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March 7, 2019

BY HAND DELIVERY

Joel H. Peck, Clerk
Document Control Center
State Corporation Commission
1300 East Main Street
Tyler Building – 1st Floor
Richmond, Virginia 23219

Application of Virginia Electric and Power Company
For approval and certification of electric transmission facilities:
Potomac Yards Undergrounding and Glebe GIS Conversion
Case No. PUR-2019-00040

Dear Mr. Peck:

Please find enclosed for filing in the above-captioned proceeding an unbound original and fifteen (15) bound copies of the application for approval of electric facilities on behalf of Virginia Electric and Power Company (the "Company"). This filing contains the Application, Appendix, Direct Testimony, and DEQ Supplement, including attachments.

As indicated in Section II.A.12.b of the Appendix, three (3) color copies of the map of the Virginia Department of Transportation "General Highway Map" for Arlington County and the City of Alexandria have been marked as required and were hand delivered to the Commission's Division of Energy Regulation today. The Company also hand delivered to the Division of Energy Regulation a CD-ROM containing the digital geographic information system ("GIS") map required by § 56-46.1 of the Code of Virginia, which is Attachment II.A.2 to the Appendix.

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

Very truly yours,

Vishwa B. Link

Enclosures

cc: William H. Chambliss, Esq.
David J. DePippo, Esq.

Dominion Energy®

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

Before the State Corporation Commission of Virginia

Potomac Yards Undergrounding and Glebe GIS Conversion

Application No. 291

Case No. PUR-2019-00040

Filed: March 7, 2019

Volume 1 of 2

Application

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC FACILITIES

Potomac Yards Undergrounding and Glebe GIS Conversion

Application No. 291

Case No. PUR-2019-00040

Filed: March 7, 2019

COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
VIRGINIA ELECTRIC AND POWER COMPANY	)	Case No. PUR-2019-00040
	)	
For approval and certification of electric transmission facilities: Potomac Yards Undergrounding and Glebe GIS Conversion	)	

APPLICATION OF VIRGINIA ELECTRIC AND POWER COMPANY FOR APPROVAL AND CERTIFICATION OF ELECTRIC FACILITIES: POTOMAC YARDS UNDERGROUNDING AND GLEBE GIS CONVERSION

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

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

2. In order to perform its legal duty to furnish adequate and reliable electric service, Dominion Energy Virginia must, from time to time, replace existing transmission facilities or construct new transmission facilities in its system.

3. In this Application, in order to comply with the expiration of an existing special use permit ("SUP") issued by the City of Alexandria, to improve operational performance, to maintain critical energy infrastructure needed to provide continued reliable electric service to facilities depended upon to provide critical services, and to maximize available land use to accommodate necessary transmission terminations, Dominion Energy Virginia proposes: (i) to convert the overhead portion of Lines #248 and #2023 located between Glebe Substation located in Arlington County, Virginia, and Potomac Yards North Terminal Station ("Potomac Yards Station") located in the City of Alexandria, Virginia, to underground lines and to tie the converted lines into Glebe Substation, including the removal and replacement of related underground lines, specifically, a total installation of approximately 2,100 feet of new underground cable from existing manhole #110 to new manhole #111 to Glebe Substation ("Potomac Yards Undergrounding"), of which, 1,100 feet will be installed utilizing microtunneling and 1,000 feet will be installed in existing underground right-of-way, and also the removal of 550 feet of underground cable and pipe from Potomac Yards Station to new manhole #111 and removal of 1,000 feet of cable only from new manhole #111 to existing manhole #110; and, (ii) to convert and rebuild the Company's existing Glebe Substation to a Gas Insulated Substation ("GIS") ("Glebe GIS Conversion") (collectively, the "Project").

4. Absent the Project, the Company's remaining transmission facilities located in this area would not be able to provide adequate service to the Company's existing customers

located in the City of Alexandria and Arlington County consistent with North American Electric Reliability Corporation ("NERC") Reliability Criteria.

5. Specifically, the Project will allow for the undergrounding of an existing overhead portion of Line #248 and Line #2023 consistent with Condition #5 of the SUP originally issued by the City of Alexandria in 1996, and as subsequently extended in 2013. In addition, the Project will allow the Company to maintain critical energy infrastructure needed to provide continued reliable electric service to facilities depended upon to provide critical service, as well as replace aging substation infrastructure that would otherwise require repair or replacement, mitigate existing operational constraints, and make required physical security upgrades in order to maintain the overall long-term reliability of the transmission system.

6. The expected in-service date for the Project is May 2022, subject to Commission approval and outage scheduling. The estimated conceptual cost of the project is approximately $122.8 million, which includes approximately $59.3 million for transmission-related work and approximately $63.5 million for substation-related work (2019 dollars). The description of the proposed Project is described in detail in Sections I and II of the Appendix attached to this Application.

7. While existing Company-owned property is adequate to construct the proposed Glebe GIS Conversion, the Potomac Yards Undergrounding would be constructed in a combination of existing Company-owned property/rights-of-way and new right-of-way across Four Mile Run. No feasible alternatives have been submitted to PJM specifically limited to this Project, which includes the Potomac Yards Undergrounding and Glebe GIS Conversion, because a key driver for the Project is the undergrounding requirement of the City of Alexandria's SUP, as discussed in more detail in the Appendix attached to this Application. The impact of the

proposed Project on scenic, environmental, and historical features is described in detail in Section III of the Appendix.

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

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

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

11. In addition to the information provided in the Appendix and the DEQ Supplement, this Application is supported by the prefiled direct testimony of Company Witnesses Peter Nedwick, Michael L. Lamb, Robert J. Shevenock II, Thomas W. Reitz, Jr., W. Chase Bland, and John A. Mulligan filed with this Application.

WHEREFORE, Dominion Energy Virginia respectfully requests that the Commission:

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

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

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

VIRGINIA ELECTRIC AND POWER COMPANY

By: Vishwa B. Link
Counsel for Applicant

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Counsel for Applicant Virginia Electric and Power Company

March 7, 2019

Appendix

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC FACILITIES

Potomac Yards Undergrounding and Glebe GIS Conversion

Application No. 291

Appendix

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

Case No. PUR-2019-00040

Filed: March 7, 2019

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EXECUTIVE SUMMARY

In order to comply with the expiration of an existing special use permit ("SUP") issued by the City of Alexandria, to improve operational performance, to maintain critical energy infrastructure needed to provide continued reliable electric service to facilities depended upon to provide critical services, and to maximize available land use to accommodate necessary transmission terminations, Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") proposes:

> (i) to convert the overhead portion of Lines #248 and #2023 located between Glebe Substation located in Arlington County, Virginia, and Potomac Yards North Terminal Station ("Potomac Yards Station") located in the City of Alexandria, Virginia, to underground lines and to tie the converted lines into Glebe Substation, including the removal and replacement of related underground lines, specifically, a total installation of approximately 2,100 feet of new underground cable from existing manhole #110 to new manhole #111 to Glebe Substation ("Potomac Yards Undergrounding"), of which, 1,100 feet will be installed utilizing microtunneling and 1,000 feet will be installed in existing underground right-of-way, and also the removal of 550 feet of underground cable and pipe from Potomac Yards Station to new manhole #111 and removal of 1,000 feet of cable only from new manhole #111 to existing manhole #110; and,
>
> (ii) to convert and rebuild the Company's existing Glebe Substation to a Gas Insulated Substation ("GIS") ("Glebe GIS Conversion")

(collectively, the "Project"). Absent the Project, the Company's remaining transmission facilities located in this area would not be able to provide adequate service to the Company's existing customers located in the City of Alexandria and Arlington County consistent with North American Electric Reliability Corporation ("NERC") Reliability Criteria.

Specifically, the Project will allow for the undergrounding of an existing overhead portion of Line #248 and Line #2023 consistent with Condition #5 of the SUP originally issued by the City of Alexandria in 1996, and as subsequently extended in 2013. In addition, the Project will allow the Company to maintain critical energy infrastructure needed to provide continued reliable electric service to facilities depended upon to provide critical service, as well as replace aging substation infrastructure that would otherwise require repair or replacement, mitigate existing operational constraints, and make required physical security upgrades in order to maintain the overall long-term reliability of the transmission system.

While existing Company-owned property is adequate to construct the proposed Glebe GIS Conversion, the Potomac Yards Undergrounding would be constructed in a combination of existing Company-owned property/rights-of-way and new right-of-way across Four Mile Run.

The estimated conceptual cost of the Project is approximately $122.8 million, which includes approximately $59.3 million for transmission-related work and approximately $63.5 million for substation-related work (2019 dollars).

The expected in-service date for the Project is May 2022. The Company estimates it will take

approximately 30 months for detailed engineering, materials procurement, permitting, and construction after a final order from the Commission. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order by December 31, 2019. Should the Commission issue a final order by December 31, 2019, the Company estimates that construction should begin on March 1, 2020, and be completed by May 31, 2022. While the Company believes that this construction timeline will enable it to meet the targeted in-service date for the Project, these estimates do not account for timing risks associated with underground construction, such as the long lead times required for material, unpredictable subterranean characteristics, unexpected permitting delays, and limited contractor resources, which could result in further delays in construction.

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: The Project is necessary in order to comply with the expiration of an existing SUP issued by the City of Alexandria, to improve operational performance, to maintain critical energy infrastructure needed to provide continued reliable electric service to facilities depended upon to provide critical services, and to maximize available land use to accommodate necessary transmission terminations.

Dominion Energy Virginia's transmission system is responsible for providing transmission service (i) for redelivery to the Company's retail customers, (ii) to Appalachian Power Company, Old Dominion Electric Cooperative, Northern Virginia Electric Cooperative, Central Virginia Electric Cooperative, and Virginia Municipal Electric Association for redelivery to their retail customers in Virginia, and (iii) to North Carolina Electric Membership Corporation and North Carolina Eastern Municipal Power Agency for redelivery to their customers in North Carolina (collectively, the "Dominion Energy Zone" or "Dom Zone").

Dominion Energy Virginia is part of the PJM Interconnection, L.L.C. ("PJM") regional transmission organization, which provides service to a large portion of the eastern United States. PJM currently is responsible for ensuring the reliability of and coordinating the movement of electricity through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. This service area currently has a population of approximately 65 million and on August 2, 2006, set a record high of 166,929 megawatts ("MW") for summer peak demand, of which Dominion Energy Virginia's load portion was approximately 19,256 MW serving 2.4 million customers. On July 22, 2011, the Company set a record high of 20,061 MW for summer peak demand. On February 20, 2015, the Company set a winter peak and all-time record demand of 21,651 MW. Based on the 2019 PJM Load Forecast, the Dominion Energy Zone is expected to be the fastest growing zone in PJM, with average growth rates of 0.9% summer and 1.1% winter over the next 10 years compared to the PJM average of 0.3% and 0.4% over the same period for the summer and winter, respectively.

Dominion Energy Virginia also is part of the Eastern Interconnection transmission grid, meaning its transmission system is interconnected, directly or indirectly, with all of the other transmission systems in the United States and Canada between the Rocky Mountains and the Atlantic Coast, except for Quebec

and most of Texas. All of the transmission systems in the Eastern Interconnection are dependent on each other for moving bulk power through the transmission system and for reliability support. Dominion Energy Virginia's service to its customers is extremely reliant on a robust and reliable regional transmission system.

PJM's Regional Transmission Expansion Plan ("RTEP") is the culmination of an annual transmission planning process, approved by the Federal Energy Regulatory Commission ("FERC"), which includes extensive analysis of the electric transmission system to determine any needed improvements.[1] PJM's annual RTEP is based on the effective criteria in place at the time of the analyses, including applicable standards and criteria of NERC, PJM, and local reliability planning criteria, among others.[2] The PJM Board of Managers (the "PJM Board") approves projects prior to inclusion in the RTEP.

