Dominion Energy®

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

Before the State Corporation Commission of Virginia

230 kV Line #293 and 115 kV Line #83 Rebuild Project

Application No. 309

Case No. PUR-2021-00272

Filed: November 12, 2021

Volume 2 of 2

BEFORE THE
STATE CORPORATION COMMISSION
OF VIRGINIA

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

230 kV Line #293 and 115 kV Line #83
Rebuild Project

Application No. 309

DEQ Supplement

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Based upon consultations with the Virginia Department of Environmental Quality ("DEQ"), Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") has developed this DEQ Supplement to facilitate review and analysis of the proposed 230 kV Line #293 and 115 kV Line #83 Rebuild Project ("Rebuild Project") by DEQ and other relevant agencies.

1. Project Description

In order to maintain the structural integrity and reliability of its transmission system in compliance with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, Dominion Energy Virginia proposes the following Rebuild Project located within existing right-of-way or on Company-owned property along an approximately 21.4-mile existing transmission corridor in the City of Staunton and in Augusta County, Virginia:

- Rebuild the existing approximately 21.4-mile 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83. Specifically, replace 17.6 miles of Line #293, which are supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN®[1] lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. Additionally, replace the Lines #293 and #83 conductors and shield wires for the entire 21.4 miles.

- Perform minor related substation work at the Company's existing Staunton, West Staunton and Valley Substations.

The proposed Rebuild Project will replace aging infrastructure at the end of its service life that was identified for rebuild in compliance with the Company's mandatory Planning Criteria and consistent with sound engineering judgment, thereby enabling the Company to maintain the overall long-term reliability of its transmission system, as well as to provide important system reliability benefits to the Company's entire network.

The entire Line #293 runs approximately 21.4 miles between the Company's existing Staunton and Valley Substations. The Rebuild Project would rebuild the entire 21.4-mile 230 kV Staunton-Valley Line #293, including 17.6 miles supported by single circuit 230 kV wood H-frame structures constructed between 1971 and 1981, and 3.8 miles of double circuit weathering steel lattice structures constructed in 1981 also supporting the 115 kV Craigsville-Staunton Line #83. The double circuit weathering steel lattice structures are shared between Line #293 and Line #83, which runs between the Company's existing Craigsville and Staunton Substations.

Industry experience indicates that life for wood pole structures is approximately 35 to 55 years, for conductor and connectors is approximately 40 to 60 years, and for porcelain insulators is approximately 50 years. The majority of these structures are at least 40 years old, and the Company believes it is most cost-effective to rebuild

[1] Registered trademark of United States Steel Corporation.

Line #293 between the Staunton and Valley Substations and the partial Line #83 that is shared with Line #293 rather than replace individual components.

The length of the existing right-of-way and Company-owned property to be used for the Rebuild Project is approximately 21.4 miles. Because the existing right-of-way and Company-owned property are adequate for the proposed Rebuild Project, no permanent new right-of-way is required. Given the availability of existing right-of-way and the statutory preference given to use of existing rights-of-way, and because additional costs and environmental impacts would be associated with the acquisition and construction of new right-of-way, the Company did not consider any alternate routes requiring new right-of-way for this Rebuild Project.

2. Environmental Analysis

The Company solicited comments from all relevant state and local agencies about the proposed Rebuild Project in September 2021. Copies of these letters are included as Attachment 2.

A. Air Quality

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

The entire width of the existing transmission corridor is currently maintained for transmission facility operations. However, the Rebuild Project may require some trimming of tree limbs along the right-of-way edges to support construction activities. The Company does not expect to burn cleared material, but if necessary, the Company will coordinate with the responsible locality to ensure all local ordinances are met. The Company's tree clearing methods are described in Section 2.K.

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

The Rebuild Project is located within the South Fork Shenandoah (Hydrologic Unit Code 02070005) watershed. The U.S. Geological Survey ("USGS") topographic quadrangles for Staunton (2019), Churchville (2019), Parnassus (2019), and Mount Sidney (2019) depict the study area as existing, cleared transmission line traversing through some level to steeply sloping terrain. The Rebuild Project right-of-way

crosses Lewis Creek, Bell Creek, Middle River, North Fork Naked Creek, and several unnamed perennial and intermittent streams. Any clearing required in the vicinity of streams will be performed by hand within 100 feet of both sides, and vegetation less than three inches in diameter will be left undisturbed.

The Company solicited comments from the Virginia Marine Resources Commission ("VMRC") regarding the proposed Rebuild Project in September 2021. According to a response letter dated October 6, 2021, the project is located within the jurisdictional areas of the VMRC, and a permit will be required. See Attachment 2.B.1. The Rebuild Project crosses North Fork Naked Creek, Middle River, and Lewis Creek; these waterbodies have a drainage area larger than five square miles and will require authorization from the VMRC. A Joint Permit Application will be submitted for review by the VMRC, DEQ, and the U.S. Army Corps of Engineers (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 Rebuild Project.

D. Tidal and Non-tidal Wetlands

No tidal wetlands were identified within the proposed Rebuild Project area.

Wetlands Impact Consultation

The Company delineated wetlands and other waters of the United States within the right-of-way 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 Mountain and Piedmont Region* (Version 2.0). The Company submitted the results of this delineation to the Corps on August 30, 2021, for confirmation. Total jurisdictional resources within the proposed Rebuild Project right-of-way are provided in the table below and detailed in Attachment 2.D.1.

Table 1. Jurisdictional Resources Within Rebuild Project Right-of-Way

Resource	Acreage (±)
Palustrine Emergent Wetland	0.93
Palustrine Scrub Shrub Wetland	0.09
Open Water	1.06

Resource	Acreage (±)
Upper Perennial Stream Channels (R3)	0.65 (1,597 Linear Feet)
Intermittent Stream Channels (R4)	0.05 (647 Linear Feet)
Ephemeral Stream Channels (R6)	0.01 (204 Linear Feet)

E. Solid and Hazardous Waste

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

Stantec obtained publicly available data from the Environmental Protection Agency ("EPA") Facility Registry System, which provides information about facilities, sites, or places subject to environmental regulation or of environmental interest. Although this data set includes all sites subject to environmental regulation by the EPA or other state authority, such as sites that fall under air emissions or wastewater programs, the results reported here only include those sites which fall under the EPA's hazardous waste, solid waste, remediation, and underground storage tank programs. These sites include Comprehensive Environmental Response, Compensation, and Liability Act/Superfund ("CERCLA/Superfund"); Resource Conservation and Recovery Act ("RCRA"); and brownfield sites. Per this database, there are 21 registered RCRA sites present within a 0.5-mile radius of the project. Eleven of these sites are inactive, and one active site (VAD980714646) is documented as being located in the project right-of-way; however, the address provided, and a search of aerial imagery confirm it is 1-mile outside of the 0.5-mile radius of the project. None of these sites are expected to be a concern for the project due to the distance and the nature of the sites.

The DEQ records were also searched for the presence of solid waste management facilities, Voluntary Remediation Program sites, and petroleum releases within 0.5 mile of the proposed project. One solid waste permit site (Permit Number 900000000420) is located approximately 398 linear feet from the project area. It is outside of the right-of-way, and the systems associated with the permit are either closed or inactive. A total of 64 petroleum release sites were identified within the search radius with the closest site (PC Number 20086023) located approximately 108 linear feet from the project area. This release was reported in 2007, the case is closed, and a gas station no longer operates there. Additionally, none of the identified petroleum release sites identified within 0.5 mile of the proposed project intersect with the project right-of-way and only one case (PC Number 20216048) remains open. The case is a residential home heating oil leak reported in 2020, is

approximately 2,248 linear feet from the project, and there are three drainages between it and the project. The Company has a procedure in place to handle petroleum contaminated soil, if encountered; however, as all the release sites are located outside of the project area, none of the petroleum release sites are expected to have an impact on the proposed project. A table listing these sites is included as part of Attachment 2.E.1.

In summary, a total of 64 petroleum release sites, one solid waste permit site, and 21 RCRA sites are located within a 0.5-mile radius of the project area; one active RCRA site (VAD980714646) is documented as being located within the project right-of-way; however, the coordinates for the site appear to be incorrect as the address listed and aerial imagery confirm it is outside the 0.5-mile radius of the project area. No EPA registered brownfield sites, or CERCLA/Superfund sites are located within 0.5 mile of the project area.

F. Natural Heritage, Threatened and Endangered Species

On behalf of the Company, Stantec conducted online database searches for threatened and endangered species in the vicinity of the Rebuild Project, including the U.S. Fish and Wildlife ("USFWS") Information, Planning, and Consultation ("IPaC") system, the Virginia Department of Wildlife Resources ("DWR") Virginia Fish and Wildlife Information Service ("VAFWIS"), Virginia Department of Conservation and Recreation ("DCR"), Natural Heritage Data Explorer ("NHDE"), and the Center for Conservation Biology Bald Eagle Nest and Roost Locator. The results are summarized in a report, included as Attachment 2.F.1, and are presented in the table below.

Table 2. Threatened and endangered species within the project vicinity

Species	Status	Database	Result
Indiana bat (*Myotis sodalis*)	FE SE	USFWS-IPaC	Identified as potentially occurring near the project. No known hibernacula or maternity roost trees within the vicinity of the project. The project will generally occur within an existing, cleared, and maintained right-of-way; however, limited removal of danger trees may be necessary. The Company plans to adhere to the time-of-year-restriction for "pup season" (June 1 – July 31). Given that no Indiana bat hibernacula or maternity roost trees occur in the vicinity of the Rebuild Project, no impacts are expected.

Species	Status	Database	Result
Northern long-eared bat (*Myotis septentrionalis*)	FT ST	USFWS-IPaC, DWR-VAFWIS, DWR-NLEB Winter Habitat and Roost Tree Map	Identified as potentially occurring near the project. No known hibernacula or maternity roost trees within the vicinity of the project. The project will generally occur within an existing, cleared, and maintained right-of-way; however, limited removal of danger trees may be necessary. Given that no northern long-eared bat hibernacula or maternity roost trees occur in the vicinity, no impacts are expected. To the extent that impacts may be possible, the Company would plan to rely upon and comply with the 4(d) Rule.
Madison cave isopod (*Antrolana lira*)	FT ST	USFWS-IPaC	Identified as potentially occurring near the project. This species inhabits the bottoms of streams and pools in flooded caves that are associated with karst features. Karst features are located within the project right-of-way. Geotechnical investigations will be performed to locate transmission support foundations outside any karst features. Therefore, the project is not expected to adversely affect the Madison cave isopod.
Little brown bat (*Myotis lucifugus*)	SE	DWR-VAFWIS	Identified as potentially occurring near the project. The project will generally take place within existing, cleared and maintained right-of-way; however, limited removal of danger trees may be necessary. No roosts or hibernacula have been identified within the vicinity of the project. As such, no adverse impacts to this species are expected.
Tri-colored bat (*Perimyotis subflavus*)	SE	DWR-VAFWIS	Identified as potentially occurring near the project. The project will generally take place within existing, cleared and maintained right-of-way; however, limited removal of danger trees may be necessary. No roosts or hibernacula have been identified within the vicinity of the project. As such, no adverse impacts to this species are expected.
Loggerhead shrike (*Lanius ludovicianus*)	ST	DWR-VAFWIS; DCR-NHDE	Identified as potentially occurring near the project. The loggerhead shrike nests in small trees/shrubs. While potential habitat is present, no conversion of habitat is expected and all transmission line construction work will generally occur within existing, cleared, and maintained right-of-way. Therefore, the project is not likely to adversely affect the loggerhead shrike.

Note: FE denotes species is federally endangered; FT denotes species is federally threatened; SE denotes species is state endangered; ST denotes species is state threatened.

Indiana Bat

The federally and state endangered Indiana bat has been identified by the USFWS-IPaC as potentially occurring within or near the Rebuild Project. The Indiana bat

typically inhabits caves during the winter months while roosting under the peeling bark of dead and dying trees along streams and rivers in the summer. The Rebuild Project will generally occur within an existing maintained transmission line right-of-way; however, limited removal of trees during construction access and removal of danger trees may be necessary. The Company plans to adhere to the time-of-year-restriction for "pup season" (June 1 – July 31). Given that no Indiana bat hibernacula or maternity roost trees occur in the vicinity of the Rebuild Project, no impacts are expected.

Northern Long-eared Bat

The federally and state threatened northern long-eared bat has been identified by the USFWS-IPaC, DWR-VAFWIS, and DWR-NLEB Winter Habitat and Roost Tree Map databases as potentially occurring within the vicinity of the Rebuild Project; however, DWR records indicate that no known hibernacula or maternity roost trees occur within the vicinity. The northern long-eared bat is typically found in intact forest habitats with mixed hardwoods and often nests in and breeds in tree hollows and in woody debris (Source: NatureServe). The Rebuild Project will generally occur within an existing maintained transmission line right-of-way; however, limited removal of trees during construction access and removal of danger trees may be necessary. Given that no northern long-eared bat hibernacula or maternity roost trees occur in the vicinity, no impacts are expected. To the extent that impacts may be possible, the Company would plan to rely upon and comply with the USFWS Endangered Species Act Section 4(d) for NLEB.

Madison Cave Isopod

The federally and state threatened Madison cave isopod was identified by the USFWS-IPaC as potentially occurring within or near the Rebuild Project. The species inhabits the bottoms of streams and pools in flooded caves that are associated with karst features. Karst features are located within the project right-of-way and within the vicinity of the Rebuild Project. On previous electric transmission projects in Augusta County, DCR commented coordination on Madison cave isopod would only need to occur if the project would:

1. Withdraw water from wells or lower the water table,
2. Alter sinkholes, caves, or sinking streams,
3. Involve wastewater injection into the groundwater,
4. Include quarrying,
5. Perform nutrient applications lacking certified nutrient management plans, or
6. Discharge water to conveyances that discharge to downstream karst features.

The Rebuild Project will not involve any of these activities. Specifically, the Company will perform geotechnical investigations to locate transmission support foundations outside any karst features. Therefore, the Rebuild Project is not expected to adversely affect the Madison cave isopod.

Little Brown Bat and Tri-colored Bat

The DWR-VAFWIS database identified the state endangered little brown bat and tri-colored bat as potentially occurring within or near the Rebuild Project. Both bats hibernate in caves and use a variety of habitat in the summer ranging from urban to suburban to forested areas. The Rebuild Project will generally take place within existing, cleared and maintained transmission line right-of-way; however, limited removal of trees during construction access and removal of danger trees may be necessary. No roosts or hibernacula have been identified within the vicinity of the project. As such, no adverse impacts to this species are expected.

Loggerhead Shrike

The state threatened loggerhead shrike was identified by DWR-VAFWIS and DCR-NHDE as potentially occurring within or near the Rebuild Project. The species typically nests in shrubs or small trees in open areas and sometimes moves from pastures to shrub and open forest habitats during cold weather. While potential habitat is present, no conversion of habitat is expected, and work will generally occur within existing cleared and maintained right-of-way. Therefore, the Rebuild Project is not likely to adversely affect the loggerhead shrike.

Bald Eagle

There are no bald eagle nests or roosts located within the vicinity of the Rebuild Project. The closest bald eagle nest, RH0901 is located approximately 2.84-miles to the northeast of the project area. Therefore, no adverse impacts to this species are expected.

The Company requested comments from the USFWS, DWR, and DCR regarding the proposed Rebuild Projects in September 2021. Responses from DCR were received on August 27, 2021 and September 8, 2021, and are included as Attachments 2.F.2 and 2.F.3, respectively. The response from DWR, received on September 8, 2021, is included as Attachment 2.F.4.

As the Company will obtain all necessary permits prior to construction, such as authorization from the VMRC, DEQ, and the Corps, coordination with the DWR, DCR, and USFWS will take place through the respective permit processes to avoid and minimize impacts to listed species.

Natural Heritage Resources

An initial project review of the DCR NHDE identified natural heritage resources within the project area. The project area intersects karst bedrock and the Virginia Department of Mines, Minerals, and Energy ("DMME") sinkhole screening layers. Sinkholes allow surface water to directly affect groundwater quality and flow, which can degrade drinking water, springs and spring-fed surface waters, and the habitat of

subterranean creatures. DCR recommends minimizing surface disturbance, strict use of appropriate erosion and sediment control measures, and adherence to best management practices for karst to reduce potential impacts to karst, groundwater, and surface water resources. The Company submitted the project to DCR for a more detailed review. The response from DCR, was received on August 27, 2021, and is included as Attachment 2.F.2.

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

G. 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 on the proposed Rebuild Project 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.G.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.

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

Stantec was retained by the Company to conduct a Stage I Pre-Application Analysis for the proposed Rebuild Project. Preliminary background research was conducted pursuant to the *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (DHR 2008) for proposed transmission line improvements. As detailed by Virginia Department of Historic Resources ("VDHR") guidance, consideration was given to: National Historic Landmark ("NHL") properties located within a 1.5-mile radius of the project centerline; National Register of Historic Places ("NRHP") listed properties, battlefields, and historic landscapes located within a 1.0-mile radius of the project centerline; NRHP-eligible sites located within a 0.5-mile radius of the project centerline; and archaeological sites located within the project right-of-way. The Stage 1 Analysis was submitted to VDHR on November 5, 2021. The Stage 1 Analysis is included as Attachment 2.H.1.

Archaeological Resources

One previously recorded archaeological resource was identified within the Rebuild Project right-of-way. Site 44AU1012 has not been evaluated for listing on the NRHP. The site is described as surface remains of a circular foundation of a railroad water tower and two metal water pumps.

Table 3. Previously Recorded Archaeological resources within the Rebuild Project Right-of-Way

VDHR #	Resource Name	VDHR/NRHP Status
44AU1012	Late 19th Century to Early 20th Century Railroad Water Tower and Pumps	Not Evaluated

Architectural Resources

One NHL-listed architectural resource is located within the 1.5-mile radius of the Rebuild Project centerline. Including the NHL, which is also listed on the NRHP, 32 NRHP-listed resources are located within 1.0 mile and three NRHP-eligible resources were identified within 0.5 mile of the Rebuild Project centerline. Based upon the proposed changes to structure heights, it is anticipated that the Rebuild Project will have no impact to historic properties with no view of the Rebuild Project, and a minimal impact to those historic properties that will view the Rebuild Project, as shown in the table below. Consistent with its customary practice, the Company will coordinate with VDHR regarding the findings of the Stage I Pre-Application Analysis.

Table 4. Previously Recorded Architectural Resources Considered under the Stage I Pre-Application Guidelines

VDHR #	Resource Name	VDHR/NRHP Status	Distance to Centerline (Feet)	Impact
007-0024	Mount Pleasant/Mount Pleasant Farm	NRHP-Listed, VLR Listed	2,898	Minimal
007-0755	Augusta County Training School/Cedar Green School, Route 693	NRHP-Listed, VLR Listed	1,828	None
007-1175	Public Schools in Augusta County, Virginia, 1870-1940	NRHP-Listed, VLR Listed	1,830	None
007-1283	Ashton/A.M. Bruce House	NRHP-Eligible	957	Minimal
132-0001/ 132-0024-0161	Augusta County Courthouse, 1 East Johnson Street	NRHP-Listed, VLR Listed	898	None

VDHR #	Resource Name	VDHR/NRHP Status	Distance to Centerline (Feet)	Impact
132-0002	Hill Top, Mary Baldwin Campus	NRHP-Listed, VLR Listed	1,770	None
132-0004/ 132-0035-0229	The Manse/Woodrow Wilson Birthplace, 24 North Coalter Street	NHL Listed, NRHP-Listed, VLR Listed	1,172	None
132-0006/ 132-0034-0513	Stuart House, 120 Church Street	NRHP-Listed, VLR Listed	1,598	Minimal
132-0007/ 132-0034-0514	Trinity Episcopal Church, 214 West Beverly Street	NRHP-Listed, VLR Listed	1,513	None
132-0008	Virginia School for the Deaf and Blind Historic District, East Beverley Street	NRHP-Listed, VLR Listed	153	Minimal
132-0009	Old Site Antebellum Complex/ Staunton Correctional Center/The Blackburn Inn/ Western State Lunatic Asylum/ 301 Greenville Avenue	NRHP-Listed, VLR Listed	210	Minimal
132-0011/ 132-0034-0515	Old Main/Stuart Hall, 235 West Frederick Street	NRHP-Listed, VLR Listed	2,185	None
132-0013	Sears House, 400 Marquis Street	NRHP-Listed, VLR Listed	427	Minimal
132-0014	Wharf Area Historic District	NRHP-Listing, VLR Listing	301	None
132-0015/ 132-0035-0230	Arista Hoge House/Kalorama Castle, 215 Kalorama Street	NRHP-Listing, VLR Listing	525	Minimal
132-0016	Mary Baldwin College Main Building, Mary Baldwin College	NRHP-Listing, VLR Listing	1,547	Minimal
132-0017	Rose Terrace, 150 North Market Street	NRHP-Listing, VLR Listing	1,937	Minimal
132-0018/ 132-0036-0116	C.W. Miller House/Mary Baldwin College Music Building, 210 North New Street	NRHP-Listing, VLR Listing	1,885	None
132-0021/ 132-0035-0231	The Oaks, 437 East Beverley Street	NRHP-Listing, VLR Listing	1,289	None
132-0022	Kable House, 310 Prospect Street	NRHP-Listing, VLR Listing	2,352	None

VDHR #	Resource Name	VDHR/NRHP Status	Distance to Centerline (Feet)	Impact
132-0023/ 132-0024-0162	National Valley Bank/United Virginia Bank/National Valley, 12 West Beverley Street	NRHP-Listing, VLR Listing	1,224	None
132-0024	Beverley Historic District	NRHP-Listing, VLR Listing	286	Minimal
132-0027/ 132-0035-0232	Oakdene, 605 East Beverley Street	NRHP-Listing, VLR Listing	1,656	Minimal
132-0028/ 132-0035-0233	J.C.M. Merrillat House/Hunter House, 521 East Beverley Street	NRHP-Listing, VLR Listing	1,454	None
132-0030	Breezy Hill, 1220 North Augusta Street	NRHP-Listing, VLR Listing	4,397	None
132-0032/ 132-0035-0234	Catlett House, 303 Berkeley Place	NRHP-Listing, VLR Listing	1,168	None
132-0033/ 132-0035-0235	Thomas J. Michie House, 324 East Beverley Street	NRHP-Listing, VLR Listing	573	None
132-0034	Newtown Historic District	NRHP-Listing, VLR Listing	1,240	Minimal
132-0035	Gospel Hill Historic District	NRHP-Listing, VLR Listing	263	Minimal
132-0036	Stuart Addition Historic District	NRHP-Listing, VLR Listing	1,489	None
132-0037	Robert E. Lee High School, 274 Churchville Avenue	NRHP-Listing, VLR Listing	4,007	None
132-0055	Bear Wallow Farm/Willoughby, 919 Middlebrook Avenue	DHR Staff-Eligible	1,760	Minimal
132-0057	John J.F. White House, 865 Middlebrook Avenue	DHR Staff-Eligible	2,092	None
132-5011	Booker T. Washington High School for Coloreds, 1114 West Johnson Street	NRHP-Listing, VLR Listing	2,982	Minimal
132-5023	Montgomery Hall Park/Montgomery Hall Park Historic District, 1000 Montgomery Avenue	NRHP-Listing, VLR Listing	2,952	Minimal
132-5025	Bessie Weller Elementary School, 600 Greenville Avenue	Potentially Eligible	0	Minimal

I. Chesapeake Bay Preservation Areas

The Rebuild Project is not located in a locality subject to the Chesapeake Bay Preservation Act. Additionally, 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. The Company will meet those conditions.

J. Wildlife Resources

Relevant agency databases were reviewed and requests for comments from the USFWS, DWR, and DCR were submitted to determine if the proposed Rebuild Project has the potential to affect any threatened or endangered species, as described in Section 2.F and included as Attachment 2.F.2. As discussed in Section 2.F and identified in Attachment 2.F.1, certain federal and state listed species were identified as potentially occurring in the project area. The Company will coordinate with the USFWS, DWR, and DCR as appropriate to determine whether additional surveys are necessary and to minimize impacts on wildlife resources. Since the proposed Rebuild Project is a rebuild of a transmission line generally within existing right-of-way, no loss of wildlife habitat is anticipated.

K. Recreation, Agricultural and Forest Resources

The Rebuild Project is expected to have minimal permanent impacts on recreational, agricultural, and forest resources since no additional right-of-way is required. The vicinity of the Rebuild Project at the Staunton Substation is urban; however, the majority of the Rebuild Project area is largely characterized as rural.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. Land can also be considered prime farmland if subject to certain management practices such as drainage and irrigation. Land that does not meet the criteria for prime farmland can be considered to be "farmland of statewide importance." The criteria for defining and delineating farmland of statewide importance are determined by the Virginia Department of Agriculture and Consumer Services. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Other areas that are not identified as having national or statewide importance can be considered to be "farmland of local importance." This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance. A total of 21.00 acres of prime farmland and 164.05 acres of farmland of statewide importance occurs within a predominantly 100-150 foot-wide corridor encompassing the Line #293 and Line #83 project area.

Augusta County and the City of Staunton do not have designated farmlands of local importance. The *Augusta County Comprehensive Plan* identifies four agricultural and forestal districts, which are authorized by Va. Code § 15.2-4312; however, the Rebuild Project does not pass through any of these districts. Prime farmland and farmlands of statewide importance are also discussed within the *Augusta County Comprehensive Plan*. Prime farmland and farmlands of statewide importance account for 12% and 16% of Augusta County's soils, respectively. Although these soils tend to be found in isolated patches throughout the county and along alluvial deposits near rivers, much of the county's soils, not classified as prime farmland or farmland of statewide importance by the United States Department of Agriculture Natural Resource Conservation Service, are very productive.

Farming operations currently exist within the Company easement; however, the Company utilizes timber mats to access transmission structures within agricultural fields, and pads for structure erection. These will minimize the impact to the soil, resulting in only a temporary impact, thereby avoiding permanent impacts to farmlands from construction access. The Company will work with landowners on final structure placement to minimize the effect on farming operations. Therefore, prime farmland and agricultural and forestal districts should not be incrementally impacted by the construction of the Rebuild Project, and the Rebuild Project is not expected to affect agricultural land.

Under the Virginia Open-Space Land Act, any public body can acquire title or rights to real property to provide means of preservation of open-space land. Such conservation easements must be held for no less than five years in duration and can be held in perpetuity. There is one Virginia Outdoors Foundation ("VOF") conservation easement and one Valley Conservation Council conservation easement crossed by the existing right-of-way for Line #293 and the proposed Rebuild Project.

In a response letter dated October 5, 2021, the VOF stated that the proposed Rebuild Project crosses one VOF easement (Project 1035) and would like to receive further coordination once access to Structures 192 and 193 has been determined. See Attachment 2.K.1. The Company will contact VOF following completion of the access review.

The existing right-of-way does not cross any federal or state parks or forests, game preserves, wildlife management areas, conservation sites, or managed conservation lands.

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. There are no rivers designated as a scenic river within the vicinity of the Rebuild Project.

In September 2021, the Company solicited DCR for comments on the proposed Rebuild Project. In an email dated September 8, 2021, DCR stated that they had no comments on the scope of the Rebuild Project. See Attachment 2.K.2.

The entire width of the existing transmission corridor is currently maintained for transmission facility operations. Trees and brush located within 100 feet of streams will be cleared by hand in accordance with the Company-approved Erosion and Sediment Control specifications.

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 towards the conductors and exhibits signs or symptoms of disease or structural defect that make it an elevated risk for falling will be designated as a "danger tree" and may be removed. The Company's arborist will contact the property owner if possible before any danger trees are cut, except in emergency situations. The Company's Forestry Coordinator will field inspect the right-of-way and designate any danger trees present. Qualified contractors working in accordance with the Company's electric transmission specifications will perform all danger tree cutting. The Rebuild Project is expected to have minimal, if any, impact on agricultural or forest resources as the proposed Rebuild Project involves rebuilding a portion of an existing line which is already cleared and maintained for existing facility operation and no additional right-of-way is required.

The transmission line right-of-way is regularly maintained to keep vegetation at the emergent and scrub-shrub level for the safe operation of the existing facilities. Since the proposed Rebuild Project is to take place within the existing right-of-way, no impact to forestland is expected.

L. Use of Pesticides and Herbicides

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

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.

M. Geology and Mineral Resources

According to the Virginia DMME Division of Geology and Mineral Resources Interactive Geologic Map, the Rebuild Project sits atop portions of the Beekmantown Group, Martinsburg and Orando Formations, Edinburg Formation, Lincholnshire and New Market Limestones, Elbrook Formation, and Conococheague Formation, which consist of dolostone, limestone, shale, sandstone, and black shale. There are also some karst formations within the vicinity. Karst features are areas where the dissolving bedrock has created sinkholes, caves, sinking streams, and other related features. Karst features are areas where the surface water interacts with the subsurface groundwater and are generally unstable areas for construction. Before construction of the Rebuild Project, geotechnical borings will be taken to ensure foundations will not be placed in karst features. If karst features are encountered during the project, coordination with DCR will occur as needed to document and minimize adverse impacts. A project review from DCR indicated that one known cave, Muddy Pit, is located within the project area while a second cave, Transmission Pit, is likely located just outside the project area. The DCR-DNH Karst Program recommends field verifying the locations of both cave entrances and completely avoiding the entrances during construction. Additionally, it is recommended that these areas be protected with erosion and sediment control measures as well as establishing a clearly marked protective buffer indicating sensitive karst features in the area around the entrances. The Company intends to comply with the recommendations (provided in Attachment 2.F.2 and will provide updated location information on the entrances to the DCR-DNH Karst Program.

According to the USGS topographic maps and aerial imagery, there are no active mines or stone quarries within the proposed Rebuild Project right-of-way. A search of the DMME Mineral Mining online map confirms there are no active or abandoned mines within the right-of-way. There is one active permit, Augusta Plant (Permit #05549AD), approximately 0.4 mile from the Rebuild Project. Mines within 0.5 mile of the Rebuild Project are provided in the table below.

The Rebuild Project is located within a cleared and maintained right-of-way, and no active mines are located within the right-of-way. As such, the Rebuild Project will not negatively impact the geology, any mineral resources, or the identified mines.

Table 5. Mines within 0.5 Mile of the Rebuild Project

Mine ID	Mineral	Status	Latitude	Longitude
DMM03322	Limestone	Orphaned	38.281200	-79.017300
DMM02556	Limestone	Orphaned	38.218300	-79.097600
DMM07507	Limestone	Orphaned	38.132500	-79.092600
DMM07505	Limestone	Orphaned	38.146500	-79.057500

N. Transportation Infrastructure

The existing right-of-way to be used for the proposed Rebuild Project crosses multiple roads in Augusta County. Roads within the project area are low to moderate traffic volume roads. The Company plans to apply for land use permits from the Virginia Department of Transportation ("VDOT") for the aerial crossings of VDOT-maintained roads and any construction entrances from the VDOT right-of-way. All permits will be obtained prior to construction. In September 2021, the Company requested comments from VDOT.

The Company solicited the Virginia Department of Aviation ("DOAv") and the Federal Aviation Administration ("FAA") for comments regarding the proposed Rebuild Project. The design of the proposed Rebuild Project must prevent interference with pilots' safe ingress and egress at the airport. Such hazard or impediments include interference with navigation and communication equipment and glare from materials and external lights. In an email dated September 13, 2021, DOAv stated that after review, it was determined that the proposed project is located within 20,000 linear feet of Bridgewater Airport and a Form 7460 is required. The FAA also stated that a Form 7460 will be required in an email dated September 13, 2021. See Attachments 2.N.1 and 2.N.2.

Finally, the Company has reviewed the FAA website (https://oeaaa.faa.gov/oeaaa/external/portal.jsp) to identify airports within 10 nautical miles of the Rebuild Project; the following airports were identified:

- Augusta Medical Center Heliport, approximately 4.9 miles southeast of Staunton Substation,
- Eagle's Nest Airport, approximately 7.17 miles southeast of Line #293,
- Shenandoah Valley Regional Airport, approximately 4.63 miles southeast of Valley Substation
- Bridgewater Air Park, approximately 3.15 miles north of Valley Substation

Based on a preliminary review, impacts to air navigation are not anticipated but FAA filings are required for some of the proposed structures and construction cranes. The Company has filed for obstruction evaluation determinations for these structures.

The Company will coordinate with VDOT, DOAv, and the FAA as necessary to obtain all appropriate permits.

Attachments

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

September 7, 2021

BY EMAIL

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

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Mr. Andersen,

Dominion Energy Virginia (the "Company") is proposing to rebuild the approximately 21.4-mile existing 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. The Company also intends to perform minor project-related substation work at the Company's existing Staunton, West Staunton and Valley Substations.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Rachel Studebaker at (804) 217-1847 or rachel.m.studebaker@dominionenergy.com.

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

Sincerely,
Dominion Energy Virginia

Jason P. Ericson
Director, Environmental Services

Attachment: Project Notice Map

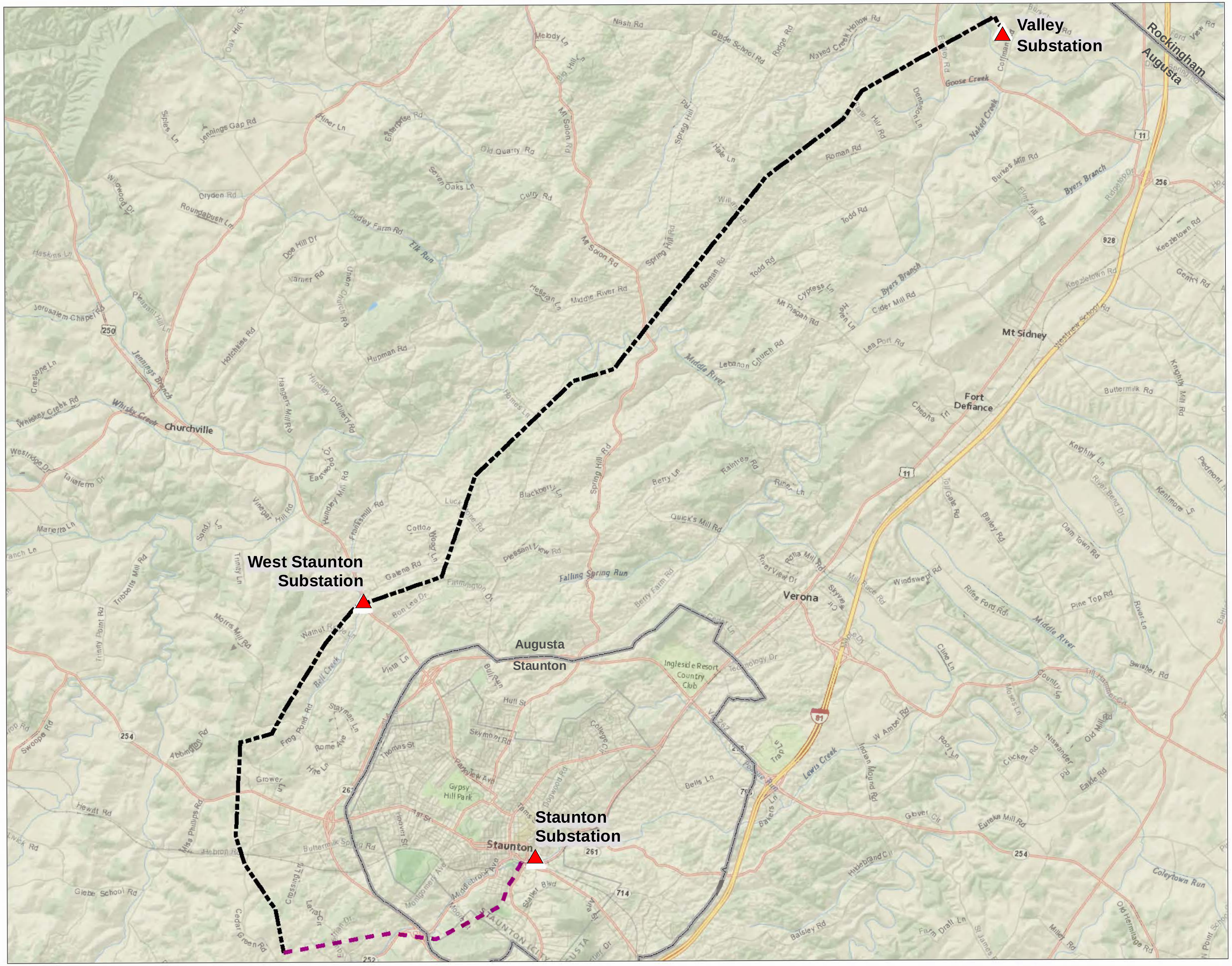


Figure No.
I.A.1

Title
Overview Map

Client/Project
203401607
Dominion Energy Virginia
230 kV Line #293 and 115 kV Line #83 Rebuild Project

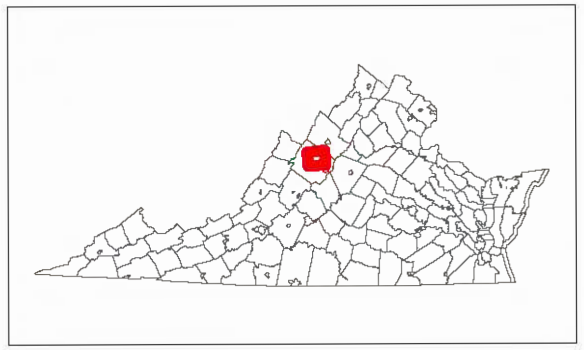
Project Location
Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-06-29
TR by MGS on 2021-06-29
IR by MK on 2021-08-03

N

0 7,000 14,000 Feet
(At original document size of 11x17)
1:84,000

- 🔺 Substation
- ▬ ▬ Lines #293 and #83 Project Centerline
- ▬ ▬ Line #293 Project Centerline



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR
3. Base Map © National Geographic

Stantec

Page 01 of 01

U:\203401607\03_data\gis_cad\gis\01607_p_scc_I.A.1.mxd Revised: 2021-08-04 By: MGSanderson

Attachment I.A.1

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

September 7, 2021

BY EMAIL

Mr. Mark Eversole
Habitat Management Division
Virginia Marine Resources Commission
Building 96, 380 Fenwick Road
Fort Monroe, Virginia 23651

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Mr. Eversole,

Dominion Energy Virginia (the "Company") is proposing to rebuild the approximately 21.4-mile existing 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. The Company also intends to perform minor project-related substation work at the Company's existing Staunton, West Staunton and Valley Substations.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Rachel Studebaker at (804) 217-1847 or rachel.m.studebaker@dominionenergy.com.

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

Sincerely,

Dominion Energy Virginia

Jason P. Ericson
Director, Environmental Services

Attachment: Project Notice Map

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

September 7, 2021

BY EMAIL

Ms. Amy M. Ewing
Virginia Department of Wildlife Resources
P.O. Box 90778
Henrico, Virginia 23228

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Ms. Ewing,

Dominion Energy Virginia (the "Company") is proposing to rebuild the approximately 21.4-mile existing 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. The Company also intends to perform minor project-related substation work at the Company's existing Staunton, West Staunton and Valley Substations.

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

Sincerely,

Dominion Energy Virginia

Jason P. Ericson
Director, Environmental Services

Attachment: Project Notice Map

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

September 7, 2021

BY EMAIL

Ms. Rene Hypes
Virginia Department of Conservation and Recreation
Environmental Review Coordinator, Natural Heritage Program
600 East Main Street, Suite 1400
Richmond, Virginia 23219

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Ms. Hypes,

Dominion Energy Virginia (the "Company") is proposing to rebuild the approximately 21.4-mile existing 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. The Company also intends to perform minor project-related substation work at the Company's existing Staunton, West Staunton and Valley Substations.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Rachel Studebaker at (804) 217-1847 or rachel.m.studebaker@dominionenergy.com.

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

Sincerely,

Dominion Energy Virginia

Jason P. Ericson
Director, Environmental Services

Attachment: Project Notice Map

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

Dominion Energy®

September 7, 2021

BY EMAIL

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

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Mr. Lasher,

Dominion Energy Virginia (the "Company") is proposing to rebuild the approximately 21.4-mile existing 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. The Company also intends to perform minor project-related substation work at the Company's existing Staunton, West Staunton and Valley Substations.

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

Sincerely,

Dominion Energy Virginia

Jason P. Ericson
Director, Environmental Services

Attachment: Project Notice Map

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

Dominion Energy®

September 7, 2021

BY EMAIL

Ms. Bettina Rayfield
Manager Environmental Impact Review and Long Range Priorities Program
Office of Environmental Impact Review
Department of Environmental Quality
PO Box 1105
Richmond, Virginia 23218

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Ms. Rayfield,

Dominion Energy Virginia (the "Company") is proposing to rebuild the approximately 21.4-mile existing 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. The Company also intends to perform minor project-related substation work at the Company's existing Staunton, West Staunton and Valley Substations.

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

Sincerely,

Dominion Energy Virginia

Jason P. Ericson
Director, Environmental Services

Attachment: Project Notice Map

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

September 7, 2021

BY EMAIL

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

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Ms. Rhur,

Dominion Energy Virginia (the "Company") is proposing to rebuild the approximately 21.4-mile existing 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. The Company also intends to perform minor project-related substation work at the Company's existing Staunton, West Staunton and Valley Substations.

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

Sincerely,

Dominion Energy Virginia

Jason P. Ericson
Director, Environmental Services

Attachment: Project Notice Map

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

Dominion Energy®

September 7, 2021

BY EMAIL

Mr. Keith Tignor
Endangered Plant and Insect Species Program
Virginia Department of Agriculture and Consumer Affairs
102 Governor Street
Richmond, Virginia 23219

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Mr. Tignor,

Dominion Energy Virginia (the "Company") is proposing to rebuild the approximately 21.4-mile existing 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. The Company also intends to perform minor project-related substation work at the Company's existing Staunton, West Staunton and Valley Substations.

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

Sincerely,

Dominion Energy Virginia

Jason P. Ericson
Director, Environmental Services

Attachment: Project Notice Map

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

September 7, 2021

BY EMAIL

Regulator of the Day
US Army Corps of Engineers
Norfolk District
803 Front Street
Norfolk, Virginia 23510

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Regulator of the Day,

Dominion Energy Virginia (the "Company") is proposing to rebuild the approximately 21.4-mile existing 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. The Company also intends to perform minor project-related substation work at the Company's existing Staunton, West Staunton and Valley Substations.

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

Sincerely,

Dominion Energy Virginia

Jason P. Ericson
Director, Environmental Services

Attachment: Project Notice Map

Dominion Energy Virginia
10900 Nuckols Road, 4th Floor Glen Allen, Virginia 23060

September 7, 2021

BY EMAIL

Mr. Don Komara
Harrisonburg Resident Engineer
Virginia Department of Transportation
Harrisonburg Residency
3536 North Valley Pike
Harrisonburg, VA 22802
donald.komara@vdot.virginia.gov

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Mr. Komara,

Dominion Energy Virginia (the "Company") is proposing to rebuild the existing approximately 21.4-mile 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. As part of the Project, the Company also intends to perform minor related substation work at the Company's existing Staunton, West Staunton, and Valley Substations.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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.

If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Nancy Reid at 434.532.7579 or nancy.r.reid@dominionenergy.com.

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

Sincerely,

Nancy Reid

Nancy Reid
Siting and Permitting Specialist

Attachment I.A.1: Project Notice Map

Dominion Energy Virginia
10900 Nuckols Road, 4th Floor Glen Allen, Virginia 23060

September 7, 2021

BY EMAIL

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

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Ms. Little,

Dominion Energy Virginia (the "Company") is proposing to rebuild the existing approximately 21.4-mile 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. As part of the Project, the Company also intends to perform minor related substation work at the Company's existing Staunton, West Staunton, and Valley Substations.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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.

If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Nancy Reid at 434.532.7579 or nancy.r.reid@dominionenergy.com.

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

Sincerely,

Nancy Reid

Nancy Reid
Siting and Permitting Specialist

Attachment I.A.1: Project Notice Map

Dominion Energy Virginia
10900 Nuckols Road, 4th Floor Glen Allen, Virginia 23060

September 7, 2021

BY EMAIL

Mr. Randy Kiser
Staunton District Engineer
Virginia Department of Transportation
Staunton District Office
811 Commerce Road
Staunton, Virginia 24401

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Mr. Kiser,

Dominion Energy Virginia (the "Company") is proposing to rebuild the existing approximately 21.4-mile 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. As part of the Project, the Company also intends to perform minor related substation work at the Company's existing Staunton, West Staunton, and Valley Substations.

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Nancy Reid

Nancy Reid
Siting and Permitting Specialist

Attachment I.A.1: Project Notice Map

Dominion Energy Virginia
10900 Nuckols Road, 4th Floor Glen Allen, Virginia 23060

September 7, 2021

BY EMAIL

Mr. Roger Kirchen
Department of Historic Resources
Review and Compliance Division
2801 Kensington Avenue
Richmond, Virginia 23221
roger.kirchen@dhr.virginia.gov

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Mr. Kirchen,

Dominion Energy Virginia (the "Company") is proposing to rebuild the existing approximately 21.4-mile 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. As part of the Project, the Company also intends to perform minor related substation work at the Company's existing Staunton, West Staunton, and Valley Substations.

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Sincerely,

Nancy Reid

Nancy Reid
Siting and Permitting Specialist

Attachment I.A.1: Project Notice Map

Dominion Energy Virginia
10900 Nuckols Road, 4th Floor Glen Allen, Virginia 23060

September 7, 2021

BY EMAIL

Mr. Scott Denny
Virginia Department of Aviation
Airport Services Division
5702 Gulfstream Road
Richmond, Virginia 23250
scott.denny@doav.virginia.gov

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Mr. Denny,

Dominion Energy Virginia (the "Company") is proposing to rebuild the existing approximately 21.4-mile 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. As part of the Project, the Company also intends to perform minor related substation work at the Company's existing Staunton, West Staunton, and Valley Substations.

