acer rubrum*), and potentially, Willow oak (*Quercus phellos*). This natural community is rare both state-wide and globally.

Basic Oak-Hickory Forest habitats in Virginia include submesic to subxeric uplands underlain by basic igneous and metamorphic rocks (e.g., diabase, gabbro, amphibolite, metabasalt). Hickories (*Carya spp.*) are abundant in these communities and have the potential to dominate some tree stands, but other tree species include oaks (*Quercus spp.*), White ash (*Fraxinus americana*), and Tulip

⁴ This approach is consistent with the Commission's directive in prior proceedings. See, e.g., *Application of Virginia Electric and Power Company For approval and certification of electric transmission facilities: DTC 230 kV Line Loop and DTC Substation*, Case No. PUR-2021-00280, Final Order at 15 ("Based on the record developed herein, the Commission agrees with Dominion [Energy Virginia] that customers should not bear the costs of the recommended survey. The Commission therefore declines to adopt DCR's recommendation but directs the Company to educate its construction personnel regarding the plant species prior to the commencement of construction activities and to coordinate with DCR-DNH if the species is found within the Project area") (internal citations omitted).

poplar. Oak tree existence has been declining in these communities, and White ash trees have been nearly eliminated by the insect pathogen Emerald ash borer (*Agrilus planipennis*). Some features of the Basic Oak-Hickory Forest are considered uncommon or rare in Virginia, and like other significant natural communities, the occurrence of this community has been reduced due to agriculture, silviculture, and urban development.

DCR-DNH recommends that the Company conduct a survey to inventory the significant natural communities in the study area due to their potential to support natural heritage resources. It is unlikely that the Piedmont Upland Depression Swamp is present along the routes given the absence of land categorized as swamp, and it is unlikely that Piedmont Hardpan Forest and Basic Oak-Hickory Forest are present along the routes due to either the quality or absence of forested land.

Due to the low likelihood of these significant natural communities in the Project area, and the lack of any legal status via federal or state law, the Company concludes that DCR's recommendation for an inventory of significant natural communities in the Project area is not required. In lieu of conducting an inventory of these resources prior to construction, Dominion Energy Virginia suggests that it provide the Company's construction team with information about significant natural communities and coordinate with DCR-DNH if a species of concern from within a community is observed.

Ecological Cores

Ecological cores are areas of 100-acres or more of contiguous natural land cover associated with areas of high ecological value. They are ranked from C1 (Outstanding) to C5 (General).

During the Project routing process, ERM attempts to avoid higher-ranking ecological cores to the extent practicable, while also taking into consideration other routing constraints. When avoidance is not possible, ERM attempts to minimize the crossing length of higher-ranking ecological cores, collocate with existing linear corridors, cross previously cleared or disturbed areas, and to minimize fragmentation by following ecological core boundaries to the extent practicable. Where cores are crossed, the habitat is not fully lost as the transmission lines are maintained as open meadow/shrub habitat that is consistent with successional habitat.

As part of its official review, DCR-DNH identified one ecological core (Core 36864) encompassing 603 acres and located 0.3 mile south of the Project. The ecological core is ranked C3: High. The DCR-DNH found that no ecological cores are crossed by the Project route alternatives. See [Attachment 2.G.1](#).

Based on the CCB Virginia Eagle Nest Locator mapping portal, the Proposed Route and Alternative Routes do not intersect any secondary buffers of currently documented bald eagle nests as identified in The Bald Eagle Protection Guidelines

for Virginia (2012). According to the CCB database, there is one eagle nest (CCB ID PW9803) located about 2.5 miles southwest of the routes (see Attachment 2.G.1). Nest PW9803 was documented to be occupied in 2004. The next closest nest (CCB ID PW1702) is approximately 3.8 miles southwest of the routes and was last observed as occupied in 2017. None of the route alternatives are within the 660-foot management buffer for eagle nests. Should a nest be identified within 660 feet of a Project route, the Company will work with the appropriate jurisdictional agencies to minimize impacts on the species.

Construction and maintenance of the new transmission line facilities could have minor effects on wildlife; however, impacts on most species would be short-term in nature, and limited to the period of construction.

Proposed Route (Route 1)

Of the six species identified in Table G-1 above, none have historically been documented by state agencies in areas crossed by the Proposed Route. The Proposed Route would require approximately 6.3 acres of tree clearing, which is less than what would be required for the Alternative Route (Route 2), which is 6.7 acres. The Proposed Route would have a total of six waterbody crossings (including an unnamed perennial and an unnamed intermittent tributary to Rocky Branch); however, as the crossings would be spanned by the transmission line, impacts to aquatic species would be limited to temporary construction impacts associated with vegetation clearing adjacent to the waterbody and the elimination of riparian buffer benefits such as erosion control, water filtration, habitat and temperature control. According to the CCB, and as noted above, this route does not cross a primary or secondary buffer zone of a documented bald eagle nest.

Alternative Route (Route 2)

Impacts of the Alternative Route to threatened and endangered species would be similar to those described above for the Proposed Route. With regard to potential impacts on wildlife, the Alternative Route would require 0.4 acre of additional forested land clearing than the Proposed Route (6.7 acres versus 6.3 acres). Similar to the Proposed Route, the Alternative Route crosses a total of six waterbody crossings, including an unnamed perennial and an unnamed intermittent tributary to Rocky Branch.

Daves Store - Gemini Route

Impacts of the Daves Store-Gemini Route are anticipated to be minimal as 0.8 acre of forested land would be cleared while the remaining portions of the right-of-way cross developed land (0.6 acre). No waterbodies are crossed by the Daves Store – Gemini Route right-of-way.

New and updated information is continually added to DCR's Biotics database. The Company shall re-submit project information and a map for an update on this natural

heritage information if the scope of the Project changes and/or six months have passed before this information is utilized.⁵

By letters dated January 9, 2024, the Company requested comments from USFWS, DWR, and DCR-DNH about the Project.

H. Erosion and Sediment Control

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

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

Dutton + Associates, LLC (D+A) conducted a Stage I Pre-Application Analysis ("Stage I Analysis") of potential impacts on cultural resources for the Project Proposed Routes and Alternative Routes in accordance with the Virginia Department of Historic Resources' ("VDHR") *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (VDHR 2008). A copy of the Stage I Analysis, which was provided to VDHR on January 29, 2024, is included as Attachment 2.I.1. For each route alternative, the analysis identified and considered previously recorded resources within the following study tiers as specified in the Guidelines:

- National Historic Landmark ("NHL") properties located within a 1.5-mile radius of each route centerline.
- National Register of Historic Places ("NRHP")-listed properties, NHLs, battlefields, and historic landscapes within a 1.0-mile radius of each route centerline.
- NRHP-eligible and -listed properties, NHLs, battlefields, and historic landscapes within a 0.5-mile radius of each route centerline.
- Qualifying architectural resources and archaeological sites located within the right-of-way for each alternative route.
- Information on cultural resources within each of the above study tiers was obtained from the Virginia Cultural Resource Information System.
- Information on battlefields surveyed and assessed by the National Park Service's American Battlefield Protection Program ("ABPP") (NPS 2023). No additional resources (locally significant sites and ABPP study areas, core areas,

⁵ The Company updated this commitment consistent with discussions held between Company and DCR-DNH representatives on August 23, 2022.

or potential NRHP boundaries for battlefields) were identified within the relevant study tiers for the various route options.

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

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

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

Proposed Route (Route 1)

Seven aboveground historic resources were identified within the VDHR study tiers for the Proposed Route (Table I-1). Construction and operation of the new facilities along these routes would result in no impact to one resource (076-0271) and a minimal impact to the other six (030-5152, 076-5035, 076-5036, 076-5190, 076-5988, and 076-5989). Because a majority of the routes share a common alignment, the impact findings are the same. A summary of D+A's results by resource is provided below.

The Manassas National Battlefield Park Historic District (076-0271) is located approximately 0.68 mile northeast of the Proposed Route. This resource would have no view of the new infrastructure that would be installed along the route due to intervening distance and proximity to the Company's existing Line #2030/2140. Thus, D+A concluded that the Proposed Route would result in no impact to 076-0271.

Ody Cemetery (076-5035) is situated approximately 0.17 mile to the north of the Proposed Route. Between the resource and the Proposed Route is extensive large-scale commercial developments, raised road and highway corridors, and patches of woodland and treeline bordering the highway. While there is potential for limited visibility of several transmission structures from some vantage points in the vicinity of the cemetery, the burial ground itself is not publicly accessible. Regardless, the setting around the cemetery is compromised by existing modern development and by on-going development between the routes and the burial ground. Thus, D+A concluded that the Proposed Route would result in no more than a minimal impact to 076-5035.

Manassas Station Operation Battlefield (076-5036) is located approximately 0.09 mile to the southwest of the Proposed Route. The Proposed Route crosses portions of the battlefield in areas noted as part of the American Battlefield Protection Program (ABPP) study area. The Proposed Route is located more than 1.0 mile away from the potential-National Register area and battlefield core area for the resource. Views from and towards the Project are characterized by a disturbed landscape, a variety of small and large-scale development, and extensive infrastructure including multiple, existing high-voltage transmission lines and structures. Where visible, the proposed Project structures would be seen amongst an extensive amount of other modern development, and because of the sporadic views from only discrete vantages, would not likely be noticeable as a substantial or cumulative change. Furthermore, the visibility is minor in relation to the battlefields as a whole. Thus, D+A concluded that the Proposed Route would result in no more than a minimal impact to 076-5036.

The commercial building at 14111 Daves Store Lane (076-5988) is located approximately 0.28 mile to the southwest of the Proposed Route within a rapidly developing area that has severely diminished the historic setting, including a raised highway (US 29), a high-rise hotel, and under-construction data centers. The majority of the route would likely be screened from the resource, while the view in areas where it could be visible is dominated by modern infrastructure. Therefore, D+A concluded that the Proposed Route would result in no more than a minimal impact to 076-5988.

The Buckland Mills Battlefield (030-5152) is crossed by 0.2 mile of the Proposed Route while the Second Battle of Manassas (076-5190) site is crossed by 0.25 mile of the route. The Proposed Route crosses portions of the battlefields in areas noted as part of the ABPP study areas. The Proposed Route is located more than one mile away from both battlefield's ABPP potential-National Register or core areas. The portion of the battlefields crossed by the route is heavily fragmented by modern development. Where visible, the proposed structures would be seen amongst an extensive amount of other modern development, and because of the sporadic views from only discrete vantages, would not likely be noticeable as a substantial or cumulative change. Furthermore, the visibility is minor in relation to the battlefields as a whole. Therefore, D+A concluded that the Proposed Route would result in no more than a minimal impact on 030-5152 and 076-5190.

Manassas Gap Railroad (076-5989) is crossed by the Proposed Route. The railroad corridor is flanked to both sides by large-scale commercial development, modern infrastructure, including I-66 and other road corridors, and other utilities. Where visible,

the proposed structures would be seen amongst an extensive amount of modern development, and because of the sporadic views from only discrete, publicly-accessible vantages, would not likely be noticeable as a substantial or cumulative change. Therefore, D+A concluded that the Proposed Route would result in no more than a minimal impact on 076-5989.

TABLE I-1 Daves Store 230 kV Line Extension Project Resources in VDHR Tiers for the Proposed Route (Route 1)				
Buffer (miles)	Considered Resources	VDHR #	Description	Impact
1.0-1.5	National Historic Landmarks	None	None	NA
	National Register—Listed	None	None	NA
0.5-1.0	Battlefields— Potentially Eligible	None	None	NA
	Rural Historic District — Eligible	None	None	NA
	National Register—Eligible	None	None	NA
	National Register—Listed	076-0271	Manassas Battlefield Historic District	None
0.0- 0.5	Battlefields— Potentially Eligible	076-5036	Manassas Station Operations Battlefield	Minimal
	Historic Landscapes	None	None	NA
	National Register – Eligible	None	None	NA
	National Register – Potentially Eligible	076-5988	Commercial Building, 14111 Daves Store Lane	Minimal
		076-5035	Ody Cemetery	Minimal
0.0 (within right-of- way)	National Register — Eligible	030-5152	Buckland Mills Battlefield	Minimal
	Battlefields— Potentially Eligible	076-5190	Second Battle of Manassas	Minimal
	National Register – Potentially Eligible	076-5989	Manassas Gap Railroad	Minimal

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

The Stage I Analysis also considered the potential effects to archaeological resources. No archaeological sites lie within the new right-of-way associated with the Proposed Route.

Alternative Route (Route 2)

Similar to the Proposed Route, seven aboveground historic resources were identified within the VDHR study tiers for the Alternative Route (Route 2) (Table I-2). Construction and operation of the new facilities along this route would result in no impact to one resource (076-0271) and a minimal impact to the other six (030-5152, 076-5035, 076-5036, 076-5190, 076-5988, and 076-5989). Because a majority of the Alternative Route shares a common alignment with the Proposed Route, the impact findings are the same as noted above.

TABLE I-1 Daves Store 230 kV Line Extension Project Resources in VDHR Tiers for the Proposed Route				
Buffer (miles)	Considered Resources	VDHR #	Description	Impact
1.0-1.5	National Historic Landmarks	None	None	NA
	National Register—Listed	None	None	NA
0.5-1.0	Battlefields— Potentially Eligible	None	None	NA
	Rural Historic District — Eligible	None	None	NA
	National Register—Eligible	None	None	NA
	National Register—Listed	076-0271	Manassas Battlefield Historic District	None
0.0- 0.5	Battlefields— Potentially Eligible	076-5036	Manassas Station Operations Battlefield	Minimal
	Historic Landscapes	None	None	NA
	National Register – Eligible	None	None	NA
	National Register – Potentially Eligible	076-5988	Commercial Building, 14111 Daves Store Lane	Minimal
		076-5035	Ody Cemetery	Minimal
0.0 (within right-of- way)	National Register — Eligible	030-5152	Buckland Mills Battlefield	Minimal
	Battlefields— Potentially Eligible	076-5190	Second Battle of Manassas	Minimal
	National Register – Potentially Eligible	076-5989	Manassas Gap Railroad	Minimal

TABLE I-2 Daves Store 230 kV Line Extension Project Resources in VDHR Tiers for the Alternative Route (Route 2)				
Buffer (miles)	Considered Resources	VDHR #	Description	Impact
1.0-1.5	National Historic Landmarks	None	None	NA
	National Register—Listed	None	None	NA
0.5-1.0	Battlefields— Potentially Eligible	None	None	NA
	Rural Historic District — Eligible	None	None	NA
	National Register—Eligible	None	None	NA
	National Register—Listed	076-0271	Manassas Battlefield Historic District	None
0.0- 0.5	Battlefields— Potentially Eligible	076-5036	Manassas Station Operations Battlefield	Minimal
	Historic Landscapes	None	None	NA
	National Register – Eligible	None	None	NA
	National Register – Potentially Eligible	076-5988	Commercial Building, 14111 Daves Store Lane	Minimal
		076-5035	Ody Cemetery	Minimal
0.0 (within right-of- way)	National Register — Eligible	030-5152	Buckland Mills Battlefield	Minimal
	Battlefields— Potentially Eligible	076-5190	Second Battle of Manassas	Minimal
	National Register – Potentially Eligible	076-5989	Manassas Gap Railroad	Minimal

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

The Stage I Analysis also considered the potential effects to archaeological resources. One archaeological site lies adjacent to the new right-of-way associated with Alternative Route 2: Site 44PW0882. Site 44PW0882, is a pre-contact lithic workshop located approximately

65 feet from the ROW of Alternative Route 2. This site, a prehistoric lithic scatter, was identified by Thunderbird Archaeological Associates in 1995. Identified through subsurface testing, six lithic flakes were recovered from the site plowzone. Moreover, based upon recent aerial photography, it appears the site has likely been destroyed by ongoing construction in the vicinity and the surrounding area has been subject to previous survey. No recommendation of NRHP eligibility was provided and the site was not formally evaluated by the VDHR. The condition of the site would be confirmed during the Phase I survey to be completed for the Project if the Alternative Route (Route 2) is selected as the preferred alternative. There are no archaeological sites within or adjacent to the right-of-way for the Proposed Route (Route 1).

Daves Store - Gemini Route

Five aboveground historic resources were identified within the VDHR study tiers for the Daves Store - Gemini Route (Table I-3). Construction and operation of the new facilities along these routes would result in a minimal impact to all five resources (076-5036, 076-5988, 076-5989, 030-5152, and 076-5190).

TABLE I-3 Daves Store 230 kV Line Extension Project Resources in VDHR Tiers for the Daves Store-Gemini Route				
Buffer (miles)	Considered Resources	VDHR #	Description	Impact
1.0-1.5	National Historic Landmarks	None	None	NA
	National Register—Listed	None	None	NA
0.5-1.0	Battlefields— Potentially Eligible	None	None	NA
	Rural Historic District — Eligible	None	None	NA
	National Register—Eligible	None	None	NA
	National Register—Listed	None	None	NA
0.0- 0.5	Battlefields— Potentially Eligible	076-5036	Manassas Station Operations Battlefield	Minimal
	Historic Landscapes	None	None	NA
	National Register – Eligible	None	None	NA
	National Register – Potentially Eligible	076-5988	Commercial Building, 14111 Daves Store Lane	Minimal
		076-5989	Manassas Gap Railroad	Minimal
0.0 (within right-of- way)	National Register — Eligible	030-5152	Buckland Mills Battlefield	Minimal
	Battlefields— Potentially Eligible	076-5190	Second Battle of Manassas	Minimal
	National Register – Potentially Eligible	None	None	NA

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

By letter dated January 9, 2024, the Company solicited comments from VDHR on the proposed Project.

J. Chesapeake Bay Preservation Areas

The Project is located in Prince William County, a locality subject to the Chesapeake Bay Preservation Act. Construction, installation, operation, and maintenance of electric transmission lines are conditionally exempt from the Chesapeake Bay Preservation Act as stated in the exemption for public utilities, railroads, public roads, and facilities in 9 VAC 25-830-150 and Article V of Prince William County's Zoning Ordinance.

Prince William County enacted the Chesapeake Bay Preservation Overlay District in Article V of its Zoning Ordinance. Under the act, RPAs are defined as the land area within 100 feet of a perennial stream or bank edge of wetlands adjacent to the perennial stream. Based on the definition of RPAs and the Prince William County Comprehensive Plan Chesapeake Bay Resource Protection Area map (Prince William County, 2023), there are two RPAs in the study area. An RPA is associated with Rocky Branch, which is south of Wellington Branch Drive and 0.3 mile from the proposed Daves Store Substation. The Alternative Route, located on the southside of Wellington Branch Drive, does not cross Rocky Branch, but crosses approximately 0.2 acre of the RPA.

The second RPA in the study area is an unnamed tributary to Broad Run located on the properties associated with the Gainesville West and Gainesville East Data Center campuses. The Daves Store Line Proposed Route and Alternative Route cross the western extents of the RPA, which runs parallel to and north of Wellington Road and the Jiffy Lube Live amphitheater. In discussions with the developers, ERM and the Company learned of an ongoing effort to restore the RPA in accordance with County guidelines by proposing plantings to restore the viability of the RPA as it was disturbed during previous contamination remediation efforts associated with the Atlantic Research Corporation manufacturing site (see Section F). The Company met with County staff on May 22, 2023, to introduce the Project and discuss the RPA. Further discussions were held with the County on September 5, and December 14, 2023. The Company has avoided the boundaries of the RPA shown on the stream restoration plan and will continue to coordinate with the County to address any additional concerns associated with the RPA.

The Daves Store - Gemini Route does not cross any County-designated RPAs.

The Company will meet the required conditions and will use Best Management Practices to limit impacts to RPAs to the maximum extent possible while safely and effectively constructing and maintaining its infrastructure.

K. Wildlife Resources

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

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 is actively 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.

Proposed Route (Route 1)

The majority of the Proposed Route crosses developed land (11.1 acres), with smaller areas of open space (9.5 acres), forested land (6.3 acres), and areas of open water (0.1 acre) interspersed within the alignment. Based on review of recent (2023) aerial photography, approximately 6.3 acres of forested habitat would need to be cleared within the right-of-way for construction along this route. According to current aerial imagery (2023), the forested areas crossed by the route are interspersed with industrial and commercial development in the Piney Branch Industrial Park and data center campuses proposed west of University Boulevard. Therefore, it is likely that these areas lack the biodiversity of the significant natural communities mentioned above.

Any adjustments to this Project schedule resulting from these or similar challenges could necessitate a minimum of a six - to twelve - month delay in the targeted in-service date. Accordingly, for purposes of judicial economy, the Company requests that the Commission issue a final order approving both a desired in-service target date (i.e., September 1, 2026) and a CPCN sunset date (i.e., September 1, 2027) for energization of the Project.

Alternative Route (Route 2)

The majority of the Alternative Route crosses developed land (12.3 acres), with smaller areas of open space (10.1 acres), forested land (6.7 acres), and areas of open water (0.2 acre) interspersed within the proposed alignment. Based on review of recent (2023) aerial photography, approximately 6.7 acres of forested habitat would need to be cleared within the right-of-way for construction of this route. Similar to the Proposed Route, the Alternative Route crosses the common 0.3-mile area across forested lands which could lack the biodiversity of the significant natural communities mentioned above per the interspersed existing and proposed industrial and commercial developments.

Daves Store - Gemini Route

The Daves Store-Gemini Route crosses forested land (0.8 acre) and developed land (0.6 acre) along the proposed alignment. Based on review of recent (2023) aerial photography, approximately 0.8 acre of forested habitat would need to be cleared within the right-of-way for construction of this route, though the route predominantly is within the Daves Store, Atlas, and Gemini Substation sites, which are planned to be cleared and developed.

L. Recreation, Agricultural, and Forest Resources

The Project would not cross or otherwise affect agricultural lands.

The Project is expected to have minimal incremental impacts on recreational, agricultural, and forest resources. Generally, the study area is a highly developed, industrial area, with limited forest cover. Opportunities for collocation with the Company's existing electric transmission rights-of-way and other linear corridors were considered for the routes, where possible, as a means of avoiding or minimizing impacts on forest and recreational. Where forested areas are crossed, trees would be removed, and vegetation would be kept at maintained heights within the right-of-way.

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. No state scenic rivers will be crossed or affected by the Project. Additionally, none of the route alternatives run parallel to or cross any Virginia Byways, Scenic Rivers, or Virginia Birding and Wildlife Trails.

Wentworth Green Walking Trail is located in the forested area along Rocky Branch south of Wellington Road. Vegetation and forest cover around Rocky Branch protects the viewshed from the walking trail, such that there would be no physical impacts from the Project routes on the resource. Shared use asphalt paths along Linton Hall Road, Wellington Road, and Limestone Drive are part of the Broad Run Trail Network. The Proposed and Alternative Routes cross a portion of the path along University Boulevard. The perpendicular crossing will not physically affect the path; however, there could be visual impacts as discussed in Section 6.3 of the Environmental Routing Study.

The Virginia Agricultural and Forestal Districts Act provides for the creation of conservation districts designed to conserve, protect, and encourage the development and improvement of a locality's agricultural and forested lands. The Proposed and Alternative Routes do not cross any AFDs.

Under the Virginia Open-Space Land Act, any public body can acquire title or rights to real property to provide means of preservation of open-space land. Most easements created under the Act are held by the Virginia Outdoors Foundation ("VOF"), but any state agency is authorized to create and hold an open-space easement. Such conservation easements are designed to preserve and protect open space and other resources and must be held for no less than five years in duration and can be held in perpetuity. According to the DCR's NHDE, none of the alternative routes cross any VOF easements or, other conservation lands identified by the DCR-DNH.

The Proposed Route and Alternative Route are approximately 0.3 mile south of a 440-acre DCR conservation forest, the Conway Robinson Memorial State Forest. The Manassas Battlefield Park is adjacent to the Conway Robinson Memorial State Forest and spans over 5,000 acres. These sites are outside the study area and are not anticipated to be affected by the Project (see Section I).

Prince William County has protected open space easements within the study area on open space land owned by the Wentworth Green Community Association, the Virginia Gateway Owners Association and the Bristow Industrial Park Owners Association. The closest open space easement begins approximately 480 feet south of the right-of-way of the Alternative Route, south of Wellington Road. This area encompasses part of the Rocky Branch stream and associated RPA (see Section J). There is an additional open space easement located approximately 780 feet southeast of the southern extent of the Proposed Route and Alternative Route, near NOVEC's Atlantic DP Substation. No direct impacts will occur to these easements and conservation lands as a result of the Project.

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

Proposed Route (Route 1)

The Proposed Route does not cross AFD land.

The Proposed Route collocates along the Norfolk Southern Railway corridor, where there is limited existing vegetative buffering. The route crosses a portion of the Broad Run Trail Network along University Boulevard; however, the perpendicular crossing would have limited impacts on the recreational resource. The Proposed Route crosses the boundaries of planned data center developments totaling approximately 0.7 mile. An assessment of impacts on these resources is provided in the Environmental Routing Study.

NRCS soils data indicates approximately 3.5 acres (0.3 mile) of the Proposed Route right-of-way are classified as prime farmland and 6.9 acres (0.7 mile) are classified as farmland of statewide importance. According to NRCS soils data, the Proposed Route crosses approximately 14.4 acres of agricultural lands (53.3 percent of the route) and approximately 6.3 acres of forested lands (23.3 percent of the route). As noted, however, based on review of recent (2023) aerial photography, there are no agricultural lands along the routes.

Alternative Route (Route 2)

The Alternative Route does not cross AFD land.

The Alternative Route crosses US 29 and the Norfolk Southern Railway before collocating with Wellington Branch Drive for 0.3 mile, where there is limited existing vegetative buffering. The route crosses a portion of the Broad Run Trail Network along University Boulevard; however, the perpendicular crossing would have limited impacts on the recreational resource. The Alternative Route crosses facility boundaries of planned data center developments totaling approximately 0.7 mile. An assessment of impacts on these resources is provided in the Environmental Routing Study.

NRCS soils data indicates approximately 5.4 acres (0.4 mile) of the Alternative Route right-of-way are classified as prime farmland, and 6.9 acres (0.7 mile) are classified as farmland of statewide importance. According to NRCS soils data, the Alternative Route crosses approximately 16.7 acres of agricultural lands (57 percent of the route) and approximately 6.7 acres of forested lands (22.9 percent of the route). As noted, however, based on review of recent (2023) aerial photography, there are no agricultural lands along the routes.

Daves Store - Gemini Route

The Daves Store-Gemini Route does not cross AFD land. Some existing vegetative buffers surround the parcel for the Daves Store Substation, located adjacent to the Company's existing Heathcote Substation, along I-66. Vegetative buffers exist along Daves Store Lane on the parcels for the Atlas Substation and Gemini Substation, where the Daves Store - Gemini Route would cross. An assessment of impacts on these resources is provided in the Environmental Routing Study.

NRCS soils data indicates approximately 0.9 acre (0.1 mile) of the Daves Store - Gemini Route right-of-way are classified as prime farmland and no farmland of statewide importance is crossed. According to NRCS soils data, the Daves Store - Gemini Route crosses 0.1 acre of agricultural lands (8 percent of the route) and approximately 0.8 acre of forested lands (62 percent of the route). As noted, however, based on review of aerial photography, there are no agricultural lands along the routes.

By letters dated January 9, 2024, the Company solicited comments on the proposed Project from DCR-DNH, VOF, and VDOF.

M. Use of Pesticides and Herbicides

Of the techniques available, selective foliar is the preferred method of herbicide application. The Company typically maintains transmission line rights-of-way by means of selective, low volume applications of EPA-approved, non-restricted use herbicides. The goal of this method is to exclude tall growing brush species from right-of-way by establishing early successional plant communities of native grasses, forbs, and low growing woody vegetation. "Selective" application means the Company sprays only the undesirable plant species (as opposed to broadcast applications). "Low volume"

application means the Company uses only the volume of herbicide necessary to remove the selected plant species. The mixture of herbicides used varies from one cycle to the next to avoid the development of resistance by the targeted plants. There are four means of dispersal available to the Company, including by-hand application, backpack, fixed nozzle-radiarc, and aerial. Very little right-of-way maintenance incorporates aerial equipment. The Company uses licensed contractors to perform this work that are either certified applicators or registered technicians in the Commonwealth of Virginia.

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

Letters were submitted to the DCR-DNH on January 9, 2024, describing the Project and requesting comment. See Attachment 2.G.1 to the DEQ Supplement.

Additionally, based on discussions between the Company and the Virginia Department of Conservation and Recreation's ("DCR") Department of Natural Heritage ("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 DNH 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 an 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.

N. Geology and Mineral Resources

The study area is located within the Piedmont geologic province, which lies between the mountainous Blue Ridge province to the west and the terraced slopes of the Coastal Plain province to the east. The characteristically heavy weathered bedrock of the Piedmont province is caused by the humid climate, thick soils, and rolling topography of the region. The Piedmont province consists of several complex geologic terranes where faults separate the rock units with variable igneous and metamorphic histories.

Based on review of the Geologic Map of Virginia, the proposed route alternatives are located within a Mesozoic basin. The bedrock underlying the Proposed Route starting from the Daves Store Substation site and extending to the junction of I-66 and US 29 consists of interbedded shale and siltstone of the Newark Supergroup of the Upper-Triassic. The remainder of the route extends through Jurassic-age intrusive igneous mafic bedrock (diabase) until the route terminates at the Stinger and Trident Switching Stations and NOVEC's Atlantic DP Substation. (William and Mary Department of Geology 2023; USGS 2005).

ERM reviewed publicly available Virginia Energy datasets (2023), USGS topographic quadrangles, and current (2023) digital aerial photographs to identify mineral resources in

the study area. There are no active mineral resource sites within 0.25 mile of the Daves Store Line route alternatives. The closest active permitted mining site is the Manassas Quarry located on Vulcan Lane approximately 3.3 miles southeast of NOVEC's Atlantic DP Substation. The closest mineral occurrence are two diabase prospects located outside of the study area approximately 1.3 miles southwest of the Alternative Route south of US 29 and north of Lake Manassas (Virginia Energy 2023).

O. Transportation Infrastructure

Road and Railroad Crossings

The road network in the study area consists of a variety of road types, from principal arterials such as I-66 and US Route 29, to minor arterials such as University Boulevard, Wellington Road, and Linton Hall Road, to minor collectors, such as Wellington Branch Drive. These public roads are maintained by the Virginia Department of Transportation ("VDOT").

ERM reviewed the VDOT projects and studies website to identify future road projects in the study area and no proposed projects were identified. VDOT's "Transform I-66 Outside of the Beltway" project involved road improvements, new express lanes, park and ride spaces, and interchange improvements to I-66. The Transform I-66 Outside the Beltway Project began construction in 2017 and was completed in November 2022 (VDOT, 2022). The Project will not impact I-66 or the Transform I-66 Outside the Beltway Project.

ERM reviewed the Prince William County 2022 Comprehensive Plan Roadway Plan Map (Prince William County, 2023). Through this review and meetings with VDOT and the County, the Company learned of plans to expand Wellington Road from four to six lanes between University Boulevard and Prince William Parkway, a road segment of approximately 4.0 miles. There are no detailed plans publicly available or proposed timeline for the Wellington Road widening project according to feedback from County and VDOT staff.

VDOT has classified portions of US 29 within the study area as limited access highway. Defined by VDOT as "a highway designed for through traffic over which abutting properties have no easement or right of light, air, or access by reason of the fact that their property abuts upon the limited access highway" (VDOT, 2013). The route alternatives minimize impacts to the limited access highway to the extent possible by avoiding paralleling the highway based on feedback received from VDOT during the routing process. The Proposed Route and Alternative Route each require structures within VDOT right-of-way due to the presence of surrounding constraints.

One railroad, a Norfolk Southern Railroad, crosses the study area along the south side of I-66 and US 29.

Proposed Route (Route 1)

The Proposed Route crosses U.S. Route 29 once and collocates with the Norfolk Southern Railway for about 0.3 mile and Wellington Road for about 0.3 mile. No portion of the

Proposed Route right-of-way overlaps the railroad right-of-way. The Proposed Route additionally crosses six minor roads and one principal arterial road (US 29). In addition, the Proposed Route requires two structures to be located within VDOT right-of-way and the limited access highway area along US 29.

Road crossings would be as close to perpendicular as practicable; however, there are constructability and environmental constraints that require non-perpendicular crossings of roadways to minimize impacts. At the US 29 crossing, the Proposed Route crosses at a non-perpendicular alignment to minimize potential impacts to a point of delivery station operated by Columbia Gas and the VDOT limited access highway area. At the Wellington Road crossing, the Proposed Route crosses at a non-perpendicular alignment to minimize impacts to an RPA and associated features (see Section J) and an existing pond located at the Jiffy Lube Live amphitheater entrance, adjacent to Cellar Door Drive.

Based on a review of the Prince William County 2022 Comprehensive Plan Roadway Plan Map and discussions with VDOT, the Proposed Route crosses Wellington Road at a location planned for a future road expansion. The Proposed Route spans across Wellington Road and is not anticipated to impact the area identified for the future expansion.

Alternative Route (Route 2)

The Alternative Route crosses US 29 once and collocates with Wellington Road for about 0.3 mile. The route crosses eight minor roads, which is two more crossings than the Proposed Route. The Alternative Route crosses US 29 at the same location and using the same non-perpendicular alignments as the Proposed Route. The Alternative Route crosses six minor roads and one principal arterial road (US 29). It also requires three structures to be located within VDOT right-of-way, which is one structure greater than the Proposed Route. Two structures are located in the limited access highway area along US 29 and the third structure is located along the Wellington Branch Drive corridor to avoid buildings.

The Alternative Route follows Wellington Branch Drive and overlaps the VDOT right-of-way for approximately 0.3 mile due to space constraints and the need to minimize impacts to other utilities located on either side of the roadway, including a Columbia Gas pipeline, and NOVEC and Company distribution facilities. The Alternative Route crosses Wellington Branch Drive twice. Similar to the Proposed Route, the Alternative Route crosses Wellington Road at a location planned for a future road expansion but spans the road to minimize impacts to the area identified for road widening.

The Alternative Route crosses the Norfolk Southern Railway at the same location as the Proposed Route but does not collocate with the right-of-way along the railroad.

Daves Store - Gemini Route

The Daves Store - Gemini Route does not cross any roadways and will not impact any known future road projects. The Daves Store - Gemini Route does not cross any railroads or other transportation corridors.

By letter dated September 5, 2023, the Company solicited comments from VDOT on the proposed Project. VDOT responded on October 17, 2023, expressing no concerns with the location of the Proposed and Alternative Route, but noted that the placement of structures within VDOT right-of-way should be outside of the “clear zones” for the roadways, to minimize conflict with errant vehicles utilizing the roadways. See Attachment 2.O.1. See the Environmental Routing Study for further information regarding VDOT feedback.

Collocated sections of the Proposed Route with the Norfolk Southern Railway would be located entirely outside of railroad right-of-way. By electronic mail dated August 15, 2023, the Company solicited comments from the Norfolk Southern Railway on the proposed Project. Norfolk Southern Railway responded on August 15, 2023 expressing no concerns with the Project as long as the transmission line crossing meets the applicable engineering standards. See Attachment 2.O.2.

Airports

The design of the Project must prevent interference with pilots’ safe ingress and egress at airports. Such hazards or impediments include interference with navigation and communication equipment and glare from materials and external lights.

The Company reviewed the Federal Aviation Administration’s (“FAA”) website to identify public use airports, airports operated by a federal agency or the U.S. Department of Defense, or heliports with at least one FAA-approved instrument approach procedure, and public use or military airports under construction within 10.0 miles of the Project routes.

It was determined there are seven airports, private airstrips, or heliports are located within 10.0 miles of the Project. Of those seven facilities, six are private and the seventh is the public Manassas Regional Airport/Harry P. Davis Field, which is approximately 5.1 miles southeast of the Project. ERM, on behalf of the Company, conducted an airport analysis to determine if any of the FAA defined Civil Airport Imaginary Surfaces associated with the airports and other facilities would be penetrated by structures associated with the Project. ERM reviewed the height limitations associated with FAA-defined imaginary surfaces for the Manassas Regional Airport. Based on the results of this review it was determined there would be no potential for penetration into any of the Imaginary Surfaces associated with the nearby airport facilities and thus there would be no impacts to navigable airspace from the Project.

The regulations that govern objects that may affect navigable airspace are codified in the Code of Federal Regulations, Title 14, Part 77. In these regulations it states that restrictions to structure heights only apply to public use airports and do not apply to privately owned airports. The privately owned UVA Health Haymarket Medical Center Heliport is located approximately 2.3 miles northwest of the Project. There is no runway associated with this facility. Even though UVA Health Haymarket Medical Center Heliport is not granted the same height restrictions of the surrounding area (as opposed to a public-use airport), the Project is not expected to have any impacts on the navigable airspace of the heliport.

Since the FAA manages air traffic in the United States, it will evaluate any physical objects that may affect the safety of aeronautical operations through an obstruction evaluation. If required during the permitting process, Dominion Energy Virginia will submit an FAA Form 7460-1 Notice pursuant to 14 CFR Part 77 for any tower locations that meet the review criteria.

By letter dated January 9, 2024 the Company solicited comments from Virginia Department of Aviation (“DOAv”) on the proposed Project.

P. Drinking Water Wells

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

By letter dated January 9, 2024, the Company solicited comments from VDH-ODW on the proposed Project. VDH-ODW responded on January 18, 2024, regarding potential Project impacts to public water distribution systems or sanitary sewage collection systems. This response is included as Attachment 2.P.2.

Q. Pollution Prevention

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

ATTACHMENTS

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



January 9, 2023

BY EMAIL

John D. Lynch
Northern Virginia District Engineer
Virginia Department of Transportation, Northern Virginia District Office
4975 Alliance Drive
Fairfax, Virginia 22030

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICATION

RE: Dominion Energy Virginia's Proposed Daves Store 230 kV Line Extension Project in Prince William County, Virginia

To: John D. Lynch

Dominion Energy Virginia (the "Company") is proposing to:

- Cut existing 230 kV Line #2161 (Gainesville – Wheeler) near the Northern Virginia Electric Cooperative's ("NOVEC") Atlantic DP Substation to create Lines #2161 (Stinger - Wheeler) and #2346 (Gainesville – Trident). Extend 230 kV Line #2161 on new, double-circuit 230 kV structures approximately 0.53 miles northwest to Stinger Substation. Extend 230 kV Line #2346 on new, double-circuit 230 kV structures approximately 0.55 miles northwest to Trident Substation.
- Construct 230 kV Line #2347 on new, double-circuit 230 kV structures approximately 0.31 miles from Trident Substation to Stinger Substation. This line shares double-circuit structures with 230 kV Lines #2161 and #2346.
- Construct 230 kV Line #2337 on new, double-circuit 230 kV structures approximately 1.56 miles (Proposed Route) or 1.75 miles (Alternative Route) from Stinger Substation to Daves Store Substation.
- Construct 230 kV Line #2350 on new, double-circuit 230 kV structures approximately 1.73 miles (Proposed Route) or 1.92 miles (Alternative Route) from Stinger Substation to Gemini Substation. This line shares double-circuit structures with Line #2337 for most of the proposed routes. This line will be re-routed into Atlas Substation at a future date, and this re-route will occur entirely within the substation fence line.
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- Construct 230 kV Line #2339 on new, single-circuit 230 kV structures approximately 0.10 miles from Daves Store Substation to Gemini Substation.

Collectively, the Daves Store 230 kV line extension and related transmission projects are referred to as the "Project". The Company has identified proposed and alternative routes in new right-of-way for the Dave's Store Lines, as shown on the attached Project Overview Map.

The Project is necessary to assure that Dominion Energy Virginia can provide service requested by customers in Prince William County, Virginia, maintain reliable service for the overall load growth in the Project area, and to comply with mandatory NERC Reliability Standards

The Company is preparing to file an application for a Certificate of Public Convenience and Necessity ("CPCN") with the Virginia State Corporation Commission ("SCC"). In advance of filing

the CPCN application, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter. Once filed, the application will be available for review on the Company's website at <http://www.dominionenergy.com/davesstore>.

The enclosed Project Overview Map depicts the proposed and alternative routes of the Dave's Store Lines, as well as the general Project location. Please note that the Project Overview Map and route descriptions depicted therein are preliminary in nature and subject to final engineering. Please refer to the CPCN application for any updates to the Project description and/or routes.

We have included a GIS shapefile of the proposed routes to assist in your project review. If you have any questions, please do not hesitate to contact Craig Hurd at 804-201-5020 or Craig.R.Hurd@dominionenergy.com. We appreciate your assistance with this project review and look forward to any additional information you may have to offer.

Regards,

Craig R. Hurd

Craig R. Hurd

Siting and Permitting

Dominion Energy Virginia

Attachment: Project Map

GIS Shapefiles

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



January 9, 2023

BY EMAIL

Kamal Suliman
Regional Operations Director
Virginia Department of Transportation, Northern Virginia District Office
4975 Alliance Drive
Fairfax, Virginia 22030

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICATION

RE: Dominion Energy Virginia's Proposed Daves Store 230 kV Line Extension Project in Prince William County, Virginia

To: Kamal Suliman

Dominion Energy Virginia (the "Company") is proposing to:

- Cut existing 230 kV Line #2161 (Gainesville – Wheeler) near the Northern Virginia Electric Cooperative's ("NOVEC") Atlantic DP Substation to create Lines #2161 (Stinger - Wheeler) and #2346 (Gainesville – Trident). Extend 230 kV Line #2161 on new, double-circuit 230 kV structures approximately 0.53 miles northwest to Stinger Substation. Extend 230 kV Line #2346 on new, double-circuit 230 kV structures approximately 0.55 miles northwest to Trident Substation.
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Collectively, the Daves Store 230 kV line extension and related transmission projects are referred to as the "Project". The Company has identified proposed and alternative routes in new right-of-way for the Dave's Store Lines, as shown on the attached Project Overview Map.

The Project is necessary to assure that Dominion Energy Virginia can provide service requested by customers in Prince William County, Virginia, maintain reliable service for the overall load growth in the Project area, and to comply with mandatory NERC Reliability Standards

The Company is preparing to file an application for a Certificate of Public Convenience and Necessity ("CPCN") with the Virginia State Corporation Commission ("SCC"). In advance of filing

the CPCN application, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter. Once filed, the application will be available for review on the Company's website at <http://www.dominionenergy.com/davesstore>.

The enclosed Project Overview Map depicts the proposed and alternative routes of the Dave's Store Lines, as well as the general Project location. Please note that the Project Overview Map and route descriptions depicted therein are preliminary in nature and subject to final engineering. Please refer to the CPCN application for any updates to the Project description and/or routes.

We have included a GIS shapefile of the proposed routes to assist in your project review. If you have any questions, please do not hesitate to contact Craig Hurd at 804-201-5020 or Craig.R.Hurd@dominionenergy.com. We appreciate your assistance with this project review and look forward to any additional information you may have to offer.

Regards,

Craig R. Hurd

Craig R. Hurd

Siting and Permitting

Dominion Energy Virginia

Attachment: Project Map

GIS Shapefiles

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



January 9, 2023

BY EMAIL & CERTIFIED MAIL

Mr. Christopher Shorter
County Executive, Prince William County
1 County Complex Court, Suite 245
Prince William, Virginia 22192

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICATION

**RE: Dominion Energy Virginia's Proposed Daves Store 230 kV Line Extension Project in Prince William County, Virginia
Notice Pursuant to Va. Code §15.2-2202**

To: Mr. Christopher Shorter

Dominion Energy Virginia (the "Company") is proposing to:

- Cut existing 230 kV Line #2161 (Gainesville – Wheeler) near the Northern Virginia Electric Cooperative's ("NOVEC") Atlantic DP Substation to create Lines #2161 (Stinger - Wheeler) and #2346 (Gainesville – Trident). Extend 230 kV Line #2161 on new, double-circuit 230 kV structures approximately 0.53 miles northwest to Stinger Substation. Extend 230 kV Line #2346 on new, double-circuit 230 kV structures approximately 0.55 miles northwest to Trident Substation.
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Collectively, the Daves Store 230 kV line extension and related transmission projects are referred to as the "Project". The Company has identified proposed and alternative routes in new right-of-way for the Dave's Store Lines, as shown on the attached Project Overview Map.

The Project is necessary to assure that Dominion Energy Virginia can provide service requested by customers in Prince William County, Virginia, maintain reliable service for the overall load growth in the Project area, and to comply with mandatory NERC Reliability Standards

The Company is preparing to file an application for a Certificate of Public Convenience and Necessity ("CPCN") with the Virginia State Corporation Commission ("SCC"). In advance of filing

the CPCN application, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter. Once filed, the application will be available for review on the Company's website at <http://www.dominionenergy.com/davesstore>.

The enclosed Project Overview Map depicts the proposed and alternative routes of the Dave's Store Lines, as well as the general Project location. Please note that the Project Overview Map and route descriptions depicted therein are preliminary in nature and subject to final engineering. Please refer to the CPCN application for any updates to the Project description and/or routes.