As part of the Project, the Company proposes to underground the portion of Glebe-Ox Line #248 and Glebe-North Alexandria Line #2023 between the Potomac Yards Station and Glebe Substation consistent with Condition #5 of the SUP originally issued by the City of Alexandria in 1996, as extended in 2013 (i.e., the Potomac Yards Undergrounding), and to convert and rebuild the Company's existing Glebe Substation with GIS equipment (i.e., the Glebe GIS Conversion). Conversion of the Company's Glebe Substation to GIS will allow the Potomac Yards Undergrounding to be terminated in the Glebe Substation without having to expand the substation beyond its existing footprint, as well as replace aging substation infrastructure that would otherwise require repair or replacement, mitigate existing operational constraints, and make required physical security upgrades in order to maintain the overall long-term reliability of the transmission system, as well as improve the operational reliability of the distribution and transmission systems.

Importantly, Glebe Substation is the transmission source for substations that provides service to critical government facilities, both civil- and defense-related, that are located in the Crystal City area and Arlington County. Also at Glebe Substation, the existing substation transformer #1 is connected directly to the overhead portion of Line #2023 (Glebe-North Alexandria) and transformer #2 is connected directly to Line #250 (Arlington-Glebe). Therefore, an outage of either transmission line results in the loss of service to the Company's customers who are being served from that transformer. If a long-term outage of either transmission line (planned or unplanned) is needed then to restore service to the affected transformer, transmission operations personnel must cut jumpers on the transmission line to return the transformer to service. They then have to reverse this process to restore the transmission line to service. Also, for transmission Lines # 275 and #276, which both provide service to the Crystal Substation, the respective 230 kV Bus #1 or #2 must be taken out of service to de-energize the

[1] PJM Manual 14B focuses on the RTEP process and can be found at http://www.pjm.com/documents/manuals.aspx.
[2] See PJM Manual 14B, Attachment D: PJM Reliability Planning Criteria.

respective transmission line. The proposed Glebe GIS arrangement shown in Attachment II.C.2 improves the operability of the Glebe Substation by eliminating the line/transformer outage discussed above and relocating the underground Lines #275 and #276 into their own breaker bays, thus eliminating the need to take bus outages. The proposed arrangement shown in Attachment II.C.2 also allows the Company to take breaker outages for planned and unplanned reasons without impacting the reliability of service to the Company's transmission facilities that are located in Glebe Substation.

Potomac Yards Undergrounding

In the mid- to late-1990s, Dominion Energy Virginia was required by an easement right-of-way agreement to underground existing double circuit 230 kV overhead Lines #248 and #2023 in Potomac Yards. At that time, the Glebe Substation, which is located at the northern end of Lines #248 and #2023, did not have the space within the substation for the equipment required to support the lines as they transitioned from underground to overhead so that they could be brought into the station. Based on communications with surrounding property owners that confirmed the unavailability of property adjacent to the substation, the Company proposed the current site of the Potomac Yards Station at the northern edge of Potomac Yards along Four Mile Run to locate a small terminal station to transition Lines #248 and #2023 from underground to overhead. In 1996, the Alexandria City Council and Planning Commission granted the Company SUP 96-0091 for the installation of the Potomac Yards Station. Importantly, the City conditioned the SUP upon recommendations offered by City Council Staff proposed to address concerns regarding future planning and development in that area, as well as aesthetic concerns. In particular, Condition #5 of SUP 96-0091 provided for a 15-year expiration of the SUP, thereby requiring removal of the terminal facility in 2011.

Prior to expiration of SUP 96-0091 in 2011, the Company submitted an application requesting extension of the SUP approval and removal of Condition #5 (SUP 2011-0014). In the application, the Company noted that the property situation remained unchanged. Specifically, continued inquiries by the Company concerning the availability of the area adjacent to Glebe Substation for the expansion needed to transition the overhead portion of Lines #248 and #2023 to underground confirmed that the area remained unavailable. Further, there were no reasonable options available that would allow the Potomac Yards Station to be removed. At that time, the Potomac Yards Station provided continued reliable electric service to over 93,000 customers located in the City of Alexandria and Arlington County as part of the Company's critical energy infrastructure, the loss of which would potentially disrupt continued reliable service to facilities depended upon to provide critical services in the area. This area of the Company's system serves critical civil- and defense-related government facilities. Thus, long-term outages in this area can significantly impact the government's ability to provide critical services to the citizens of the United States. In June 2011, the Planning Commission deferred consideration

on the Company's application and requested that the Company undertake detailed analysis of the options for relocating the Potomac Yards Station for presentation to the City. Based on the report prepared by the Company, and taking into consideration the complexity of the proposed relocation, existing leases, multiple property owners, constructability and timing, and related logistics, the City Staff recommended that the SUP be extended until January 1, 2021. The Planning Commission and City Council approved SUP 2011-0014, as amended, in October 2013. As such, the Company is now required to remove and/or relocate the Potomac Yards Station by January 1, 2021. See Attachment I.A.1 for documentation regarding the history of the Potomac Yards Station and the issuance and extension of the SUP. Prior to filing this Application, the Company met with City of Alexandria representatives to ask whether the City again would consider removing the condition to remove and/or relocate the Potomac Yards Station and issue a new SUP without such a condition, or otherwise extend again the existing SUP. City representatives informed the Company that the City would not consider either of those options.

At present, the Company's existing transmission system in the Alexandria-Arlington Load Area includes existing 230 kV transmission Lines #248 and #2023, which leave Glebe Substation as overhead lines, travel approximately 0.2 mile across Four Mile Run, and then transition to underground at the Potomac Yards Station located on the south side of Four Mile Run, southeast of Glebe Substation. From the Potomac Yards Station, Lines #248 and #2023 travel underground in a southwesterly direction for approximately 1,550 feet to existing manhole #110.

As of this filing, additional inquiries by the Company concerning the availability of the area adjacent to Glebe Substation for the expansion needed to transition the overhead portion of Lines #248 and #2023 to underground continue to confirm that the area remains unavailable. See Attachment I.A.2. Therefore, as part of the Potomac Yards Undergrounding, the Company proposes to convert the overhead portion of Lines #248 and #2023 located between Glebe Substation and Potomac Yards Station to underground lines and tie into the Glebe Substation, as rearranged and reconfigured as GIS under the proposed Project.

Within the scope of the Potomac Yards Undergrounding, existing 230 kV overhead Lines #248 and #2023 would be removed between Glebe Substation and Potomac Yards Station. This would include the removal of approximately 1,208 feet of double circuit 3-phase 2500 ACAR conductor, approximately 1,208 feet of 3#6 alumoweld shield wire, approximately 1,208 feet of fiber optic shield wire, one double circuit backbone at Potomac Yards Station, three double circuit steel poles located between the stations, and two single circuit steel poles located inside Glebe Substation.

Also, approximately 1,550 feet of each of the existing double circuit underground lines that currently exit Potomac Yards Station headed southwest toward existing manhole #110 would be removed to accommodate the tie-in and

relocation of the underground lines directly into Glebe Substation. Each circuit consists of two sets of three conductor bundles. One three-conductor bundle is installed in one steel pipe. At the tie-in point, four new steel pipes would be installed turning northwest, crossing under U.S. Route 1 and under Four Mile Run into Glebe Substation. Four three-conductor bundles, high-pressure fluid-filled ("HPFF") cables would be replaced from new manhole #111 to existing manhole #110, to facilitate relocating the underground circuits into Glebe Substation. This length is approximately 1,000 feet.

See Attachment II.A.2 for a map of the area including the Potomac Yards Undergrounding and the reconfigured Glebe Substation under the proposed Project.

Glebe GIS Conversion

Dominion Energy Virginia's existing Glebe Substation is located in Arlington County, Virginia on the north bank of Four Mile Run. The current substation layout consists of nine 230 kV breakers, eight 230 kV transmission line terminals, two 230–34.5 kV transformers and six distribution circuits. In addition to this equipment, there are two control enclosures and one pressurization plant pump station enclosure that serve other existing underground HPFF lines.

The current substation footprint is built to its maximum and, to accommodate the proposed additional equipment needed for two new underground transmission line terminals, the substation would need to be expanded. However, as noted above, vacant property adjacent to the substation continues to be unavailable. Therefore, to accommodate the proposed underground transmission line terminals from Potomac Yards Station within the existing substation footprint at Glebe Substation, the electrical arrangement has to be modified with the use of GIS equipment. Within the scope of the proposed Glebe GIS Conversion, the Company proposes to remove approximately 800 feet of single circuit 3-phase 2500 ACAR conductor, approximately 130 feet of 3#6 alumoweld shield wire, four single circuit backbones, and one single circuit steel pole located inside Glebe Substation. The Glebe GIS Conversion also would include the installation of approximately 215 feet of 7#7 alumoweld shield wire, 925 feet of OPGW shield wire, 337 feet of single circuit 3-phase 1233.6 ACSS/TW (HS-285) conductor, and four shield wire poles located inside Glebe Substation. The Glebe GIS Conversion provides additional terminal locations to accommodate existing lines and the relocation of two three-conductor bundles for Lines #248 and #2023. See Section II.C for additional discussion.

In addition to accommodating underground terminals for Lines #248 and #2023, the Glebe GIS Conversion will allow the Company to maintain critical energy infrastructure needed to provide continued reliable electric service to facilities depended upon to provide critical service, as well as replace aging substation

infrastructure that would otherwise require repair or replacement, mitigate existing operational constraints, and make required physical security upgrades in order to maintain the overall long-term reliability of the transmission system as well as improve the operational reliability of the distribution and transmission systems. Importantly, the proposed arrangement shown in Attachment II.C.2 also allows the Company to take breaker outages for planned and unplanned reasons without impacting the reliability of service to the Company's transmission facilities, which are located in Glebe Substation The 230 kV transmission equipment is installed in the southern two thirds of the station, which generally was constructed in the early 1970s, while the distribution assets are located in the northern third of the substation, which generally were constructed in the early 1960s. Glebe Substation was built in an area that was compacted and filled over decaying debris. Since its construction, this has created foundation movement that continues to challenge equipment in this facility. Areas impacted have included 230 kV disconnect switch alignment, substation control houses, equipment foundations and security fencing. See Section I.L regarding the condition of the substation, and Section II.C for discussion of additional benefits resulting from the conversion to GIS.

The Project

PJM has classified the Project as a baseline reliability project (b3090) based on its Operation Performance criteria as noted at its December 13, 2018 Transmission Expansion Advisory Committee ("TEAC") Meeting. The "potential" removal of the overhead sections of Line #248 and Line #2023 located between Potomac Yards Station and Glebe Substation resulted in NERC criteria violations on the remaining transmission facilities if the lines are not converted from overhead to underground lines in this location. Attachment I.A.3 contains a copy of the slides presented at the December 13, 2018, TEAC Meeting. The Project would be 100% allocated to the Dominion Zone and was approved at the February 2019 PJM Board Meeting.

In summary, the proposed Project will allow the Company to comply with Condition #5 of the existing SUP by undergrounding an existing overhead portion of Lines #248 and #2023, and to maintain adequate and reliable service to its customers located in the City of Alexandria and Arlington County by reconfiguring Glebe Substation using GIS equipment to allow for Lines #248 and #2023 to terminate underground within the existing footprint. The Project also will allow the Company to maintain critical energy infrastructure needed to provide continued reliable electric service to facilities depended upon to provide critical service, as well as replace aging substation infrastructure that would otherwise require repair or replacement, mitigate existing operational constraints, and make required physical security upgrades in order to maintain the overall long-term reliability of the transmission system, in addition to improving the operational reliability of the distribution and transmission systems. Further, the proposed arrangement shown in Attachment II.C.2 also will allow the Company to take breaker outages for planned and unplanned reasons without impacting the

reliability of service to the Company's transmission facilities that are located in Glebe Substation.