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Sincerely,

Nancy Reid

Nancy Reid
Siting and Permitting Specialist

Attachment I.A.1: Project Notice Map

Dominion Energy Virginia
10900 Nuckols Road, 4th Floor Glen Allen, Virginia 23060

September 7, 2021

BY EMAIL

Mr. Steve Phillips
Manger, Obstruction Evaluation Group
Federal Aviation Administration
10101 Hillwood Parkway
Fort Worth, Texas 76177
OEGroup@faa.gov

RE: Dominion Energy Virginia's 230 kV Line #293 and 115 kV Line #83 Rebuild Project
City of Staunton and Augusta County, Virginia

Dear Mr. Phillips,

Dominion Energy Virginia (the "Company") is proposing to rebuild the existing approximately 21.4-mile 230 kV Staunton-Valley Line #293, which is inclusive of a 3.8-mile section of 115 kV Craigsville-Staunton Line #83 (the "Project"). Specifically, the Project will replace 17.6 miles of Line #293, which is supported primarily by single circuit wood H-frame structures, with primarily weathering steel H-frame structures; also replace 3.8 miles of Line #293, which is supported primarily by double circuit COR-TEN® lattice structures that also support 115 kV Line #83, with primarily weathering steel double circuit monopole structures. As part of the Project, the Company also intends to perform minor related substation work at the Company's existing Staunton, West Staunton, and Valley Substations.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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.

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

Sincerely,

Nancy Reid

Nancy Reid
Siting and Permitting Specialist

Attachment I.A.1: Project Notice Map

COMMONWEALTH of VIRGINIA

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

Ann F. Jennings
Secretary of Natural and Historic Resources

Steven G. Bowman
Commissioner

October 6, 2021

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

Re: Staunton to Valley TL293 Rebuild Project

Dear Ms. Kennedy,

This will respond to the request for comments regarding the Staunton to Valley TL293 rebuild Project, prepared by Dominion Energy. Specifically, Dominion has proposed to rebuild approximately 17.6 miles of the existing 230 kV Staunton-Valley Line #293 and 3.8 miles of 115 kV Craigsville-Staunton Line #83 in Augusta County and the City of Staunton, Virginia. We reviewed the provided project documents and found the proposed project is within the jurisdictional areas of the Virginia Marine Resources Commission (VMRC) and will 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 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. Any jurisdictional impacts will be reviewed by the VMRC during the JPA process. Should the proposed project change, a new review by this agency may be required relative to these jurisdictional areas.

Please contact me at 757-247-8028 or by email at mark.eversole@mrc.virginia.gov if you have questions. Thank you for the opportunity to comment.

Sincerely,

Mark Eversole
Environmental Engineer, Habitat Management

ME/tlb
HM

Stantec Consulting Services Inc.
150 Riverside Parkway, Suite 301 Fredericksburg, Virginia 22406

August 2, 2021
File: 203401607

Attention:Regulator of the Day
U.S. Army Corps of Engineers
803 Front Street
Norfolk, VA 23510
Via Email: CENAO.REG_ROD@usace.army.mil

Reference: Request for Preliminary Jurisdictional Determination
Staunton to Valley Transmission Line 293 230 kV Rebuild, Augusta County and the City of Staunton, Virginia
Start: Latitude **38.147705**˚ Longitude -**79.065615**˚
Terminus: Latitude **38.313316**˚ Longitude -**78.970345**˚

Applicant: Mr. Mark Allen
Dominion Energy Virginia
10900 Nuckols Road, 4th Floor
Glen Allen, Virginia 23060

Dear Regulator of the Day:

Stantec Consulting Services Inc. (Stantec) has been retained by Virginia Electric and Power Company, doing business as Dominion Energy Virginia, to conduct a detailed investigation of waters of the U.S., including wetlands, on the above-referenced project. The study area consists of a 21.55-mile existing transmission line right-of-way (ROW) located within the Lewis Creek, Middle River, and North Fork Naked Creek drainage basins in Augusta County and the City of Staunton, Virginia (Figure 1). The study area originates at the Staunton Substation located east of South Coalter Street, south of Kalorama Street, and north of Commerce Road in the City of Staunton. The ROW generally runs northeast and terminates at the Valley Substation located west of Coffman Road (Route 696), south of Summit Church Road (Route 690), and east of North Fork Naked Creek in Weyers Cave. Access to the study area includes, but is not limited to, Greenville Avenue (Route 11), Middlebrook Avenue (Route 252), Cedar Green Road, Parkersburg Turnpike (Route 254), Morris Mill Road, Churchville Avenue (Route 250), Galena Road, Homes Lane, Spring Hill Road, State Hill Road, and Fadley Road (Figure 2). A copy of the Pre-Application and/or Jurisdictional Waters Determination Request Form is provided in Appendix A.

Off-site Evaluation

Prior to conducting fieldwork, Stantec consulted the U.S. Geological Survey (USGS) 7.5-minute Topographical Quadrangle Maps for Staunton, Virginia (1986 revision), Stuarts Draft, Virginia (1984 revision), Greenville, Virginia (1972 revision), Churchville, Virginia (1981 revision), Parnassus, Virginia (1986 revision), and Mount Sidney, Virginia (1987 revision), the National Wetlands Inventory Interactive Mapper (NWI), administered by the U.S. Fish and Wildlife Service (USFWS), the SSURGO Soils Survey, administered by the Natural Resources Conservation Service (NRCS), and flood plain maps available at the Flood Map Service Center, administered by the Federal Emergency Management Agency (FEMA). The USGS quad maps depict the project corridor as traversing primarily cleared land on nearly level to steeply

Reference: Staunton to Valley Transmission Line 293 230 kV Rebuild

sloping terrain. Perennial and intermittent stream channels along with a pond are also mapped within the study area. The NWI map (Figure 3) depicts palustrine emergent wetlands, freshwater ponds, as well as perennial and intermittent stream channels within the study limits. The soil survey (Figure 4) indicates that the site is underlain primarily by Frederick-Christian silt loams, Frederick-Christian Gravelly silt loams, Edom silt loam, Frederick-Rock outcrop complex, Chilhowie channery silty clay loam, Rock outcrop-Chilhowie complex, Chilhowie silty clay loam, Fluvaquents, Guernsey silt loam, Chagrin loam, Buchanan fine sandy loam, Udifluvents, and Buckton silt loam. Fluvaquents are classified by the NRCS as hydric in Augusta County, Virginia, while Guernsey silt loam, Chagrin loam, Buchanan fine sandy loam, Udifluvents, and Buckton silt loam may have hydric inclusions. Additionally, the flood hazard map (Figure 5) shows portions of the project corridor associated with Lewis Creek and Middle River lie within the 100-year floodplain (Zone AE).

On-site Evaluation

Fieldwork was conducted during June 2021 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).* Wetland flags were placed in the field by Stantec and sequentially numbered to provide an on-site record of the delineation. The data sheets (Appendix B) used in this investigation are attached along with the Delineation Map (Figure 6) showing the GPS-located limits of wetlands and other water features, as well as data point locations. Representative site photos are included in Appendix C.

Site Description

Jurisdictional features identified by Stantec within the project limits may be classified as palustrine emergent and scrub-shrub wetlands; perennial, intermittent, and ephemeral stream channels; and open water. Wetland vegetation is typified by soft rush (*Juncus effusus*), broadleaf cattail (*Typha latifolia*), fox sedge (*Carex vulpinoidea*), rufous bulrush (*Scirpus pendulus*), softstem bulrush (*Schoenoplectus tabernaemontani*), woolgrass (*Scirpus cyperinus*), and rough bluegrass (*Poa trivialis*). The transition from wetland to upland is generally identified by a shift from hydric to non-hydric soils and a shift in the vegetative community. Table 1 shows the dimensions of the identified jurisdictional resources within the project area.

Table 1. Wetlands and WOUS Calculations

PSS (Acres)	**PEM** (Acres)	**Upper Perennial Stream Channels** (R3) Acres (LF)	**Intermittent Stream Channels** (R4) Acres (LF)	**Ephemeral Stream Channels** (R6) Acres (LF)	**Open Waters** (Acres)
0.09	0.93	0.65 (1,597)	0.05 (647)	0.01 (204)	1.06

Stantec

July 30, 2021
Regulator of the Day

Reference: Staunton to Valley Transmission Line 293 230 kV Rebuild

On behalf of our client, Stantec respectfully requests that the Corps confirm our delineation. We would appreciate the opportunity to meet with you on site to present our fieldwork. Please call to set up a meeting date or to discuss any questions regarding our investigation.

Thank you for your cooperation in this matter.

Regards,

Stantec Consulting Services Inc.

Mack McGraw
Ecologist
Phone: (540) 785-5544
Fax: (540) 785-1742
mack.mcgraw@stantec.com

Brendan Young
Ecologist
Phone: (540) 785-5544
Fax: (540) 785-1742
brendan.young@stantec.com

Enclosures: Figures 1-6
Appendices A, B, and C

cc. Mr. Mark Allen – Dominion Energy Virginia
Mr. Corey Gray – Stantec

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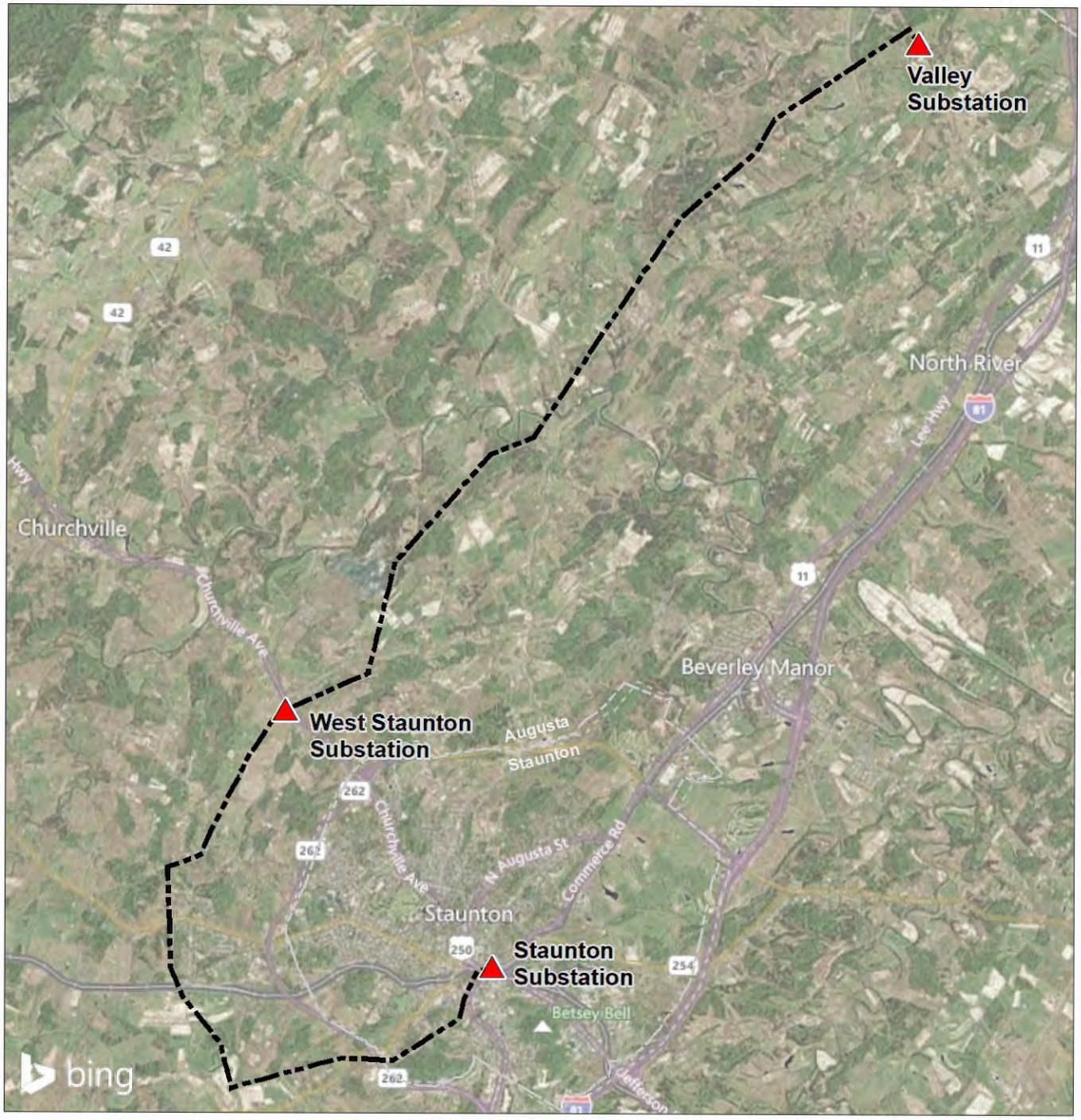
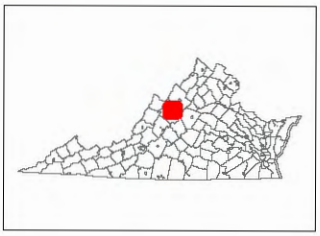




Substation

Project Centerline

0 5,000 10,000 Feet

(At original document size of 8.5x11)
1:120,000

N

Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Project Location
Augusta County and
City of Staunton, Virginia

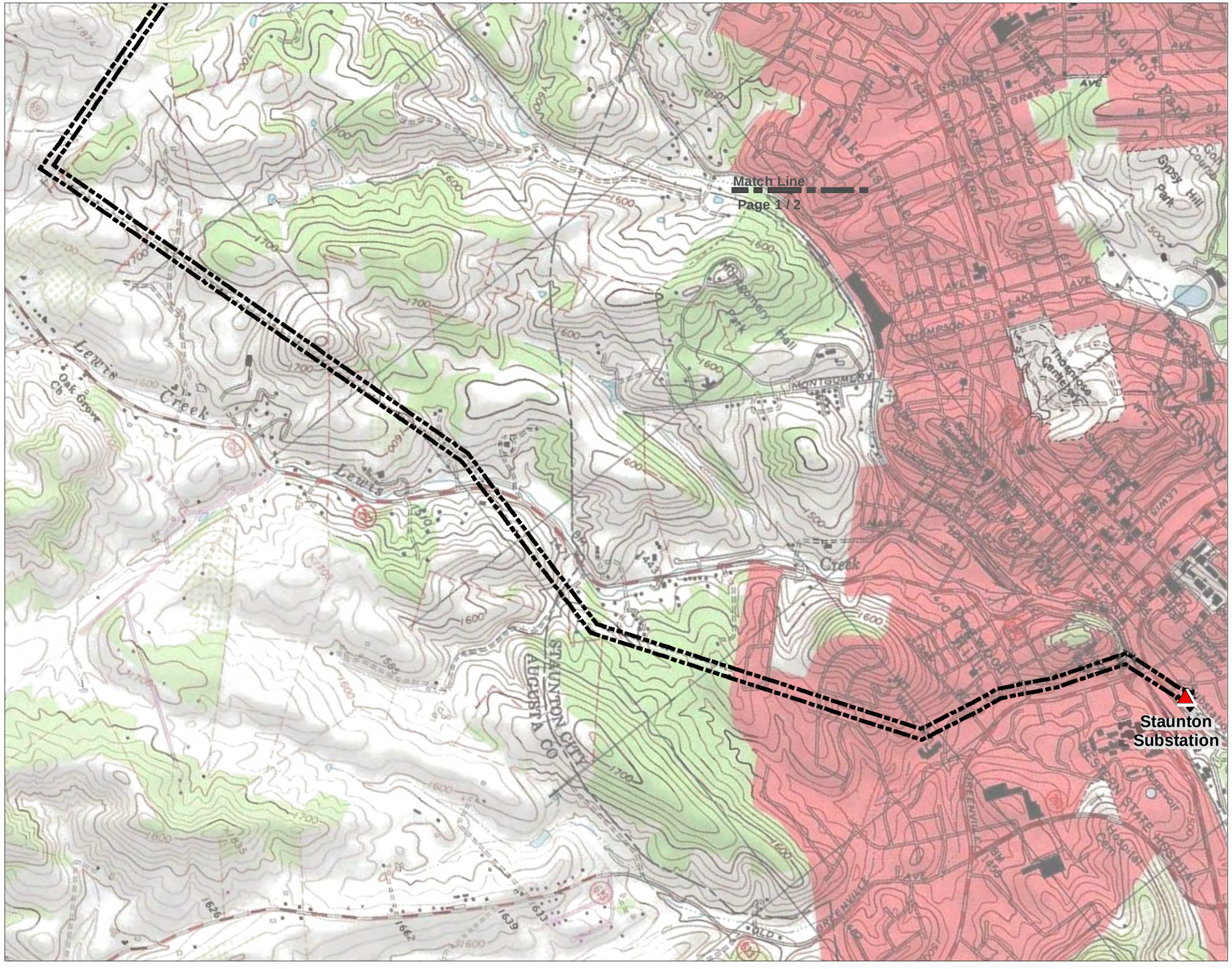
Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

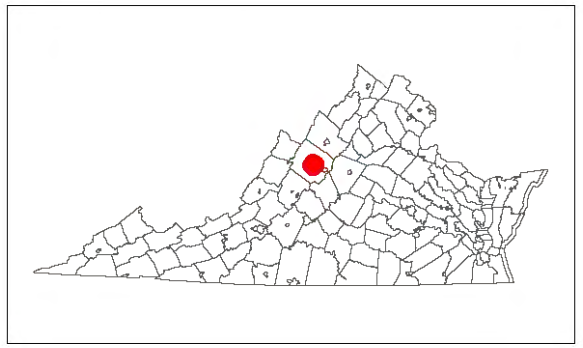
Client/Project 20340160?
Dominion Energy Virginia
Staunton - Valley Transmission Line 293
230 kV Rebuild

Figure No.
1

Title
Project Vicinity Map

Page 01 of 01





Notes
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2. Data Sources: Dominion Energy Virginia, Stantec, DCR
3. Topographic map © USGS 7.5 Minute Series Topographic Map, Churchville, VA Quadrangle, 1964 (Rev1981), Greenville, VA Quadrangle, 1964 (Rev1972), Mount Sidney, VA Quadrangle, 2004, Pamassus, VA Quadrangle, 1967 (Rev1986), Staunton, VA Quadrangle, 2001, Stuarts Draft, VA Quadrangle, 1964 (Rev1984)

Stantec

Figure No.
2
Title
Project Location Map

Client/Project 203401607
Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location
Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

N
0 1,500 3,000 Feet
(At original document size of 11x17)
1:18,000

Substation
Project Limits

Start
Latitude: 38.147705
Longitude: -79.065615

Terminus
Latitude: 38.313316
Longitude: -78.970345

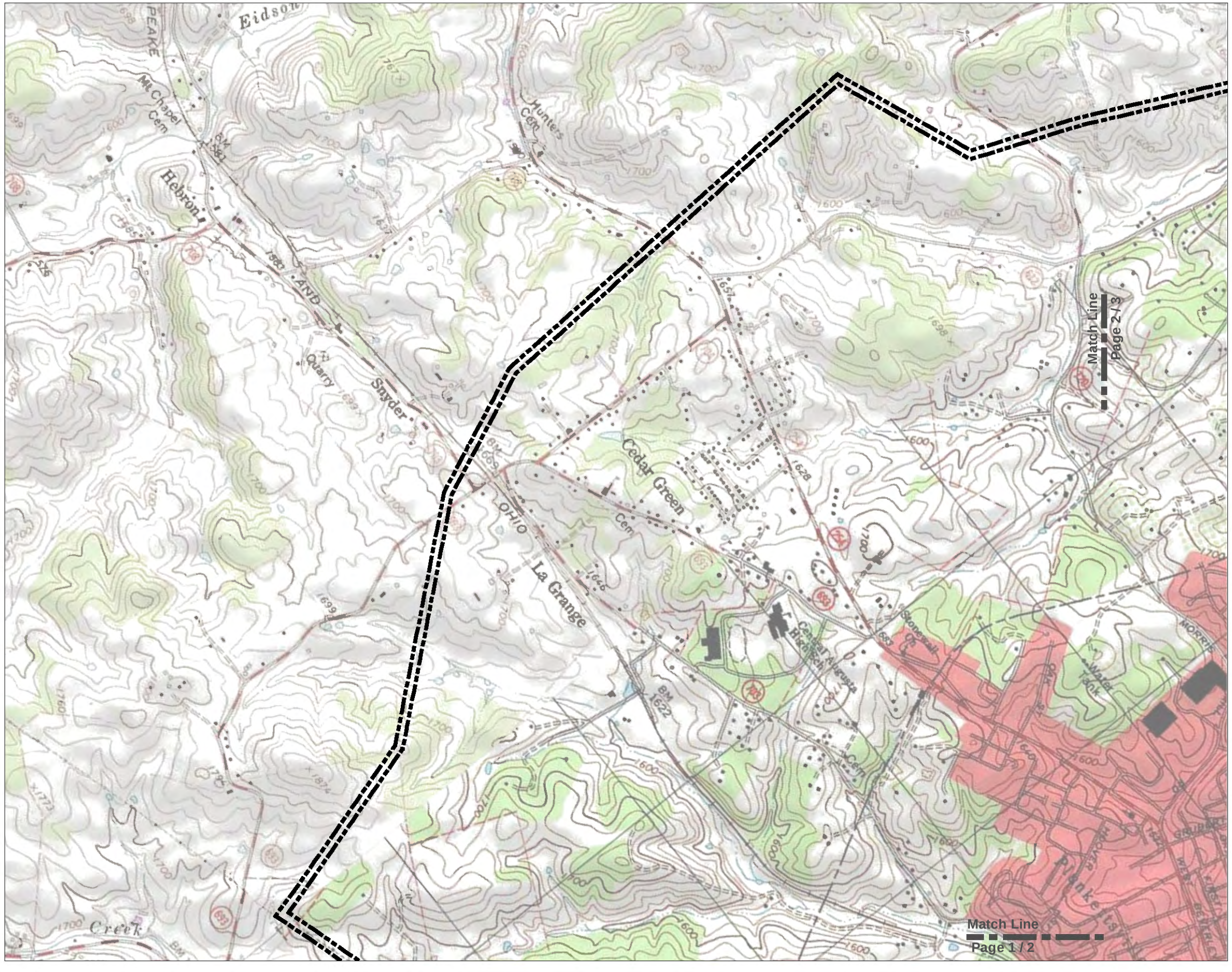

Figure No.

2

Title

Project Location Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

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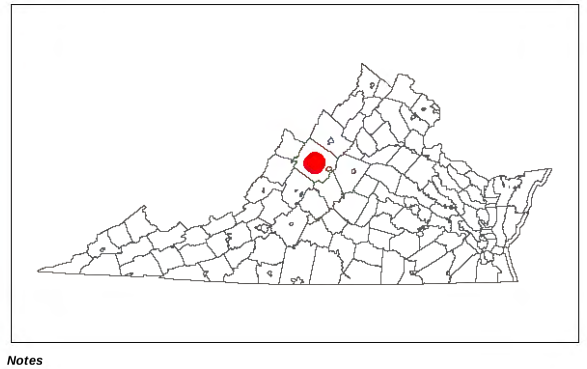

Notes

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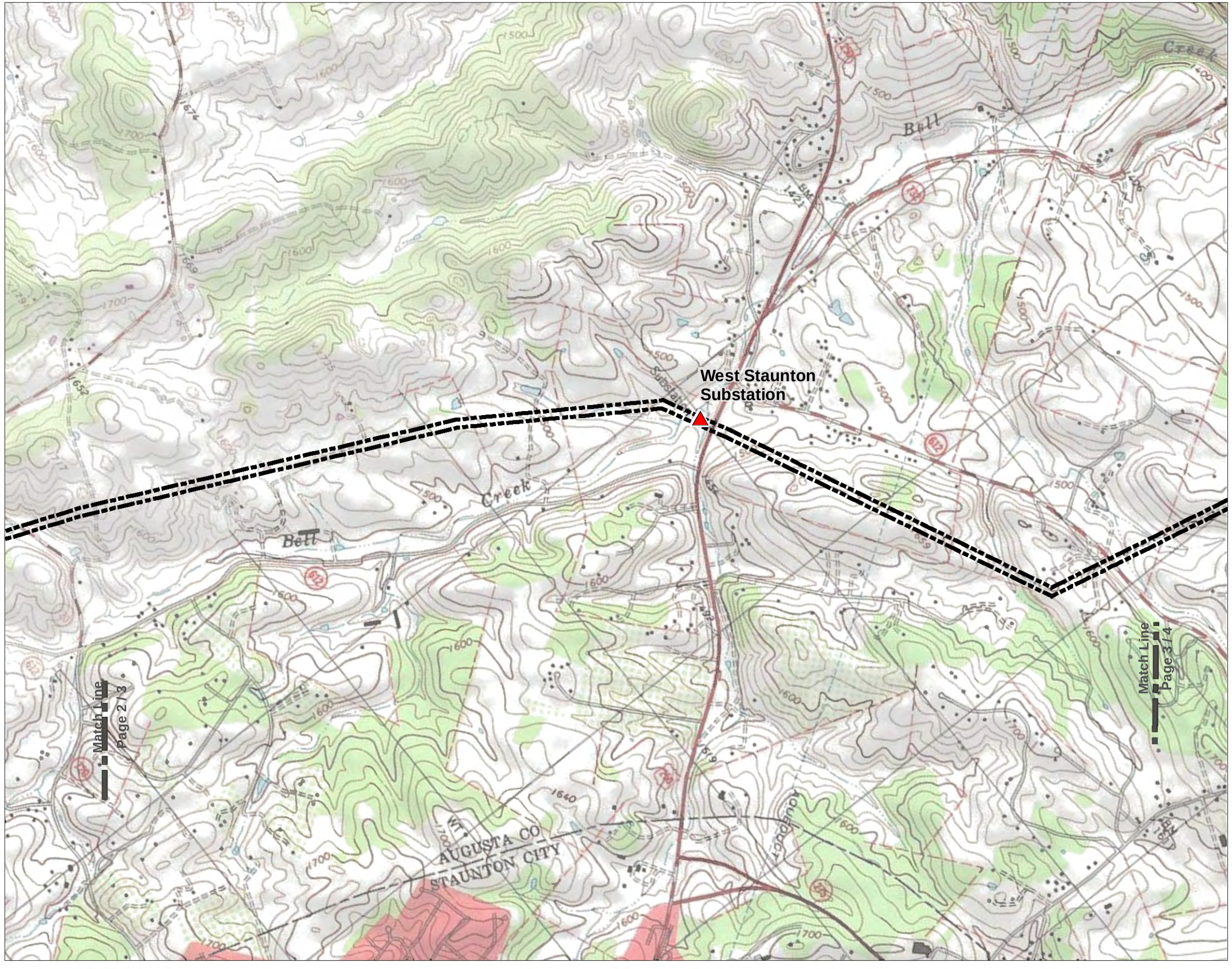

Figure No.

2

Title

Project Location Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

N

0 1,500 3,000 Feet

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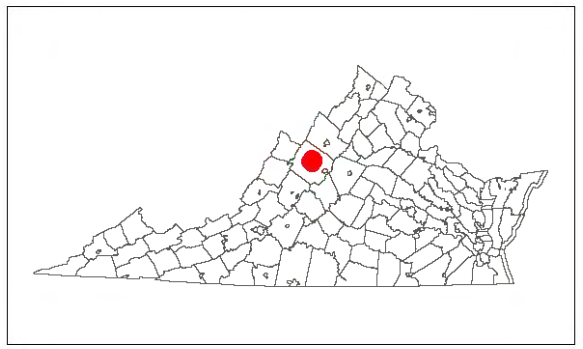

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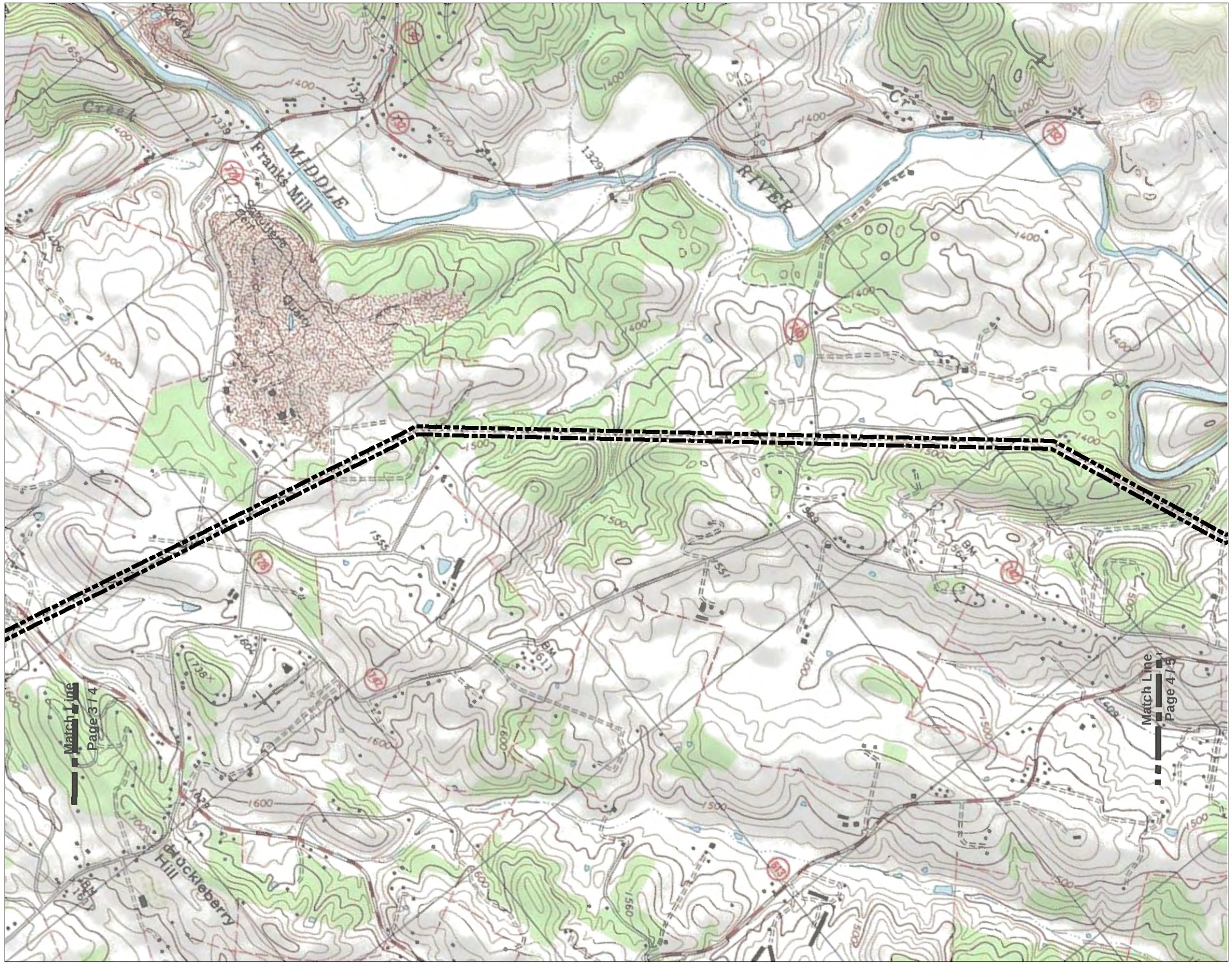

Figure No.

2

Title

Project Location Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

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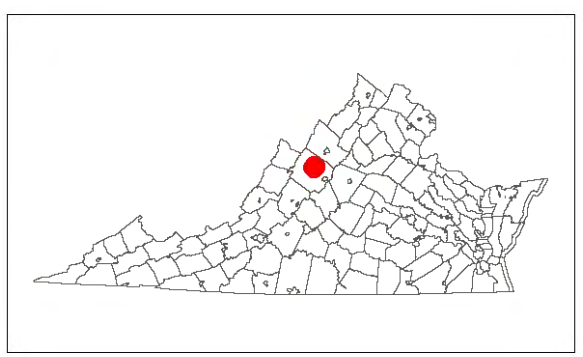

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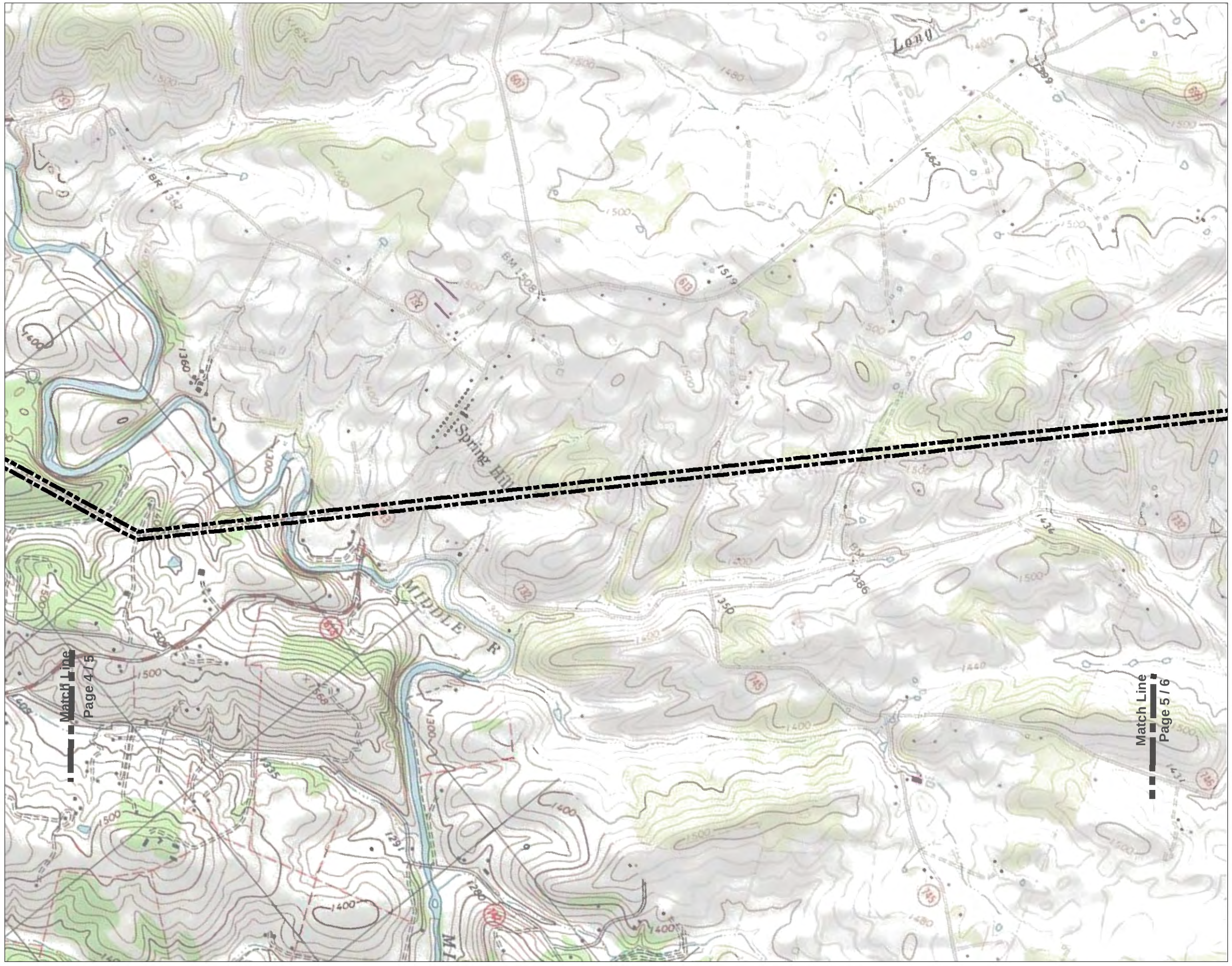

Figure No.

2

Title

Project Location Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

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(At original document size of 11x17)
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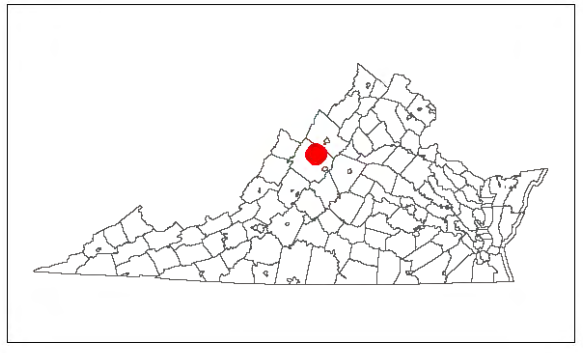

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1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR
3. Topographic map © USGS 7.5 Minute Series Topographic Map, Churchville, VA Quadrangle, 1964 (Rev1981), Greenville, VA Quadrangle, 1964 (Rev1972), Mount Sidney, VA Quadrangle, 2004, Pamassus, VA Quadrangle, 1967 (Rev1986), Staunton, VA Quadrangle, 2001, Stuarts Draft, VA Quadrangle, 1964 (Rev1984)

Stantec

Figure No.

2

Title

Project Location Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

N

0 1,500 3,000 Feet

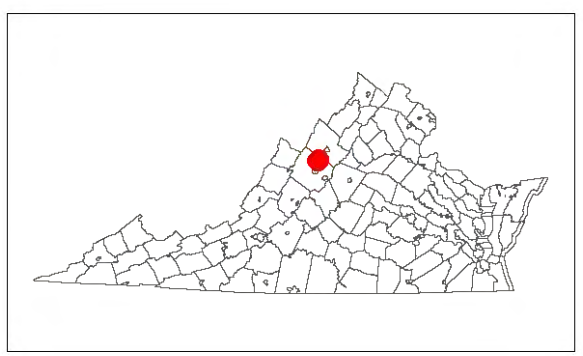
(At original document size of 11x17)
1:18,000

Substation

Project Limits

Start
Latitude: 38.147705
Longitude: -79.065615

Terminus
Latitude: 38.313316
Longitude: -78.970345



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR
3. Topographic map © USGS 7.5 Minute Series Topographic Map, Churchville, VA Quadrangle, 1964 (Rev1981), Greenville, VA Quadrangle, 1964 (Rev1972), Mount Sidney, VA Quadrangle, 2004, Parnassus, VA Quadrangle, 1967 (Rev1986), Staunton, VA Quadrangle, 2001, Stuarts Draft, VA Quadrangle, 1964 (Rev1984)

Stantec

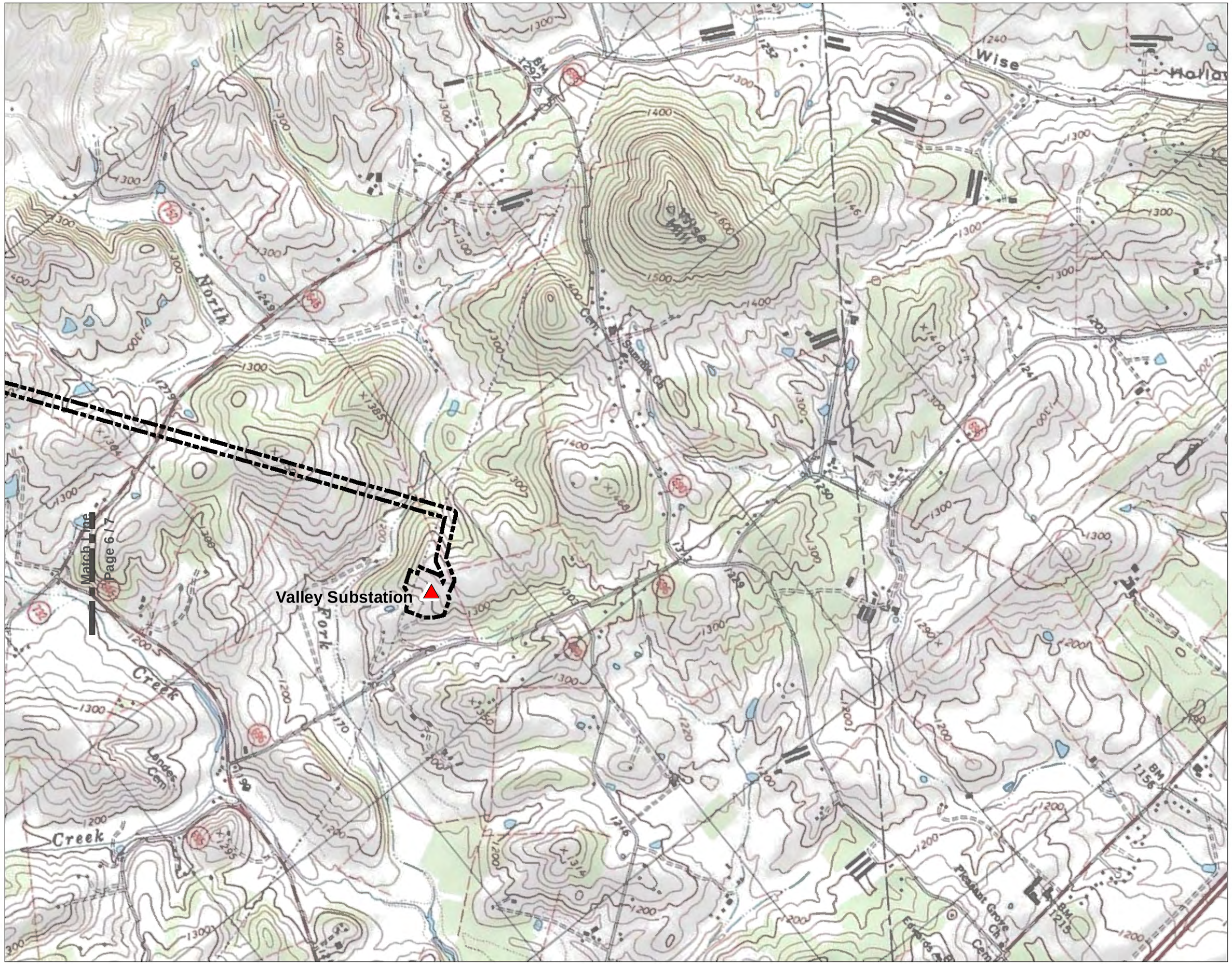


Figure No.

2

Title

Project Location Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

N

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(At original document size of 11x17)
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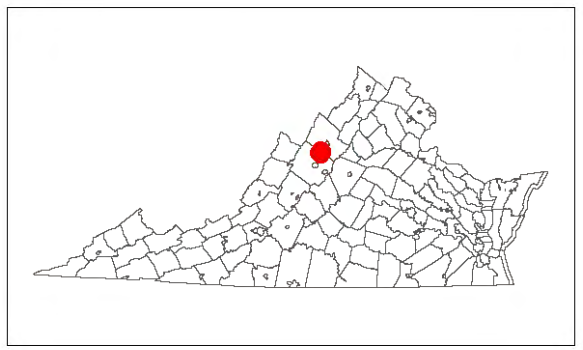
Substation

Project Limits

Start
Latitude: 38.147705
Longitude: -79.065615

Terminus
Latitude: 38.313316
Longitude: -78.970345



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR
3. Topographic map © USGS 7.5 Minute Series Topographic Map, Churchville, VA Quadrangle, 1964 (Rev1981), Greenville, VA Quadrangle, 1964 (Rev1972), Mount Sidney, VA Quadrangle, 2004, Parnassus, VA Quadrangle, 1967 (Rev1986), Staunton, VA Quadrangle, 2001, Stuarts Draft, VA Quadrangle, 1964 (Rev1984)

Stantec

Figure No.

3

Title

National Wetlands Inventory Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

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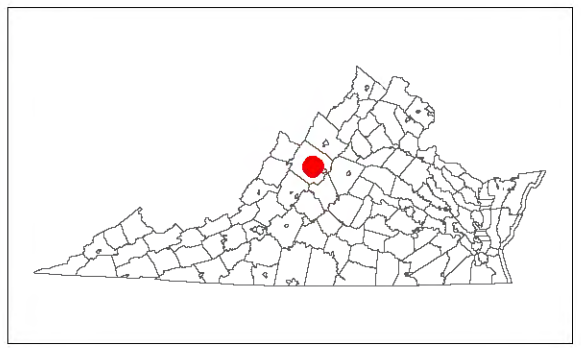
- Substation
- Project Limits
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR, USFWS National Wetlands Inventory (NWI)
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Figure No.

3

Title

National Wetlands Inventory Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

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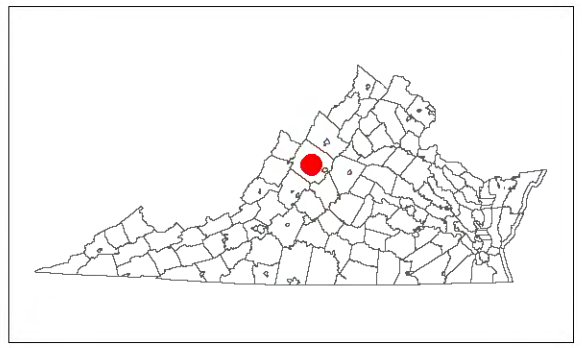
- Substation
- Project Limits
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR, USFWS National Wetlands Inventory (NWI)
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

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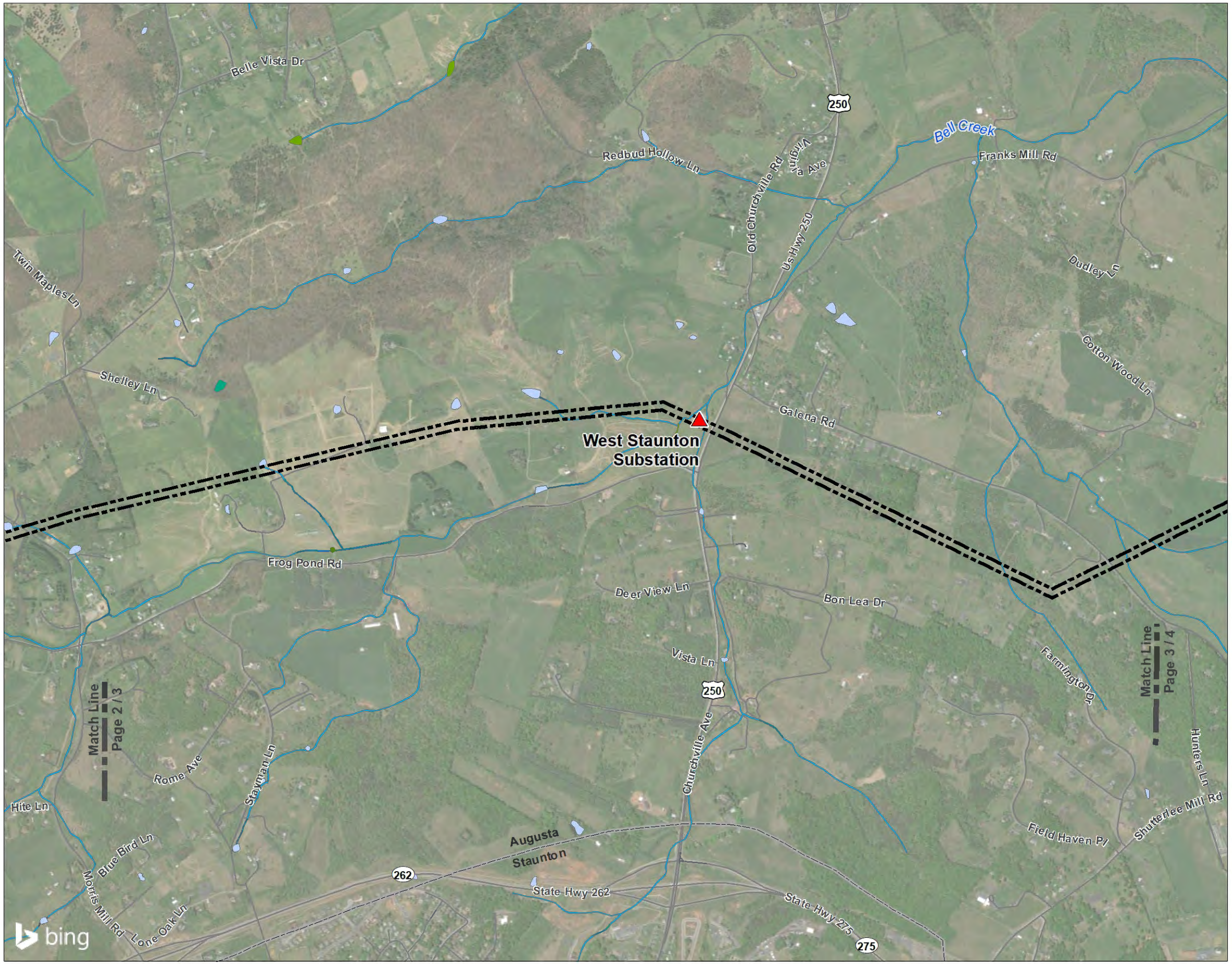

Figure No.