We have included a GIS shapefile of the proposed routes to assist in your project review. If you have any questions, please do not hesitate to contact Craig Hurd at 804-201-5020 or Craig.R.Hurd@dominionenergy.com. We appreciate your assistance with this project review and look forward to any additional information you may have to offer.

Regards,

Craig R. Hurd

Craig R. Hurd

Siting and Permitting

Dominion Energy Virginia

Attachment: Project Map

GIS Shapefiles

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



January 9, 2023

BY EMAIL

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

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICATION

RE: Dominion Energy Virginia's Proposed Daves Store 230 kV Line Extension Project in Prince William County, Virginia

To: Mr. Scott Denny

Dominion Energy Virginia (the "Company") is proposing to:

- Cut existing 230 kV Line #2161 (Gainesville – Wheeler) near the Northern Virginia Electric Cooperative's ("NOVEC") Atlantic DP Substation to create Lines #2161 (Stinger - Wheeler) and #2346 (Gainesville – Trident). Extend 230 kV Line #2161 on new, double-circuit 230 kV structures approximately 0.53 miles northwest to Stinger Substation. Extend 230 kV Line #2346 on new, double-circuit 230 kV structures approximately 0.55 miles northwest to Trident Substation.
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Collectively, the Daves Store 230 kV line extension and related transmission projects are referred to as the "Project". The Company has identified proposed and alternative routes in new right-of-way for the Dave's Store Lines, as shown on the attached Project Overview Map.

The Project is necessary to assure that Dominion Energy Virginia can provide service requested by customers in Prince William County, Virginia, maintain reliable service for the overall load growth in the Project area, and to comply with mandatory NERC Reliability Standards

The Company is preparing to file an application for a Certificate of Public Convenience and Necessity ("CPCN") with the Virginia State Corporation Commission ("SCC"). In advance of filing

the CPCN application, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter. Once filed, the application will be available for review on the Company's website at <http://www.dominionenergy.com/davesstore>.

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Regards,

Craig R. Hurd

Craig R. Hurd

Siting and Permitting

Dominion Energy Virginia

Attachment: Project Map

GIS Shapefiles

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



January 9, 2023

BY EMAIL & CERTIFIED MAIL

Mr. Tom Gordy, Brentsville District Supervisor
Prince William County Board of Supervisors
9400 Innovation Drive, Suite 130
Manassas, Virginia 20110

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICATION

**RE: Dominion Energy Virginia's Proposed Daves Store 230 kV Line Extension Project in Prince William County, Virginia
Notice Pursuant to Va. Code §15.2-2202**

To: Mr. Tom Gordy

Dominion Energy Virginia (the "Company") is proposing to:

- Cut existing 230 kV Line #2161 (Gainesville – Wheeler) near the Northern Virginia Electric Cooperative's ("NOVEC") Atlantic DP Substation to create Lines #2161 (Stinger - Wheeler) and #2346 (Gainesville – Trident). Extend 230 kV Line #2161 on new, double-circuit 230 kV structures approximately 0.53 miles northwest to Stinger Substation. Extend 230 kV Line #2346 on new, double-circuit 230 kV structures approximately 0.55 miles northwest to Trident Substation.
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Collectively, the Daves Store 230 kV line extension and related transmission projects are referred to as the "Project". The Company has identified proposed and alternative routes in new right-of-way for the Dave's Store Lines, as shown on the attached Project Overview Map.

The Project is necessary to assure that Dominion Energy Virginia can provide service requested by customers in Prince William County, Virginia, maintain reliable service for the overall load growth in the Project area, and to comply with mandatory NERC Reliability Standards

The Company is preparing to file an application for a Certificate of Public Convenience and Necessity ("CPCN") with the Virginia State Corporation Commission ("SCC"). In advance of filing

the CPCN application, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter. Once filed, the application will be available for review on the Company's website at <http://www.dominionenergy.com/davesstore>.

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Regards,

Craig R. Hurd

Craig R. Hurd

Siting and Permitting

Dominion Energy Virginia

Attachment: Project Map

GIS Shapefiles

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



January 9, 2023

BY EMAIL

Ms. Martha Little
Virginia Outdoors Foundation
600 East Main Street, Suite 402
Richmond, Virginia 23250

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICATION

RE: Dominion Energy Virginia's Proposed Daves Store 230 kV Line Extension Project in Prince William County, Virginia

To: Ms. Martha Little

Dominion Energy Virginia (the "Company") is proposing to:

- Cut existing 230 kV Line #2161 (Gainesville – Wheeler) near the Northern Virginia Electric Cooperative's ("NOVEC") Atlantic DP Substation to create Lines #2161 (Stinger - Wheeler) and #2346 (Gainesville – Trident). Extend 230 kV Line #2161 on new, double-circuit 230 kV structures approximately 0.53 miles northwest to Stinger Substation. Extend 230 kV Line #2346 on new, double-circuit 230 kV structures approximately 0.55 miles northwest to Trident Substation.
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Regards,

Craig R. Hurd

Craig R. Hurd

Siting and Permitting

Dominion Energy Virginia

Attachment: Project Map

GIS Shapefiles

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



January 9, 2023

BY EMAIL

Sunil Rabindranath
Project Manager, Engineering Division
Metropolitan Washington Airports Authority
P.O. Box 17045, MA-224
Washington, DC 20041

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICATION

RE: Dominion Energy Virginia's Proposed Daves Store 230 kV Line Extension Project in Prince William County, Virginia

To: Sunil Rabindranath

Dominion Energy Virginia (the "Company") is proposing to:

- Cut existing 230 kV Line #2161 (Gainesville – Wheeler) near the Northern Virginia Electric Cooperative's ("NOVEC") Atlantic DP Substation to create Lines #2161 (Stinger - Wheeler) and #2346 (Gainesville – Trident). Extend 230 kV Line #2161 on new, double-circuit 230 kV structures approximately 0.53 miles northwest to Stinger Substation. Extend 230 kV Line #2346 on new, double-circuit 230 kV structures approximately 0.55 miles northwest to Trident Substation.
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Regards,

Craig R. Hurd

Craig R. Hurd

Siting and Permitting

Dominion Energy Virginia

Attachment: Project Map

GIS Shapefiles

89



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



January 9, 2023

BY EMAIL & CERTIFIED MAIL

Tanya Washington Stern
Director of Planning, Prince William County
5 County Complex Court, Suite 210
Prince William, Virginia 22192

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICATION

**RE: Dominion Energy Virginia's Proposed Daves Store 230 kV Line Extension Project in Prince William County, Virginia
Notice Pursuant to Va. Code §15.2-2202**

To: Tanya Washington Stern

Dominion Energy Virginia (the "Company") is proposing to:

- Cut existing 230 kV Line #2161 (Gainesville – Wheeler) near the Northern Virginia Electric Cooperative's ("NOVEC") Atlantic DP Substation to create Lines #2161 (Stinger - Wheeler) and #2346 (Gainesville – Trident). Extend 230 kV Line #2161 on new, double-circuit 230 kV structures approximately 0.53 miles northwest to Stinger Substation. Extend 230 kV Line #2346 on new, double-circuit 230 kV structures approximately 0.55 miles northwest to Trident Substation.
- Construct 230 kV Line #2347 on new, double-circuit 230 kV structures approximately 0.31 miles from Trident Substation to Stinger Substation. This line shares double-circuit structures with 230 kV Lines #2161 and #2346.
- Construct 230 kV Line #2337 on new, double-circuit 230 kV structures approximately 1.56 miles (Proposed Route) or 1.75 miles (Alternative Route) from Stinger Substation to Daves Store Substation.
- Construct 230 kV Line #2350 on new, double-circuit 230 kV structures approximately 1.73 miles (Proposed Route) or 1.92 miles (Alternative Route) from Stinger Substation to Gemini Substation. This line shares double-circuit structures with Line #2337 for most of the proposed routes. This line will be re-routed into Atlas Substation at a future date, and this re-route will occur entirely within the substation fence line.
- Construct 230 kV Line #2338 on new, single-circuit 230 kV structures approximately 0.10 miles from Daves Store Substation to Gemini Substation.
- Construct 230 kV Line #2339 on new, single-circuit 230 kV structures approximately 0.10 miles from Daves Store Substation to Gemini Substation.

Collectively, the Daves Store 230 kV line extension and related transmission projects are referred to as the "Project". The Company has identified proposed and alternative routes in new right-of-way for the Dave's Store Lines, as shown on the attached Project Overview Map.

The Project is necessary to assure that Dominion Energy Virginia can provide service requested by customers in Prince William County, Virginia, maintain reliable service for the overall load growth in the Project area, and to comply with mandatory NERC Reliability Standards

The Company is preparing to file an application for a Certificate of Public Convenience and Necessity ("CPCN") with the Virginia State Corporation Commission ("SCC"). In advance of filing

the CPCN application, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter. Once filed, the application will be available for review on the Company's website at <http://www.dominionenergy.com/davesstore>.

The enclosed Project Overview Map depicts the proposed and alternative routes of the Dave's Store Lines, as well as the general Project location. Please note that the Project Overview Map and route descriptions depicted therein are preliminary in nature and subject to final engineering. Please refer to the CPCN application for any updates to the Project description and/or routes.

We have included a GIS shapefile of the proposed routes to assist in your project review. If you have any questions, please do not hesitate to contact Craig Hurd at 804-201-5020 or Craig.R.Hurd@dominionenergy.com. We appreciate your assistance with this project review and look forward to any additional information you may have to offer.

Regards,

Craig R. Hurd

Craig R. Hurd

Siting and Permitting

Dominion Energy Virginia

Attachment: Project Map

GIS Shapefiles

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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

January 30, 2024

Dominion Energy Services, Inc.
Attn: Heather Kennedy
120 Tredegar Street
Richmond, VA 23219

Re: Daves Store 230 kV Line Extension Project, SCC Project
Notification

Dear Ms. Kennedy:

This will respond to the request for comments regarding the State Corporation Commission (SCC) Project Notification for the Daves Store 230 kV Line Extension Project, prepared by Dominion Energy. Specifically, Dominion Energy has proposed to install two new 230 kV lines and double-circuit structures extending northwest to Stinger and Trident Substations. Dominion Energy has also proposed to construct new 230 kV lines and double-circuit structures extending from Stinger Substation to Daves Store Substation, from Stinger Substation to Gemini Substation, and from Daves Store Substation to Gemini Substation in Prince William County, Virginia.

We reviewed the provided project documents and found the proposed and alternate line extension routes 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

An Agency of the Natural and Historic Resources Secretariat

www.mrc.virginia.gov

Telephone (757) 247-2200 Information and Emergency Hotline 1-800-541-4646

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HM



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

DATE
29 January 2024

SUBJECT
Daves Store 230 kV Line Extension
Project Wetland and Waterbody Desktop
Summary

REFERENCE
0662524

Dear Ms. Rayfield:

Environmental Resources Management (ERM), on behalf of Virginia Electric and Power Company (Dominion Energy Virginia, Dominion, or the Company), conducted a desktop wetland and waterbody review of publicly available information for the proposed Daves Store 230 kilovolt (kV) Line Extension Project (the Project) in Prince William County, Virginia. This delineation was done using desktop resources and methodology and a field delineation is required to verify the accuracy and extent of aquatic resource boundaries. The Project route alternatives are shown in Attachment 1, while Attachment 2 illustrates wetland boundaries identified in this the desktop review.

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

1. Cut existing 230 kV Line #2161 (Gainesville – Wheeler) near the Northern Virginia Electric Cooperative's ("NOVEC") Atlantic DP Substation to create Lines #2161 (Stinger - Wheeler) and #2346 (Gainesville – Trident). Extend 230 kV Line #2161 on new, double-circuit 230 kV structures approximately 0.53 miles northwest to Stinger Substation. Extend 230 kV Line #2346 on new, double-circuit 230 kV structures approximately 0.55 miles northwest to Trident Substation.
2. Construct 230 kV Line #2347 on new, double-circuit 230 kV structures approximately 0.31 miles from Trident Substation to Stinger Substation. This line shares double-circuit structures with 230 kV Lines #2161 and #2346.
3. Construct 230 kV Line #2337 on new, double-circuit 230 kV structures approximately 1.56 miles (Proposed Route) or 1.75 miles (Alternative Route) from Stinger Substation to Daves Store Substation.



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4. Construct 230 kV Line #2350 on new, double-circuit 230 kV structures approximately 1.73 miles (Proposed Route) or 1.92 miles (Alternative Route) from Stinger Substation to Gemini Substation. This line shares double-circuit structures with Line #2337 for most of the proposed routes. This line will be re-routed into Atlas Substation at a future date, and this re-route will occur entirely within the substation fence line.
5. Construct 230 kV Line #2338 on new, single-circuit 230 kV structures approximately 0.10 miles from Daves Store Substation to Gemini Substation.
6. Construct 230 kV Line #2339 on new, single-circuit 230 kV structures approximately 0.10 miles from Daves Store Substation to Gemini Substation.

The Project is necessary to assure that Dominion Energy Virginia can provide service requested by the Customer in Prince William County, Virginia, maintain reliable service for the overall growth in the load area, and comply with mandatory NERC Reliability Standards. Discussion of the proposed Project and its need is further discussed in the Company's Application.

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

This assessment did not include field investigations required for wetland delineations in accordance with the U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0).

PROJECT STUDY AREA AND POTENTIAL ROUTES

A study area was developed encompassing an area containing the Project origin and termination points for the planned facilities (i.e., Dominion's proposed Lines #2161

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(Stinger-Wheeler), #2346 (Trident-Gainesville), #2347, #2337, and #2350, collectively referred to as the “Daves Store Lines”, and proposed Lines #2338 and #2339, collectively referred to as the “Daves Store-Gemini Route”) as well as an area broad enough for the identification of reasonable route alternatives meeting the Project objectives. Additionally, and to the extent practicable, the limits of the study area were defined by reference to easily distinguishable landmarks, such as roads or other recognizable features.

Based on the above, ERM and Dominion defined the boundaries of the study area for the Project as follows:

- Linton Hall Road, U.S. Route 29 (US 29 or Lee Highway), and the proposed Daves Store, Atlas, and Gemini Substations, which are adjacent to the Company’s existing Heathcote Substation, to the west;
- Interstate 66 (I-66) and Express Lanes, the Norfolk Southern Railway, and Prince William Parkway to the north;
- The community of Wellington, Piney Branch Lane, the Bristow Industrial Park and NOVEC’s existing Atlantic DP Substation to the east; and
- The Jiffy Lube Live amphitheater entertainment venue, Linton Hall Road, and NOVEC’s existing Atlantic DP Substation to the south.

The study area encompasses approximately 1,470 acres (2.3 square miles) in western Prince William County. The Project is located south of I-66 and of the Company’s existing Haymarket 230 kV Lines (Lines #2176, #2251, #2184, and #2185) with the study area encompassing lands to the north of I-66 Highway. The project study area is shown in Attachment 1.

Dominion identified three overhead routes that would involve construction of one new 230 kV transmission line extension, which would cut into the Company’s existing 230 kV Line #2161 (Wheeler – Gainesville) along Wellington Road near the NOVEC’s Atlantic Delivery Point (DP) Substation, and extend two 230 kV circuits on new, double-circuit 230 kV structures approximately 2.2 miles northwest to the Daves Store Substation, creating to form Line #2337, described below.

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PROPOSED ROUTE ALTERNATIVES

DAVES STORE LINE ROUTE 1

The Daves Store Line Route 1 consists of proposed Lines #2161 (Stinger-Wheeler), #2346 (Trident-Gainesville), #2347, #2337 and #2350.

Daves Store Line Route 1 exits the Daves Store Substation site to the southwest, heading east for approximately 0.2 mile, passing south of Dominion's existing Heathcote Substation. It next heads south for about 0.2 mile, crossing US 29 (including on and off ramps on the south side of the intersection of US 29 and I-66) and the Norfolk Southern Railway. The route then turns east and parallels the south side of the railroad for approximately 0.3 mile, crossing a series of parking lots for nearby commercial facilities. It next turns and heads south (away from the railroad) for less than 0.1 mile, before veering east and continuing approximately 0.4 mile to a crossing of Rail Court Lane. This segment of Daves Store Line Route 1 passes between commercial/industrial buildings and crosses associated parking lots before crossing a forested parcel along the north edge of a construction materials processing facility (Vulcan Materials Company or Vulcan) west of Rail Line Court.

Daves Store Line Route 1 next heads about 0.2 mile to the southeast, crossing University Boulevard and partially forested and cleared lands along commercial property boundaries and the future Skylark View Way roadway. The route then turns south and enters the area planned for the Gainesville West data center development that will contain the proposed Stinger Switching Substation. It heads about 0.2 mile crossing the proposed Stinger Substation site, before continuing another 0.1 mile to a split at the future Deacon Falls Drive roadway on the north side of Wellington Road. From here, one segment of Daves Store Line Route 1 continues east for about 0.2 mile, terminating within the proposed Trident Switching Substation site. The other segment continues about 0.1 mile south across Wellington Road, then parallels the south side of the road for approximately 0.3 mile to NOVEC's Atlantic DP Substation, entering the substation at its northwest corner.

Daves Store Line Route 1 also includes an additional 0.2 mile segment to connect the Atlas Substation, where Proposed Line #2350 does not share double-circuit structures with proposed Line #2337. South of the Heathcote Substation, this segment would

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continue generally southwest and follow the southern boundary of the proposed Atlas and Gemini Substation sites before turning north to enter the proposed Atlas Substation site.

Daves Store Line Route 1 measures approximately 2.5 miles in length and encompasses approximately 27.0 acres.

DAVES STORE LINE ROUTE 2

The Daves Store Line Route 2 consists of proposed Lines #2161 (Stinger-Wheeler), #2346 (Trident-Gainesville), #2347, #2337 and #2350.

Daves Store Line Route 2 is identical to Daves Store Line Route 1 with the exception of a segment along the Norfolk Southern Railway. It initially follows the same alignment as Daves Store Line Route 1 to the south/southeast for about 0.4 mile from the proposed Daves Store Substation site to the crossing of the railroad. Unlike Daves Store Line Route 1, which heads east along the south side of the railroad, Daves Store Line Route 2 instead continues south/southeast for about 0.1 mile, crossing a parking lot and Wellington Branch Drive. It then parallels the south side of the road for approximately 0.3 mile across mostly commercial lands with a crossing of Limestone Drive. Daves Store Line Route 2 next turns north, continuing for approximately 0.2 mile across developed commercial lands to an intersection with Daves Store Line Route 1 near an Amazon distribution facility. It then follows the same alignment as Daves Store Line Route 1 for about 1.5 miles to NOVEC's existing Atlantic DP Substation via Dominion's proposed Stinger and Trident Switching Substations.

Similar to Daves Store Line Route 1, Daves Store Line Route 2 includes an additional 0.2 mile segment to connect the Atlas Substation, where Proposed Line #2350 does not share double-circuit structures with proposed Line #2337. South of the Heathcote Substation, this segment would continue generally southwest and follow the southern boundary of the proposed Atlas and Gemini Substation sites before turning north to enter the proposed Atlas Substation site.

Daves Store Line Route 2 measures approximately 2.7 miles in length and encompasses about 29.3 acres.

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DAVES STORE–GEMINI ROUTE

The Daves Store–Gemini Route (Lines #2338 and #2339) connects the proposed Atlas, Gemini, and Daves Store Substations, which are generally in-line of each other in the northwest portion of the study area. The Daves Store–Gemini Route is approximately 0.1 mile in length and encompasses approximately 1.3 acres.

DESKTOP EVALUATION METHODOLOGY

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

- USA National Agricultural Imagery Program (NAIP) Natural Color Images, Virginia, 1-meter pixel resolution, photo date 2023 (NAIP 2023)
- USA NAIP Imagery: Color Infrared NAIP Infrared Images, Virginia, 1-meter pixel resolution (NAIP 2023)
- Recent digital aerial photography captured December 2023 (Planet Imagery 2023)
- Prince William County orthoimagery and georeferenced aerial imagery topography (1937-2023) (Prince William County 2023)
- Historic aerial imagery (Google LLC 2022)
- Prince William County contours (2-foot intervals) (Prince William County 2023a)
- ESRI World Topographic Map, multiple scales (ESRI, et al., 2023)
- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping (2021) (USFWS 2021)
- Soils data from the U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) Soil Survey Geographic (SSURGO) Database (USDA-NRCS 2023)
- The National Hydrography Dataset (NHD) Plus High Resolution (USGS 2023)



NATURAL COLOR AND INFRARED AERIAL PHOTOGRAPHY

Recent (2023) natural color aerial photography was used to provide a visual overview of the Project area and to assist in evaluating current conditions. Infrared aerial photography was used to identify the potential presence of wetlands based on signatures associated with the levels of reflectance. For example, areas that are inundated with water appear very dark (almost black) due to the low level of reflectance in the infrared spectrum. The presence of these dark colors can be used as a potential indicator of hydric or inundated soils that are likely associated with wetlands (NAIP 2021).

TOPOGRAPHIC MAPS

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

USFWS NATIONAL WETLAND INVENTORY MAPPING

NWI maps provide the boundaries and classifications of potential wetland areas as mapped by the USFWS (USFWS 2021). NWI data is based primarily on aerial photo interpretations with limited ground-truthing and may represent incorrect boundaries or wetland cover types. NWI data can be unreliable in some areas, especially in forested landscapes, when aerial photography is used as the major data source. The classifications of the majority of the NWI polygons in the study area appear to be accurate based on a review of the cover types observed in the aerial photography. However, in areas where there was an obvious discrepancy between the NWI classification and the aerial photography, ERM modified the classification to more accurately reflect current conditions. In order to acknowledge ERM's adjustment of NWI classifications where appropriate, all of the wetland types referenced in this assessment are referred to as "assigned wetland cover types" regardless of whether the cover type was actually modified from the NWI classification.

USDA-NRCS SOILS DATA

Soils in the study area were identified and assessed using the SSURGO database, which is a digital version of the original county soil surveys (USDA-NRCS 2023). The attribute data within the SSURGO database provides the proportionate extent of the component soils and their properties (e.g., hydric rating) for each soil map unit. The soils in the study area were grouped into three categories based on the hydric rating of the component soils within each map unit: hydric, partially hydric, and non-hydric. Hydric soils were defined as those where the major component soils, and minor components in

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some cases, are designated as hydric. Hydric components in these map units account for more than 80 percent of the map unit. Partially hydric soils include map units that only contain minor component soils that are designated as hydric. The partially hydric map units in the Project area contain 10 percent or less hydric soils. The remaining map units do not contain any component soils that are designated as hydric. Areas mapped as hydric or partially hydric have a higher probability of containing wetlands than areas with no hydric soils.

USGS NATIONAL HYDROGRAPHY DATASET

The National Hydrography Dataset (NHD) dataset contains features such as lakes, ponds, streams, rivers, and canals (USGS 2020). There are two waterbodies mapped by the NHD crossed by the proposed routes. In addition, current (December 2023) aerial imagery showed four recently constructed open waterbody features (likely stormwater ponds associated with new developments).

PROBABILITY ANALYSIS

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

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

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

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0662524**Table 1: Criteria Used to Rank the Probability of Wetland Occurrence**

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

WETLAND AND WATERBODY CROSSINGS

The desktop analysis provides a probability of wetlands and waterbody occurrence within each route. As stated above, field delineations were not performed and would be required to verify the accuracy and extent of aquatic resource boundaries. A range of wetland occurrence probabilities are reported by this study from very low to high. The probability of wetland occurrence increases as multiple indicators begin to overlap towards the “high” end of the spectrum. The medium, medium-high and high probability categories are the most reliable representation of in-situ conditions, due to overlapping data sets, and these categories are reported in the summary below as a percentage of the total acreage of each route. Attachment 2 depicts the interpreted wetlands displayed on color base map images.

RESULTS

Results of the probability analysis are presented in Table 2 below. Summaries are provided in the sections following the table. No wetlands or waterbodies were identified within the Daves Store–Gemini Route.

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Probability	Total within right-of-way (acres) ^b	Wetland and Waterbody type (acres)			
		PEM (Emergent)	PFO (Forested)	PUB (Freshwater pond)	Riverine (Stream)
Daves Store Line Route 1					
High	1.7	0.0	1.7	NA	0.0
Medium/High	2.6	1.5	0.7	0.3	0.1
Medium	1.3	0.2	0.5	0.5	0.1
Medium/Low	NA	NA	NA	NA	NA
Low	NA	NA	NA	NA	NA
Very Low	NA	NA	NA	NA	NA
Grand Total	5.5	1.6	2.9	0.8	0.2
Daves Store Line Route 2					
High	1.7	0.0	1.7	NA	0.0
Medium/High	2.3	1.1	0.8	0.3	0.1
Medium	1.4	0.2	0.6	0.5	0.1
Medium/Low	NA	NA	NA	NA	NA
Low	NA	NA	NA	NA	NA
Very Low	NA	NA	NA	NA	NA
Grand Total	5.4	1.3	3.1	0.8	0.2

Note: Totals may not equal the sum of addends due to rounding.

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

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

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

WETLAND CROSSINGS

DAVES STORE LINE ROUTE 1

The Daves Store Line Route 1 is approximately 2.5 miles and encompasses a total of approximately 27.0 acres. Based on the methodology discussed above, the right-of-way

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footprint will encompass approximately 20.6 percent (5.5 acres) of land with a medium or higher probability of containing wetlands and waterbodies.

DAVES STORE LINE ROUTE 2

The Daves Store Line Route 2 is approximately 2.7 miles and encompasses a total of approximately 29.3 acres. Based on the methodology discussed above, the right-of-way footprint will encompass approximately 18.3 percent (5.5 acres) of land with a medium or higher probability of containing wetlands and waterbodies.

DAVES STORE-GEMINI ROUTE

The Daves Store–Gemini Route is approximately 0.2 miles and encompasses a total of approximately 1.3 acres. Based on the methodology discussed above, no wetlands or waterbodies are within the Daves Store–Gemini Route right-of-way.

WATERBODY CROSSINGS

ERM identified and mapped waterbodies in the study area using similar publicly available GIS databases as those used to identify and map wetlands. Waterbodies crossed by the alternative routes including unnamed perennial and intermittent tributaries to Rocky Branch, as well as four recently constructed open waterbody features (identified using December 2023 aerial imagery).

DAVES STORE LINE ROUTE 1

Daves Store Line Route 1 would have a total of 6 waterbody crossings. Of these, 2 are NHD-mapped waterbody crossings, including an unnamed perennial tributary and an unnamed intermittent tributary to Rocky Branch. There are 3 unmapped open waterbody features and a recently constructed channel (tributary to Rocky Branch) identified within the right-of-way using recent aerial imagery (December 2023). Based on ERM's desktop wetland and waterbody analysis, the Daves Store Line Route 1 right-of-way would encompass approximately 0.2 acre of RVR and 0.8 acre of PUB wetlands.

DAVES STORE LINE ROUTE 2

Daves Store Line Route 2 would have a total of 6 waterbody crossings. Of these, 2 are NHD-mapped waterbody crossings, including an unnamed perennial and an unnamed

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intermittent tributary to Rocky Branch. There are 3 unmapped open waterbody features and a recently constructed channel (tributary to Rocky Branch) identified within the right-of-way using recent aerial imagery (December 2023). Based on ERM's desktop wetland and waterbody analysis, the Daves Store Line Route 2 right-of-way would encompass approximately 0.2 acre of RVR, and 0.8 acre of PUB.

DAVES STORE-GEMINI ROUTE

Based on ERM's desktop wetland and waterbody analysis, the Daves Store–Gemini Route right-of-way would not cross any NHD-mapped or unmapped waterbodies.

PROJECT IMPACTS

Avoiding or minimizing new impacts on wetlands and streams was among the criteria used in developing routes for the Project. To minimize impacts on wetland areas, the transmission line has been designed to span or avoid wetlands where possible, keeping transmission structures outside of wetlands to the extent practicable. Direct impacts to wetlands would be limited to placement of structures within wetlands if unavoidable and the permanent conversion of PSS/PFO wetlands within the right-of-way to PSS or PEM type wetlands.

There would be no change in contours of wetlands and waterbodies, or redirection of the flow of water, and the amount of spoil from foundations and structure placement would be minimal. Excess soil in wetlands generated through foundation construction would be mitigated through Best Management Practices (erosion and sediment controls) and would be removed from the wetland.

The majority of potential direct impacts on wetlands due to Project construction would be temporary in nature. Mats would be used for construction equipment to travel over wetlands, as appropriate. Due to the absence of an existing right-of-way, some new access roads may be necessary along the route. If a section of line cannot be accessed from existing roads, Dominion Energy Virginia may need to install a culvert, ford, or temporary bridge along the right-of-way to cross small streams. In such cases, some temporary fill material in wetlands adjacent to such crossings may be required. This fill would be placed on erosion control fabric and removed when work is completed, returning ground elevations to original contours. When siting transmission lines,

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perpendicular crossings of wetland systems are prioritized to minimize direct impacts to these sensitive areas and reduce overall impacts to the watershed.

Where the removal of trees or shrubby vegetation occurs within wetlands, Dominion Energy Virginia would use the least intrusive method reasonably possible to clear the corridor. Hand cutting of vegetation would be conducted, where needed, to avoid and minimize impacts on streams and/or wetlands. Where tree clearing is required within the new right-of-way, PFO and PSS wetlands would be permanently converted to PSS or PEM wetland types. Forested wetlands and riparian buffers provide functions such as peak flood flow reduction, nutrient and sediment capture, filtration of pollutants to adjacent waterbodies, and habitat diversity. The conversion of forested wetlands would reduce or eliminate some of these functions.

Required tree removal adjacent to waterbodies would reduce riparian buffer functions such as stream bank stabilization and erosion control, nutrient and sediment filtration, floodwater storage and peak flow reduction, and water temperature modification from shading. Vegetation within the right-of-way would be allowed to return to maintained grasses and shrubs after construction, which would provide some filtration stabilization to help protect waterbodies from pollutants. Within the stream buffers (100 feet), all trees will be hand felled with stumps left in place to reduce the potential for erosion. Shrubs and trees with a diameter at breast height of less than three inches will be left in place unless it impedes temporary access where they would be clipped, leaving roots in place which will be able to naturally regenerate.

SUMMARY

This Wetland and Waterbody Summary report was prepared in accordance with the Memorandum of Agreement between the DEQ and the SCC for the purpose of initiating a Wetlands Impact Consultation. Please note that a formal onsite wetland delineation was not conducted as part of this review.

In addition, there is a Project website where the SCC application will be available after filing, as well as maps and discussions about the Project. It can be accessed by going to:

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



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

Sincerely,

Mariah Weitzenkamp
Environmental Resources Management

cc: Heather Kennedy, Dominion Energy Virginia

Enclosures: Attachments 1 and 2



REFERENCES

- Environmental Laboratory. 1987. Technical Report Y-87-1: Corps of Engineers Wetlands Delineation Manual US Army Corps of Engineers, Waterways Experiment Station. January 1987.
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DATE
29 January 2024

REFERENCE
0662524

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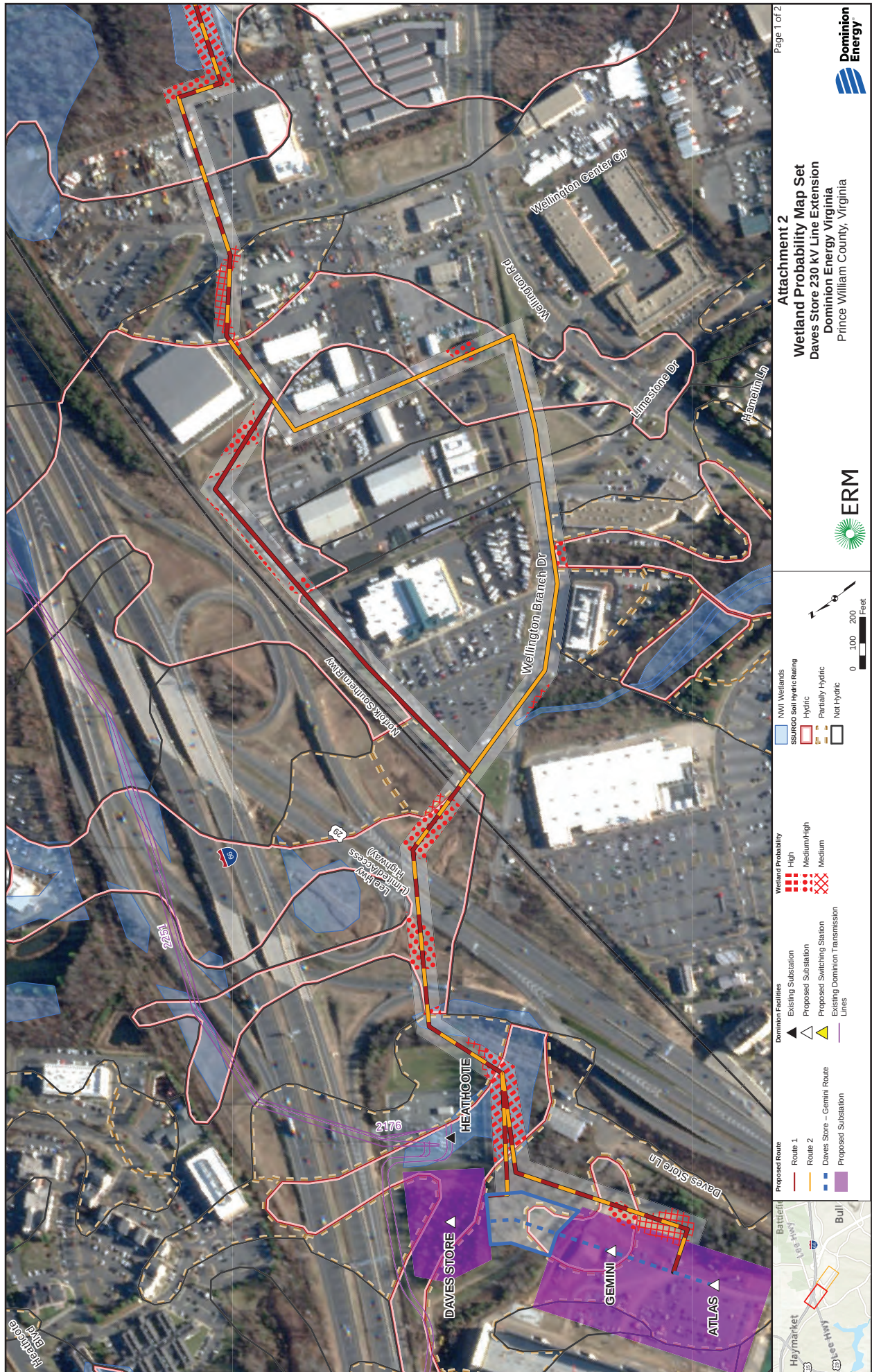
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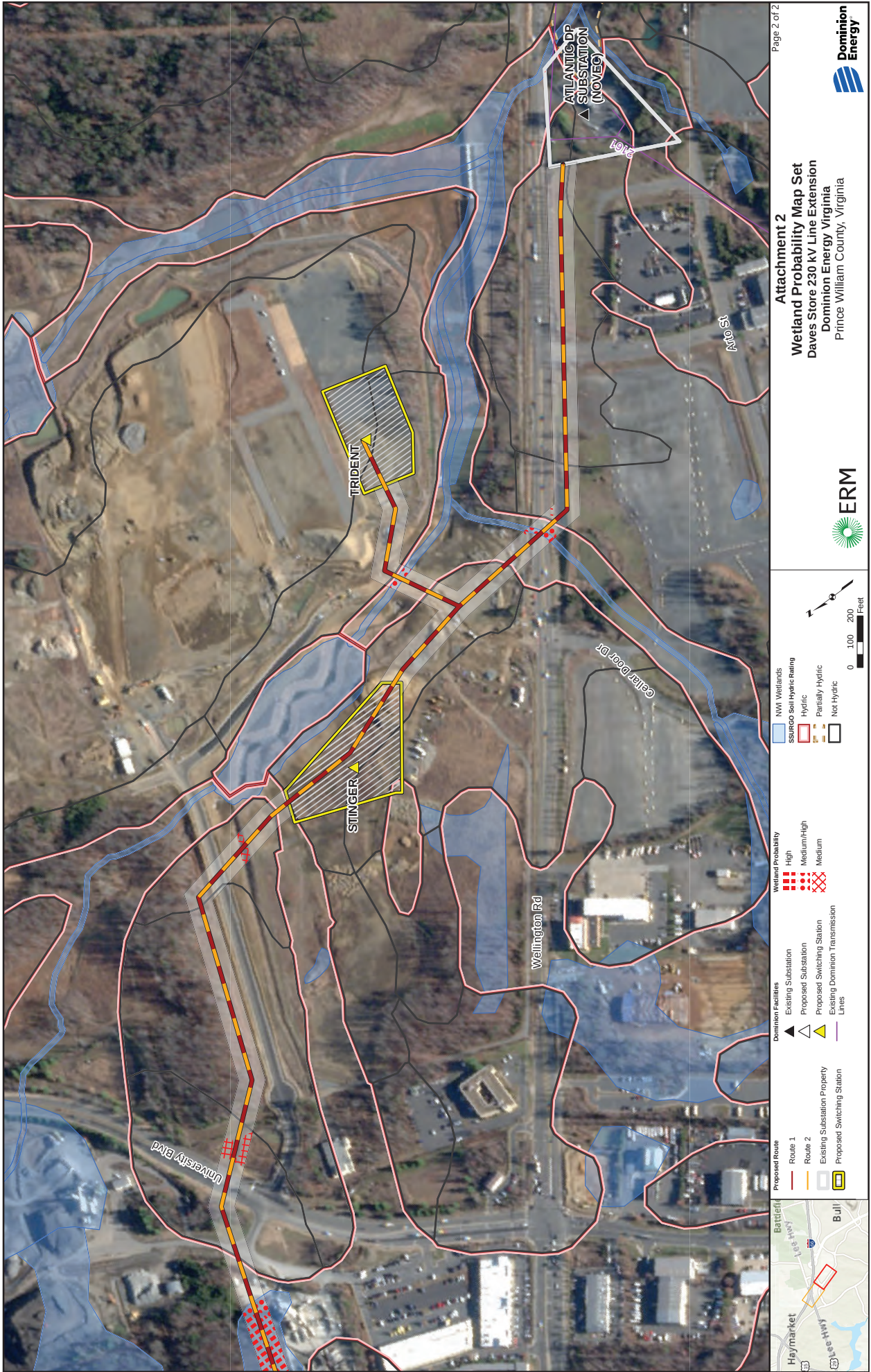
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ATTACHMENT 1



ATTACHMENT 2







Travis A. Voyles
Secretary of Natural and Historic Resources

Matthew S. Wells
Director

Andrew W. Smith
Chief Deputy Director



COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Frank N. Stovall
*Deputy Director
for Operations*

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

Laura Ellis
*Deputy Director for
Administration and Finance*

October 5, 2023

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

Re: 0662524, Daves Store Routing Study

Dear Ms. Lewis:

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

According to the information in our files, the Vulcan Gainesville Tract Conservation Site is located within the project area, including a 100 foot buffer. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Vulcan Gainesville Tract Conservation Site has been assigned a biodiversity rank of B3, which represents a site of high significance. The natural heritage resources associated with this site are:

<i>Agalinis auriculata</i>	Earleaf false foxglove	G3/S1/NL/NL
<i>Pycnanthemum torreyi</i>	Torrey's Mountain-mint	G2/S2/SOC/LT
<i>Solidago rigida</i> var. <i>rigida</i>	Stiff Goldenrod	G5T5/S2/NL/NL

To minimize adverse impacts to the documented natural heritage resources as a result of the proposed activities, DCR recommends avoidance of the conservation site.

Furthermore, according to a DCR biologist and a predicted suitable habitat layer, there is a potential for additional populations of several rare plants, which are typically associated with prairie vegetation and inhabit semi-open diabase glades in Virginia, to occur in the project area if suitable habitat exists on site. Diabase glades are characterized by historically fire-dominated grassland vegetation on relatively nutrient-rich soils underlain by Triassic bedrock. Diabase flatrock, a hard, dark-colored volcanic rock, is found primarily in northern Virginia counties and is located within the geologic formation known as the Triassic Basin. Where the bedrock is exposed,

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

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

a distinctive community type of drought-tolerant plants occurs. Diabase flatrocks are extremely rare natural communities that are threatened by activities such as quarrying and road construction (Rawinski, 1995).

In Northern Virginia, diabase supports occurrences of several global and state rare plant species: Earleaf False foxglove (*Agalinis auriculata*, G3/S1/NL/NL), American bluehearts (*Buchnera americana*, G5?/S1S2/NL/NL), Downy phlox (*Phlox pilosa*, G5/S1/NL/NL), Torrey's Mountain-mint (*Pycnanthemum torreyi*, G2/S2/SOC/LT), Stiff goldenrod (*Solidago rigida* var. *rigida*, G5T5/S2/NL/NL), and Hairy hedgenettle (*Stachys arenicola*, G5T4?/S1/NL/NL).

Please note that Torrey's Mountain-mint is currently classified as a species of concern by the United States Fish and Wildlife Service (USFWS) and listed as threatened by the Virginia Department of Agriculture and Consumer Services (VDACS).

Due to the potential for this site to support populations of diabase plants, DCR recommends an inventory for the resources in the study area. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

DCR-Division of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact Anne Chazal, Natural Heritage Chief Biologist, at anne.chazal@dcr.virginia.gov or 804-786-9014 to discuss availability and rates for field work.

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. Survey results should be coordinated with DCR-DNH. Upon review of the results, if it is determined the species is present, and there is a likelihood of a negative impact on the species, DCR-DNH will recommend coordination with VDACS to ensure compliance with Virginia's Endangered Plant and Insect Species Act.

In addition, if tree clearing occurs on the southern edge of the submitted project shape, the proposed project will impact an Ecological Core (C3) as identified in the Virginia Natural Landscape Assessment (<https://www.dcr.virginia.gov/natural-heritage/vaconvisvnl>). Mapped cores in the project area can be viewed via the Virginia Natural Heritage Data Explorer, available here: <http://vanhde.org/content/map>.

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

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

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

DCR 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, robust monitoring and an adaptive management plan to provide guidance if initial revegetation efforts are unsuccessful or if invasive species outbreaks occur.

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 \$770.00 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
Natural Heritage Locality Liaison

Literature Cited

Rawinski, T.J. 1995. Natural communities and ecosystems: Conservation priorities for the future. Unpublished report for DCR-DNH.



United States Department of the Interior

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



In Reply Refer To:
Project Code: 2023-0131237
Project Name: Daves Store Routing Study

September 20, 2023

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

To Whom It May Concern:

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

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the 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.

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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

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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

09/20/2023

PROJECT SUMMARY

Project Code: 2023-0131237

Project Name: Daves Store Routing Study

Project Type: Transmission Line - New Constr - Above Ground

Project Description: This request is part of a pre-permitting exercise investigating the viability of overhead powerline routes.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.7908546,-77.5882919562993,14z>



Counties: Prince William County, Virginia

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ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

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

INSECTS

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

CRITICAL HABITATS

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

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

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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 Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, 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 <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31

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 (■)

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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 (■)

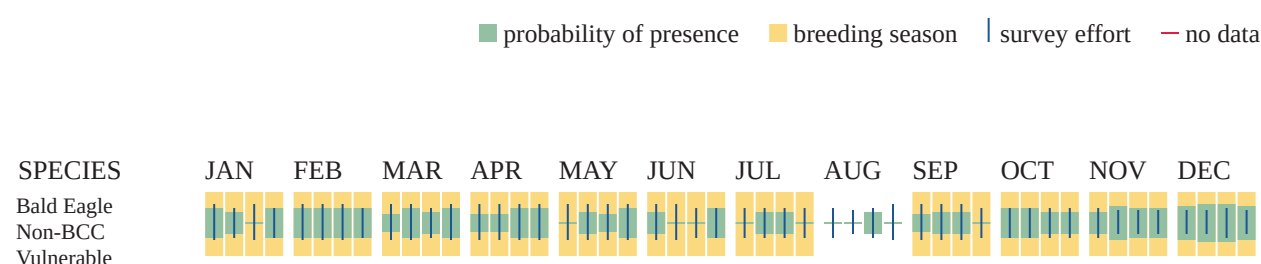
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

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>

MIGRATORY BIRDS

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

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ 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.
-

09/20/2023

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 <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> 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 <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

A week is marked as having no data if there were no survey events for that week.