Docket Item #3

Special Use Permit #2011-0014
3601 & 3951 Jefferson Davis Highway – Dominion Virginia Power Electrical Terminal

Application	General Data	
Consideration of a request for an extension of an SUP approval and the removal of the Condition of Expiration for an electrical terminal station	**Planning Commission Hearing:**	October 1, 2013
	City Council Hearing:	October 19, 2013
Address: 3601 and 3951 Jefferson Davis Highway, Potomac Yard	**Zone:**	CDD#10 – South Potomac Coordinated Development District CDD#19 – North Potomac Coordinated Development District
Applicant: Dominion Virginia Power	**Small Area Plan:**	North Potomac Yard Potomac Yard/Potomac Greens

Staff Recommendation: APPROVAL subject to compliance with all applicable codes and ordinances and the recommended conditions.

Staff Reviewers: Amy Friedlander, Planning and Zoning, amy.friedlander@alexandriava.gov

PLANNING COMMISSION ACTION, OCTOBER 1, 2013: On a motion by Commissioner Wagner, seconded by Vice Chair Dunn, the Planning Commission voted to recommend approval of SUP #2011-0014 as amended. The motion carried on a vote of 7 to 0.

Reason: The Commission found the proposed application to be consistent with the intent of the Four Mile Run Restoration Plan and the North Potomac Yard Small Area Plan.

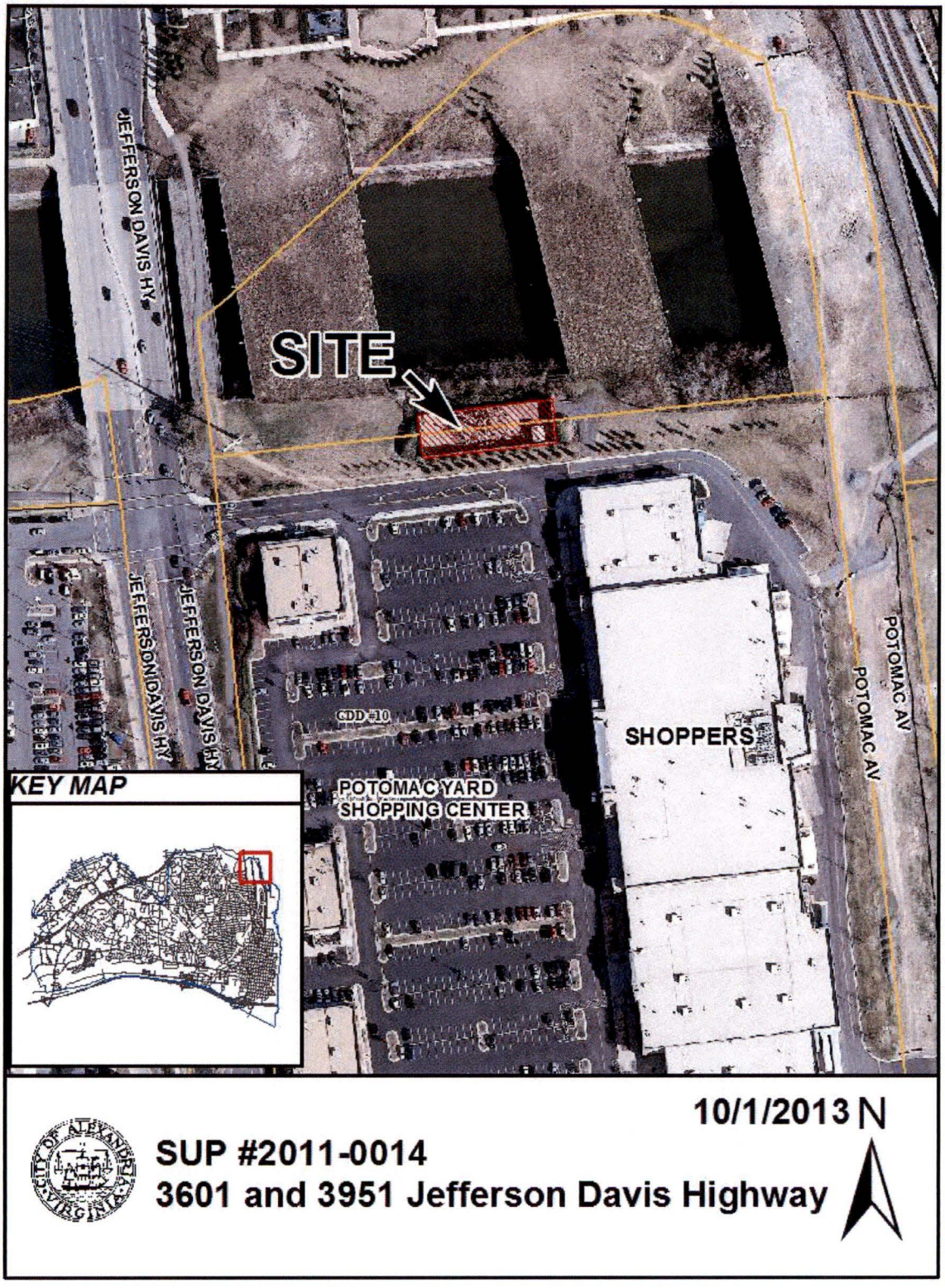
Speakers:
Howard Middleton, attorney for the applicant, represented the application.

Judy Noritake, representing the Parks and Recreation Commission and the Four Mile Run Joint Task Force, spoke in favor of the relocation of the terminal station and the consistency with the Four Mile Run Restoration Master Plan. She referenced the letters sent to Planning Commission from the Parks and Recreation Commission (dated September 30, 2013) and the Four Mile Run Joint Task Force (dated September 30, 2013).

PLANNING COMMISSION ACTION, JUNE 7, 2011: On a motion by Mr. Wagner, seconded by Mr. Jennings, the Planning Commission voted to defer the SUP request. The motion carried on a vote of 6-0, with Mr. Robinson absent.

Reason: The Commission deferred consideration of this request until the November Planning Commission hearing, with the understanding that the applicant will 1) undertake a serious, detailed analysis of the options for relocating the terminal facility, to include such information as alternative locations, issues, engineering hurdles and possibilities, and costs; 2) meet with planning staff, landowners, WMATA, Arlington County, and other entities who may play a role in the potential relocation options; and 3) present the result of this work in a report to the City in time to present to the Commission for its November consideration. The Commission also noted that staff has agreed not to pursue enforcement against the applicant, given that the application for extension of time has been filed, and that Dominion Virginia Power has taken all steps it needs to do to keep its permit alive, and this approach is consistent with staff's approach in other similar cases.

In the intervening time, updates were presented to Planning Commission in November 2011 and February 2012 regarding the status of completion of Planning Commission's June 7, 2011 request.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JEFFERSON DAVIS HY
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JEFFERSON DAVIS HY
CDD #10
POTOMAC YARD
SHOPPING CENTER
SHOPPERS
POTOMAC AV
POTOMAC AV
KEY MAP
10/1/2013
N
SUP #2011-0014
3601 and 3951 Jefferson Davis Highway

I. OVERVIEW

The Applicant, Dominion Virginia Power, is requesting an amendment to the existing special use permit for the electric terminal facility (SUP#96-0091) to eliminate Condition #5, which requires the facility to be removed within 15 years from the original approval in 1996. (Attachment 1)

As part of the overall undergrounding of the 230 kV lines throughout the City, there was a need for a terminal facility at Four Mile Run. The terminal facility transitions the 230 kV lines from underground to overhead.

At the Planning Commission and City Council hearing in 1996, there was considerable discussion about the impact of the proposed terminal facility on the visual quality on this important gateway to the City. In addition, during the discussion by the Planning Commission and City Council in 1996, concerns were raised that this terminal facility might preclude or impact future planning or development in the northern portion of Potomac Yard, which is why the 15 year expiration condition was required as part of the special use permit approval.

At its June 7, 2011 hearing, The Planning Commission deferred action on the application, requesting *"that the applicant will (1) undertake a serious, detailed analysis of the options for relocating the terminal facility, to include such information as alternative locations, issues, engineering hurdles and possibilities, and costs; (2) meet with planning staff, landowners, WMATA, Arlington County, and other entities who may play a role in the potential relocation options; and (3) present the result of this work in a report to the City in time to present to the Commission for its November consideration."*

As requested by the Planning Commission, an alternatives report was completed and submitted by Dominion Virginia Power (Attachment 2). Six alternative sites and the retention of the existing site and facility were analyzed (Figure 2).

Although six sites were evaluated as discussed in more detail below, site 6 (Figure 3) is the only viable option because of ownership, location, and use of the other proposed sites.

Relocation of the terminal facility to Site 6, the existing Dominion Virginia Power substation in Arlington, would allow the lines to be placed underground and overhead facilities to be removed. Dominion Virginia Power projects the cost to relocate the facility, lines, and remove poles to be approximately $22 million in 2011 dollars.

After determining that Site 6 was the only viable alternative, City staff has been working with Dominion Virginia Power, Arlington County, WMATA, and the landowners of North Potomac Yard's Landbay F to find appropriate solutions for all the various issues that have been raised during the process.

The existing Dominion Virginia Power substation and the relocation option Site 6 are adjacent to the existing WMATA employee and bus parking facility on Four Mile Run. Construction of Site 6 will impact the WMATA bus parking area. It was originally believed that only a few buses on the WMATA bus parking lot would have to be relocated in order for Dominion Virginia Power

to adequately accommodate its construction areas but after more analysis and discussion with WMATA it was determined that all 110 buses would need to be relocated because the buses need to be located together for operational reasons. This was the major issue City staff has been working to resolve as locating 2 contiguous acres of paved surface for the displaced buses in close proximity to the current WMATA bus depot in Arlington proved to be challenging.

The process has been lengthy for many reasons including the complexity of the proposed relocation, existing leases, multiple property owners, constructability and timing, and logistical issues surrounding relocating WMATA bus parking. Staff believes that the solution proposed here to relocate buses to Landbay F after 2019 will allow for the future relocation of the terminal facility and appropriate accommodations for the impacted WMATA bus parking.

Because of the complex nature of the construction and the necessary coordination between multiple parties and two jurisdictions, staff is recommending the following, subject to approval by the State Corporation Commission and other applicable agencies:

a. Relocation of the terminal facility to the existing Dominion Virginia Power substation site (site 6) as generally depicted in Figure 3;
b. Removing the 3 existing poles and relocating the 230kV line below grade as generally depicted in Figure 3; and
c. Extension of the special use permit until January 1, 2021.

Staff believes extension of the special use permit until 2021 is necessary to allow the continued operation of the facility because of the complicated and extensive approvals Dominion Virginia Power will need to obtain followed by the construction period to relocate the facility. Given the existing leases, the proposed timing allows the property owner of Landbay-F to work with existing tenants.

In addition to approval by the Planning Commission and City Council, relocation of the terminal facility will require approval by the State Corporation Commission (SCC) and coordination with Arlington County, WMATA, and the property owner of the Potomac Yard Shopping Center, Virginia Marine Resources Commission, Corps of Engineers, VDOT, and meet the Virginia Department of Conservation's Erosion and Sedimentation Control and Stream Water Management requirements.

II. ZONING/MASTER PLAN DESIGNATION

The northern parcel at the site is zoned CDD#10, while the southern parcel is zoned CDD#19. The underlying zoning for the site is I-Industrial (Figure 4). Sections 4-1402(Z) and 7-1202(B) of the Zoning Ordinance require a special use permit for the construction of transmission wires and facilities that exceed 65 feet in height as the three poles that cross Route 1 and Four Mile Run range in height from approximately 100' to 130'. The terminal facility spans both parcels and is located almost entirely within the Resource Protection Area (RPA).