3

Title

National Wetlands Inventory Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

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(At original document size of 11x17)
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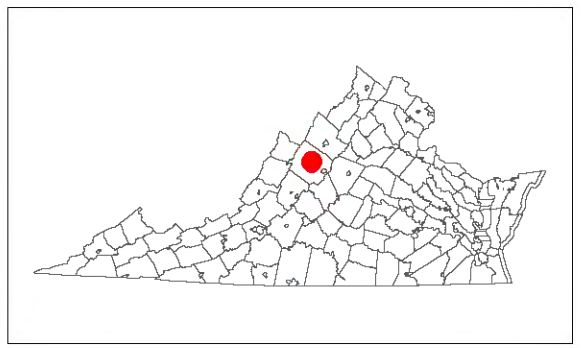
- Substation
- Project Limits
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine



Notes

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2. Data Sources: Dominion Energy Virginia, Stantec, DCR, USFWS National Wetlands Inventory (NWI)
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

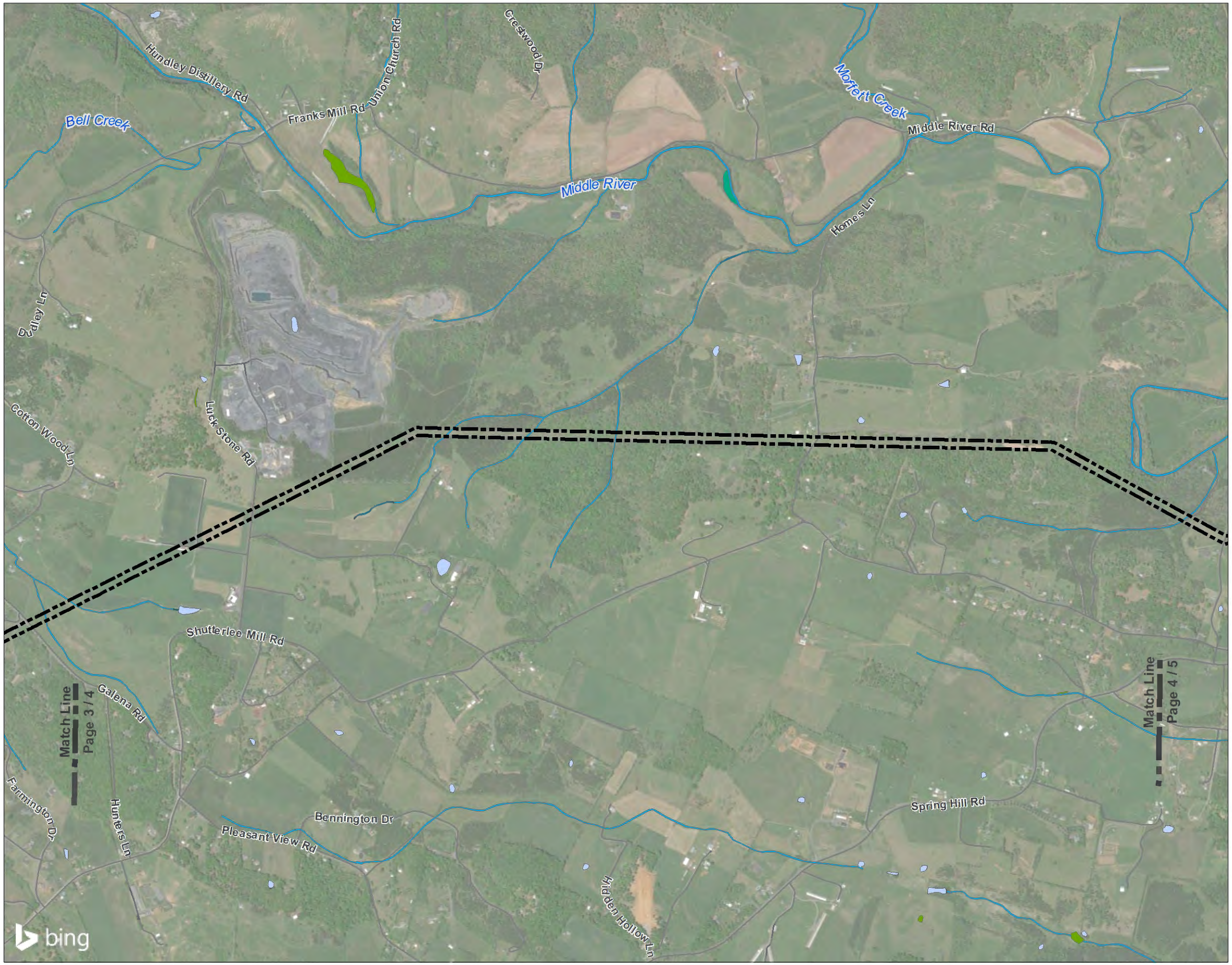

Figure No.

3

Title

National Wetlands Inventory Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

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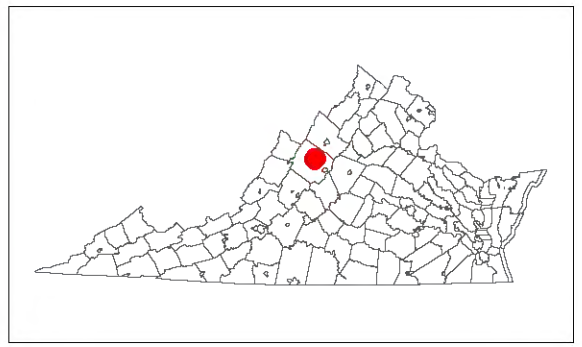
- Substation
- Project Limits
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine



Notes

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4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

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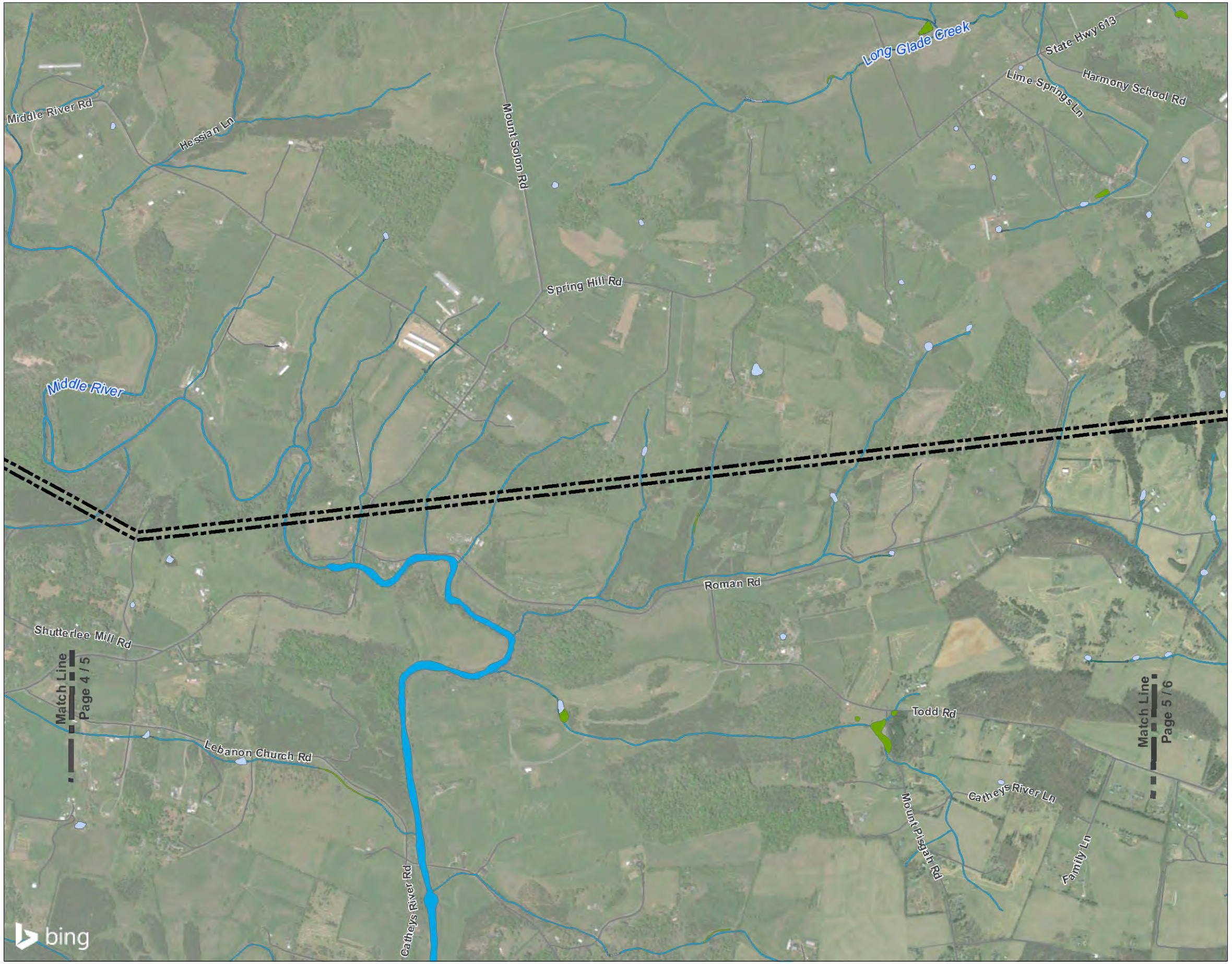

Figure No.

3

Title

National Wetlands Inventory Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

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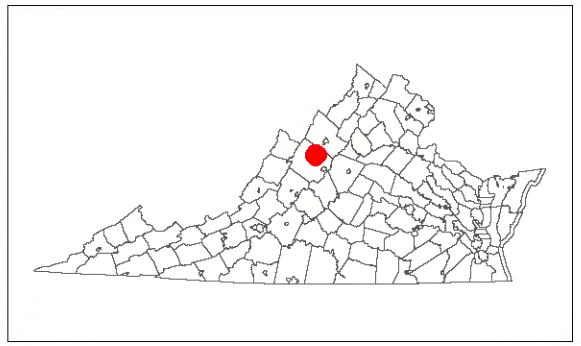
- Substation
- Project Limits
- Freshwater Emergent Wetland
- Freshwater Pond
- Riverine



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4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Figure No.

3

Title

National Wetlands Inventory Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
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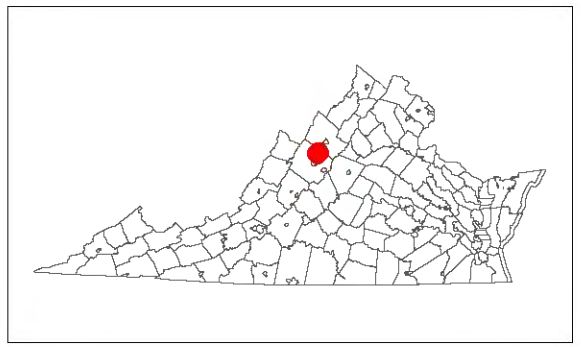
- Substation
- Project Limits
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine



Notes

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3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Figure No.

3

Title

National Wetlands Inventory Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

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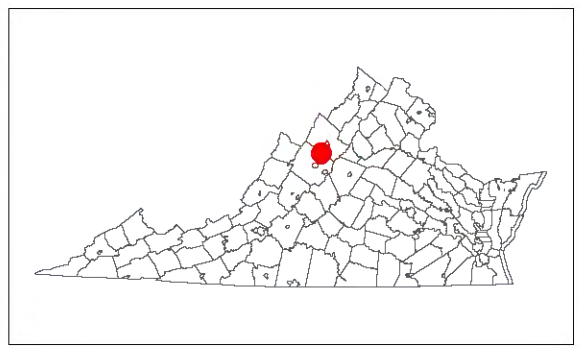
- Substation
- Project Limits
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR, USFWS National Wetlands Inventory (NWI)
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Map Unit Symbol	Description
39	Fluvaquents, nearly level
40B2	Frederick-Christian silt loams, 2 to 7 percent slopes, eroded
40C2	Frederick-Christian silt loams, 7 to 15 percent slopes, eroded
40D2	Frederick-Christian silt loams, 15 to 25 percent slopes, eroded
41C3	Frederick-Christian silty clay loams, 7 to 15 percent slopes, severely eroded
41D3	Frederick-Christian silty clay loams, 15 to 25 percent slopes, severely eroded
42B2	Frederick-Christian gravelly silt loam, 2 to 7 percent slopes, eroded
42C2	Frederick-Christian gravelly silt loams, 7 to 15 percent slopes, eroded
42D2	Frederick-Christian gravelly silt loams, 15 to 25 percent slopes, eroded
42E2	Frederick-Christian gravelly silt loams, 25 to 45 percent slopes

Map Unit Symbol	Description
43C	Frederick-Christian very gravelly silt loams, 7 to 15 percent slopes
45C2	Frederick-Rock outcrop complex, 0 to 15 percent slopes, eroded
45E2	Frederick-Rock outcrop complex, 15 to 45 percent slopes, eroded
540D2	Frederick-Christian silt loams-Urban land complex, 7 to 15 percent slopes, eroded
542C2	Frederick-Christian gravelly silt loams-Urban land complex, 15 to 25 percent slopes, eroded
542D2	Frederick-Christian gravelly silt loams-Urban land complex, 7 to 15 percent slopes, eroded
545E2	Frederick-Rock outcrop-Urban land complex, 15 to 45 percent slopes, eroded
70E	Rock outcrop-Frederick complex, steep
88	Urban land

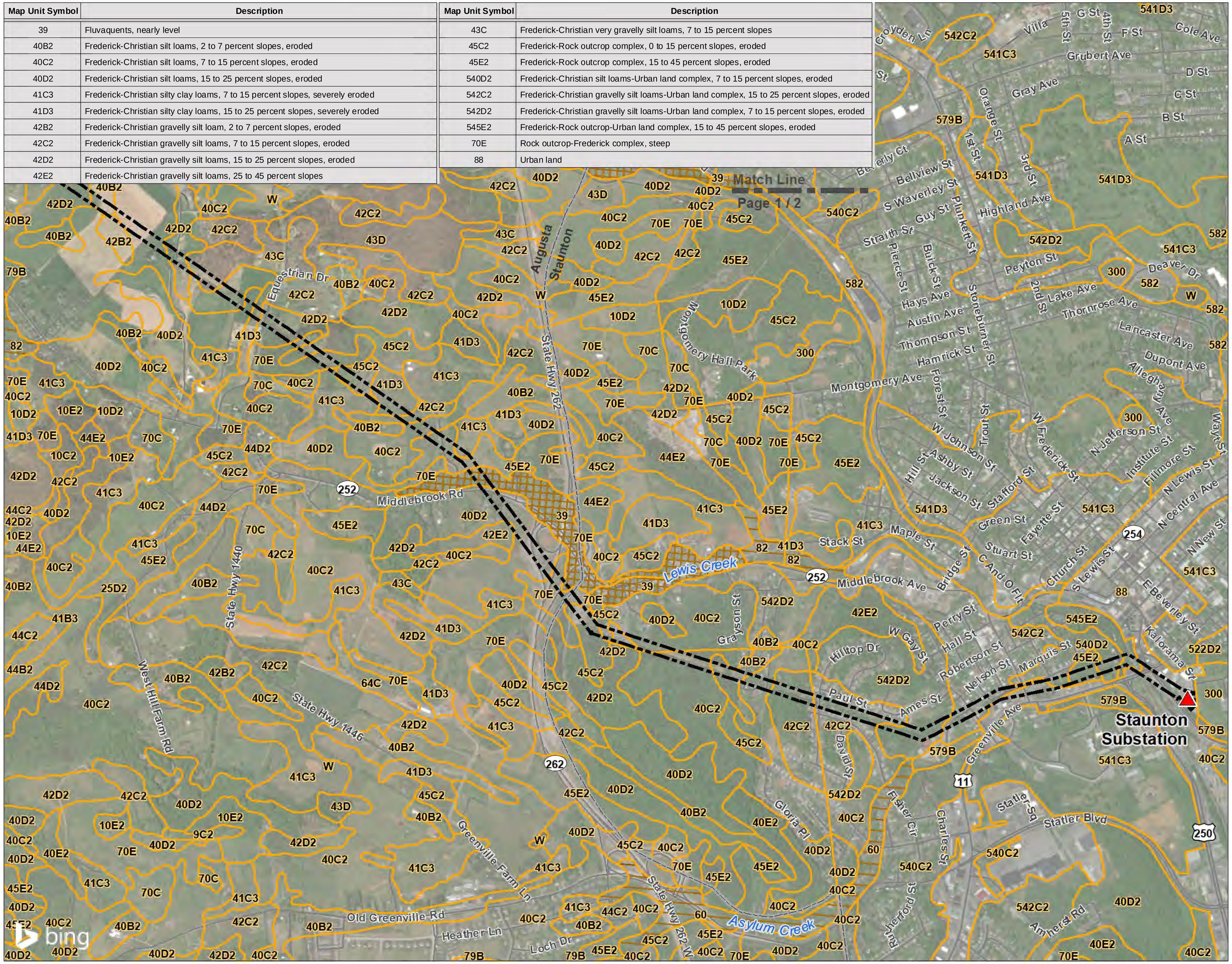


Figure No.
4

Title
Soils Map

Client/Project 203401607
Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location
Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

N
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(At original document size of 11x17)
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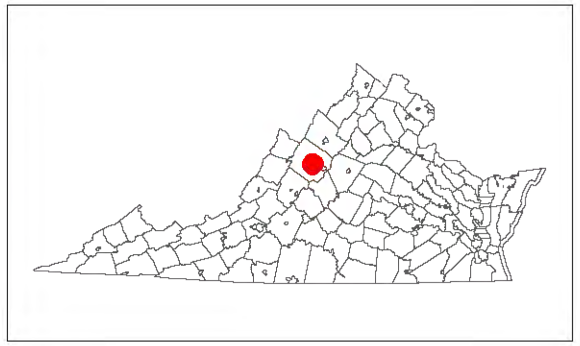
▲	Substation
▭	Project Limits
▭	Soils
▩	Hydric Soils
▨	Predominantly Nonhydric Soils



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR, USDA NRCS SSURGO Soil Survey, ESRI, NADS
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

U:\203401607\03_data\gis_cad\gis\01607_e_soils.mxd Revised: 2021-07-15 By: ljones

Map Unit Symbol	Description
20C2	Chilhowie silty clay loam, 7 to 15 percent slopes, eroded
30B2	Edom silt loam, 2 to 7 percent slopes, eroded
30C2	Edom silt loam, 7 to 15 percent slopes, eroded
40B2	Frederick-Christian silt loams, 2 to 7 percent slopes, eroded
40C2	Frederick-Christian silt loams, 7 to 15 percent slopes, eroded
40D2	Frederick-Christian silt loams, 15 to 25 percent slopes, eroded
41C3	Frederick-Christian silty clay loams, 7 to 15 percent slopes, severely eroded
42B2	Frederick-Christian gravelly silt loam, 2 to 7 percent slopes, eroded
42C2	Frederick-Christian gravelly silt loams, 7 to 15 percent slopes, eroded
42D2	Frederick-Christian gravelly silt loams, 15 to 25 percent slopes, eroded

Map Unit Symbol	Description
45C2	Frederick-Rock outcrop complex, 0 to 15 percent slopes, eroded
70E	Rock outcrop-Frederick complex, steep
79B	Timberville silt loam, 0 to 7 percent slopes, frequently flooded

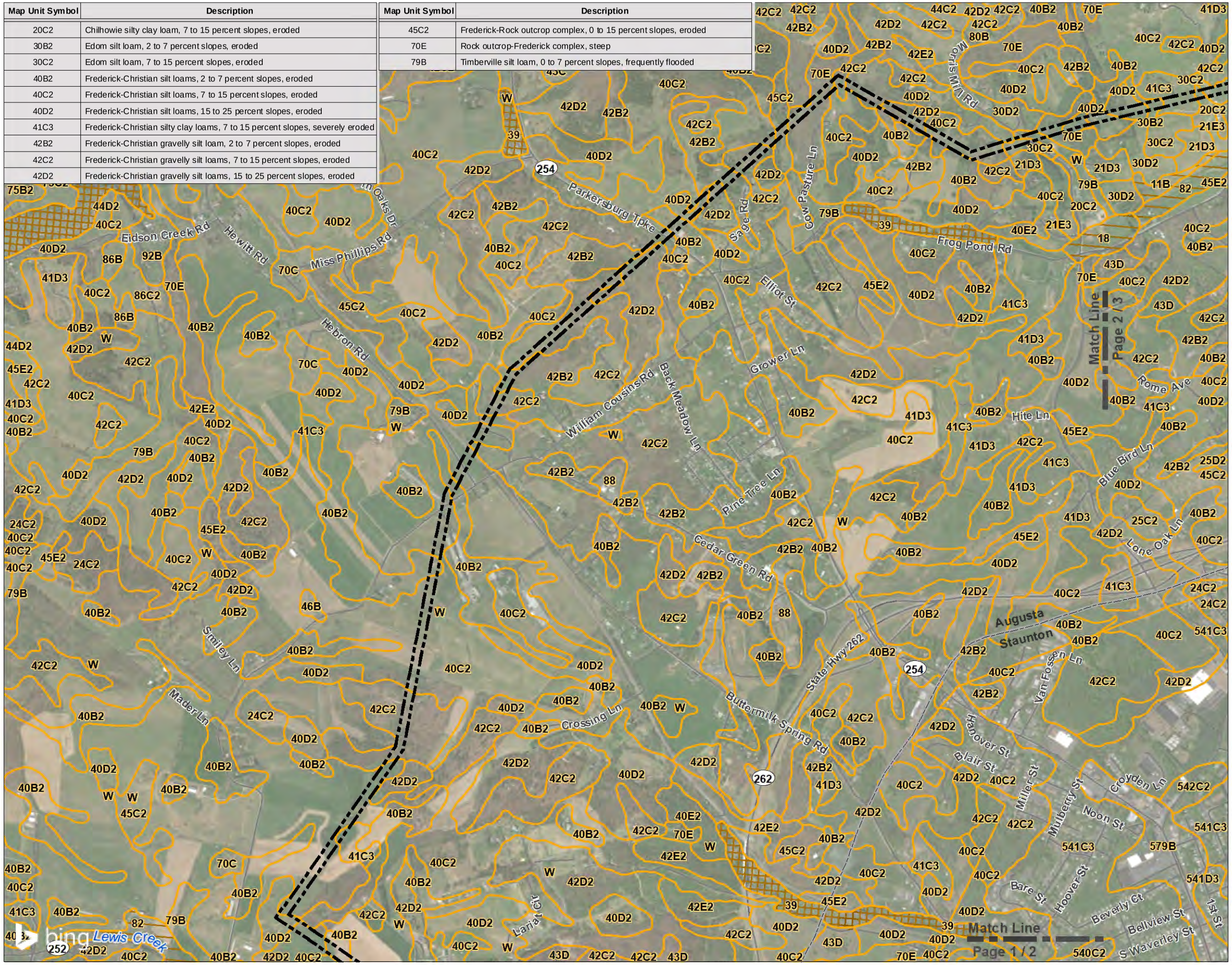


Figure No.

4

Title

Soils Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

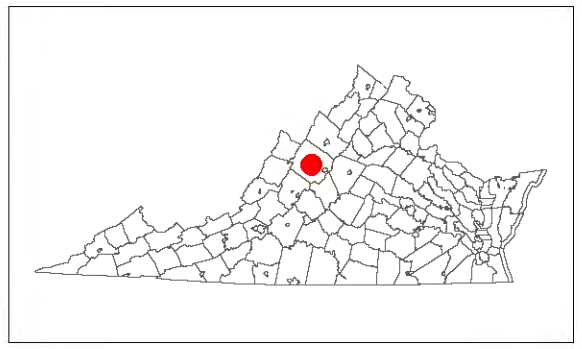
Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

0 1,500 3,000 Feet

(At original document size of 11x17)
1:18,000

- Substation
- Project Limits
- Soils
- Hydric Soils
- Predominantly Nonhydric Soils



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR, USDA NRCS SSURGO Soil Survey, ESRI, NADS
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Map Unit Symbol	Description
11A	Buchanan fine sandy loam, 0 to 2 percent slopes
18	Chagrin loam
20C2	Chilhowie silty clay loam, 7 to 15 percent slopes, eroded
21C3	Chilhowie channery silty clay loam, 7 to 15 percent slopes, severely eroded
21D3	Chilhowie channery silty clay loam, 15 to 25 percent slopes, severely eroded
30B2	Edom silt loam, 2 to 7 percent slopes, eroded
30C2	Edom silt loam, 7 to 15 percent slopes, eroded
40B2	Frederick-Christian silt loams, 2 to 7 percent slopes, eroded
40C2	Frederick-Christian silt loams, 7 to 15 percent slopes, eroded
40D2	Frederick-Christian silt loams, 15 to 25 percent slopes, eroded

Map Unit Symbol	Description
40E2	Frederick-Christian silt loams, 25 to 45 percent slopes, eroded
41C3	Frederick-Christian silty clay loams, 7 to 15 percent slopes, severely eroded
42C2	Frederick-Christian gravelly silt loams, 7 to 15 percent slopes, eroded
45C2	Frederick-Rock outcrop complex, 0 to 15 percent slopes, eroded
70C	Rock outcrop-Frederick complex, sloping
70E	Rock outcrop-Frederick complex, steep
74C2	Sequoia-Berks silt loams, 7 to 15 percent slopes, eroded
79B	Timberville silt loam, 0 to 7 percent slopes, frequently flooded

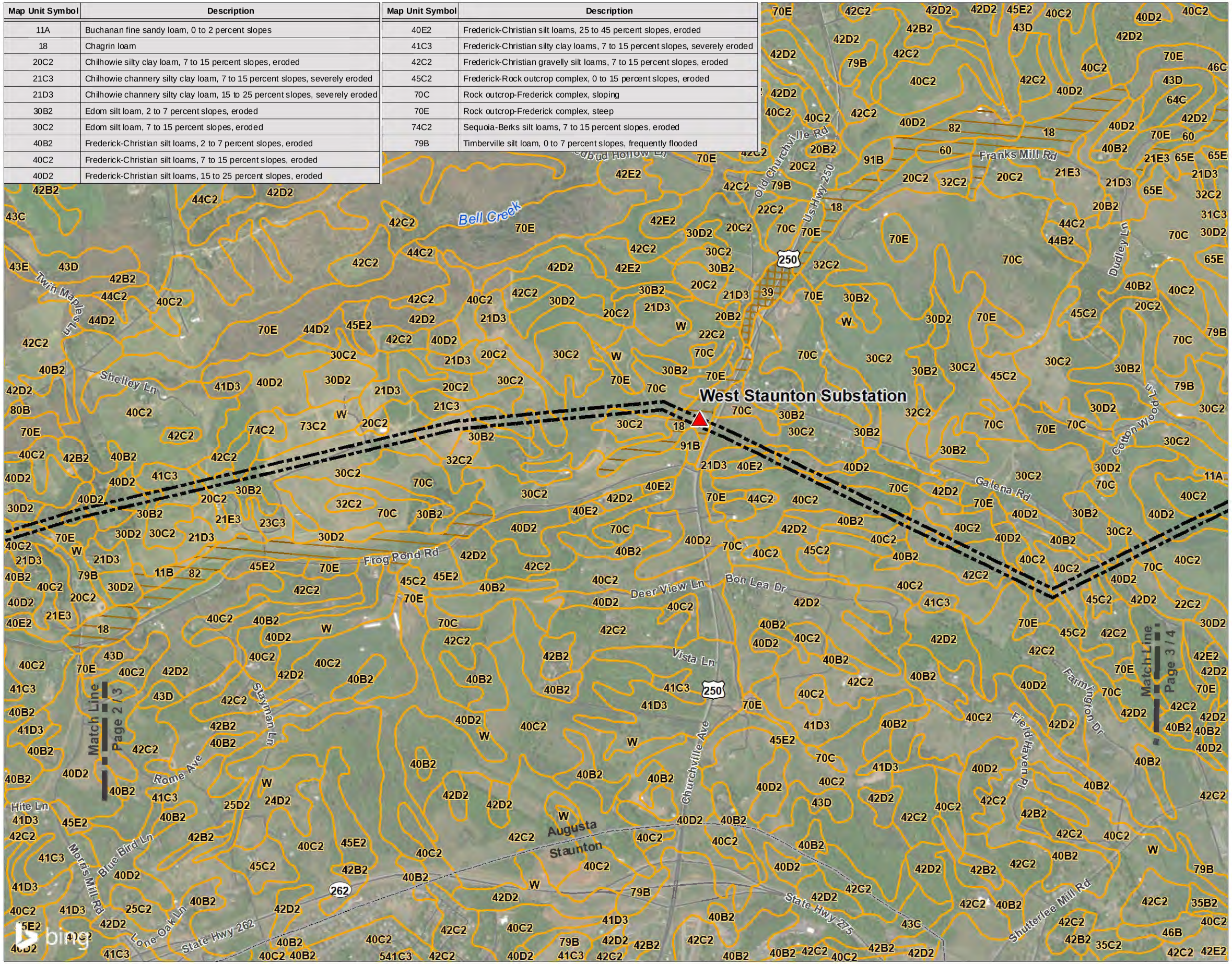


Figure No.

4

Title

Soils Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

0 1,500 3,000 Feet

(At original document size of 11x17)
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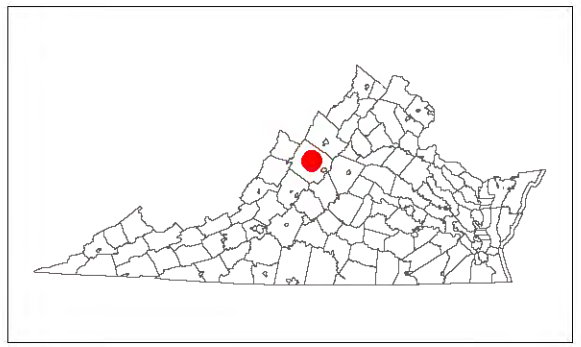
- Substation
- Project Limits
- Soils
- Hydric Soils
- Predominantly Nonhydric Soils



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR, USDA NRCS SSURGO Soil Survey, ESRI, NADS
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Map Unit Symbol	Description
11A	Buchanan fine sandy loam, 0 to 2 percent slopes
20C2	Chilhowie silty clay loam, 7 to 15 percent slopes, eroded
30B2	Edom silt loam, 2 to 7 percent slopes, eroded
30C2	Edom silt loam, 7 to 15 percent slopes, eroded
30D2	Edom silt loam, 15 to 25 percent slopes, eroded
32C2	Edom-Rock outcrop complex, 0 to 15 percent slopes, eroded
37C2	Endcav-Rock outcrop complex, 2 to 15 percent slopes, eroded
40B2	Frederick-Christian silt loams, 2 to 7 percent slopes, eroded
40C2	Frederick-Christian silt loams, 7 to 15 percent slopes, eroded
40D2	Frederick-Christian silt loams, 15 to 25 percent slopes, eroded

Map Unit Symbol	Description
41D3	Frederick-Christian silty clay loams, 15 to 25 percent slopes, severely eroded
42C2	Frederick-Christian gravelly silt loams, 7 to 15 percent slopes, eroded
42D2	Frederick-Christian gravelly silt loams, 15 to 25 percent slopes, eroded
42E2	Frederick-Christian gravelly silt loams, 25 to 45 percent slopes
44B2	Frederick-Christian silt loams, rocky, 2 to 7 percent slopes, eroded
45C2	Frederick-Rock outcrop complex, 0 to 15 percent slopes, eroded
45E2	Frederick-Rock outcrop complex, 15 to 45 percent slopes, eroded
70C	Rock outcrop-Frederick complex, sloping
70E	Rock outcrop-Frederick complex, steep
W	Water

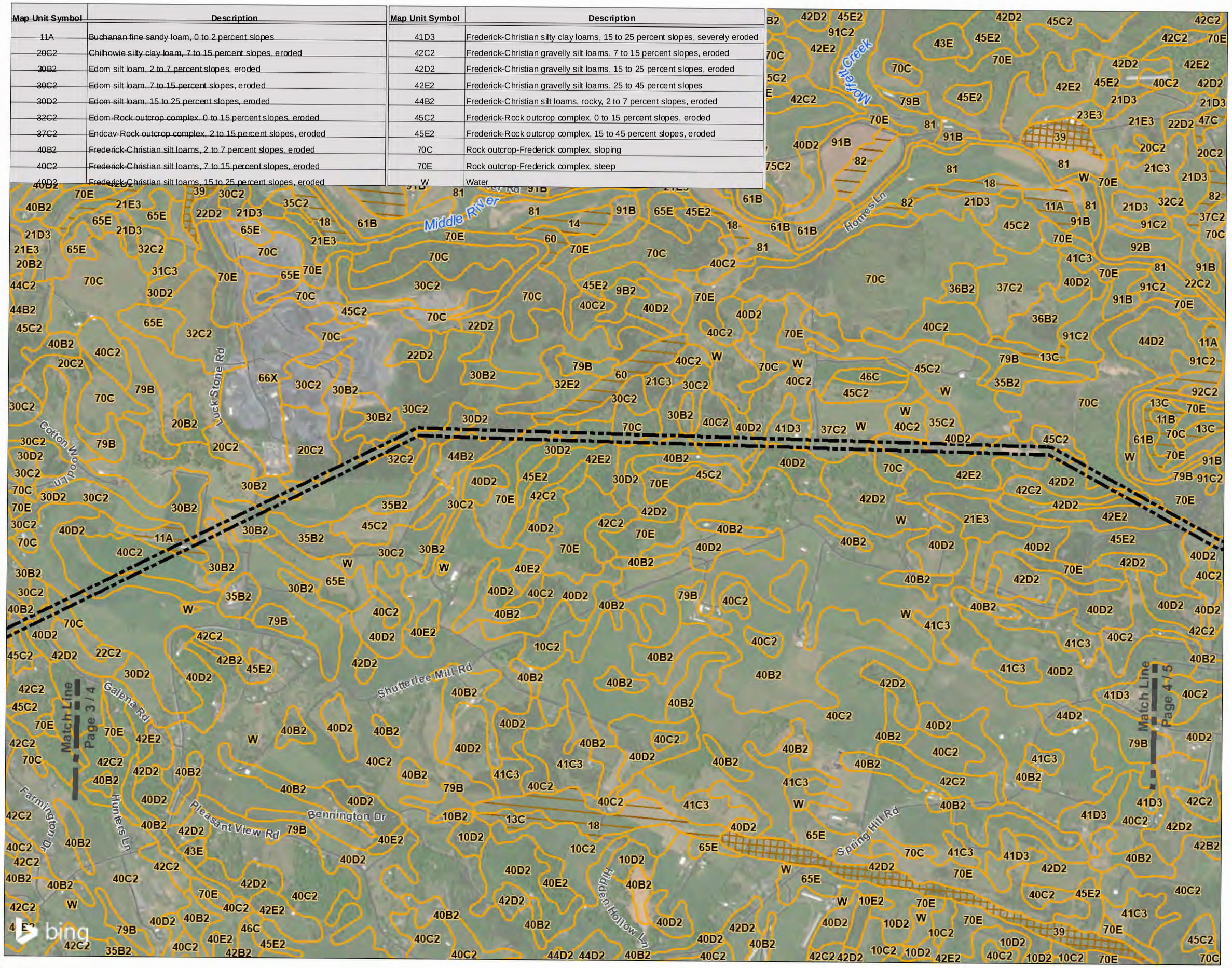


Figure No.

4

Title

Soils Map

Client/Project

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJS on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

0 1,500 3,000 Feet

(At original document size of 11x17)
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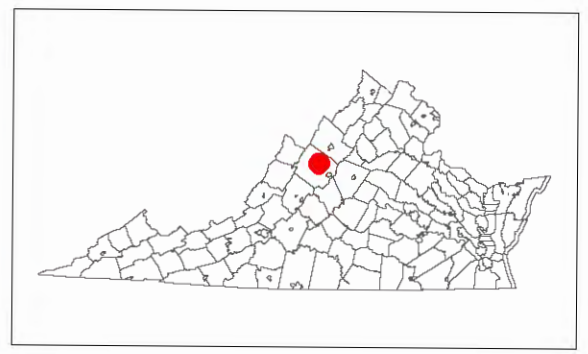
- Substation
- Project Limits
- Soils
- Hydric Soils
- Predominantly Nonhydric Soils



Notes

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2. Data Sources: Dominion Energy Virginia, Stantec, DCR, USDA NRCS SSURGO Soil Survey, ESRI, NADS
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Map Unit Symbol	Description
20C2	Chilhowie silty clay loam, 7 to 15 percent slopes, eroded
21C3	Chilhowie channery silty clay loam, 7 to 15 percent slopes, severely eroded
21D3	Chilhowie channery silty clay loam, 15 to 25 percent slopes, severely eroded
21E3	Chilhowie channery silty clay loam, 25 to 45 percent slopes, severely eroded
22B2	Chilhowie-Edom complex, 2 to 7 percent slopes, eroded
22C2	Chilhowie-Edom complex, 7 to 15 percent slopes, eroded
22D2	Chilhowie-Edom complex, 15 to 25 percent slopes, eroded
23E3	Chilhowie-Edom channery silty clay loams, 15 to 45 percent slopes, severely eroded
30C2	Edom silt loam, 7 to 15 percent slopes, eroded
30D2	Edom silt loam, 15 to 25 percent slopes, eroded

Map Unit Symbol	Description
31C3	Edom silty clay loam, 7 to 15 percent slopes, severely eroded
40D2	Frederick-Christian silt loams, 15 to 25 percent slopes, eroded
42C2	Frederick-Christian gravelly silt loams, 7 to 15 percent slopes, eroded
42D2	Frederick-Christian gravelly silt loams, 15 to 25 percent slopes, eroded
42E2	Frederick-Christian gravelly silt loams, 25 to 45 percent slopes
44C2	Frederick-Christian silt loams, rocky, 7 to 15 percent slopes, eroded
44D2	Frederick-Christian silt loams, rocky, 15 to 25 percent slopes, eroded
45E2	Frederick-Rock outcrop complex, 15 to 45 percent slopes, eroded
47C	Guernsey silt loam, 2 to 10 percent slopes
68E	Rock outcrop-Chilhowie complex, steep

Map Unit Symbol	Description
70C	Rock outcrop-Frederick complex, sloping
70E	Rock outcrop-Frederick complex, steep
91B	Wheeling silt loam, 0 to 7 percent slopes
W	Water

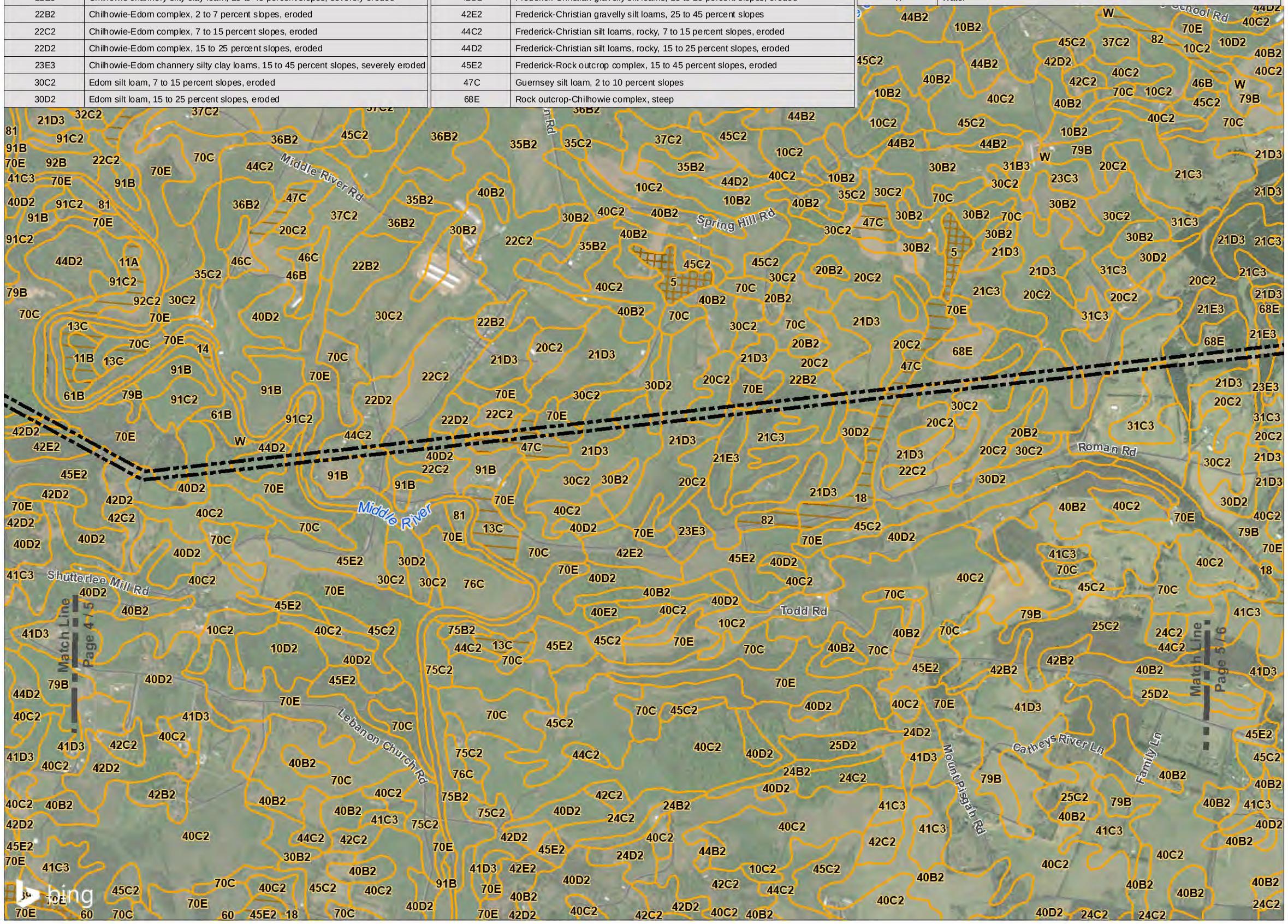


Figure No.