09/20/2023

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>
-

09/20/2023

IPAC USER CONTACT INFORMATION

Agency: ERM

Name: Roy Mullinax

Address: 919 E Main St

City: Richmond

State: VA

Zip: 23219

Email: paul.mullinax@erm.com

Phone: 7062074123

VAFWIS - Department of Wildlife Resources

38.79518 -77.59543

is the Search Point

Submit

Cancel

Search Point

- ☒ **Change** to "clicked" map point
- ☐ **Fixed** at 38.79518 -77.59543

Show Position Rings

- ☒ Yes ☐ No

1 mile and 1/4 mile at the Search Point

Show Search Area

- ☒ Yes ☐ No

2 Search distance miles radius

Search Point is at map center

Base Map [Choices](#)

Topography



Map Overlay [Choices](#)

Current List: Position, Search

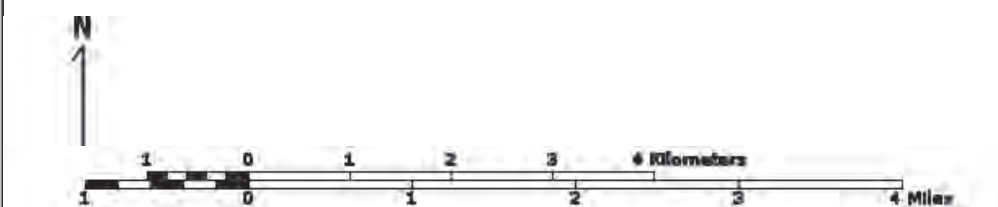
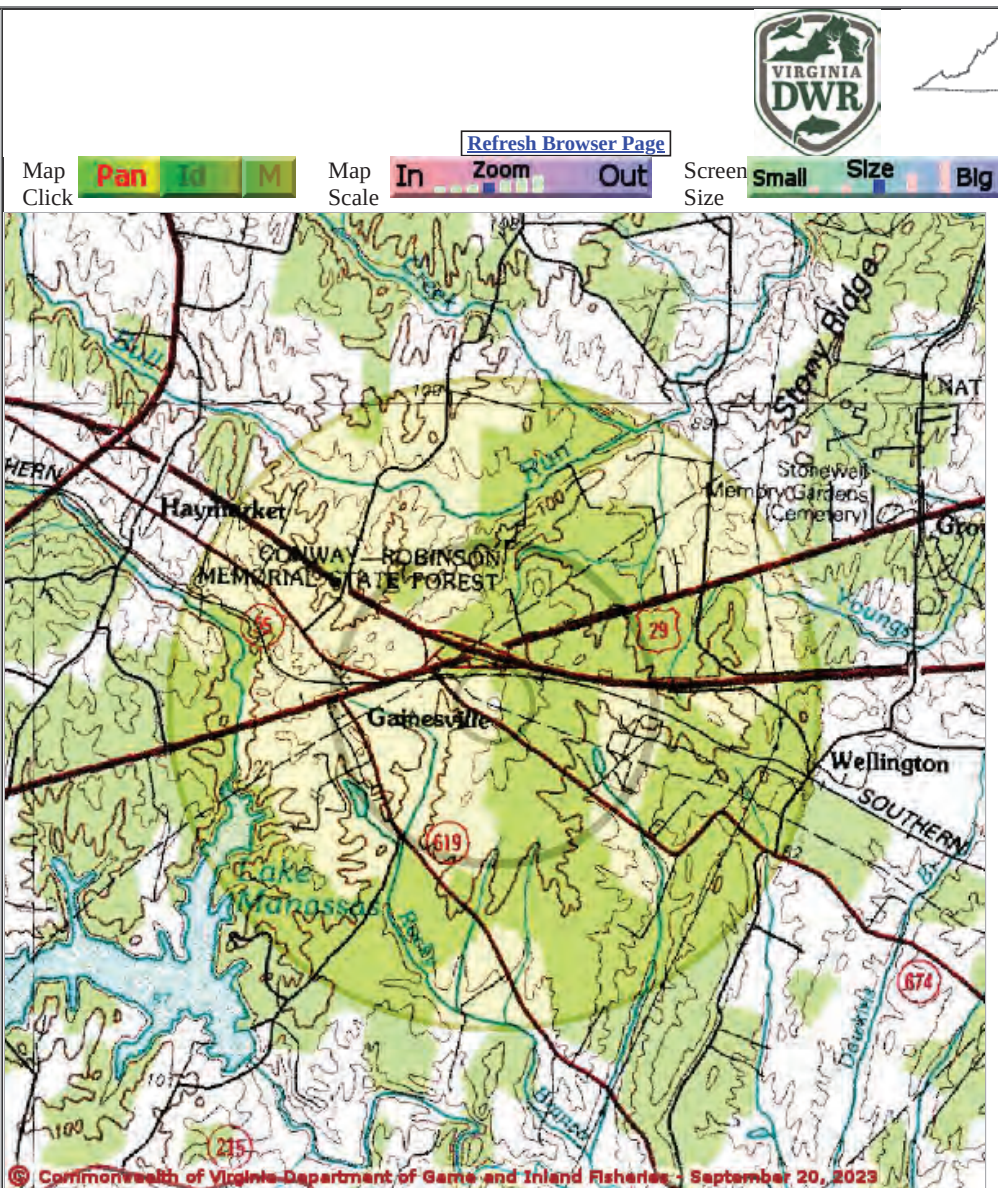
Map Overlay Legend



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



2 mile radius Search Area



Point of Search 38.79518 -77.59543

Map Location 38.79518 -77.59543

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

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

Map projection is UTM Zone 18 NAD 1983 with left 269796 and top 4302049. Pixel size is 16 meters. Coordinates displayed are decimal Degrees North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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

map assembled 2023-09-20 14:50:18 (qa/qc March 21, 2016 12:20 - tn=1527691 dist=3218 I
)
\$poi=38.7951890 -77.5954319

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| [DWR](#) | [Credits](#) | [Disclaimer](#) | [Contact](#) | [Web Policy](#) |

VaFWIS Search Report Compiled on 9/20/2023, 2:52:11 PM[Help](#)

Known or likely to occur within a **2 mile radius around point 38.7951890 -77.5954318**
in **153 Prince William County, VA**

[View Map of
Site Location](#)

559 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 30) (30 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
010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus		BOVA
060029	FTST	IIa	Lance, yellow	Elliptio lanceolata	Yes	BOVA,SppObs,HU6
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050027	FPSE	Ia	Bat, tri-colored	Perimyotis subflavus		BOVA
060006	SE	Ib	Floater, brook	Alasmodontia varicosa	Potential	BOVA,Habitat,HU6
030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Potential	Habitat,HU6
040096	ST	Ia	Falcon, peregrine	Falco peregrinus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
040379	ST	Ia	Sparrow, Henslow's	Centronyx henslowii	Potential	BOVA,BBA,HU6
100155	ST	Ia	Skipper, Appalachian grizzled	Pyrgus wyandot		HU6
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,HU6
030012	CC	IVa	Rattlesnake, timber	Crotalus horridus		BOVA,HU6
010077		Ia	Shiner, bridle	Notropis bifrenatus		BOVA
040040		Ia	Ibis, glossy	Plegadis falcinellus		HU6
040306		Ia	Warbler, golden-winged	Vermivora chrysoptera		BOVA
100248		Ia	Fritillary, regal	Speyeria idalia idalia		BOVA,HU6
040213		Ic	Owl, northern saw-whet	Aegolius acadicus		BOVA,HU6
040052		IIa	Duck, American black	Anas rubripes		BOVA,HU6
040036		IIa	Night-heron, yellow-crowned	Nyctanassa violacea violacea		BOVA
040181		IIa	Tern, common	Sterna hirundo		BOVA,HU6
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA,HU6

040140		Ila	Woodcock, American	Scolopax minor	Potential	BOVA,BBA,HU6
040203		IIf	Cuckoo, black-billed	Coccyzus erythrophthalmus		BOVA
040105		IIf	Rail, king	Rallus elegans		BOVA
040304		IIf	Warbler, Swainson's	Limnothlypis swainsonii		HU6
100154		IIf	Butterfly, Persius duskywing	Erynnis persius persius		HU6
100166		IIf	Skipper, Dotted	Hesperia attalus slossonae		HU6

To view **All 559 species** [View 559](#)

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

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

Virginia Wildlife Action Plan Conservation Opportunity Ranking:

- a - On the ground management strategies/actions exist and can be feasibly implemented.;
- b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;
- c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

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

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams

N/A

Impediments to Fish Passage (1 records)

[View Map of All Fish Impediments](#)

ID	Name	River	View Map
1259	LAKE VIEW ESTATES DAM	TR-ROCKY BRANCH	Yes

Colonial Water Bird Survey

N/A

Threatened and Endangered Waters

N/A

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Species Observations (13 records , 2 Observations with
Threatened or Endangered species)[View Map of All Query Results](#)
[Species Observations](#)

obsID	class	Date Observed	Observer	N Species			View Map
				Different Species	Highest TE [*]	Highest Tier ^{**}	
306560	SppObs	Mar 27 2004	NEVES, WINSTON, WATSON, AND KRAVITZ, VIRGINIA COOPERATIVE FISH AND WILDLIFE RESEARCH UNIT, VA TECH	5	FTST	II	Yes
306561	SppObs	Mar 27 2004	NEVES, WINSTON, WATSON, AND KRAVITZ, VIRGINIA COOPERATIVE FISH AND WILDLIFE RESEARCH UNIT, VA TECH	5	FTST	II	Yes
7624	SppObs	Sep 4 1994	PHILIP H. STEVENSON	2		IV	Yes
623025	SppObs	Jun 12 2014	Andrew; Dietrich Tasha; Foreman	2			Yes
622623	SppObs	Apr 17 2014	Andrew; Dietrich Tasha; Foreman	1			Yes
617525	SppObs	Mar 29 2012	Eric; Dallalio Adrienne; Brand	1			Yes
317013	SppObs	Jun 5 2006	Mark Causey	1			Yes
312740	SppObs	Jun 25 2005	Mark Causey	1			Yes
303673	SppObs	Dec 10 2002	Colin Krause	2			Yes
303665	SppObs	Oct 3 2002	Colin Krause	3			Yes

56483	SppObs	Jun 1 1997	BILLY M. TEELS, DIRECTOR, WETLAND SCIENCE INSTITUTE, USDA, NATURAL RESOURCES, CONSERVATION SERVICE, LAUREL, MD	12			Yes
7538	SppObs	Nov 1 1994	TIM ROBBINS	5			Yes
363819	SppObs	Jan 1 1900		1			Yes

Displayed 13 Species Observations

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	Tier Species						View Map
	Highest TE [*]	BOVA Code, Status [*] , Tier ^{**} , Common & Scientific Name					
Broad Run (20700102)	SE	060006	SE	Ib	Floater, brook	Alasmidonta varicosa	Yes
Little Bull Run (20700102)	SE	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
		060006	SE	Ib	Floater, brook	Alasmidonta varicosa	
Little Bull Run (20700102)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
tributary (20700102)	SE	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
		060006	SE	Ib	Floater, brook	Alasmidonta varicosa	
tributary (20700102)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
tributary (20700102)	SE	060006	SE	Ib	Floater, brook	Alasmidonta varicosa	Yes

Habitat Predicted for Terrestrial WAP Tier I & II Species

N/A

Virginia Breeding Bird Atlas Blocks (6 records)

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

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE [*]	Highest Tier ^{**}	
50194	Gainesville, CE	38		III	Yes

50193	Gainesville, CW	48		III	Yes
50196	Gainesville, SE	74		III	Yes
50195	Gainesville, SW	45		III	Yes
49194	Thoroughfare Gap, CE	49		III	Yes
49196	Thoroughfare Gap, SE	70	ST	I	Yes

Public Holdings: (2 names)

Name	Agency	Level
Manassas National Battlefield Park	National Park Service	Federal
Conway Robinson Memorial State Forest	VA Dept. of Forestry	State

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

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
153	Prince William	483	FESE	I

USGS 7.5' Quadrangles:

Thoroughfare Gap

Gainesville

USGS NRCS Watersheds in Virginia:

N/A

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

HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
PL32	Broad Run-Catletts Branch	58	SE	I
PL34	Broad Run-Rocky Branch	59	FTSE	I
PL43	Little Bull Run	58	SE	I
PL44	Middle Bull Run	72	FTSE	I

Compiled on 9/20/2023, 2:52:11 PM I1527691.0 report=all searchType= R dist= 3218 poi= 38.7951890 -77.5954318

PixelSize=64; Anadromous=0.015581; BBA=0.031412; BECAR=0.017086; Bats=0.017702; Buffer=0.06043; County=0.054332; HU6=0.043374; Impediments=0.018377; Init=0.091321; PublicLands=0.022065; Quad=0.024906; SppObs=0.218471; TEWaters=0.020484; TierReaches=0.0452129999999999; TierTerrestrial=0.02501; Total=0.909562; Tracking_BOVA=0.222176; Trout=0.018931; huva=0.020272



CCB Mapping Portal



X = Approximate Site Location

Layers: VA Eagle Nest Locator, VA Eagle Nest Buffers

Map Center [longitude, latitude]: [-77.5799560546875, 38.797577240505625]

Map Link:

https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&layer=VA+Eagle+Nest+Buffers&zoom=12&lat=38.797577240505625&lng=-77.5799560546875&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=World+Imagery+%28ESRI%29

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Commonwealth of Virginia

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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director
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August 13, 2019

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

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

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

Dear Mr. Williams:

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

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

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

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

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

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

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

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

Sincerely,



Jaime B. Robb, Manager
Office of Stormwater Management

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

Case Decision Information:

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

REPORT >

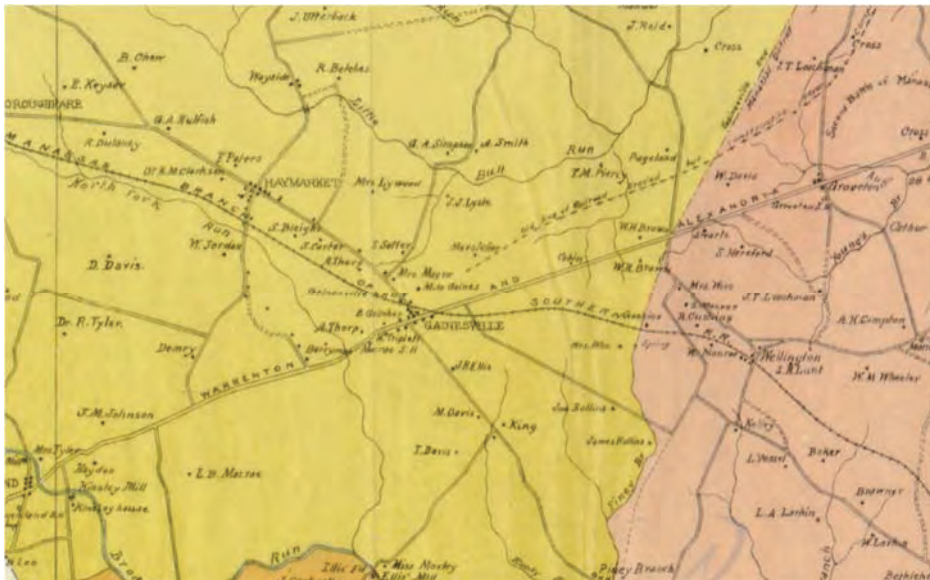
Pre-Application Analysis of Cultural Resources for the Daves Store 230kV Line Extension Project

LOCATION > Prince William County, Virginia

DATE > JANUARY 2024

PREPARED FOR >

Dominion Energy



PREPARED BY >

Dutton + Associates, LLC

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

PROJECT REVIEW # >

**SCC Pre-Application Analysis
of Cultural Resources for the
Daves Store 230kV Line Extension Project**

Prince William County, Virginia

PREPARED FOR:

DOMINION ENERGY
10900 NUCKOLS ROAD, 4TH FLOOR
GLEN ALLEN, VA 23060

PREPARED BY:

DUTTON + ASSOCIATES, LLC
1115 Crowder Drive
Midlothian, Virginia 23236
804.644.8290

PRINCIPAL INVESTIGATOR:

Robert J. Taylor, Jr. M.A.

January 2024

ABSTRACT

In January 2024, Dutton + Associates, LLC (D+A) completed a Pre-Application Analysis (analysis) of cultural resources for the Daves Store 230kV Line Extension Project (the Project) in Prince William County, Virginia. The analysis was performed for Virginia Electric and Power Company (Dominion Energy Virginia, Dominion, or the Company) in support of a State Corporation Commission (SCC) application for the Project. The analysis was conducted in accordance with Virginia Department of Historic Resources' (VDHR) guidance titled Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia (January 2008) and Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation Guidelines for Transmission Line Applications Filed Under Title 56 of the Code of Virginia (August 2017).

The Project is comprised of two components including the Daves Store 230kV Line (proposed Lines #2161 (Stinger-Wheeler), #2346 (Trident-Gainesville), #2347, #2337 and #2350) and Daves Store-Gemini Line (proposed Lines #2338 and #2339). After review of the potential electrical solutions, Dominion is investigating two potential routes for the Daves Store 230kV Line, proposed Route 1 and alternative Route 2. Both route alternatives would generally require a new 100 foot wide right-of-way (ROW), and be suspended from steel monopoles that would range from approximately 72 to 122 feet tall with an average height of 102 feet. No alternative routes were considered for the Daves Store-Gemini Line. The Daves Store-Gemini Line would generally require a new 200 foot wide ROW, for the two, single-circuit lines and be suspended from steel H-frame structures that are approximately 87 feet tall.

The background research conducted as part of this analysis was consistent with VDHR guidance and designed to identify all previously recorded National Historic Landmarks (NHL) located within 1.5-miles of the proposed Project or closer, all National Register of Historic Places (NRHP)-listed properties, battlefields, and historic landscapes located within 1-mile of the proposed Project or closer, all historic properties considered eligible for listing in the NRHP located within 0.5-miles of the proposed Project or closer, and all archaeological sites located directly within the proposed Project area. Historic properties include architectural and archaeological (terrestrial and underwater) resources, historic and cultural landscapes, battlefields, and historic districts. For each historic property within the defined tiers, a review of existing documentation and a field reconnaissance was undertaken to assess each property's significant character-defining features, as well as the character of its current setting. Following identification of historic properties, D+A assessed the potential for impacts to any identified properties as a result of the proposed Project. Specific attention was given to determining whether or not construction related to the Project could introduce new visual elements into the property's viewshed or directly impact the property through construction, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP.

Review of the VDHR VCRIS inventory records revealed a total of one-hundred-ten (110) previously recorded architectural resources are located within 1.5 mile of the Project study area. Of these, there are no (0) NHLs located within 1.5 mile of the proposed Project or closer, one (1) NRHP-listed property located within 1.0 mile or closer of the Project, three (3) battlefields located

1.0 mile or closer of the Project, and three (3) properties that have been determined eligible or potentially eligible for listing in the NRHP by the VDHR within 0.5 mile or closer of the Project. Two (2) of the battlefields and one (1) NRHP-eligible resource are directly crossed by portions of the Project.

Assessment of impacts from each of the historic properties and battlefields found that generally the historic setting and viewshed of each has been compromised by widespread development and is now characterized by suburban sprawl, massive infrastructure, and an extensive utility network of other transmission lines, communications towers, and similar features. The dense development pattern inhibits views in the direction of the Project from many vantages in the area, however, some proposed structures may be visible above and between development and treeline from discrete vantage points. Where visible, the Project components would be seen amongst extensive other modern features and due to the already heavily compromised setting, and would not introduce any substantially different qualities or characteristics into the viewshed or other cumulatively change the surrounding setting. **Overall, there will be no more than a minimal impact to any considered historic property or battlefield as a result of the proposed Daves Store-Gemini Route, and the difference in impact from proposed Route 1 and alternative Route 2 is negligible, as both are recommended to pose no more than a minimal impact to any considered historic property or battlefield.**

Potential impacts summary for architectural resources.

VDHR #	Resource Name, Address	NRHP-Status	Distance from Project	Recommended Impact
030-5152	Buckland Mills Battlefield	NRHP-Eligible	Route 1 – Directly Crossed Route 2 - Directly Crossed Daves Store-Gemini Route – Directly Crossed	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route - Minimal
076-0271	Manassas Battlefield Historic District/ Manassas National Battlefield Park	NRHP-Listed	Route 1 - ~0.68 Mile Route 2 - ~0.68 Mile Daves Store-Gemini Route - ~1.27 Mile	Route 1 – No Impact Route 2 – No Impact Daves Store-Gemini Route – No Impact
076-5035	Ody Cemetery	Potentially NRHP-Eligible	Route 1 - ~0.17 Mile Route 2 - ~0.17 Mile Daves Store-Gemini Route - ~0.87 Mile	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route – No Impact
076-5036	Manassas Station Operations Battlefield	Potentially NRHP-Eligible	Route 1 - ~0.09 Mile Route 2 - ~0.09 Mile Daves Store-Gemini Route – Directly Crossed	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route – Minimal
076-5190	Second Battle of Manassas	Potentially NRHP-Eligible	Route 1 – Directly Crossed Route 2 - Directly Crossed Daves Store-Gemini Route – Directly Crossed	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route – No Impact
076-5988	Commercial Building, 14111 Daves Store Lane	Potentially NRHP-Eligible	Route 1 - ~0.28 Mile Route 2 - ~0.28 Mile Daves Store-Gemini Route - ~0.12 Mile	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route - Minimal

VDHR #	Resource Name, Address	NRHP-Status	Distance from Project	Recommended Impact
076-5989	Manassas Gap Railroad	Potentially NRHP-Eligible	Route 1 – Directly Crossed Route 2 – Directly Crossed Daves Store-Gemini Route - ~0.10 Mile	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route – No Impact

With regards to archaeology, portions of both route alternatives and the entirety of the Daves Stoe-Gemini Route have been subject to previous phase I survey. As a result of these surveys, one (1) previously recorded site is located directly within or adjacent (within 100 feet) to the proposed ROW of at least one of the Project route alternatives. The site has not been formally evaluated. The unevaluated site is located roughly 65 feet from the ROW of alternative Route 2. Review of this site suggests it has been destroyed since it was previously documented. While no survey or formal investigation of archaeological sites was conducted as part of this effort, **it is D+A's opinion that the previously recorded site will not be impacted by the Project and no further consideration is necessary. D+A further recommends that any portion of the selected route alternative that has not been subject to accepted cultural resource survey be investigated, and any newly identified sites should be evaluated and assessed for Project impacts as additional Project construction details become available.**

Summary of potential impacts summary for archaeological resources.

VDHR #	Description	NRHP Status	Proximity to Project	Impacts
44PW0882	Lithic Workshop, Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated	~65 feet from Route 2	No Impact

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1. INTRODUCTION

In January 2024, Dutton + Associates, LLC (D+A) completed a Pre-Application Analysis (analysis) of cultural resources for the Daves Store 230kV Line Extension Project (the Project) in Prince William County, Virginia (Figure 1-1). The analysis was performed for Virginia Electric and Power Company (Dominion Energy Virginia, Dominion, or the Company) in support of a State Corporation Commission (SCC) application for the Project. The analysis was conducted in accordance with Virginia Department of Historic Resources' (VDHR) guidance titled *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008) and Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation *Guidelines for Transmission Line Applications Filed Under Title 56 of the Code of Virginia* (August 2017).

This analysis was performed at a level that meets the purpose and intent of VDHR and the SCC's guidance based upon Project data and engineering available at the time of the study. It provides information on the presence of previously recorded National Historic Landmark (NHL) properties located within a 1.5-mile buffer area established around the Projects, properties listed on the National Register of Historic Places (NRHP), battlefields, and historic landscapes located within a 1-mile buffer around the Projects, properties previously determined eligible for listing in the NRHP located within a 0.5-mile buffer area around the Projects, and previously identified archaeological resources directly within the Project area. This analysis will not satisfy Section 106 identification and evaluation requirements in the event federal permits or licenses are needed; however, it can be used as a planning document to assist in making decisions under Section 106 as to whether further cultural resource identification efforts may be warranted.

This report contains a research design which describes the scope and methodology of the analysis, discussion of previously identified historic properties, and an assessment of potential impacts. D+A Senior Architectural Historian Robert J. Taylor, Jr. M.A. served as Principal Investigator and oversaw the general course of the Project and supervised all aspects of the work. Copies of all notes, maps, correspondence, and historical research materials are on file at the D+A main office in Midlothian, Virginia.

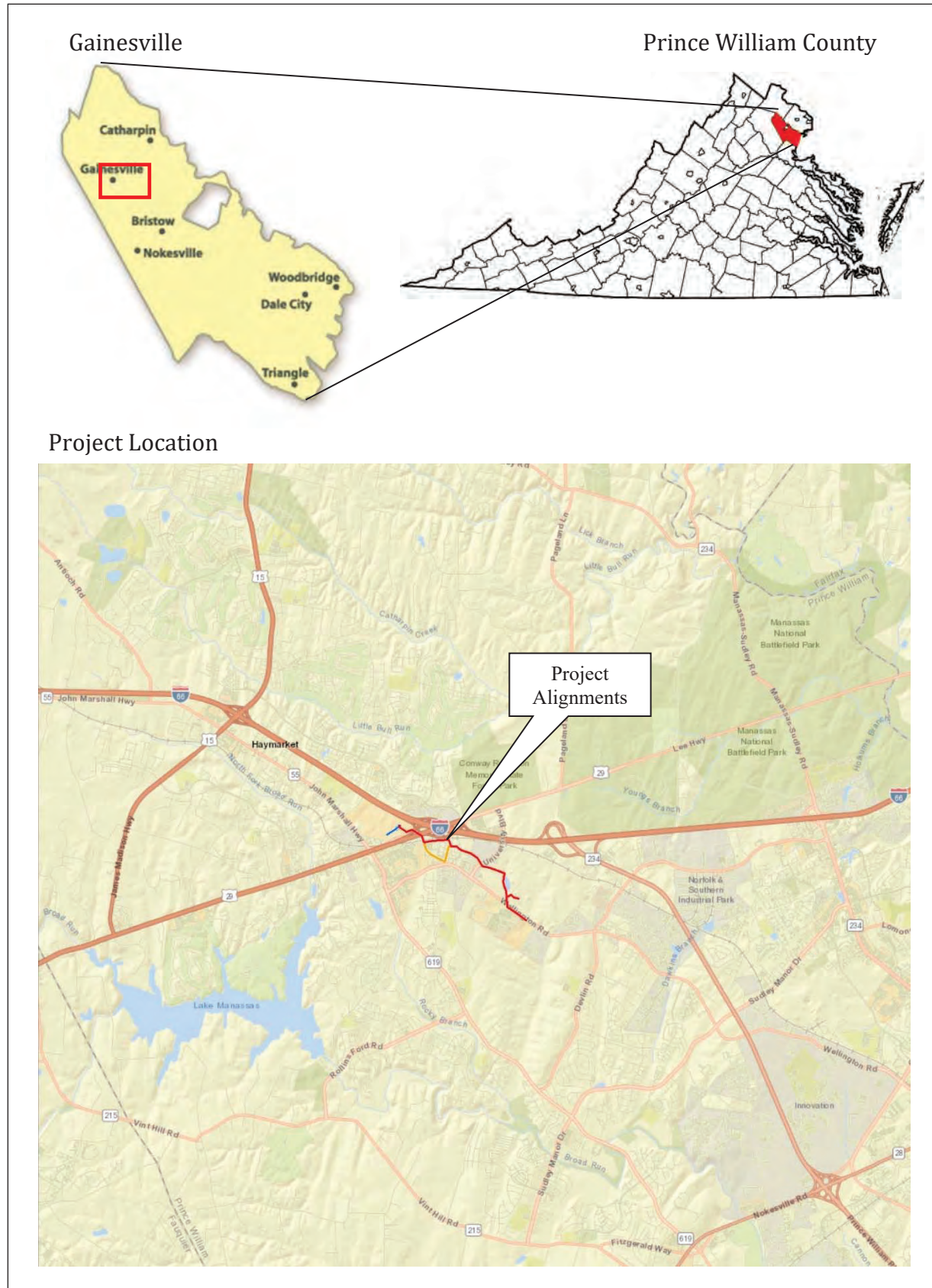


Figure 1-1: Project general location

2. PROJECT DESCRIPTION

The Project is comprised of two components including the Daves Store 230kV Line and Daves Store-Gemini Line. After review of the potential electrical solutions, Dominion is investigating two potential routes for the Daves Store 230kV Line, proposed Route 1 and alternative Route 2. Because both route alternatives are in relatively close proximity to one other, they are collectively grouped as the “Project study area” for this analysis, however, the individual route are discussed separately within this analysis when appropriate. Both route alternatives would generally require a new 100 foot wide right-of-way (ROW), and be suspended from steel monopoles that would range from approximately 72 to 122 feet tall with an average height of 102 feet. No alternatives were identified for the Daves Store-Gemini Line, as it is a short, 0.2-mile line connecting proposed substations associated with the Project. The Daves Store-Gemini Line would require a new 200 foot wide ROW for the two, single-circuit lines, and be suspended from steel H-frame structures that would be approximately 87 feet tall.

PROJECT DESCRIPTION



Figure 2-1: Daves Store 230kV Route Alternatives and Daves Store-Gemini Line.

3. RESEARCH DESIGN

The intent of this effort was to identify all known historic properties within the vicinity of the proposed Project study area in order to assess them for potential impacts brought about by the Project. Historic properties include architectural and archaeological (terrestrial and underwater) resources, historic and cultural landscapes, battlefields, and historic districts. For each previously recorded historic property, an examination of property documentation, current aerial photography, and a field reconnaissance was undertaken to assess each property's integrity of feeling, setting, and association, and to provide photo documentation of the property including views toward the proposed Project. The D+A personnel who directed and conducted this survey meet the professional qualification standards of the Department of the Interior (48 FR 44738-9).

ARCHIVAL RESEARCH

In December 2023, D+A conducted archival research with the goal of identifying all previously recorded historic properties and any additional historic property locations referred to in historic documents and other archives, as well as consultation with local informants and other professionals with intimate knowledge of the Project area as appropriate. Background research was conducted at the VDHR and on the internet and included the following sources:

- VDHR Virginia Cultural Resource Information System (VCRIS) site files; and
- National Park Service (NPS), American Battlefield Protection Program (ABPP), maps and related documentation.
- Prince William County Office of Historic Preservation

Data collection was performed according to VDHR guidance in *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008) and was organized in a multi-tier approach. As such, the effort was designed to identify all previously recorded NHL's located within 1.5-miles of the proposed Project study area, all historic properties listed in the NRHP, battlefields, and historic landscapes located within 1-mile of the Project study area, all historic properties previously determined eligible for listing in the NRHP located within 0.5-mile of the Project study area, as well as all archaeological sites located directly within the Project area.

FIELD RECONNAISSANCE

Field reconnaissance included visual inspection of historic properties within the study tiers, although no inspection of archaeological sites or subsurface testing was performed at this time. Visual inspection included digital photo documentation of each property's existing conditions including its setting and views toward the proposed Project. Photographs were taken of primary resource elevations, general setting, and existing viewsheds. All photographs were taken from public right-of-way or where property access was granted.

ASSESSMENT OF POTENTIAL IMPACTS

Following identification and field inspection of historic properties, D+A assessed each architectural resource for potential impacts brought about by the proposed Project. Assessment of

impacts was conducted through a combination of field inspection, digital photography, review of topography and aerial photography, and photo simulation. Photo simulation was conducted from vantage points within or near each resource property deemed most likely to have a change in visibility as a result of the Project. The photo simulation entailed digital photography, towards the Project, which was then loaded into a computer with location coordinates and ground-elevation. The transmission line structures to be rebuilt as part of the Project were then also computer modeled to represent the location, height, and configuration following construction. These models were then overlaid onto the digital photograph so that the existing (unaltered) view can be compared with the simulated view that illustrates the proposed structures, as they would appear on the landscape.

Archaeological assessment was limited to desktop review of Project improvements in relation to previously delineated site boundaries, however, existing conditions of sites remain unknown at this level of investigation.

When assessing impacts, D+A considered those qualities and characteristics that qualify the property for listing and whether the Project has the potential to alter or diminish the integrity of the property and its associated significance. Specific attention was given to determining whether or not the proposed Project would introduce new visual elements into a property's viewshed, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP. Identified impacts were characterized as severe, moderate, minimal, or none in accordance with the following guidance:

According to VDHR guidance, Project impacts are characterized as such:

- **None** – Project is not visible from the property
- **Minimal** – Occur within viewsheds that have existing transmission lines, locations where there will only be a minor change in tower height, and/or views that have been partially obstructed by intervening topography and vegetation.
- **Moderate** – Include viewsheds with expansive views of the transmission line, more dramatic changes in the line and tower height, and/or an overall increase in the visibility of the route from the historic properties.
- **Severe** – Occur within viewsheds that do not have existing transmission lines and where the views are primarily unobstructed, locations where there will be a dramatic increase in tower visibility due to the close proximity of the route to historic properties, and viewsheds where the visual introduction of the transmission line is a significant change in the setting of the historic properties.

REPORT PREPARATION

The results of the archival resource, field inspection, and analysis were synthesized and summarized in a summary report accompanied by maps, illustrations, and photographs as appropriate. All research material and documentation generated by this Project is on file at D+A's office in Midlothian, Virginia.

4. ARCHIVES SEARCH

This section includes a summary of efforts to identify previously known and recorded cultural resources within the tiered Project buffers. It includes lists, maps, and descriptive data on all previously conducted cultural resource surveys, and previously recorded architectural resources and archaeological sites according to the VDHR archives and VCRIS database. Because the Project alternatives are all within close proximity of one another within a relatively small defined space, a single Project study area that encompasses all Project components was used for this analysis.

PREVIOUSLY SURVEYED AREAS

VDHR and VCRIS records indicate that there have been thirty-three (33) prior Phase I cultural resource surveys within 1-mile of the Project study area, including four (4) that overlap with or include portions of the proposed ROW for individual alternatives. These surveys are at a minimum archaeological in nature, although some include architectural resources as well. The 4 surveys overlapping the Project study area were conducted for transportation and utility-related Projects, as well as some private development Projects. As a result of these prior surveys, portions of both Route 1 and 2 have been subject to survey although some portions remain unsurveyed. The 4 previously conducted cultural resource surveys that include portions of the Project study area are listed in Table 4-1 and illustrated in Figure 4-1.

Table 4-1: Previously conducted cultural resource surveys that include portions of the Project study area.
Source: VDHR.

VDHR Survey #	Title	Author	Date	Project Review #
PW-127	Phase I Archeological Resources Reconnaissance of Proposed Virginia Gateway Project, Prince William County, Virginia	TAA	1995	1994-2405
PW-155	Cultural Resources Survey I-66 Widening and HOV Study, Prince William County, Virginia	CCR	1999	1996-1099
PW-533	A Phase I Cultural Resource Survey of the Atlantic Research Corporation Tract, Prince William County, Virginia	CRI	2005	courtesy
PW-572	Phase I Cultural Resources Survey of the Gainesville-Haymarket 230kV Transmission Line, Prince William County, Virginia	DUTTON	2019	2014-0713



ARCHITECTURAL RESOURCES

Review of the VDHR VCRIS inventory records revealed a total of one-hundred-ten (110) previously recorded architectural resources are located within 1.5 mile of the Project study area. Of these, there are no (0) NHLs located within 1.5 mile of the proposed Project or closer, one (1) NRHP-listed property located within 1.0 mile or closer of the Project, three (3) battlefields located 1.0 mile or closer of the Project, and three (3) properties that have been determined eligible or potentially eligible for listing in the NRHP by the VDHR within 0.5 mile or closer of the Project. Two (2) of the battlefields and one (1) NRHP-eligible resource are directly crossed by portions of the Project.

Table 4-2 lists all NHLs, NRHP-listed, and NRHP-eligible resources within their respective buffered tiers. A map of all previously recorded architectural resources within 1.5-mile of the Project study area is depicted in Figure 4-2 and a map of any NHL, NRHP-listed, and NRHP-eligible resources within their respective study tiers are included in Figure 4-3.

Table 4-2: Considered Architectural Resources within their respective tiered buffer zones for the Project

Buffer(miles)	Considered Resources	VDHR #	Description
1.5	National Historic Landmarks	None	None
1.0	National Historic Landmarks	None	None
	National Register- Listed	076-0271	Manassas Battlefield Historic District (NRHP Listing), Manassas National Battlefield Park (Historic/Current)
	Battlefields	None	None
	Historic Landscapes	None	None
0.5	National Historic Landmarks	None	None
	National Register- Listed	None	None
	Battlefields	076-5036	Bristoe Station Battlefield (Historic), Bull Run Bridge (Historic), Kettle Run Battlefield (Historic), Manassas Station Operations Battlefield (Historic), Union Mills (Historic)
	Historic Landscapes	None	None
	National Register- Eligible	076-5988	Commercial Building, 14111 Daves Store Lane (Function/Location), Suburban Propane (Current Name)
		076-5035	Ody Cemetery (Historic)
0.0 (ROW)	National Historic Landmarks	None	None
	National Register - Listed	None	None
	Battlefields	030-5152	Buckland Mills Battlefield (Historic/Current)

ARCHIVES SEARCH

		076-5190	Battle of Gainesville (Historic), Brawner's Farm (Historic), Groveton (Historic), Manassas Plains (Historic), Second Battle of Bull Run (Historic/Current), Second Battle of Manassas (Historic/Current)
	Historic Landscapes	None	None
	National Register- Eligible	076-5989	Manassas Gap Railroad (Historic), Norfolk Southern Railroad (Current Name)

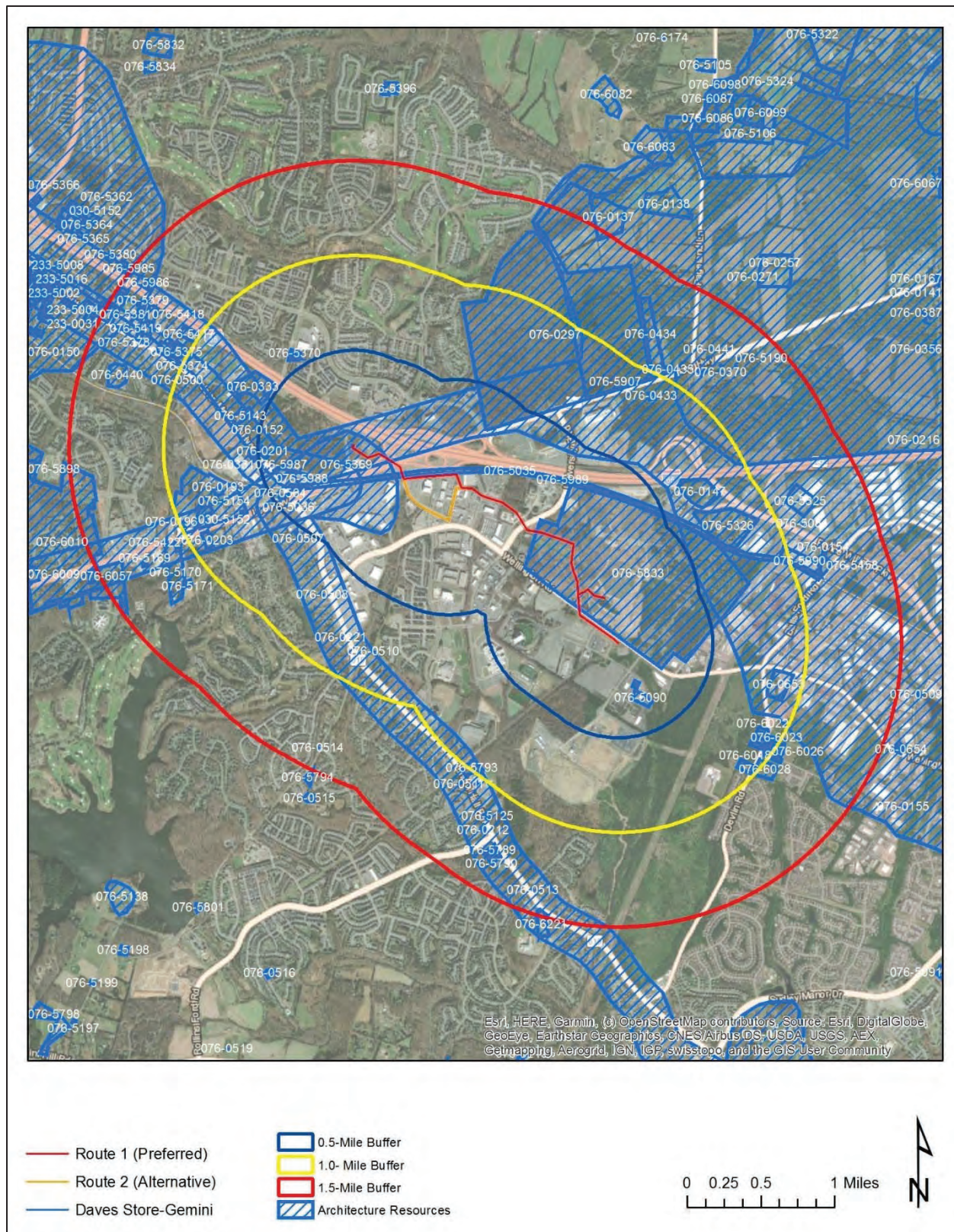


Figure 4-2: All previously identified architectural resources within 1.5-miles of the Project study area.
Source: VCRIS

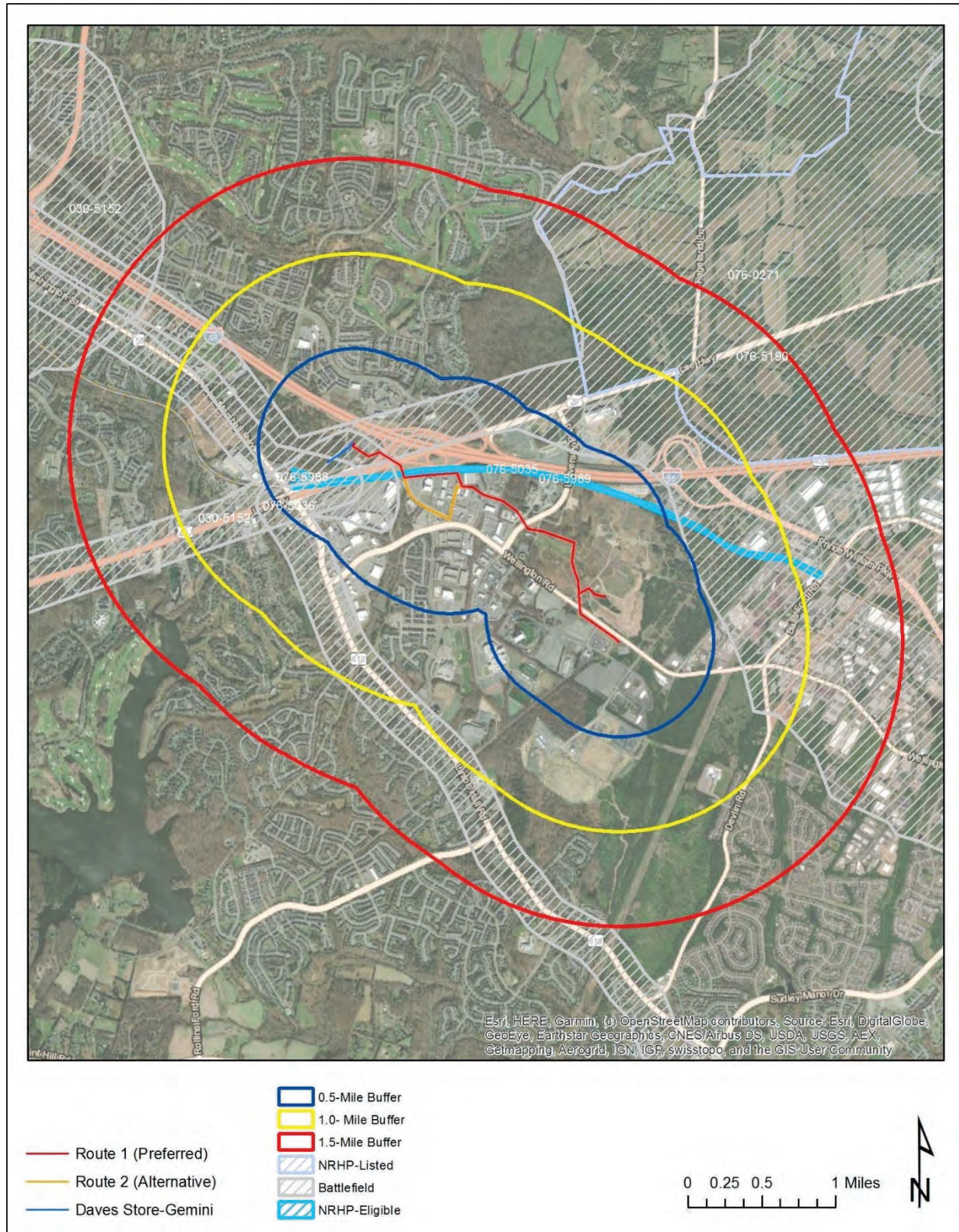


Figure 4-3: Considered architectural resources within their respective tiers around Project study area.
Source: VCRIS

NPS AMERICAN BATTLEFIELD PROTECTION PROGRAM (ABPP)

A review of the National Park Service (NPS) ABPP records reveals that the Project area is located within one mile of portions of three (3) defined battlefields, including the Manassas Station Operations Battlefield, Second Manassas Battlefield, and Buckland Mills Battlefield.