III. PROJECT DESCRIPTION

The terminal facility, constructed in 1997, contains equipment needed to connect the underground 230kV lines along Route 1 to the above-ground 230 kV lines that run west down the middle of Four Mile Run (Figure 1). The facility is an approximately 160' by 60' enclosure surrounding two 80' poles and other equipment measuring up to 47' tall (Figure 5). It is an unmanned facility and rarely accessed; access is provided on the east side of the facility.

IV. TABLE 1: OVERVIEW OF POTOMAC YARD PLANNING & DEVELOPMENT

Year	Type	Action
1996	Agreement with RF&P	Dominion Virginia Power locates the 230kV overhead transmission lines located in Potomac Yard below grade.
1996	SUP #96-0091	The special use permit (SUP#96-0091) for the existing terminal facility is approved, which include a condition that required a "*15-year expiration, for removal of the terminal facility.*"
1997	SIT#96-0021	Terminal facility constructed and operational.
1999	CDD#10	Approval of the South Potomac Yard CDD Zoning, Concept Plan and Design Guidelines
2003	DSUP#2002-0026	Potomac Greens approval
2003	DSUP#2002-0028	Landbay C approval, 901 Slater's Lane
2006	Master Plan	Four Mile Run Restoration Master Plan approved by Alexandria and Arlington
2006	DSUP#2004-0048	Landbay H & Partial Landbay I
2007	DSUP#2006-0026	Landbay G & Fire Station, affordable housing
2008	DSUP#2006-0013	Approval of 23.66 acre linear park within CDD#10, Landbay K
2008	Master Plan	Comprehensive Transportation Master Plan
2009	DSUP#2007-0022	Town Center Mixed-Use Development
2009	DSUP#2006-0018	Landbays I and J (East)
2010	CDD#19	CDD zoning per North Potomac Yard Small Area Plan & adoption of Urban Design Standards
2011	FEASIBILITY STUDY	Potomac Metro Environmental Impact Study conducted
2011	SUP#2011-0014	Dominion Virginia Power filed a request for an amendment to the existing SUP to remove the 15 year limit.
2011	SUP#2011-0014	The Planning Commission deferred the application to provide a detailed Alternatives Analysis Report.
2012	DSUP#2011-0001	Landbay L, multifamily building with retail
2012	DSUP#2012-0012	Landbay J, multifamily building
2012	DSUP#2011-0021	Landbay H/I, multifamily building

V. FOUR MILE RUN RESTORATION MASTER PLAN

In 2006, Alexandria and Arlington jointly developed and subsequently approved the Four Mile Run Restoration Master Plan and Design Guidelines. The goal was to ecologically and aesthetically improve the Four Mile Run Stream Corridor while not comprising the flood protection project implemented in the 1970's. Since the Plan's adoption, the jurisdictions have made a continued effort to implement many of the Plan's in-stream ecological recommendations through Federal grants from the U.S. Environmental Protection Agency. The Plan also calls for transforming the Stream Corridor's adjacent open space areas into functional recreational and environmental destinations, in contrast with the former utilitarian or industrial uses of many of these areas. As such, the Four Mile Run Master Plan recommends *"the undergrounding of the high voltage electrical transmission lines that currently occupy, and visually dominate, the corridor, both in the stream and alongside it." The recommendation is based on "numerous comments [raised by the public at the master planning meetings] regarding the visual blight caused by the existence of these lines, which are located both alongside and within the stream."*

VI. NORTH POTOMAC YARD SMALL AREA PLAN (LANDBAY F)

In 2010, City Council approved the North Potomac Yard Small Area Plan and associated approvals for the existing retail shopping center. The Plan and CDD zoning builds on the Four Mile Run Restoration Master Plan, requiring a 2.3 acre Crescent Park adjacent to Four Mile Run as well as other improvements next to Four Mile Run intended to provide a wide range of opportunities for active and passive open space. Together, the Four Mile Run Master Plan and the North Potomac Yard approvals provide open space amenities along both sides of Four Mile Run and emphasize the valuable ecological and urban assets the area has to offer. Removal of the terminal facility is consistent with the intent of the North Potomac Yard Master Plan to provide improved open space and enhance the visual quality of this gateway entrance to the City, adjacent to Four Mile Run. Removal of this facility would eliminate the overhead lines, remove the facility from the resource protection area (RPA) and remove this structure from the middle of the 3.5 acres of open space planned adjacent to Four Mile Run (Figure 6 and 7). The North Potomac Yard open space, the Four Mile Run Restoration Master Plan, and the open space within Arlington County will result in a significant open space area for both the City and Arlington County.

VII. ALTERNATIVES REPORT

As requested by the Planning Commission, Dominion Virginia Power, in conjunction with the City and Arlington County, prepared an Alternatives Report (Attachment 2) to evaluate potential sites to relocate the existing terminal facility. The report evaluated six possible sites for relocation of the terminal facility and the retention of the existing facility, or no-build (Figure 2). The analysis details the availability of each site, feasibility, cost, operability, and permits required for each site. Because of technical requirements of the equipment, all options had to be located in close proximity to the existing substation and the existing 230 kV line. The alternatives report determined all six sites were determined viable for construction and operation.

Technological advances have been made which allow the terminal facility to be located on the

existing substation site in Arlington County, which was not feasible in 1996 when the option was first explored. The new equipment is smaller and therefore can be located within the substation site.

Through joint discussions with Arlington County, WMATA, and Dominion Virginia Power over the past year, it was agreed that Site 6 is the only viable alternative to the no-build option.

Site 1 and Site 2 were eliminated due to the significant impacts to the existing WMATA bus and employee parking. Sites 3, 4, and 5 were eliminated by the City (Sites 4 and 5) and Arlington County (Site 3) because they would significantly impact the existing Four Mile Run Park.

Therefore, the only remaining viable site is alternative 6, the site within the existing Dominion Virginia Power substation area.

Table 2: Summary of Alternatives Report

	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
Location (Figure 2)	Existing WMATA bus parking facility	Existing WMATA employee parking facility	On Arlington County 4MR parkland	On Alexandria 4MR parkland	On Alexandria 4MR parkland	On existing substation property in Arlington County
All 3 poles undergrounded	○	○	○	●	●	○
Elimination of facility from RPA	○	○	●	●	●	○
Additional open space to Four Mile Run	○	○	●	●	●	○
Consistent with Four Mile Run Restoration Master Plan	○	○	●	●	●	○
Permanently impacts WMATA parking	●	●	○	○	○	○
Cost (in 2011 dollars)	**24,281,024**	**28,696,869**	**24,543,318**	**24,244,253**	**22,720,741**	**22,231,024**

○ = ACCEPTABLE ● = UNACCEPTABLE

VIII. STAFF ANALYSIS

As outlined above, since the approval of the facility in 1996, there has been considerable land use, transportation, and open space planning and redevelopment in this area (Table 1). The condition requiring removal of the facility within 15 years anticipated the planning and

redevelopment that is occurring within this portion of the City of Alexandria and Arlington County. The terminal facility now occupies a prominent site within the inter-jurisdictional plans including the City's North Potomac Yard Plan, Arlington's Potomac Yard Plan, and the Four Mile Run Restoration Master Plan. The relocation of the facility is consistent with these inter-jurisdictional documents and augments the implementation of these plans.

In 2011, Dominion Virginia Power originally applied for the removal of the 15 year expiration on their SUP from 1996. At the hearing for this request, Planning Commission asked for alternative proposals and deferred the application. In the intervening time since the deferral, City staff has been working with the various parties involved to make the only viable alternative from Dominion Virginia Power's alternatives report possible.

Staff is recommending the removal and relocation of the terminal facility, but in order to accomplish that goal, the timeline has to be extended to 2021 to accommodate the remaining extensive and complicated approvals and enable the bus parking relocation in coordination with the existing leases on Landbay F.

PARKING RELOCATION (WMATA, CITY OF ALEXANDRIA, LANDBAY F)

The City has been working with Arlington, Dominion Virginia Power, and WMATA to find a suitable solution for the various issues that have come up during this relocation analysis. Initially it was thought that the construction impacts on the WMATA property would only displace a small number of buses. Various iterations of parking options for this scenario were developed and analyzed, including several sites in Alexandria and Arlington.

However, it was later determined that the best solution would be to relocate all 110 buses currently parked at the Four Mile Run site. Staff has worked with the property owner of Landbay F to secure an agreement (Attachment 3) to provide 2 contiguous acres to accommodate the 110 buses that will be displaced and to design and construct the temporary lot (Figure 8). The parking lot may require subsequent site plan approval by the Planning Commission.

WMATA has expressed support of this concept; further details will be resolved by the City and WMATA closer to the time of implementation.

ARLINGTON COUNTY

Arlington County approved its Potomac Yard Design Guidelines in October 2000. The design of Arlington Potomac Yard South Park includes a direct pedestrian connection across the bridge to remain in Four Mile Run to Alexandria. The existing terminal facility is located at the Alexandria end of this bridge. If the terminal facility is not relocated, it will be the first thing pedestrians see as they enter Alexandria from Arlington through Four Mile Run Park.

Arlington County is fully supportive of the relocation and has coordinated with the City and Dominion Virginia Power throughout this process. Arlington County Manager Barbara Donnellan has submitted a letter of support to the City (Attachment 4).

EASEMENT(S)

Before construction commences, the City and Dominion Virginia Power have to perform a property exchange and easement of the land in the Alexandria portion of Four Mile Run under which the 230kV lines will run. State law limitations (Article 7 Section 9) imposed on localities with respect to granting permanent easements prevent the City from directly granting Dominion Virginia Power the necessary authority to locate the line in the park area along Four Mile Run. Instead, the City would need to convey title to the relevant park area to Dominion Virginia Power. Dominion Virginia Power would then encumber the property with the sub-surface and construction easements needed to install and operate the lines and convey the fee interest back to the City.

Arlington County is exempt from the aforementioned state law limitations and would likely seek County Board approval for a permanent easement for Dominion Virginia Power for the portion of the underground line that goes under Arlington.

SUMMARY

There would be temporary impacts associated with construction in the work areas, but ultimately the improvements would be consistent with the inter-jurisdictional Four Mile Run Restoration Master Plan, Arlington's Potomac Yard Design Guidelines, Alexandria's North Potomac Yard CDD #19 Rezoning Conditions, and North Potomac Yard Urban Design Standards.

The terminal facility and the 130' backbone poles are the first things you see when entering the City from Arlington on Route 1. The first glimpse of Alexandria should not include tall, unsightly utilities that can be undergrounded. With the planned redevelopment and park improvements, this area will become a prominent and more appropriate gateway to the City.

The various iterations of the terminal facility were always intended to be temporary sites. The terminal facility could exist within the Dominion Virginia Power substation property in Arlington in perpetuity. Therefore, staff is recommending that the SUP extension should be approved subject to conditions requiring the future relocation of the facility to the Alternative 6 site.

IX. OUTREACH

Staff has presented this case to the Four Mile Run Joint Task Force, which oversees the implementation of the Four Mile Run Restoration Master Plan. The relocation of the terminal facility helps ensure the best possible outcome for implementation of the Four Mile Run Master Plan.

Staff has also presented to the Parks & Recreation Commission, which is in support of the relocation because it will allow the land currently occupied by the terminal facility to be returned to parkland.