4

Title

Soils Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

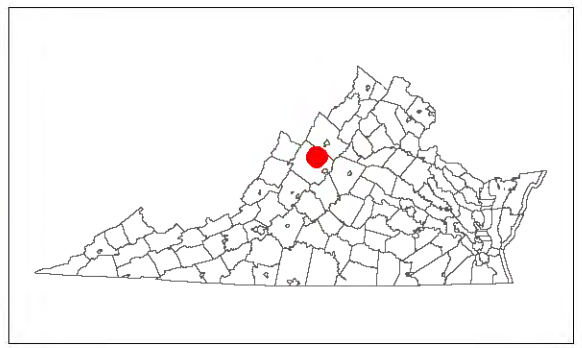
Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

0 1,500 3,000 Feet

(At original document size of 11x17)
1:18,000

- Substation
- Project Limits
- Soils
- Hydric Soils
- Predominantly Nonhydric Soils



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR, USDA NRCS SSURGO Soil Survey, ESRI, NADS
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Map Unit Symbol	Description
20C2	Chilhowie silty clay loam, 7 to 15 percent slopes, eroded
21C3	Chilhowie channery silty clay loam, 7 to 15 percent slopes, severely eroded
21D3	Chilhowie channery silty clay loam, 15 to 25 percent slopes, severely eroded
21E3	Chilhowie channery silty clay loam, 25 to 45 percent slopes, severely eroded
22B2	Chilhowie-Edom complex, 2 to 7 percent slopes, eroded
22C2	Chilhowie-Edom complex, 7 to 15 percent slopes, eroded
22D2	Chilhowie-Edom complex, 15 to 25 percent slopes, eroded
23C3	Chilhowie-Edom shaly silty clay loams, 7 to 15 percent slopes, severely eroded
23E3	Chilhowie-Edom channery silty clay loams, 15 to 45 percent slopes, severely eroded
30B2	Edom silt loam, 2 to 7 percent slopes, eroded

Map Unit Symbol	Description
30C2	Edom silt loam, 7 to 15 percent slopes, eroded
30D2	Edom silt loam, 15 to 25 percent slopes, eroded
31C3	Edom silty clay loam, 7 to 15 percent slopes, severely eroded
42C2	Frederick-Christian gravelly silt loams, 7 to 15 percent slopes, eroded
45C2	Frederick-Rock outcrop complex, 0 to 15 percent slopes, eroded
68E	Rock outcrop-Chilhowie complex, steep
70E	Rock outcrop-Frederick complex, steep

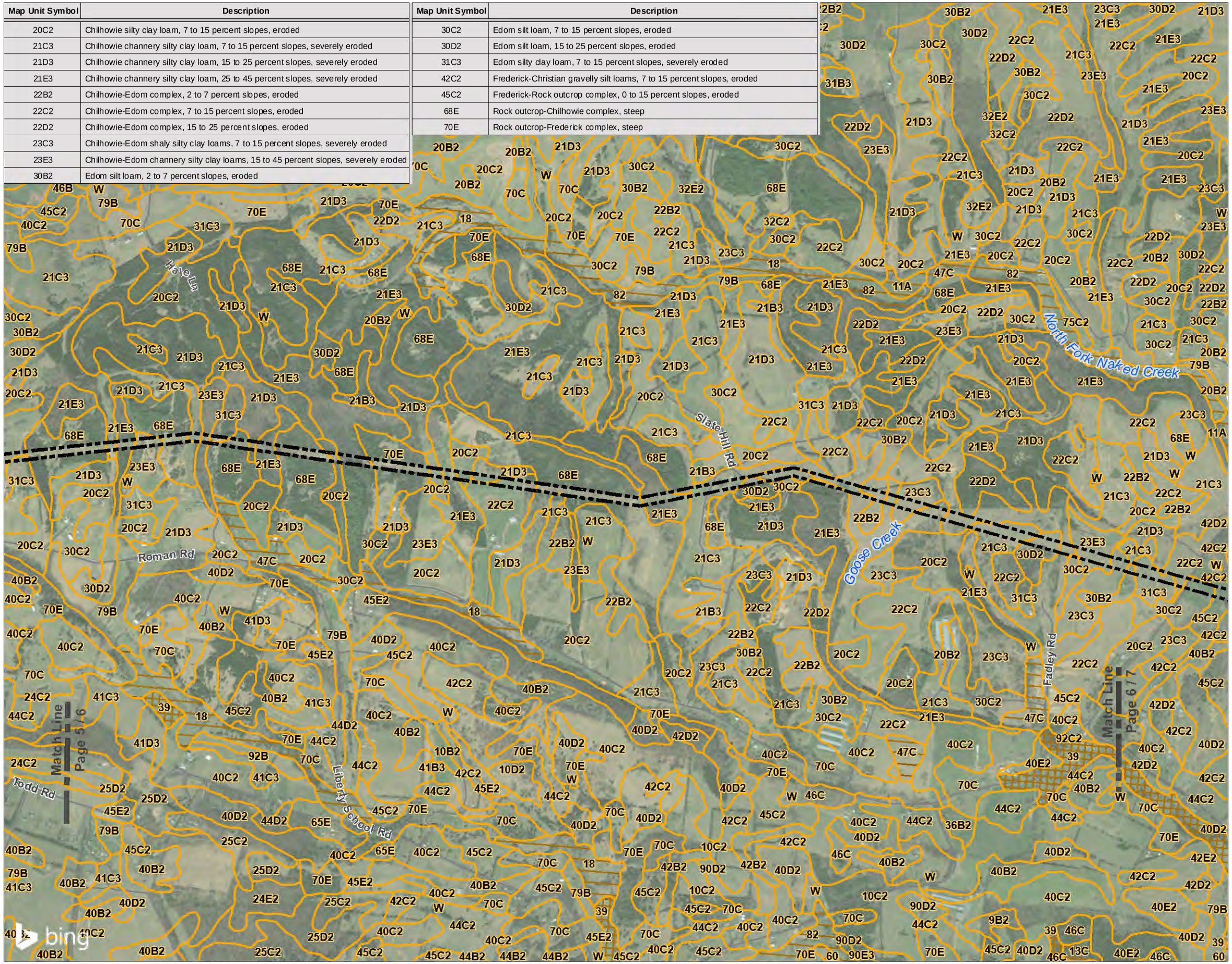


Figure No.

4

Title

Soils Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

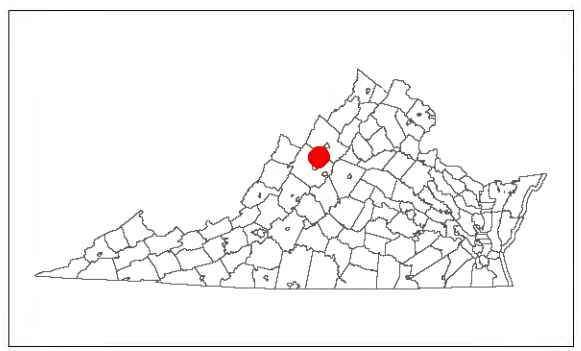
Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

0 1,500 3,000 Feet

(At original document size of 11x17)
1:18,000

- Substation
- Project Limits
- Soils
- Hydric Soils
- Predominantly Nonhydric Soils



Notes

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2. Data Sources: Dominion Energy Virginia, Stantec, DCR, USDA NRCS SSURGO Soil Survey, ESRI, NADS
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Map Unit Symbol	Description
14	Buckton silt loam
21C3	Chilhowie channery silty clay loam, 7 to 15 percent slopes, severely eroded
21D3	Chilhowie channery silty clay loam, 15 to 25 percent slopes, severely eroded
22C2	Chilhowie-Edom complex, 7 to 15 percent slopes, eroded
22D2	Chilhowie-Edom complex, 15 to 25 percent slopes, eroded
23C3	Chilhowie-Edom shaly silty clay loams, 7 to 15 percent slopes, severely eroded
23E3	Chilhowie-Edom channery silty clay loams, 15 to 45 percent slopes, severely eroded
30B2	Edom silt loam, 2 to 7 percent slopes, eroded
30C2	Edom silt loam, 7 to 15 percent slopes, eroded
30D2	Edom silt loam, 15 to 25 percent slopes, eroded

Map Unit Symbol	Description
31C3	Edom silty clay loam, 7 to 15 percent slopes, severely eroded
40B2	Frederick-Christian silt loams, 2 to 7 percent slopes, eroded
40C2	Frederick-Christian silt loams, 7 to 15 percent slopes, eroded
40D2	Frederick-Christian silt loams, 15 to 25 percent slopes, eroded
41C3	Frederick-Christian silty clay loams, 7 to 15 percent slopes, severely eroded
42C2	Frederick-Christian gravelly silt loams, 7 to 15 percent slopes, eroded
42D2	Frederick-Christian gravelly silt loams, 15 to 25 percent slopes, eroded
43D	Frederick-Christian very gravelly silt loams, 15 to 25 percent slopes
45C2	Frederick-Rock outcrop complex, 0 to 15 percent slopes, eroded
45E2	Frederick-Rock outcrop complex, 15 to 45 percent slopes, eroded

Map Unit Symbol	Description
70C	Rock outcrop-Frederick complex, sloping
70E	Rock outcrop-Frederick complex, steep
82	Udifluvents, loamy

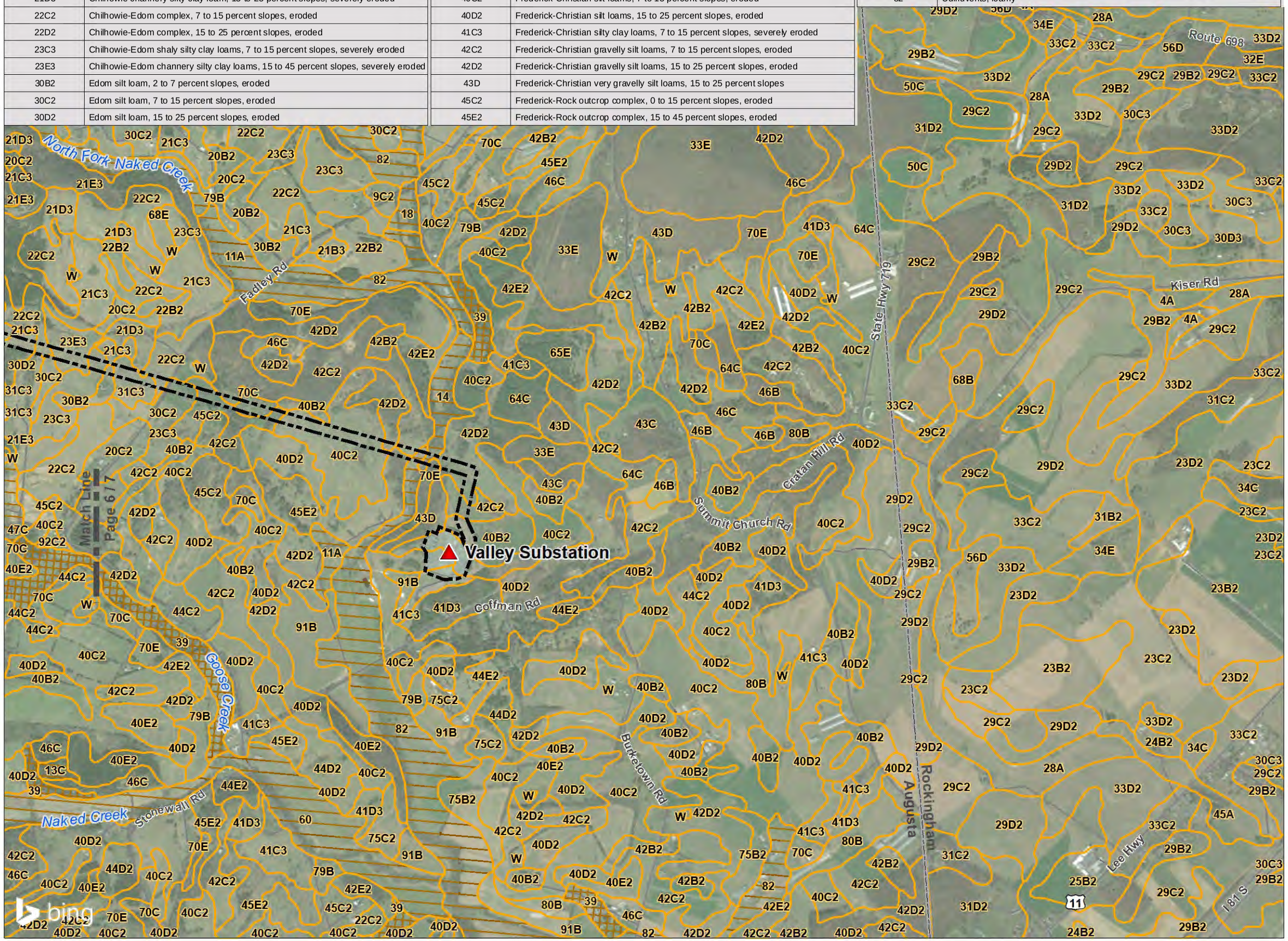


Figure No.

4

Title

Soils Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

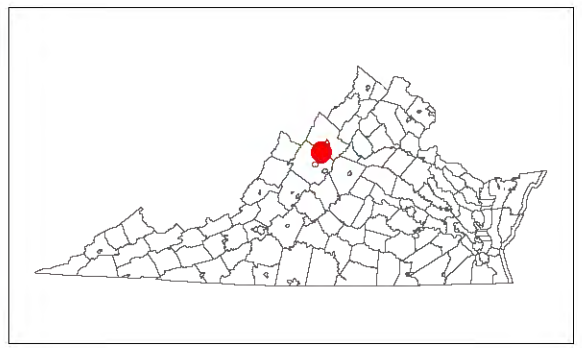
Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

0 1,500 3,000 Feet

(At original document size of 11x17)
1:18,000

- Substation
- Project Limits
- Soils
- Hydric Soils
- Predominantly Nonhydric Soils



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR, USDA NRCS SSURGO Soil Survey, ESRI, NADS
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Figure No.

5

Title

Flood Hazard Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

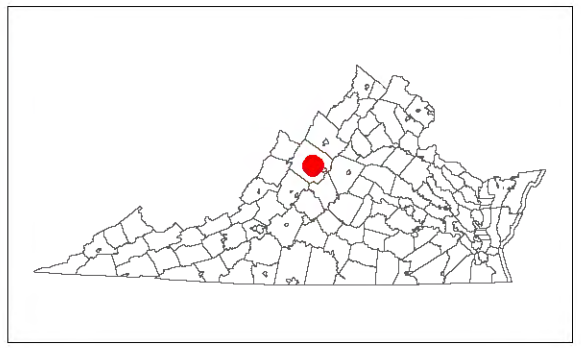
Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

0 1,500 3,000 Feet

(At original document size of 11x17)
1:18,000

- Substation
- Project Limits
- 100-Year Flood Zone
- 100-Year Floodway
- 500-Year Flood Zone



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
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Figure No.

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Title

Flood Hazard Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

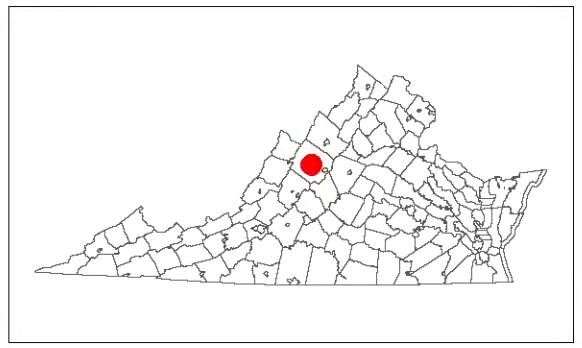
Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

0 1,500 3,000 Feet

(At original document size of 11x17)
1:18,000

- Substation
- Project Limits
- 100-Year Flood Zone
- 100-Year Floodway
- 500-Year Flood Zone



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
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4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

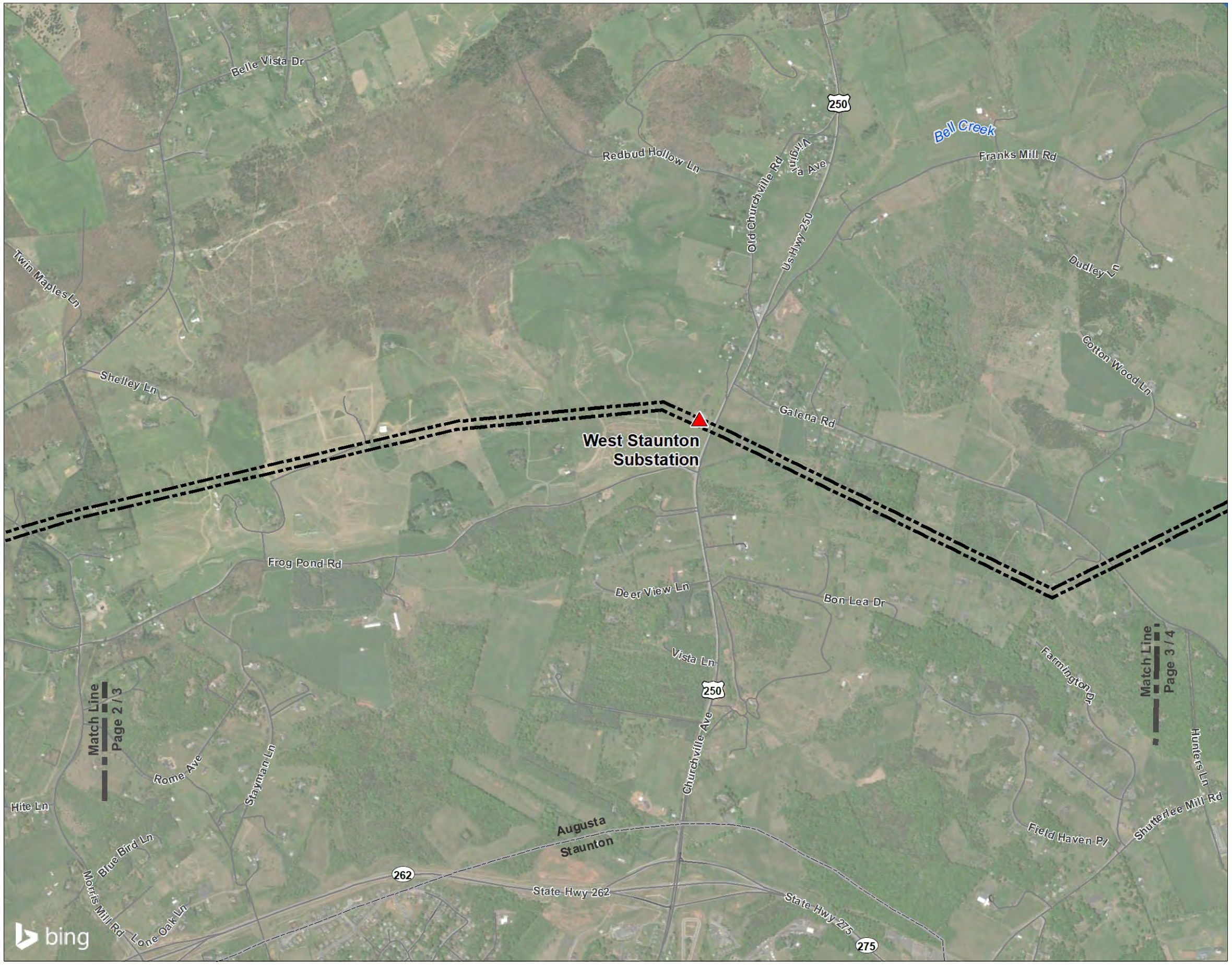

Figure No.

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Flood Hazard Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

0 1,500 3,000 Feet

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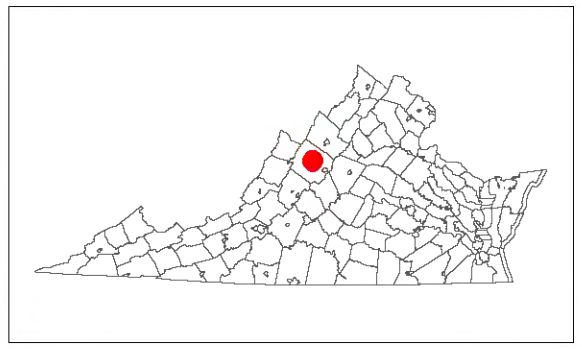
- Project Limits
- 100-Year Flood Zone
- 100-Year Floodway
- 500-Year Flood Zone



Notes

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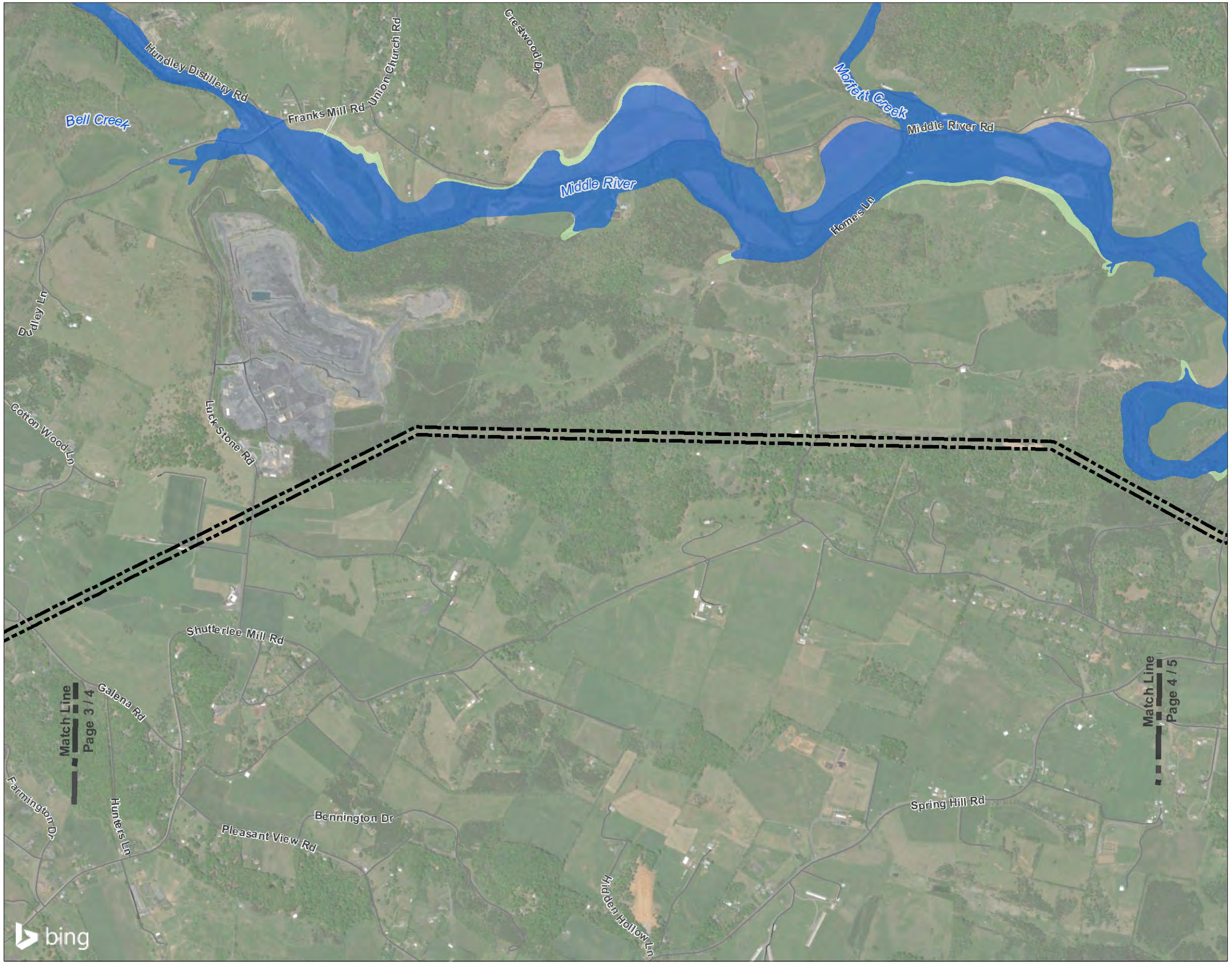
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec



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Flood Hazard Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
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- Substation
- Project Limits
- 100-Year Flood Zone
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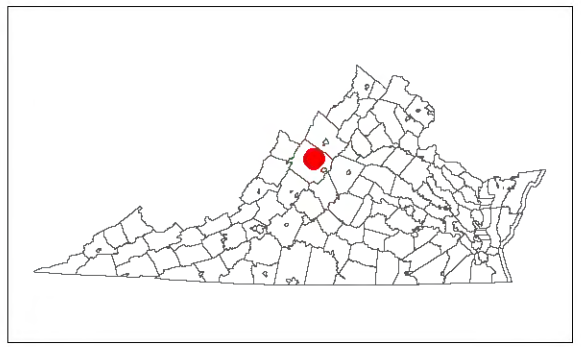

Notes

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2. Data Sources: Dominion Energy Virginia, Stantec, DCR, FEMA
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

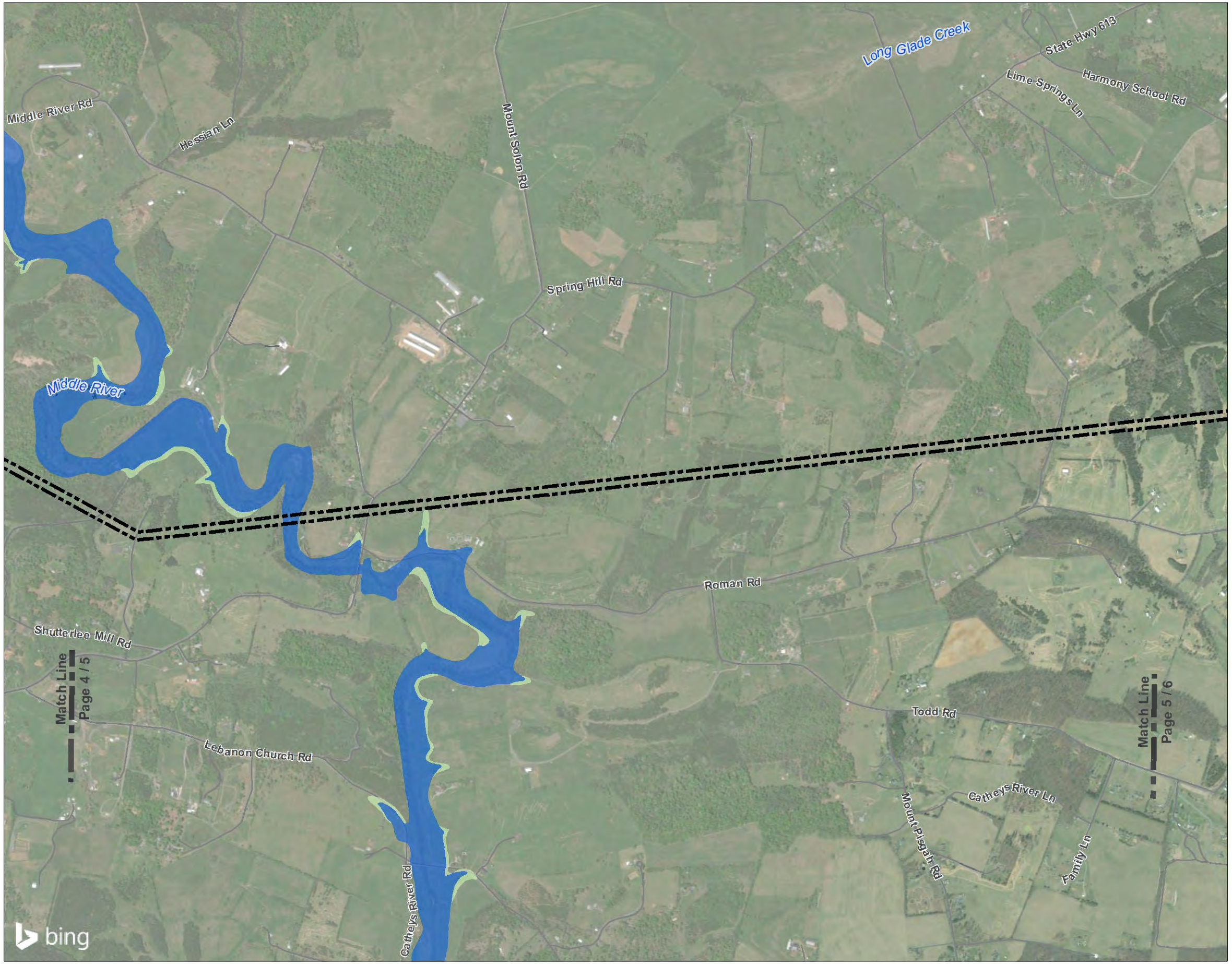


Figure No.

5

Title

Flood Hazard Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

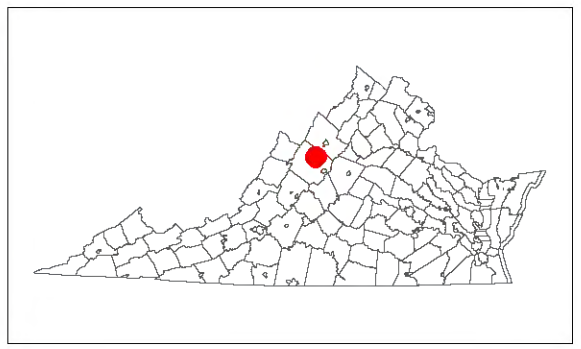
Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

0 1,500 3,000 Feet

(At original document size of 11x17)
1:18,000

- Substation
- Project Limits
- 100-Year Flood Zone
- 100-Year Floodway
- 500-Year Flood Zone



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1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR, FEMA
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Figure No.

5

Title

Flood Hazard Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
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0 1,500 3,000 Feet

(At original document size of 11x17)
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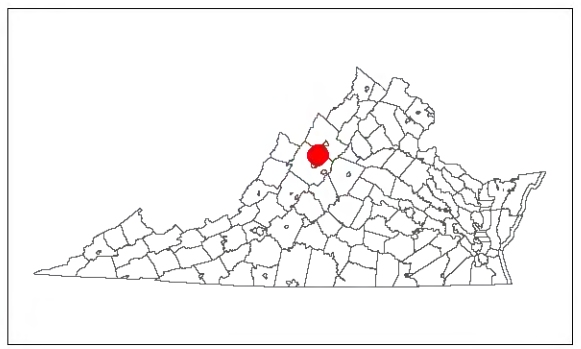
- Substation
- Project Limits
- 100-Year Flood Zone
- 100-Year Floodway
- 500-Year Flood Zone



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1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, DCR, FEMA
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4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

Figure No.

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Flood Hazard Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by LJJ on 2021-05-10
TR by TPS on 2021-06-08
IR by JM on 2021-07-15

N

0 1,500 3,000 Feet

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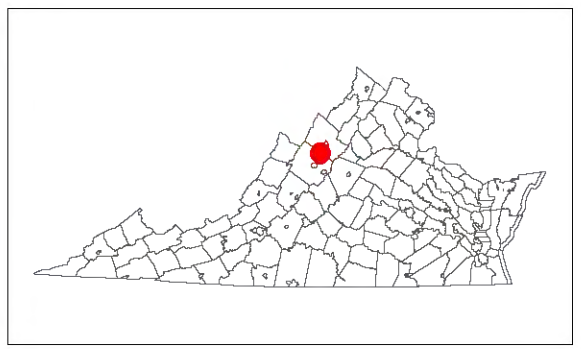
- Substation
- Project Limits
- 100-Year Flood Zone
- 100-Year Floodway
- 500-Year Flood Zone



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2. Data Sources: Dominion Energy Virginia, Stantec, DCR, FEMA
3. Orthoimagery © Bing Maps
4. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

U:\203401607\03_data\gis_cad\gis\401607_e_fema.mxd Revised: 2021-07-15 By: ljjones

Site Data

Project Area	342.34 Acres ±
Project Length	21.55 Miles ±
Palustrine Scrub-Shrub Wetlands (PSS)	0.09 Acres ±
Palustrine Emergent Wetlands (PEM)	0.93 Acres ±
Upper Perennial Stream Channels (R3)	0.65 Acres ± (1,597 L.F. ±)
Intermittent Stream Channels (R4)	0.05 Acres ± (647 L.F. ±)
Ephemeral Stream Channels (R6)	0.01 Acres ± (204 L.F. ±)
Open Waters	1.06 Acres ±

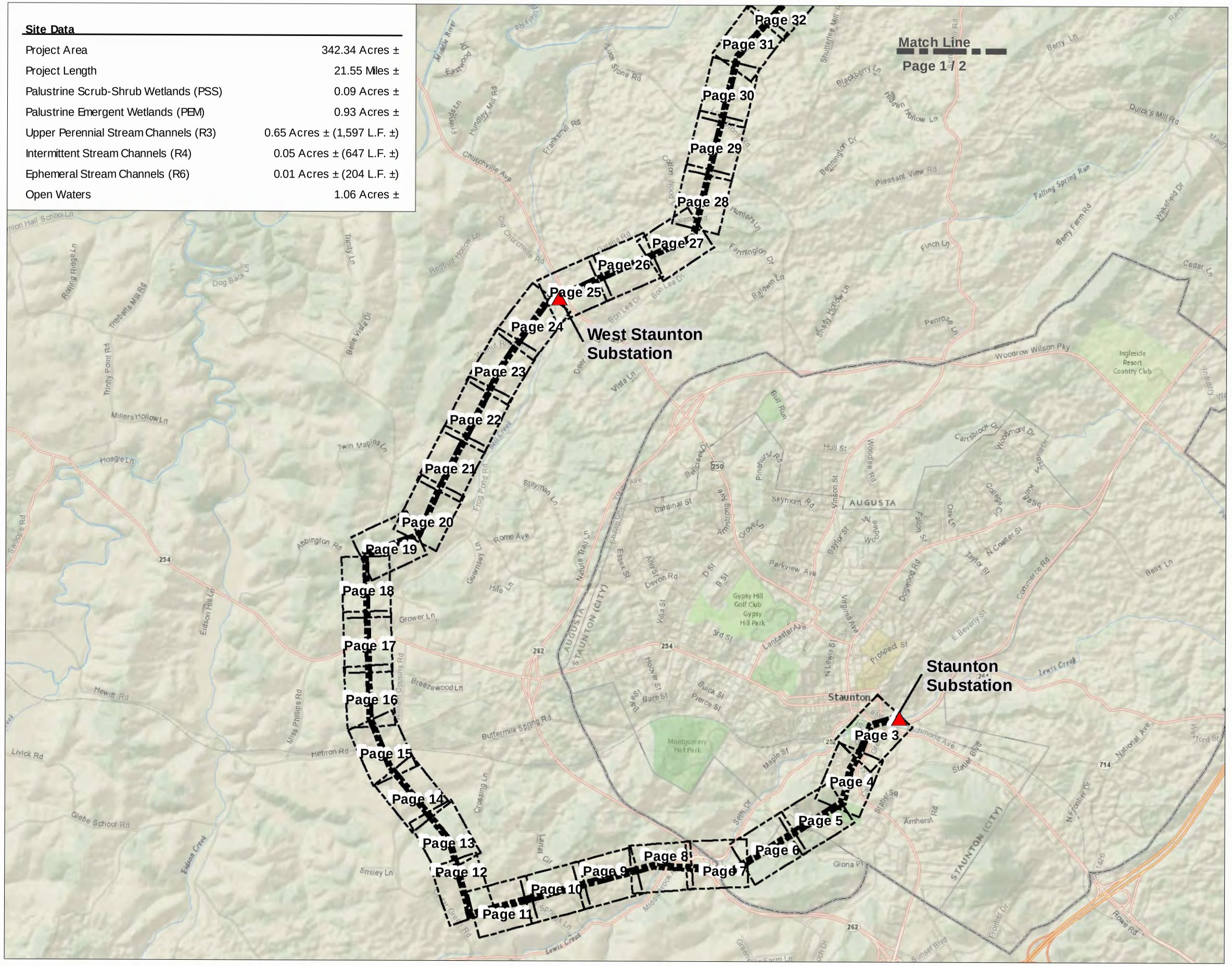

Figure No.
6

Title
Delineation Map

Client/Project 203401607
Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location
Augusta County and City of Staunton, Virginia

Prepared by ECL on 2021-05-25
TR by TPS on 2021-07-13
IR by JM on 2021-07-15

N

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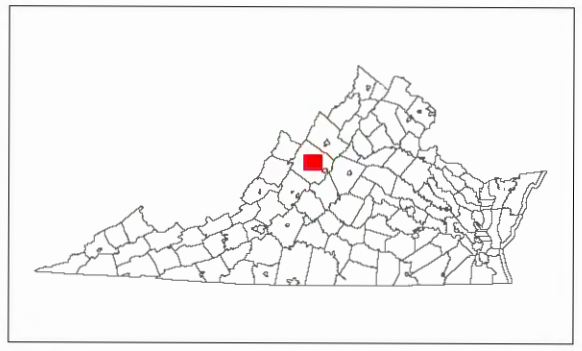
Substation
Project Limits
Page Index



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec
3. Base Map © National Geographic

Stantec

Site Data	
Project Area	342.34 Acres ±
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Ephemeral Stream Channels (R6)	0.01 Acres ± (204 L.F. ±)
Open Waters	1.06 Acres ±

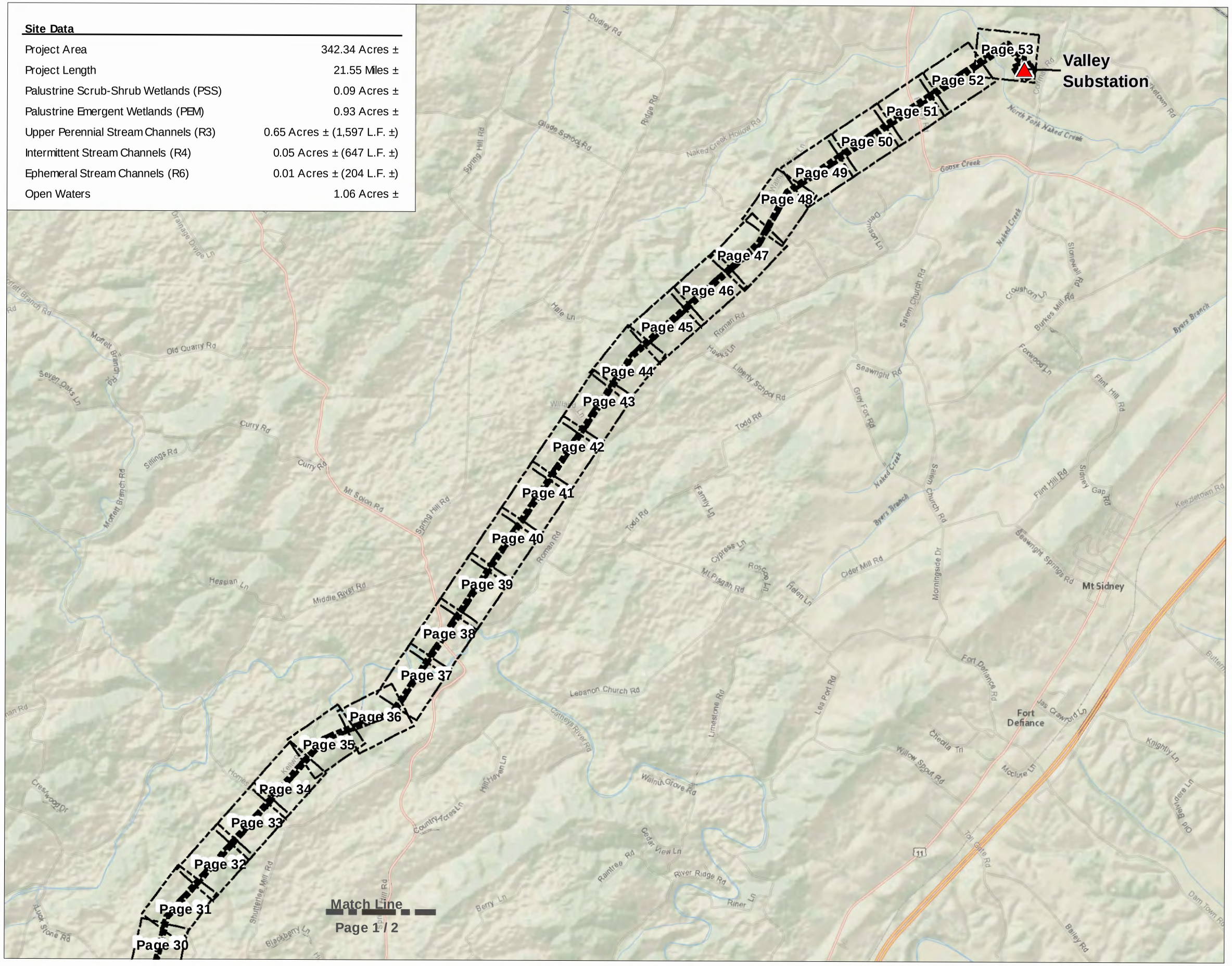

Figure No.
6

Title
Delineation Map

Client/Project 203401607
Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location
Augusta County and City of Staunton, Virginia

Prepared by ECL on 2021-05-25
TR by TPS on 2021-07-13
IR by JM on 2021-07-15

N

0 4,000 8,000 Feet

(At original document size of 11x17)
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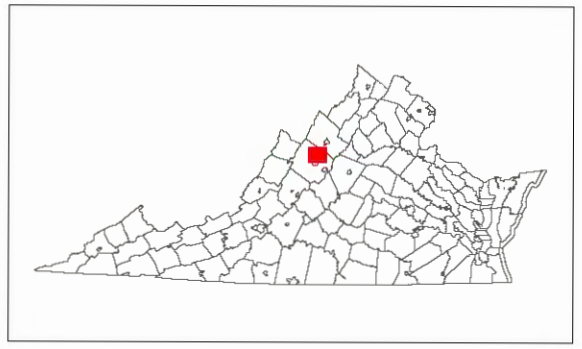
Substation
Project Limits
Page Index



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec
3. Base Map © National Geographic

Stantec

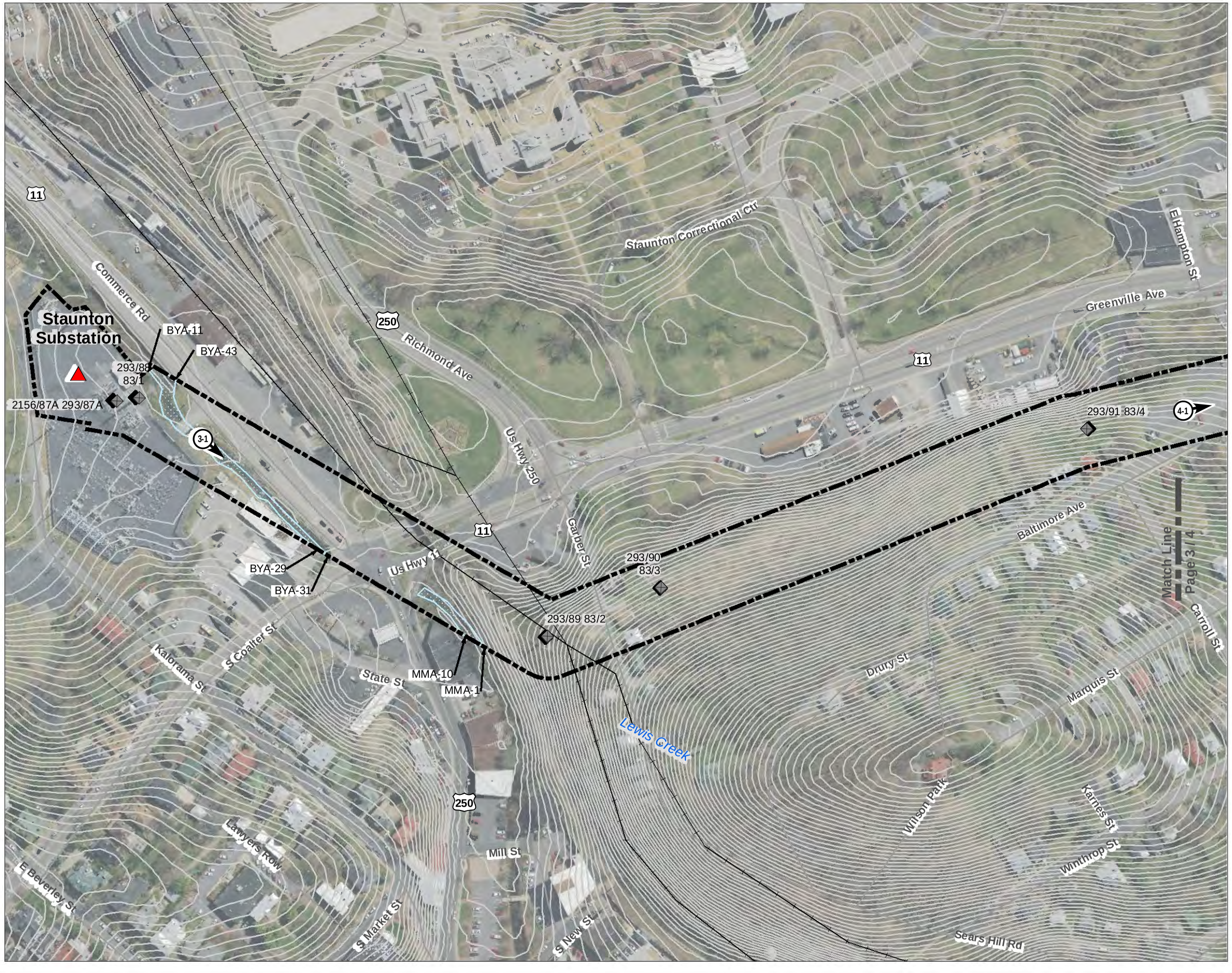


Figure No.

6

Title

Delineation Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by ECL on 2021-05-25
TR by TPS on 2021-07-13
IR by JM on 2021-07-15

0 200 400 Feet

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

- Photo Location
- A-1 Flag Location
- 2 Data Point Location
- Existing Structure
- Project Limits
- Approximate Palustrine Scrub-Shrub Wetland Limits (PSS)
- Approximate Palustrine Emergent Wetland Limits (PEM)
- Approximate Upper Perennial Stream Channel Limits (R3)
- Approximate Intermittent Stream Channel Limits (R4)
- Approximate Ephemeral Stream Channel Limits (R6)
- Approximate Open Water Limits
- Railroad
- 2-Foot Contour

Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, ESRI, NADS, National Transportation Atlas Railroads
3. The limits of waters of the U.S., including wetlands, shown on this map have been field located by means of sub-meter capable GPS technology and are for planning purposes only
4. Topography generated from USGS 1/9 arc second digital elevation model raster dataset
5. Orthoimagery © Bing Maps and © VGIN
6. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

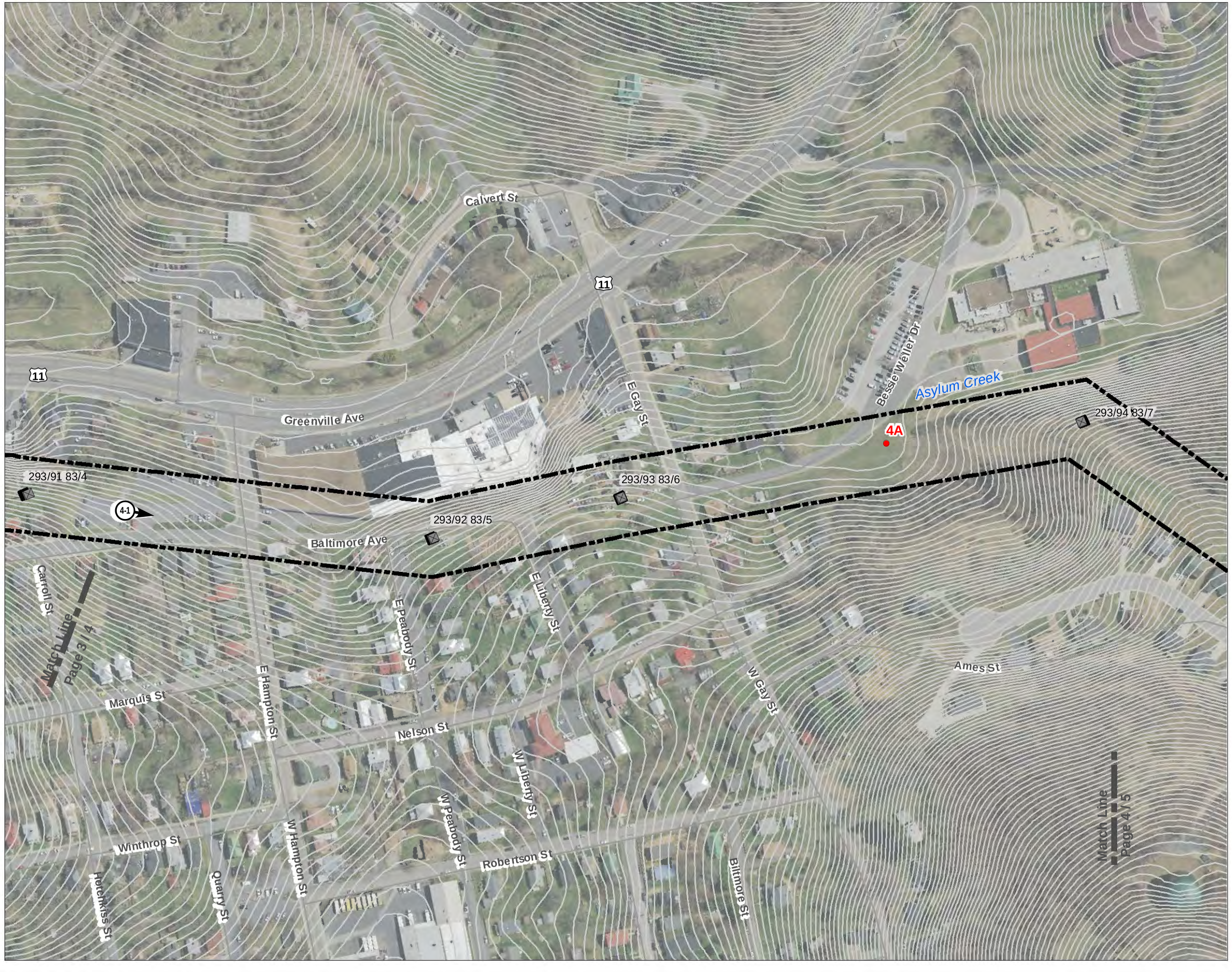


Figure No.