As defined by the ABPP in 2009, battlefields may be divided into three tiers that correlate to both the historic association and the current level of integrity and preservation. The battlefield ***study area*** represents the historic extent of the battle as it unfolded upon the landscape; the battlefield ***core area*** represents the areas of fighting on the battlefield and typically includes the areas of greatest importance to understanding the events of the battle; and the ***potential National Register boundaries*** encompass the area that remains reasonably intact and warrant preservation.

Table 4-3 lists the battlefields within one mile and identifies portions of each battlefield directly crossed by the Project and within one mile. Figure 4-4 illustrates the location of each battlefield in relation to the Project area.

Table 4-3: ABPP Battlefields within one mile and proximity to battlefield tiers

ABPP #	Battlefield Name	Study Area	Core Area	Potential National Register Area
VA024	Manassas Station Operations	Within One Mile	Beyond One Mile	Beyond One Mile
VA026	Second Manassas	Within One Mile	Within One Mile	Within One Mile
VA042	Buckland Mills	Within One Mile	Beyond One Mile	Beyond One Mile

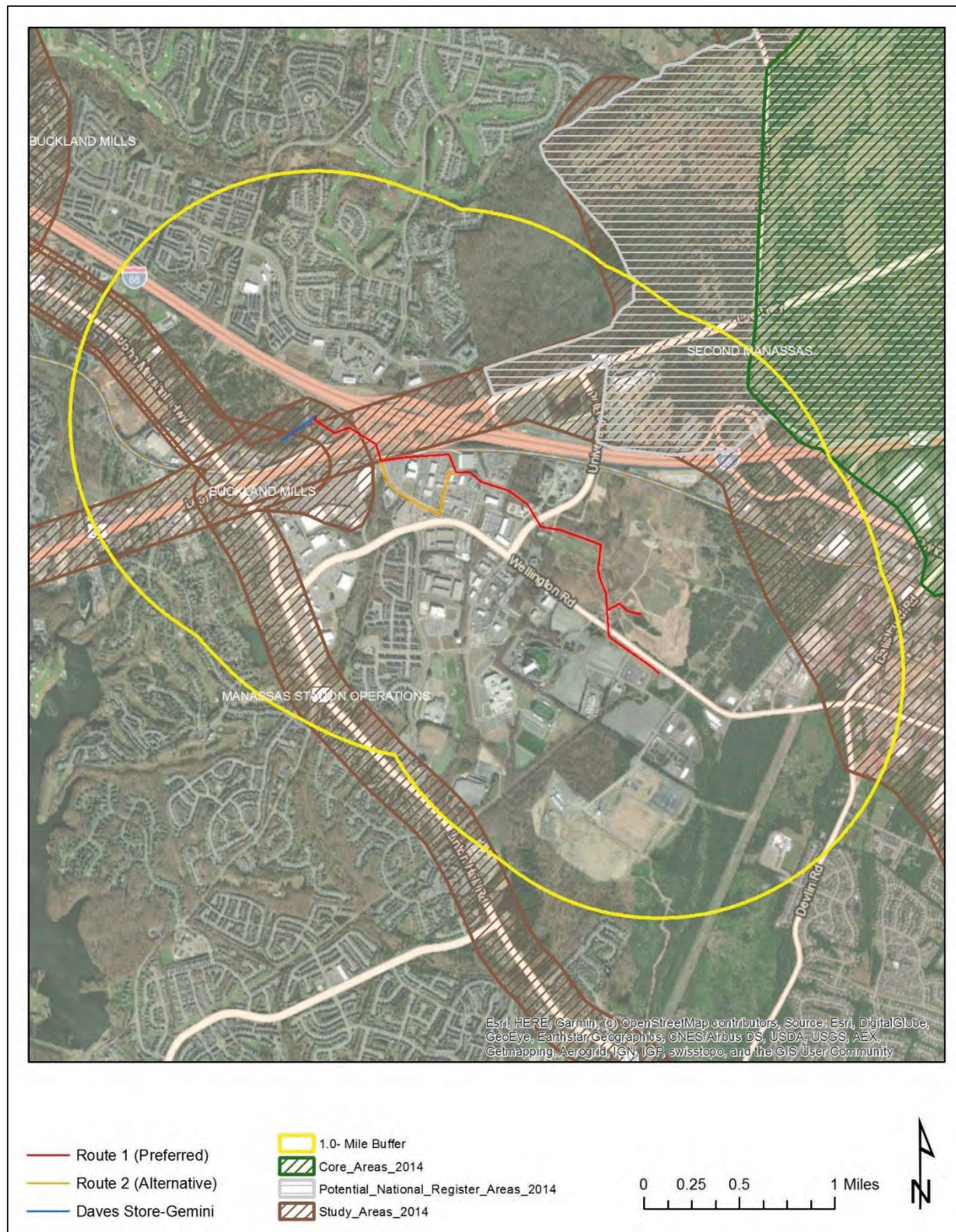


Figure 4-4: Battlefields in relation to the Project study area. Source: VCRIS/ American Battlefield Protection Program (ABPP)

ARCHAEOLOGICAL SITES

Review of the VDHR VCRIS records reveals there are fifty-six (56) previously recorded archaeological sites within one mile of the Project study area. These include prehistoric lithic scatters and camps; as well as historic domestic sites, farmsteads, a Civil War hospital site, cemeteries, and trash scatters. Of these, six (6) has been determined eligible or potentially eligible for listing in the NRHP, fifteen (15) have been determined not eligible for listing, and the remaining sites have not been formally evaluated. One (1) of the sites is located adjacent (within 100 feet) of the proposed ROW of at least one of the Project route alternatives.

Table 4-4 lists all previously recorded archaeological resources within one-mile of the Project study area and Table 4-5 provides additional information on the site that is adjacent to (within 100 feet) of a component of the Project. Figure 4-5 illustrates the locations of all previously recorded sites within one mile of the Project study area and Figure 4-6 details the location of the archaeological sites located adjacent to the Project.

Table 4-4: Previously recorded archaeological resources within one mile of the Project study area. Bold listings denote sites listed in- or eligible for the NRHP. Orange highlight denotes site is located within or adjacent to a Project alternative.

VDHR #	Type	Temporal Association	NRHP Status
44PW0080	Dwelling, single	18th Century: 4th quarter (1775 - 1799), 20th Century: 1st half (1900 - 1949), 20th Century: 3rd quarter (1950 - 1974)	DHR Staff: Eligible
44PW0573	No Data	19th Century (1800 - 1899)	DHR Staff: Not Eligible
44PW0574	Dwelling, single	No Data	Not Evaluated
44PW0575	Dwelling, single	19th Century: 2nd half (1850 - 1899), 20th Century: 1st half (1900 - 1949)	Not Evaluated
44PW0623	Cemetery	Historic/Unknown	DHR Staff: Potentially Eligible
44PW0874	Trash scatter	19th Century (1800 - 1899), 20th Century (1900 - 1999)	Not Evaluated
44PW0875	Artifact scatter, Camp, Dwelling, single	Pre-Contact, Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)	Not Evaluated
44PW0876	Cemetery	19th Century (1800 - 1899), 20th Century (1900 - 1999)	Not Evaluated
44PW0877	No Data	Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)	Not Evaluated
44PW0878	Cemetery	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)	Not Evaluated
44PW0879	Artifact scatter, Camp, Other	Pre-Contact, Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)	Not Evaluated

ARCHIVES SEARCH

VDHR #	Type	Temporal Association	NRHP Status
44PW0880	Trash scatter	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)	Not Evaluated
44PW0881	Dwelling, single, Lithic workshop	Paleo-Indian (15000 - 8501 B.C.E), Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)	Not Evaluated
44PW0882	Lithic workshop	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44PW0883	Trash scatter	19th Century: 4th quarter (1875 - 1899), 20th Century: 1st quarter (1900 - 1924)	Not Evaluated
44PW0884	Trash scatter	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - Present)	Not Evaluated
44PW0885	Artifact scatter, Lithic workshop, Trash scatter	Pre-Contact	Not Evaluated
44PW0886	Dwelling, single	19th Century: 4th quarter (1875 - 1899), 20th Century: 1st quarter (1900 - 1924)	Not Evaluated
44PW0893	Camp	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44PW0965	Dwelling, single	20th Century: 1st quarter (1900 - 1924)	Not Evaluated
44PW0966	Dwelling, single	19th Century: 1st half (1800 - 1849)	Not Evaluated
44PW0985	Quarry	Historic/Unknown	DHR Staff: Not Eligible
44PW0987	No Data	Indeterminate, 19th Century (1800 - 1899)	Not Evaluated
44PW0988	Farmstead	Indeterminate	DHR Staff: Not Eligible
44PW0989	No Data	18th Century: 2nd/3rd quarter (1725 - 1774), 19th Century (1800 - 1899)	DHR Staff: Not Eligible
44PW1040	Cemetery	Reconstruction and Growth (1866 - 1916)	Not Evaluated
44PW1255	Trash scatter	19th Century: 2nd/3rd quarter (1825 - 1874)	DHR Staff: Not Eligible
44PW1256	Farmstead	19th Century: 2nd/3rd quarter (1825 - 1874)	DHR Staff: Not Eligible
44PW1257	Dwelling, single, Farmstead, Outbuilding	19th Century: 4th quarter (1875 - 1899), 20th Century (1900 - 1999)	DHR Staff: Not Eligible
44PW1588	Dwelling, single	Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Potentially Eligible
44PW1589	Dwelling, single	World War I to World War II (1917 - 1945), The New Dominion (1946 - 1988)	DHR Staff: Not Eligible
44PW1591	Farmstead	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible

ARCHIVES SEARCH

VDHR #	Type	Temporal Association	NRHP Status
44PW1593	Dwelling, single	Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	DHR Evaluation Committee: Not Eligible
44PW1594	Barn, Cemetery, Dwelling, single, Other	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916)	DHR Staff: Potentially Eligible
44PW1595	Trash scatter	19th Century: 2nd half (1850 - 1899), 20th Century: 1st half (1900 - 1949)	DHR Staff: Not Eligible
44PW1596	Cemetery, Trash scatter	World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible
44PW1599	Camp, temporary, Dwelling, single	Early Woodland (1200 B.C.E - 299 C.E), Contact Period (1607 - 1750), Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)	DHR Staff: Potentially Eligible
44PW1616	Dwelling, single	Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	Not Evaluated
44PW1617	Outbuilding	19th Century: 2nd half (1850 - 1899)	Not Evaluated
44PW1656	Trash scatter	19th Century: 4th quarter (1875 - 1899), 20th Century (1900 - 1999)	Not Evaluated
44PW1660	Dwelling, single	19th Century: 4th quarter (1875 - 1899), 20th Century (1900 - 1999)	DHR Staff: Not Eligible
44PW1661	Dwelling, single	18th Century: 4th quarter (1775 - 1799), 19th Century: 1st half (1800 - 1849)	DHR Staff: Not Eligible
44PW1662	Dwelling, single, Farmstead, Military camp, Military field hospital	19th Century: 2nd/3rd quarter (1825 - 1874), 20th Century: 1st quarter (1900 - 1924)	DHR Staff: Eligible
44PW1663	Dwelling, single	20th Century (1900 - 1999)	DHR Staff: Not Eligible
44PW1792	Farmstead	19th Century: 3rd quarter (1850 - 1874), 19th Century: 4th quarter (1875 - 1899), 20th Century (1900 - 1999)	Not Evaluated
44PW1793	Outbuilding	Historic/Unknown, 19th Century (1800 - 1899)	Not Evaluated
44PW1932	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44PW1933	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44PW1934	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44PW1935	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44PW1936	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44PW1937	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44PW1944	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44PW1945	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated
44PW1982	Stone pile	Pre-Contact	Not Evaluated
44PW2038	Cemetery	Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	Not Evaluated

Table 4-5: Previously recorded archaeological resource adjacent to a Project alternative.

VDHR #	Description	NRHP Status	Proximity to Project
44PW0882	Lithic Workshop, Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated	~65-feet from Route 2

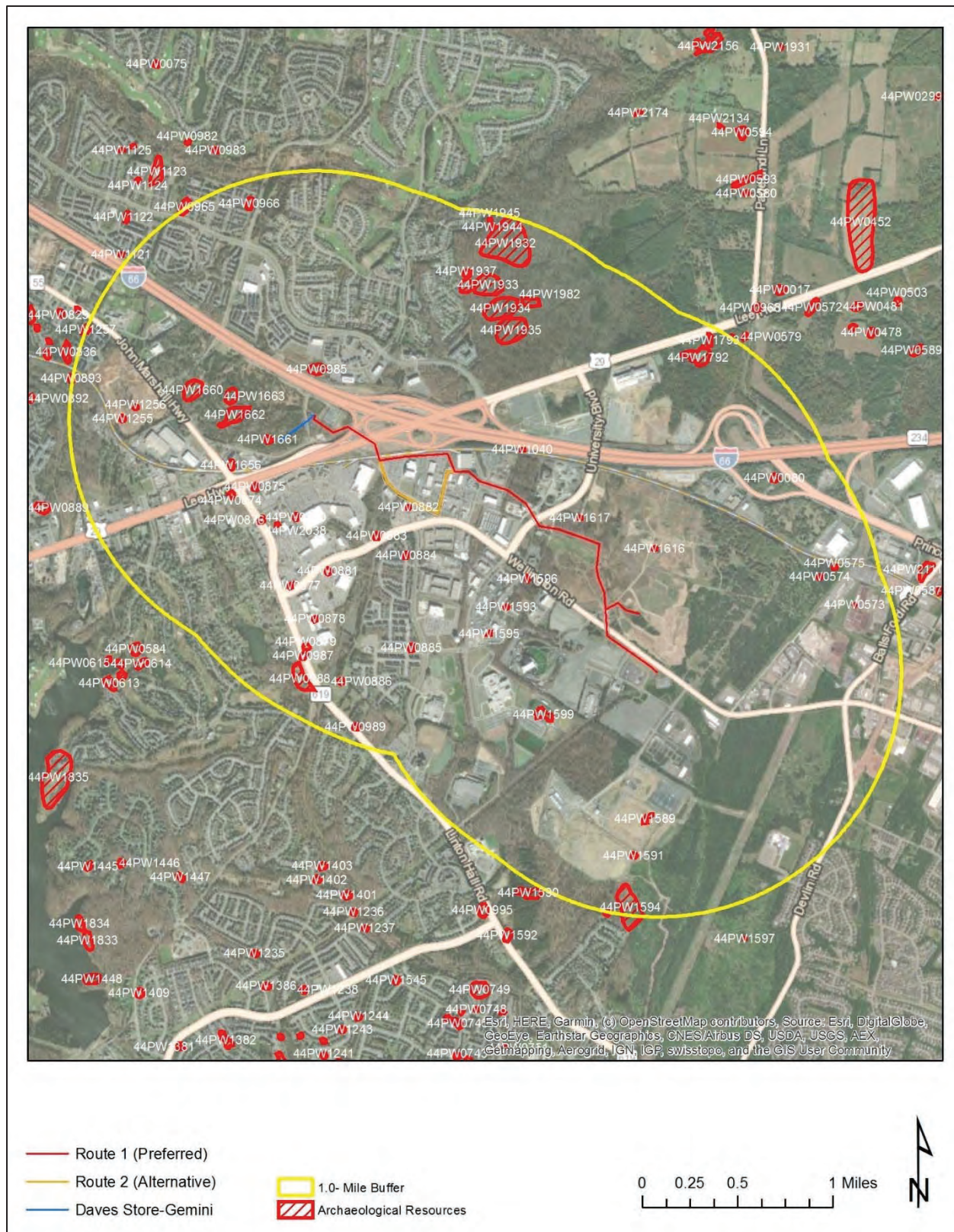


Figure 4-5: Previously recorded archaeological resources located within 1- mile of Project study area. Source: VCRIS



Figure 4-6: Detail of previously recorded archaeological resources within or adjacent to the Project study area. Source: VCRIS

5. RESULTS OF FIELD RECONNAISSANCE

In accordance with the VDHR guidelines for assessing impacts of proposed electric transmission lines on historic resources, considered architectural properties identified within the VDHR-defined study tiers around the Project study area were field verified for existing conditions and photo documented (Figure 5-1 and Table 5-1). Inspection and analysis of the setting around the resource and views towards the Project alternatives were also conducted to assess potential Project impacts. For the purposes of this analysis, an impact is one that alters, either directly or indirectly, those qualities or characteristics that qualify a particular property for listing in the NRHP and does so in a manner that diminishes the integrity of a property's materials, workmanship, design, location, setting, feeling, and/or association. With respect to transmission lines, direct impacts typically are associated with ground disturbance resulting from ROW clearing and structure construction. Indirect impacts typically are associated with the introduction of new visual elements or changes to the physical features of a property's setting or viewshed. According to VDHR guidance, Project impacts are characterized by the definitions below.

- **None** – Project is not visible from the property.
- **Minimal** – Occur within viewsheds that have existing transmission lines, locations where there will only be a minor change in tower height, and/or views that have been partially obstructed by intervening topography and vegetation.
- **Moderate** – Include viewsheds with expansive views of the transmission line, more dramatic changes in the line and tower height, and/or an overall increase in the visibility of the route from the historic properties.
- **Severe** – Occur within viewsheds that do not have existing transmission lines and where the views are primarily unobstructed, locations where there will be a dramatic increase in tower visibility due to the close proximity of the route to historic properties, and viewsheds where the visual introduction of the transmission line is a significant change in the setting of the historic properties.

The results of the field reconnaissance and assessment for each resource are organized by VDHR number and summarized in the following pages.

RESULTS OF FIELD RECONNAISSANCE

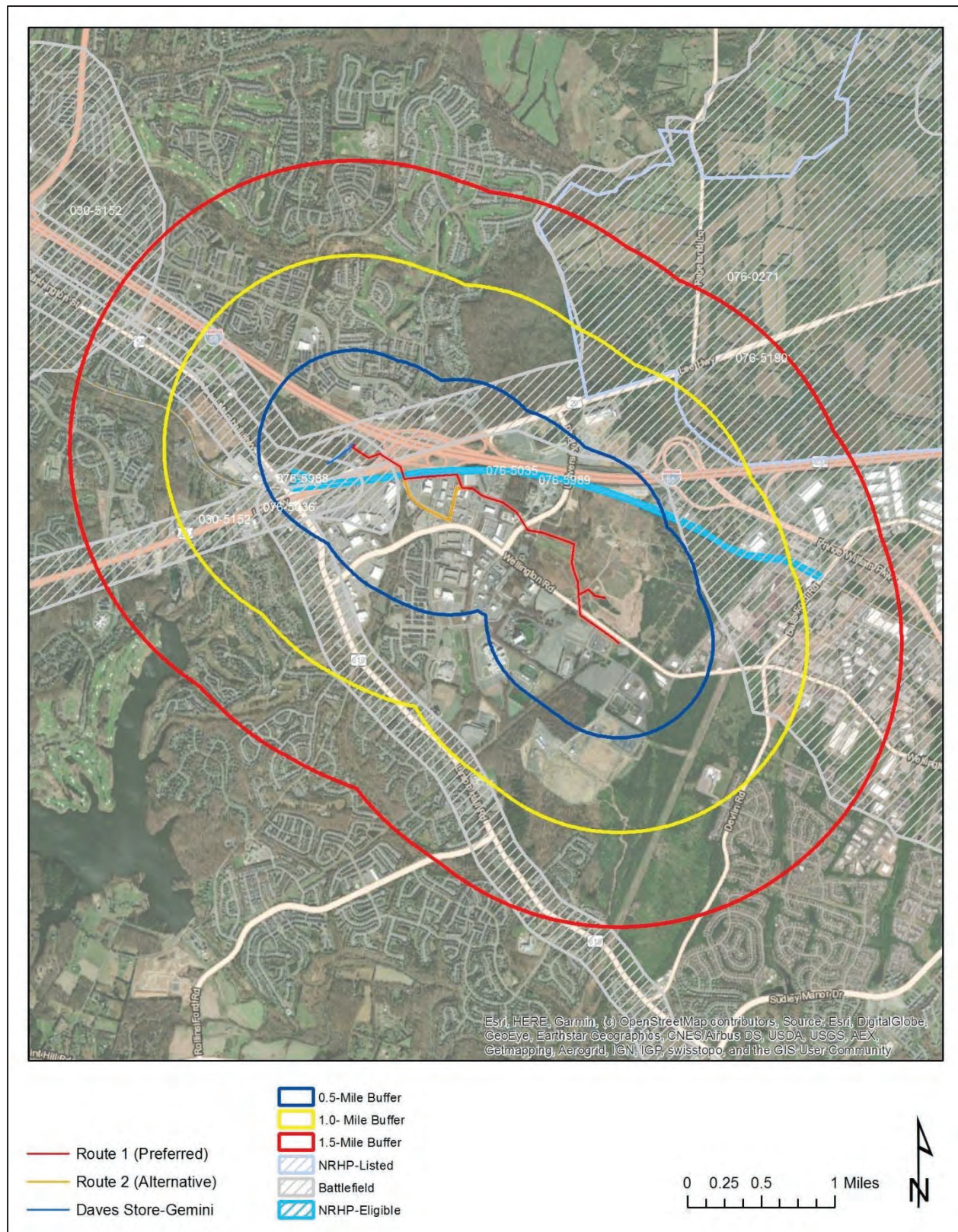


Figure 5-1: Considered architectural resources within their respective tiers around Project study area.
Source: VCRIS

RESULTS OF FIELD RECONNAISSANCE

Table 5-1: Considered architectural resources and distance to Project.

VDHR #	Resource Name/ Address	NRHP-Status	Distance from Project
030-5152	Buckland Mills Battlefield	NRHP-Eligible	Route 1 – Directly Crossed Route 2 - Directly Crossed Daves Store-Gemini Route – Directly Crossed
076-0271	Manassas Battlefield Historic District/ Manassas National Battlefield Park	NRHP-Listed	Route 1 - ~0.68 Mile Route 2 - ~0.68 Mile Daves Store-Gemini Route - ~1.27 Mile
076-5035	Ody Cemetery	Potentially NRHP-Eligible	Route 1 - ~0.17 Mile Route 2 - ~0.17 Mile Daves Store-Gemini Route - ~0.87 Mile
076-5036	Manassas Station Operations Battlefield	Potentially NRHP-Eligible	Route 1 - ~0.09 Mile Route 2 - ~0.09 Mile Daves Store-Gemini Route – Directly Crossed
076-5190	Second Battle of Manassas	Potentially NRHP-Eligible	Route 1 – Directly Crossed Route 2 - Directly Crossed Daves Store-Gemini Route – Directly Crossed
076-5988	Commercial Building, 14111 Daves Store Lane	Potentially NRHP-Eligible	Route 1 - ~0.28 Mile Route 2 - ~0.28 Mile Daves Store-Gemini Route - ~0.12 Mile
076-5989	Manassas Gap Railroad	Potentially NRHP-Eligible	Route 1 – Directly Crossed Route 2 – Directly Crossed Daves Store-Gemini Route - ~0.10 Mile

VDHR# 030-5152

Buckland Mills Battlefield

Buckland Mills Battlefield was the site where 4,000 Union and 8,000 Confederate forces clashed on October 19, 1863, ending in the eventual retreat of J.E.B. Stuart through New Baltimore. The Union forces were basically comprised of Maj. Gen. Alfred Pleasonton's Cavalry Corps, the First Brigade being under the command of Brig. Gen. Henry E. Davies, and the Second Brigade being under the command of Brig. Gen. George A. Custer. First Brigade Horse Artillery was under the command of Capt. James M. Robertson. Southern forces were under the command of Maj. Gen. J.E.B. Stuart's Cavalry Corps, with Stuart commanding Hampton's Division and Maj. Gen. Fitzhugh Lee commanding his own Division. Gen. Davies pursued Gen. Stuart along the Warrenton Turnpike through New Baltimore. CSA Col. Thomas H. Owen started attack on Gen. Custer at Buckland Mills with Fitzhugh Lee attacking from the direction of Auburn. Stuart was eventually forced to retreat. In 2002, VDHR recommended this battlefield *eligible for listing in the NRHP* under Criterion A for its association with the Civil War in Virginia.

The Buckland Mills Battlefield encompasses a large area relating to troops movements and areas of fighting. The battlefield is generally situated to the south and west of the Project study area, although portions of the Project are located within the delineated limits of the battlefield. This includes the location of a short length of both Project route alternatives and the Daves Store-Gemini Route. The portion of the battlefield in which Project components are located is a part of the *study area* as delineated by the ABPP. This portion of the battlefield is not included within the *potential-National Register area* as delineated by the ABPP, nor does it include any portion of battlefield *core area*, the nearest portion of which is over one mile away.

As such, there will be a direct impact to the landscape of the battlefield as a result of the construction of a portion of the Project transmission line, however, this area has already been substantially compromised by nonhistoric development and disturbance and there are no known archaeological sites, earthworks, or contemporary battlefield features within the Project area.

Because the battlefield borders the Project area, there is also the potential for indirect or visual impacts. In order to assess the potential indirect impacts, a site visit was made to the battlefield to inspect existing conditions and the setting around and within the vicinity of the Project study area, with emphasis on views towards the Project and associated improvements. Photographs were taken from representative vantage points throughout the battlefield towards the Project components to document current conditions, lines of sight, and the extent of visibility of existing similar infrastructure. Photo simulation was also conducted from representative vantage points to model the visibility of proposed transmission structures.

Inspection revealed that the portion of the battlefield in the vicinity of the Project is heavily fragmented by modern development. The delineated boundaries of the battlefield in this area generally consist of a narrow corridor bordering Lee Highway (US-29) representing an “avenue of approach” to the battle. The modern road has been widened and elevated, and is now bordered by extensive suburban commercial development. The Project improvements within the battlefield include the location of the Daves Store-Gemini Route and a short portion of both Project alternatives, much of which are sited within what is currently an undeveloped tract of land adjacent to an existing electrical substation at the intersection of Lee Highway and Interstate-66. Views from and towards the Project are characterized by a disturbed landscape and variety of small and large-scale development, and extensive infrastructure including multiple existing high-voltage transmission lines and structures.

Generally, views in the area are short and interrupted by the dense development patterns, however, existing transmission structures on other lines, as well as communications towers and other tall vertical features may be seen through gaps in development and above rooflines from some vantage points.

The existing structures on the other 230kV transmission lines in the area average 112 feet in height, while the proposed structures associated with this Project may range from approximately 73 to 122 feet tall with an average height of 102 feet.

As such, it is anticipated that there is the potential for visibility of a limited number of proposed transmission structures from discrete vantage points within and around the portion of the battlefield in the vicinity of the Project; however, this area already has a heavily compromised setting. For this reason, this portion of the battlefield is not considered a part of the potentially National Register eligible boundary by the ABPP. Where visible, the proposed structures would be seen amongst an extensive amount of other modern development, and because of the sporadic views from only discrete vantages, would not likely be noticeable as a substantial or cumulative change.

Therefore, the Project is not anticipated to introduce any significant change to the setting or viewshed of or from the battlefield, and it is D+A’s recommendation that the Project will result in no more than a **minimal impact** to the Buckland Mills Battlefield per VDHR’s impact characterization scale.

Figure 5-2 depicts the overall limits of the Buckland Mills Battlefield in relation to the Project and viewshed buffers, and Figure 5-3 provides a detail of the portion of the battlefield in the vicinity

of the Project with the location and direction of all representative photographs and photo simulations. Figure 5-4 through Figure 5-11 are representative photographs of and from the battlefield towards the Project and Figure 5-12 through Figure 5-19 provide photo simulations of the Project from representative vantages.

RESULTS OF FIELD RECONNAISSANCE

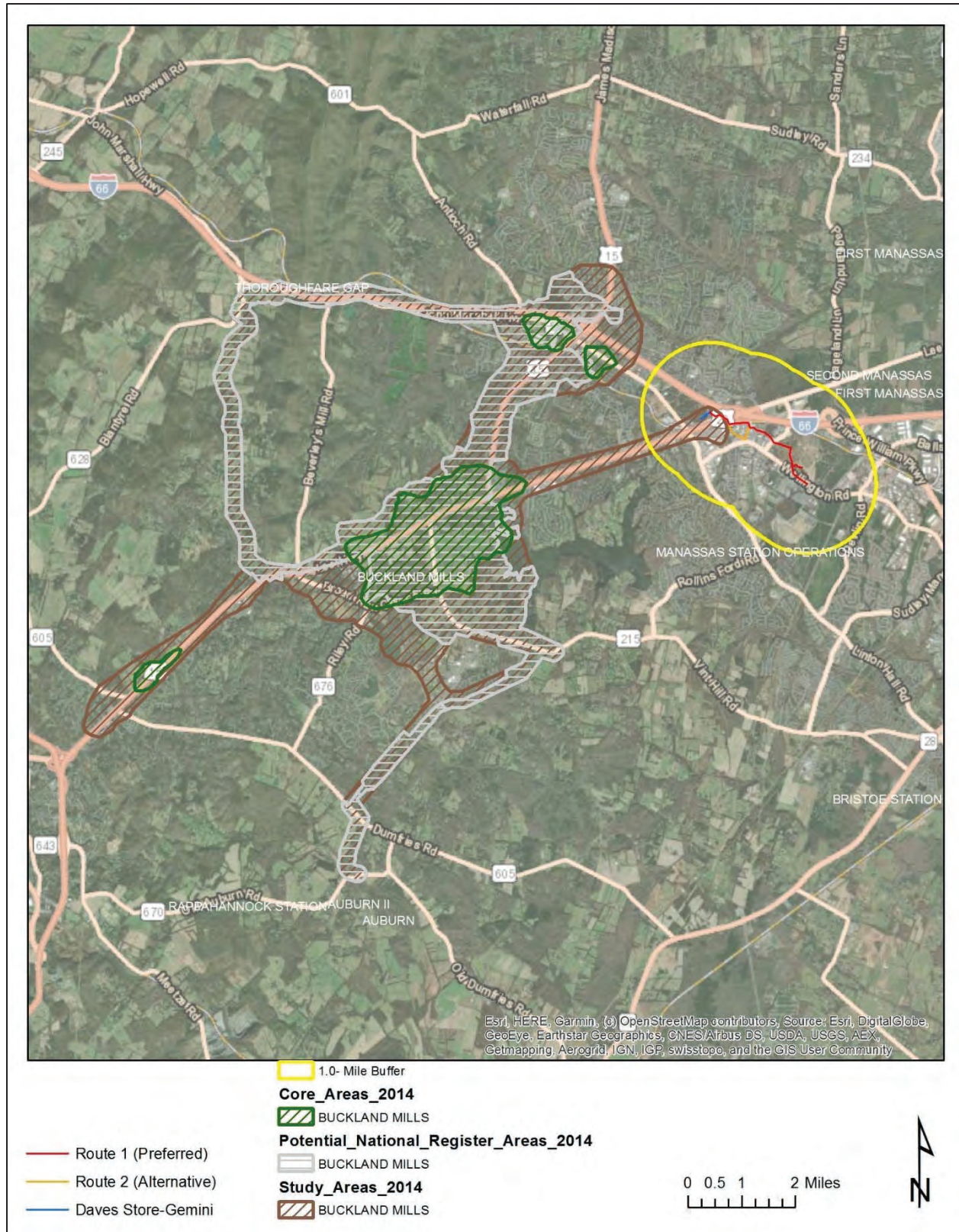
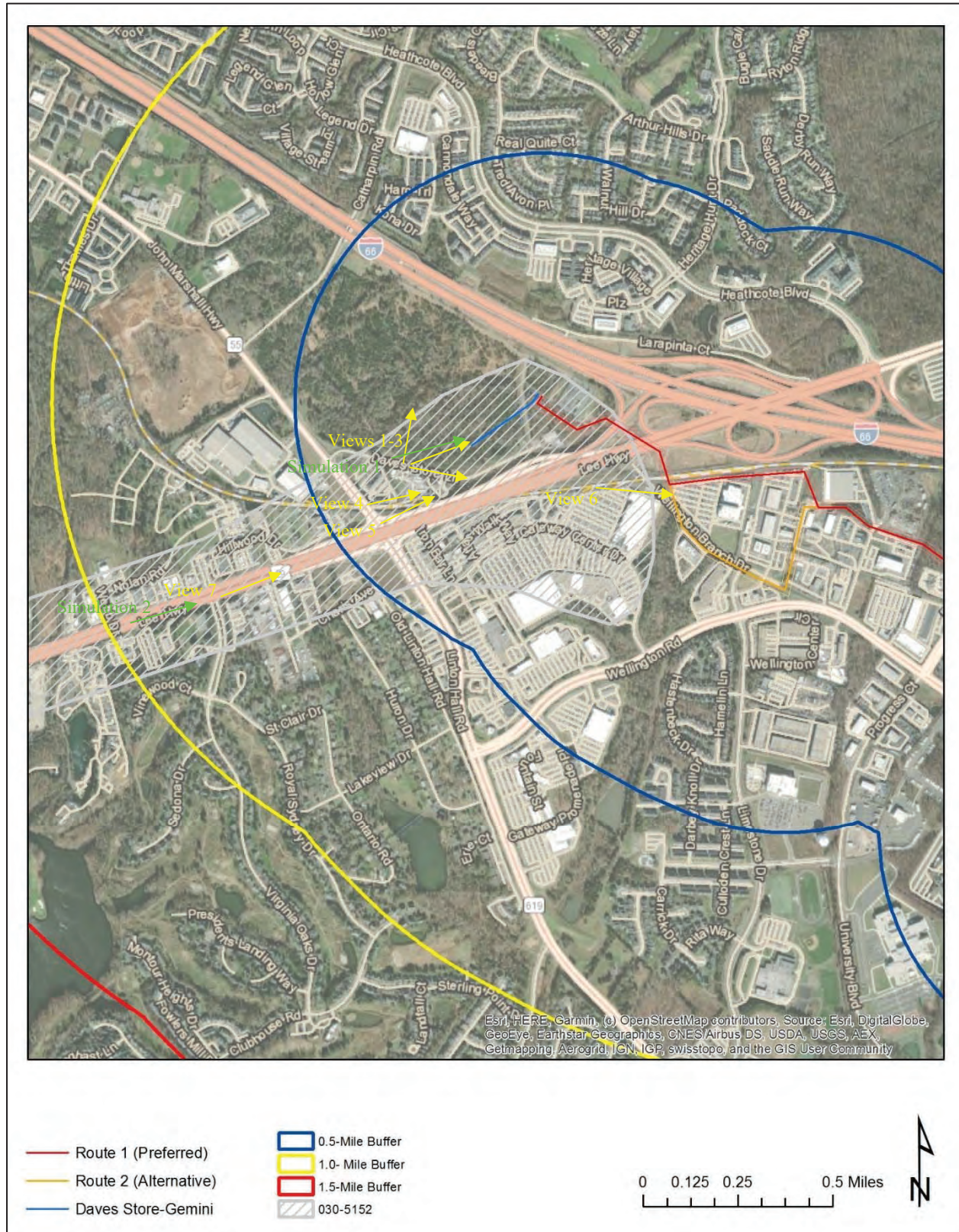


Figure 5-2: Overall limits of the Buckland Mills Battlefield with ABPP delineated tiers in relation to the Project study area. Source: VCRIS

RESULTS OF FIELD RECONNAISSANCE



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Figure 5-4: Photo location 1- View from Daves Store Lane towards the Project, facing north (Daves Store-Gemini Route not visible through existing vegetation).

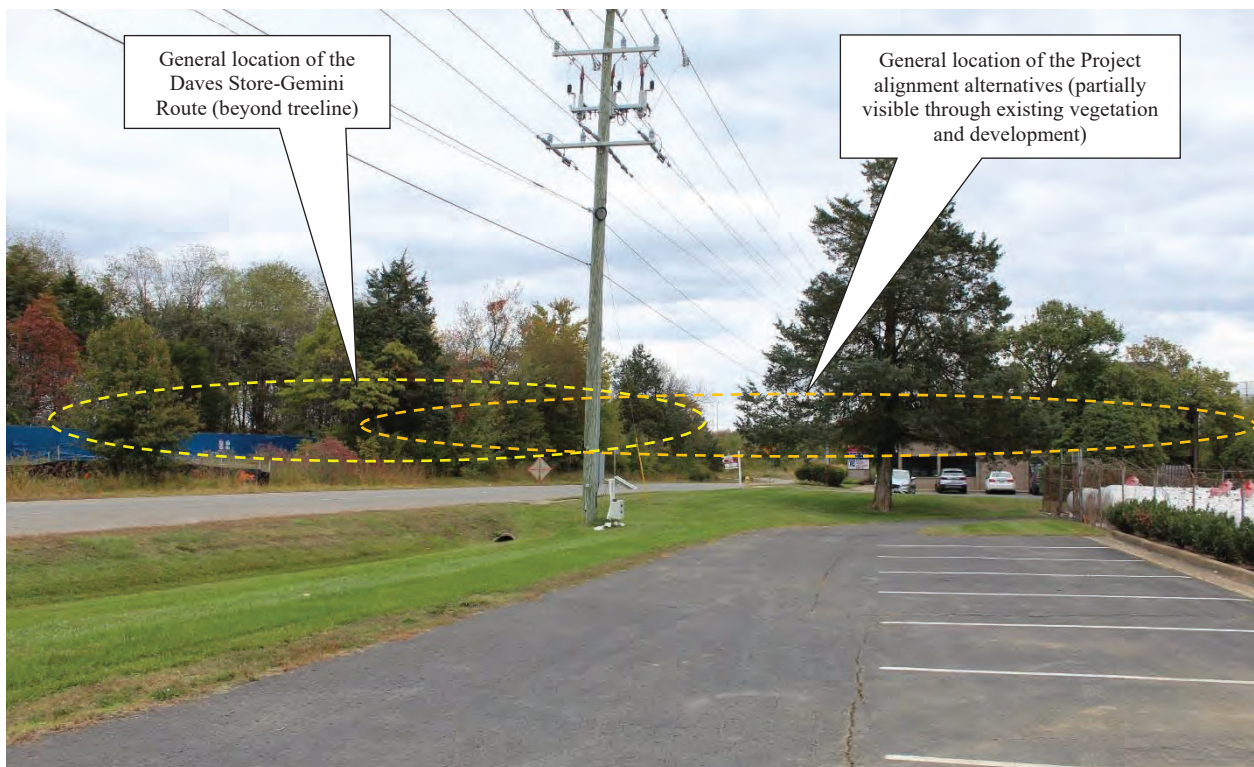


Figure 5-5: Photo location 2- View from Daves Store Lane towards the Project, facing northeast (Daves Store-Gemini Route not visible; both route alternatives mostly screened with limited potential for visibility).

RESULTS OF FIELD RECONNAISSANCE



Figure 5-6: Photo location 3- View from Daves Store Lane towards the Project, facing east (No expected visibility).



Figure 5-7: Photo location 4- View from Linton Hall Road overpass towards the Project, facing east (Partially visible above and amongst other infrastructure and development).

RESULTS OF FIELD RECONNAISSANCE

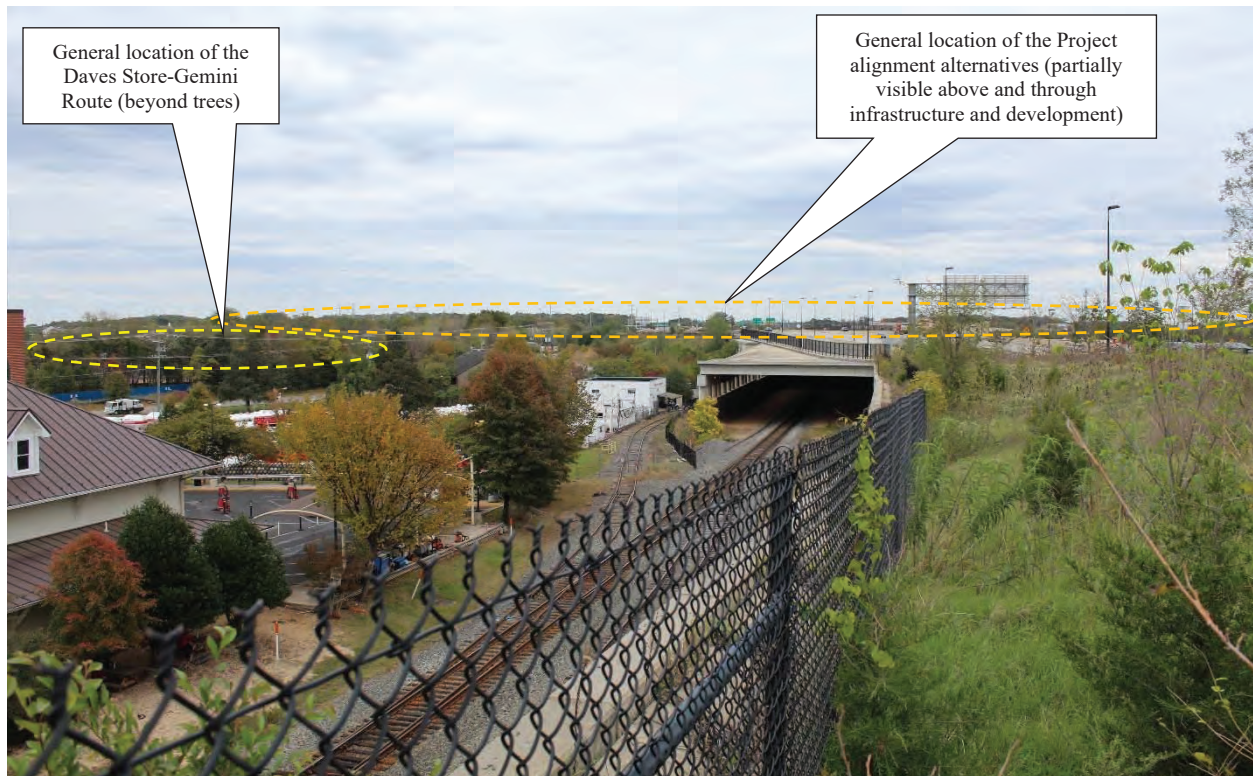


Figure 5-8: Photo location 5- View from W Main Street towards the Project, facing east (Partially visible above and amongst other infrastructure and development).

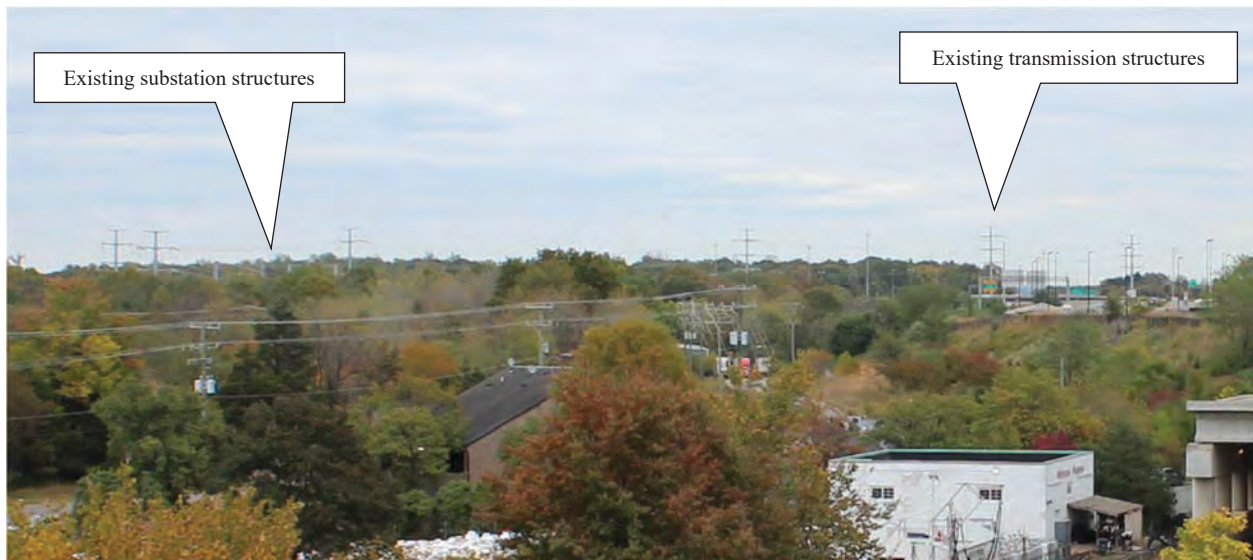


Figure 5-9: Detail of Photo location 5- Existing substation and transmission structures in area.