X. ON-GOING COORDINATION – NEXT STEPS

Upon approval by the Planning Commission and City Council, and SCC, if received, Dominion Virginia Power will need to work with WMATA to obtain the necessary construction and underground easements to allow the required construction and access. Dominion Virginia Power must also obtain administrative approval from Arlington County for the relocation. After approval by Arlington County, Dominion Virginia Power is required to apply to the Virginia State Corporation Commission (SCC) to obtain a Certificate of Public Convenience and Necessity (CPCN). This involves a regulatory process before the SCC. After the CPCN is obtained, permitting can begin. After all permits are obtained and the design is approved, and after the end of calendar year 2018, the construction is estimated to take 12-14 months, with several required outages on various lines. Construction would be conducted in phases and there is some risk of outages for a few hours at a time. This particular substation cannot take any outages until 2015, but a majority of the construction work can be completed before an outage is required and potentially before the buses need to be relocated.

XI. RECOMMENDED CONDITIONS

Staff recommends **APPROVAL** subject to compliance with all applicable codes and ordinances and the following conditions:

1. The special use permit (SUP#2011-00014) for the Dominion Virginia Power terminal facility (Figure 3) shall be valid until January 1, 2021, subject to the conditions and attachments herein. (P&Z) (CAO)

2. Prior to January 1, 2021, the Applicant shall be responsible for relocating the Dominion Virginia Power terminal facility (Figure 3) and all necessary terminal facility equipment and underground lines within the existing substation property to the facility located within Arlington County as generally consistent with Alternative 6 and for eliminating the three existing steel pole structures and associated lines and elements as depicted in the Alternatives Report dated October 28, 2011. (P&Z)(RP&CA)

3. The Applicant shall prepare and file all necessary applications and plans with the State Corporation Commission (SCC) and all other applicable agencies, including but not limited to Arlington County, Virginia Marine Resources Commission, Corps of Engineers, VDOT, and the Washington Metropolitan Area Transit Authority (WMATA) and comply with the Virginia Department of Conservation's Erosion and Sedimentation Control and Storm Water Management requirements and all applicable requirements and approvals, to permit the relocation of the existing Dominion Virginia Power terminal facility to the Dominion Virginia Power substation property in Arlington (Figure 3) subject to the conditions herein. (P&Z) (T&ES)

4. The Applicant shall be responsible for the submission of a plan depicting all grading, including seeding and stabilization, demolitions, and associated elements as required and/or deemed necessary by the conditions herein to be approved administratively by the City. The

plans shall be to the satisfaction of the Directors of Planning and Zoning, Transportation and Environmental Services and Recreation, Parks and Cultural Activities. The Applicant shall obtain all necessary permits and approval(s) as required herein, related to the plan. (P&Z)(T&ES)(RP&CA)

5. The Applicant shall provide a schedule to the City, within ninety (90) days of approval of the special use permit, outlining the process and schedule to meet the time requirements herein. (P&Z)(T&ES)(RP&CA)

6. The Applicant shall vacate the all easements associated with the existing terminal facility upon removal of the terminal facility as required herein. (P&Z) (RP&CA) (CAO)

7. Any site contamination directly related to Dominion Virginia Power's operations shall be remediated by the Applicant prior to bond release. (RP&CA)(T&ES)

8. **[CONDITION AMENDED BY PLANNING COMMISSION]** In the event that the SCC or other necessary regulatory approvals are denied, then Conditions 1-67 herein shall not apply and the special use permit shall be redocketed for the Planning Commission and City Council, with an alternative plan. (P&Z) (CAO) (PC)

XII. ATTACHMENTS

1. SUP1996-0091 Staff Report
2. Alternatives Report
3. Lionstone/JBG/Landbay F Letter of Support
4. Arlington County Letter of Support
5. Email from City Attorney's Office to DVP regarding easement procedure
6. Email addendum to Lionstone/JBG/Landbay F Letter of Support

STAFF: Faroll Hamer, Director, Planning and Zoning;
Jeffrey Farner, Deputy Director, Planning and Zoning;
Christopher Spera, Deputy City Attorney;
Amy Friedlander, Urban Planner, Planning and Zoning
Bethany Carton, Park Planner, Recreation, Parks and Cultural Activities;
Dana Wedeles, Park Planner, Recreation, Parks and Cultural Activities; and
Claudia Hamblin-Katnik, Watershed Programs Administrator, Transportation and Environmental Services

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Staff Note: In accordance with section 11-506(c) of the zoning ordinance, construction or operation shall be commenced and diligently and substantially pursued within 18 months of the date of granting of a special use permit by City Council or the special use permit shall become void.