6

Title

Delineation Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by ECL on 2021-05-25
TR by TPS on 2021-07-13
IR by JM on 2021-07-15

N

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- 2-Foot Contour

Notes

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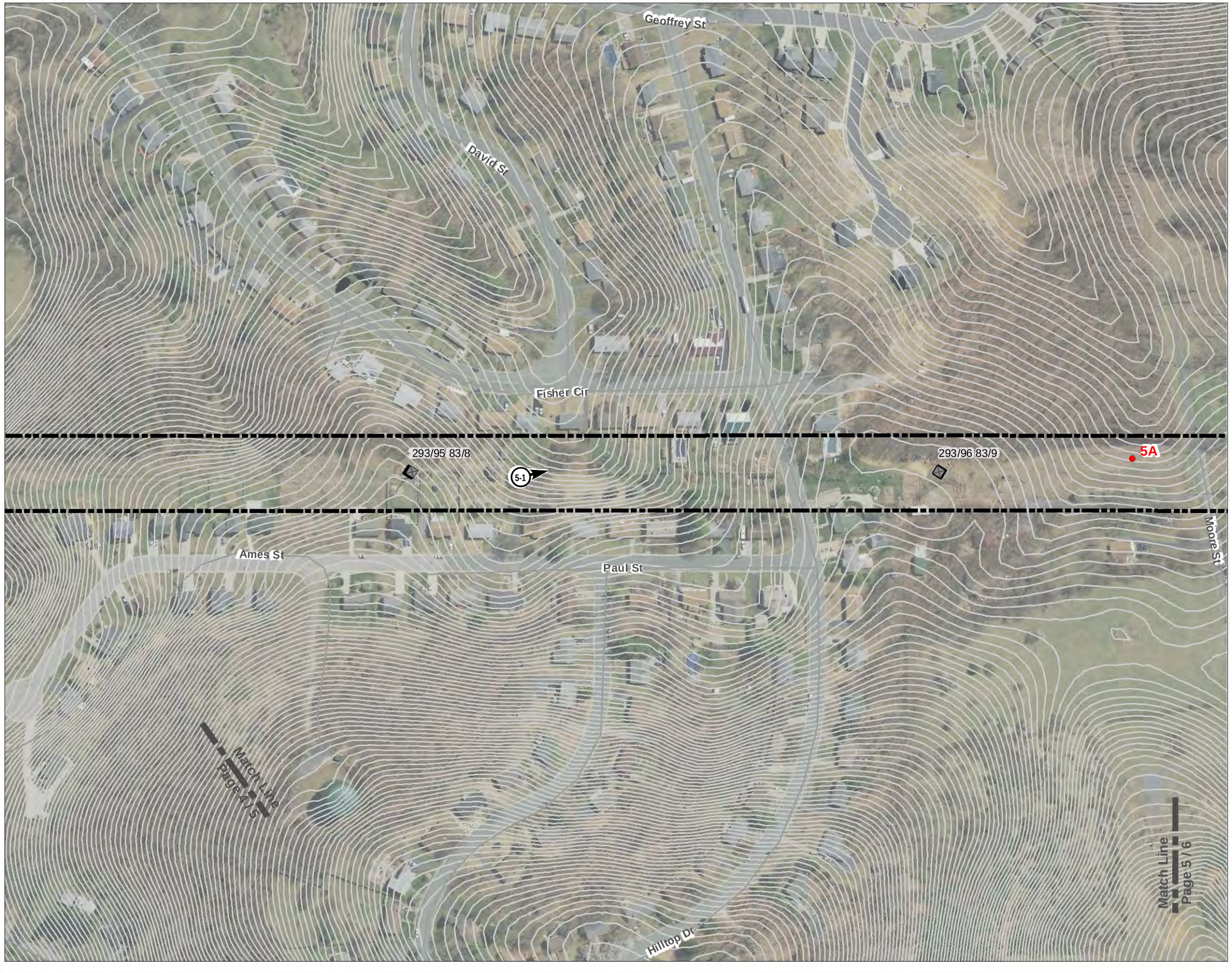

Figure No.

6

Title

Delineation Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by ECL on 2021-05-25
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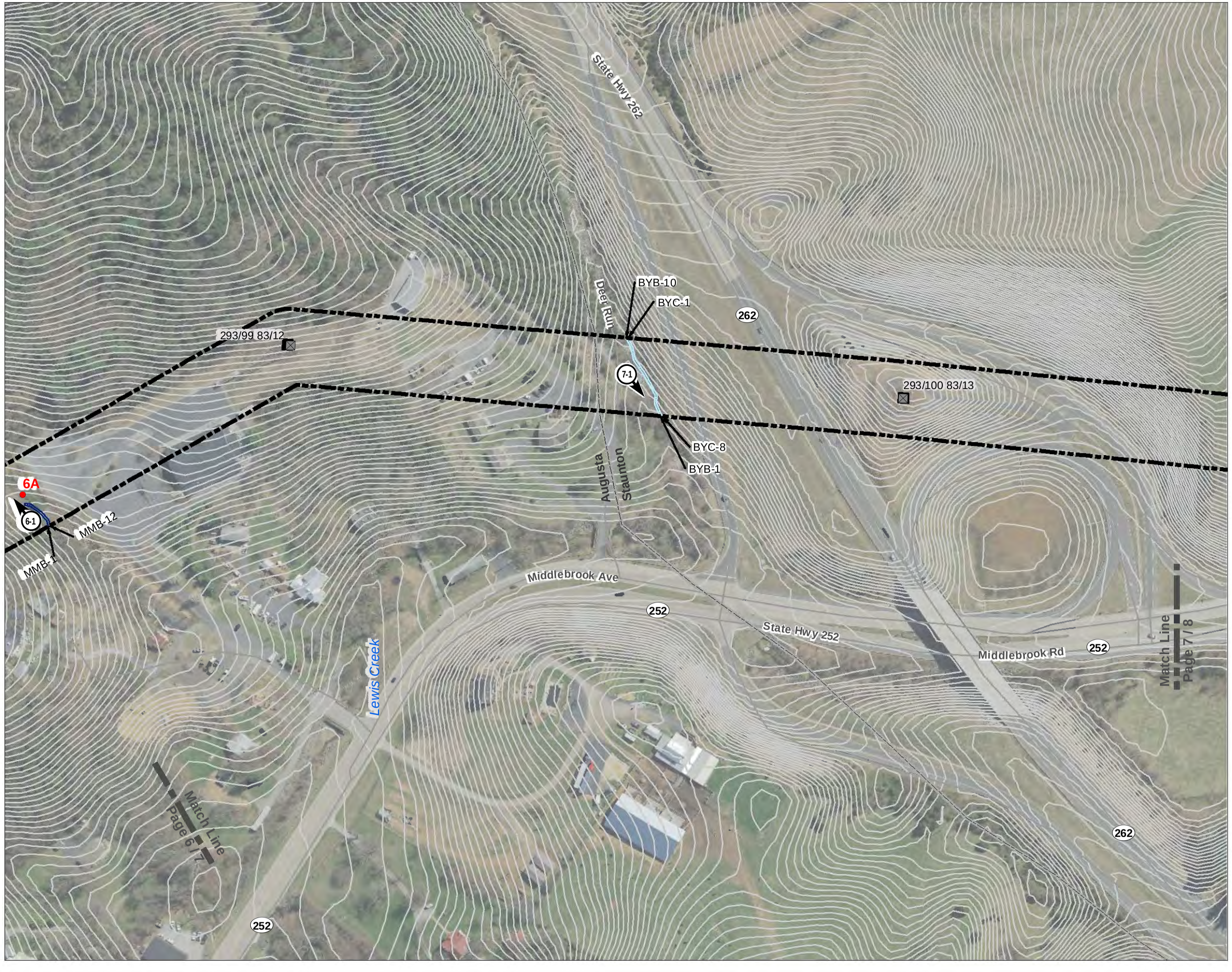

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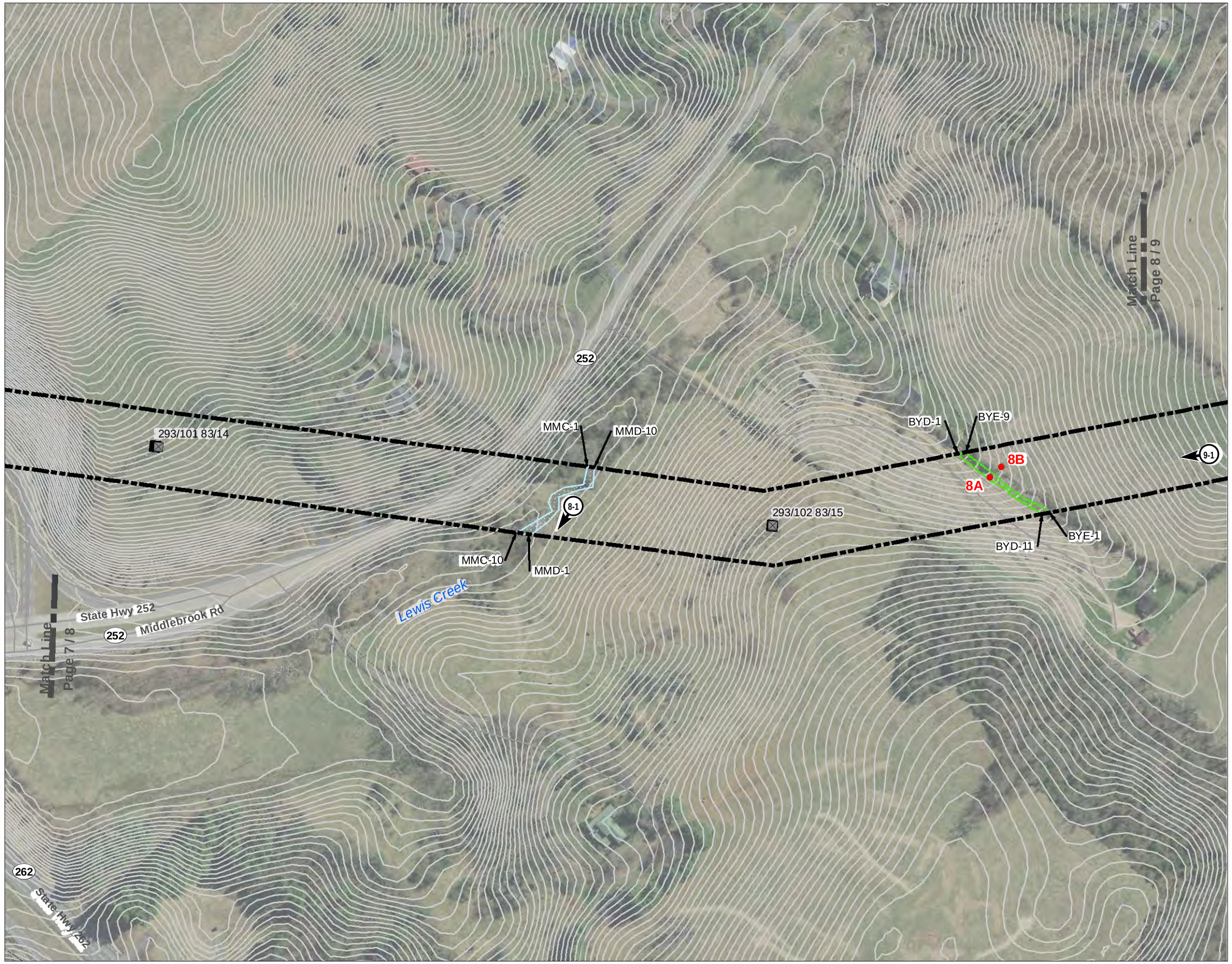

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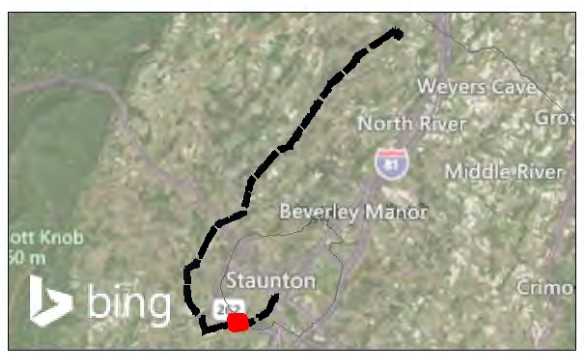

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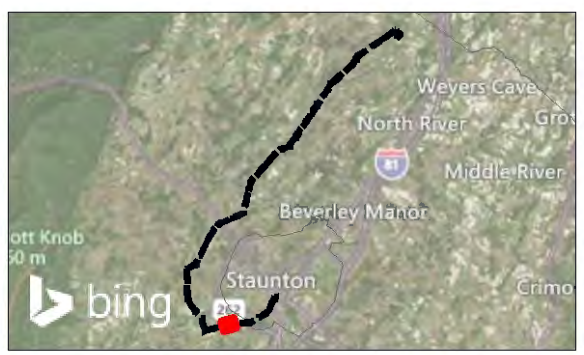

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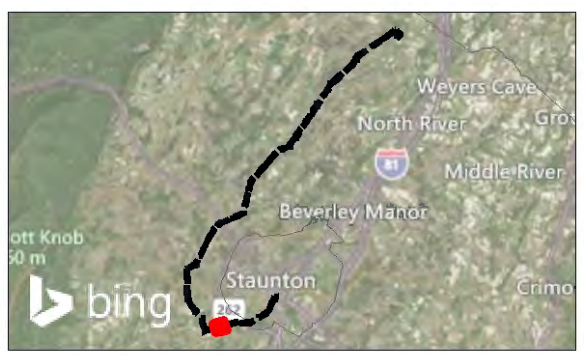

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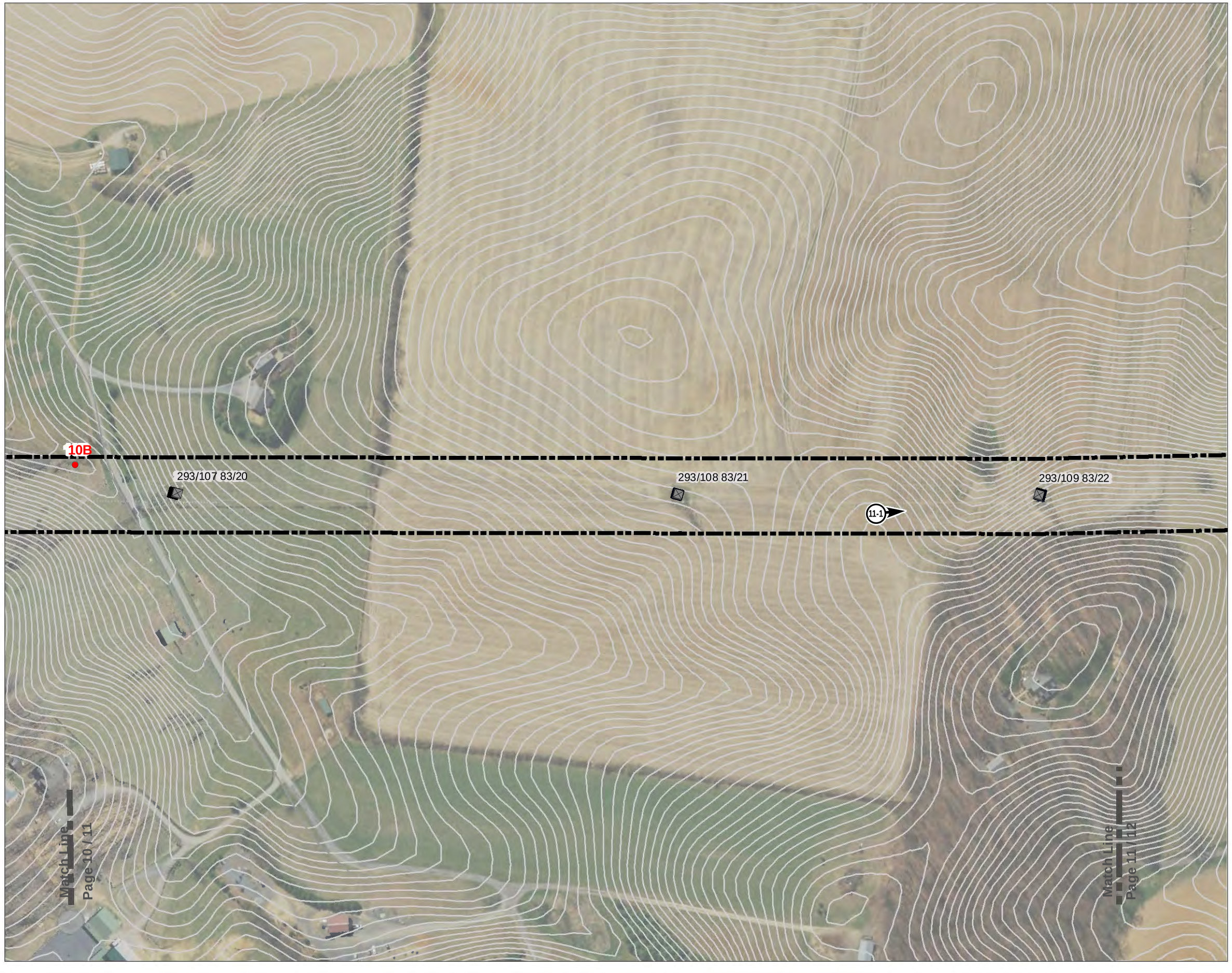

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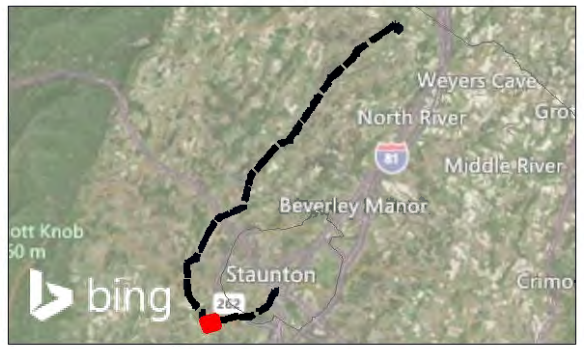

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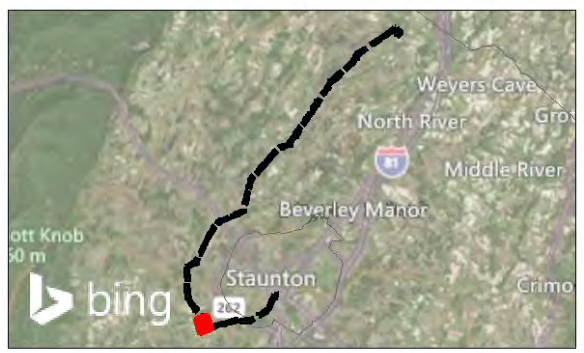

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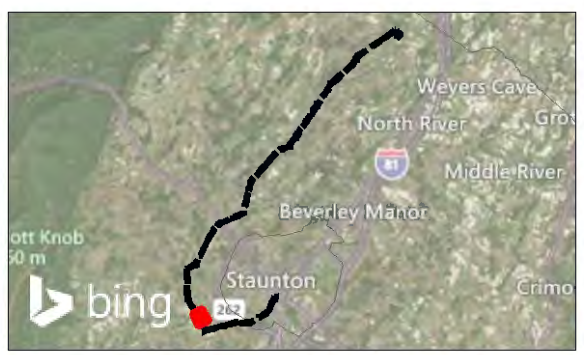

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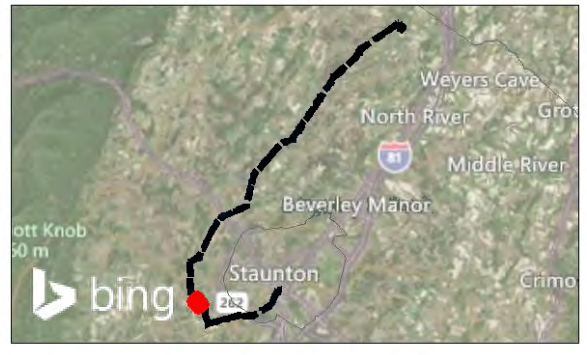

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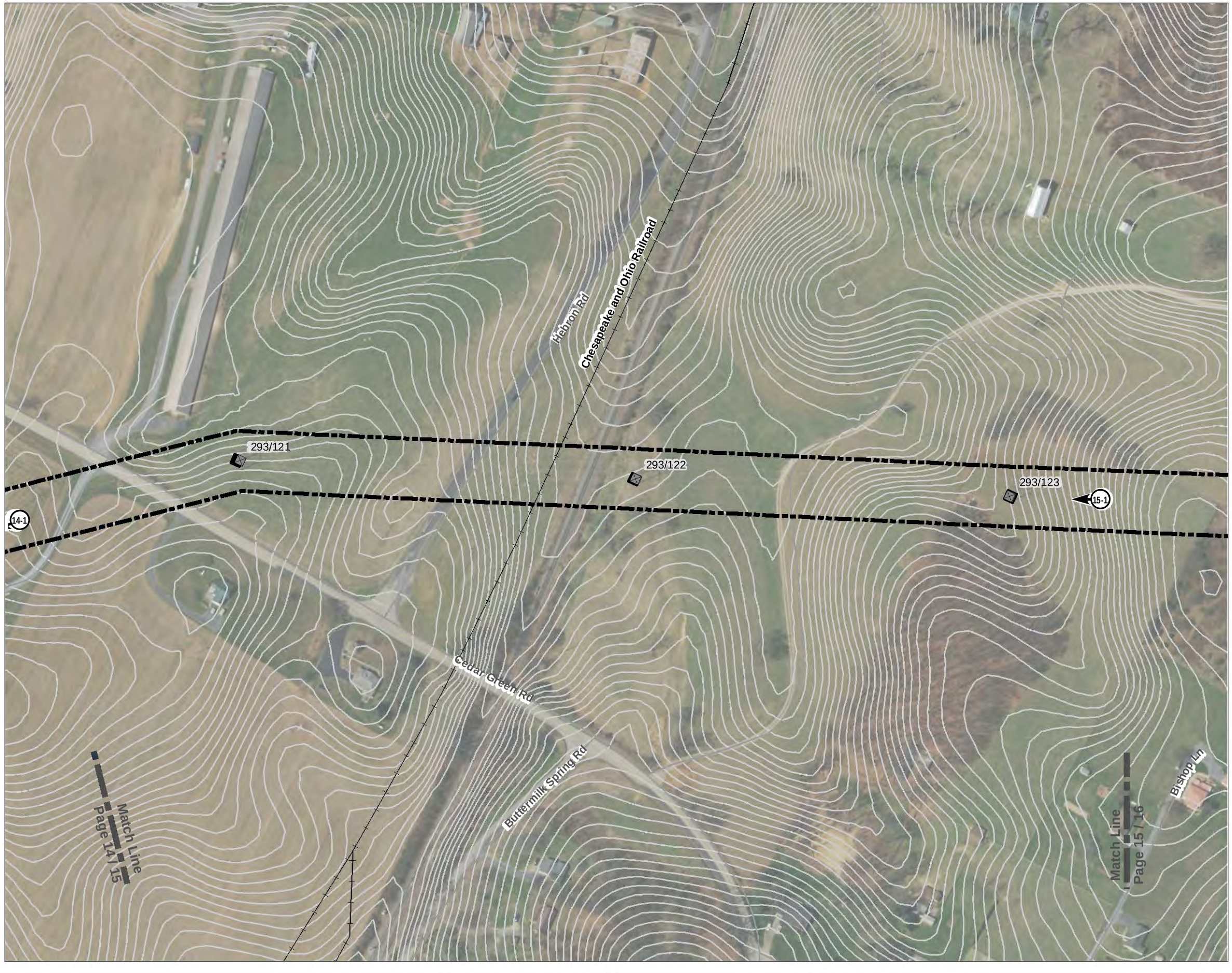

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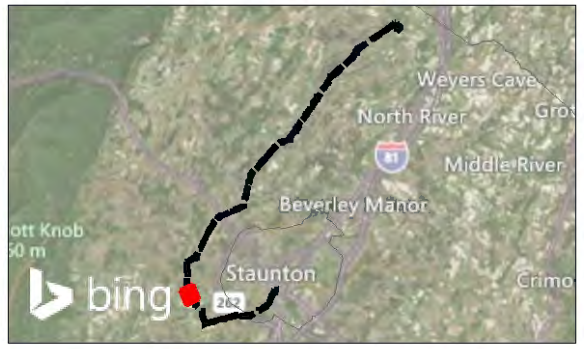

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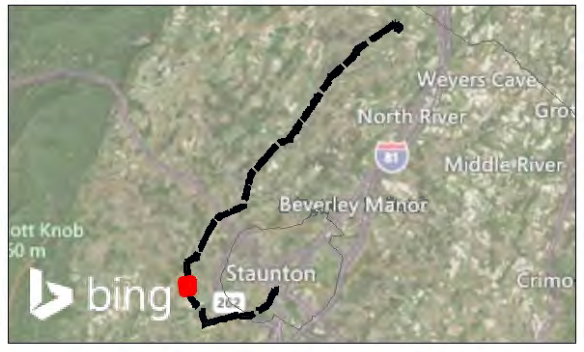

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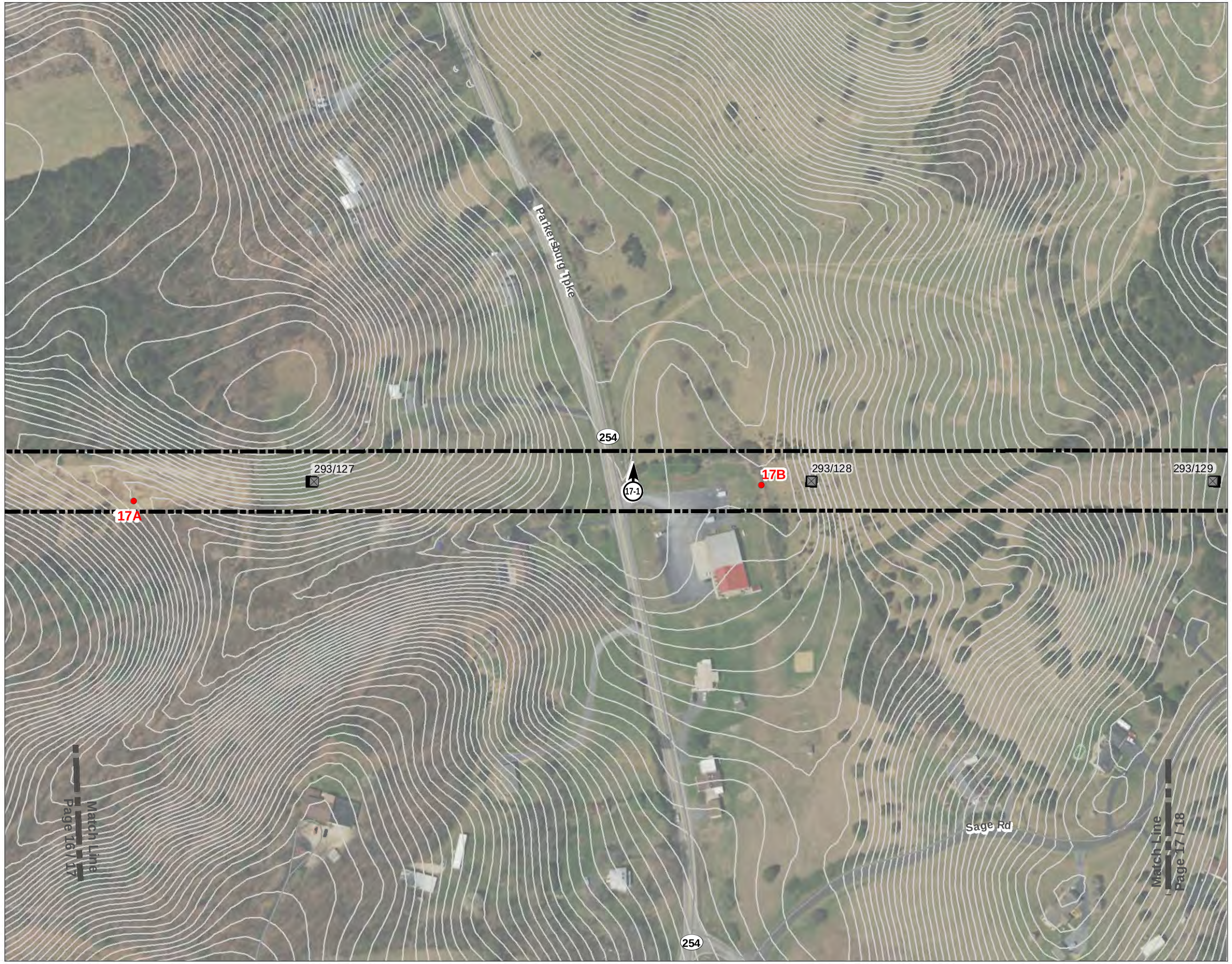

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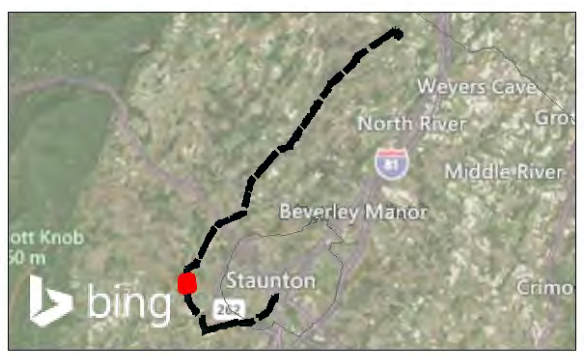

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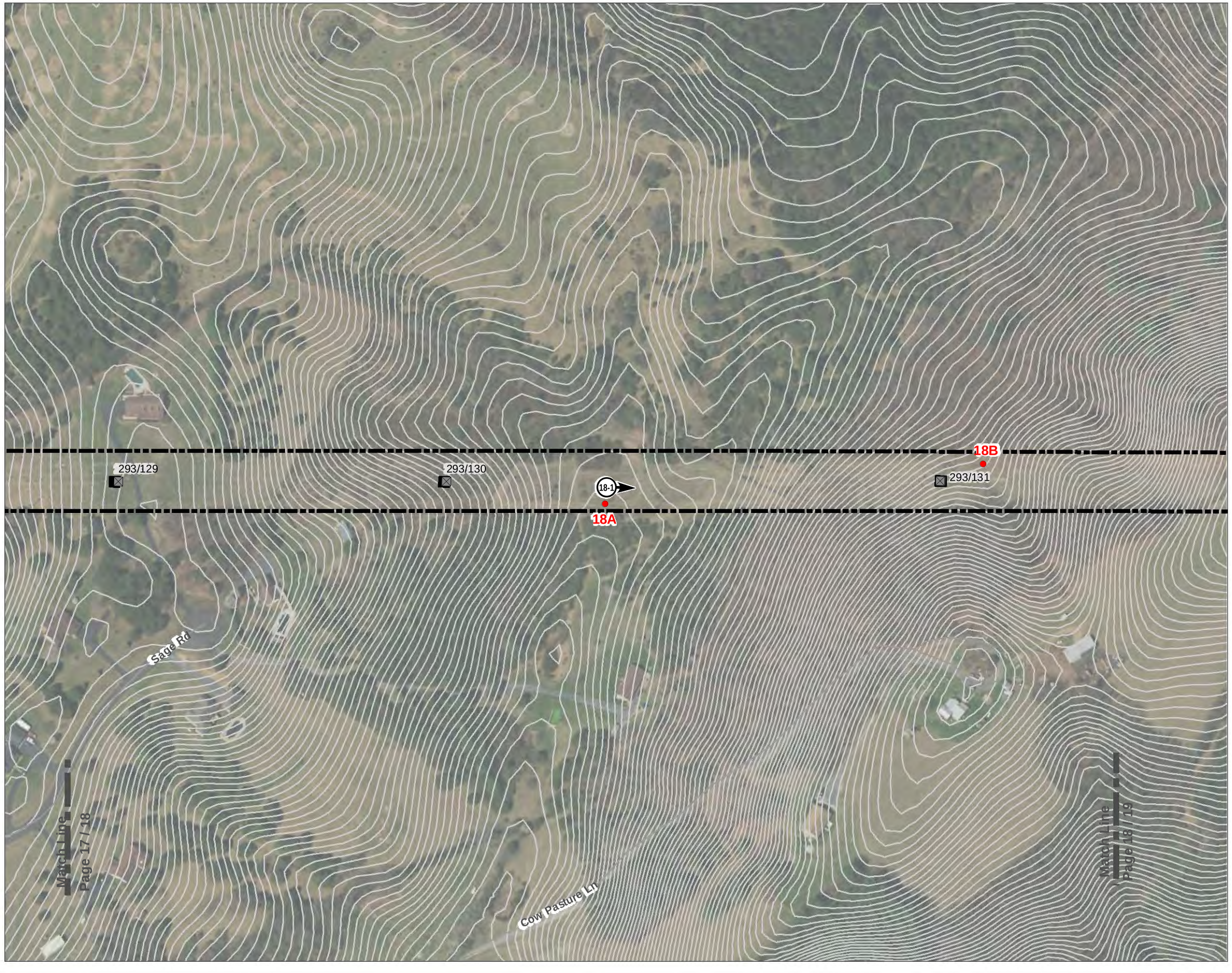

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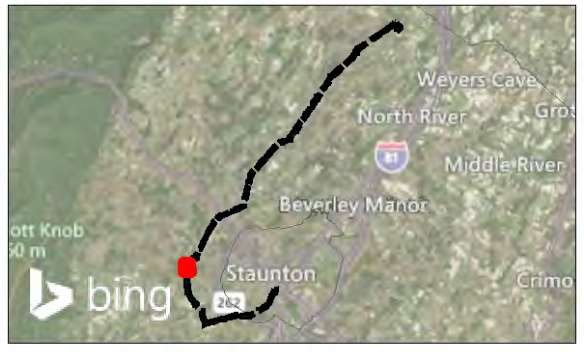

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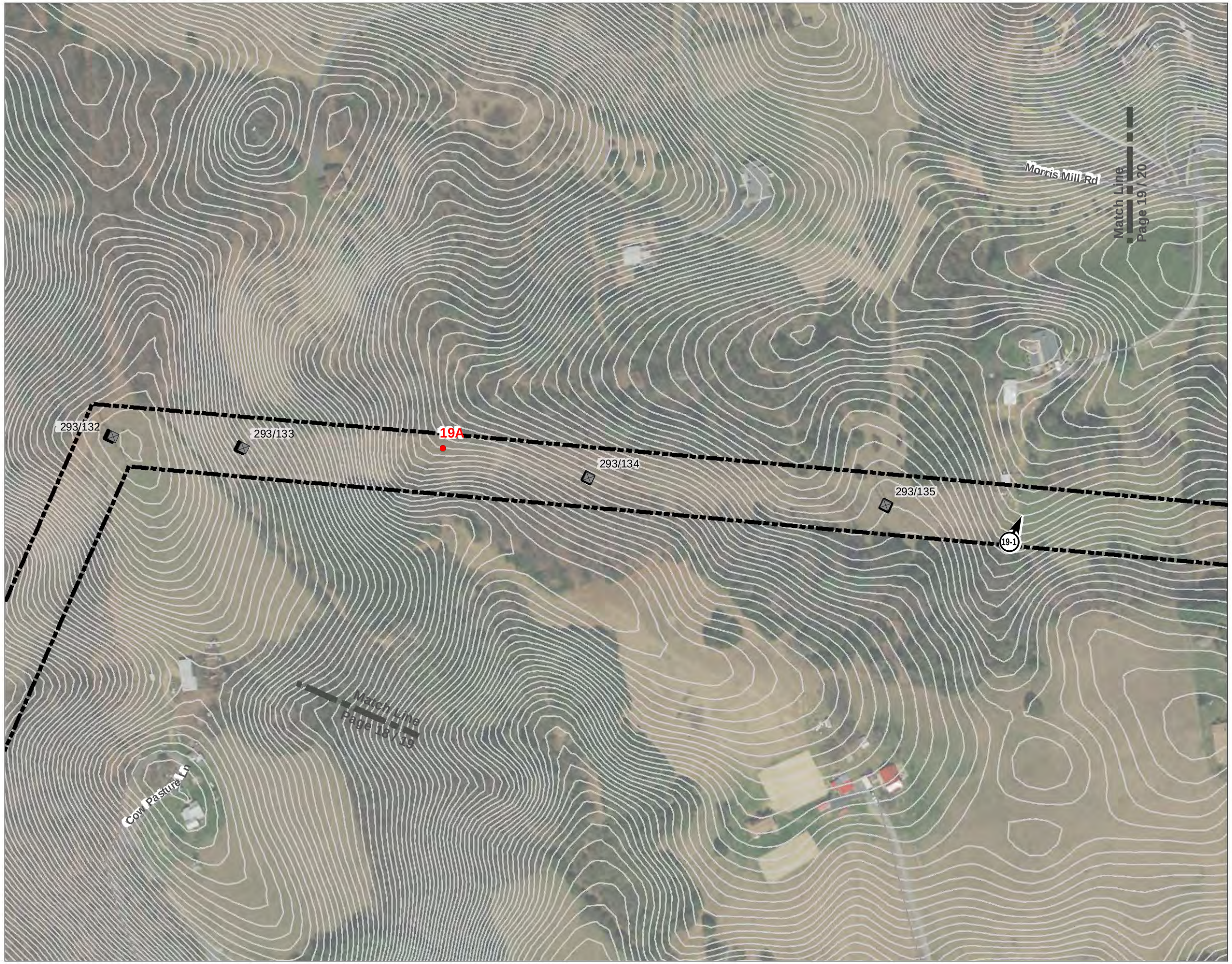

Figure No.

6

Title

Delineation Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by ECL on 2021-05-25
TR by TPS on 2021-07-13
IR by JM on 2021-07-15

N

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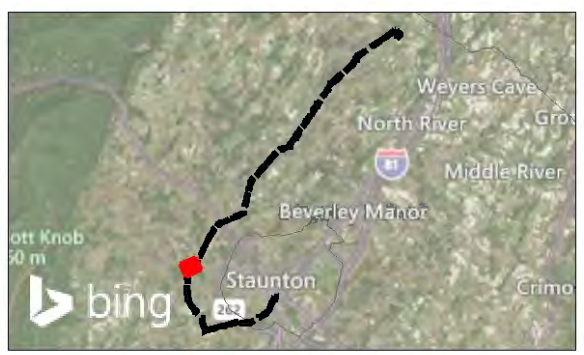

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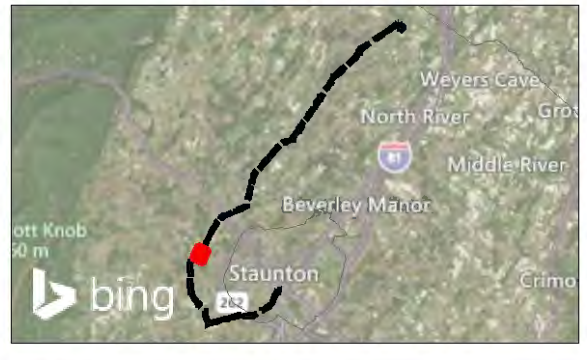

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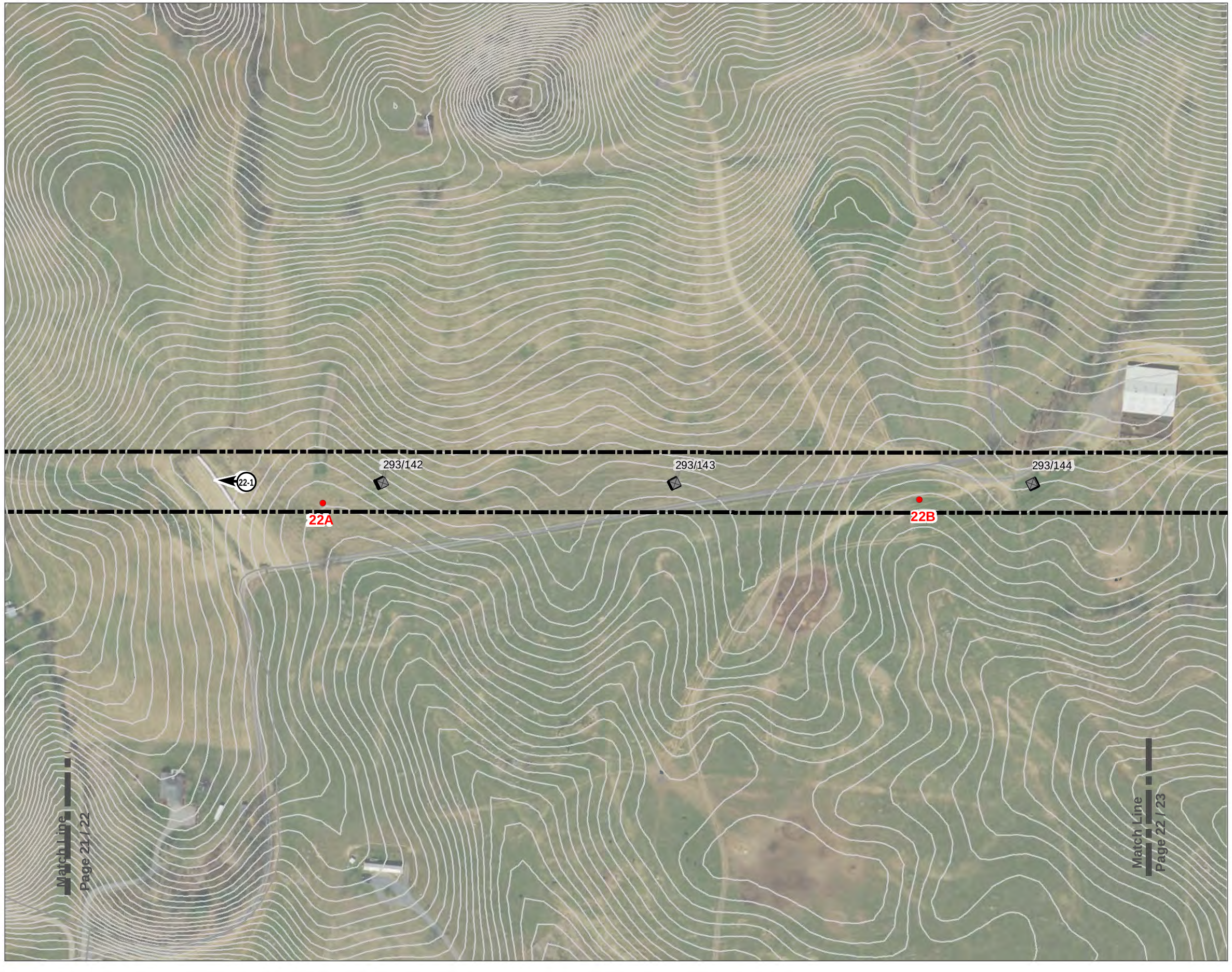

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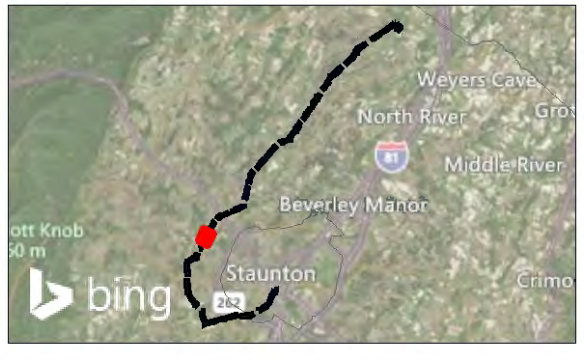

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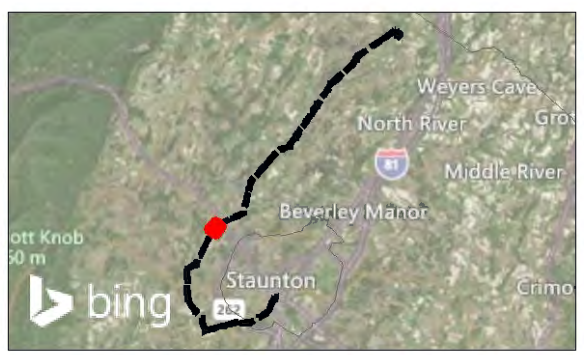