RESULTS OF FIELD RECONNAISSANCE

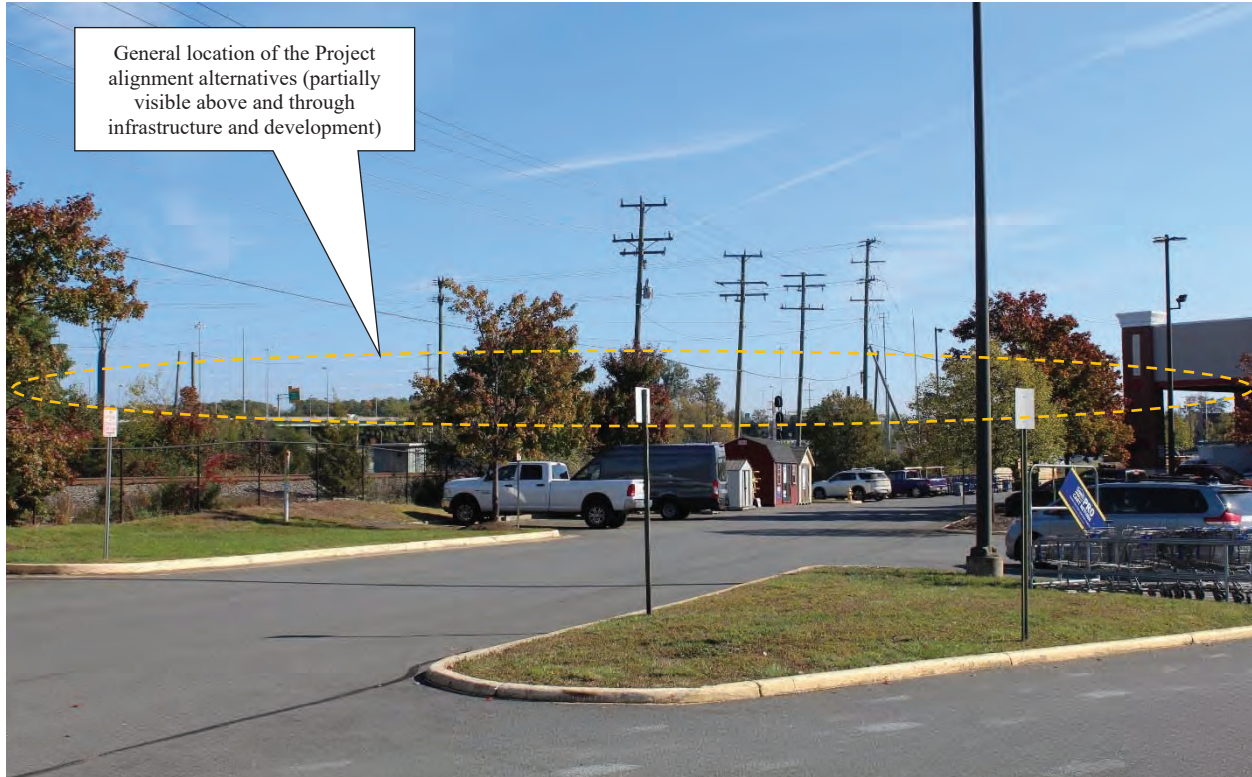


Figure 5-10: Photo location 6- View from commercial area off Gateway Center Drive towards the Project, facing east (Partially visible amongst other existing infrastructure above development).



Figure 5-11: Photo location 7- View from Lee Highway (US-29) towards the Project, facing northeast (No expected visibility beyond existing infrastructure and development).

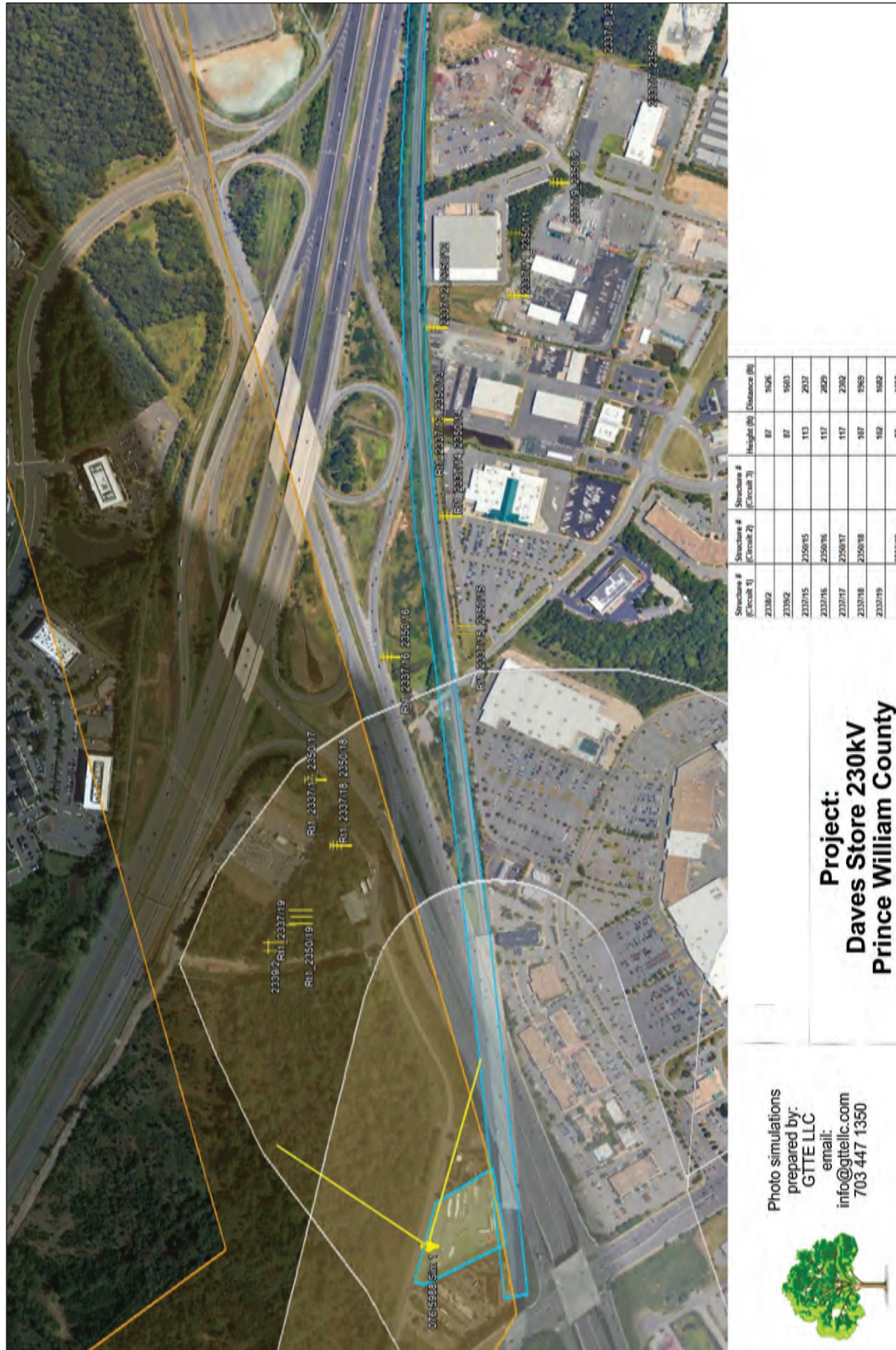


Figure 5-12: Location, direction of view, and structures modeled from Simulation location 1 for the Buckland Mills Battlefield. Source: GTTE, LLC



Figure 5-13: Existing view from the location of Simulation 1 for the Buckland Mills Battlefield. Source: GTTE, LLC

FIELD RECONNAISSANCE



Daves Store 230kV Project Prince William County		Route 1	Proposed View (Location of towers not visible are overlaid with yellow tower icon)
Photo Simulations and Diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.			This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Figure 5-14: Proposed view of Route 1 from the location of Simulation 1 for the Buckland Mills Battlefield – (Some structures on Route 1 and Daves Store-Gemini Route partially visible). Source: GTTE, LLC



Photo simulations prepared by: GTTE LLC info@gttelc.com 703.447.1350	Daves Store 230kV Project Prince William County	Route 2	Proposed View (Location of towers not visible are overlaid with yellow tower zone)
This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.	Photo Simulations and Diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.		

Figure 5-15: Proposed view of Route 2 from the location of Simulation 1 for the Buckland Mills Battlefield – (Some structures on Route 2 and Daves Store-Gemini Route partially visible), Source: GTTE, LLC

FIELD RECONNAISSANCE

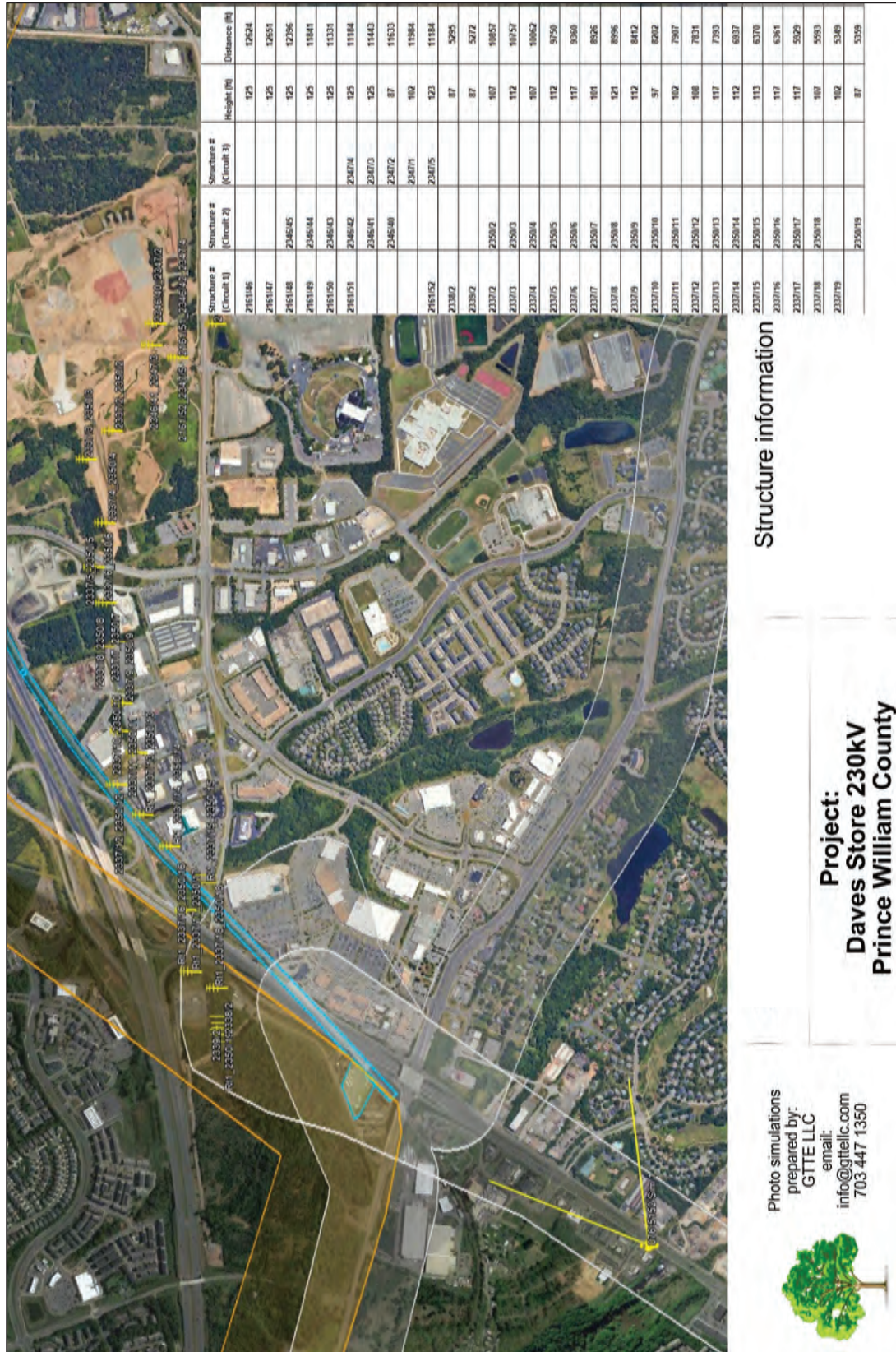


Figure 5-16: Location, direction of view, and structures modeled from Simulation location 2 for the Buckland Mills Battlefield. Source: GTTE, LLC



Figure 5-17: Existing view from the location of Simulation 2 for the Buckland Mills Battlefield. Source: GTTE, LLC



Photo simulations prepared by:
GTTE LLC
info@gttelc.com
703.447.1350

Daves Store 230kV Project
Prince William County

Photo Simulations and Diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.

Route 1

Proposed View
(Location of towers not visible are overlaid with yellow tower icons)



This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Figure 5-18: Proposed view of Route 1 from the location of Simulation 2 for the Buckland Mills Battlefield – (No Project components visible). Source: GTTE, LLC



Photo simulations
prepared by:
GTTE LLC
info@gttelc.com
703.447.1350

Daves Store 230kV Project
Prince William County

Photo Simulations and Diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.

Route 2

Proposed View
(Location of towers not visible are overlaid with yellow tower icon)



This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Figure 5-19: Proposed view of Route 2 from the location of Simulation 2 for the Buckland Mills Battlefield – (No Project components visible). Source: GTTE, LLC

VDHR# 076-0271

Manassas National Battlefield Park Historic District



The Manassas National Battlefield Park Historic District (Park) contains approximately 6,469.54 acres of Virginia landscape historically significant for its association with the First Battle of Manassas on July 21, 1861 and the Second Battle of Manassas on August 28-30, 1862. In the Reconstruction decades following the war, commemorative markers, cemeteries, and historical monuments began to grace the land that had only partially returned to its agricultural roots. Preservation and commemoration of this hallowed ground became a priority, ultimately prompting the creation of Manassas National Battlefield Park in 1940. The park consists of a relatively intact and minimally developed area of land surrounded by the rapidly developing region of western Prince William County. Land outside of the historic district boundaries has been described by the NPS (2009) as “fragmented and altered” and that it will most likely fade within the next five years due to rapid development. The park is divided by Lee Highway (US-29) as it travels east-west through the area. Further to the south is the I-66 corridor which delineates dense commercial and industrial development beyond. To the west is a dense suburban residential development on the outskirts of Haymarket. To the north and east of the park is typical mid-density rural development with a higher ratio of twentieth century homes and properties. In an effort to preserve and commemorate this ground, the Park was created in 1940 and was **listed in the NRHP** under Criterion A, B, C, and D in 1966.

The Manassas Battlefield Park Historic District is situated to the north and east of the Project study area, approximately 0.68 mile away from both route alternatives and 1.27 miles away from the Daves Store-Gemini Route at the nearest points. As such, there will be no direct impact to the district so assessment focused on indirect visual impacts. In order to assess the potential indirect impacts, a site visit was made to inspect existing conditions and the setting around and within the district, with emphasis on views towards the Project and associated improvements. As a large area, photographs were taken from representative vantage points throughout the district in proximity to

the Project where visibility would most likely be possible, as well as where existing views remain generally intact. The NPS previously conducted a study which identified viewshed anchor points within the park where visitors can observe the landscape much as it was at the time of the war with little nonhistoric intrusion. None of these points are located within one mile of any portion of the Project. Photographs were taken towards the Project alignment to document current conditions, lines of sight, and the extent of visibility of existing infrastructure. Photo simulation was also conducted from representative vantage points to model the visibility of proposed structures.

Inspection of the portion of the historic district in proximity to the Project revealed that it generally retains similar conditions and integrity to when it was listed in the NRHP, although is bordered by modern development. Only small portions of the battlefield park historic district are located within one mile of the Project. These include discrete areas at the extreme southwest corner of the park property and include a wooded area along the north side of Lee Highway (US-29) as well as an area bordering Pageland Lane. The portion of property bordering Pageland Lane is crossed by a wide (250 foot) transmission line ROW with six sets of parallel high-voltage 230kV structures. This portion of the park also abuts the north side of Interstate-66. The park headquarters is just north of this area and all interpretative trails, waysides, and viewshed anchor points are situated well to the north and east.

Inspection from the vicinity of the park headquarters and other vantages along Pageland Lane reveal that vegetation and development on the intervening landscape provide complete screening in the direction of the Project. While a variety of modern features are visible from this area, including other exiting high-voltage transmission lines, Interstate-66, and large-scale commercial development, the area beyond these intrusions where the Project study area is located is not visible. Inspection from further west along Lee Highway, in the vicinity of the Conway Robinson State Forest (which is located west of and outside of the Manassas Battlefield Park Historic District) revealed similar views of extensive modern development, however, the closer proximity to the Project may permit some limited visibility of associate improvements above the treelines and development in the distance. However, any visibility would be limited to discrete structures that would be seen amongst and behind other nonhistoric features.

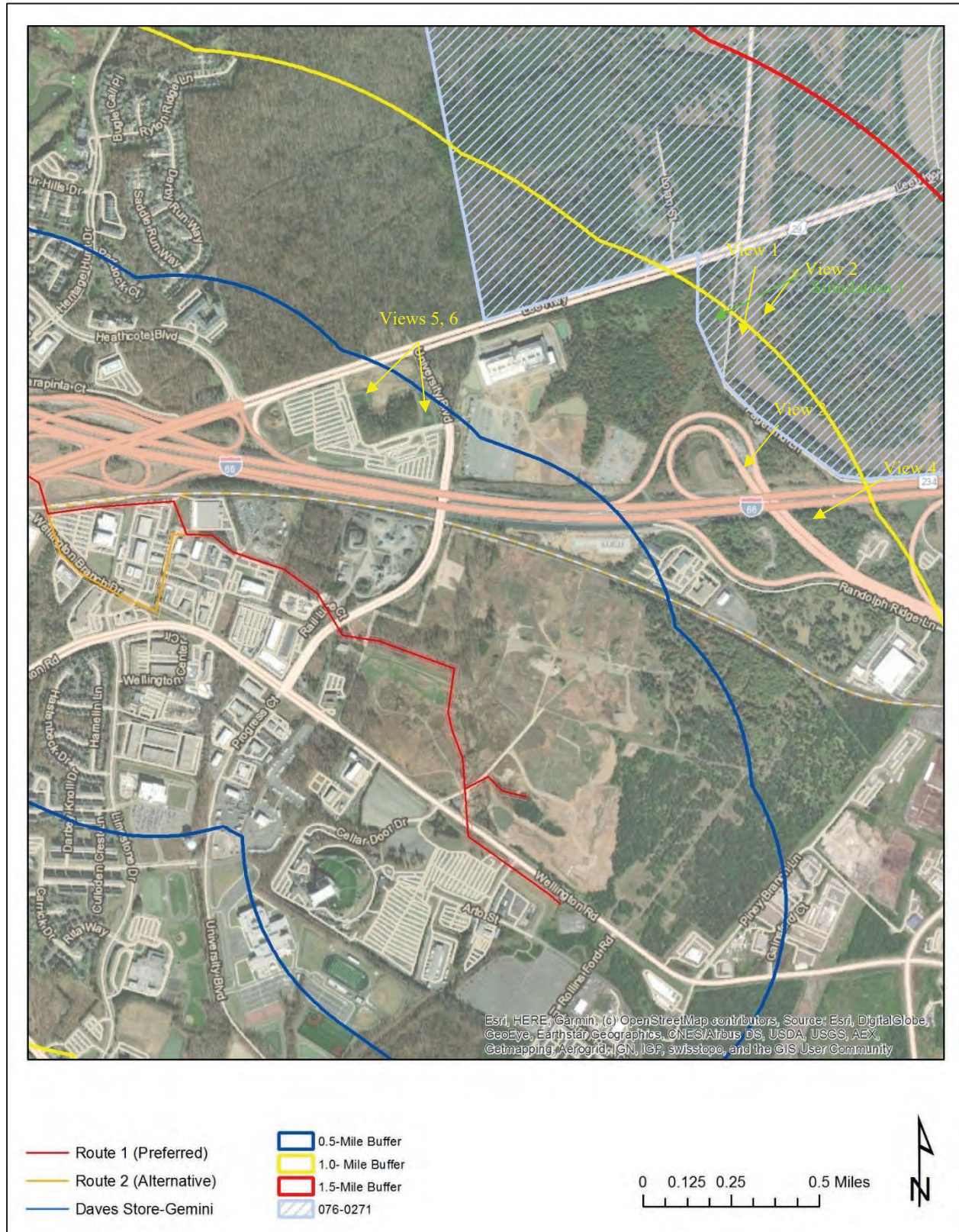
The existing structures on the other 230kV transmission lines in the area average 112 feet in height, while the proposed structures associated with this Project may range from approximately 73 to 122 feet tall with an average height of 102 feet.

As such, it is anticipated that there is the potential for visibility of a limited number of proposed transmission structures from discrete vantage points within and near the extreme western edge of the historic district where the setting and viewshed is already severely compromised. There is not expected to be any visibility or change in setting from more intact vantage points within the battlefield park, including from any NPS viewshed anchor points.

Therefore, the Project is not anticipated to introduce any noticeable change to the setting or viewshed of or from the historic district, and it is D+A's recommendation that the Project will result in **no impact** to the Manassas Battlefield Park Historic District per VDHR's impact characterization scale.

Figure 5-20 provides a detail of the portion of the historic district in the vicinity of the Project with the location and direction of all representative photographs and photo simulations. Figure 5-21 through Figure 5-26 are representative photographs of and from the battlefield towards the Project and Figure 5-27 through Figure 5-30 provide photo simulations of the Project from representative vantages.

RESULTS OF FIELD RECONNAISSANCE



RESULTS OF FIELD RECONNAISSANCE

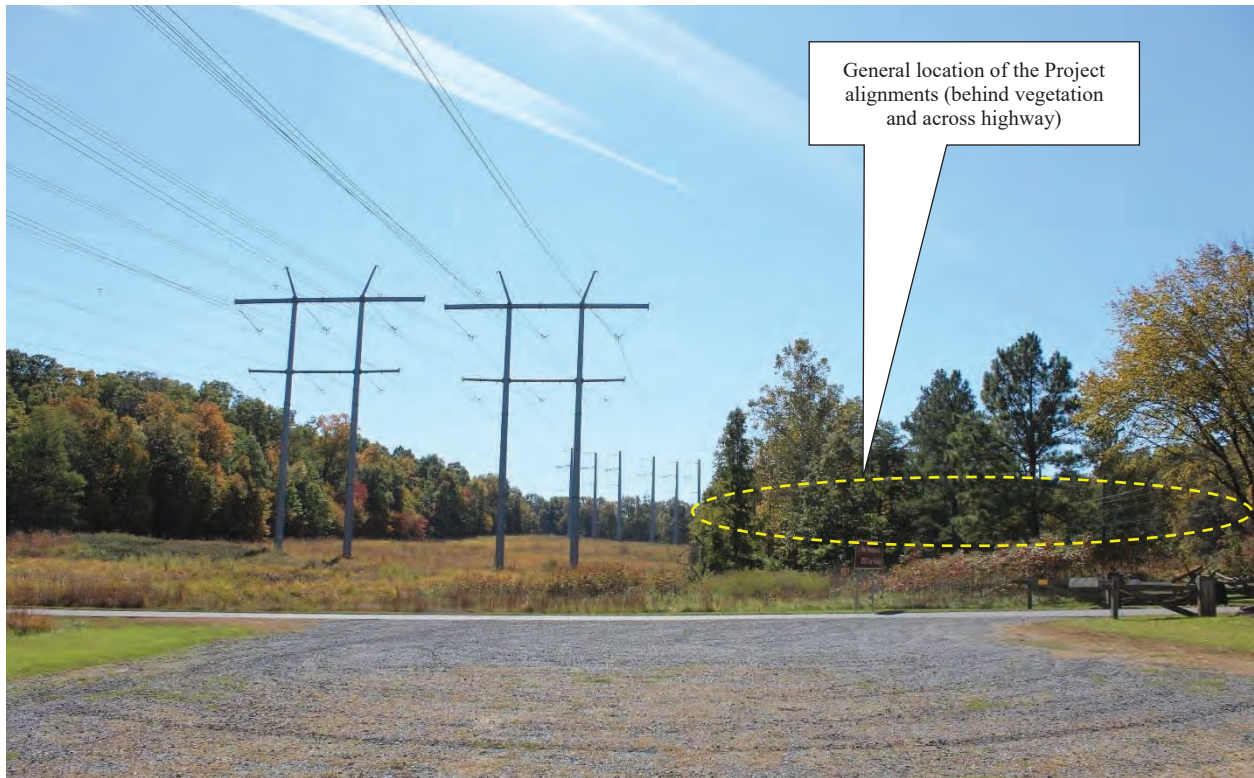


Figure 5-21: Photo location 1- View from entrance to park headquarters towards the Project, facing south (No expected visibility).

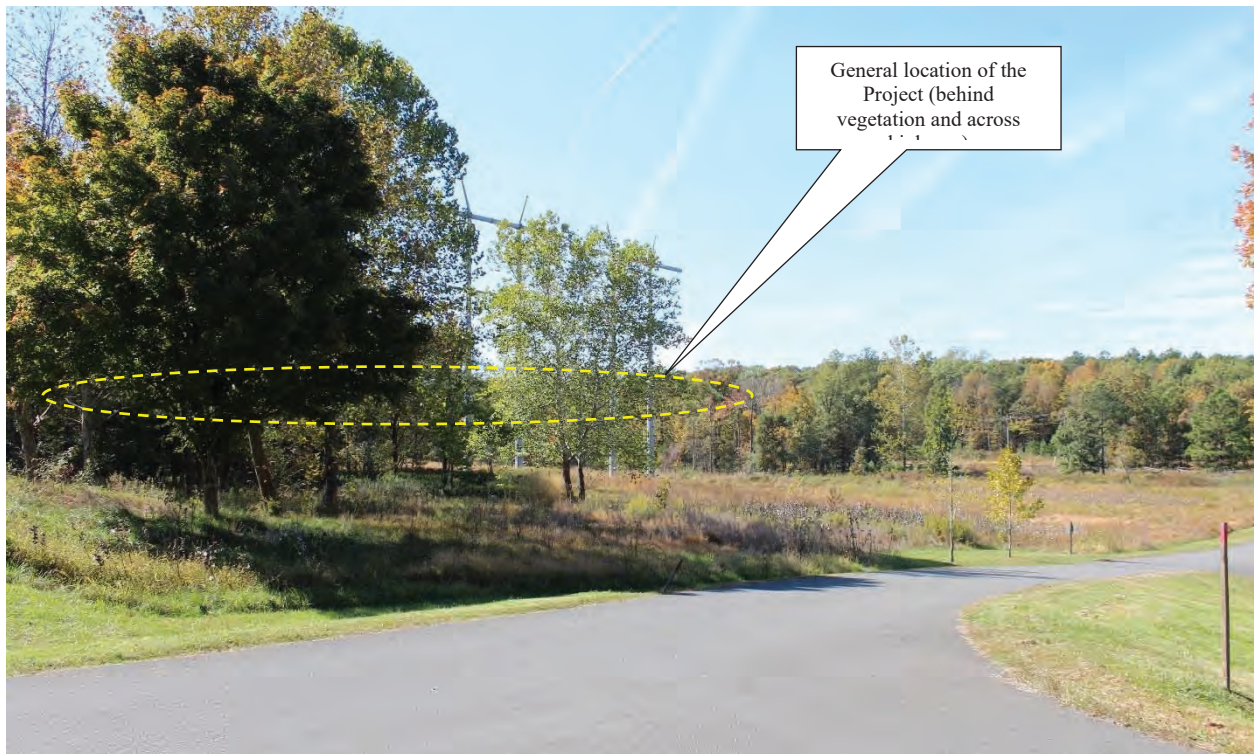


Figure 5-22: Photo location 2- View from park headquarters parking towards the Project, facing southwest (No expected visibility).

RESULTS OF FIELD RECONNAISSANCE



Figure 5-23: Photo location 3- View from Pageland Lane towards the Project, facing southwest (No expected visibility).



Figure 5-24: Photo location 4- View from Pageland Lane towards the Project, facing west (No expected visibility).

RESULTS OF FIELD RECONNAISSANCE



Figure 5-25: Photo location 5 – View from Conway Robinson State Forest entrance towards the Project, facing southwest (partial visibility possible above treeline and amongst other infrastructure)



Figure 5-26: Photo location 6- View from Conway Robinson State Forest entrance towards the Project, facing south (partial visibility possible above treeline and amongst other infrastructure).

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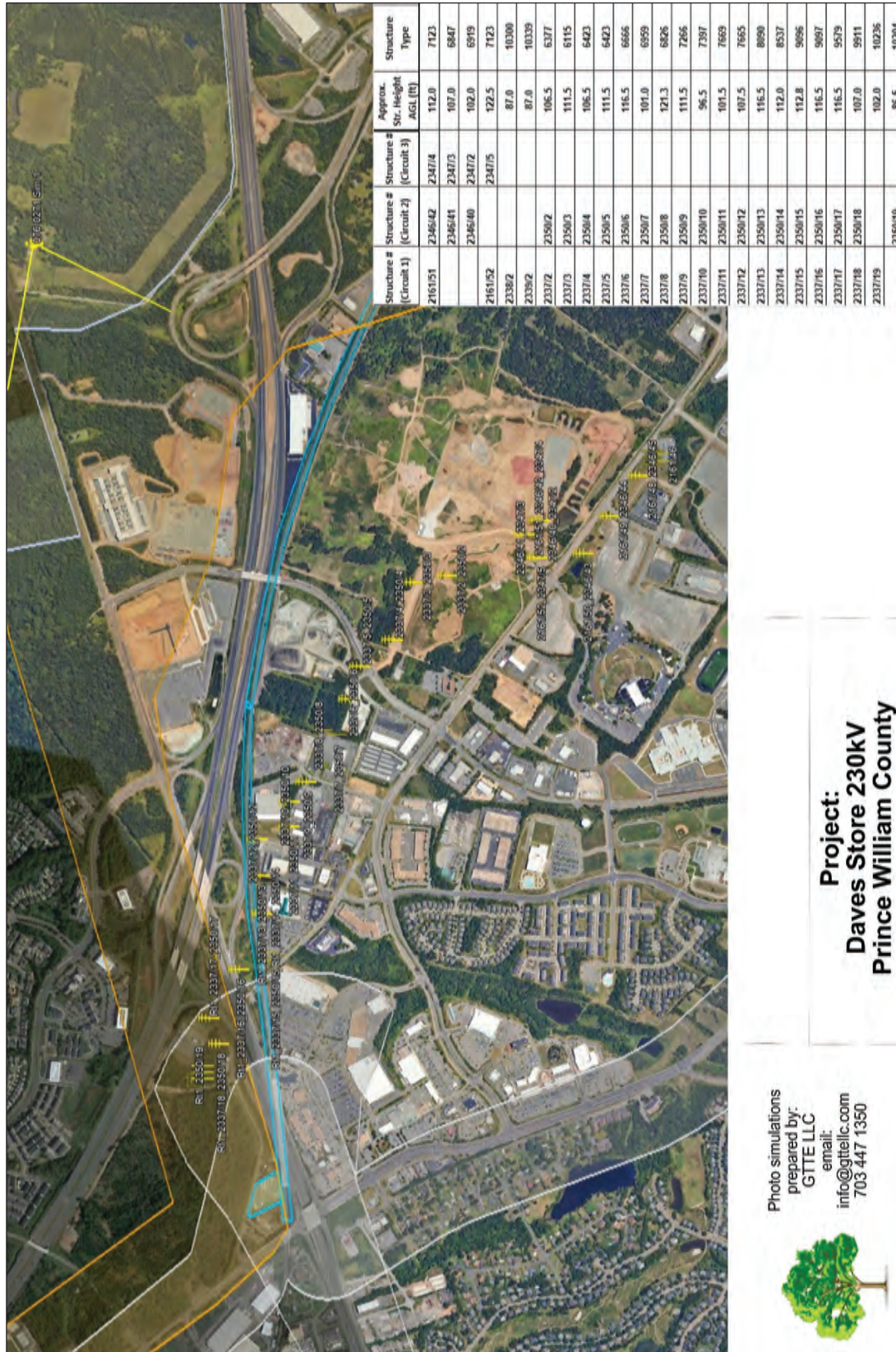


Figure 5-27: Location, direction of view, and structures modeled from Simulation location 1 within the Manassas Battlefield Park Historic District. Source: GTTE, LLC



Figure 5-28: Existing view from the location of Simulation 1 for the Manassas Battlefield Park Historic District. Source: GTTE, LLC



Figure 5-29: Proposed view of Route 1 from the location of Simulation 1 for the Manassas Battlefield Park Historic District– (No Project components visible). Source: GTTE, LLC



Figure 5-30: Proposed view of Route 2 from the location of Simulation 1 for the Manassas Battlefield Park Historic District– (No Project components visible). Source: GTTE, LLC

VDHR# 076-5035**Ody Cemetery, off Interstate-66**

The Ody cemetery is a small, family cemetery from the late-nineteenth century. The cemetery is believed to have African American affiliation and contains at least one and possibly multiple internments of individuals that lived through the abolition of slavery in an area in which slavery was an active practice, and may contain unmarked graves of additional individuals. Few late-nineteenth African-American interment areas have been recorded in this region, and fewer have been determined to be eligible for the NRHP. As a result, VDHR determined the resource ***potentially eligible for listing in the NRHP*** in 2015.

The cemetery is situated to the north of the Project study area, approximately 0.17 mile away from both route alternatives at the nearest point, and over 0.87 miles away from the Daves Store-Gemini Route. As such, there will be no direct impact to the property so assessment focused on indirect visual impacts. Because the cemetery is located between and adjacent to I-66 and the Norfolk Southern Railroad, it is not publicly-accessible, so impacts assessment was limited to review of aerial photography and streetview imagery, coupled with site inspection from nearby vantage points.

Review of aerial photography reveals that the cemetery is set in a thin treeline immediately bordered by both the highway ROW and railroad corridor within a severely diminished historic setting. Between the resource and the Project study area is extensive large-scale commercial development, raised road and highway corridors, and patches of woodland and treeline. Streetview imagery from the I-66 corridor nearby revealed that the treeline bordering the highway in which the cemetery is located largely screens views in the direction of the Project. Inspection from parking lots associated with the nearby commercial properties revealed partially unobstructed views in some directions towards the Project area with more inhibited views in other directions.

As such, it is anticipated that there is the potential for some limited visibility of the Project and a number of proposed transmission structures from some vantage points in the vicinity of the cemetery, however, the cemetery itself is not publicly-accessible so views from it would not be possible for the general public. The setting and viewshed in which visibility is possible is already severely compromised by existing modern development with additional ongoing construction in which the Project would be seen amongst and behind.

Therefore, the Project is not anticipated to introduce any substantial change to the setting or viewshed of or from the property, or detract from those qualities and characteristics that make it potentially eligible for listing in the NRHP, and it is D+A's recommendation that the Project will result in no more than a ***minimal impact*** to the Ody Cemetery per VDHR's impact characterization scale.

Figure 5-31 provides a detail of the Ody Cemetery with the location and direction of all representative photographs. Figure 5-32 and Figure 5-33 are representative photographs of and from the cemetery towards the Project.

RESULTS OF FIELD RECONNAISSANCE



Figure 5-31: Detail of Ody Cemetery in relation to the Project study area with location of representative photographs and views towards the Project area depicted in yellow.

RESULTS OF FIELD RECONNAISSANCE



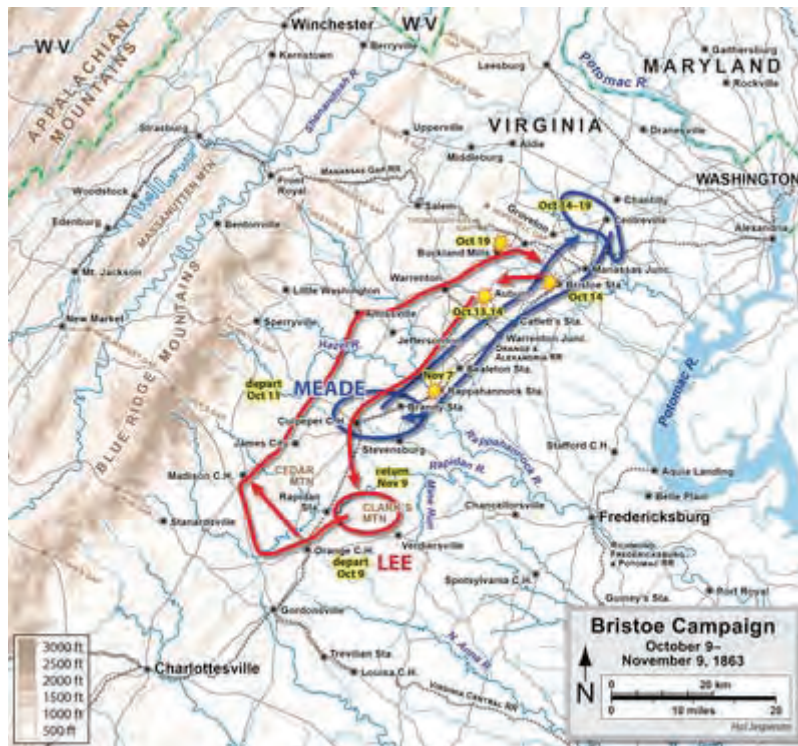
Figure 5-32: Photo location 1- View from Daves Store Lane towards the Project, facing east (partial visibility above and three intervening vegetation and development).



Figure 5-33: Photo location 2- View from Daves Store Lane towards the Project, facing northeast (partial visibility above and three intervening vegetation and development).

VDHR ID# 076-5036

Manassas Station Operations Battlefield



The Manassas Station Operations Battlefield, also known as the Bristoe Station Battlefield, is a Civil War battlefield that dates to 1862. The battlefield consists of the sites of four smaller actions that led up to the Second Battle of Manassas on August 29-30, 1862. Together, these engagements are referred to as the Manassas Station Operations. On August 25th, Confederate General “Stonewall” Jackson moved his force of 20,000 soldiers from Cedar Mountain in hopes of stopping Union General John Pope’s army from heading south. On August 25th, Jackson moved east toward Bristoe Station and attacked a Union garrison there the next day. He then moved toward Manassas Junction on August 27th. The Confederates engaged with the Union Army under General John Pope at Union Mills, which was arriving in piecemeal. A separate portion of the Confederate Army under General Richard Ewell also engaged with a Union force at Kettle Run, before moving to Manassas Junction to meet with Jackson’s force. After pushing back Union forces, the Confederates were able to take a defensive position at Manassas and wait for the remainder of General Lee’s army to arrive. As a result of these events’ association with the Second Battle of Manassas, the battlefield is considered **potentially eligible** for listing in the NRHP.

The Manassas Station Operations Battlefield encompasses a large area relating to troops movements and areas of fighting. The battlefield is generally situated to the south of the Project study area, although portions of the Project are located within the delineated limits of the battlefield. This includes a portion of the Daves Store-Gemini Route, but none of the route alternatives. The portion of the battlefield in which Project components are located is a part of the *study area* as delineated by the ABPP. This portion of the battlefield is not included within the

potential-National Register area as delineated by the ABPP, nor does it include any portion of *battlefield core area*, the nearest portion of which is over one mile away.

As such, there will be a direct impact to the landscape of the battlefield as a result of the construction of the Daves Store-Gemini Route and a short portion of both route alternatives, however, this area has already been substantially compromised by nonhistoric development and disturbance and there are no known archaeological sites, earthworks, or contemporary battlefield features within the Project area.

Because the battlefield borders the Project area, there is also the potential for indirect or visual impacts. In order to assess the potential indirect impacts, a site visit was made to the battlefield to inspect existing conditions and the setting around and within the vicinity of the Project study area, with emphasis on views towards the Project and associated improvements. Photographs were taken from representative vantage points throughout the battlefield towards the Project components to document current conditions, lines of sight, and the extent of visibility of existing similar infrastructure. Photo simulation was also conducted from representative vantage points to model the visibility of proposed transmission structures.

Inspection revealed that the portion of the battlefield in the vicinity of the Project is heavily fragmented by modern development. The delineated boundaries of the battlefield in this area generally consist of a narrow corridor bordering Linton Hall Road and John Marshall Highway representing an “avenue of approach” to the battle. The modern roads have been widened and portions elevated, and are now both bordered by extensive suburban commercial development. The Project improvements within the battlefield include a portion of both Project alternatives and the Daves Store-Gemini Route, all of which is within what is currently an undeveloped tract of land adjacent to an existing electrical substation at the intersection of Lee Highway and Interstate-66. Views from and towards the Project are characterized by a disturbed landscape and variety of small and large-scale development, and extensive infrastructure including multiple existing high-voltage transmission lines and structures.

Generally, views in the area are short and interrupted by the dense development patterns, however, existing transmission structures on other lines, as well as communications towers and other tall vertical features may be seen through gaps in development and above rooflines from some vantage points.

The existing structures on the other 230kV transmission lines in the area average 112 feet in height, while the proposed structures associated with this Project may range from approximately 73 to 122 feet tall with an average height of 102 feet.

As such, it is anticipated that there is the potential for visibility of a limited number of proposed transmission structures from discrete vantage points within and around the portion of the battlefield in the vicinity of the Project; however, this area already has a heavily compromised setting. For this reason, this portion of the battlefield is not considered a part of the potentially National Register eligible boundary by the ABPP. Where visible, the proposed structures would be seen amongst an extensive amount of other modern development, and because of the sporadic views from only discrete vantages, would not likely be noticeable as a substantial or cumulative change.

Therefore, the Project is not anticipated to introduce any significant change to the setting or viewshed of or from the battlefield, and it is D+A's recommendation that the Project will result in no more than a ***minimal impact*** to the Manassas Station Operations Battlefield per VDHR's impact characterization scale.

Figure 5-34 depicts the overall limits of the Manassas Station Operations Battlefield in relation to the Project and viewshed buffers, and Figure 5-35 provides a detail of the portion of the battlefield in the vicinity of the Project with the location and direction of all representative photographs and photo simulations. Figure 5-36 through Figure 5-45 are representative photographs of and from the battlefield towards the Project and Figure 5-46 through Figure 5-57 provide photo simulations of the Project from representative vantages.