IV. STAFF REPORT GRAPHICS

Figure 1: Context

Figure 2: Alternatives analyzed

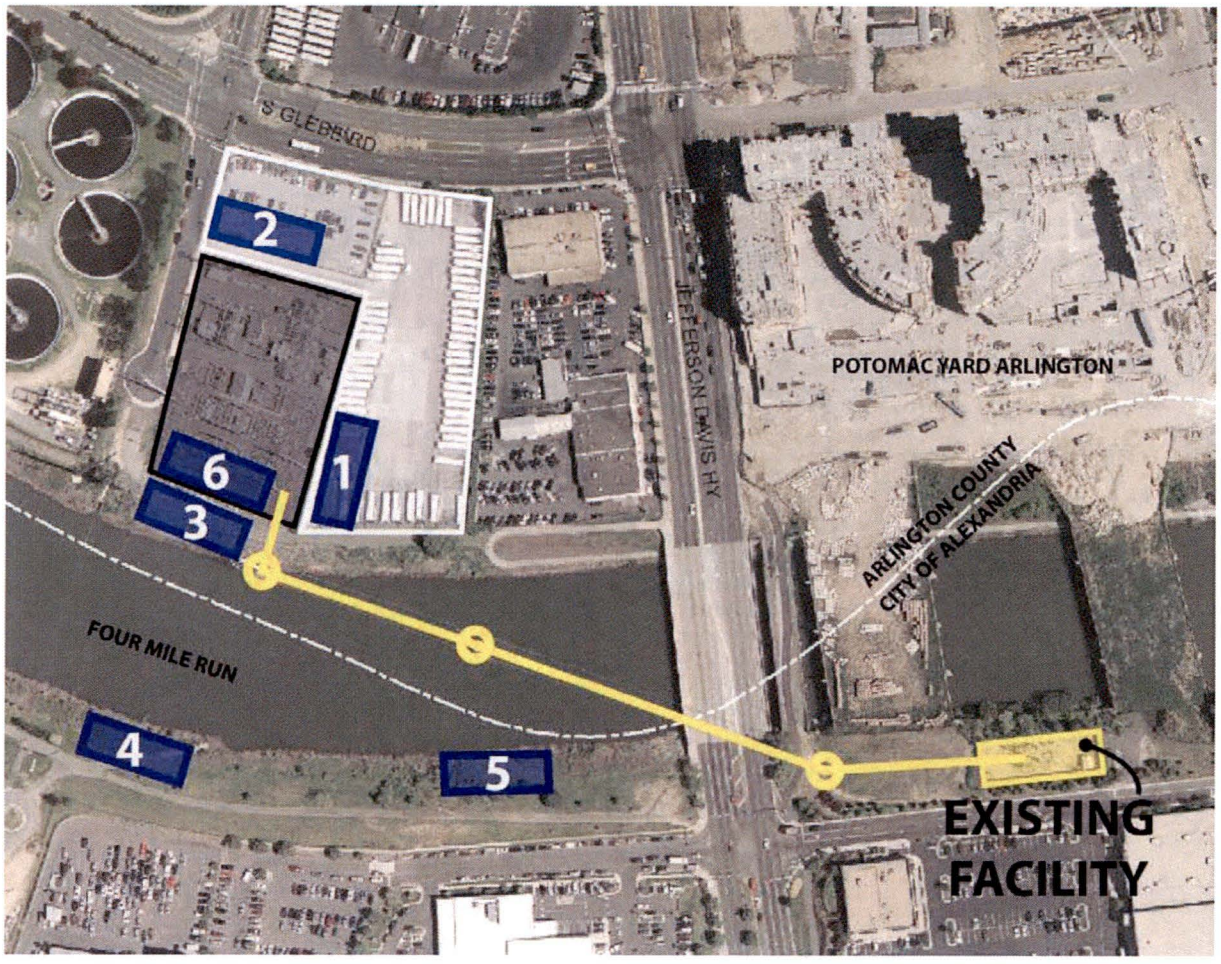

Figure 3: Staff Recommendation

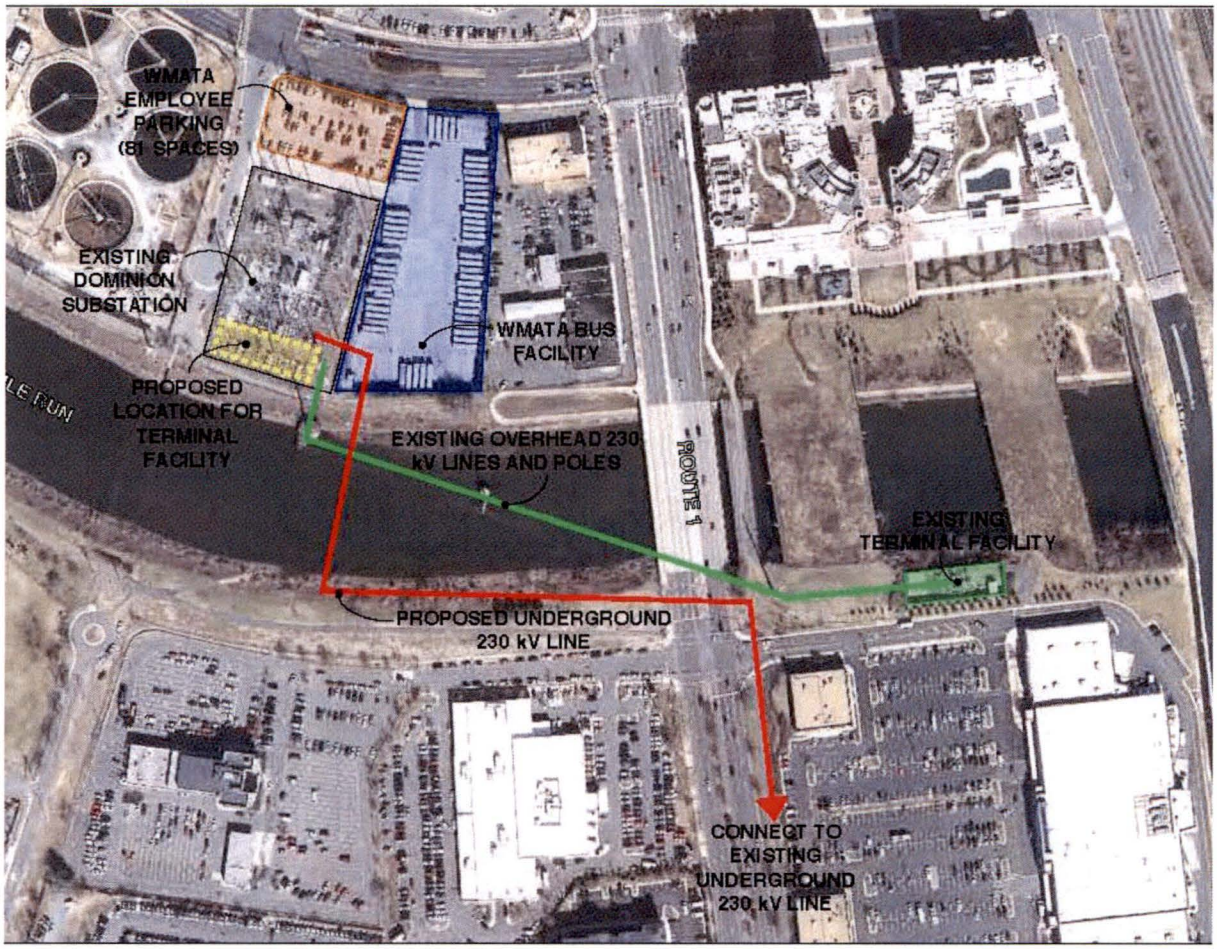

Figure 4: Existing Zoning and RPA Boundary

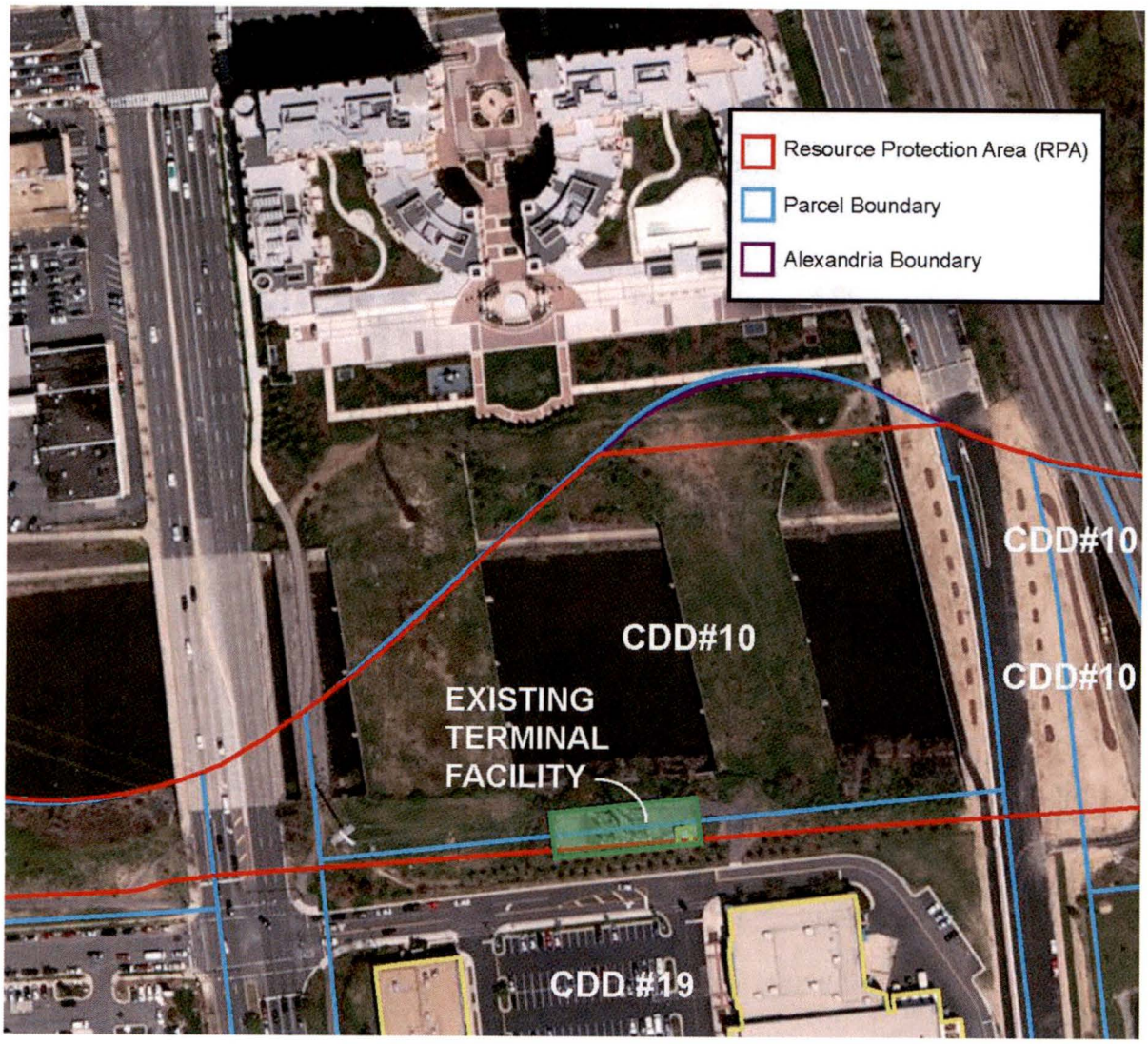

Figure 5: Terminal Facility

Figure 6: Four Mile Run Illustrative Plan

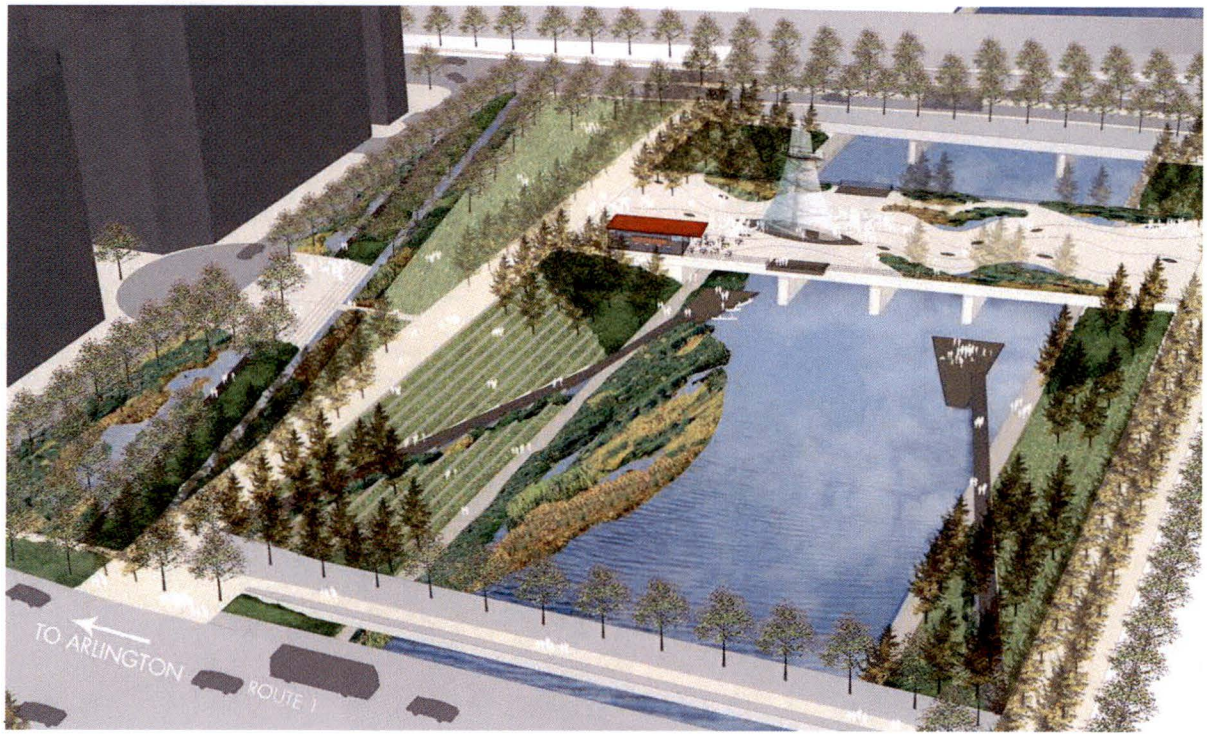

Figure 7: North Potomac Yard Illustrative Plan

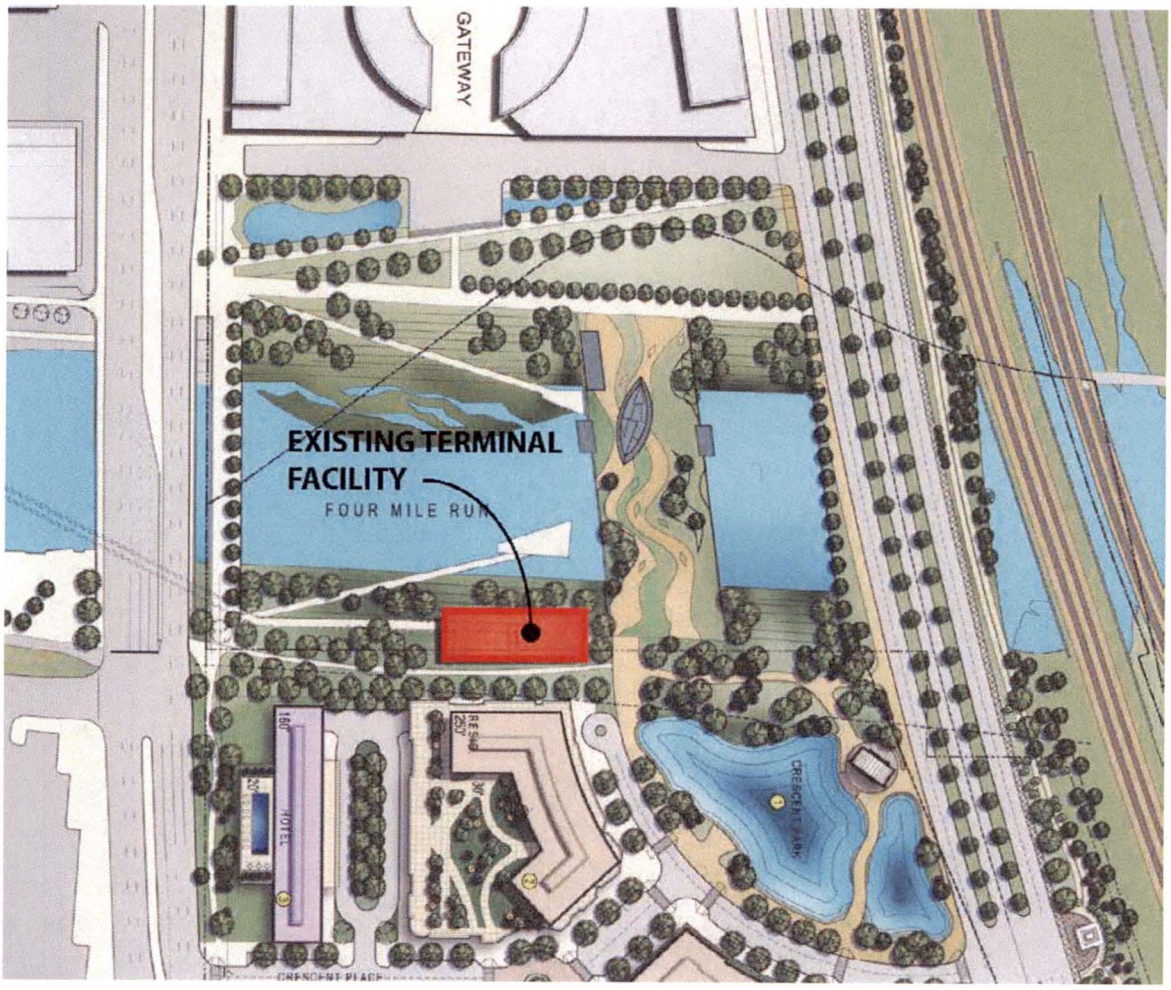

Figure 8: Landbay F Theater Site for Bus Relocation

CITY DEPARTMENT COMMENTS

Legend: C - code requirement R - recommendation S - suggestion F - finding

Transportation & Environmental Services:

No comments

Code Enforcement:

No comments

Health:

No comments

Parks and Recreation:

No comments

Police Department:

No comments

Docket Item #41
SPECIAL USE PERMIT #96-0091

Planning Commission Meeting
June 4, 1996

ISSUE: Consideration of a request for a special use permit to install an overhead-to-underground electric transmission terminal facility.

APPLICANT: Virginia Electric and Power Company (VEPCO) by Jonathan P. Rak, attorney

LOCATION: 3601 Jefferson Davis Highway
Potomac Yard

ZONE: CDD-10/Coordinated Development District, Potomac Yard/Greens

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CITY COUNCIL ACTION, JUNE 25, 1996: City Council approved the recommendation of the Planning Commission, as amended, and approved the request, subject to compliance with all applicable codes, ordinances and staff recommendations and amended Condition #5 and added a Condition #6, shown below:

5. A 15-year expiration, for removal of the terminal facility.

6. The applicant shall come back in the Fall (1996) for an amendment to the Sunset Drive special use permit (SUP 95-0209).