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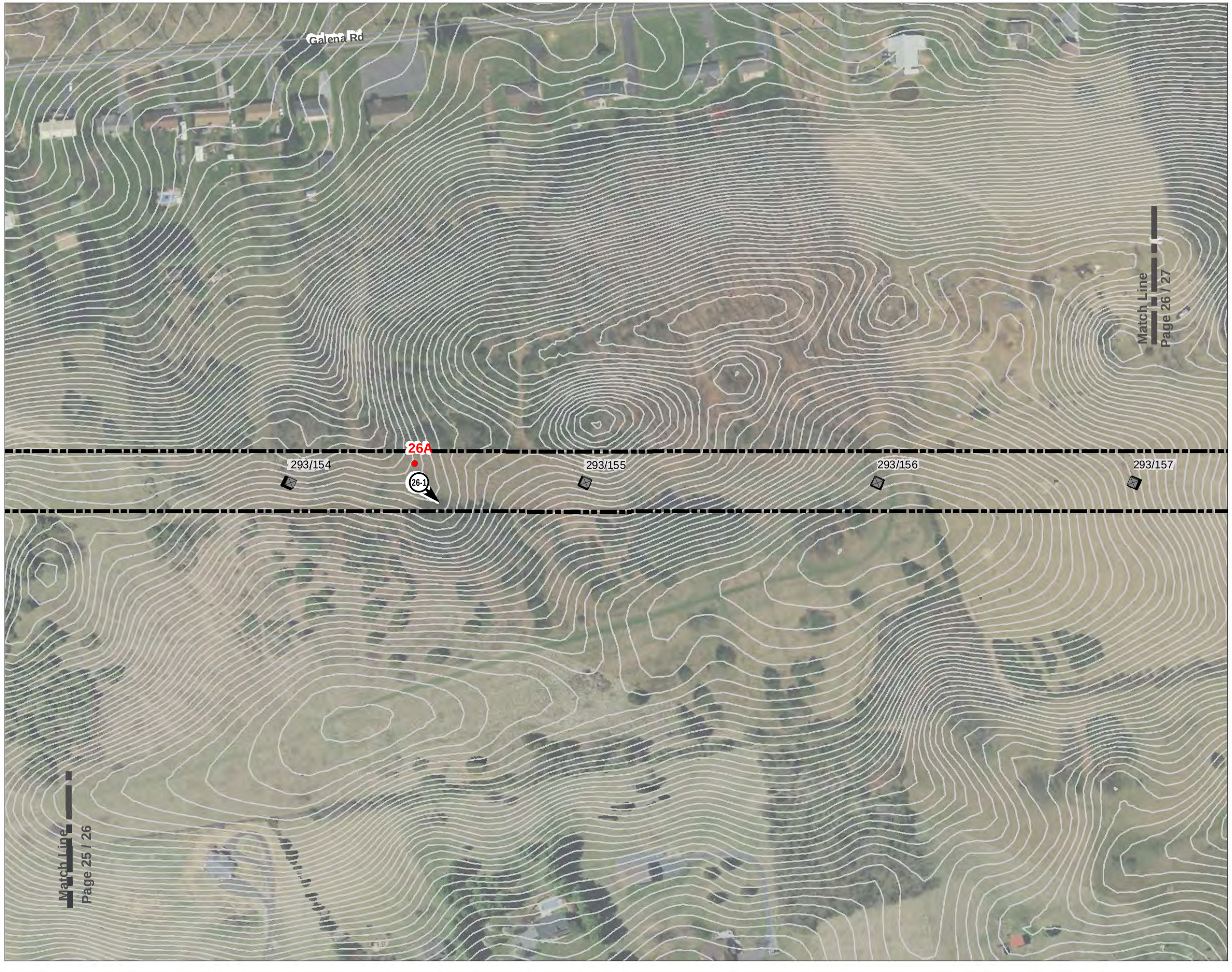

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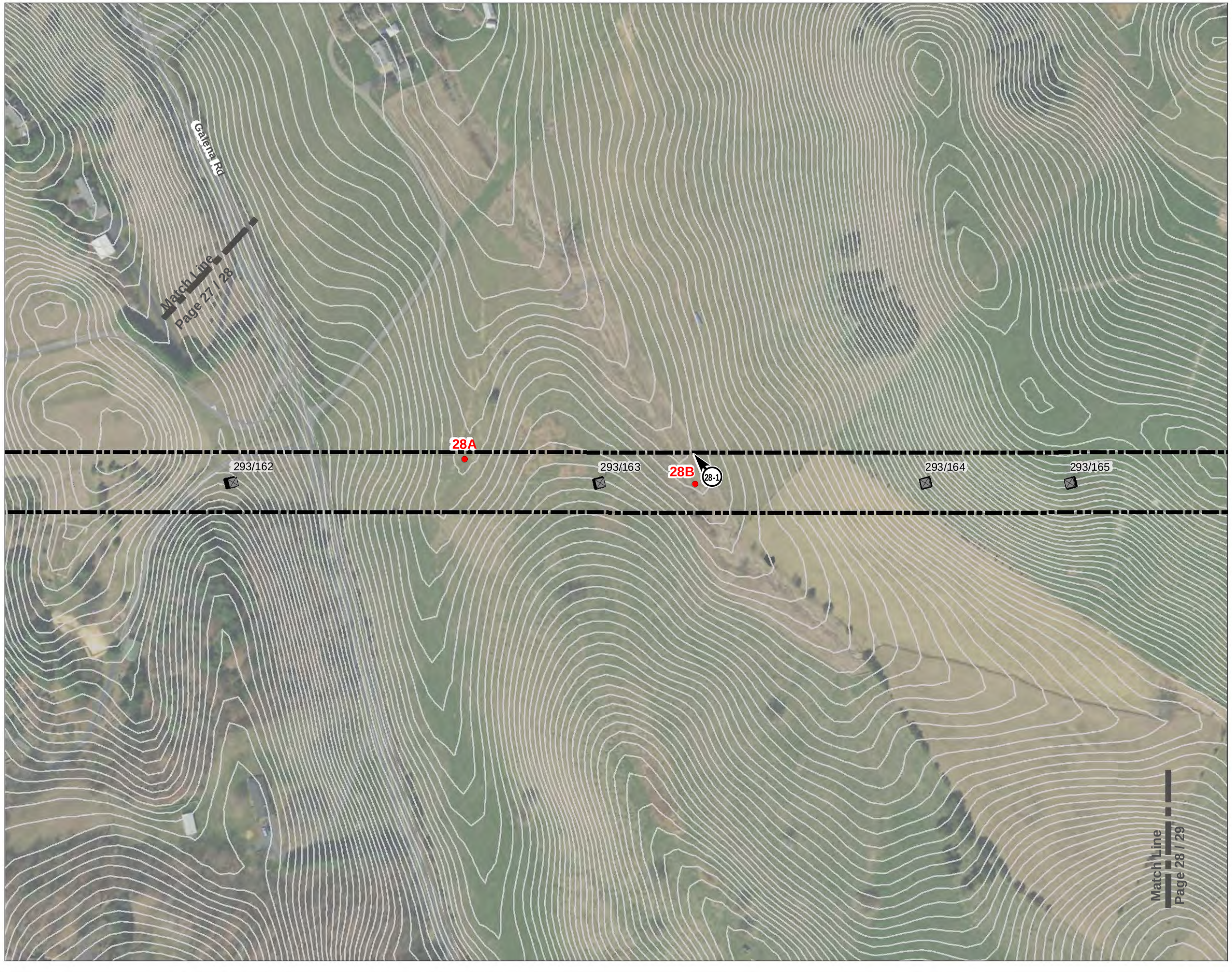

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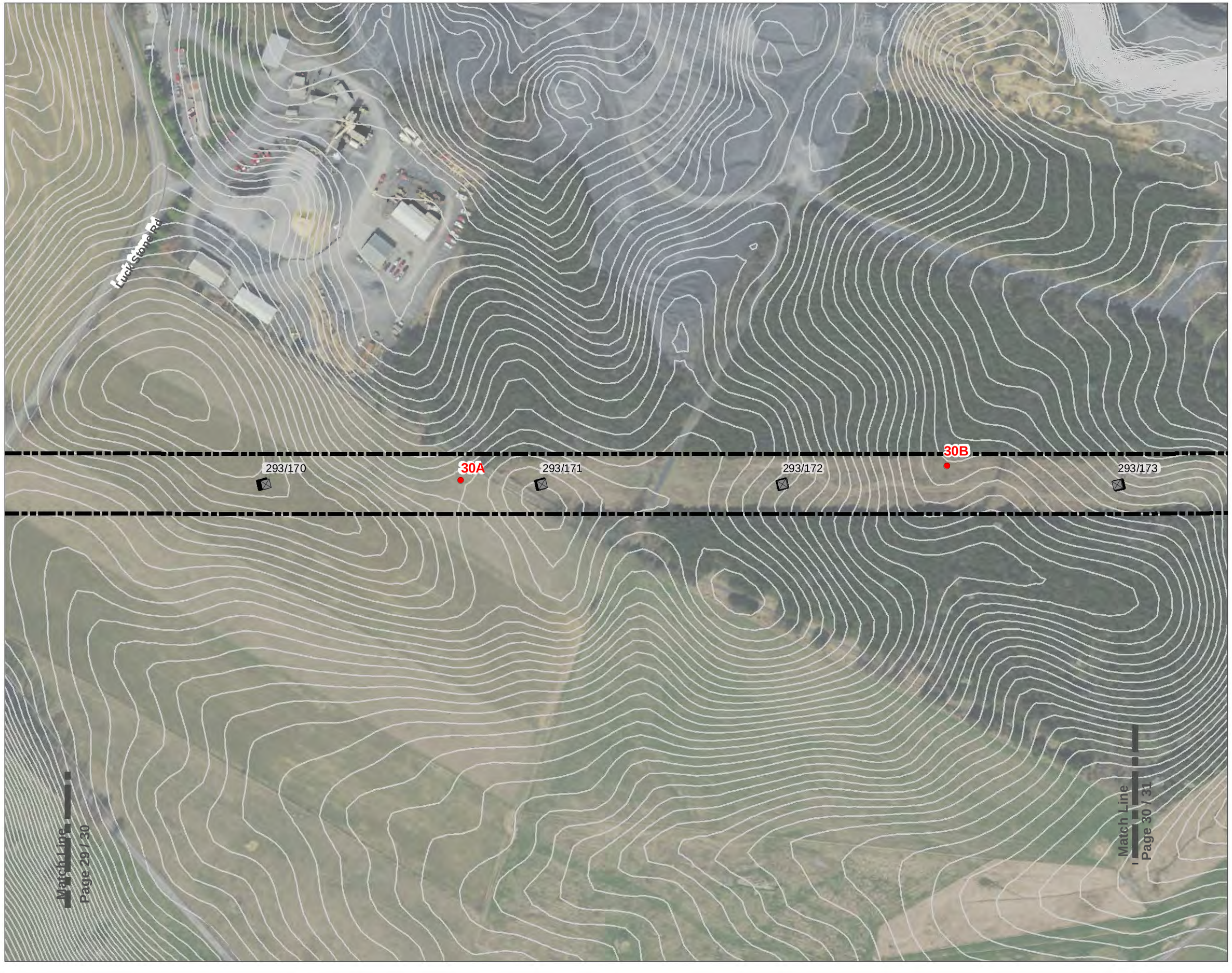

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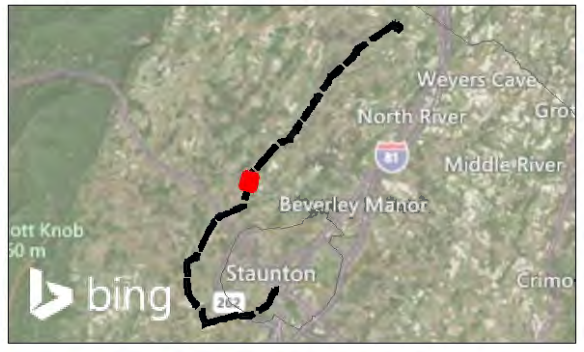

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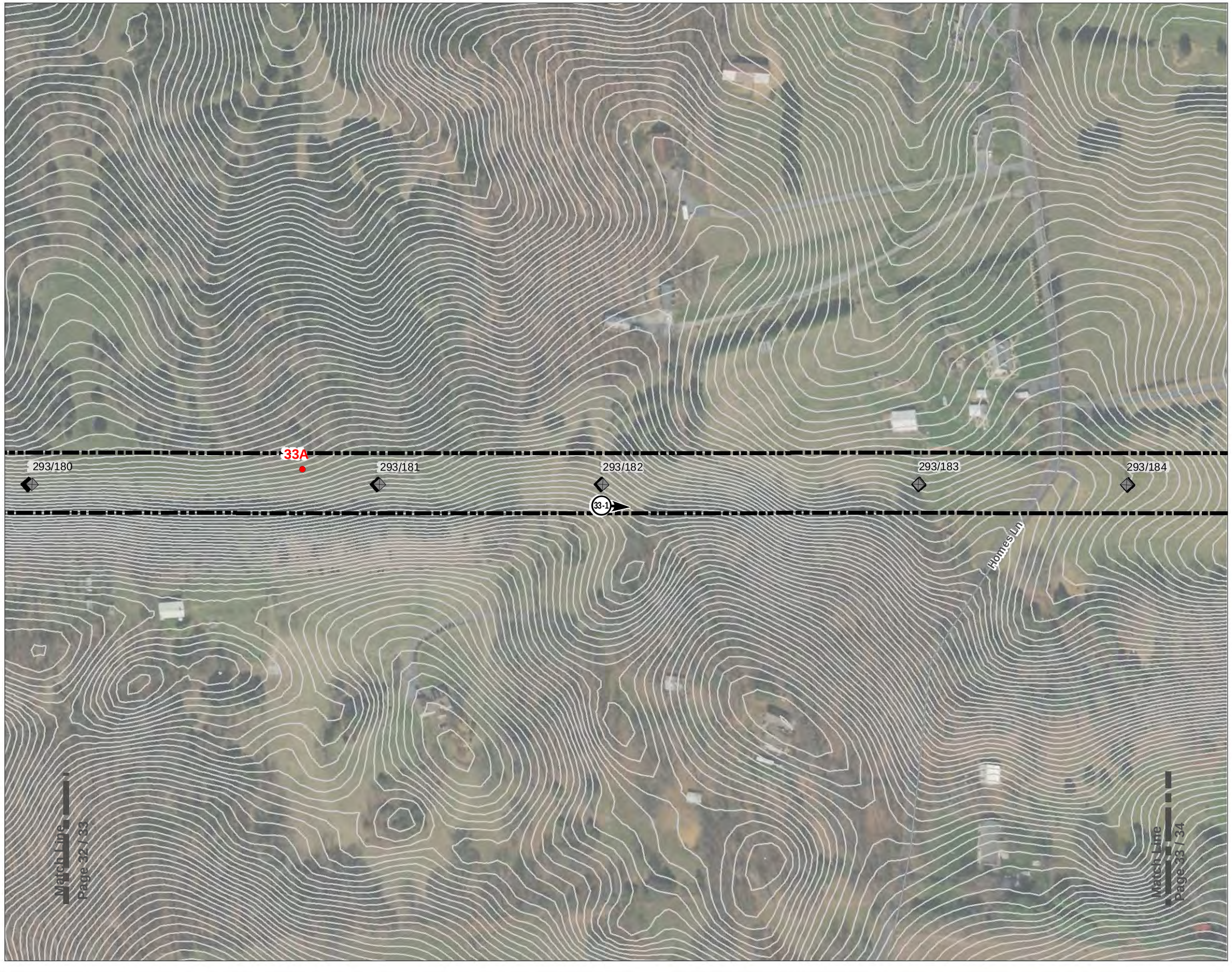

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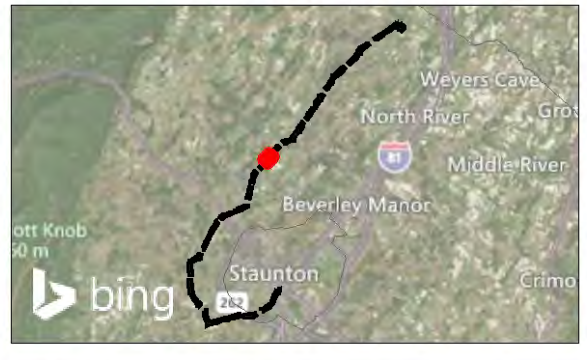

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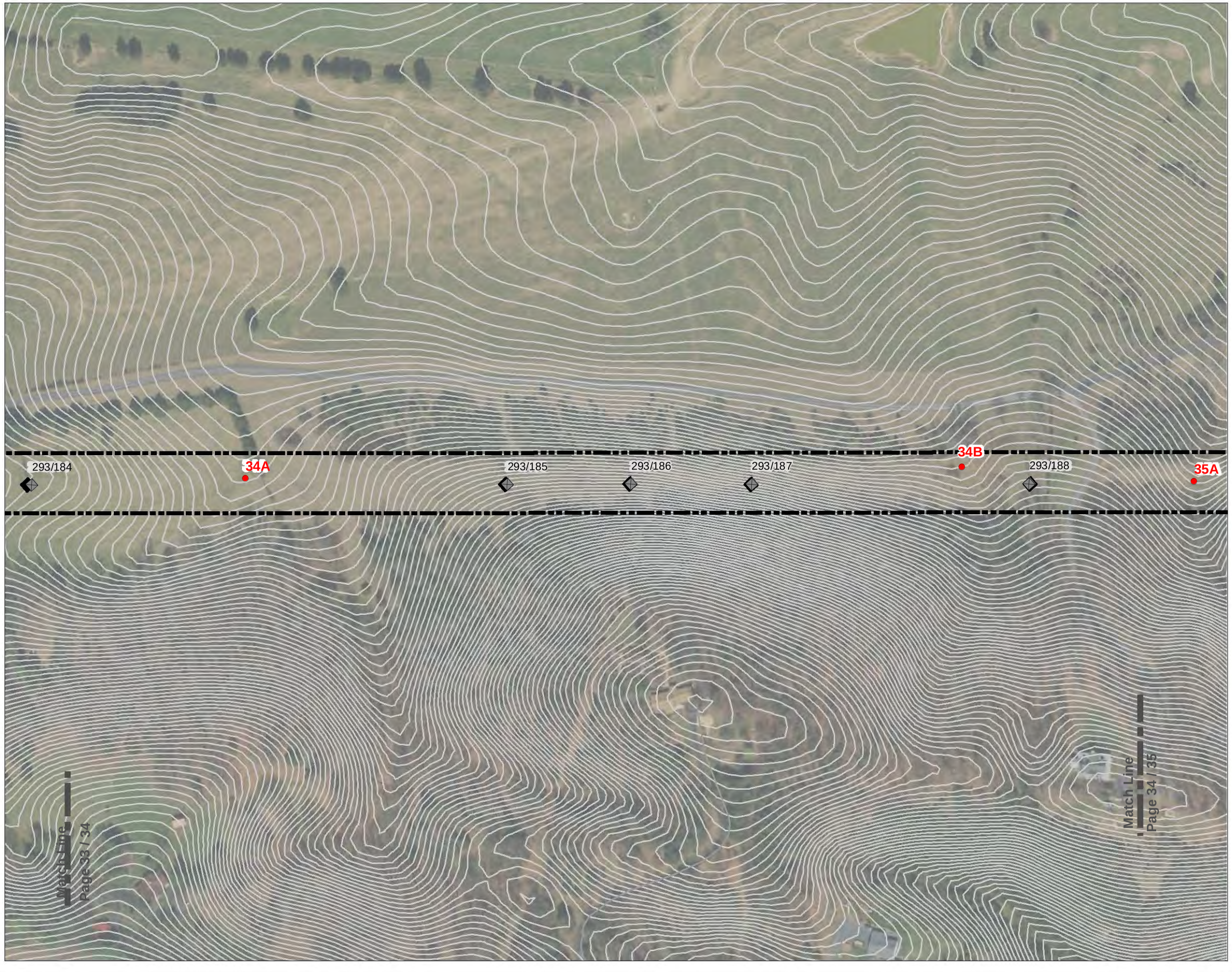

Figure No.

6

Title

Delineation Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by ECL on 2021-05-25
TR by TPS on 2021-07-13
IR by JM on 2021-07-15

0 200 400 Feet

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

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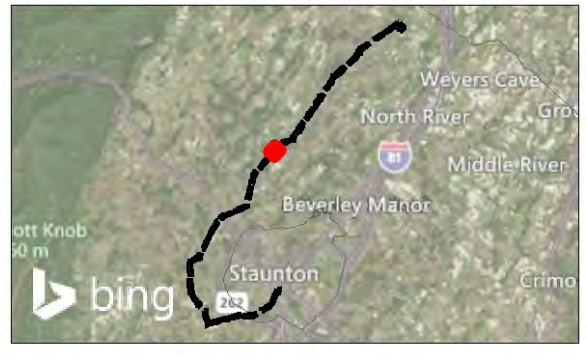

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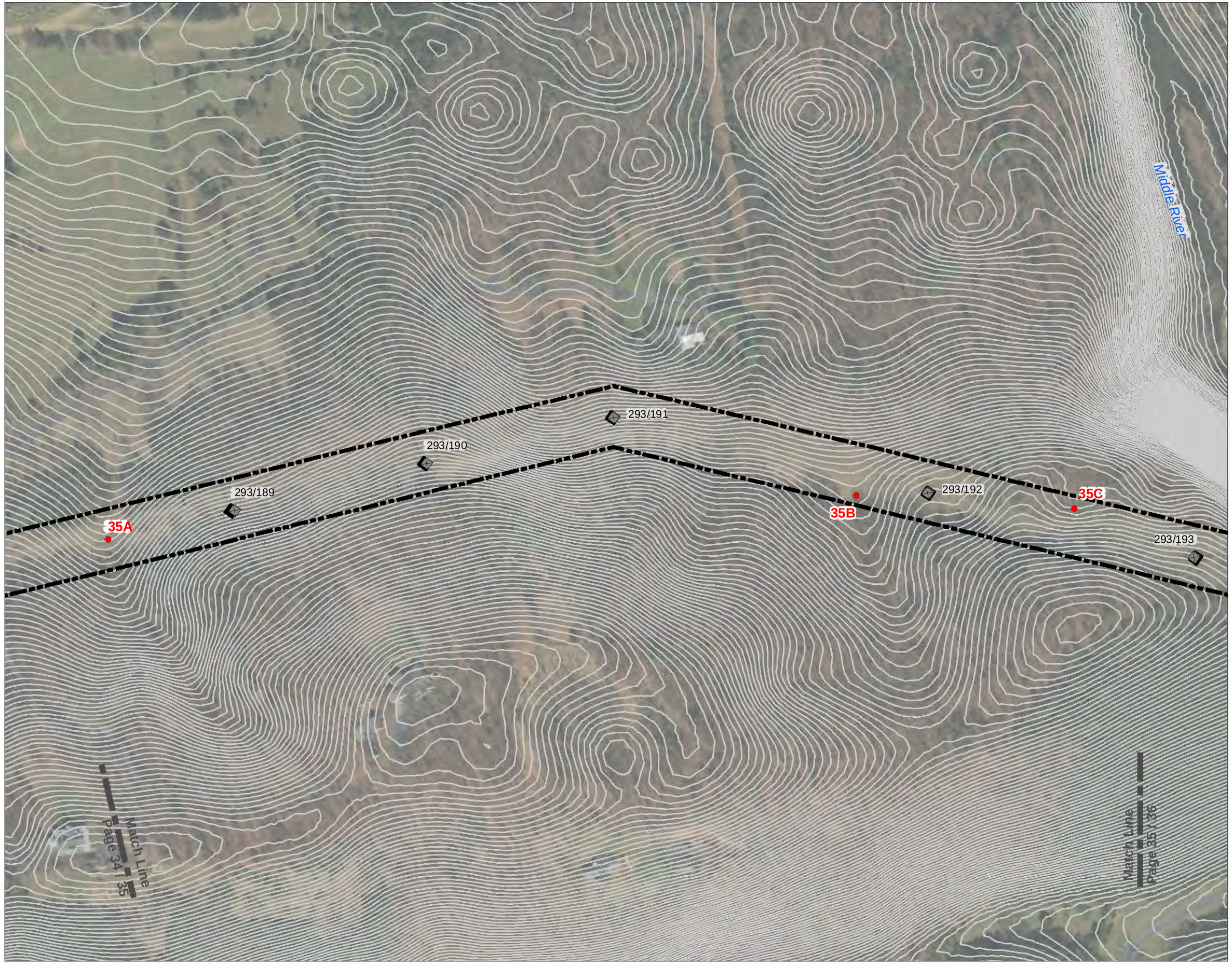

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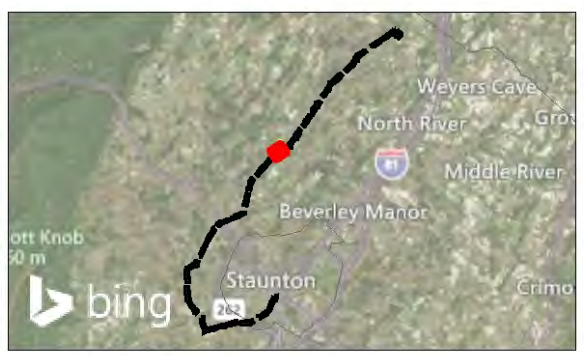

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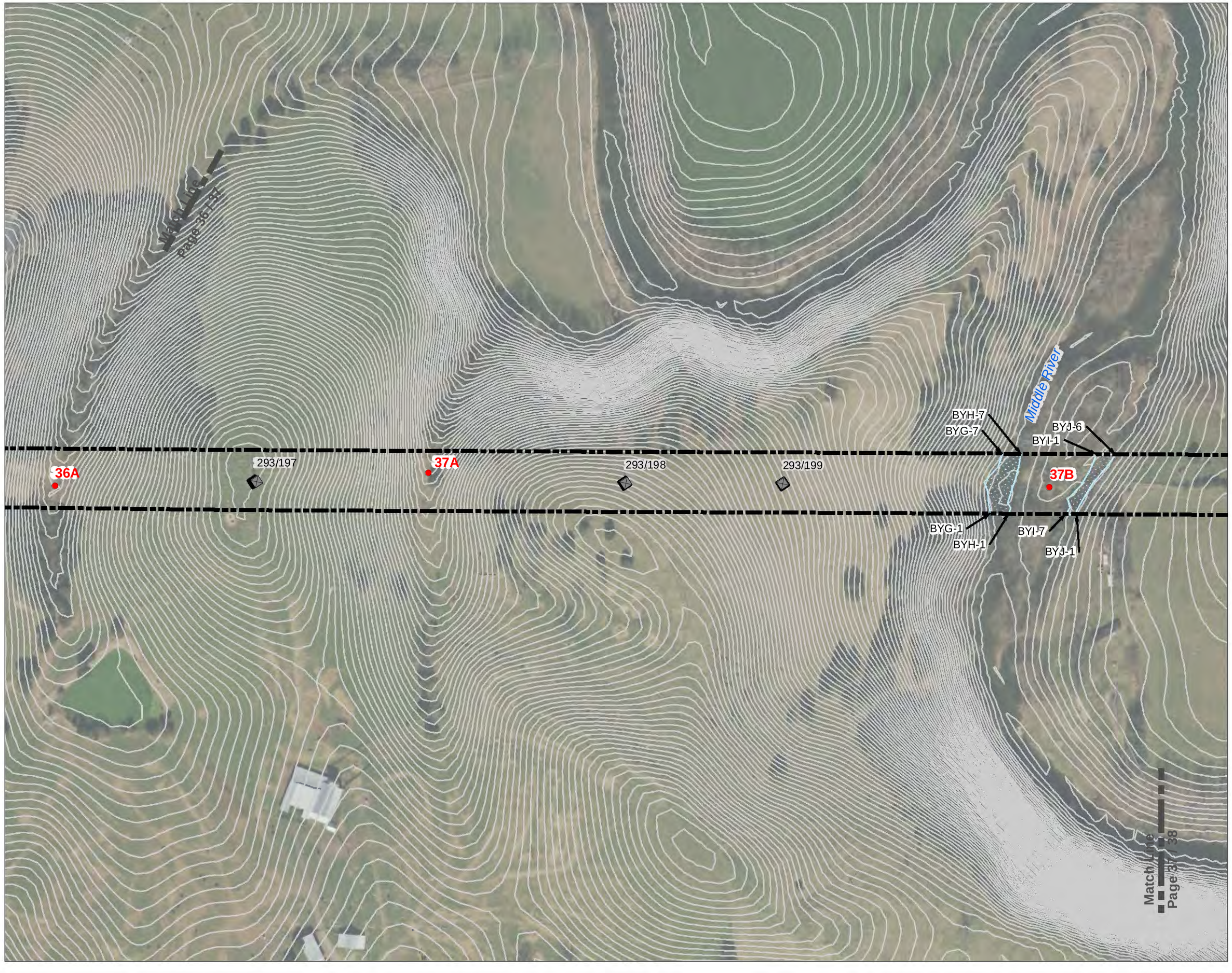

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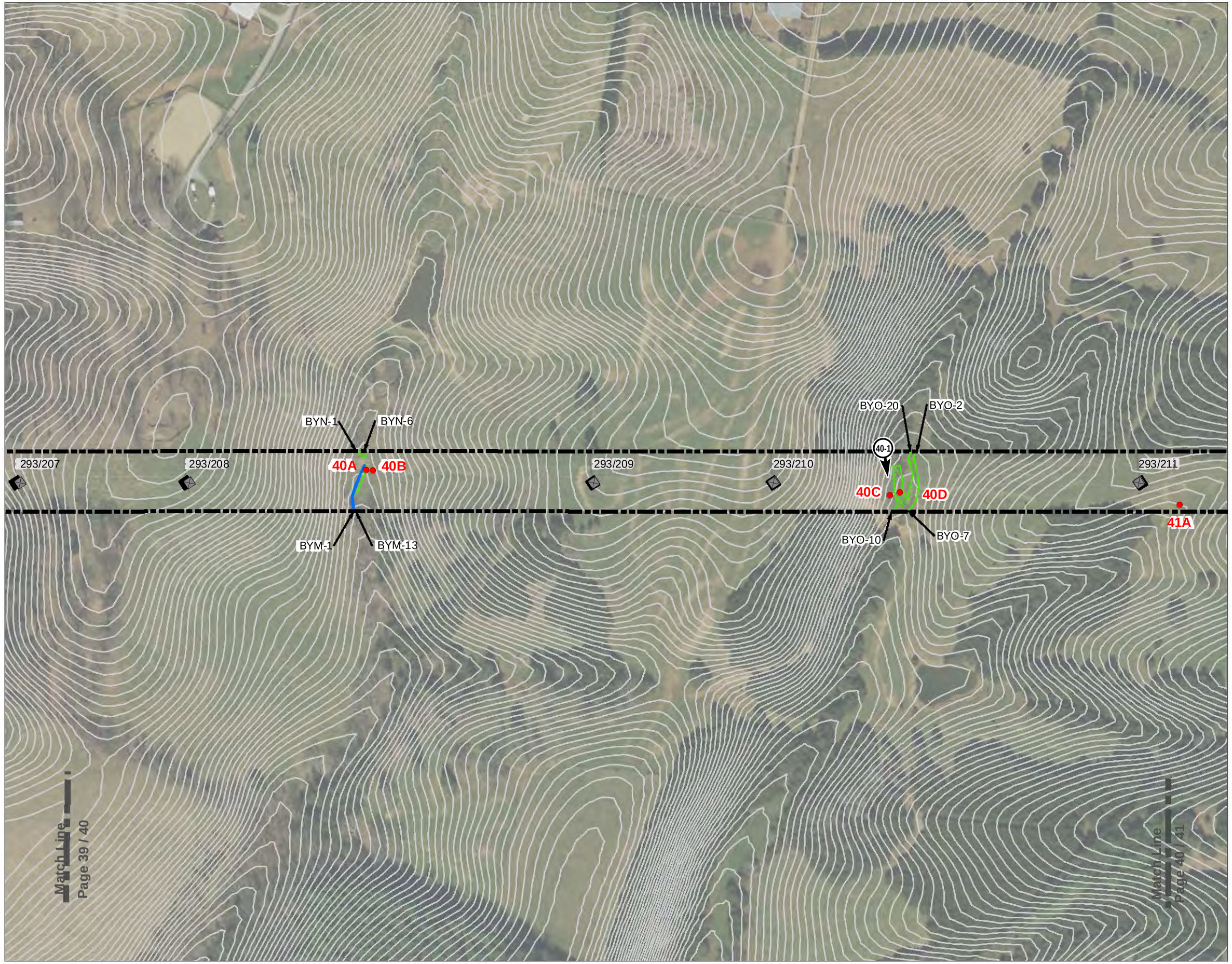

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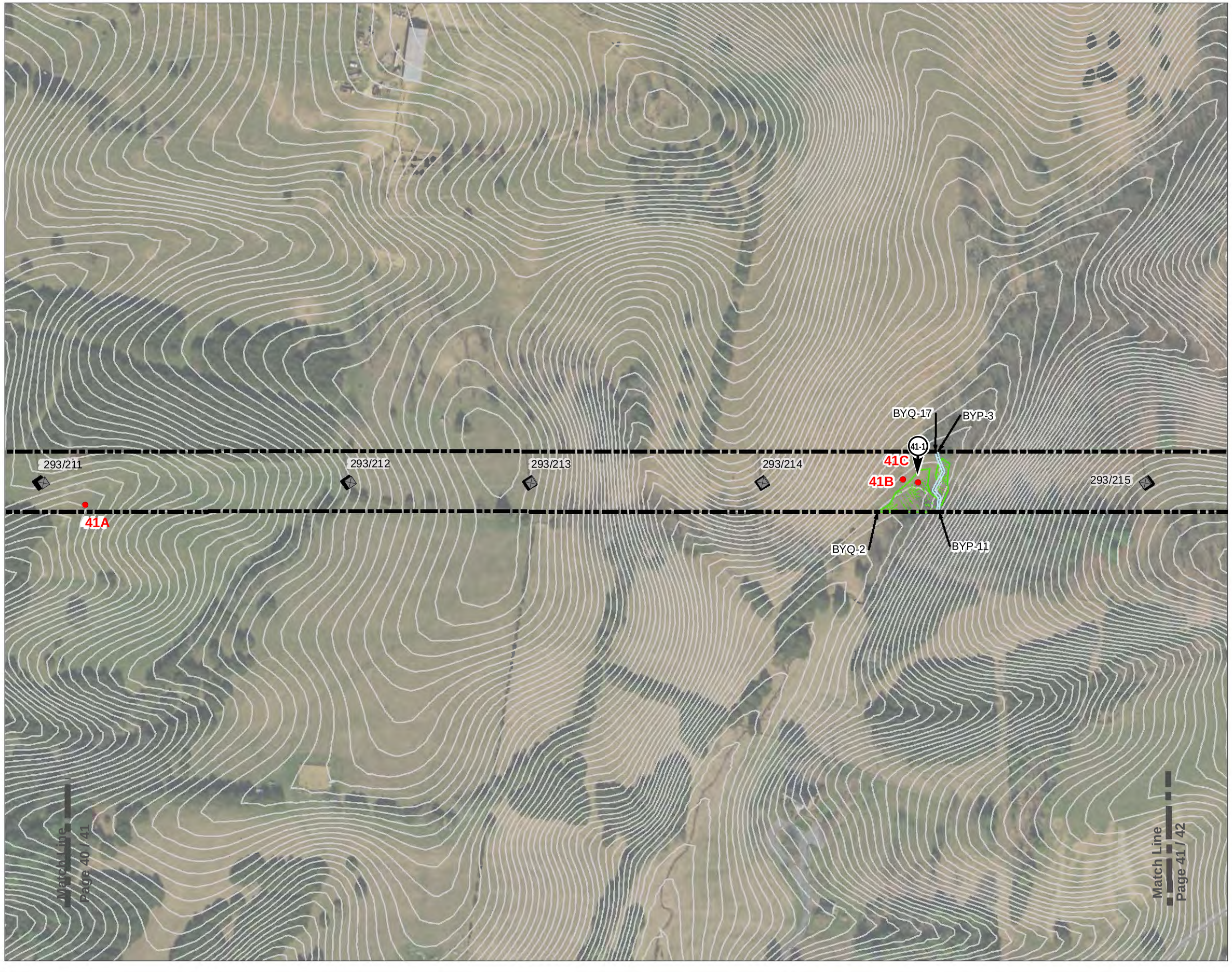

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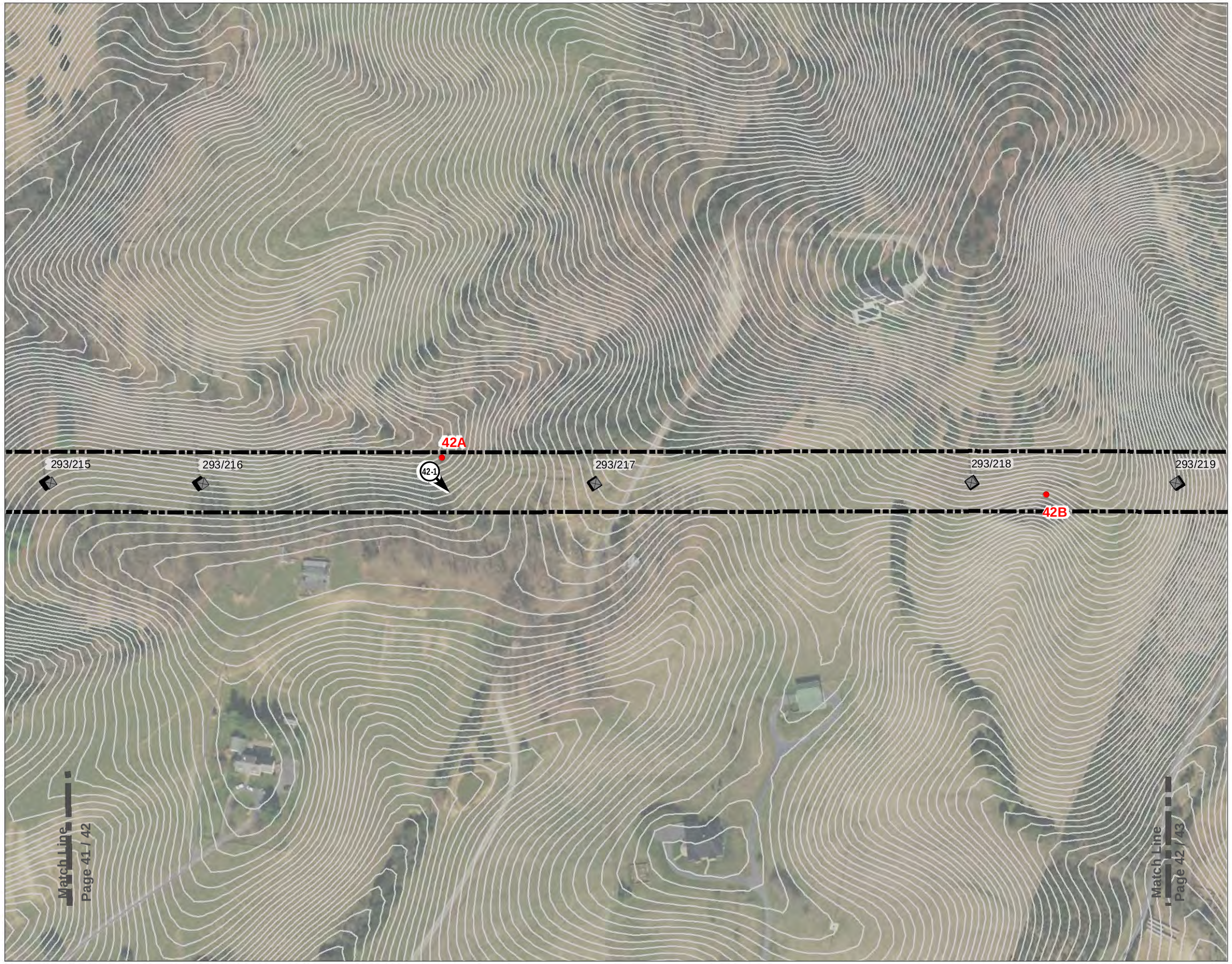

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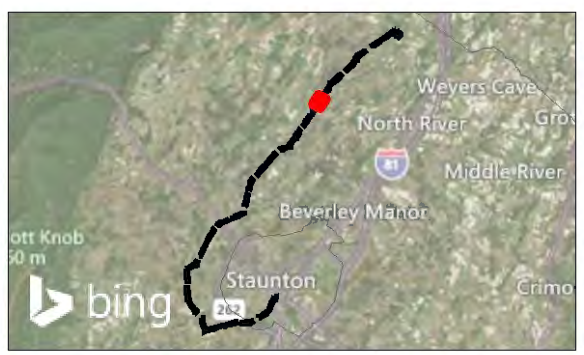

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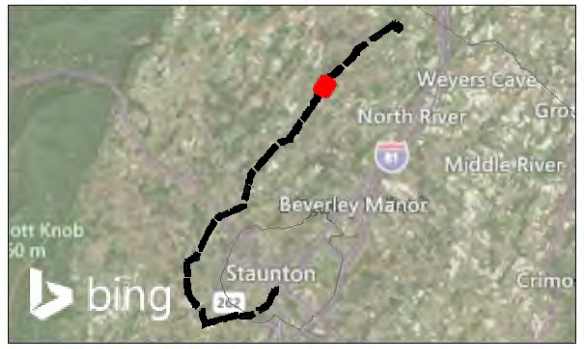

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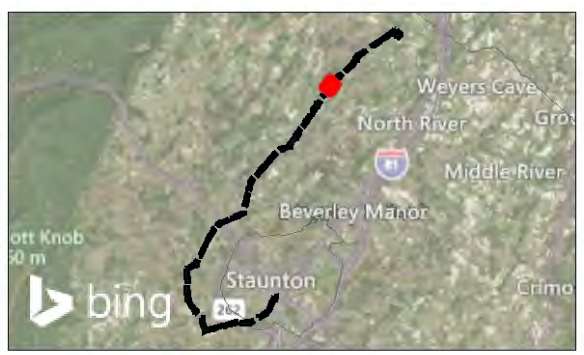

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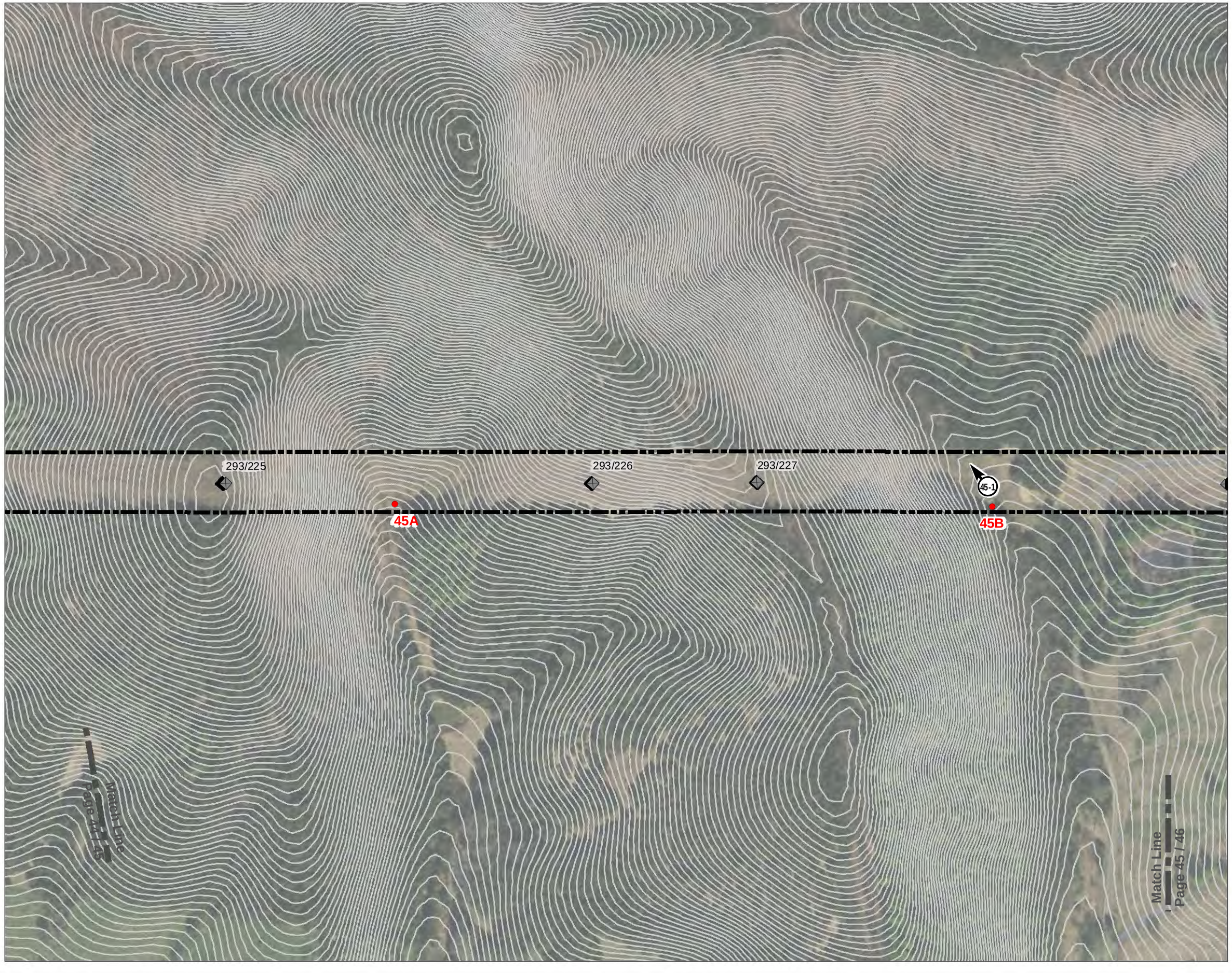

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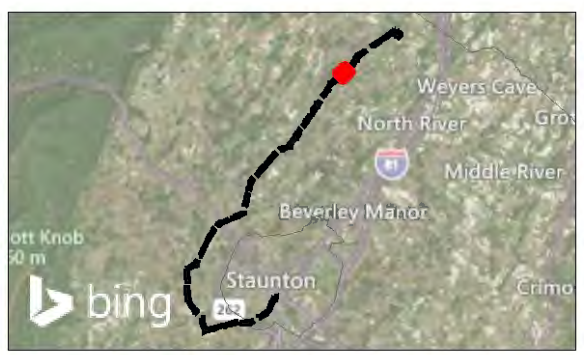