RESULTS OF FIELD RECONNAISSANCE

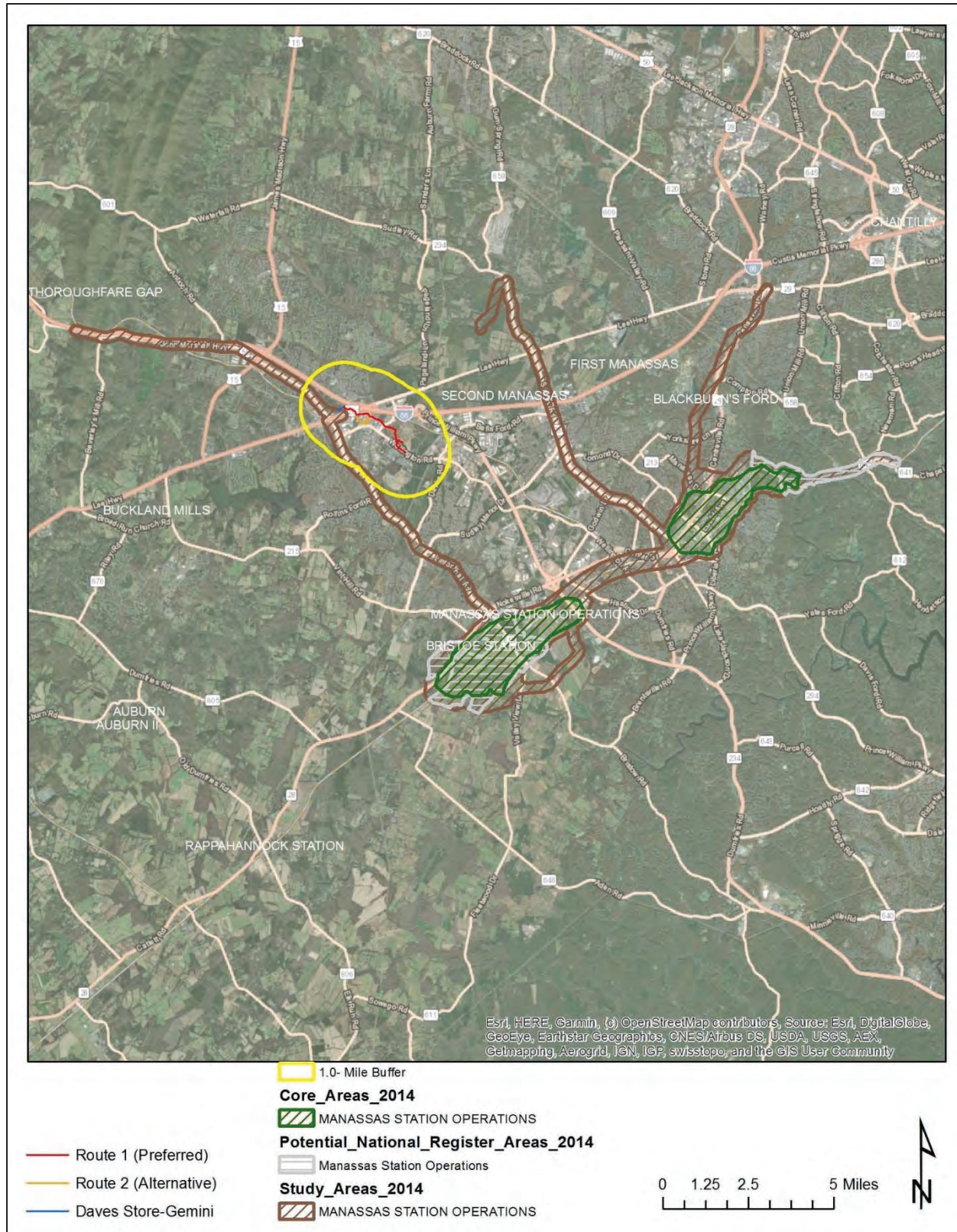


Figure 5-34: Overall limits of the Manassas Station Operations Battlefield with ABPP delineated tiers in relation to the Project study area. Source: VCRIS

RESULTS OF FIELD RECONNAISSANCE

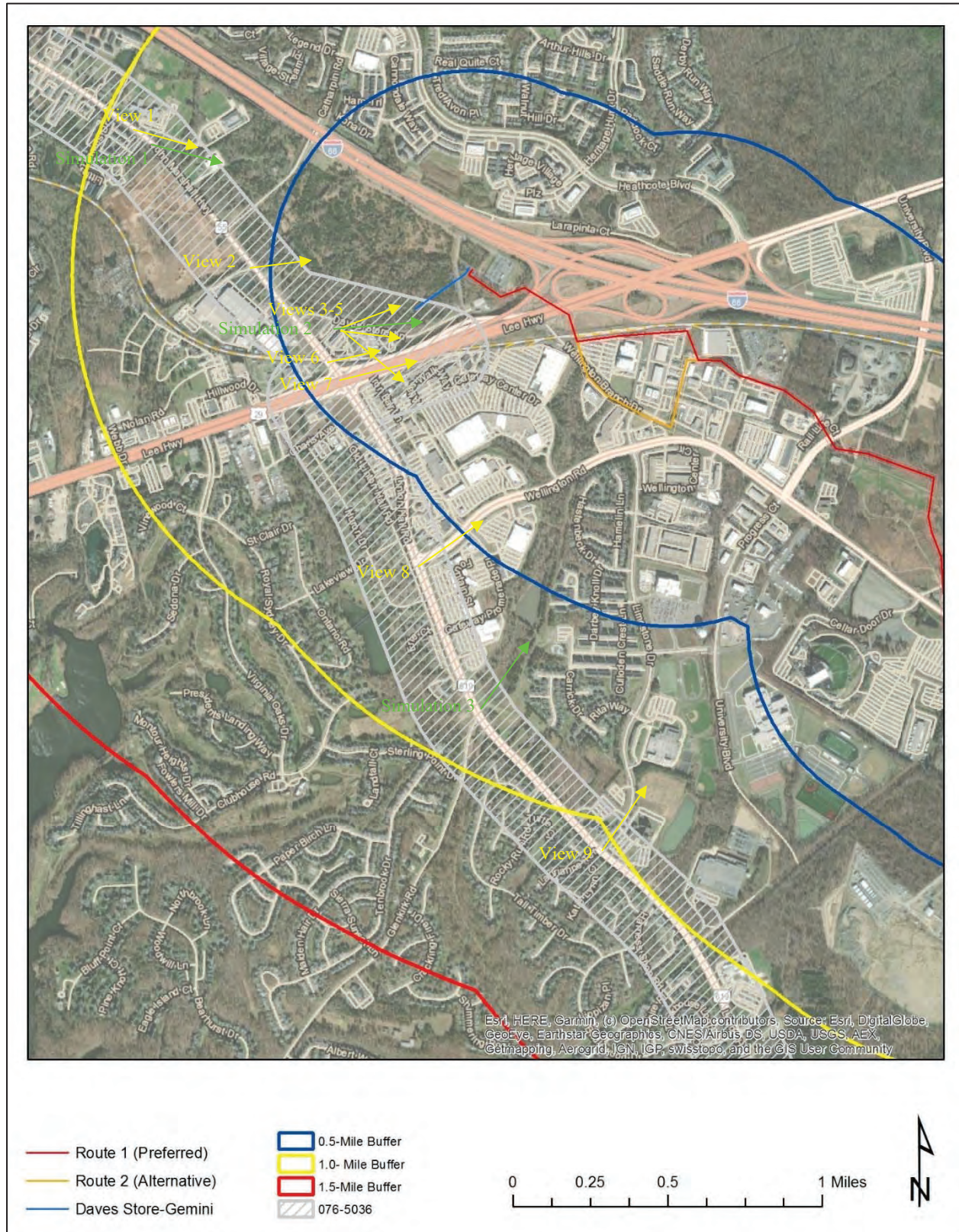


Figure 5-35: Detail of the Manassas Station Operations Battlefield with representative photographs and views towards the Project depicted in yellow and photo simulations depicted in green.

RESULTS OF FIELD RECONNAISSANCE



Figure 5-36: Photo location 1- View from John Marshall Highway at George C Tyler School towards the Project, facing east (No expected visibility).



Figure 5-37: Photo location 2- View from John Marshall Highway at Gaines United Methodist Church Cemetery towards the Project, facing east (No expected visibility).

RESULTS OF FIELD RECONNAISSANCE



Figure 5-38: Photo location 3- View from Daves Store Lane towards the Project, facing north (Daves Store-Gemini Route not visible beyond vegetation).

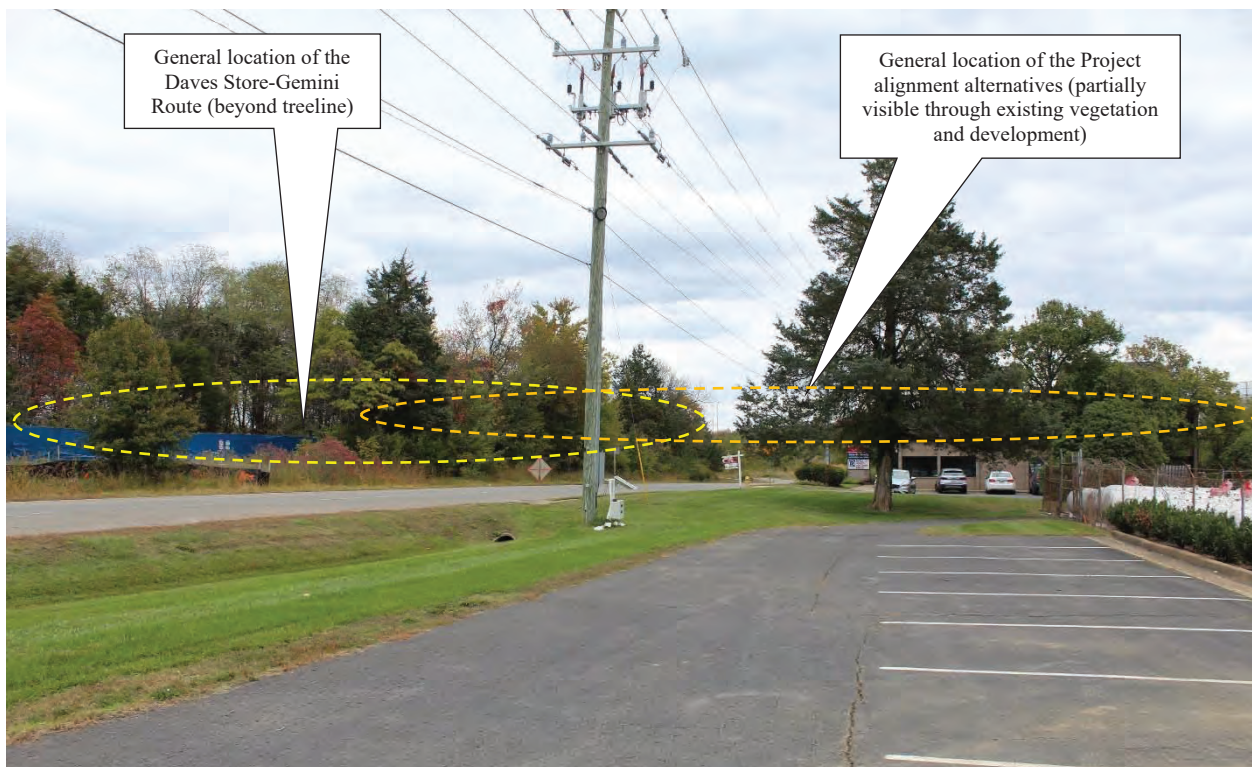


Figure 5-39: Photo location 4- View from Daves Store Lane towards the Project, facing northeast (Daves Store-Gemini Route not visible; both route alternatives mostly screened with limited potential for visibility).

RESULTS OF FIELD RECONNAISSANCE



Figure 5-40: Photo location 5- View from Daves Store Lane towards the Project, facing east (No expected visibility).



Figure 5-41: Photo location 6- View from Linton Hall Road overpass towards the Project, facing east (Partially visible above and amongst other infrastructure and development).

RESULTS OF FIELD RECONNAISSANCE

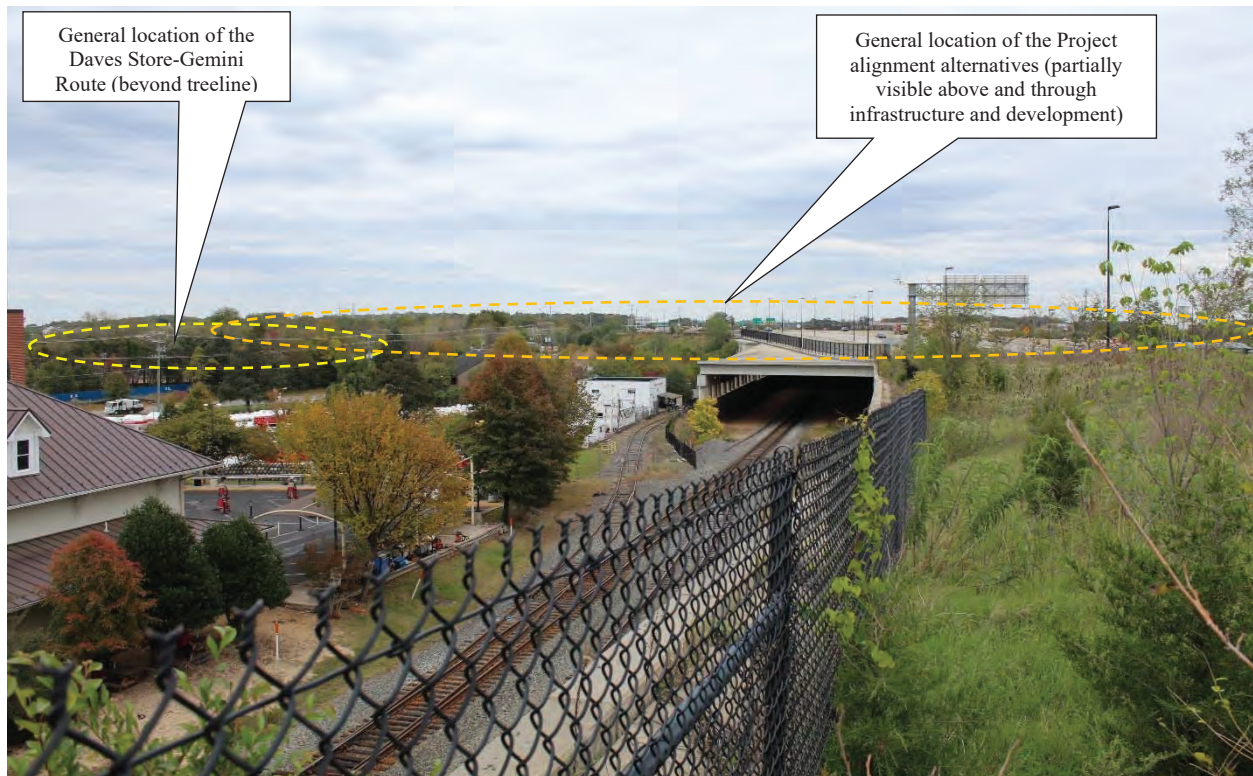


Figure 5-42: Photo location 7- View from W Main Street towards the Project, facing east (Partially visible above and amongst other infrastructure and development).

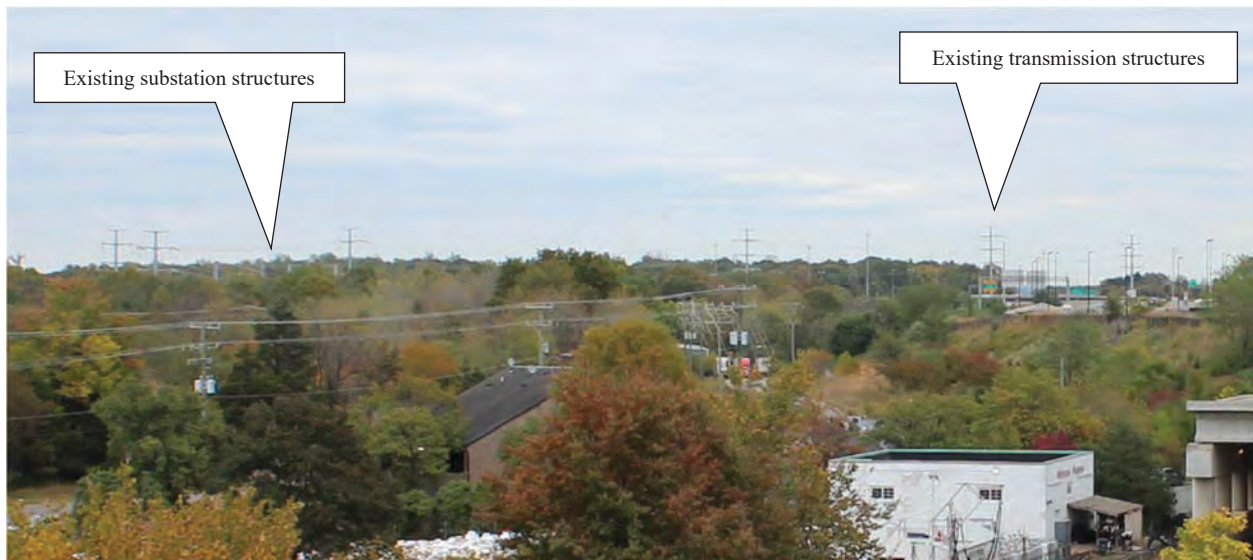


Figure 5-43: Detail of Photo location 7- Existing substation and transmission structures in area.

RESULTS OF FIELD RECONNAISSANCE



Figure 5-44: Photo location 8- View from Linton Hall Road at Wellington Road towards the Project, facing northeast (No expected visibility).



Figure 5-45: Photo location 9- View from Linton Hall Road at Limestone Drive towards the Project, facing north (No expected visibility).



Figure 5-46: Location, direction of view, and structures modeled from Simulation location 1 within the Manassas Station Operations Battlefield. Source: GTTE, LLC



Figure 5-47: Existing view from the location of Simulation 1 for the Manassas Station Operations Battlefield. Source: GTTE, LLC



Photo simulations prepared by: GTTE LLC email: info@gttelc.com 703.447.1350	Daves Store 230kV Project Prince William County	Route 1	Proposed View (Location of towers not visible are overlaid with yellow tower icon)	This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.	This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.
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Figure 5-48: Proposed view of Route 1 from the location of Simulation 1 for the Manassas Station Operations Battlefield – (No Project components visible). Source: GTTE, LLC



Photo simulations
prepared by:
GTTE LLC
email:
info@gttelc.com
703.447.1350

Daves Store 230kV Project
Prince William County

Photo Simulations and Diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.

Route 2

Proposed View

(Location of towers not visible are overlaid with yellow tower icon)

This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.



Figure 5-49: Proposed view of Route 2 from the location of Simulation 1 for the Manassas Station Operations Battlefield – (No Project components visible). Source: GTTE, LLC

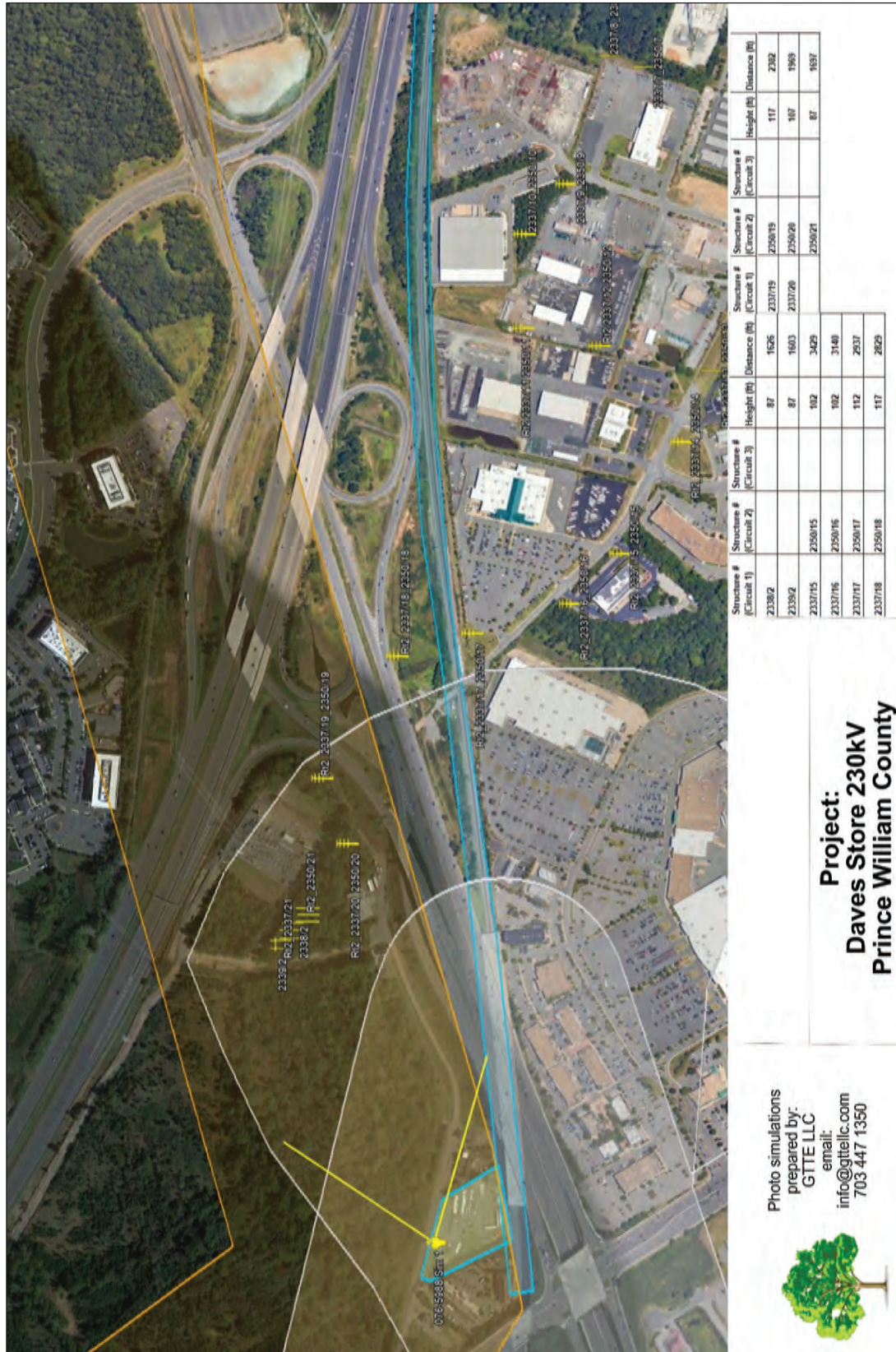


Figure 5-50: Location, direction of view, and structures modeled from Simulation location 2 for the Manassas Station Operations Battlefield. Source: GTTE, LLC



Figure 5-51: Existing view from the location of Simulation 2 for the Manassas Station Operations Battlefield. Source: GTTE, LLC



Figure 5-52: Proposed view of Route 1 from the location of Simulation 2 for the Manassas Station Operations Battlefield – (Some structures on Route 1 and Daves Store-Gemini Route partially visible). Source: GTTE, LLC



Figure 5-53: Proposed view of Route 2 from the location of Simulation 2 for the Manassas Station Operations Battlefield – (Some structures on Route 1 and Daves Store-Gemini Route partially visible). Source: GTTE, LLC

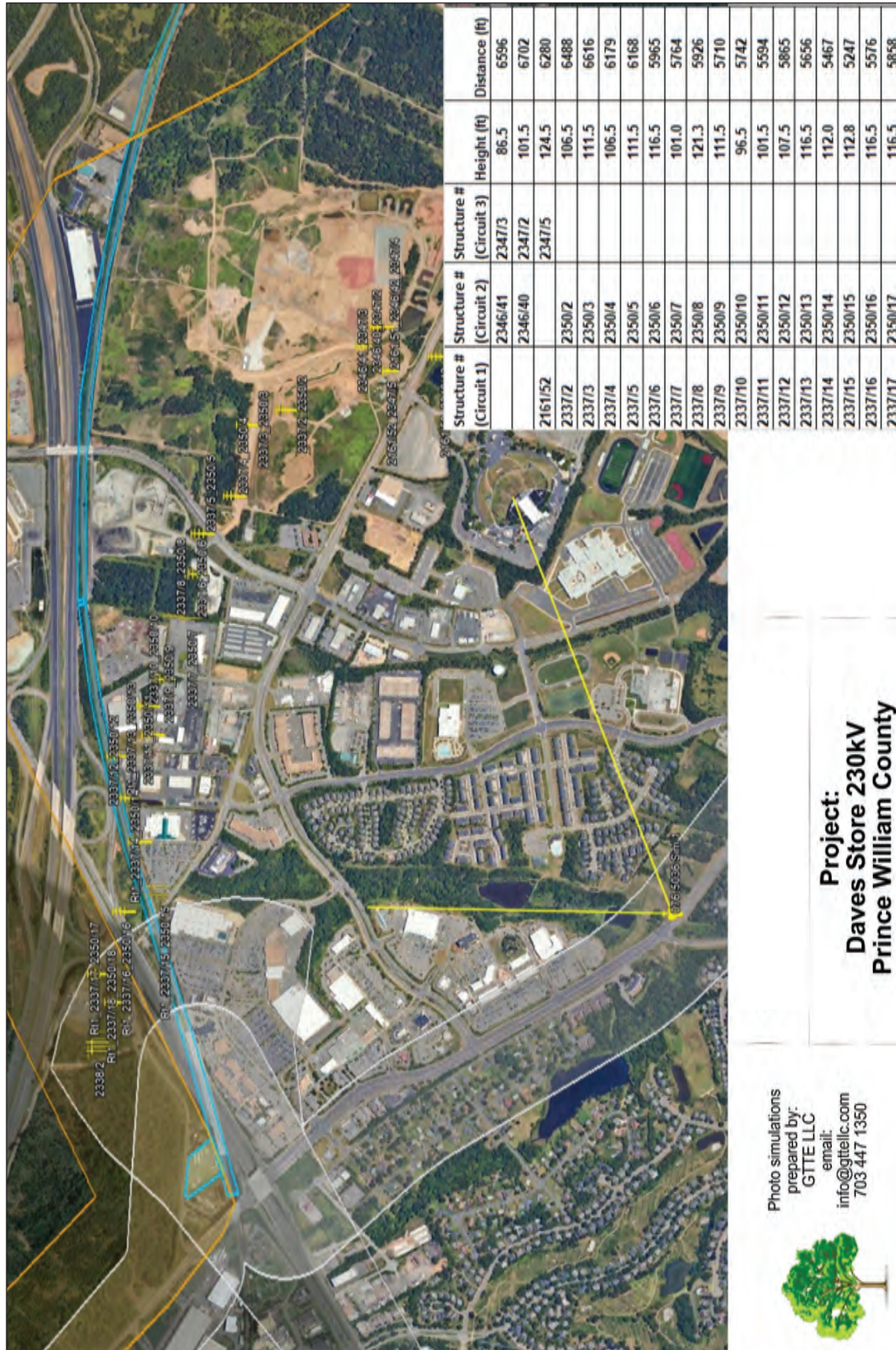


Figure 5-54: Location, direction of view, and structures modeled from Simulation location 3 for the Manassas Station Operations Battlefield. Source: GTTE, LLC



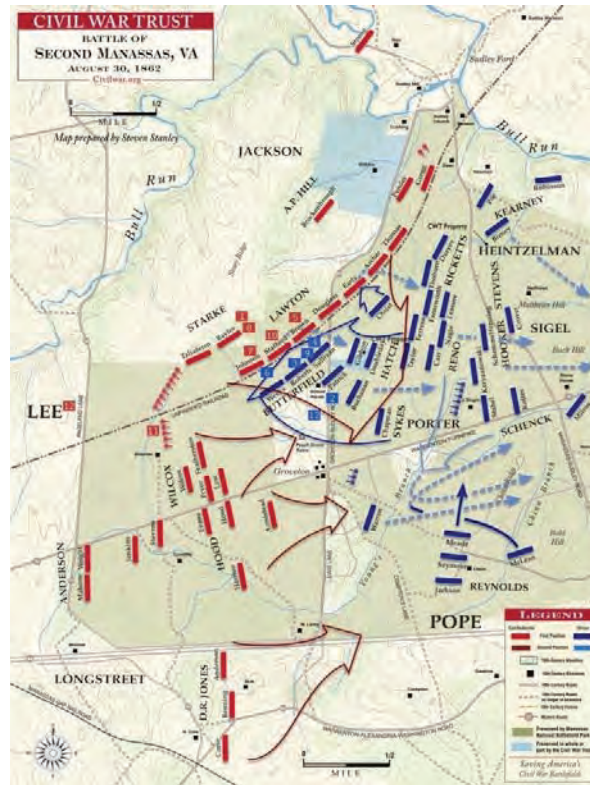
Figure 5-55: Existing view from the location of Simulation 3 for the Manassas Station Operations Battlefield. Source: GTTE, LLC



Figure 5-56: Proposed view of Route 1 from the location of Simulation 3 for the Manassas Station Operations Battlefield – (No Project components visible). Source: GTTE, LLC



Figure 5-57: Proposed view of Route 2 from the location of Simulation 3 for the Manassas Station Operations Battlefield – (No Project components visible). Source: GTTE, LLC

VDHR# 076-5190
Second Battle of Manassas

The Second Battle of Manassas was fought August 28-30, 1862, approximately one year after the First Battle of Manassas. Following burning of the Union stores at Manassas Junction, Stonewall Jackson attacked a section of John Pope's army near Brawner's Farm and shortly thereafter the engagement ended in a stalemate. The next day, Pope attacked Jackson but was devastated by the Confederate Artillery and ultimately Pope retreated. An estimated 22,180 men lost their lives between the two sides. A large portion of the land upon which the Second Battle of Manassas took place has been preserved by the National Park Service as part of the Manassas Battlefield Historic District. Other sections of the land outside of Park Service control have been heavily developed. In 2007, VDHR recommended this battlefield **eligible for listing in the NRHP** under Criterion A for its association with the Civil War in Virginia.

The Second Battle of Manassas battlefield as defined by the NPS is a large landscape that encompasses approximately 17,346 acres relating to troops movements and areas of fighting centered on the intersection of Lee Highway and Groveton Road. Much of the battlefield area is situated to the north and east of the Project study area, although a narrow corridor along Lee Highway (US-29) that represents an "avenue of approach" to the battle is located in closer proximity to the Project with some portions of the Project within the battlefield boundaries. This includes a short length of both Project route alternatives and the length of the Daves Store-Gemini Route. The portion of the battlefield in which Project components are located is a part of the *study area* as delineated by the ABPP. This portion of the battlefield is not included within the *potential-*

National Register area as delineated by the ABPP, nor does it include any portion of battlefield *core area*, the nearest portion of which is nearly one mile away.

As such, there will be a direct impact to the landscape of the battlefield as a result of the construction of the Daves Store-Gemini Route and a portion of the Project alternative routes, however, this area has already been substantially compromised by nonhistoric development and disturbance and there are no known archaeological sites, earthworks, or contemporary battlefield features within the Project area.

Because the battlefield borders the Project area and additional portions are located within one mile, there is also the potential for indirect or visual impacts. In order to assess the potential indirect impacts, a site visit was made to the battlefield to inspect existing conditions and the setting around and within the vicinity of the Project study area, with emphasis on views towards the Project and associated improvements. Photographs were taken from representative vantage points throughout the battlefield towards the Project components to document current conditions, lines of sight, and the extent of visibility of existing similar infrastructure. Photo simulation was also conducted from representative vantage points to model the visibility of proposed transmission structures.

Inspection revealed that the portion of the battlefield in which the Project is located is heavily fragmented by modern development. The delineated boundaries of the battlefield in this area generally consist of a narrow corridor bordering Lee Highway (US-29) representing an “avenue of approach” to the battle. The modern road has been widened and is now bordered by suburban commercial development south of Interstate-66. The Project improvements within the battlefield include a short length of both Project alternatives and the Daves Store-Gemini Route, all of which are sited within what is currently an undeveloped tract of land adjacent to an existing electrical substation at the intersection of Lee Highway and Interstate-66. Views from and towards the Project are characterized by a disturbed landscape and variety of small and large-scale development, and extensive infrastructure including multiple existing high-voltage transmission lines and structures.

Inspection of portions of the battlefield within one mile revealed a mix of developed and undeveloped areas. Portions of the “avenue of approach” north of Interstate-66 overlap the Conway Robinson State Forest which remains wooded. The portions of the battlefield further northeast that are within the area preserved as the Manassas Battlefield Park retain better historical integrity, however, only small portions of this area are located within one mile of the Project, including an area along Pageland Road that is bordered by an existing 230-kV Transmission line and the highway. Additional portions of the battlefield south of Interstate-66 and north of Wellington Road are densely built with a mix of commercial, residential, and ongoing development.

Generally, views in the area are short and interrupted by the dense development patterns, however, existing transmission structures on other lines, as well as communications towers and other tall vertical features may be seen through gaps in development and above rooflines from some vantage points. These longer distant views tend to be set along elevated road vantages such as the Lee Highway/Linton Hall Road overpass and the University Boulevard/I-66 overpass. Other areas

where more distant visibility, and therefore potential views of the Project are possible include across large parking lots and other areas recently cleared for development.

The existing structures on the other 230kV transmission lines in the area average 112 feet in height, while the proposed structures associated with this Project may range from approximately 73 to 122 feet tall with an average height of 102 feet.

As such, it is anticipated that there is the potential for visibility of a limited number of proposed transmission structures from discrete vantage points within and around the portion of the battlefield within one mile of Project; however, most of this area already has a heavily compromised setting. For this reason, only a small portion of the battlefield within one mile of the Project, primarily within the Manassas National Battlefield Park, is considered potentially National Register by the ABPP. Where visible, the proposed structures would be seen amongst an extensive amount of other modern development, and because of the sporadic views from only discrete vantages, would not likely be noticeable as a substantial or cumulative change.

Therefore, the Project is not anticipated to introduce any significant change to the setting or viewshed of or from the battlefield, and it is D+A's recommendation that the Project will result in no more than a ***minimal impact*** to the Second Manassas Battlefield per VDHR's impact characterization scale.

Figure 5-58 illustrates the overall limits of the Second Manassas Battlefield in relation to the Project area and viewshed buffers, and Figure 5-59 provides a detail of the portion of the battlefield in the vicinity of the Project with the location and direction of all representative photographs and photo simulations. Figure 5-60 through Figure 5-68 are representative photographs of and from the battlefield towards the Project and Figure 5-69 through Figure 5-87 provide photo simulations of the Project from representative vantages.

RESULTS OF FIELD RECONNAISSANCE

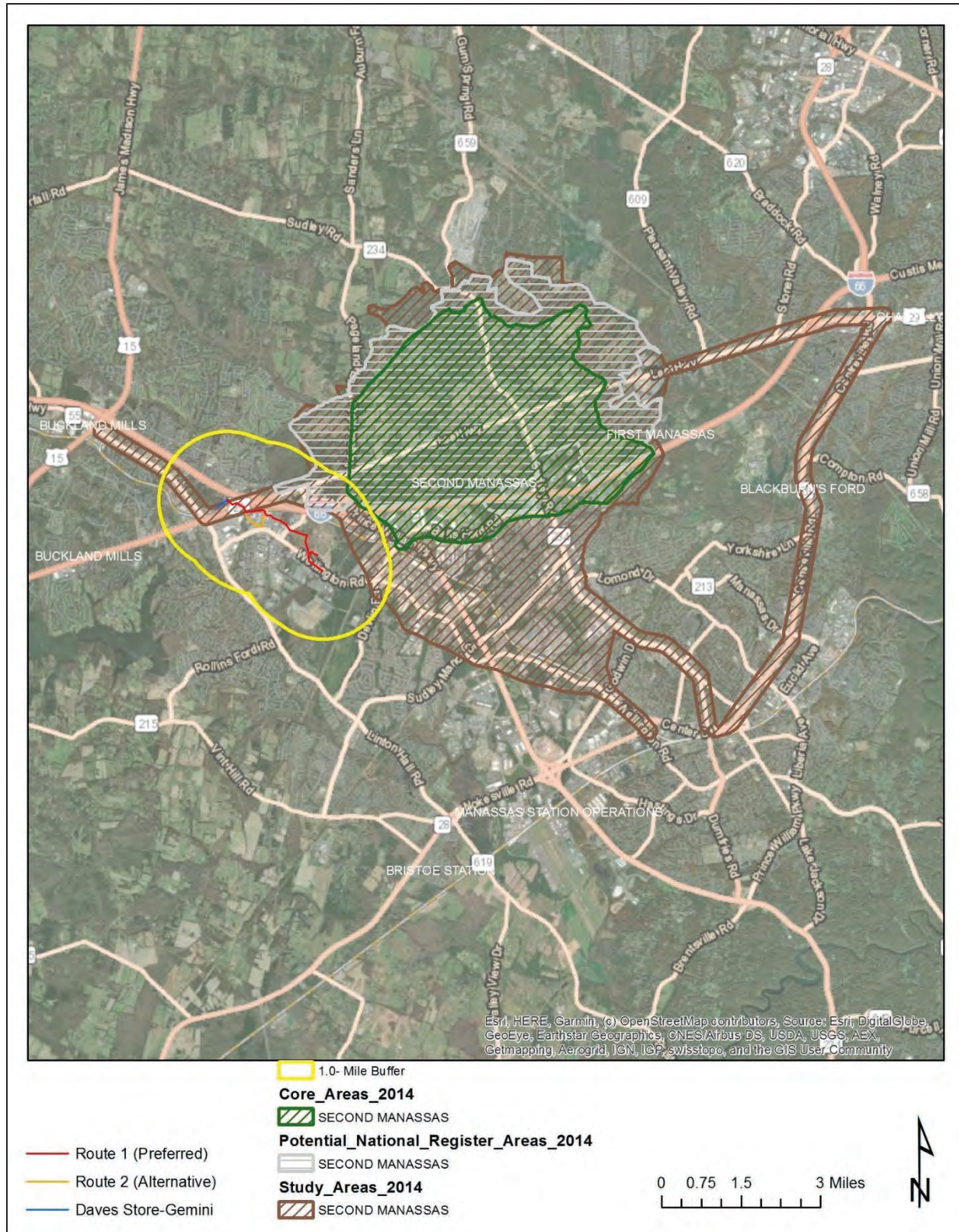


Figure 5-58: Overall limits of the Second Manassas Battlefield with ABPP delineated tiers in relation to the Project study area. Source: VCRIS

Figure 5-59: Detail of Second Manassas Battlefield in relation to the Project study area with location of representative photographs and views towards the Project area depicted in yellow and photo simulations depicted in green.

RESULTS OF FIELD RECONNAISSANCE



Figure 5-60: Photo location 1- View from John Marshall Highway at George C Tyler School towards the Project, facing east (No expected visibility).



Figure 5-61: Photo location 2- View from John Marshall Highway at Gaines United Methodist Church Cemetery towards the Project, facing east (No expected visibility).

RESULTS OF FIELD RECONNAISSANCE



Figure 5-62: Photo location 3 – View from Conway Robinson State Forest entrance towards the Project, facing southwest (partial visibility possible above treeline and amongst other infrastructure)



Figure 5-63: Photo location 4- View from Conway Robinson State Forest entrance towards the Project, facing south (partial visibility possible above treeline and amongst other infrastructure).



Figure 5-64: Photo location 5- View from University Boulevard at I-66 towards the Project, facing southwest (partial visibility possible above treeline and amongst other infrastructure).

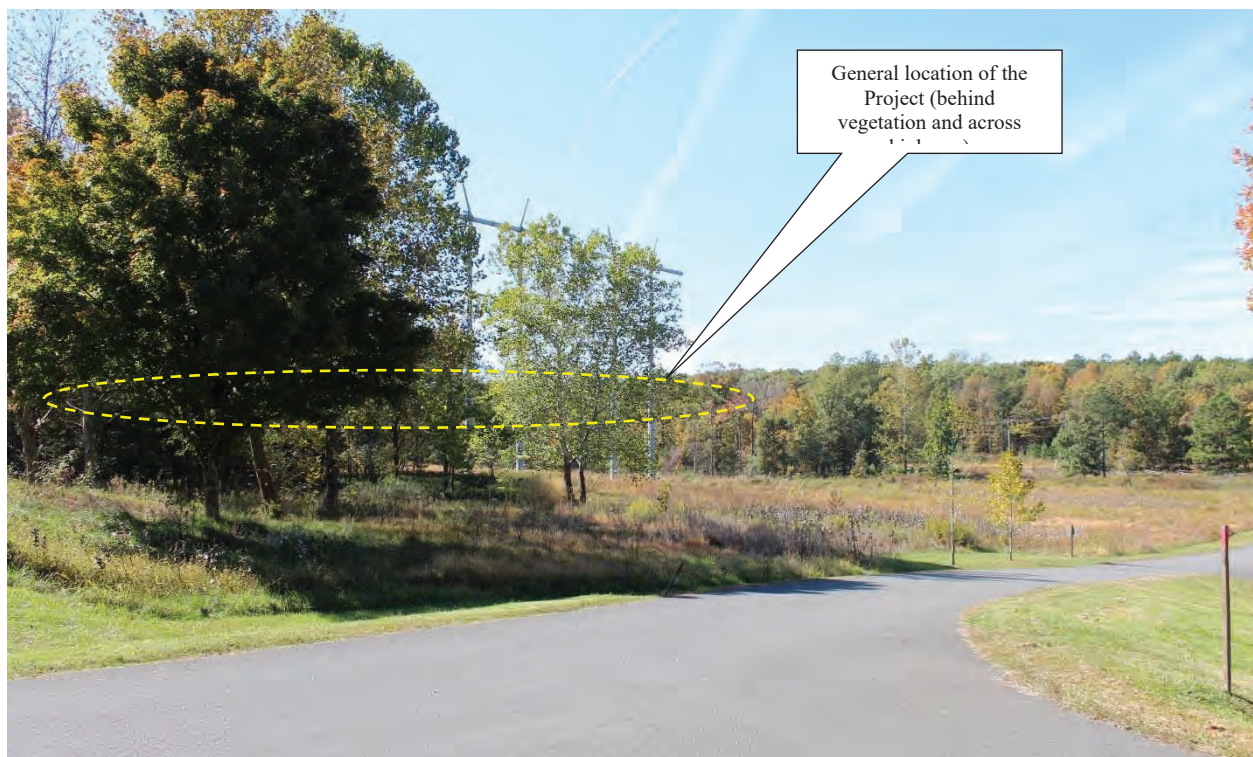


Figure 5-65: Photo location 6- View from Manassas Battlefield Park headquarters parking towards the Project, facing southwest (No expected visibility).

RESULTS OF FIELD RECONNAISSANCE



Figure 5-66: Photo location 7- View from Randolph Ridge Lane towards the Project, facing west (No expected visibility).



Figure 5-67: Photo location 8- View from Piney Branch Lane towards the Project, facing west (No expected visibility).

RESULTS OF FIELD RECONNAISSANCE



Figure 5-68: Photo location 9- View from Wellington Road at Hansen Farm Road towards the Project, facing west (No expected visibility).