Mr. Rak stated that they would consent and be happy to come back in the Fall, and if delayed because of this track relocation, will give all of the details and explain the source of the delay.

CITY COUNCIL ACTION, JUNE 15, 1996: Deferred until June 25, 1996 regular meeting.

PLANNING COMMISSION ACTION, JUNE 4, 1996: On a motion by Mr. Wagner, seconded by Mr. Komoroske, the Planning Commission voted to recommend approval of the request, subject to compliance with all applicable codes, ordinances and staff recommendations and to add Condition #5. The motion carried on a vote of 5 to 1. Mr. Ragland voted against the motion and Mr. Leibach was absent.

Reason: A majority of the Planning Commission believed that VEPCO should be forced to find a different and less prominent location.

for the terminal facility and added a condition requiring the facility to be removed from the proposed site within two years.

Speakers:

Jonathan Rak, representing the applicant, presented the application.

Marc Allen, VEPCO, explained the problems finding a suitable site.

SUP 96-0091

STAFF RECOMMENDATION:

Staff recommends approval of the request subject to compliance with all codes and ordinances and the following conditions:

1. The applicant shall submit a plan to the satisfaction of the Director of P&Z which includes proposed landscaping, fencing and other measures to the terminal structure, around its base and along Jefferson Davis Highway, the combination of which screens the terminal facility to the maximum reasonable extent. (P&Z)

2. All landscaping shall be maintained in good condition. (P&Z)

3. A final site plan in conformance with Section 11-410 of the zoning ordinance shall be approved by the Director of Transportation and Environmental Services before any permits will be issued for construction. (T&ES) (Code)

4. No final site plan shall be released and no construction activity shall take place until the applicant submits a Health and Safety Plan to the satisfaction of the directors of Health and T&ES indicating measures to be taken during any remediation and/or construction to minimize the potential risks to workers, the neighborhood and the environment. (T&ES) (Health)

5. A 15-year expiration, for removal of the terminal facility. (City Council)

6. The applicant shall come back in the Fall (1996) for an amendment to the Sunset Drive special use permit (SUP 95-0209). (City Council)

Staff Note: In accordance with section 11-506(c) of the zoning ordinance, construction or operation shall be commenced and diligently and substantially pursued within 18 months of the date of granting of a special use permit by City Council or the special

use permit shall become void.

SUP 96-0091

BACKGROUND:

1. The applicant, Virginia Electric and Power Company (VEPCO), is requesting a special use permit to construct an electrical terminal structure on the RF&P property next to Four Mile Run at the north end of Potomac Yard.

2. On March 12, 1996, City Council approved a special use permit allowing VEPCO to erect a temporary terminal facility near the King Street Metro and behind the homes which face Sunset Drive. (SUP #95-0209) The temporary facility is being constructed in order to allow the undergrounding of high voltage electric lines from that point south to the south end of the City at the Jefferson Street substation.

3. The second phase of the work will be the undergrounding of the line from the point of the temporary facility north to the northern boundary of the City. When the second phase of undergrounding is complete, a terminal station will be necessary where the underground lines emerge from the ground and connect to existing overhead lines to the north. After the second terminal station is constructed, the temporary terminal facility at Sunset Drive will be dismantled and removed.

4. The proposed terminal facility at Four Mile Run will be very similar to the one at Sunset Drive. It consists of a backbone structure connecting the overhead wires to the underground conduit and related equipment as shown on the attached drawing. The two proposed backbone poles are 80 feet tall; other structural components are 47 feet tall. The tall poles and structures will be located within the north terminal area, which is a fenced enclosure measuring approximately 160 feet by 50 feet and located at the north end of the Potomac Yard retail shopping center. The terminal will be constructed at a point approximately 260 feet back from the edge of Route 1 and immediately adjacent to Four Mile Run.

5. The applicant has submitted a proposed plan to screen the base of the terminal station which includes a slatted chain link fence and landscaping around the fenced area. At staff's request, VEPCO has also submitted two cross section drawings which show how the structure will appear from the perspective of a driver on Route 1. See attached plans.

6. According to the applicant, the terminal facility will be fully automatic and will not be manned. There will be no employees stationed at the terminal and periodic inspection by one VEPCO employee will occur approximately once a week.

7. Zoning: The subject property is zoned CDD/Coordinated Development District. Section 7-1100 of the zoning ordinance permits overhead transmission wires carried by poles or towers which exceed 65 feet in height with a special use permit in any zone. Since some of the poles within the terminal are in excess of the permitted 65 feet, a special use permit is required.

8. Master Plan: The proposed use is consistent with the Potomac Yard/Potomac Greens Small Area Plan chapter of the Master Plan which designates the property Coordinated Development District.

STAFF ANALYSIS:

Staff generally supports VEPCO's efforts to underground its high voltage lines within the City. Staff attempted to find alternative locations for the north terminal facility because it believes that it will detract from the appearance of the entrance to the City. Staff worked with representatives of VEPCO and the RF&P to that end but was unable to find any alternative feasible site. On balance, staff believes that the benefits to the City from the undergrounding project, with the removal of the tall overhead wires and poles throughout the City, outweigh the harm caused by the appearance of the tall terminal structure at Four Mile Run.

Staff has reviewed VEPCO's proposed plan for screening the base of the facility and discussed its concerns with the applicant as well as the RF&P. Specifically, the chain link fence arrangement is unsatisfactory to both the RF&P and city staff because it is unattractive and not in character with the retail center construction. Staff believes a gated wall made of the same exterior material as the shopping center or another appropriate material will be a great improvement. In addition, staff recommends that the poles be painted light gray and the base be painted a color similar to the shopping center buildings to minimize the visibility of the terminal structure.

As to the applicant's landscaping plan, staff believes what is proposed is minimal and the selection of tree species of a particularly slow-growing variety. Staff also believes that it is important to view any effort to screen the facility in context. Specifically, as to the view from Route 1, grading and landscaping along Route 1 may actually hide the base of the terminal structure more efficiently than more landscaping at the foot of the terminal itself. In addition, any additional landscaping regarding the

terminal should be coordinated with the landscaping already proposed for the retail center. For all of these reasons, staff has included a condition which requires VEPCO to prepare a plan that accomplishes the maximum screening that is reasonably possible, while coordinating any plantings with RF&P's landscape plan for the retail center.

With the recommended conditions, staff recommends approval of the special use permit.

STAFF: Sheldon Lynn, Director, Department of Planning and Zoning; Barbara Ross, Deputy Director.

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SUP 96-0091

CITY DEPARTMENT COMMENTS

Legend: C - code requirement R - recommendation
S - suggestion F - finding

Transportation & Environmental Services:

R-1 A final site plan in conformance with Section 11-410 of the zoning ordinance shall be approved by the Director of Transportation and Environmental Services before any permits will be issued for construction.

Code Enforcement:

R-1 A site plan in conformance with Section 11-410 of the zoning ordinance shall be approved by the director of Transportation and Environmental Services before any permits will be issued for construction.

Health Department:

R-1 A condition of the special use permit be that:

The final site plan shall not be released and no construction activity shall take place until the following has been submitted and approved by the directors of Health and T&ES:

Submit a Health and Safety Plan indicating measures to be taken during any remediation and/or construction to minimize the potential risks to workers, the neighborhood and the environment.

Police Department:

F-1 No objections.

REPORTS OF BOARDS, COMMISSIONS AND COMMITTEES

Planning Commission

26. SPECIAL USE PERMIT #96-0088 -- 207 SOUTH PEYTON STREET
Public Hearing and Consideration of a request for a special use permit to operate a private school; zoned OCH/Office Commercial High. Applicant: St. Coletta's School, by Cyril D. Calley, attorney. (#39 6/15/96)

COMMISSION ACTION: Recommend Approval 6-0

City Council approved the request, subject to compliance with all applicable code, ordinances and staff recommendations.

Council Action:

27. SPECIAL USE PERMIT #96-0091 -- 3601 JEFFERSON DAVIS HIGHWAY -- POTOMAC YARD
Public Hearing and Consideration of a request for a special use permit to install an overhead-to-underground electric transmission facility; zoned CDD-10/Coordinated Development District, Potomac Yard/Greens. Applicant: Virginia Electric and Power Company (VEPCO), by Jonathan P. Rak, attorney. (#60 6/15/96)

COMMISSION ACTION: Recommend Approval 5-1

Mr. Rak stated that they would consent and be happy to come back in the fall, and if we are delayed because of this track relocation we will give you all of the details and explain what the source of the delay was.

City Council approved the recommendation of the Planning Commission, as amended, and approved the request, subject to compliance with all applicable codes, ordinances and staff recommendations and a new Condition #5 that would be a 15-year expiration (for removal of the terminal facility) and a new Condition #6 that would require the applicant to come back in the fall for an amendment to the Sunset Drive special use permit.

Council Action:

ORAL PRESENTATIONS BY MEMBERS OF CITY COUNCIL

(a) Councilman Cleveland complimented and was very grateful for the staff of the Alexandria Hospital Emergency Room for comforting his wife.

(b) Councilman Speck pointed out that in the Washington Business Journal, its headline concerning bankruptcies is misleading. Assistant City Manager Brannan was requested to contact the

Dominion Virginia Power

Potomac Yards North Terminal Site Relocation Study For the City of Alexandria, Virginia

October 28, 2011

Potomac Yards North Terminal Site
Relocation Study

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Request for SUP amendment
SCC Approval Process
Real Estate Communication
§15.2-2404 Code of Virginia

Potomac Yards North Terminal Site
Relocation Study

Purpose/Objective:

By the terms of an easement right-of-way agreement dated 6/1/1969 with the Richmond, Fredericksburg and Potomac Railroad Company (RF&P), Dominion Virginia Power (Dominion) was compelled in the mid- to late 1990's to underground the existing double circuit 230 kV overhead transmission lines in Potomac Yard property, at that time owned by the RF&P. Typically, Dominion's transmission lines continue from one substation to another as either completely overhead or completely underground. In this situation, the Glebe substation in Arlington County, which is the northern end of the two 230 kV circuits, did not have the space within the substation for the equipment required to support the lines as they transition from underground to overhead so they could be brought into the station. Alternative sites were studied at the time, but most were found unsuitable to the property owners of those sites. Ultimately, the City of Alexandria, the property owner of Potomac Yards and Dominion agreed to a site at the northern edge of Potomac Yard along Four Mile Run in the City of Alexandria to locate a small terminal station that would allow the transition of the electric transmission lines from underground to overhead and across Four Mile Run into Glebe Substation. The overhead portion of this solution was already in place and required minor adjustment. Dominion obtained Special Use Permit 96-0091 on June 25, 1996 from the City of Alexandria for the Four Mile Run North Terminal Site. That approval contained Condition #5, which provided that the SUP would expire in 15 years. (A copy of the existing Special Use Permit is included as an Attachment.) The terminal facility is on perpetual easement granted by the property owners who currently own the properties where the existing terminal station resides.

Dominion filed a request in March 2011 asking the City of Alexandria to remove Condition #5 of the existing Special Use Permit to and allow the permit to be perpetual. (A copy of that request is included as an Attachment.) The City staff and members of the Planning Commission felt the terminal station and overhead transmission lines were not appropriate in their present location due to high-rise residential redevelopment that is planned in that area. That request was tabled until the November 2011 meeting of the Planning Commission, and the City asked for additional review and studies of alternative sites.