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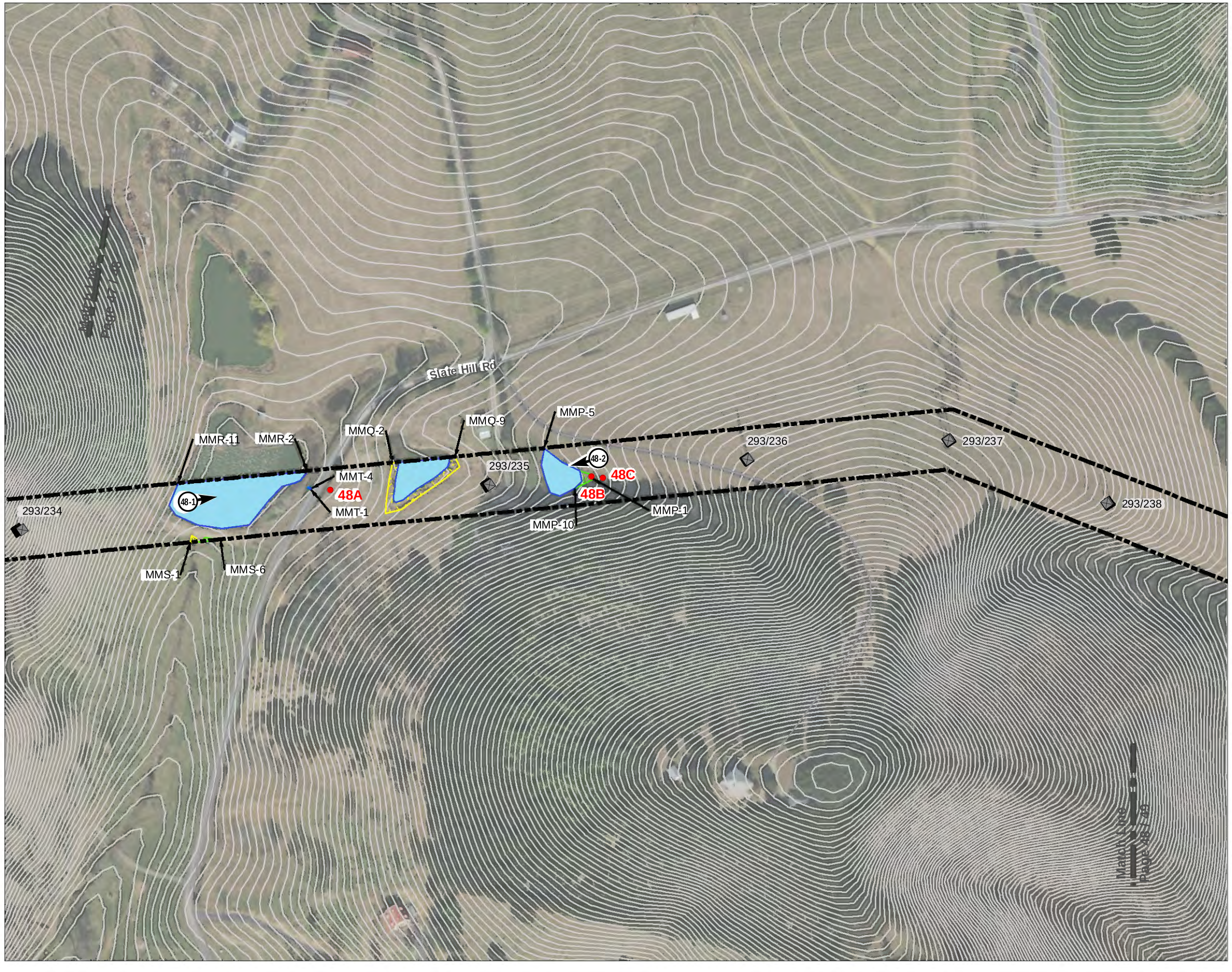

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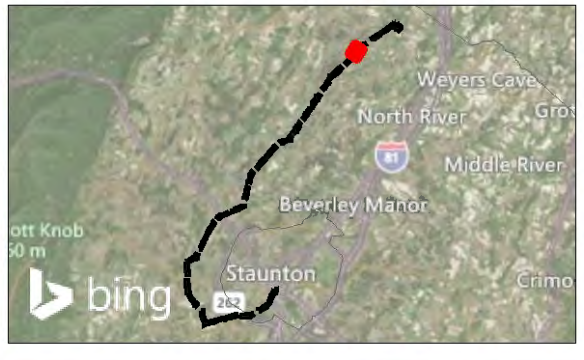

Notes

1. Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet
2. Data Sources: Dominion Energy Virginia, Stantec, ESRI, NADS, National Transportation Atlas Railroads
3. The limits of waters of the U.S., including wetlands, shown on this map have been field located by means of sub-meter capable GPS technology and are for planning purposes only
4. Topography generated from USGS 1/9 arc second digital elevation model raster dataset
5. Orthoimagery © Bing Maps and © VGIN
6. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

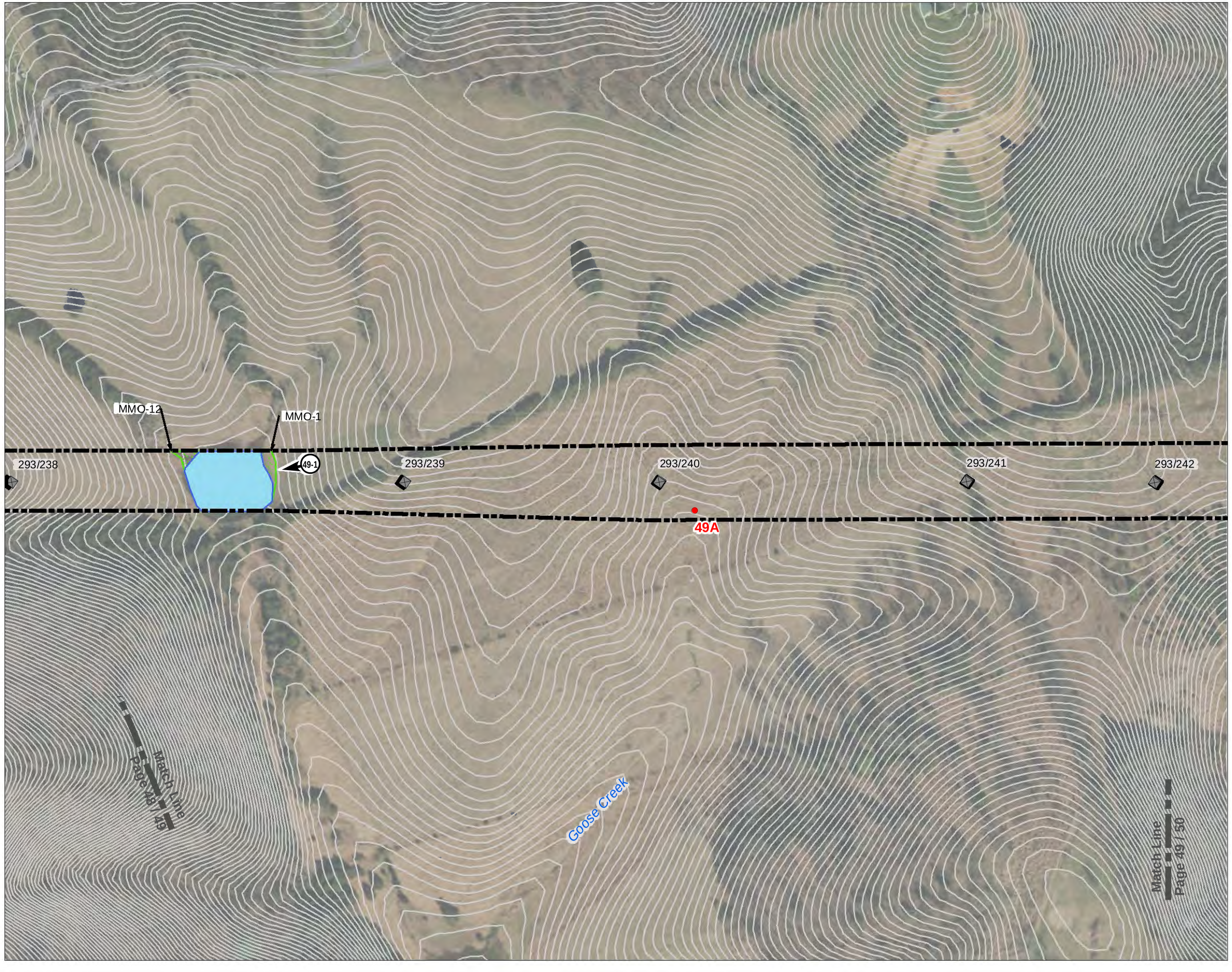

Figure No.

6

Title

Delineation Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by ECL on 2021-05-25
TR by TPS on 2021-07-13
IR by JM on 2021-07-15

0 200 400 Feet

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

- Photo Location
- Flag Location
- Data Point Location
- Existing Structure
- Project Limits
- Approximate Palustrine Scrub-Shrub Wetland Limits (PSS)
- Approximate Palustrine Emergent Wetland Limits (PEM)
- Approximate Upper Perennial Stream Channel Limits (R3)
- Approximate Intermittent Stream Channel Limits (R4)
- Approximate Ephemeral Stream Channel Limits (R6)
- Approximate Open Water Limits
- Railroad
- 2-Foot Contour

Notes

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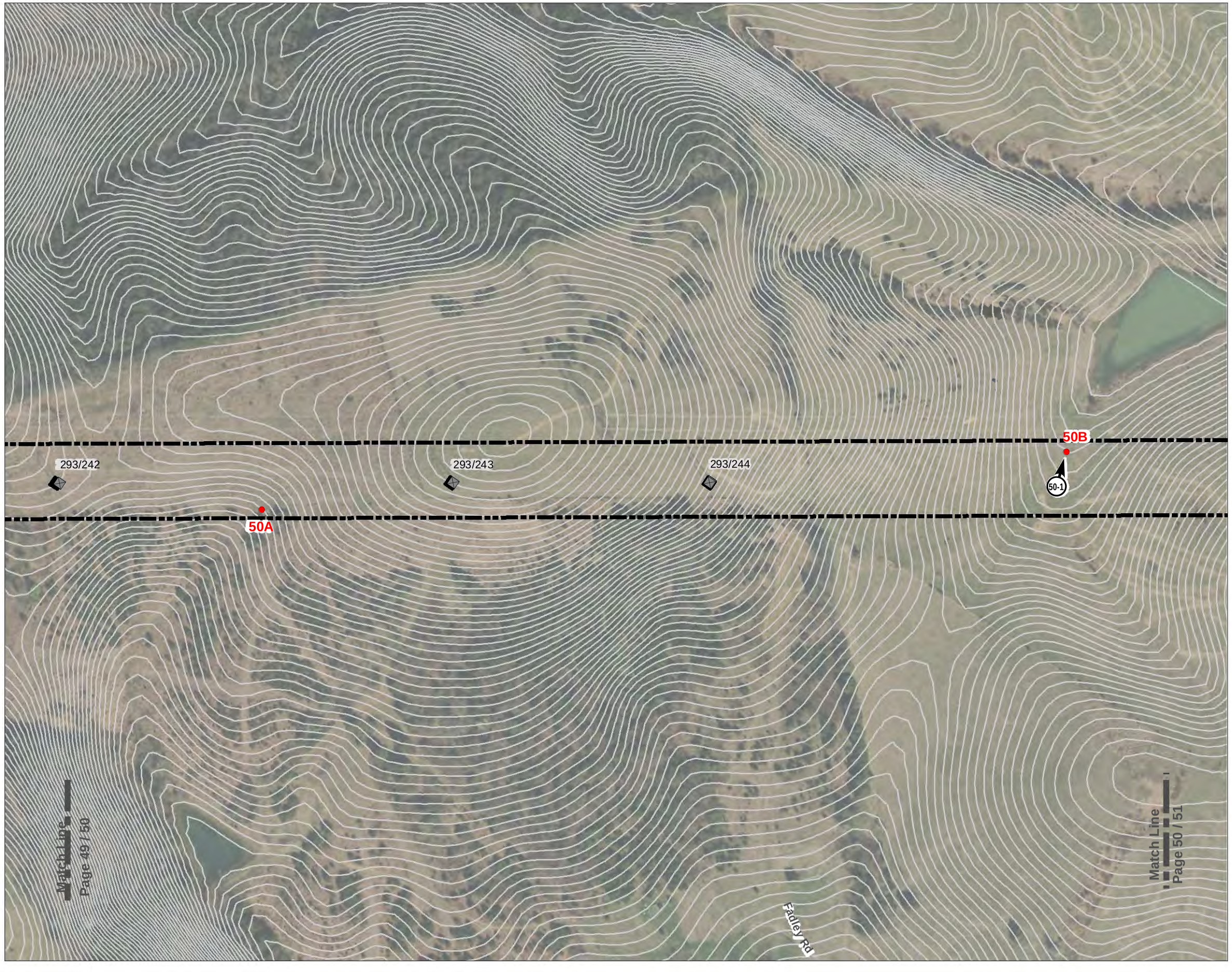

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Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

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- Railroad
- 2-Foot Contour

Notes

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Stantec

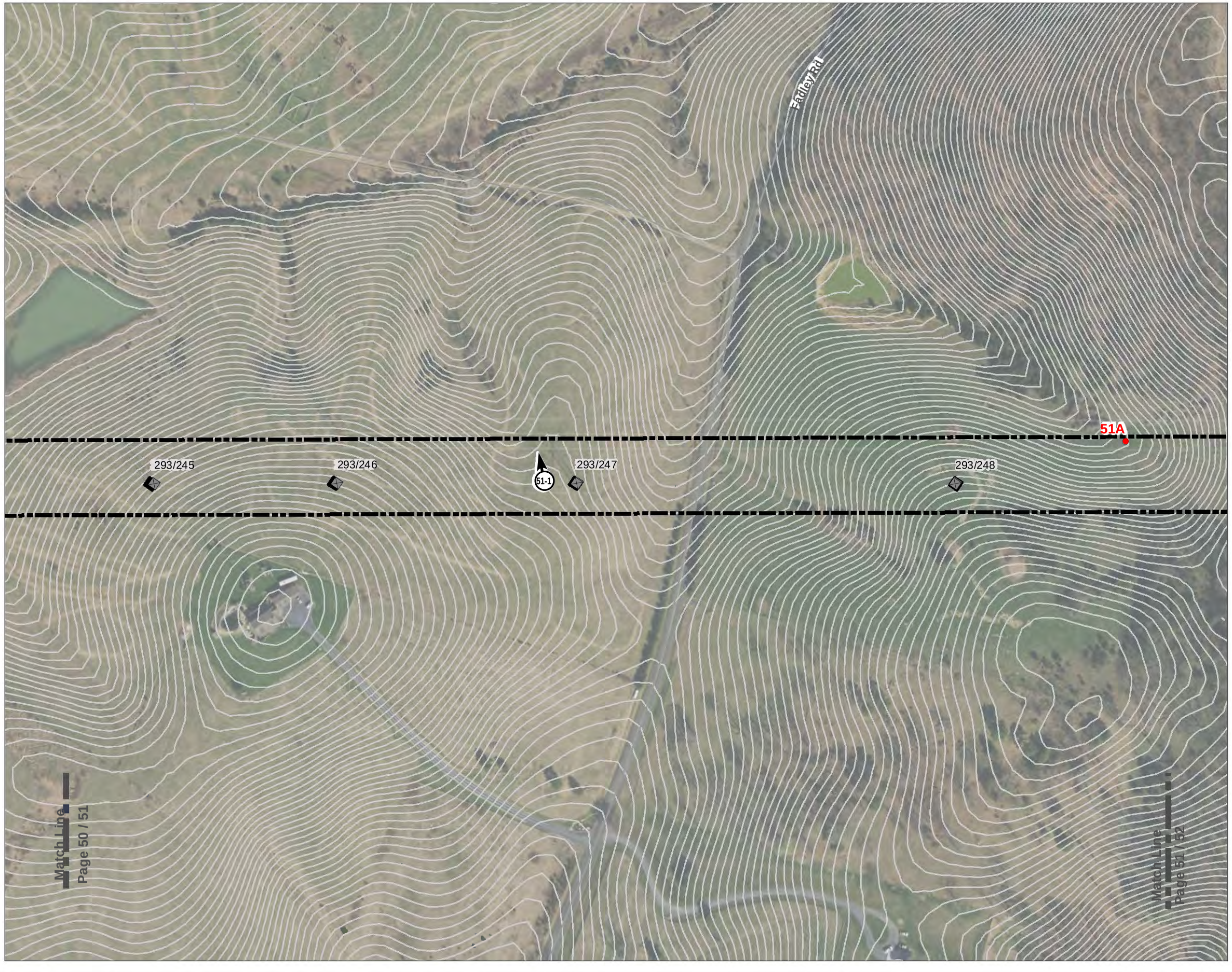

Figure No.

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Title

Delineation Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by ECL on 2021-05-25
TR by TPS on 2021-07-13
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(At original document size of 11x17)
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- Approximate Ephemeral Stream Channel Limits (R6)
- Approximate Open Water Limits
- Railroad
- 2-Foot Contour

Notes

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Stantec

Figure No.

6

Title

Delineation Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by ECL on 2021-05-25
TR by TPS on 2021-07-13
IR by JM on 2021-07-15

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- Railroad
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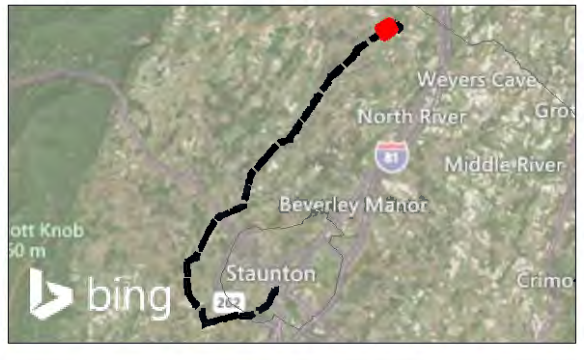

Notes

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Stantec

Figure No.

6

Title

Delineation Map

Client/Project 203401607

Dominion Energy Virginia
Staunton - Valley Transmission Line 293 230 kV Rebuild

Project Location

Augusta County and City of Staunton, Virginia

Prepared by ECL on 2021-05-25
TR by TPS on 2021-07-13
IR by JM on 2021-07-15

N

0 200 400 Feet

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

- Photo Location
- A-1 Flag Location
- 2 Data Point Location
- Existing Structure
- Project Limits
- Approximate Palustrine Scrub-Shrub Wetland Limits (PSS)
- Approximate Palustrine Emergent Wetland Limits (PEM)
- Approximate Upper Perennial Stream Channel Limits (R3)
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- Approximate Open Water Limits
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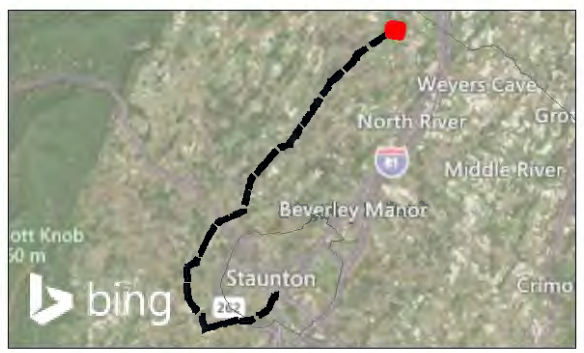

Notes

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6. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

Stantec

APPENDIX A
PRE-APPLICATION AND JURISDICTIONAL DETERMINATION REQUEST FORM

NORFOLK DISTRICT REGULATORY OFFICE PRE-APPLICATION AND/OR JURISDICTIONAL WATERS DETERMINATION REQUEST FORM

This form is used when you want to determine if areas on your property fall under regulatory requirements of the U.S. Army Corps of Engineers (USACE). Please supply the following information and supporting documents described below. This form can be filled out online and/or printed and then mailed, faxed, or e-mailed to the Norfolk District. Submitting this request authorizes the US Army Corps of Engineers to field inspect the property site, if necessary, to help in the determination process. **THIS FORM MUST BE SIGNED BY THE PROPERTY OWNER TO BE CONSIDERED A FORMAL REQUEST.**

The printed form and supporting documents should be mailed to:

U.S. Army Corps of Engineers, Norfolk District
Regulatory Branch
803 Front Street
Norfolk, Virginia 23510-1096

Or faxed to (757) 201-7678, or e-mailed to: CENAO.REG_ROD@usace.army.mil

Additional information on the Regulatory Program is available on our website at:
http://www.nao.usace.army.mil/
Please contact us at 757-201-7652 if you need any assistance with filling out this form.

Location and Information about Property to be subject to a Jurisdictional Determination:

1. Date of Request: **August 2021**

2. Project Name: **Staunton to Valley Transmission Line 293 230 kV Rebuild**

3. City or County where property located: **Augusta County and the City of Staunton, Virginia**

4. Address of property and directions (attach a map of the property location and a copy of the property plat):

The study area originates at the Staunton Substation located east of South Coalter Street, south of Kalorama Street, and north of Commerce Road in the City of Staunton. The ROW generally runs northeast and terminates at the Valley Substation located west of Coffman Road (Route 696), south of Summit Church Road (Route 690), and east of North Fork Naked Creek in Weyers Cave. Access to the study area includes, but is not limited to, Greenville Avenue (Route 11), Middlebrook Avenue (Route 252), Cedar Green Road, Parkersburg Turnpike (Route 254), Morris Mill Road, Churchville Avenue (Route 250), Galena Road, Homes Lane, Spring Hill Road, State Hill Road, and Fadley Road. Location and Vicinity maps are included in the submittal package.

5. Coordinates of property (if known):
Start: **Latitude 38.147705 ° Longitude -79.065615 °**
Terminus: **Latitude 38.313316 ° Longitude -78.970345 °**

6. Size of property in acres: **342.34 acres**

21.55 miles

7. Tax Parcel Number / GPIN (if available):

8. Name of Nearest Waterway: **Lewis Creek, Middle River, and North Fork Naked Creek**

9. Brief Description of Proposed Activity, Reason for Preapplication Request, and/or Reason for Jurisdictional Waters Determination Request: **Environmental Constraints Analysis**

10. Has a wetland delineation/determination been completed by a consultant or the Corps on the property previously? ☐ YES ☐ NO ☒ UNKNOWN,

If yes, please provide the name of the consultant and/or Corps staff and Corps permit number, if available:

Contact Information:

Property Owner Name: **Various – Legal rights of entry are secured for access to the right-of-way (ROW).**
Mailing Address: **The project is within existing transmission line ROW managed and maintained by Virginia Electric and Power Company d/b/a Dominion Energy Virginia (c/o Mark Allen)**
City: State: Zip:
Daytime Telephone:
E-mail Address:

Requestor Name: **Mr. Mark Allen – Virginia Electric and Power Company**
Mailing Address: **10900 Nuckols Road, 4th Floor**
City: State: Zip: **Glen Allen, Virginia 23060**
Daytime Telephone: **(804) 257-4711**
E-mail Address: **mark.allen@dominionenergy.com**

Consultant Name: **Mack McGraw, Stantec Consulting Services Inc.**
Mailing Address: **150 Riverside Parkway, Suite 301**
City: State: Zip: **Fredericksburg, Virginia 22406**
Daytime Telephone: **540-785-5544**
E-mail Address: **mack.mcgraw@stantec.com**

Additionally, if you have any of the following information, please include it with your request: wetland delineation map, other relevant maps, drain tile survey, topographic survey, and/or site photographs.

CERTIFICATION: I am hereby requesting a preapplication consultation or jurisdictional waters and/or wetlands determination from the U.S. Army Corps of Engineers, for the property(ies) I have described herein. I agree to allow the duly authorized representatives of the Norfolk District Corps of Engineers and other regulatory or advisory agencies to enter upon the premises of the project site at reasonable times to evaluate inspect and photograph site conditions. This consent to enter the property is superior to, takes precedence over, and waives any communication to the contrary. For example, if the

property is posted as "no trespassing" this consent specifically supersedes and waives that prohibition and grants permission to enter the property despite such posting. I hereby certify that the information contained in the Request for a Jurisdictional Determination is accurate and complete:

Mark S. Allen

Requestor's Signature

Aug 26, 2021

Date

APPENDIX B
WETLAND DETERMINATION DATA FORMS

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 4A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/1/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS-URBAN LAND COMPLEX

Summary of Findings: **UPLAND WEST OF BESSIE WELLER DRIVE.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAV E
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Digitaria sanguinalis	Herbaceous	FACU	70

Non-Dominant Species	Stratum	IND	%
Rumex crispus	Herbaceous	FAC	10
Schedonorus arundinaceus	Herbaceous	FACU	5
Ranunculus acris	Herbaceous	FAC	5

% Dominant species FAC or wetter: O

Prevalence Index: 3.8

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	7.5YR 5/8	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 5A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/1/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/96 AND 293/97.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Gleditsia triacanthos	Shrub	FAC	10
Dactylis glomerata	Herbaceous	FACU	90
Celastrus scandens	Vine	FACU	15
Parthenocissus quinquefolia	Vine	FACU	5

Non-Dominant Species	Stratum	IND	%
Cirsium discolor	Herbaceous	UPL	10
Rubus phoenicolasius	Herbaceous	FACU	5
Verbesina alternifolia	Herbaceous	FAC	5

% Dominant species FAC or wetter: 25%

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-4	10YR 4/4	100					LOAM
4-20	10YR 5/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 6A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND SWALE ABOVE FLAG MMB-6 BETWEEN TOWERS 293/98 AND 293/99.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Gleditsia triacanthos	Shrub	FAC	20
Juniperus virginiana	Shrub	FACU	5
Chasmanthium latifolium	Herbaceous	FACU	35
Alliaria petiolata	Herbaceous	FACU	25
Lonicera japonica	Vine	FACU	15

Non-Dominant Species	Stratum	IND	%
Galium aparine	Herbaceous	FACU	20
Allium vineale	Herbaceous	FACU	10
Verbesina alternifolia	Herbaceous	FAC	5
Ambrosia artemisiifolia	Herbaceous	FACU	5
Cirsium discolor	Herbaceous	UPL	5
Sisymbrium officinale	Herbaceous	UPL	5
Rumex crispus	Herbaceous	FAC	3
Trifolium repens	Herbaceous	FACU	2

% Dominant species FAC or wetter: 20%

Prevalence Index: 3.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-3	10YR 5/4	100					LOAM
3-20	10YR 6/3	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 8A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/1/2021	Soil Map Unit Name:	FREDERICK-ROCK OUTCROP COMPLEX

Summary of Findings: **PEM WETLAND BELOW FLAG BYE-6.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):

Surface Water:
Water Table:
Saturated soil: 2

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Liquidambar styraciflua	Shrub	FAC	15
Panicum dichotomiflorum	Herbaceous	FACW	25
Arthraxon hispidus	Herbaceous	FAC	15

Non-Dominant Species	Stratum	IND	%
Juncus effusus	Herbaceous	FACW	10
Rumex crispus	Herbaceous	FAC	10
Rubus argutus	Herbaceous	FACU	5

% Dominant species FAC or wetter: 100%

Prevalence Index: 2.6

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%: **X**
Prevalence Index is ≤ 3.0: **X**
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-15	2.5Y 5/1	85	10YR 4/6	15	C	M	LOAM
15-20	10YR 5/2	90	10YR 5/6	10	C	M	LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)

Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 8B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/1/2021	Soil Map Unit Name:	FREDERICK-ROCK OUTCROP COMPLEX

Summary of Findings: **UPLAND ABOVE FLAG BYE-6.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	NONE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Solidago altissima	Herbaceous	FACU	45
Medicago sativa	Herbaceous	UPL	25

Non-Dominant Species	Stratum	IND	%
Plantago major	Herbaceous	FACU	5
Rumex crispus	Herbaceous	FAC	5

% Dominant species FAC or wetter: O

Prevalence Index: 4.3

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 10A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/1/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS

Summary of Findings: **UPLAND SWALE EAST OF TOWER 293/106.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Dactylis glomerata	Herbaceous	FACU	95

Non-Dominant Species	Stratum	IND	%
Trifolium repens	Herbaceous	FACU	10
Schedonorus arundinaceus	Herbaceous	FACU	5
Ranunculus hispidus	Herbaceous	FAC	5
Rumex crispus	Herbaceous	FAC	1

% Dominant species FAC or wetter: O

Prevalence Index: 3.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-4	10YR 5/6	100					SANDY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)		
___	___		

Restrictive Layer (If Observed)
Type: GRAVEL
Depth (inches): 4

Remarks: **SOIL PARAMETER NOT MET.**

GRAVEL REFUSAL AT 4 INCHES.

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 10B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/1/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS

Summary of Findings: **UPLAND SWALE EAST OF TOWER 293/107.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Quercus velutina	Tree	UPL	30
Prunus serotina	Tree	FACU	30
Quercus stellata	Tree	UPL	20
Trifolium repens	Herbaceous	FACU	40
Sisymbrium officinale	Herbaceous	UPL	40
Cirsium discolor	Herbaceous	UPL	30

Non-Dominant Species	Stratum	IND	%
Carya glabra	Tree	FACU	10
Dactylis glomerata	Herbaceous	FACU	25
Rumex crispus	Herbaceous	FAC	10
Festuca rubra	Herbaceous	FACU	10
Ranunculus hispidus	Herbaceous	FAC	5
Symphyotrichum pilosum	Herbaceous	FAC	1

% Dominant species FAC or wetter: O

Prevalence Index: 4.4

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/6	100					CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)		
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 12A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND DEPRESSION NORTH OF TOWER 293/111.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	R5UBH
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	FLAT
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Sisymbrium officinale	Herbaceous	UPL	60
Dactylis glomerata	Herbaceous	FACU	40

Non-Dominant Species	Stratum	IND	%
Schedonorus arundinaceus	Herbaceous	FACU	15
Rumex crispus	Herbaceous	FAC	10
Chenopodium album	Herbaceous	FACU	10
Ambrosia artemisiifolia	Herbaceous	FACU	5
Capsella bursa-pastoris	Herbaceous	FACU	2
Carex vulpinoidea	Herbaceous	OBL	1

% Dominant species FAC or wetter: O

Prevalence Index: 4.3

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-8	10YR 5/4	100					CLAY LOAM
8-20	10YR 6/4	100					CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 12B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND AT TOWER 293/112.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Gleditsia triacanthos	Shrub	FAC	5
Elymus virginicus	Herbaceous	FACW	35
Medicago sativa	Herbaceous	UPL	30
Lonicera japonica	Vine	FACU	15

Non-Dominant Species	Stratum	IND	%
Cirsium arvense	Herbaceous	FACU	10
Solanum carolinense	Herbaceous	FACU	5

% Dominant species FAC or wetter: 50%

Prevalence Index: 3.6

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 13A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/116 AND 293/117.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	X Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Salix nigra	Sapling	OBL	10
Robinia pseudoacacia	Shrub	FACU	10
Rosa multiflora	Shrub	FACU	5
Rumex crispus	Herbaceous	FAC	25
Impatiens capensis	Herbaceous	FACW	15
Lonicera japonica	Vine	FACU	5

Non-Dominant Species	Stratum	IND	%
Rubus argutus	Herbaceous	FACU	10
Medicago sativa	Herbaceous	UPL	10
Galium aparine	Herbaceous	FACU	10
Allium canadense	Herbaceous	FACU	3

% Dominant species FAC or wetter: 50%

Prevalence Index: 3.3

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-3	10YR 4/6	100					LOAM
3-20	10YR 5/8	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 14A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/117 AND 293/118.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-3

Hydrology Parameter:

Primary Indicators:		***Secondary Indicators:***
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Medicago sativa	Herbaceous	UPL	90

Non-Dominant Species	Stratum	IND	%
Rumex crispus	Herbaceous	FAC	5
Solanum carolinense	Herbaceous	FACU	3

% Dominant species FAC or wetter: O

Prevalence Index: 4.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 6/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 17A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/126 AND 293/127.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	R4SBC
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	2-5

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Rubus argutus	Herbaceous	FACU	20
Solidago rugosa	Herbaceous	FAC	15
Schedonorus arundinaceus	Herbaceous	FACU	15
Trifolium repens	Herbaceous	FACU	15
Toxicodendron radicans	Vine	FAC	5

Non-Dominant Species	Stratum	IND	%
Verbesina alternifolia	Herbaceous	FAC	10
Phytolacca americana	Herbaceous	FACU	10
Dactylis glomerata	Herbaceous	FACU	10
Achillea millefolium	Herbaceous	FACU	10
Potentilla simplex	Herbaceous	FACU	10
Fragaria virginiana	Herbaceous	FACU	5
Stellaria graminea	Herbaceous	FACU	2
Dichanthelium clandestinum	Herbaceous	FAC	1

% Dominant species FAC or wetter: 40%
Prevalence Index: 3.8
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST
Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-12	10YR 5/4	100					GRAVELLY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)		
___	___		

Restrictive Layer (If Observed)
Type: GRAVEL
Depth (inches): 12

Remarks: **SOIL PARAMETER NOT MET.**
GRAVEL REFUSAL AT 12 INCHES.

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 17B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND SOUTH OF TOWER 293/128.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	TOE OF SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Diospyros virginiana	Shrub	FAC	3
Rubus argutus	Herbaceous	FACU	15
Cirsium arvense	Herbaceous	FACU	15
Lonicera japonica	Vine	FACU	5

Non-Dominant Species	Stratum	IND	%
Rumex crispus	Herbaceous	FAC	10
Verbascum thapsus	Herbaceous	FACU	10
Solidago altissima	Herbaceous	FACU	5

% Dominant species FAC or wetter: 25%
Prevalence Index: 3.8
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST
Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 18A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/130 AND 293/131.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Schedonorus arundinaceus	Herbaceous	FACU	65

Non-Dominant Species	Stratum	IND	%
Asclepias syriaca	Herbaceous	FACU	10
Solidago altissima	Herbaceous	FACU	5
Rubus argutus	Herbaceous	FACU	3
Lamium purpureum	Herbaceous	UPL	3

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-2	10YR 5/4	100					LOAM
2-20	10YR 6/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 18B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS

Summary of Findings: **UPLAND SWALE NORTH OF TOWER 293/131.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	3-5

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Juglans nigra	Shrub	FACU	5
Rubus argutus	Herbaceous	FACU	30
Microstegium vimineum	Herbaceous	FAC	20
Lonicera japonica	Vine	FACU	25
Toxicodendron radicans	Vine	FAC	10

Non-Dominant Species	Stratum	IND	%
Verbesina alternifolia	Herbaceous	FAC	15
Cirsium discolor	Herbaceous	UPL	10
Rosa multiflora	Herbaceous	FACU	5
Schedonorus arundinaceus	Herbaceous	FACU	5
Dichanthelium clandestinum	Herbaceous	FAC	5
Symphyotrichum pilosum	Herbaceous	FAC	3
Galium aparine	Herbaceous	FACU	1
Verbascum thapsus	Herbaceous	FACU	1
Securigera varia	Vine	UPL	1
Parthenocissus quinquefolia	Vine	FACU	5

% Dominant species FAC or wetter: 40%

Prevalence Index: 3.7

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-10	10YR 4/6	100					CLAY LOAM
10-20	10YR 5/4	100					CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 19A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/133 AND 293/134.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	2-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Elaeagnus umbellata	Shrub	UPL	5
Acer negundo	Shrub	FAC	2
Galium pedemontanum	Herbaceous	UPL	35
Rubus argutus	Herbaceous	FACU	20
Schedonorus arundinaceus	Herbaceous	FACU	15
Anthoxanthum odoratum	Herbaceous	FACU	15
Lonicera japonica	Vine	FACU	25
Toxicodendron radicans	Vine	FAC	20

Non-Dominant Species	Stratum	IND	%
Rosa multiflora	Herbaceous	FACU	10
Achillea millefolium	Herbaceous	FACU	10
Fragaria virginiana	Herbaceous	FACU	10
Cirsium discolor	Herbaceous	UPL	5
Dactylis glomerata	Herbaceous	FACU	5
Solidago altissima	Herbaceous	FACU	5
Geranium carolinianum	Herbaceous	UPL	3
Alliaria petiolata	Herbaceous	FACU	3
Sisymbrium officinale	Herbaceous	UPL	1
Parthenocissus quinquefolia	Vine	FACU	5

% Dominant species FAC or wetter: 25%
Prevalence Index: 4.1
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST
Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 4/6	100					CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 20A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	EDOM SILT LOAM

Summary of Findings: **UPLAND ABOVE FLAG BYF-7.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	NONE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Medicago sativa	Herbaceous	UPL	90

Non-Dominant Species	Stratum	IND	%
Trifolium repens	Herbaceous	FACU	10
Solanum carolinense	Herbaceous	FACU	3
Rubus argutus	Herbaceous	FACU	3

% Dominant species FAC or wetter: O

Prevalence Index: 4.8

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 20B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	TIMBERVILLE SILT LOAM

Summary of Findings: **PEM WETLAND BELOW FLAG BYF-7.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil: 1

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Carex vulpinoidea	Herbaceous	OBL	25
Typha latifolia	Herbaceous	OBL	20

Non-Dominant Species	Stratum	IND	%
Salix nigra	Shrub	OBL	3
Poa trivialis	Herbaceous	FACW	10
Eleocharis obtusa	Herbaceous	OBL	10
Carex lurida	Herbaceous	OBL	5
Rumex crispus	Herbaceous	FAC	5

% Dominant species FAC or wetter: 100%

Prevalence Index: 1.6

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation: X
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	Color (Moist)	%	Color (Moist)	%	Type	Loc	Texture
0-5	5Y 5/1	85	2.5Y 4/6	15	C	M	CLAY LOAM
5-20	2.5Y 6/1	85	2.5Y 4/6	15	C	M	CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 20C

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/2/2021	Soil Map Unit Name:	TIMBERVILLE SILT LOAM

Summary of Findings: **UPLAND BETWEEN TOWERS 293/137 AND 293/138.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	NONE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	FLAT
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Robinia pseudoacacia	Shrub	FACU	10
Solidago altissima	Herbaceous	FACU	30
Rubus allegheniensis	Herbaceous	FACU	15
Lonicera japonica	Vine	FACU	15
Campsis radicans	Vine	FAC	10

Non-Dominant Species	Stratum	IND	%
Erechtites hieraciifolius	Herbaceous	UPL	10
Rumex crispus	Herbaceous	FAC	5

% Dominant species FAC or wetter: 20%

Prevalence Index: 3.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 21A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND BETWEEN TOWERS 293/139 AND 293/140.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Trifolium repens	Herbaceous	FACU	30
Digitaria sanguinalis	Herbaceous	FACU	25
Tridens flavus	Herbaceous	FACU	20

Non-Dominant Species	Stratum	IND	%
Ranunculus acris	Herbaceous	FAC	10
Solanum carolinense	Herbaceous	FACU	5
Schedonorus arundinaceus	Herbaceous	FACU	5

% Dominant species FAC or wetter: O

Prevalence Index: 3.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/8	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 21B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILTY CLAY LOAMS

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/140 AND 293/141.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Tridens flavus	Herbaceous	FACU	25
Schedonorus arundinaceus	Herbaceous	FACU	20
Digitaria sanguinalis	Herbaceous	FACU	15

Non-Dominant Species	Stratum	IND	%
Ranunculus acris	Herbaceous	FAC	3

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	Color (Moist)	%	Color (Moist)	%	Type	Loc	Texture
0-20	10YR 5/8	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 22A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	EDOM SILT LOAM

Summary of Findings: **UPLAND SOUTH OF TOWER 293/142.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-3

Hydrology Parameter:

Primary Indicators:		***Secondary Indicators:***
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Medicago sativa	Herbaceous	UPL	45

Non-Dominant Species	Stratum	IND	%
Taraxacum officinale	Herbaceous	FACU	10
Rumex crispus	Herbaceous	FAC	5
Plantago major	Herbaceous	FACU	5

% Dominant species FAC or wetter: O

Prevalence Index: 4.6

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 22B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	EDOM SILT LOAM

Summary of Findings: **UPLAND BETWEEN TOWERS 293/143 AND 293/144.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		***Secondary Indicators:***
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Digitaria sanguinalis	Herbaceous	FACU	55

Non-Dominant Species	Stratum	IND	%
Taraxacum officinale	Herbaceous	FACU	10
Trifolium repens	Herbaceous	FACU	5

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 24A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	CHILHOWIE SILTY CLAY LOAM

Summary of Findings: **UPLAND DRAINAGEWAY IN CATTLE PASTURE SOUTH OF TOWER 293/148.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	R4SBC
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Trifolium pratense	Herbaceous	FACU	25
Agrostis capillaris	Herbaceous	FAC	20

Non-Dominant Species	Stratum	IND	%
Dactylis glomerata	Herbaceous	FACU	15
Ranunculus hispidus	Herbaceous	FAC	10
Taraxacum officinale	Herbaceous	FACU	2
Carex vulpinoidea	Herbaceous	OBL	2
Persicaria pensylvanica	Herbaceous	FACW	2
Cirsium discolor	Herbaceous	UPL	1
Sisymbrium officinale	Herbaceous	UPL	1

% Dominant species FAC or wetter: 50%

Prevalence Index: 3.5

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-12	10YR 5/3	94	5YR 4/6	5	C	M	LOAM
			10YR 2/1	1	D	M	
12-20	10YR 5/4	98	10YR 5/6	1	C	M	LOAM
			10YR 2/2	1	D	M	

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 24B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	ROCK OUTCROP-FREDERICK COMPLEX

Summary of Findings: **UPLAND SWALE IN CATTLE PASTURE SOUTH OF TOWER 293/150.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Agrostis capillaris	Herbaceous	FAC	70
Dactylis glomerata	Herbaceous	FACU	40

Non-Dominant Species	Stratum	IND	%
Ranunculus hispidus	Herbaceous	FAC	5
Taraxacum officinale	Herbaceous	FACU	3

% Dominant species FAC or wetter: 50%

Prevalence Index: 3.4

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-4	10YR 4/3	100					LOAM
4-12	7.5YR 5/6	90	10YR 5/3	10	D	M	LOAM
12-20	10YR 6/2	90	7.5YR 5/6	10	C	M	CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 25A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	CHAGRIN LOAM

Summary of Findings: **PEM WETLAND BELOW FLAG MMH-2 EAST OF TOWER 293/150A.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	R4SBC
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	X Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table: 24
Saturated soil: O

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Nasturtium officinale	Herbaceous	OBL	70
Juncus effusus	Herbaceous	FACW	50

Non-Dominant Species	Stratum	IND	%
Eleocharis obtusa	Herbaceous	OBL	30
Carex vulpinoidea	Herbaceous	OBL	10
Veronica anagallis-aquatica	Herbaceous	OBL	5

% Dominant species FAC or wetter: 100%
Prevalence Index: 1.3
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST ***Calculated using all species present.***

Rapid Test for Hydrophytic Vegetation: X
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	2.5Y 5/2	93	2.5Y 2.5/1	5	D	M	CLAY LOAM
			10YR 4/6	2	C	PL	

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 25B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	CHAGRIN LOAM

Summary of Findings: **UPLAND ABOVE FLAG MMH-2 EAST OF TOWER 293/150A.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	NONE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Trifolium pratense	Herbaceous	FACU	50
Ranunculus hispidus	Herbaceous	FAC	20

Non-Dominant Species	Stratum	IND	%
Agrostis capillaris	Herbaceous	FAC	10
Taraxacum officinale	Herbaceous	FACU	5
Cirsium discolor	Herbaceous	UPL	3
Ambrosia artemisiifolia	Herbaceous	FACU	2
Plantago major	Herbaceous	FACU	1

% Dominant species FAC or wetter: 50%

Prevalence Index: 3.7

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/4	88	7.5YR 4/6	10	C	M	LOAM
			2.5Y 4/2	2	D	M	

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 26A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/154 AND 293/155.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	3-5

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Symphoricarpos orbiculatus	Shrub	FACU	10
Verbesina alternifolia	Herbaceous	FAC	50
Schedonorus arundinaceus	Herbaceous	FACU	40
Lonicera japonica	Vine	FACU	10

Non-Dominant Species	Stratum	IND	%
Anthoxanthum odoratum	Herbaceous	FACU	10
Solidago rugosa	Herbaceous	FAC	10
Dactylis glomerata	Herbaceous	FACU	5
Leucanthemum vulgare	Herbaceous	UPL	5
Achillea millefolium	Herbaceous	FACU	5
Verbascum thapsus	Herbaceous	FACU	5
Cirsium discolor	Herbaceous	UPL	5
Trifolium dubium	Herbaceous	UPL	5
Rosa multiflora	Herbaceous	FACU	2
Rubus argutus	Herbaceous	FACU	2
Hieracium caespitosum	Herbaceous	UPL	1
Parthenocissus quinquefolia	Vine	FACU	2

% Dominant species FAC or wetter: 25%

Prevalence Index: 3.7

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-6	10YR 5/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type: GRAVEL
Depth (inches): 6

Remarks: **SOIL PARAMETER NOT MET.**

GRAVEL REFUSAL AT 6 INCHES.

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 27A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	FREDERICK-CHISTIAN GRAVELLY SILT LOAMS

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/158 AND 293/159.**

Hydrophytic Vegetation is Present:		Normal Circumstances: X	NWI Classification: R4SBC
Hydric Soils are Present:		Disturbed Parameters (see Remarks):	Local Relief: CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):	Landform: DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):	Slope %: 1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Juglans nigra	Shrub	FACU	10
Elaeagnus umbellata	Shrub	UPL	5
Schedonorus arundinaceus	Herbaceous	FACU	50
Trifolium dubium	Herbaceous	UPL	20

Non-Dominant Species	Stratum	IND	%
Cirsium discolor	Herbaceous	UPL	10
Trifolium pratense	Herbaceous	FACU	10
Galium pedemontanum	Herbaceous	UPL	10
Rubus argutus	Herbaceous	FACU	10
Anthoxanthum odoratum	Herbaceous	FACU	5
Verbascum thapsus	Herbaceous	FACU	5
Allium vineale	Herbaceous	FACU	1
Verbesina alternifolia	Herbaceous	FAC	1
Lepidium virginicum	Herbaceous	FACU	1
Vitis vulpina	Vine	FAC	2

% Dominant species FAC or wetter: O
Prevalence Index: 4.3
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST
Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

MOWED AND MAINTAINED.