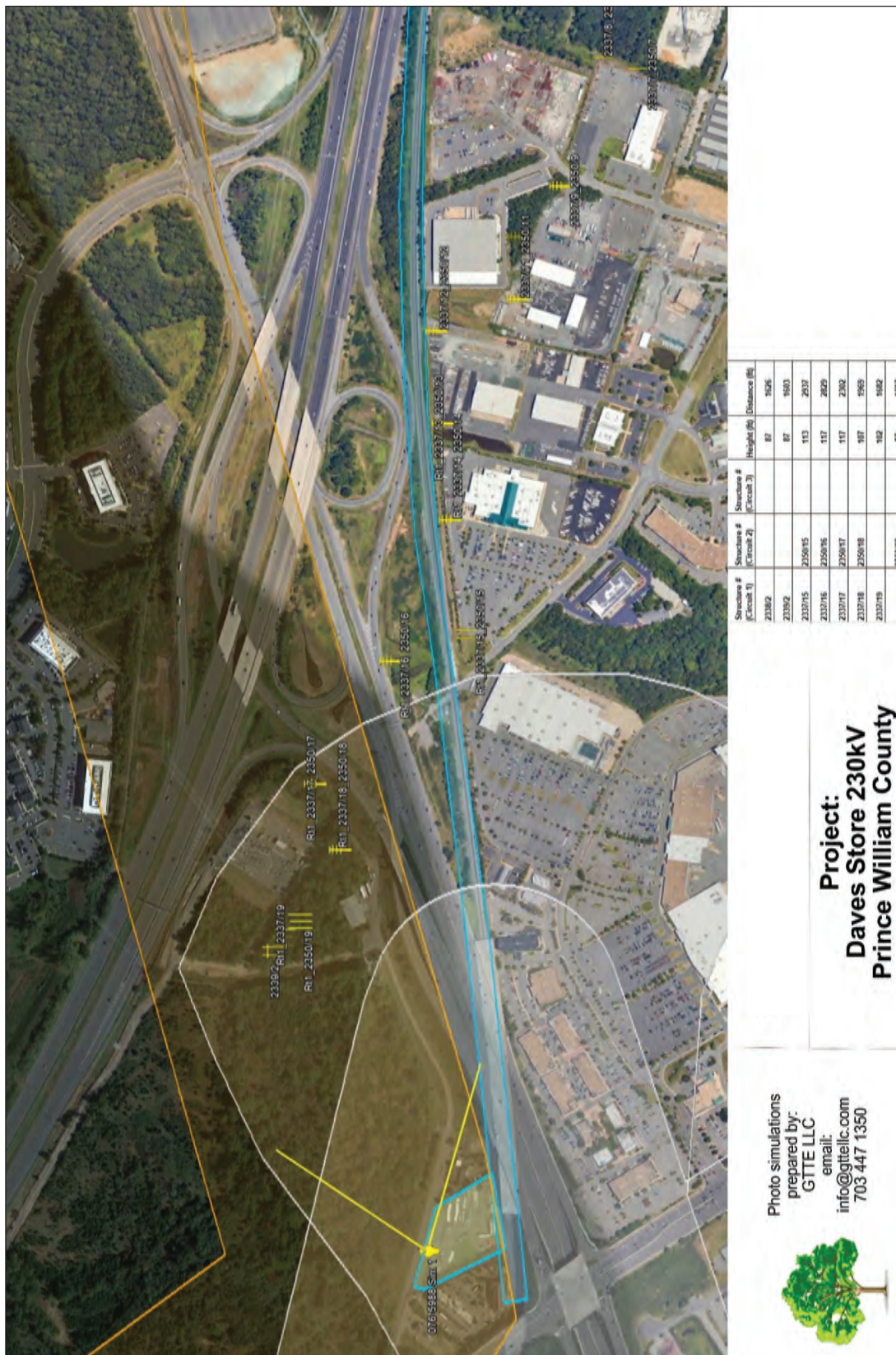


Figure 5-69: Location, direction of view, and structures modeled from Simulation location 1 for the Second Manassas Battlefield. Source: GTTE, LLC



Figure 5-70: Existing view from the location of Simulation 1 for the Second Manassas Battlefield. Source: GTTE, LLC



Figure 5-71: Proposed view of Route 1 from the location of Simulation 1 for the Second Manassas Battlefield – (Some structures on Route 1 and Daves Store-Gemini Route partially visible), Source: GTTE, LLC



Figure 5-72: Proposed view of Route 2 from the location of Simulation 1 for the Second Manassas Battlefield – (Some structures on Route 1 and Daves Store-Gemini Route partially visible). Source: GTTE, LLC

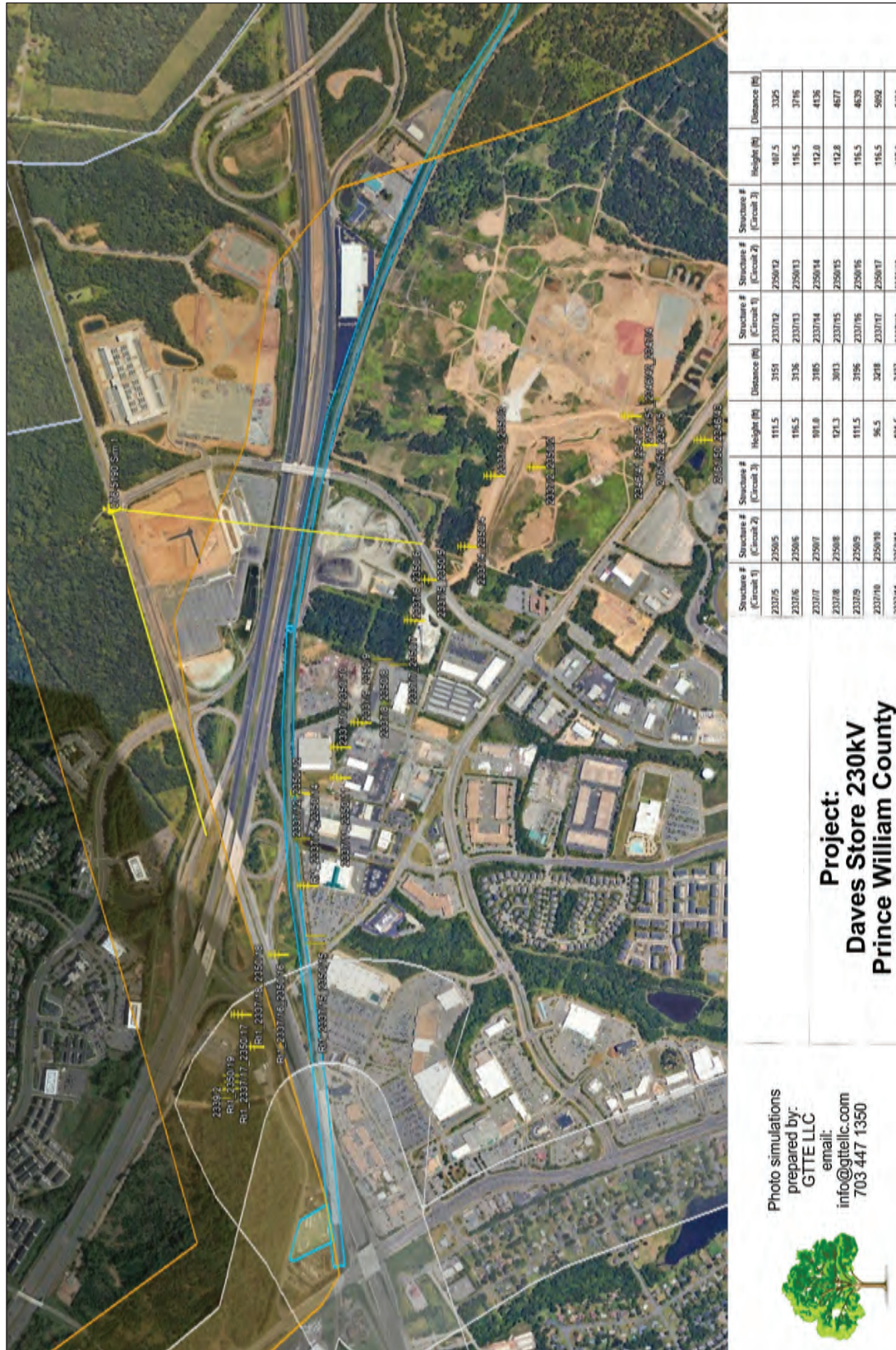


Figure 5-73: Location, direction of view, and structures modeled from Simulation location 2 from the Second Manassas Battlefield. Source: GTE, LLC



Figure 5-74: Existing view from the location of Simulation 2 for the Second Manassas Battlefield. Source: GTTE, LLC



Figure 5-75: Proposed view of Route 1 from the location of Simulation 2 for the Second Manassas Battlefield- (Several structures visible above treeline and development). Source: GTTE, LLC



Figure 5-76: Proposed view of Route 2 from the location of Simulation 2 for the Second Manassas Battlefield- (Several structures visible above treeline and development). Source: GTTE, LLC

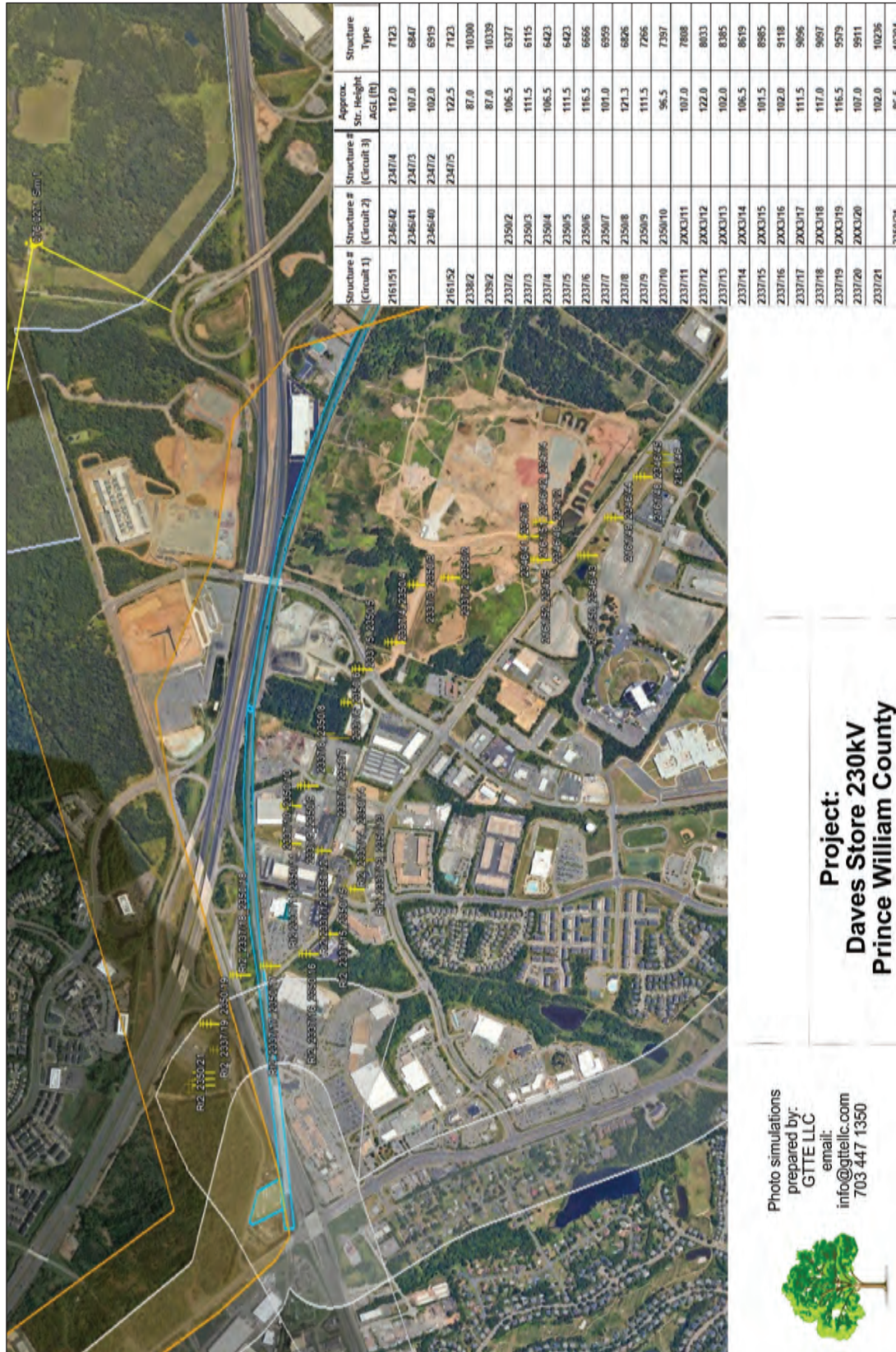


Figure 5-77: Location, direction of view, and structures modeled from Simulation location 3 within the Second Manassas Battlefield. Source: GTE, LLC



Figure 5-78: Existing view from the location of Simulation 3 for the Second Manassas Battlefield. Source: GTTE, LLC



Figure 5-79: Proposed view of Route 1 from the location of Simulation 3 for the Second Manassas Battlefield– (No Project components visible). Source: GTTE, LLC



Figure 5-80: Proposed view of Route 2 from the location of Simulation 3 for the Second Manassas Battlefield- (No Project components visible). Source: GTTE, LLC



Figure 5-81: Location, direction of view, and structures modeled from Simulation location 4 within the Second Manassas Battlefield. Source: GTTE, LLC



Figure 5-82: Existing view from the location of Simulation 4 for the Second Manassas Battlefield. Source: GTTE, LLC



Figure 5-83: Proposed view of Route 1 from the location of Simulation 4 for the Second Manassas Battlefield – (One structure visible through treeline). Source: GTTE, LLC



Figure 5-84: Proposed view of Route 2 from the location of Simulation 4 for the Second Manassas Battlefield – (One structure visible through treeline). Source: GTTE, LLC



Figure 5-85: Location, direction of view, and structures modeled from Simulation location 5 from the Second Manassas Battlefield. Source: GTE, LLC



**Daves Store 230kV Project
Prince William County**

Photo simulations
prepared by:
GTTE LLC
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703.447.1350



Photo Simulations and Diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.

Existing View



This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Figure 5-86: Existing view from the location of Simulation 5 for the Second Manassas Battlefield. Source: GTTE, LLC



Photo simulations prepared by:
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703.447.1350

Daves Store 230kV Project
Prince William County

Route 182

Proposed View
(Location of towers not visible are overlaid with yellow tower icon)

This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Figure 5-87: Proposed view of Routes 1 and 2 from the location of Simulation 5 for the Second Manassas Battlefield– (No Project components visible). Source: GTTE, LLC

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VDHR# 076-5988**Commercial Building, 14111 Daves Store Lane**

This single-story building constructed circa 1945 represents an intact and good example of a mid-century, Art Moderne style as applied to a commercial building set within a historically suburban setting. Documented examples of the Art Moderne style are rare in Prince William County with only three other previously recorded examples. The style tended to be more popular in urban areas which is reflected through its more documented presence in Fairfax County to the east. Additional research and investigations should be conducted to more conclusively evaluate the history and significance of this property, however, VDHR determined the resource ***potentially eligible for listing in the NRHP*** in 2019.

The building is situated to the southwest of the Project study area, approximately 0.12 mile away from the Daves Store-Gemini Route, and 0.28 mile away from the nearest point of the two route alternatives. As such, there will be no direct impact to the property so assessment focused on indirect visual impacts. In order to assess the potential indirect impacts, a site visit was made to inspect existing conditions and the setting around the property, with emphasis on views towards the Project and associated improvements. Photographs were taken from representative vantage points along the front of the property and in the immediate vicinity. Photo simulation was also conducted from representative vantage points to model the visibility of proposed structures.

Inspection of the property revealed that it is located within a rapidly developing area that has severely diminished the historic setting. It is bordered to the rear by the Lee Highway (US-29) corridor and the on/off ramps to Linton Hall Road that has been widened to eleven lanes and built on a raised bed. To the west is a modern high-rise hotel with the elevated Linton Hall Road corridor beyond. Set directly across the street is a large tract actively being cleared and developed into a data warehouse complex. Due to the proximity of the proposed Daves Store-Gemini Route

adjacent to the lot being developed, the structures on this portion of the Project may be visible, however, vegetation that remains along the road in conjunction with the elevated road corridors inhibits views in the direction of the Project route alternatives set further away.

As such, it is anticipated that there is the potential for some limited visibility of a limited number of proposed transmission structures, however, the majority of both route alternatives will likely be screened from view from the property. The setting and viewshed in which visibility is possible is already severely compromised by existing modern development with additional ongoing construction in which the Project would be seen amongst and behind.

Therefore, the Project is not anticipated to introduce any substantial change to the setting or viewshed of or from the property, or detract from those qualities and characteristics that make it potentially eligible for listing in the NRHP, and it is D+A's recommendation that the Project will result in no more than a ***minimal impact*** to the Art Modern commercial building at 14111 Daves Store Lane per VDHR's impact characterization scale.

Figure 5-88 provides a detail of the portion of the historic district in the vicinity of the Project with the location and direction of all representative photographs and photo simulations. Figure 5-89 through Figure 5-93 are representative photographs of and from the battlefield towards the Project and Figure 5-94 through Figure 5-97 provide photo simulations of the Project from representative vantages.

RESULTS OF FIELD RECONNAISSANCE

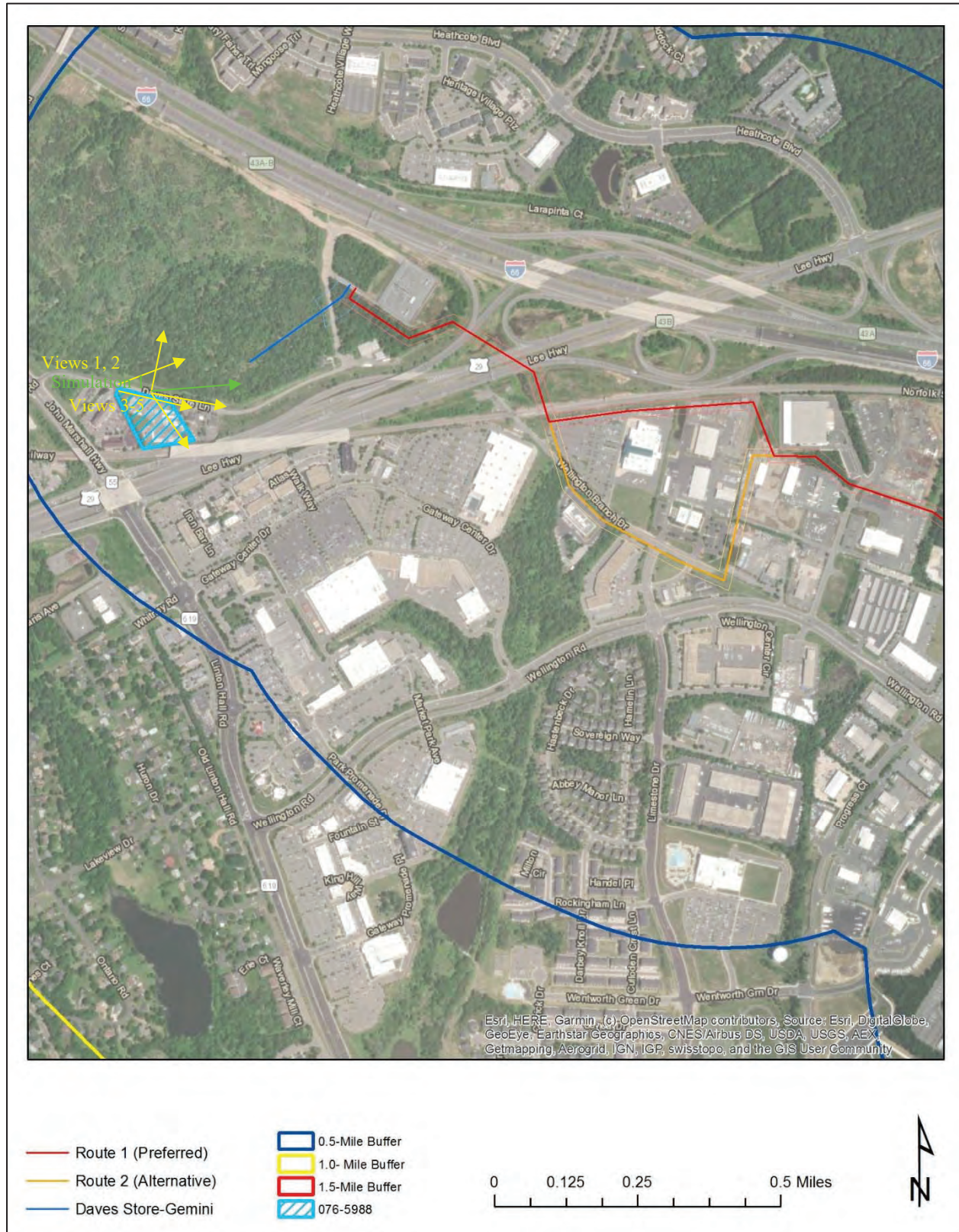


Figure 5-88: Detail of Commercial Building at 14111 Daves Store Lane in relation to the Project study area with location of representative photographs and views towards the Project area depicted in yellow and photo simulations depicted in green.

RESULTS OF FIELD RECONNAISSANCE



Figure 5-89: Photo location 1- View from Daves Store Lane towards the Project, facing east (partial visibility above and three intervening vegetation and development).



Figure 5-90: Photo location 2- View from Daves Store Lane towards the Project, facing northeast (partial visibility above and three intervening vegetation and development).

RESULTS OF FIELD RECONNAISSANCE



Figure 5-91: Photo location 3- View from property towards the Project, facing north (Daves Store-Gemini Route not visible beyond vegetation).

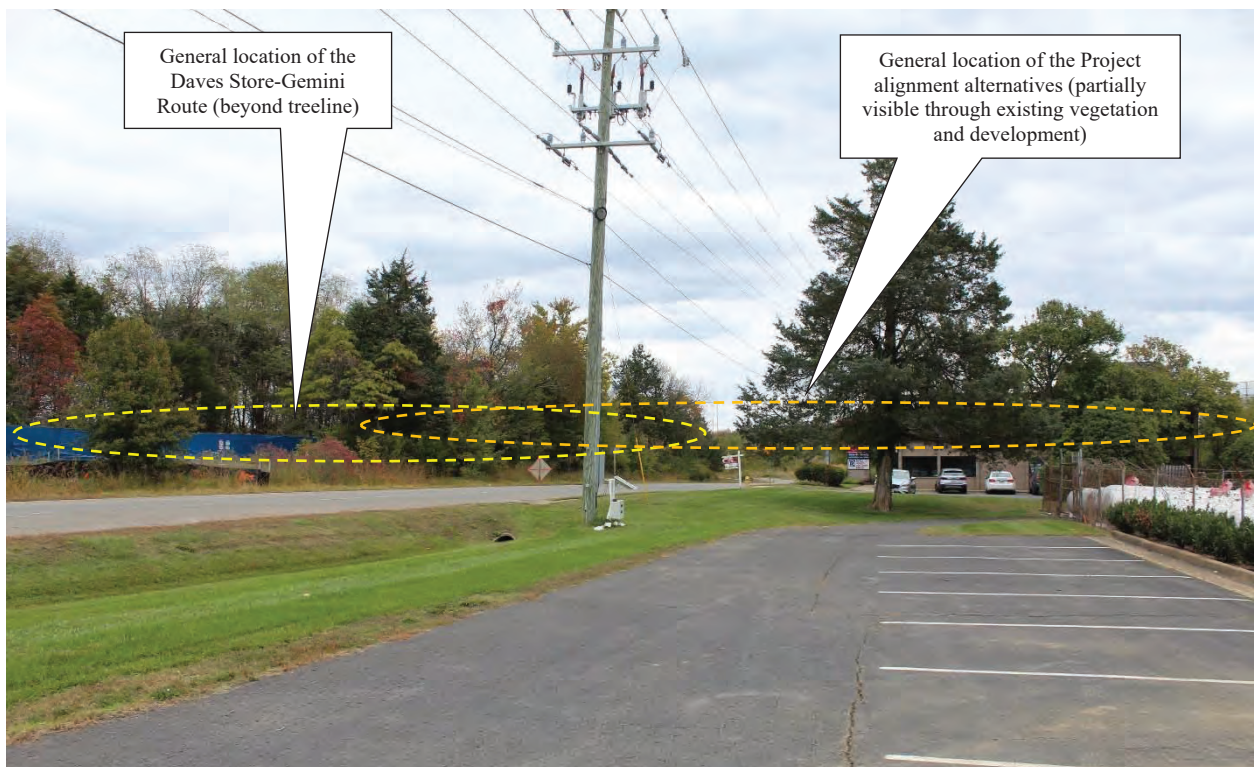


Figure 5-92: Photo location 4 - View from property towards the Project, facing northeast (Daves Store-Gemini Route not visible; both route alternatives partially visible above and through intervening vegetation).

RESULTS OF FIELD RECONNAISSANCE



Figure 5-93: Photo location 5 - View from Daves Store Lane towards the Project, facing north (No).

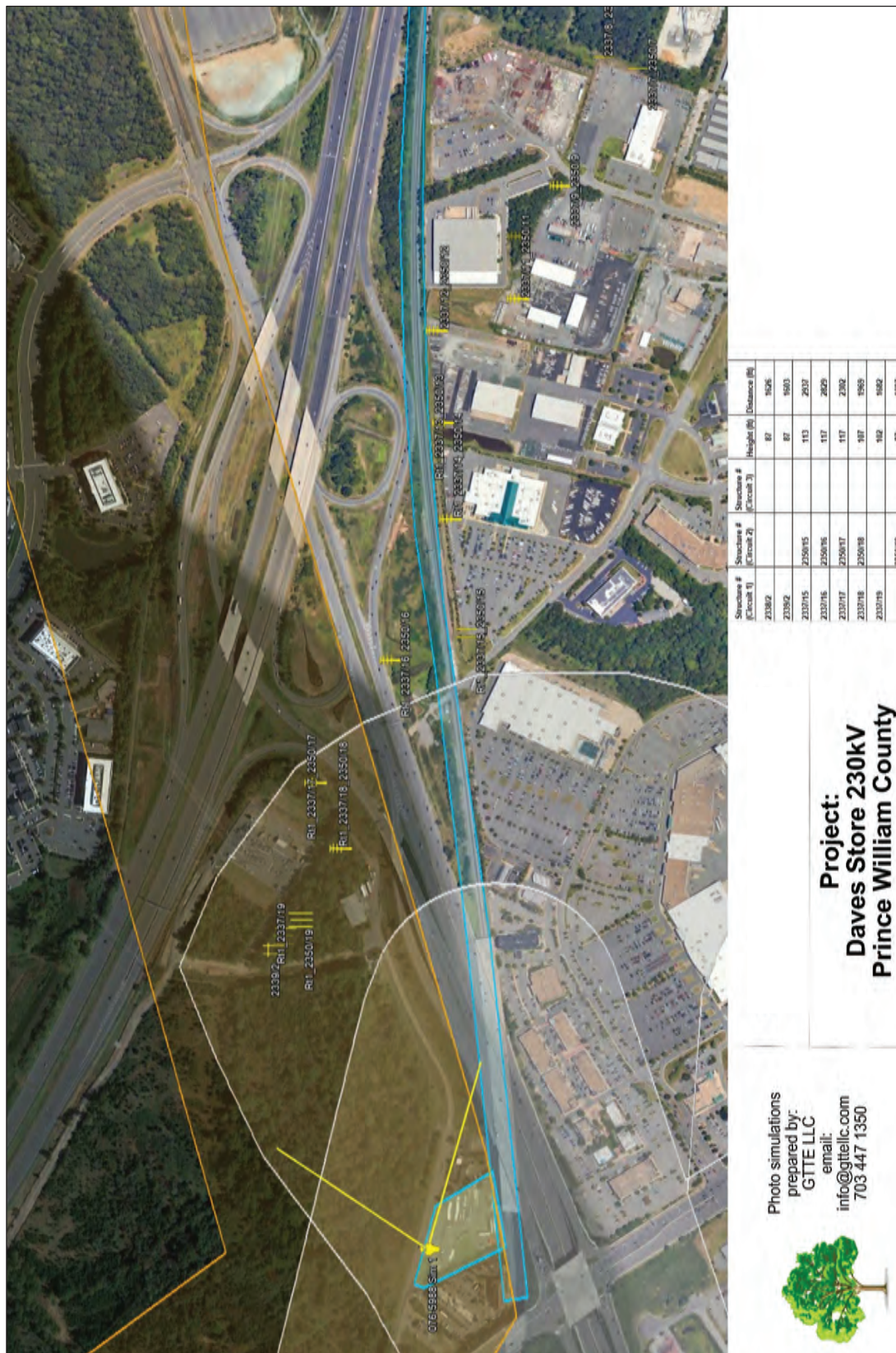


Figure 5-94: Location, direction of view, and structures modeled from Simulation location 1 for the Commercial Building at 14111 Daves Store Lane. Source: GTTE, LLC



Figure 5-95: Existing view from the location of Simulation 1 for the Commercial Building at 14111 Daves Store Lane, Source: GITE, LLC



Figure 5-96: Proposed view of Route 1 from the location of Simulation 1 for the Commercial Building at 14111 Daves Store Lane – (Some structures on Route 1 and Daves Store-Gemini Route partially visible). Source: GTTE, LLC



Photo simulations prepared by: GTTE LLC info@gttelc.com 703.447.1350 	Daves Store 230kV Project Prince William County Photo Simulations and Diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.	Sim 1 Route 2	Proposed View (Location of towers not visible are overlaid with yellow tower icon) This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location. 
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Figure 5-97: Proposed view of Route 2 from the location of Simulation 1 for the Commercial Building at 14111 Daves Store Lane – (Some structures on Route 1 and Daves Store-Gemini Route partially visible). Source: GTTE, LLC

VDHR# 076-5989
Manassas Gap Railroad

The Manassas Gap Railroad, chartered in 1851, ran from the Orange and Alexandria (O&A) Railroad's Manassas Junction west toward Front Royal and through Manassas Gap in the Blue Ridge Mountains to the Shenandoah Valley. It was completed to Strasburg in 1854. The railroad was built south along the Shenandoah Valley, and reached Mount Jackson in Shenandoah County in 1859. During the Civil War, the railroad played an important role in several campaigns and events, including carrying troops to the first battle of Manassas in 1861, as well as “Stonewall” Jackson’s Great Locomotive Raid. Following the war, the line was merged with the Baltimore & Ohio (B&O) Railroad, and in 1896, most of the original Manassas Gap Railroad became part of the Southern Railway system, and eventually became an important part of the modern-day Norfolk Southern Railway system. The corridor is significant for its association with transportation development in Virginia during the mid-nineteenth century, as well as important associations to the Civil War in the region. As a result, it has been determined ***potentially eligible for listing in the NRHP*** by the VDHR on multiple occasions.

The Manassas Gap Railroad is a long, linear resource that extends well beyond the vicinity of the Project study area to the east and west, and just a roughly two-mile length of corridor is located within one-half mile of the Project, including one point where both route alternatives cross the railroad alignment.

Although the Project crosses the railroad, it will be suspended above the resource, with no associated structures or improvements in the corridor and as such, there will be no direct impact. Therefore, assessment focused on indirect visual impacts to the corridor. In order to assess the potential indirect impacts, a site visit was made to the railroad corridor to inspect existing conditions and the setting around and within the vicinity of the Project study area, with emphasis on views towards the Project and associated improvements. Photographs were taken from publicly-

accessible vantage points towards the Project to document current conditions, lines of sight, and the extent of visibility of existing similar infrastructure. Photo simulation was also conducted from representative vantage points to model the visibility of proposed transmission structures.

Because the railroad corridor itself is not accessible, inspection was conducted from nearby publicly-accessible vantages including two road overpasses bridging the corridor, as well as a parking lot adjacent to a short length of the corridor. Inspection revealed that the railroad extends through a densely developed suburban landscape with extensive modern and ongoing development that have diminished the historic setting of the corridor. The corridor is flanked to both sides by large-scale commercial development, modern infrastructure including an interstate highway and other road corridors, and a large amount of other utilities. Generally, views in the area are short and interrupted by the dense development patterns, however, existing transmission structures on other lines, as well as communications towers and other tall vertical features may be seen through gaps in development and above rooflines from some vantage points, particularly the more elevated overpasses of the railroad.

The existing structures on the other 230kV transmission lines in the area average 112 feet in height, while the proposed structures associated with this Project may range from approximately 73 to 122 feet tall with an average height of 102 feet.

As such, it is anticipated that there is the potential for visibility of a limited number of proposed transmission structures that are of similar height from discrete vantage points within and around the length of the railroad in the vicinity of the Project; however, this area already has a heavily compromised setting. Where visible, the proposed structures would be seen amongst an extensive amount of other modern development, and because of the sporadic views from only discrete, publicly-accessible vantages, would not likely be noticeable as a substantial or cumulative change.

Therefore, the Project is not anticipated to introduce any significant change to the setting or viewshed of or from the railroad, and it is D+A's recommendation that the Project will result in no more than a **minimal impact** to the Manassas Gap Railroad per VDHR's impact characterization scale.

Figure 5-98 provides a detail of the length of the Manassas Gap Railroad in the vicinity of the Project with the location and direction of all representative photographs and photo simulations. Figure 5-99 through Figure 5-106 are representative photographs of and from the battlefield towards the Project and Figure 5-107 through Figure 5-114 provide photo simulations of the Project from representative vantages.

RESULTS OF FIELD RECONNAISSANCE

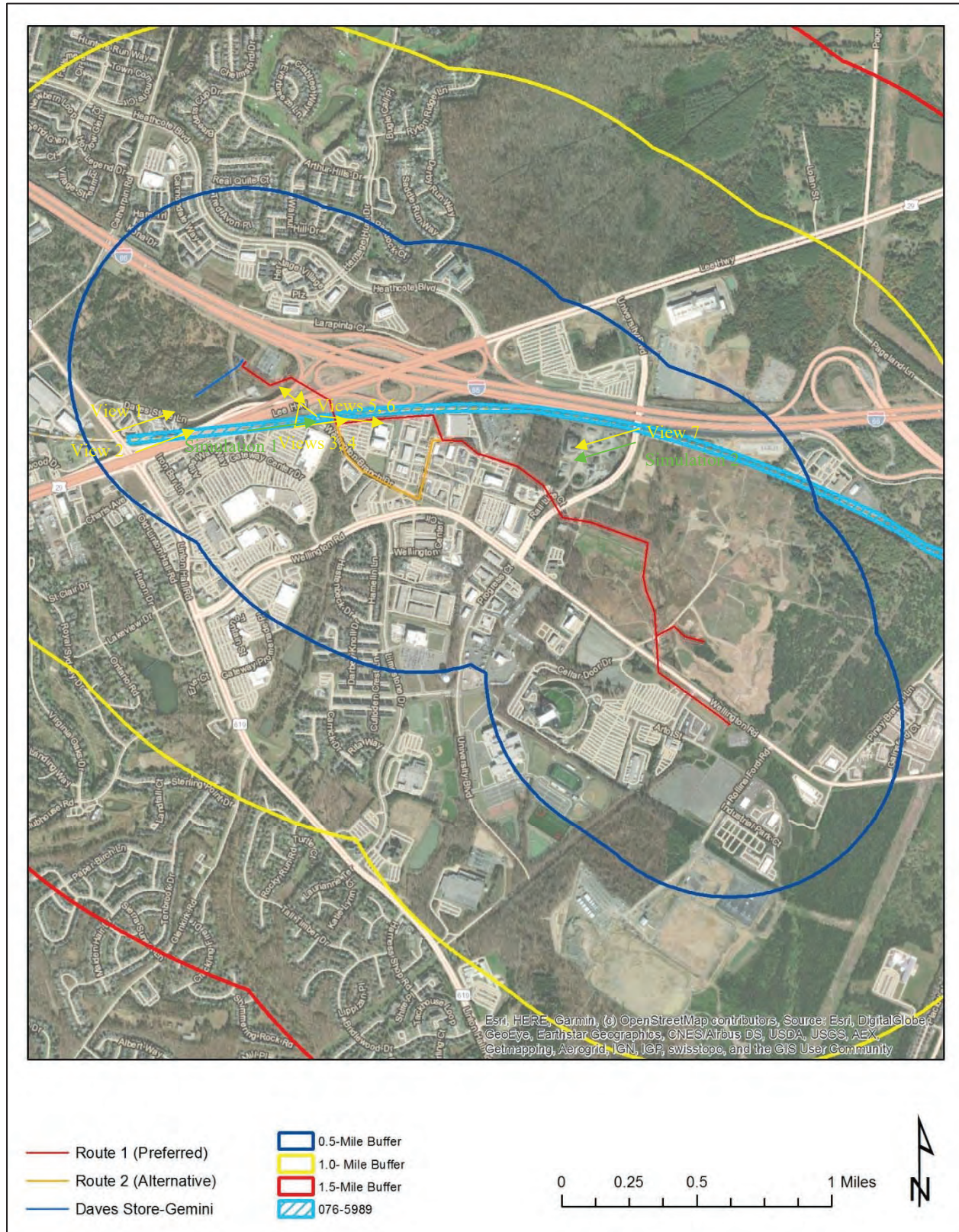


Figure 5-98: Detail of the Manassas Gap Railroad with representative photographs and views towards the Project depicted in yellow and photo simulations depicted in green.

RESULTS OF FIELD RECONNAISSANCE



Figure 5-99: Photo location 1- View from Linton Hall Road overpass towards the Project, facing east (Partially visible above and amongst other infrastructure and development).

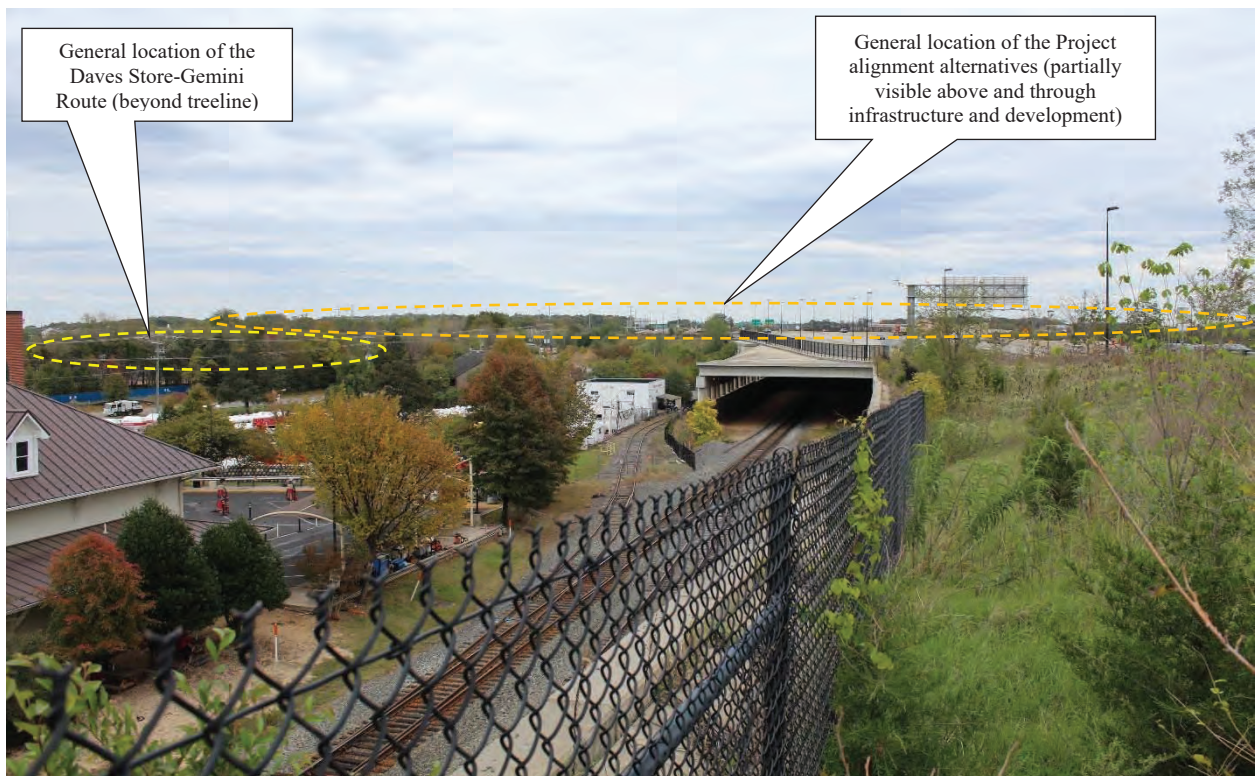


Figure 5-100: Photo location 2- View from Linton Hall Road towards the Project, facing east. (One existing structure visible).

RESULTS OF FIELD RECONNAISSANCE

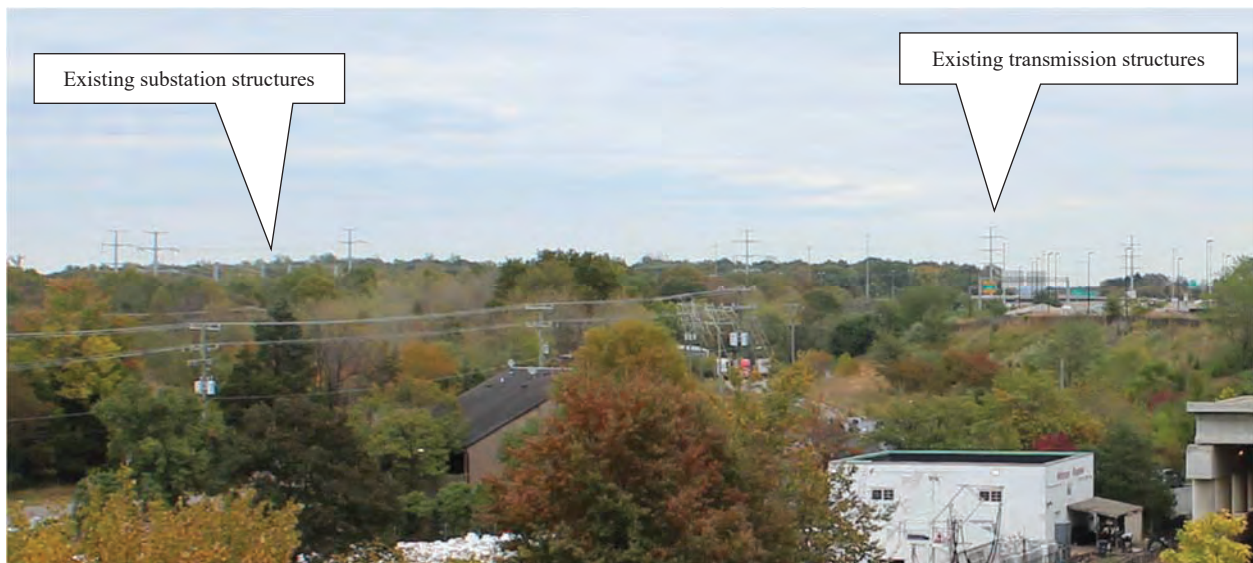


Figure 5-101: Detail of Photo location 2- Existing substation and transmission structures in area.



Figure 5-102: Photo location 3- View from parking lot off Gateway Center Drive near railroad towards the Project, facing east (Partially visible amongst other existing infrastructure above development).

RESULTS OF FIELD RECONNAISSANCE



Figure 5-103: Photo location 4- View from parking lot off Gateway Center Drive near railroad towards the Project, facing north (Partially visible through vegetation).

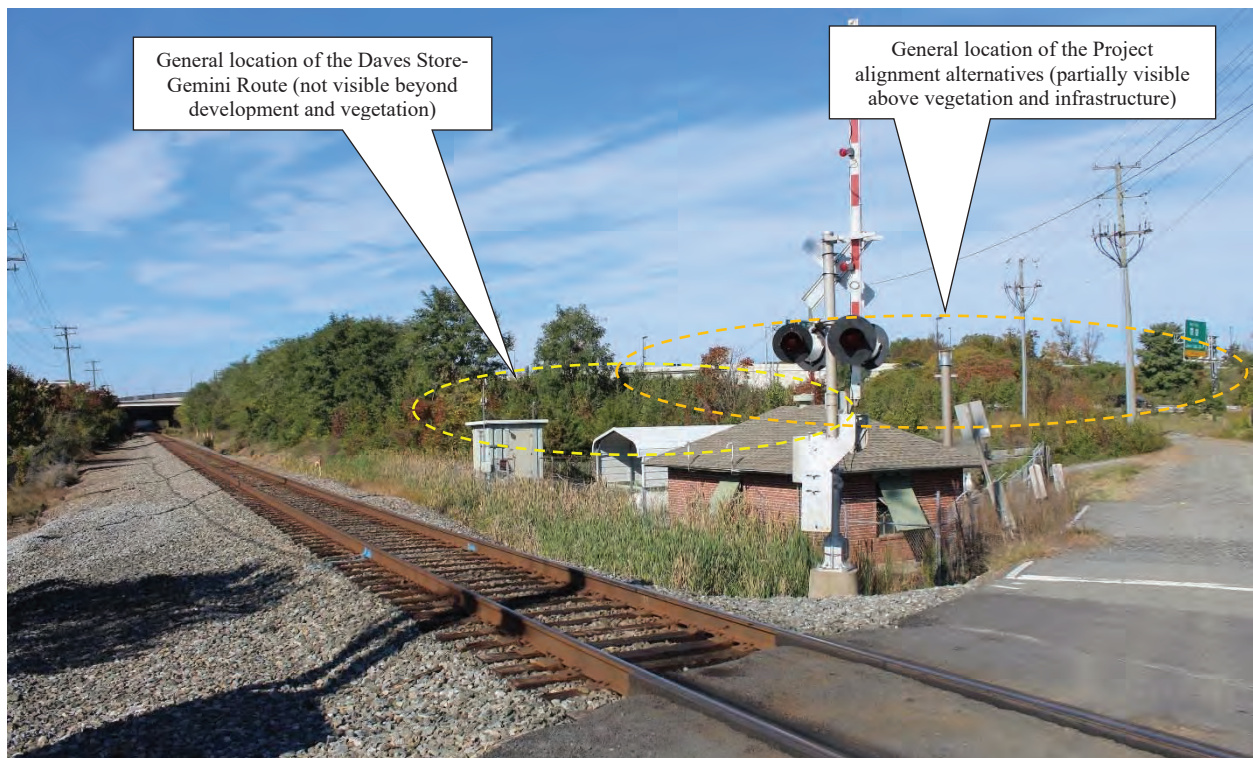


Figure 5-104: Photo location 5 - View from railroad crossing at Wellington Branch Drive towards the Project, facing northwest (Partially visible above and through vegetation and development).

RESULTS OF FIELD RECONNAISSANCE

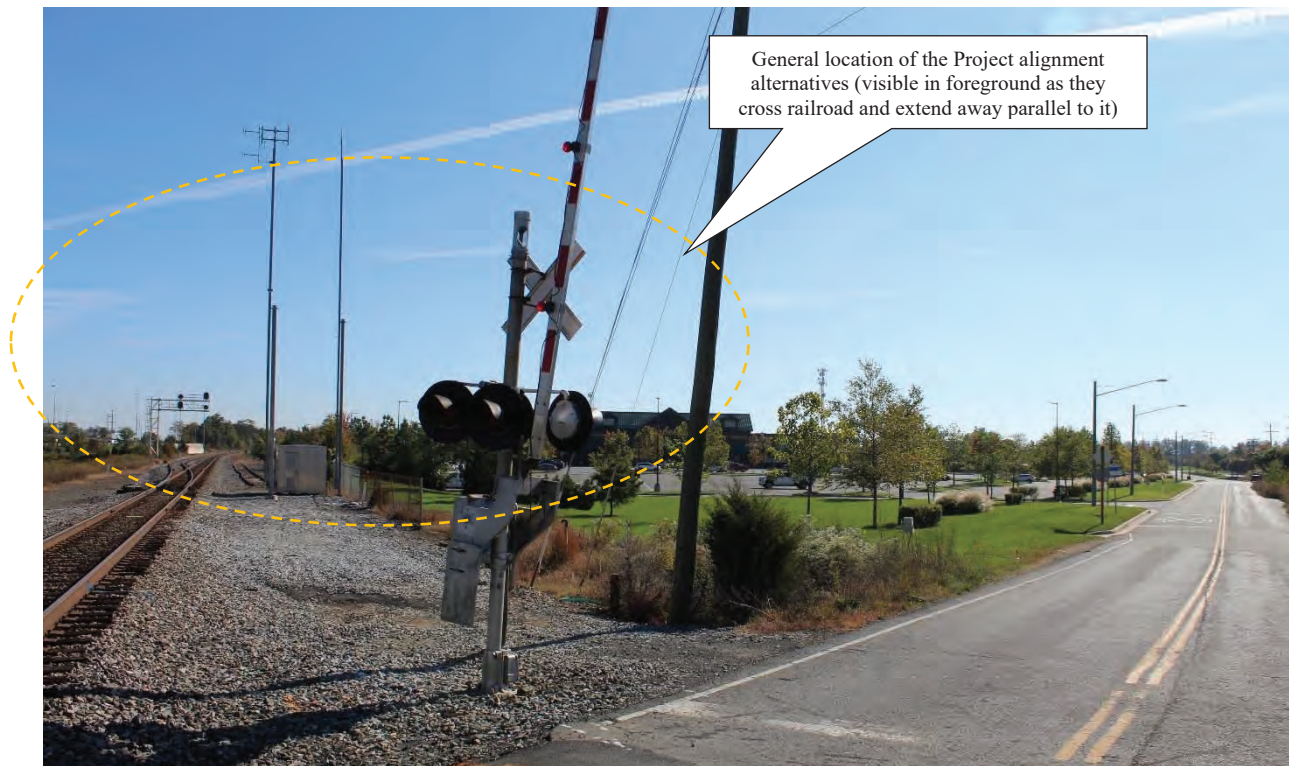


Figure 5-105: Photo location 6 - View from railroad crossing at Wellington Branch Drive towards the Project, facing northwest (Partially visible above and through vegetation and development).



Figure 5-106: Photo location 7 - View from University Drive at railroad crossing towards the Project, facing west (partial visibility above treeline).