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-6	10YR 5/4	100					CLAY LOAM
6-20	10YR 5/6	95	2.5Y 6/3	5	D	M	CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 28A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND BETWEEN TOWERS 293/162 AND 293/163.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	R4SBC
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Tridens flavus	Herbaceous	FACU	70
Trifolium pratense	Herbaceous	FACU	30

Non-Dominant Species	Stratum	IND	%
Rumex crispus	Herbaceous	FAC	10

% Dominant species FAC or wetter: O

Prevalence Index: 3.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	Color (Moist)	%	Color (Moist)	%	Type	Loc	Texture
0-20	10YR 6/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 28B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND BETWEEN TOWERS 293/163 AND 293/164.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	X Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Pyrus calleryana	Sapling	FACU	5
Poa trivialis	Herbaceous	FACW	25
Mentha arvensis	Herbaceous	FACW	25
Tradescantia fluminensis	Herbaceous	FAC	20

Non-Dominant Species	Stratum	IND	%
Cirsium arvense	Herbaceous	FACU	15
Rumex crispus	Herbaceous	FAC	5

% Dominant species FAC or wetter: 75%

Prevalence Index: 2.7

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 4/4	100					SANDY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 29A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	EDOM SILT LOAM

Summary of Findings: **UPLAND NORTH OF TOWER 293/169.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-3

Hydrology Parameter:

Primary Indicators:		***Secondary Indicators:***
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Medicago sativa	Herbaceous	UPL	65

Non-Dominant Species	Stratum	IND	%
Trifolium pratense	Herbaceous	FACU	10
Plantago major	Herbaceous	FACU	5

% Dominant species FAC or wetter: O

Prevalence Index: 4.8

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	2.5Y 7/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 30A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	EDOM SILT LOAM

Summary of Findings: **UPLAND BETWEEN TOWERS 293170 AND 293/171.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		***Secondary Indicators:***
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Schedonorus arundinaceus	Herbaceous	FACU	50

Non-Dominant Species	Stratum	IND	%
Trifolium repens	Herbaceous	FACU	5
Taraxacum officinale	Herbaceous	FACU	5

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 4/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 30B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	EDOM-ROCK OUTCROP COMPLEX

Summary of Findings: **UPLAND BETWEEN TOWERS 293/172 AND 293/173.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Gleditsia triacanthos	Sapling	FAC	35
Rosa multiflora	Shrub	FACU	10
Gleditsia triacanthos	Shrub	FAC	5
Medicago sativa	Herbaceous	UPL	40
Alliaria petiolata	Herbaceous	FACU	15
Lonicera japonica	Vine	FACU	5

Non-Dominant Species	Stratum	IND	%
Cirsium arvense	Herbaceous	FACU	10
Solanum carolinense	Herbaceous	FACU	5

% Dominant species FAC or wetter: 33%

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-2	10YR 4/4	100					LOAM
2-20	10YR 6/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)		
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 31A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/3/2021	Soil Map Unit Name:	EDOM SILT LOAM

Summary of Findings: **UPLAND SWALE NORTHEAST OF TOWER 293/174.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Elaeagnus umbellata	Shrub	UPL	25
Schedonorus arundinaceus	Herbaceous	FACU	70

Non-Dominant Species	Stratum	IND	%
Cirsium discolor	Herbaceous	UPL	20
Rumex crispus	Herbaceous	FAC	15
Leucanthemum vulgare	Herbaceous	UPL	5
Dactylis glomerata	Herbaceous	FACU	5
Ambrosia artemisiifolia	Herbaceous	FACU	5
Lepidium virginicum	Herbaceous	FACU	5
Anthoxanthum odoratum	Herbaceous	FACU	5

% Dominant species FAC or wetter: O

Prevalence Index: 4.2

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-4	10YR 4/3	100					LOAM
4-20	10YR 6/2	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 31B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	ROCK OUTCROP-FREDERICK COMPLEX

Summary of Findings: **PEM WETLAND BELOW FLAG MMK-3 AND BETWEEN TOWERS 293/176 AND 293/177.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	R4SBC
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	X Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Symphoricarpos orbiculatus	Shrub	FACU	5
Scirpus pendulus	Herbaceous	OBL	25
Juncus effusus	Herbaceous	FACW	10
Glyceria striata	Herbaceous	OBL	10
Veronica anagallis-aquatica	Herbaceous	OBL	10
Verbesina alternifolia	Herbaceous	FAC	10

Non-Dominant Species	Stratum	IND	%
Carex vulpinoidea	Herbaceous	OBL	5
Scirpus atrovirens	Herbaceous	OBL	5
Arisaema triphyllum	Herbaceous	FACW	5
Rubus argutus	Herbaceous	FACU	3
Rosa multiflora	Herbaceous	FACU	2
Impatiens capensis	Herbaceous	FACW	2
Cirsium discolor	Herbaceous	UPL	1

% Dominant species FAC or wetter: 83%

Prevalence Index: 1.8

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-10	10YR 4/1	95	10YR 3/6	5	C	M	CLAY LOAM
10-15	10YR 4/4	95	5YR 4/4	5	C	M	GRAVELLY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type: GRAVEL
Depth (inches): 15

Remarks: **SOIL PARAMETER MET.**

GRAVEL REFUSAL AT 15 INCHES.

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 31C

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	ROCK OUTCROP-FREDERICK COMPLEX

Summary of Findings: **UPLAND ABOVE FLAG MMK-3 BETWEEN TOWERS 293/176 AND 293/177.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	3-6

Hydrology Parameter:

Primary Indicators:		***Secondary Indicators:***
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Symphoricarpos orbiculatus	Shrub	FACU	3
Elaeagnus umbellata	Shrub	UPL	2
Cirsium discolor	Herbaceous	UPL	30
Verbesina alternifolia	Herbaceous	FAC	25
Lonicera japonica	Vine	FACU	5

Non-Dominant Species	Stratum	IND	%
Cercis canadensis	Shrub	FACU	1
Verbascum thapsus	Herbaceous	FACU	15
Anthoxanthum odoratum	Herbaceous	FACU	10
Rubus argutus	Herbaceous	FACU	10
Dactylis glomerata	Herbaceous	FACU	5
Leucanthemum vulgare	Herbaceous	UPL	5
Galium aparine	Herbaceous	FACU	5
Ambrosia artemisiifolia	Herbaceous	FACU	2

% Dominant species FAC or wetter: 20%

Prevalence Index: 4.1

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-8	10YR 4/4	100					LOAM
8-20	7.5YR 4/6	100					CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 32A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	ROCK OUTCROP-FREDERICK COMPLEX

Summary of Findings: **UPLAND SWALE NORTHEAST OF TOWER 293/177.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	3-6

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Ligustrum sinense	Shrub	FACU	20
Juniperus virginiana	Shrub	FACU	5
Verbesina alternifolia	Herbaceous	FAC	40
Rubus phoenicolasius	Herbaceous	FACU	25
Lonicera japonica	Vine	FACU	5

Non-Dominant Species	Stratum	IND	%
Asclepias syriaca	Herbaceous	FACU	15
Rosa multiflora	Herbaceous	FACU	10
Danthonia compressa	Herbaceous	FACU	10
Galium aparine	Herbaceous	FACU	10
Anthoxanthum odoratum	Herbaceous	FACU	5
Symphyotrichum pilosum	Herbaceous	FAC	5
Cirsium discolor	Herbaceous	UPL	5
Leucanthemum vulgare	Herbaceous	UPL	1

% Dominant species FAC or wetter: 20%

Prevalence Index: 3.8

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-3	10YR 4/3	100					LOAM
3-20	10YR 6/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 32B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	ROCK OUTCROP-FREDERICK COMPLEX

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/178 AND 293/179.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	R4SBS
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Schedonorus arundinaceus	Herbaceous	FACU	80

Non-Dominant Species	Stratum	IND	%
Dactylis glomerata	Herbaceous	FACU	10
Trifolium pratense	Herbaceous	FACU	10
Solanum carolinense	Herbaceous	FACU	5
Plantago major	Herbaceous	FACU	3

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 4/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (if Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 33A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND BETWEEN TOWERS 293/180 AND 293/181.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	NONE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	4-6

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
Surface Water (A1)	Water Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	True Aquatic Plants (B14)	Drainage Patterns (B10)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)	Thin Muck Surface (C7)	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)	Other	Geomorphic Position (D2)
		Shallow Aquitard (D3)
		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Water Depths (inches):

Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Elaeagnus umbellata	Shrub	UPL	15
Schedonorus arundinaceus	Herbaceous	FACU	55
Verbesina alternifolia	Herbaceous	FAC	15

Non-Dominant Species	Stratum	IND	%
Trifolium repens	Herbaceous	FACU	5

% Dominant species FAC or wetter: 33%

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-10	10YR 5/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
Histosol (A1)	Sandy Mucky Mineral (S1)	Depleted Matrix (F3)	2cm Muck (A10)
Histic Epipedon (A2)	Sandy Gleyed Matrix (S4)	Redox Dark Surface (F6)	Coast Prairie Redox (A16)
Black Histic (A3)	Sandy Redox (S5)	Depleted Dark Surface (F7)	Piedmont Floodplain Soils (F19)
Hydrogen Sulfide (A4)	Stripped Matrix (S6)	Redox Depressions (F8)	Red Parent Material (TF2)
Stratified Layers (A5)	Dark Surface (S7)	Iron-Manganese Masses (F12)	Very Shallow Dark Surface (TF12)
2 cm Muck (A10)	Polyvalue Below Surface (S8)	Umbric Surface (F13)	Other
Depleted Below Dark Surface (A11)	Thin Dark Surface (S9)	Piedmont Floodplain Soils (F19)	
Thick Dark Surface (A12)	Loamy Gleyed Matrix (F2)		

Restrictive Layer (If Observed)

Type: COMPACTION
Depth (inches): >10

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 34A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	ENDCAV-ROCK OUTCROP COMPLEX

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/184 AND 293/185.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-3

Hydrology Parameter:

Primary Indicators:		***Secondary Indicators:***
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Schedonorus arundinaceus	Herbaceous	FACU	95

Non-Dominant Species	Stratum	IND	%
Verbesina alternifolia	Herbaceous	FAC	3
Solanum carolinense	Herbaceous	FACU	3

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 6/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 34B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND BETWEEN TOWERS 293/187 AND 293/188.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		***Secondary Indicators:***
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Rosa multiflora	Shrub	FACU	15
Rubus argutus	Herbaceous	FACU	45

Non-Dominant Species	Stratum	IND	%
Rumex crispus	Herbaceous	FAC	10
Achillea millefolium	Herbaceous	FACU	10
Verbascum thapsus	Herbaceous	FACU	10
Schedonorus arundinaceus	Herbaceous	FACU	5
Verbesina alternifolia	Herbaceous	FAC	3

% Dominant species FAC or wetter: O

Prevalence Index: 3.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 6/3	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 35A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND BETWEEN TOWERS 293/188 AND 293/189.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		***Secondary Indicators:***
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Asclepias syriaca	Herbaceous	FACU	20
Dactylis glomerata	Herbaceous	FACU	15
Trifolium pratense	Herbaceous	FACU	10
Trifolium repens	Herbaceous	FACU	10
Verbesina alternifolia	Herbaceous	FAC	10

Non-Dominant Species	Stratum	IND	%
Achillea millefolium	Herbaceous	FACU	5
Galium aparine	Herbaceous	FACU	3

% Dominant species FAC or wetter: 20%

Prevalence Index: 3.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-3	10YR 3/4	100					LOAM
3-20	10YR 4/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 35B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS

Summary of Findings: **UPLAND SWALE WEST OF TOWER 293/192.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Morus rubra	Shrub	FACU	5
Verbesina alternifolia	Herbaceous	FAC	40
Poa pratensis	Herbaceous	FACU	30

Non-Dominant Species	Stratum	IND	%
Asclepias syriaca	Herbaceous	FACU	20
Dactylis glomerata	Herbaceous	FACU	10
Dichanthelium clandestinum	Herbaceous	FAC	10
Alliaria petiolata	Herbaceous	FACU	5
Danthonia compressa	Herbaceous	FACU	5
Leucanthemum vulgare	Herbaceous	UPL	1

% Dominant species FAC or wetter: 33%

Prevalence Index: 3.6

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-1	10YR 3/2	100					LOAM
1-20	10YR 4/4	95	10YR 5/6	5	C	M	CLAY

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 35C

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	ROCK OUTCROP-FREDERICK COMPLEX

Summary of Findings: **UPLAND DEPRESSION BETWEEN TOWERS 293/192 AND 293/193.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	TOE OF SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	3-6

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Stellaria media	Herbaceous	UPL	40
Danthonia compressa	Herbaceous	FACU	30
Microstegium vimineum	Herbaceous	FAC	20

Non-Dominant Species	Stratum	IND	%
Verbesina alternifolia	Herbaceous	FAC	15
Cirsium discolor	Herbaceous	UPL	10
Alliaria petiolata	Herbaceous	FACU	10
Rosa multiflora	Herbaceous	FACU	10
Verbascum thapsus	Herbaceous	FACU	5
Ambrosia artemisiifolia	Herbaceous	FACU	5
Rubus argutus	Herbaceous	FACU	5
Leonurus cardiaca	Herbaceous	UPL	5
Dactylis glomerata	Herbaceous	FACU	2
Symphyotrichum pilosum	Herbaceous	FAC	1

% Dominant species FAC or wetter: 33%

Prevalence Index: 4.1

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 3/3	100					GRAVELLY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 36A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	ROCK OUTCROP-FREDERICK COMPLEX

Summary of Findings: **UPLAND BETWEEN TOWERS 293/196 AND 293/197.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Gleditsia triacanthos	Tree	FAC	5
Cirsium arvense	Herbaceous	FACU	35
Schedonorus arundinaceus	Herbaceous	FACU	20

Non-Dominant Species	Stratum	IND	%
Rumex crispus	Herbaceous	FAC	10
Trifolium pratense	Herbaceous	FACU	10
Galium aparine	Herbaceous	FACU	5

% Dominant species FAC or wetter: 33%
Prevalence Index: 3.8
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST
Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 4/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 37A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/4/2021	Soil Map Unit Name:	ROCK OUTCROP-FREDERICK COMPLEX

Summary of Findings: **UPLAND BETWEEN TOWERS 293/197 AND 293/198.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	2-5

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Juniperus virginiana	Tree	FACU	20
Schedonorus arundinaceus	Herbaceous	FACU	85

Non-Dominant Species	Stratum	IND	%
Verbesina alternifolia	Herbaceous	FAC	15
Galium aparine	Herbaceous	FACU	10
Trifolium repens	Herbaceous	FACU	5

% Dominant species FAC or wetter: O

Prevalence Index: 3.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-2	10YR 4/3	100					LOAM
2-20	10YR 7/6	100					GRAVELLY SANDY CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 37B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/8/2021	Soil Map Unit Name:	ROCK OUTCROP-FREDERICK COMPLEX

Summary of Findings: **UPLAND ABOVE FLAG BYI-5.**

Hydrophytic Vegetation is Present:		Normal Circumstances: X	NWI Classification: N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):	Local Relief: CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):	Landform: DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):	Slope %: 0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Liquidambar styraciflua	Shrub	FAC	3
Juniperus virginiana	Shrub	FACU	3
Rosa multiflora	Shrub	FACU	3
Rubus argutus	Herbaceous	FACU	25
Solidago altissima	Herbaceous	FACU	20

Non-Dominant Species	Stratum	IND	%
Trifolium pratense	Herbaceous	FACU	15
Plantago major	Herbaceous	FACU	10
Rumex crispus	Herbaceous	FAC	5
Juncus effusus	Herbaceous	FACW	3

% Dominant species FAC or wetter: 20%
Prevalence Index: 3.8
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST
Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	Color (Moist)	%	Color (Moist)	%	Type	Loc	Texture
0-3	2.5Y 4/4	100					LOAM
3-20	2.5Y 6/4	100					SANDY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 38A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/8/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN SILT LOAMS

Summary of Findings: **UPLAND BETWEEN TOWERS 293/201 AND 293/202.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	R4SBC
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil: 2

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Schedonorus arundinaceus	Herbaceous	FACU	30
Galium aparine	Herbaceous	FACU	20
Lonicera japonica	Vine	FACU	15

Non-Dominant Species	Stratum	IND	%
Rumex crispus	Herbaceous	FAC	10
Securigera varia	Herbaceous	FACU	10
Cirsium arvense	Herbaceous	FACU	5
Solanum carolinense	Herbaceous	FACU	5

% Dominant species FAC or wetter: O

Prevalence Index: 3.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-3	10YR 4/4	100					LOAM
3-20	10YR 5/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 39A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/8/2021	Soil Map Unit Name:	GUERNSEY SILT LOAM

Summary of Findings: **UPLAND NORTHEAST OF TOWER 293/203.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	FLAT
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Medicago sativa	Herbaceous	UPL	45
Trifolium pratense	Herbaceous	FACU	30

Non-Dominant Species	Stratum	IND	%
Schedonorus arundinaceus	Herbaceous	FACU	15
Rumex crispus	Herbaceous	FAC	3
Plantago major	Herbaceous	FACU	3

% Dominant species FAC or wetter: O

Prevalence Index: 4.4

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	2.5Y 4/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 39B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/8/2021	Soil Map Unit Name:	GUERNSEY SILT LOAM

Summary of Findings: **UPLAND BETWEEN TOWERS 293/203 AND 293/204.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-5

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Rosa multiflora	Shrub	FACU	10
Schedonorus arundinaceus	Herbaceous	FACU	50
Dactylis glomerata	Herbaceous	FACU	45
Lonicera japonica	Vine	FACU	15

Non-Dominant Species	Stratum	IND	%

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-1	10YR 4/3	100					LOAM
1-20	10YR 4/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 39C

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE CHANNERY SILTY CLAY LOAM

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/206 AND 293/207.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Cercis canadensis	Sapling	FACU	10
Juniperus virginiana	Sapling	FACU	5
Rosa multiflora	Shrub	FACU	10
Ligustrum sinense	Shrub	FACU	10
Verbesina alternifolia	Herbaceous	FAC	60

Non-Dominant Species	Stratum	IND	%
Dactylis glomerata	Herbaceous	FACU	10
Sorghum halepense	Herbaceous	FACU	5
Juncus tenuis	Herbaceous	FAC	3

% Dominant species FAC or wetter: 20%

Prevalence Index: 3.4

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	Color (Moist)	%	Color (Moist)	%	Type	Loc	Texture
0-4	10YR 4/4	100					LOAM
4-20	10YR 5/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 40A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE CHANNERY SILTY CLAY LOAM

Summary of Findings: **PEM WETLAND BELOW FLAG BYM-8.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
X High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table: 5
Saturated soil: O

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Poa trivialis	Herbaceous	FACW	15
Carex lurida	Herbaceous	OBL	10
Carex vulpinoidea	Herbaceous	OBL	10

Non-Dominant Species	Stratum	IND	%
Rumex crispus	Herbaceous	FAC	5
Panicum dichotomiflorum	Herbaceous	FACW	3
Persicaria pensylvanica	Herbaceous	FACW	3

% Dominant species FAC or wetter: 100%

Prevalence Index: 1.7

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation: X
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 4/2	90	10YR 4/6	10	C	M	LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 40B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE CHANNERY SILTY CLAY LOAM

Summary of Findings: **UPLAND ABOVE FLAG BYM-8.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Poa pratensis	Herbaceous	FACU	30
Medicago sativa	Herbaceous	UPL	25
Trifolium pratense	Herbaceous	FACU	25

Non-Dominant Species	Stratum	IND	%
Cirsium arvense	Herbaceous	FACU	3
Solanum carolinense	Herbaceous	FACU	3

% Dominant species FAC or wetter: O

Prevalence Index: 4.3

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 40C

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE CHANNERY SILTY CLAY LOAM

Summary of Findings: **UPLAND ABOVE FLAG BYO-12.**

Hydrophytic Vegetation is Present:		Normal Circumstances: X	NWI Classification: N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):	Local Relief: NONE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):	Landform: TOE OF SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):	Slope %: 0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Schedonorus arundinaceus	Herbaceous	FACU	35
Trifolium pratense	Herbaceous	FACU	30

Non-Dominant Species	Stratum	IND	%
Cirsium arvense	Herbaceous	FACU	10

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 40D

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE CHANNERY SILTY CLAY LOAM

Summary of Findings: **PEM WETLAND BELOW FLAG BYO-12.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	0-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
X High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):

Surface Water:
Water Table: 7
Saturated soil: O

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Poa trivialis	Herbaceous	FACW	25
Carex lurida	Herbaceous	OBL	20

Non-Dominant Species	Stratum	IND	%
Juncus effusus	Herbaceous	FACW	15
Carex vulpinoidea	Herbaceous	OBL	15
Carex frankii	Herbaceous	OBL	10

% Dominant species FAC or wetter: 100%

Prevalence Index: 1.5

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation: X
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-5	10YR 4/1	85	10YR 4/6	15	C	M	CLAY LOAM
5-20	10YR 5/1	85	10YR 4/6	15	C	M	CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)

Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 41A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE SILTY CLAY LOAM

Summary of Findings: **UPLAND BY TOWER 293/211.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Trifolium pratense	Herbaceous	FACU	45
Schedonorus arundinaceus	Herbaceous	FACU	20

Non-Dominant Species	Stratum	IND	%
Medicago sativa	Herbaceous	UPL	15
Solanum carolinense	Herbaceous	FACU	15

% Dominant species FAC or wetter: O

Prevalence Index: 4.2

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	Color (Moist)	%	Color (Moist)	%	Type	Loc	Texture
0-20	10YR 5/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)		
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 41B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	GUERNSEY SILT LOAM

Summary of Findings: **UPLAND ABOVE FLAG BYQ-5.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	NONE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	2-5

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Medicago sativa	Herbaceous	UPL	75

Non-Dominant Species	Stratum	IND	%
Rumex crispus	Herbaceous	FAC	10
Solanum carolinense	Herbaceous	FACU	5
Asclepias syriaca	Herbaceous	FACU	5

% Dominant species FAC or wetter: O

Prevalence Index: 4.7

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 41C

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	GUERNSEY SILT LOAM

Summary of Findings: **PEM WETLAND BELOW FLAG BYQ-5.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	NONE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	FLOODPLAIN
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	X Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil: 8

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Scirpus cyperinus	Herbaceous	FACW	40
Scirpus atrovirens	Herbaceous	OBL	25

Non-Dominant Species	Stratum	IND	%
Arthraxon hispidus	Herbaceous	FAC	10
Microstegium vimineum	Herbaceous	FAC	5
Verbesina alternifolia	Herbaceous	FAC	3

% Dominant species FAC or wetter: 100%
Prevalence Index: 1.9
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST
Calculated using all species present.

Rapid Test for Hydrophytic Vegetation: X
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	Color (Moist)	%	Color (Moist)	%	Type	Loc	Texture
0-6	10YR 4/2	100					LOAM
6-20	2.5Y 5/1	80	10YR 4/6	15	C	M	CLAY LOAM
			10YR 4/6	5	C	PL	

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 42A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	EDOM SILT LOAM

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/216 AND 293/217.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	2-5

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Rosa multiflora	Shrub	FACU	15
Medicago sativa	Herbaceous	UPL	50
Trifolium pratense	Herbaceous	FACU	30

Non-Dominant Species	Stratum	IND	%
Microstegium vimineum	Herbaceous	FAC	5
Plantago major	Herbaceous	FACU	3

% Dominant species FAC or wetter: O

Prevalence Index: 4.4

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 6/4	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 42B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE CHANNERY SILTY CLAY LOAM

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/218 293/219.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	2-5

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Prunus serotina	Shrub	FACU	5
Juniperus virginiana	Shrub	FACU	5
Solidago altissima	Herbaceous	FACU	35
Rubus argutus	Herbaceous	FACU	15
Lonicera japonica	Vine	FACU	5

Non-Dominant Species	Stratum	IND	%
Symphyotrichum pilosum	Herbaceous	FAC	10
Medicago sativa	Herbaceous	UPL	10
Plantago major	Herbaceous	FACU	5
Alliaria petiolata	Herbaceous	FACU	5
Rumex crispus	Herbaceous	FAC	3

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	7.5YR 5/4	100					CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 43A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	ROCK OUTCROP-CHILHOWIE COMPLEX

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/220 AND 293/221.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Schedonorus arundinaceus	Herbaceous	FACU	45
Trifolium pratense	Herbaceous	FACU	20

Non-Dominant Species	Stratum	IND	%
Microstegium vimineum	Herbaceous	FAC	10
Cirsium arvense	Herbaceous	FACU	5
Rumex crispus	Herbaceous	FAC	3
Plantago major	Herbaceous	FACU	3

% Dominant species FAC or wetter: O

Prevalence Index: 3.8

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-2	10YR 5/4	100					LOAM
2-20	10YR 6/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 43B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	ROCK OUTCROP-CHILHOWIE COMPLEX

Summary of Findings: **UPLAND ABOVE FLAG BYU-7.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONVEX
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	2-5

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Trifolium pratense	Herbaceous	FACU	45
Schedonorus arundinaceus	Herbaceous	FACU	30

Non-Dominant Species	Stratum	IND	%
Plantago lanceolata	Herbaceous	UPL	10
Taraxacum officinale	Herbaceous	FACU	3

% Dominant species FAC or wetter: O

Prevalence Index: 4.1

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-3	10YR 4/6	100					LOAM
3-20	10YR 5/6	100					LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 43C

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	ROCK OUTCROP-CHILHOWIE COMPLEX

Summary of Findings: **PEM WETLAND BELOW FLAG BYU-7.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Carex vulpinoidea	Herbaceous	OBL	25
Juncus effusus	Herbaceous	FACW	20
Scirpus atrovirens	Herbaceous	OBL	15

Non-Dominant Species	Stratum	IND	%
Cirsium arvense	Herbaceous	FACU	5
Rumex crispus	Herbaceous	FAC	3

% Dominant species FAC or wetter: 100%

Prevalence Index: 1.6

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation: **X**
Dominance Test >50%: **X**
Prevalence Index is ≤ 3.0: **X**
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-4	2.5Y 4/2	100					LOAM
4-20	2.5Y 5/2	90	2.5Y 5/6	10	C	M	LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 44A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE-EDOM CHANNERY SILTY CLAY LOAMS

Summary of Findings: **PEM WETLAND BELOW FLAG BYX-4.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
X High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):

Surface Water:
Water Table: 4
Saturated soil: O

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Typha latifolia	Herbaceous	OBL	60
Poa trivialis	Herbaceous	FACW	30

Non-Dominant Species	Stratum	IND	%
Impatiens capensis	Herbaceous	FACW	15
Scirpus atrovirens	Herbaceous	OBL	10
Juncus effusus	Herbaceous	FACW	5

% Dominant species FAC or wetter: 100%

Prevalence Index: 1.4

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation: X
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-2	2.5Y 5/1	95	10YR 4/6	5	C	M	LOAM
2-20	2.5Y 6/1	90	10YR 4/6	10	C	M	CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)

Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 44B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	B. YOUNG	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE-EDOM CHANNERY SILTY CLAY LOAMS

Summary of Findings: **UPLAND ABOVE FLAG BYX-4.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	NONE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	FLAT
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Symphoricarpos orbiculatus	Shrub	FACU	30
Berberis thunbergii	Shrub	FACU	15
Alliaria petiolata	Herbaceous	FACU	15
Solidago altissima	Herbaceous	FACU	10
Lonicera japonica	Vine	FACU	5
Campsis radicans	Vine	FAC	5

Non-Dominant Species	Stratum	IND	%
Solanum carolinense	Herbaceous	FACU	5
Impatiens capensis	Herbaceous	FACW	3
Cirsium arvense	Herbaceous	FACU	3

% Dominant species FAC or wetter: 17%

Prevalence Index: 3.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-6	10YR 6/4	100					CLAY LOAM
6-20	2.5Y 6/6	100					CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 44C

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	EDOM SILTY CLAY LOAM

Summary of Findings: **PEM WETLAND BELOW FLAG MMW-3 NORTHEAST OF TOWER 293/224.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	R4SBC
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil: O

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Carex frankii	Herbaceous	OBL	30
Carex vulpinoidea	Herbaceous	OBL	30
Juncus effusus	Herbaceous	FACW	25

Non-Dominant Species	Stratum	IND	%
Equisetum arvense	Herbaceous	FAC	15
Impatiens capensis	Herbaceous	FACW	10
Poa pratensis	Herbaceous	FACU	10
Scirpus atrocinctus	Herbaceous	FACW	10
Scirpus pendulus	Herbaceous	OBL	5
Juncus tenuis	Herbaceous	FAC	5
Schedonorus arundinaceus	Herbaceous	FACU	5
Microstegium vimineum	Herbaceous	FAC	5

% Dominant species FAC or wetter: 100%
Prevalence Index: 1.9
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST
Calculated using all species present.

Rapid Test for Hydrophytic Vegetation: X
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-3	2.5Y 4/3	95	10YR 4/6	5	C	M	CLAY
3-20	2.5Y 6/2	80	10YR 5/6	20	C	M	CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 44D

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	EDOM SILTY CLAY LOAM

Summary of Findings: **UPLAND ABOVE FLAG MMW-3 NORTHEAST OF TOWER 293/224.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	TOE OF SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Elymus virginicus	Herbaceous	FACW	35
Allium vineale	Herbaceous	FACU	15

Non-Dominant Species	Stratum	IND	%
Leucanthemum vulgare	Herbaceous	UPL	5
Phleum pratense	Herbaceous	FACU	5
Cirsium discolor	Herbaceous	UPL	5
Poa pratensis	Herbaceous	FACU	5
Trifolium dubium	Herbaceous	UPL	5
Trifolium repens	Herbaceous	FACU	5
Symphyotrichum pilosum	Herbaceous	FAC	1

% Dominant species FAC or wetter: 50%

Prevalence Index: 3.3

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	Color (Moist)	%	Color (Moist)	%	Type	Loc	Texture
0-8	10YR 5/3	95	10YR 4/6	5	C	M	CLAY LOAM
8-20	10YR 5/6	90	10YR 5/3	10	D	M	LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 45A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	ROCK OUTCROP-CHILHOWIE COMPLEX

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/225 AND 293/226.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	3-6

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Symphoricarpos orbiculatus	Shrub	FACU	5
Artemisia vulgaris	Herbaceous	UPL	40
Trifolium pratense	Herbaceous	FACU	20
Schedonorus arundinaceus	Herbaceous	FACU	20
Asclepias syriaca	Herbaceous	FACU	20

Non-Dominant Species	Stratum	IND	%
Elaeagnus umbellata	Shrub	UPL	1
Verbesina alternifolia	Herbaceous	FAC	5
Microstegium vimineum	Herbaceous	FAC	5
Carex vulpinoidea	Herbaceous	OBL	3
Anthoxanthum odoratum	Herbaceous	FACU	2

% Dominant species FAC or wetter: O

Prevalence Index: 4.2

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	10YR 5/3	98	10YR 4/6	2	C	M	LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 45B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE-CHANNERY SILTY CLAY LOAM

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/227 AND 293/228.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	R4SBC
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil: O

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Artemisia vulgaris	Herbaceous	UPL	40

Non-Dominant Species	Stratum	IND	%
Danthonia compressa	Herbaceous	FACU	15
Impatiens capensis	Herbaceous	FACW	5
Cirsium discolor	Herbaceous	UPL	5
Microstegium vimineum	Herbaceous	FAC	5
Verbesina alternifolia	Herbaceous	FAC	2
Alliaria petiolata	Herbaceous	FACU	2
Amphicarpaea bracteata	Herbaceous	FAC	2
Phytolacca americana	Herbaceous	FACU	2
Dactylis glomerata	Herbaceous	FACU	1

% Dominant species FAC or wetter: O

Prevalence Index: 4.3

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

HIGHLY MANIPULATED AND MAINTAINED.

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-12	2.5Y 4/4	95	10YR 4/6	5	C	M	CLAY

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type: GRAVEL
Depth (inches): 12

Remarks: **SOIL PARAMETER NOT MET.**

GRAVEL REFUSAL AT 12 INCHES.

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 46A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE-CHANNERY SILTY CLAY LOAM

Summary of Findings: **UPLAND SWALE ABOVE EPHEMERAL STREAM CHANNEL NORTHEAST OF TOWER 293/229.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	R4SBC
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Juglans nigra	Shrub	FACU	10
Schedonorus arundinaceus	Herbaceous	FACU	40
Dactylis glomerata	Herbaceous	FACU	20

Non-Dominant Species	Stratum	IND	%
Juniperus virginiana	Shrub	FACU	1
Cercis canadensis	Shrub	FACU	1
Cirsium discolor	Herbaceous	UPL	10
Poa pratensis	Herbaceous	FACU	10
Danthonia compressa	Herbaceous	FACU	10
Rumex crispus	Herbaceous	FAC	5
Allium vineale	Herbaceous	FACU	2

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

HEAVILY DISTURBED BY CATTLE.

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-10	2.5Y 4/3	90	10YR 4/6	10	C	M	LOAM
10-20	2.5Y 5/3	98	10YR 4/6	2	C	M	LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 47A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	ROCK OUTCROP-CHILHOWIE COMPLEX

Summary of Findings: **UPLAND SWALE ABOVE FLAG MMU-3 BETWEEN TOWERS 293/231 AND 293/232.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Juniperus virginiana	Shrub	FACU	2
Symphoricarpos orbiculatus	Shrub	FACU	2
Elaeagnus umbellata	Shrub	UPL	1
Schedonorus arundinaceus	Herbaceous	FACU	30
Danthonia compressa	Herbaceous	FACU	25

Non-Dominant Species	Stratum	IND	%
Microstegium vimineum	Herbaceous	FAC	15
Allium vineale	Herbaceous	FACU	10
Ambrosia artemisiifolia	Herbaceous	FACU	10
Cirsium discolor	Herbaceous	UPL	5
Poa pratensis	Herbaceous	FACU	5
Scirpus pendulus	Herbaceous	OBL	2
Leucanthemum vulgare	Herbaceous	UPL	2
Phleum pratense	Herbaceous	FACU	1
Carex vulpinoidea	Herbaceous	OBL	1
Xanthium strumarium	Herbaceous	FAC	1

% Dominant species FAC or wetter: O

Prevalence Index: 3.8

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-1	10YR 4/4	100					CLAY LOAM
1-20	2.5Y 5/4	90	7.5YR 5/6	10	C	M	CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 47B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	ROCK OUTCROP-CHILHOWIE COMPLEX

Summary of Findings: **PEM WETLAND ASSOCIATED WITH POND BELOW FLAG MMU-3.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	PUBFh
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	FLAT
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil: O

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Schoenoplectus tabernaemontani	Herbaceous	OBL	25
Scirpus atrocinctus	Herbaceous	FACW	20
Microstegium vimineum	Herbaceous	FAC	20

Non-Dominant Species	Stratum	IND	%
Typha latifolia	Herbaceous	OBL	15
Carex vulpinoidea	Herbaceous	OBL	10
Glyceria striata	Herbaceous	OBL	5
Juncus tenuis	Herbaceous	FAC	5
Scirpus pendulus	Herbaceous	OBL	5

% Dominant species FAC or wetter: 100%
Prevalence Index: 1.7
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST
Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	5Y 5/1	85	10YR 4/6	15	C	M	CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 47C

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	ROCK OUTCROP-CHILHOWIE COMPLEX

Summary of Findings: **UPLAND SWALE NORTHEAST OF TOWER 293/232.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	2-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Juniperus virginiana	Shrub	FACU	20
Schedonorus arundinaceus	Herbaceous	FACU	30
Ambrosia artemisiifolia	Herbaceous	FACU	25
Allium vineale	Herbaceous	FACU	20
Danthonia compressa	Herbaceous	FACU	20
Cirsium discolor	Herbaceous	UPL	20

Non-Dominant Species	Stratum	IND	%
Symphoricarpos orbiculatus	Shrub	FACU	1
Dipsacus laciniatus	Herbaceous	FACU	10
Lespedeza cuneata	Herbaceous	FACU	5
Poa pratensis	Herbaceous	FACU	5
Anthoxanthum odoratum	Herbaceous	FACU	5
Leucanthemum vulgare	Herbaceous	UPL	3
Echium vulgare	Herbaceous	UPL	2
Rosa multiflora	Herbaceous	FACU	1
Trifolium dubium	Herbaceous	UPL	1
Verbascum thapsus	Herbaceous	FACU	1

% Dominant species FAC or wetter: O

Prevalence Index: 4.2

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-5	10YR 4/3	100					LOAM
5-20	10YR 5/6	85	2.5Y 5/3	10	D	M	LOAM
			7.5YR 5/6	5	C	M	

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 48A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	CHILHOWIE CHANNERY SILTY CLAY LOAM

Summary of Findings: **UPLAND DEPRESSION BETWEEN PONDS SOUTH OF TOWER 293/235.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	TOE OF SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil: 3

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Juniperus virginiana	Sapling	FACU	5
Symphoricarpos orbiculatus	Shrub	FACU	5
Fraxinus pennsylvanica	Shrub	FACW	2
Schedonorus arundinaceus	Herbaceous	FACU	40
Dipsacus laciniatus	Herbaceous	FACU	20
Lonicera japonica	Vine	FACU	25
Toxicodendron radicans	Vine	FAC	10

Non-Dominant Species	Stratum	IND	%
Rumex crispus	Herbaceous	FAC	15
Lespedeza cuneata	Herbaceous	FACU	10
Cirsium discolor	Herbaceous	UPL	5
Rubus argutus	Herbaceous	FACU	5
Asclepias syriaca	Herbaceous	FACU	5
Solidago altissima	Herbaceous	FACU	3
Rosa multiflora	Herbaceous	FACU	2
Allium vineale	Herbaceous	FACU	1
Parthenocissus quinquefolia	Vine	FACU	5

% Dominant species FAC or wetter: 29%
Prevalence Index: 3.8
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST
Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-3	2.5Y 4/3	95	7.5YR 4/6	5	C	M	LOAM
3-8	10YR 4/3	90	7.5YR 4/6	10	C	M	LOAM
8-20	2.5Y 5/3	90	10YR 7/8	10	C	M	GRAVELLY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 48B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	EDOM SILT LOAM

Summary of Findings: **PEM WETLAND ADJACENT TO POND BELOW FLAG MMP-1.**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	TOE OF SLOPE
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Water Depths (inches):

Surface Water:
Water Table:
Saturated soil: 1

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Juncus effusus	Herbaceous	FACW	25
Schoenoplectus tabernaemontani	Herbaceous	OBL	10

Non-Dominant Species	Stratum	IND	%
Salix nigra	Shrub	OBL	3
Juniperus virginiana	Shrub	FACU	1
Scirpus atrocinctus	Herbaceous	FACW	5
Arthraxon hispidus	Herbaceous	FAC	5
Microstegium vimineum	Herbaceous	FAC	5
Typha latifolia	Herbaceous	OBL	5
Scirpus pendulus	Herbaceous	OBL	3

% Dominant species FAC or wetter: 100%

Prevalence Index: 1.9

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation: X
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-1	10YR 3/3	99	7.5YR 4/6	1	C	M	LOAM
1-10	2.5Y 5/2	80	10YR 4/6	20	C	M	CLAY LOAM
10-20	10YR 3/4	70	10YR 4/2	20	D	M	CLAY
			7.5YR 4/6	10	C	M	

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)

Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 48C

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/9/2021	Soil Map Unit Name:	EDOM SILT LOAM

Summary of Findings: **UPLAND IN SWALE ABOVE FLAG MMP-1.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil: O

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Symphoricarpos orbiculatus	Shrub	FACU	15
Dipsacus laciniatus	Herbaceous	FACU	30
Danthonia compressa	Herbaceous	FACU	25
Lonicera japonica	Vine	FACU	20

Non-Dominant Species	Stratum	IND	%
Juniperus virginiana	Shrub	FACU	1
Ambrosia artemisiifolia	Herbaceous	FACU	20
Lespedeza cuneata	Herbaceous	FACU	15
Cirsium discolor	Herbaceous	UPL	10
Rosa multiflora	Herbaceous	FACU	5
Asclepias syriaca	Herbaceous	FACU	1
Juncus effusus	Herbaceous	FACW	1
Scirpus pendulus	Herbaceous	OBL	1

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-20	2.5Y 4/3	98	10YR 5/6	2	C	M	CLAY

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 49A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/8/2021	Soil Map Unit Name:	CHILHOWIE-EDOM SHALY SILTY CLAY LOAMS

Summary of Findings: **UPLAND SWALE EAST OF TOWER 293/240.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	0-2

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Symphoricarpos orbiculatus	Shrub	FACU	5
Panicum virgatum	Herbaceous	FAC	50
Asclepias syriaca	Herbaceous	FACU	20

Non-Dominant Species	Stratum	IND	%
Danthonia compressa	Herbaceous	FACU	10
Agrostis capillaris	Herbaceous	FAC	10
Rumex crispus	Herbaceous	FAC	5
Carex vulpinoidea	Herbaceous	OBL	5
Scirpus pendulus	Herbaceous	OBL	2

% Dominant species FAC or wetter: 33%

Prevalence Index: 3.2

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-12	2.5Y 4/4	95	2.5Y 6/1	5	D	M	GRAVELLY LOAM
12-20	10YR 5/8	95	2.5Y 6/1	5	D	M	GRAVELLY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	X Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 50A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/8/2021	Soil Map Unit Name:	CHILHOWIE CHANNERY SILTY CLAY LOAM

Summary of Findings: **UPLAND SWALE EAST OF TOWER 292/242.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	3-6

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Juniperus virginiana	Shrub	FACU	40
Symphoricarpos orbiculatus	Shrub	FACU	25
Dipsacus laciniatus	Herbaceous	FACU	35
Danthonia compressa	Herbaceous	FACU	15
Rubus argutus	Herbaceous	FACU	15

Non-Dominant Species	Stratum	IND	%
Elaeagnus umbellata	Shrub	UPL	15
Crataegus spp.	Shrub	N/A	1
Lespedeza cuneata	Herbaceous	FACU	10
Asclepias syriaca	Herbaceous	FACU	10
Nepeta cataria	Herbaceous	FACU	5
Ambrosia artemisiifolia	Herbaceous	FACU	2
Cirsium discolor	Herbaceous	UPL	2

% Dominant species FAC or wetter: O

Prevalence Index: 4.1

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-6	10YR 4/6	100					GRAVELLY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)		
___	___		

Restrictive Layer (If Observed)
Type: GRAVEL
Depth (inches): 6

Remarks: **SOIL PARAMETER NOT MET.**

GRAVEL REFUSAL AT 6 INCHES.

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 50B

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/8/2021	Soil Map Unit Name:	CHILHOWIE-EDOM CHANNERY SILTY CLAY LOAMS

Summary of Findings: **UPLAND SWALE IN CATTLE PASTURE BETWEEN TOWERS 293/244 AND 293/245.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		***Secondary Indicators:***
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Agrostis capillaris	Herbaceous	FAC	50
Dactylis glomerata	Herbaceous	FACU	30
Trifolium pratense	Herbaceous	FACU	25

Non-Dominant Species	Stratum	IND	%
Symphoricarpos orbiculatus	Shrub	FACU	2
Juniperus virginiana	Shrub	FACU	1
Plantago major	Herbaceous	FACU	5

% Dominant species FAC or wetter: 33%
Prevalence Index: 3.6
NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST
Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

HEAVILY GRAZED BY CATTLE.

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-3	10YR 5/4	100					LOAM
3-20	10YR 4/4	100					CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 51A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/8/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS

Summary of Findings: **UPLAND SWALE BETWEEN TOWERS 293/248 AND 293/249.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	SLOPE
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	2-5

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Symphoricarpos orbiculatus	Shrub	FACU	25
Schedonorus arundinaceus	Herbaceous	FACU	40
Rosa multiflora	Herbaceous	FACU	25
Lonicera japonica	Vine	FACU	20

Non-Dominant Species	Stratum	IND	%
Juniperus virginiana	Shrub	FACU	5
Ulmus rubra	Shrub	FAC	1
Dactylis glomerata	Herbaceous	FACU	20
Phytolacca americana	Herbaceous	FACU	10
Rubus argutus	Herbaceous	FACU	5
Cirsium discolor	Herbaceous	UPL	5
Trifolium pratense	Herbaceous	FACU	5
Fragaria virginiana	Herbaceous	FACU	2

% Dominant species FAC or wetter: O

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-4	10YR 5/6	100					CLAY LOAM
4-20	10YR 4/6	100					CLAY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)	___	
___	___		

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER NOT MET.**

Wetland Determination Data Form - Eastern Mountains and Piedmont Region

Sampling Point Number: 53A

Stantec

Project:	STAUNTON TO VALLEY TRANSMISSION LINE 293 230 KV REBUILD		
Applicant:	DOMINION ENERGY VIRGINIA	Section/Township/Range:	N/A
City/County:	AUGUSTA COUNTY	Subregion (LRR or MLRA):	LRR S
State:	VIRGINIA	Start:	38.147705° -79.065615°
Investigator(s):	M. MCGRAW	Terminus:	38.313316° -78.970345°
Date:	6/8/2021	Soil Map Unit Name:	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS

Summary of Findings: **UPLAND SWALE SOUTH OF TOWER 293/272.**

Hydrophytic Vegetation is Present:		Normal Circumstances:	X	NWI Classification:	N/A
Hydric Soils are Present:		Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	2-4

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ True Aquatic Plants (B14)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	X Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Water Depths (inches):
Surface Water:
Water Table:
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Nepeta cataria	Herbaceous	FACU	50
Agrostis capillaris	Herbaceous	FAC	20
Lonicera japonica	Vine	FACU	10
Parthenocissus quinquefolia	Vine	FACU	3

Non-Dominant Species	Stratum	IND	%
Berberis thunbergii	Shrub	FACU	2
Juniperus virginiana	Shrub	FACU	1
Juglans nigra	Shrub	FACU	1
Verbascum thapsus	Herbaceous	FACU	15
Cirsium discolor	Herbaceous	UPL	15
Lepidium virginicum	Herbaceous	FACU	10
Dactylis glomerata	Herbaceous	FACU	5
Alliaria petiolata	Herbaceous	FACU	5
Phytolacca americana	Herbaceous	FACU	5
Geranium carolinianum	Herbaceous	UPL	1

% Dominant species FAC or wetter: 25%

Prevalence Index: 4.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2018 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%:
Prevalence Index is ≤ 3.0:
Morphological Adaptations:
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER NOT MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-6	10YR 3/4	100					SANDY LOAM

Hydric Soil Indicators:

			Indicators for Problematic Hydric Soils
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)	___ 2cm Muck (A10)
___ Histic Epipedon (A2)	___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)	___ Piedmont Floodplain Soils (F19)
___ Hydrogen Sulfide (A4)	___ Stripped Matrix (S6)	___ Redox Depressions (F8)	___ Red Parent Material (TF2)
___ Stratified Layers (A5)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Very Shallow Dark Surface (TF12)
___ 2 cm Muck (A10)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Other
___ Depleted Below Dark Surface (A11)	___ Thin Dark Surface (S9)	___ Piedmont Floodplain Soils (F19)	
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)		
___	___		

Restrictive Layer (If Observed)
Type: GRAVEL
Depth (inches): 6

Remarks: **SOIL PARAMETER NOT MET.**

GRAVEL REFUSAL AT 6 INCHES.