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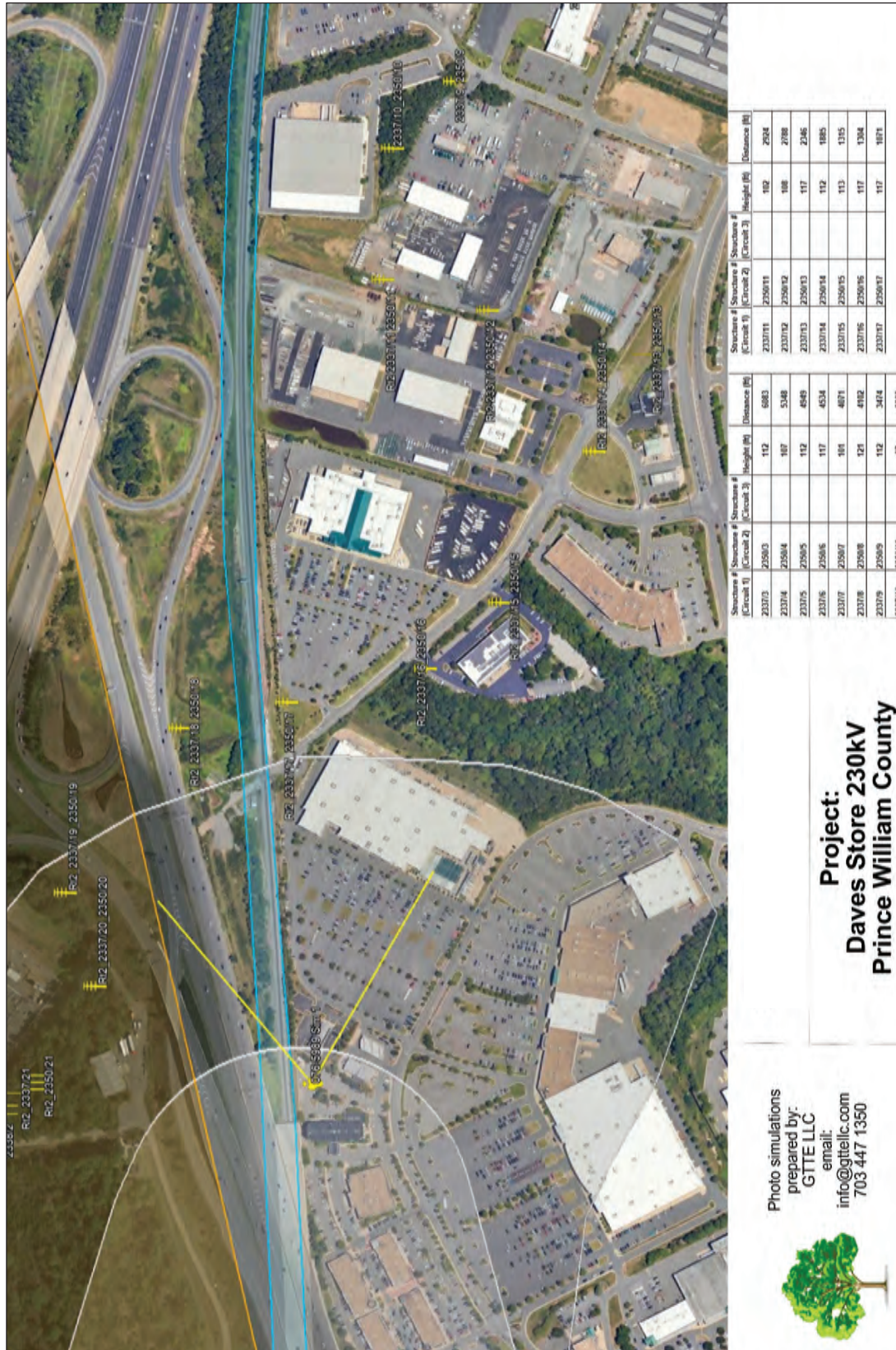


Figure 5-107: Location, direction of view, and structures modeled from Simulation location 1 from the Manassas Gap Railroad. Source: GTTE, LLC



Figure 5-108: Existing view from the location of Simulation 1 for the Manassa Gap Railroad. Source: GITE, LLC



Figure 5-109: Proposed view of Route 1 from the location of Simulation 1 for the Manassas Gap Railroad – (No Project components visible). Source: GTTE, LLC



Figure 5-110: Proposed view of Route 2 from the location of Simulation 1 for the Manassas Gap Railroad – (No Project components visible). Source: GTTE, LLC

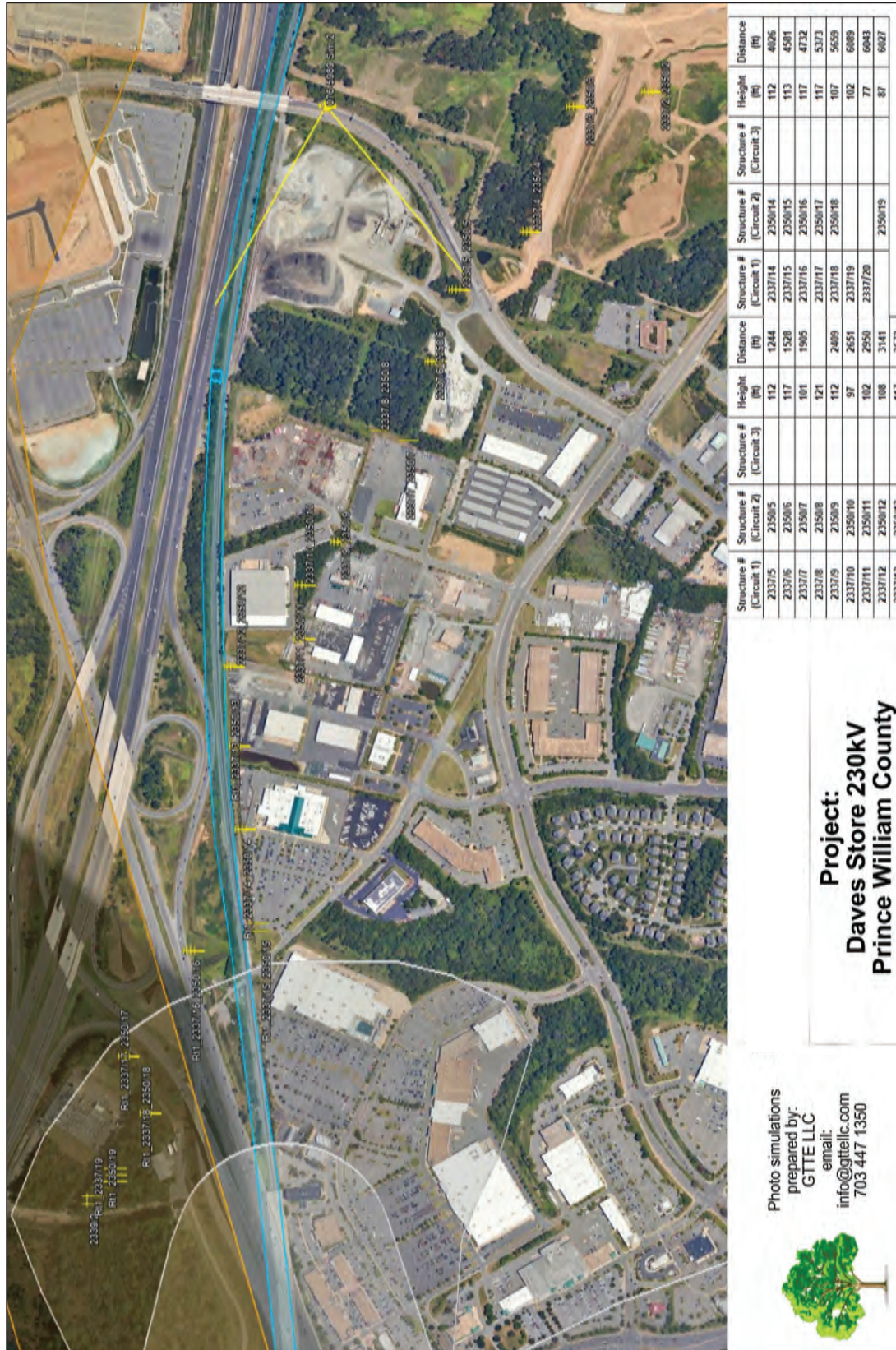


Figure 5-111: Location, direction of view, and structures modeled from Simulation location 2 from the Manassas Gap Railroad. Source: GTE, LLC



Photo simulations
prepared by:
GTTE LLC
email:
info@gttelc.com
703.447.1350

**Daves Store 230kV Project
Prince William County**

Photo Simulations and Diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.

Existing View



This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Figure 5-112: Existing view from the location of Simulation 2 for the Manassas Gap Railroad. Source: GTTE, LLC

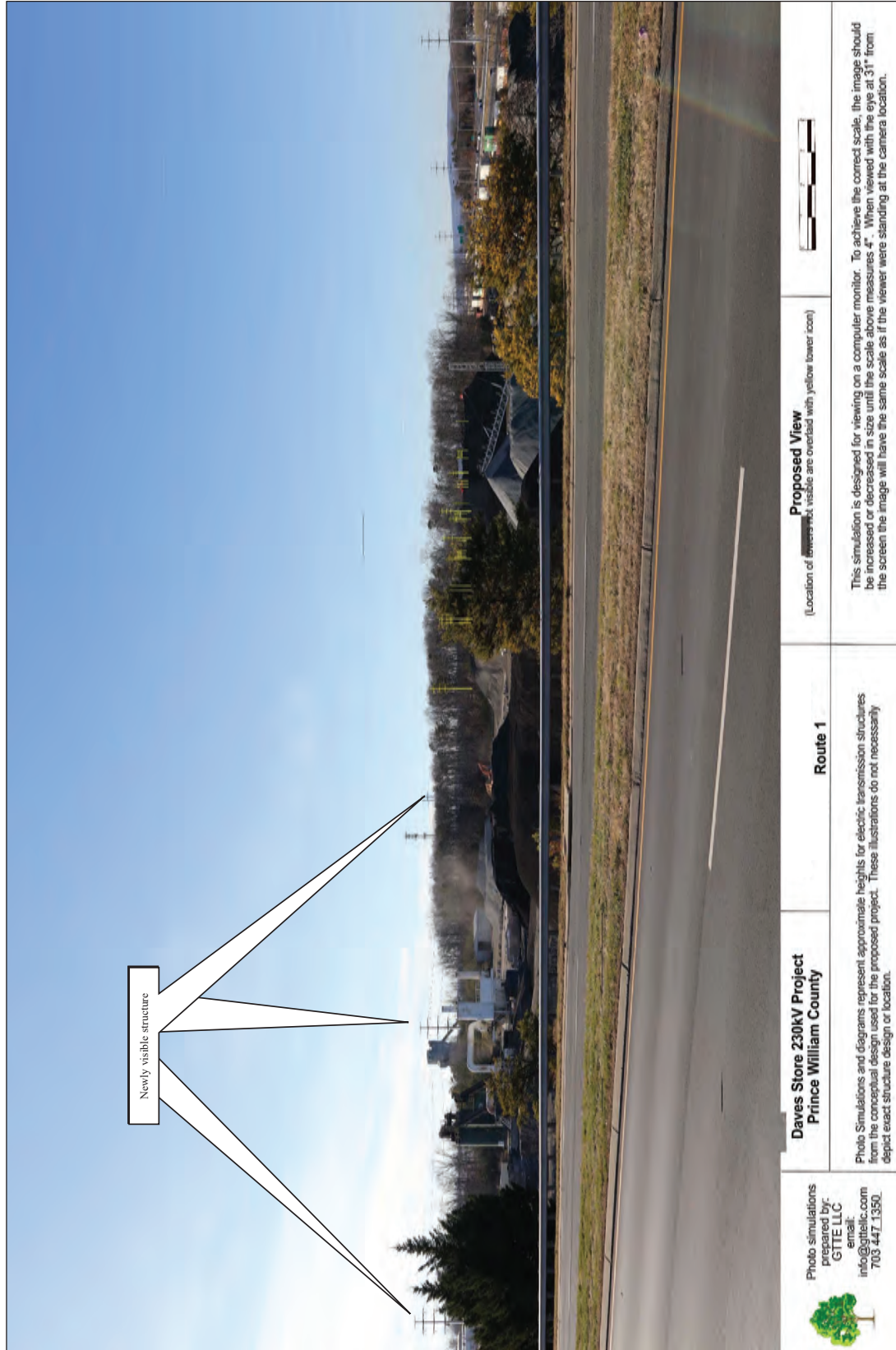


Figure 5-113: Proposed view of Route 1 from the location of Simulation 2 for the Manassas Gap Railroad – (Several structures visible above treeline). Source: GTTE, LLC



Figure 5-114: Proposed view of Route 2 from the location of Simulation 2 for the Manassas Gap Railroad – (Several structures visible above treeline). Source: GTTE, LLC

6. ARCHAEOLOGICAL ASSESSMENT

A review of the VDHR VCRIS records reveals there is one (1) previously recorded archaeological site is adjacent (within 100 feet) of the proposed ROW for at least one of the Project alignment alternatives. Formal archaeological fieldwork and investigations were not conducted as part of this effort so the existing conditions of the site is unknown. Project engineering is also still preliminary so the final Project alignment, structure locations, and extent of grading and limits of disturbance are unknown. However, a preliminary assessment of potential impacts was conducted based upon previous site data and preliminary Project information.

The previously recorded site is a prehistoric lithic scatter that has not been formally evaluated for NRHP-eligibility (Table 6-1).

Table 6-1: Previously recorded archaeological resource adjacent to the Project ROW

VDHR #	Site Type	Temporal Association	NRHP Status	Proximity to Project
44PW0882	Lithic Workshop	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated	~65 feet from Route 2

Site 44PW0882

This site was identified by Thunderbird Archaeological Associates in 1995 and is comprised of a prehistoric lithic scatter. The site was identified through subsurface testing resulting in the collection of six lithic flakes, all of which were located within plowzone. It was further noted that an unknown amount of the site was likely destroyed. No recommendation of NRHP-eligibility was provided and the site was not formally evaluated by the VDHR.

The site is located on the south side of Wellington Branch Drive just east of Gainesville. Based upon recent aerial photography, the site is now occupied by a commercial shopping center and paved parking lot near the intersection of Limestone Drive.

Based upon the boundaries of the site as mapped in VCRIS, which were not reinvestigated or confirmed as part of this effort, the site is located roughly 65-feet from the ROW for the Project alternative Route 2, but is not directly crossed (**Error! Reference source not found.**). Based upon recent aerial photography, it appears the site has likely been destroyed and the surrounding area has been subject to previous survey. ***As a result, it is D+A's recommendation that the Project is not anticipated to impact the site, and no further consideration is necessary as aprt of this Project.***

ARCHAEOLOGICAL ASSESSMENT



Figure 6-1: Site 44PW0882 in relation to the Project. Source: VCRIS.

7. SUMMARY OF POTENTIAL IMPACTS

As part of this pre-application analysis of cultural resources for the Daves Store 230kV Line Extension Project, potential impacts to previously recorded historic properties that qualify for consideration under VDHR-defined buffered tiers were assessed in accordance with the VDHR guidance. For the purposes of this analysis, an impact is one that alters, either directly or indirectly, those qualities or characteristics that qualify a particular property for listing in the NRHP and does so in a manner that diminishes the integrity of a property's materials, workmanship, design, location, setting, feeling, and/or association. With respect to transmission lines and associated Projects, direct impacts typically are associated with ground disturbance resulting from ROW clearing and structure construction. Indirect impacts typically are associated with the introduction of new visual elements or changes to the physical features of a property's setting or viewshed. According to VDHR guidance, Project impacts are characterized as such:

- **None** – Project is not visible from the property
- **Minimal** – Occur within viewsheds that have existing transmission lines, locations where there will only be a minor change in tower height, and/or views that have been partially obstructed by intervening topography and vegetation.
- **Moderate** – Include viewsheds with expansive views of the transmission line, more dramatic changes in the line and tower height, and/or an overall increase in the visibility of the route from the historic properties.
- **Severe** – Occur within viewsheds that do not have existing transmission lines and where the views are primarily unobstructed, locations where there will be a dramatic increase in tower visibility due to the close proximity of the route to historic properties, and viewsheds where the visual introduction of the transmission line is a significant change in the setting of the historic properties.

With regards to architectural resources, there are no (0) NHLs located within 1.5 mile of the proposed Project or closer, one (1) NRHP-listed property located within 1.0 mile or closer of the Project, three (3) battlefields located 1.0 mile or closer of the Project, and three (3) properties that have been determined eligible or potentially eligible for listing in the NRHP by the VDHR within 0.5 mile or closer of the Project. Two (2) of the battlefields and one (1) NRHP-eligible resource are directly crossed by portions of the Project.

Assessment of impacts from each of the historic properties and battlefields found that generally the historic setting and viewshed of each has been compromised by widespread development and is now characterized by suburban sprawl, massive infrastructure, and an extensive utility network of other transmission lines, communications towers, and similar features. The dense development pattern inhibits views in the direction of the Project from many vantages in the area, however, some proposed structures may be visible above and between development and treeline from discrete vantage points. Where visible, the Project components would be seen amongst extensive other modern features and due to the already heavily compromised setting, and would not introduce any substantially different qualities or characteristics into the viewshed or other cumulatively change the surrounding setting. ***Overall, there will be no more than a minimal impact to any considered historic property or battlefield as a result of the proposed Daves Store-Gemini Route, and the difference in impact from proposed Route 1 and***

SUMMARY OF POTENTIAL IMPACTS

alternative Route 2 is negligible, as both are recommended to pose no more than a minimal impact to any considered historic property or battlefield. (Table 7-1).

Table 7-1: Potential impacts summary for architectural resources.

VDHR #	Resource Name, Address	NRHP-Status	Distance from Project	Recommended Impact
030-5152	Buckland Mills Battlefield	NRHP-Eligible	Route 1 – Directly Crossed Route 2 - Directly Crossed Daves Store-Gemini Route – Directly Crossed	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route – Minimal
076-0271	Manassas Battlefield Historic District/ Manassas National Battlefield Park	NRHP-Listed	Route 1 - ~0.68 Mile Route 2 - ~0.68 Mile Daves Store-Gemini Route - ~1.27 Mile	Route 1 – No Impact Route 2 – No Impact Daves Store-Gemini Route – No Impact
076-5035	Ody Cemetery	Potentially NRHP-Eligible	Route 1 - ~0.17 Mile Route 2 - ~0.17 Mile Daves Store-Gemini Route - ~0.87 Mile	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route – No Impact
076-5036	Manassas Station Operations Battlefield	Potentially NRHP-Eligible	Route 1 - ~0.09 Mile Route 2 - ~0.09 Mile Daves Store-Gemini Route – Directly Crossed	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route – Minimal
076-5190	Second Battle of Manassas	Potentially NRHP-Eligible	Route 1 – Directly Crossed Route 2 - Directly Crossed Daves Store-Gemini Route – Directly Crossed	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route – No Impact
076-5988	Commercial Building, 14111 Daves Store Lane	Potentially NRHP-Eligible	Route 1 - ~0.28 Mile Route 2 - ~0.28 Mile Daves Store-Gemini Route - ~0.12 Mile	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route - Minimal
076-5989	Manassas Gap Railroad	Potentially NRHP-Eligible	Route 1 – Directly Crossed Route 2 – Directly Crossed Daves Store-Gemini Route - ~0.10 Mile	Route 1 – Minimal Route 2 – Minimal Daves Store-Gemini Route – No Impact

With regards to archaeology, portions of both route alternatives and the entirety of the Daves Stoe-Gemini Route have been subject to previous phase I survey. As a result of these surveys, one (1) previously recorded site is located directly within or adjacent (within 100 feet) to the proposed ROW of at least one of the Project route alternatives. The site has not been formally evaluated. The unevaluated site is located roughly 65 feet from the ROW of alternative Route 2. Review of this site suggests it has been destroyed since it was previously documented. While no survey or formal investigation of archaeological sites was conducted as part of this effort, ***it is D+A's opinion that the previously recorded site will not be impacted by the Project and no further consideration is necessary. D+A further recommends that any portion of the selected route alternative that has not been subject to accepted cultural resource survey be investigated, and any newly identified sites should be evaluated and assessed for Project impacts as additional Project construction details become available (Table 7-2).***

Table 7-2: Summary of potential impacts summary for archaeological resources.

VDHR #	Description	NRHP Status	Proximity to Project	Impacts
44PW0882	Lithic Workshop, Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated	~65 feet from Route 2	No Impact

8. REFERENCES

National Park Service

2009 “Civil War Sites Advisory Commission Report Update and Resurvey,” American Battlefield Protection Program

Virginia Department of Historic Resources

2008 *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

2023 Virginia Cultural Resource Information System (VCRIS) database and GIS server.

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



September 5, 2023

Mr. Bobby Shetley
Resident Administrator, Prince William County
Virginia Department of Transportation
4975 Alliance Drive
Fairfax, Virginia 22030

Mr. David Heironimus
Permits and Street Acceptance, Prince William County
Virginia Department of Transportation
4975 Alliance Drive
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Mr. Richard Burke
Transportation and Land Use Director, Prince William County
Virginia Department of Transportation
4975 Alliance Drive
Fairfax, Virginia 22030

Subject: Request for Feedback on the Dominion Energy Daves Store 230 kV Delivery Point Project Preliminary Overhead Routes

Dear Mr. Shetley, Mr. Heironimus, and Mr. Burke:

Dominion Energy Virginia (Dominion) is proposing to construct the Daves Store 230 kilovolt (kV) Delivery Point (DP) Project (Project) in the Gainesville area of Prince William County, Virginia. The Project consists of building a new 230 kV double circuit transmission line from Dominion's proposed Daves Store Substation to Northern Virginia Electric Cooperative's (NOVEC) existing Atlantic DP Substation to address load growth and electric reliability in the area. Additionally, the Project will support NOVEC's delivery point requests to build the proposed Stinger and Trident Switching Stations for data center development.

Dominion is currently evaluating four overhead routes within a 100-foot-wide right-of-way (ROW) for the Project, as depicted in **Attachment 1**. Based on routing and constructability constraints, underground routes have been determined not feasible for the Project. At this time, Dominion is providing preliminary design information to the Virginia Department of Transportation (VDOT) for feedback and input on the overhead line routes. As discussed during previous meetings between Dominion and VDOT, all preliminary routes for the Project will require crossing or overlapping VDOT's ROWs due to routing constraints. This letter provides the information requested by VDOT during our previous calls regarding the Project for review and comment on the Project. Please note that detailed design information is not yet available for the routes, and therefore the information provided is conceptual.

Overhead Transmission Lines

The four preliminary overhead routes for the Project will require a standard 100-foot-wide ROW. The overhead transmission structures for the Project will primarily be 230 kV double circuit monopole structures with an average height between 100 and 115 feet. There may be locations that require taller structures due to highway crossings or ground clearances requirements. The transmission line structures

will be placed on average between every 400 and 600 feet, with some spans to exceed 600 feet as needed, and at angles where points of inflection occur along the routes.

The map set provided in **Attachment 1** depicts the four preliminary overhead routes between Dominion's proposed Daves Store Substation and NOVEC's Atlantic DP Substation for VDOT's review. This map set shows the locations where the ROW for the transmission line would overlap VDOT's existing ROW, as determined by Prince William County's parcel database. The transmission structures and ROW have been color coded into two categories on the maps: 1) white dots for transmission structures outside VDOT ROW and red dots for transmission structures inside VDOT ROW, and 2) light blue shading for areas where the transmission line ROW overlaps with VDOT ROW.

Due to routing constraints in the area, such as existing buildings and other utilities, there are locations where Dominion would need to locate the transmission ROW and/or structures in VDOT's ROW and limited access highway. Given the location of the proposed Daves Store Substation, all overhead line routes cross Lee Highway to reach the Project's delivery points. Constructible span locations are limited at the Lee Highway crossing location due to existing buildings, Interstate 66 express lane highways, a gas pipeline, and a Norfolk Southern railroad.

Where feasible, the preliminary overhead routes cross VDOT roadways utilizing a perpendicular crossing. However, there are constructability constraints, particularly along Wellington Road, that limit perpendicular crossing locations for the transmission line. As shown in **Attachment 1**, the overhead routes cross Wellington Road in a location that minimizes impacts to viewshed, existing and proposed buildings, resource protection areas, utility easements, and a stormwater pond.

Table 1 below provides the length and acreages of the preliminary overhead routes and includes a breakdown of the amount of ROW that would overlap with VDOT's existing ROW. No VDOT-owned parcels are crossed by the preliminary overhead routes.

Table 1: Overhead Transmission Line ROW Summary

Preliminary Overhead Routes	Length of Transmission Line in VDOT ROW (miles)	Approximate Acres of Transmission Line ROW in VDOT ROW ¹	Number of Transmission Structures in VDOT ROW
Route 1	0.3	3.7	2
Route 2	0.4	5.1	3
Route 3	0.4	5.5	3
Route 4	0.5	6.5	3

¹ All transmission line routes cross Lee Highway in an area identified within VDOT's limited access highway. From the proposed Daves Store Substation, the overhead line routes consider the same alignment within a 100-foot-wide ROW.

For a preliminary overhead route, Dominion requires the entire width of the ROW to be clear of buildings, structures, and certain types of vegetation. It should be noted that Dominion will need to have access to these transmission line structures for operation and maintenance purposes after the transmission line is constructed. The anticipated ground clearance for the structures for this Project will be about 30 feet depending on existing topography, structure heights, and existing ground-level facilities (roads, signs, etc.).

Dominion understands that the location and design of any structures placed in VDOT ROW would need to be reviewed with VDOT on a case-by-case basis. Once a route is approved by the Virginia State Corporation Commission (SCC), Dominion will coordinate closely with VDOT regarding the siting of any overhead transmission line ROW or structures, as applicable, in VDOT ROW or limited access highway areas.

Underground Transmission Lines

As discussed in previous meetings between Dominion and VDOT, Dominion evaluated the feasibility of underground routes for the Project; however, these routes were dismissed due to engineering, operational, and constructability constraints. The underground routes would require a transition substation, in-road construction with Wellington Branch Drive, and a trenchless crossing underneath Lee Highway, utility infrastructure, and a Norfolk Southern railroad.

Conclusions

Dominion appreciates VDOT's time in reviewing this information for their Daves Store Project. The information and feedback regarding the preliminary routes will be used in Dominion's application to the Virginia State Corporation Commission (SCC) later this year and therefore, Dominion requests VDOT's written response with their feedback by October 6, 2023.

Dominion looks forward to receiving your written feedback on the following:

1. The feasibility of the preliminary structure locations at Lee Highway;
2. The feasibility of overlapping VDOT ROW;
3. Any issues associated with a non-perpendicular crossing of Wellington Road;
4. Any issues associated with the preliminary routes, such as lane closures, time of day restrictions, or any other restrictions for Wellington Road, Wellington Branch Drive, University Boulevard, and Lee Highway; and
5. VDOT's preference for the preliminary overhead routes.

Yours sincerely,

Dominion Energy,



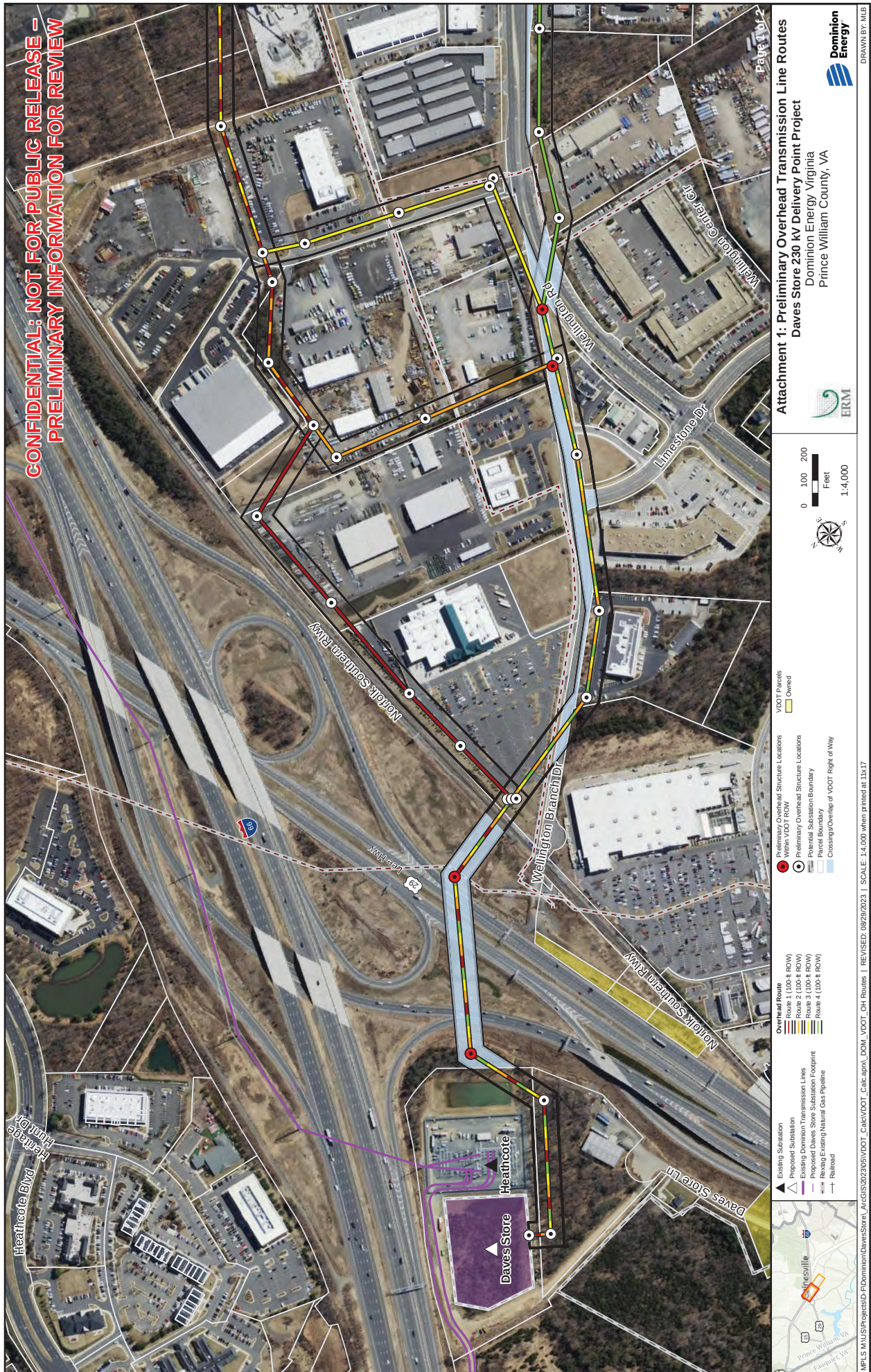
Craig Hurd
Siting & Permitting Specialist

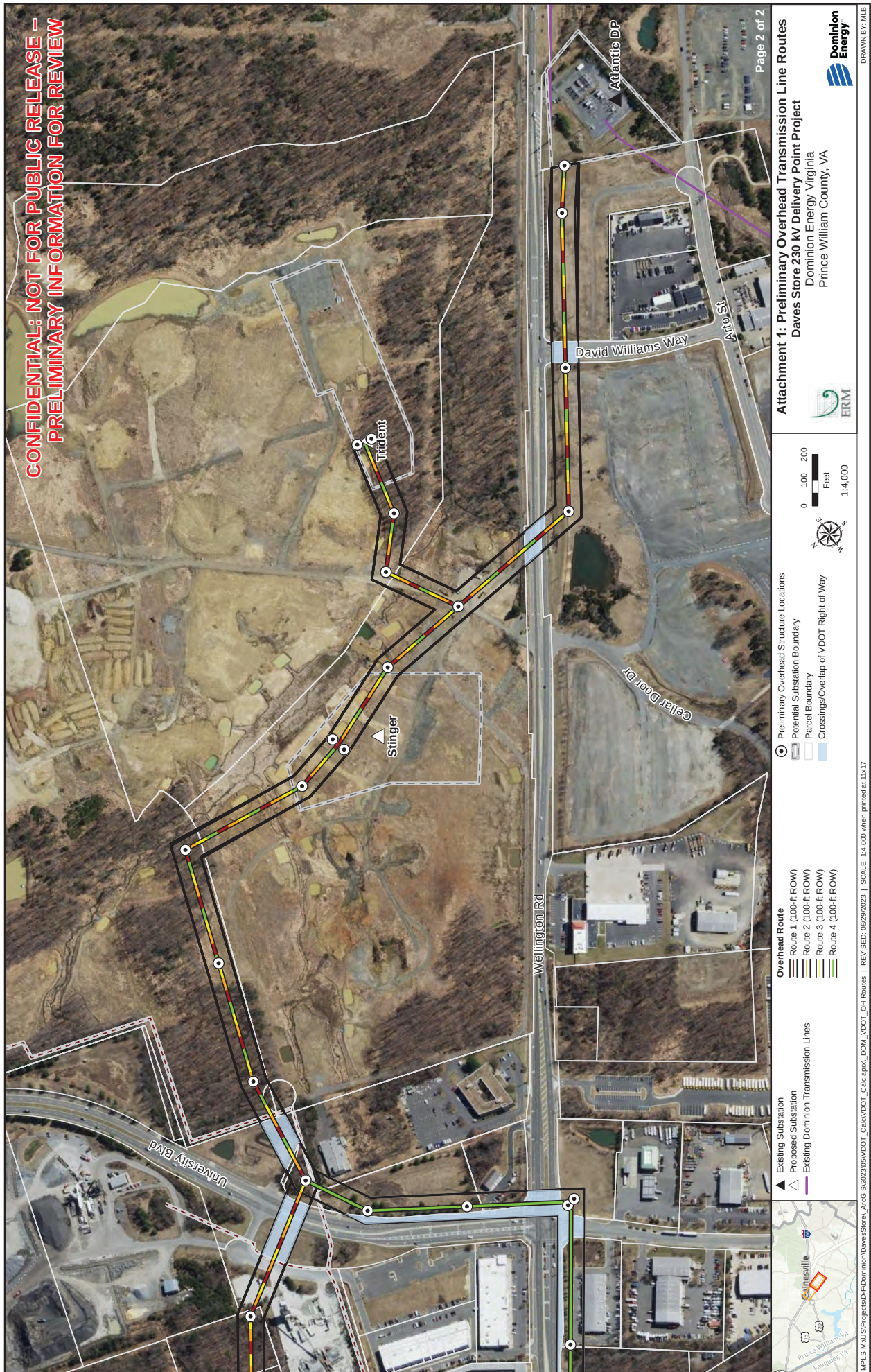
cc: Greg Vozza, Virginia Electric and Power Company
Roya Smith, Environmental Resources Management
Jon Berkin, Environmental Resources Management

Enclosures: Attachment 1 – Preliminary Overhead Routes

Daves Store 230 kV Delivery Point Project
September 5, 2023

ATTACHMENT 1
Preliminary Overhead Routes Exhibit





From: Valerie Harrill <Valerie.Harrill@railpros.com>
Sent: Tuesday, August 15, 2023 9:27 AM
To: Craig R Hurd (Services - 6) <Craig.R.Hurd@dominionenergy.com>; NS Info <ns.info@railpros.com>; NS Coordinator <ns.coordinator@railpros.com>
Cc: steven.bray@nscorp.com
Subject: [EXTERNAL] RE: Dominion Energy Transmission Line - Proposed 'NEW' Aerial Crossing - Prince William County, Virginia

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The Railway does not have an opinion on where the crossing is located as long as the crossing meets Engineering Standards.

NSCE 4 for wireline and NSCE 8 for pipelines Engineering standards can be found on the website: <http://ns.railprosspermitting.com> on the left hand side of the log in page under the tab "Before you apply".

Please have the plan and profile (examples in the Engineering standards) show the NS right of way width, height above the rail and all other necessary information outlined in the Engineering standards.

If you have any additional questions, you are welcome to contact me.

Valerie Harrill
Real Estate Specialist



11819 Miracle Hills Drive | Suite 102
PO Box 642270 | Omaha | Nebraska | 68164
Office 402-965-0550 (direct)
Valerie.Harrill@railpros.com | www.railpros.com

From: Craig.R.Hurd@dominionenergy.com <Craig.R.Hurd@dominionenergy.com>
Sent: Tuesday, August 15, 2023 8:11 AM
To: NS Info <ns.info@railpros.com>; NS Coordinator <ns.coordinator@railpros.com>
Cc: Valerie Harrill <Valerie.Harrill@railpros.com>; steven.bray@nscorp.com
Subject: Dominion Energy Transmission Line - Proposed 'NEW' Aerial Crossing - Prince William County, Virginia

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Good Morning,

My name is Craig Hurd and I work in the Siting and Permitting Group for Dominion Energy (DE).

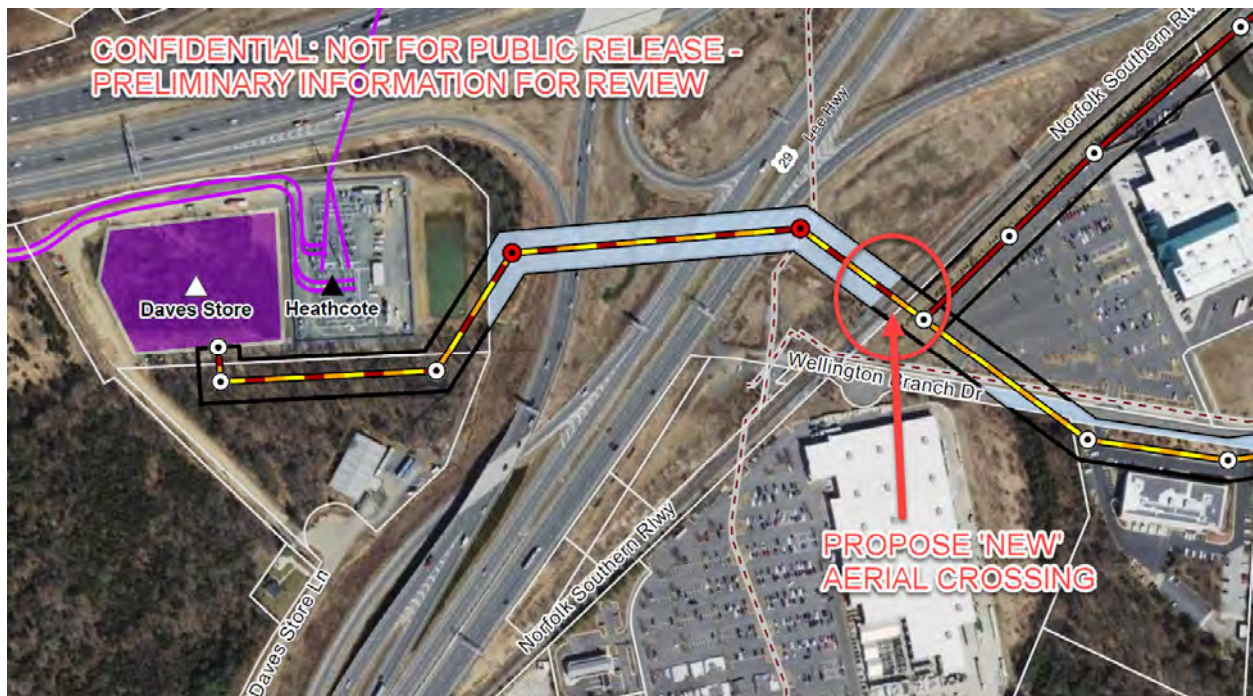
DE is currently reviewing potential routes for a new line, in Prince William County, to support the growing demand.

During this review we engage stakeholders that have existing facilities in the project area.

One option will require a 'NEW' aerial crossing over Norfolk Southern Railway (NSR).

Transmission structures will not be placed in NSR right of way.

Can you please provide any input, concerns, and questions you have with this option.



Thanks

Fud 1j #U 1#K x ug #

Siting and Permitting

Electric Transmission

Dominion Energy
5000 Dominion Boulevard (3.SW3047)
Glen Allen VA 23060
O: 804.771.6489 C: 804.201.5020



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From: Warren, Arlene <arlene.warren@vdh.virginia.gov>
Sent: Tuesday, June 22, 2021 7:53 AM
To: Rachel.M.Studebaker@dominionenergy.com
Subject: [EXTERNAL] Re: FW: SCC Case No. PUR-2021-00010/DEQ21-013S

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The proposal from Dominion is reasonable and we consider it acceptable.

Best Regards,

Arlene Fields Warren

GIS Program Support Technician

Office of Drinking Water

Virginia Department of Health

109 Governor Street

Richmond, VA 23219

(804) 864-7781

On Thu, Jun 17, 2021 at 4:33 PM Rachel.M.Studebaker@dominionenergy.com
<Rachel.M.Studebaker@dominionenergy.com> wrote:

Hello Ms. Warren,

I am reaching out in regard to the DEQ Report for SCC Case No. PUR-2021-00010/DEQ21-013S (230 kV lines #2113 and #2154 Transmission Line Rebuilds and Related Projects). As part of the VDH ODW review, it was recommended that all wells within a 1,000-foot radius of the project site be field marked and protected from accidental damage. It is our custom construction process to not conduct any work outside of the existing right-of-way (ROW), with the exception of entry using existing access roads, and use DEQ approved erosion and sediment controls. These well are located outside of the project area ROW on private land and Dominion Energy does not have permission to enter private property to field mark the wells.

Therefore, we are proposing to plot and call out the wells on the Erosion and Sediment control plans as a way of flagging them for the construction team for protection from accidental damage. Is this a sufficient approach to comply with the ODW recommendation?

Thank you,

Rachel Studebaker

Environmental Specialist II

Dominion Energy Services

120 Tredegar Street, Richmond, VA 23219

Office: (804) 273-4086

Cell: (804) 217-1847

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Heather E Kennedy (Services - 6)

From: Warren, Arlene (VDH) <Arlene.Warren@vdh.virginia.gov>
Sent: Thursday, January 18, 2024 2:32 PM
To: Heather E Kennedy (Services - 6)
Subject: [EXTERNAL] RE: Dominion Energy Proposed Daves Store 230 kV Line Extension Project - SCC Project Notification for CPCN

Follow Up Flag: Follow up
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Project #: N/A

Project Name: Dominion Energy Proposed Daves Store 230 kV Line Extension Project

UPC #: N/A

Location: Prince William Co.

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems **must be verified by the local utility.**

There are no public groundwater wells within a 1-mile radius of the project site.

The following surface water intakes are located within a 5-mile radius of the project site:

PWS ID Number	System Name	Facility Name
6685100	MANASSAS, CITY OF	LAKE MANASSAS DAM

The project is within the watershed of the following public surface water sources:

PWS ID Number	System Name	Facility Name
6059501	FAIRFAX COUNTY AUTHORITY	OCCOQUAN RESERVIOR INTAKE

Best Management Practices should be employed, including Erosion & Sedimentation Controls and Spill Prevention Controls & Countermeasures on the project site.

Materials should be managed while on site and during transport to prevent impacts to nearby surface water.

The Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.

Best Regards,

Arlene F. Warren

GIS Program Support Technician

Mobile 804-389-2167 (office/cell/text)

Email arlene.warren@vdh.virginia.gov

VDH, Office of Drinking Water
109 Governor Street, 6th Floor
Richmond, VA 23219

From: Heather.E.Kennedy@dominionenergy.com <Heather.E.Kennedy@dominionenergy.com>
Sent: Tuesday, January 9, 2024 5:01 PM
To: Rayfield, Bettina (DEQ) <bettina.rayfield@deq.virginia.gov>; Hypes, Rene (DCR) <Rene.hypes@dcr.virginia.gov>; DCR-PRR Environmental Review (DCR) <envreview@dcr.virginia.gov>; Martin, Amy (DWR) <amy.martin@dwr.virginia.gov>; Tignor, Keith (VDACS) <keith.tignor@vdacs.virginia.gov>; clint.folks@dof.virignia.gov; MRC - Scoping (MRC) <Scoping@mrc.virginia.gov>; Troy Andersen <troy_andersen@fws.gov>; keith.r.goodwin@usace.army.mil; Skorupa, James (Energy) <PHIL.SKORUPA@DMME.VIRGINIA.GOV>; Warren, Arlene (VDH) <Arlene.Warren@vdh.virginia.gov>
Cc: Craig.R.Hurd@dominionenergy.com; Adam.S.Maguire@dominionenergy.com; roya.smith@erm.com; David.J.Depippo@dominionenergy.com; valerie.m.chafee@dominionenergy.com; VLink@mcguirewoods.com; EHarris@mcguirewoods.com; jray@mcguirewoods.com
Subject: Dominion Energy Proposed Daves Store 230 kV Line Extension Project - SCC Project Notification for CPCN

To whom it May Concern,

Please see the attached project agency Notification for Dominion Energy's Certificate of Public Convenience and Necessity (CPCN) application with the State Corporation Commission (SCC) for the Dominion Energy Proposed Daves Store 230 kV Line Extension Project in Prince William County. We have also included the project overview map and project shapefiles to aim in your review.

If you have any questions, please contact me directly.

Thank you,

[Heather E.B. Kennedy](#) (she/her)
Environmental Specialist II
Dominion Energy Environmental and Sustainability
120 Tredegar Street, Richmond, VA 23219
(804) 317-9930
Heather.E.Kennedy@Dominionenergy.com



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