This is a report documenting the six alternative sites for the terminal station and a no change option, their availability, the feasibility and cost of bringing the underground lines to each site, the feasibility and cost of constructing a similar terminal station on each site, the operability of a terminal facility at each site, and the permits required for each site.

Dominion remains convinced that the best solution is to leave the existing Potomac Yard North Terminal Station in its present location and use a landscaping and/or façade redesign to lessen the visual impacts the City finds so objectionable. Dominion will share in the cost of any design solution with the developer of the redevelopment around the existing terminal station. Presently, the developer has been charged with screening the terminal station in the approval obtained from the City for the redevelopment.

However, if the City of Alexandria supports an alternative site, Dominion will bear the time and expense of preparing an application to the Virginia State Corporation Commission (SCC), who has authority (§56-46.1) for all transmission facilities 150 kV and above, to present the City's request for an alternative site. Dominion has not committed to shouldering the cost of any proposed relocation unless ordered by the SCC. The SCC approval process is outlined in an Attachment.

Potomac Yards North Terminal Site
Relocation Study

Executive Summary:

By the terms of an easement right-of-way agreement dated 6/1/1969 with the Richmond, Fredericksburg and Potomac Railroad Company (RF&P), Dominion Virginia Power (Dominion) was compelled in the mid- to late 1990's to underground the existing double circuit 230 kV overhead transmission lines in Potomac Yard property, at that time owned by the RF&P. Typically, Dominion's transmission lines continue from one substation to another as either completely overhead or completely underground. In this situation, the Glebe substation in Arlington County, which is the northern end of the two 230 kV circuits, did not have the space within the substation for the equipment required to support the lines as they transition from underground to overhead so they could be brought into the station. Alternative sites were studied at the time, but were found unsuitable or unavailable. Ultimately, the City of Alexandria, the property owner of Potomac Yards and Dominion agreed to a site at the northern edge of Potomac Yard along Four Mile Run in the City of Alexandria to locate a small terminal station that would allow the transition of the electric transmission lines from underground to overhead and across Four Mile Run into Glebe Substation. The overhead portion of this solution was already in place and required minor adjustment. Dominion obtained Special Use Permit 96-0091 on June 25, 1996 from the City of Alexandria for the Four Mile Run North Terminal Site. That approval contained Condition #5, which provided that the SUP would expire in 15 years. The existing terminal facility is on perpetual easement granted by the property owners who currently own the properties where the existing terminal station resides.

Dominion filed a request in March 2011 asking the City of Alexandria to remove Condition #5 of the existing Special Use Permit to and allow the permit to be perpetual. That request was tabled until the November 2011 meeting of the Planning Commission, and the City asked for additional review and studies of alternative sites.

A study was prepared that compared six alternative sites for the terminal station and a no change option, their availability, the feasibility and cost of bringing the underground lines to each site, the feasibility and cost of construction a similar terminal station on each site, the operability of a terminal facility at each site, and the permits required for each site. Five of those sites would require property purchase, and one considered the use of new equipment within the existing Glebe Substation. Three of those sites are owned by the County of Arlington or City of Alexandria and are adjacent to Four Mile Run within public recreational space. Two of the sites are on property owned by WMATA and used for much needed parking for both their employees and Metro buses.

Using sites 1-6 would remove the overhead transmission lines over US Route 1. Using sites 1-3 and 6 would also remove the overhead transmission lines that cross Four Mile Run.

All six sites were found to be constructible and viable for electrical operations and electric transmission system support. Costs were variable depending on construction and facility requirements. However, property owners of the sites 1-5 did not indicate a willingness to locate the terminal station on their property.

Of the possible alternative sites reviewed, only Site 6 within the existing Glebe Substation is possible at this time due to property availability. Dominion remains convinced that the best solution is to leave the existing Potomac Yard North Terminal Station in its present location, and use a design solution to lessen the visual impacts the City finds so objectionable. Dominion will share in the cost of any design solution with the developer of the redevelopment around the existing terminal station.

However, if the City of Alexandria supports an alternative site, Dominion will bear the time and expense of preparing an application to the Virginia State Corporation Commission (SCC), who has authority (§56-46.1) for all transmission facilities 150 kV and above, to present the City's request for an alternative site. If the City of Alexandria requests that Dominion proceed with an application to the SCC, both written and oral testimony would be beneficial from the City of Alexandria and the County of Arlington

Potomac Yards North Terminal Site
Relocation Study

Funding for a relocation of the terminal station and undergrounding the overhead transmission lines remains an issue that requires further discussion. Dominion has not committed to shouldering the cost of any proposed relocation unless ordered by the SCC. The cost of construction of both an alternative terminal station and placing the overhead transmission lines underground is significant. Dominion Virginia Power cannot justify asking the electric ratepayer to support the cost of this project without SCC mandate, as the existing facilities are safe and reliable.

If the City of Alexandria and County of Arlington request reconstruction and relocation of the overhead head line to underground, please see § 15.2-2404.F of the Code of Virginia for possible funding solutions.

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North Potomac Yards Cost Summary						
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Transmission						
OH	$1,219,290	$3,140,796	$772,211	$2,780,571	$2,746,107	$772,211
UG	$21,816,698	$24,311,037	$20,972,615	$20,218,646	$18,729,598	$21,110,198
Total Transmission	$23,035,988	$27,451,833	$21,744,826	$22,999,217	$21,475,705	$21,882,409
Substation						
	$1,245,036	$1,245,036	$2,798,492	$1,245,036	$1,245,036	$348,615
Extended	$24,281,024	$28,696,869	$24,543,318	$24,244,253	$22,720,741	$22,231,024

Potomac Yards North Terminal Site
Relocation Study

Alternative Discussion:

Dominion created a team made up of Electric Transmission employees that included line engineering, substation engineering, electrical system planning, operations, real estate, and permitting. This team reviewed sites in the surrounding area of the Glebe Substation and existing terminal site and presented these sites to both the Alexandria City Staff and Arlington County Staff for their comments. The team was interested in determining if any of the sites had a "fatal flaw" from the position of the municipal staffs and also if there were other sites that should be included. Many of the sites were the same considered in an alternative analysis that occurred in 1995-1996 prior to the first terminal site being built. The properties have not changed substantially in the fifteen years that have passed since that previous study, and the engineering parameters are similar, though there has been some progress in substation equipment. In an effort to reduce visibility of the required overhead line between a terminal site and Glebe Substation, no sites that required more than one or two spans were considered. The team decided not to study a site that would impact the ball field at Four Mile Run Park, and the team decided there were no options west of Glebe Substation, near or on the Arlington County waste water treatment plant property.

Siting parameters included:

- Size of enclosure: 50'X160'
- Size of site: 60'X170' / additional if setback required
- OH 230 kV line: 100'-120' wide right-of-way required/dependent on distance between structures
- UG 230 kV Line: See the Attachment indicating typical trench
  30' wide right-of-way required during construction and for future maintenance and repairs.
  Manholes typically 20'X20' (see the Attachment)
  Cable bends with a typical radius of 500'
- UG Line Oil Pumping Station: To be located in terminal site but presence does not affect location
- Temp. constr. site for directional drilling: These sites are typically 150'X150' but can be modified as needed (see the Attachment)

The sites being considered and discussed are shown on maps included in the addendum, and include:

1. Site 1 is adjacent to the southeast corner of the Glebe Substation on property owned by the Washington Metropolitan Area Transit Authority (WMATA) and presently used as a Metro bus lot. It is in Arlington County.
2. Site 2 is a site on the north side of Glebe Substation on property owned by WMATA and presently used for employee parking. It is in Arlington County.
3. Site 3 is adjacent to the south side of Glebe Substation (north side of Four Mile Run) where the walking trail parallels Four Mile Run. It is located in and owned by Arlington County.
4. Site 4 is directly across from Glebe Substation on the south side Four Mile Run and is in and owned by the City of Alexandria.
5. Site 5 is on the south side of Four Mile Run, immediately west of U.S. Route 1, and is in and owned by the City of Alexandria.
6. Site 6 is within Dominion Virginia Power's Glebe Substation in Arlington County. New gas insulated equipment is available that allows this site to be included in the alternatives.
7. Use existing Potomac Yard North Terminal Station location

Sites 1-5 require property purchase, and Site 6 considers the use of new equipment within the existing Glebe Substation. Site 3 (owned by the County of Arlington) and sites 4 and 5 (owned by the City of Alexandria) are

adjacent to Four Mile Run and within public recreational space. Because they are adjacent to Four Mile Run, these three sites require retaining walls and fill to level the sites for a terminal station. Site 3 would require this fill within Four Mile Run to allow the relocation of the pedestrian path around the station. Two of the sites are on property owned by WMATA and used for much needed parking for both their employees and Metro buses. Site 6 takes advantage of new technology that has reduced the size of certain equipment, allowing the terminal equipment to fit within the existing Glebe Substation.

Using sites 1-6 would remove the overhead transmission lines over US Route 1. Using sites 1-3 and 6 would also remove the overhead transmission lines that cross Four Mile Run.

The costs are generally comparable with differences due to the additional costs associated with the use of Site 3 and its constructability issues, and costs associates with the length of the underground line construction.

All six sites were found to be constructible and viable for electrical operations and electric transmission system support. Excepting Dominion Virginia Power, property owners of these sites that required purchase did not indicate a willingness to locate the terminal station on their property.

Site 6 has fewer costs. The site is existing with some rearrangement and additional equipment required within the existing fence.

Potomac Yards North Terminal Site
Relocation Study

Site 1:
Relocating the terminal station to this site removes the visual impacts of the overhead transmission lines and places the terminal station directly adjacent to the east side of the existing Glebe Substation. Impacts include the loss of a portion of WMATA's parking area for Metro buses, and temporary impacts associated with the work areas needed on each side of Four Mile Run and the east side of US Rte. 1 for the directional drill operation.

Real Estate

Contacts: 03/02/2011 - Mr. Mark Meister; 08/01/2011 – Anabela Talaia
Both from the WMATA Office of Station Area Planning and Asset Management

Results: Property not available as it is required to support WMATA's Four Mile Run Metrobus Garage operations.

Transmission

Estimate

Overhead Section	$ 1,219,290
Underground Section	$21,816,698
Total	$23,035,988

Substation / System Protection

Estimate: $1,245,036

Permits:
This alternative would require the construction of 230 kV underground transmission lines under US Route 1 and Four Mile Run and an expansion of Glebe Substation for a new terminal facility. Permits required:

- SCC Certificate
- Corps of Engineers Permit
- Va. Marine Resources Commission Permit
- Va. Dept. of Transportation Land Use Permit
- Arlington County Use Permit
- E&S/Land Disturbing Permit
- Va. Storm Water Management Permit

Operability and Work Ability
Required outages:

- Line 248 Ox to Glebe
- Line 2023 Jefferson St. to Glebe
- Line 275 Glebe to Crystal
- Bus #5 at Glebe
- Delivery transformer #1 at Glebe

Both circuits 248 and 2023 cannot be out of service at the same time. This would create an undesirable reliability satiation. Another 230 kV transmission line would be over loaded and fail. This could cause a cascading effect to the system.

Removing bus #5 at Glebe effectively removes one of the circuits (line 275) to Crystal from service. This alone is acceptable, but if an unplanned event should occur on the adjacent line to Crystal (line 276) the crews would have to stop work and release their outage on bus #5. This event would cause outages to customers in the area for a couple hours until the bus is returned to service.

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Potomac Yards North Terminal Site
Relocation Study

The construction plan is acceptable with the understood limits, requiring two separate operations to accomplish the overall objective. Also, progress would stop if an unplanned event were to occur on line 276 Glebe to Crystal

Conclusions / Recommendations
The current property owners will not make this site is available for a relocated terminal site. Further consideration is not reasonable without WMATA agreement to sell the site.

Total estimated cost for this site is $24,281,024

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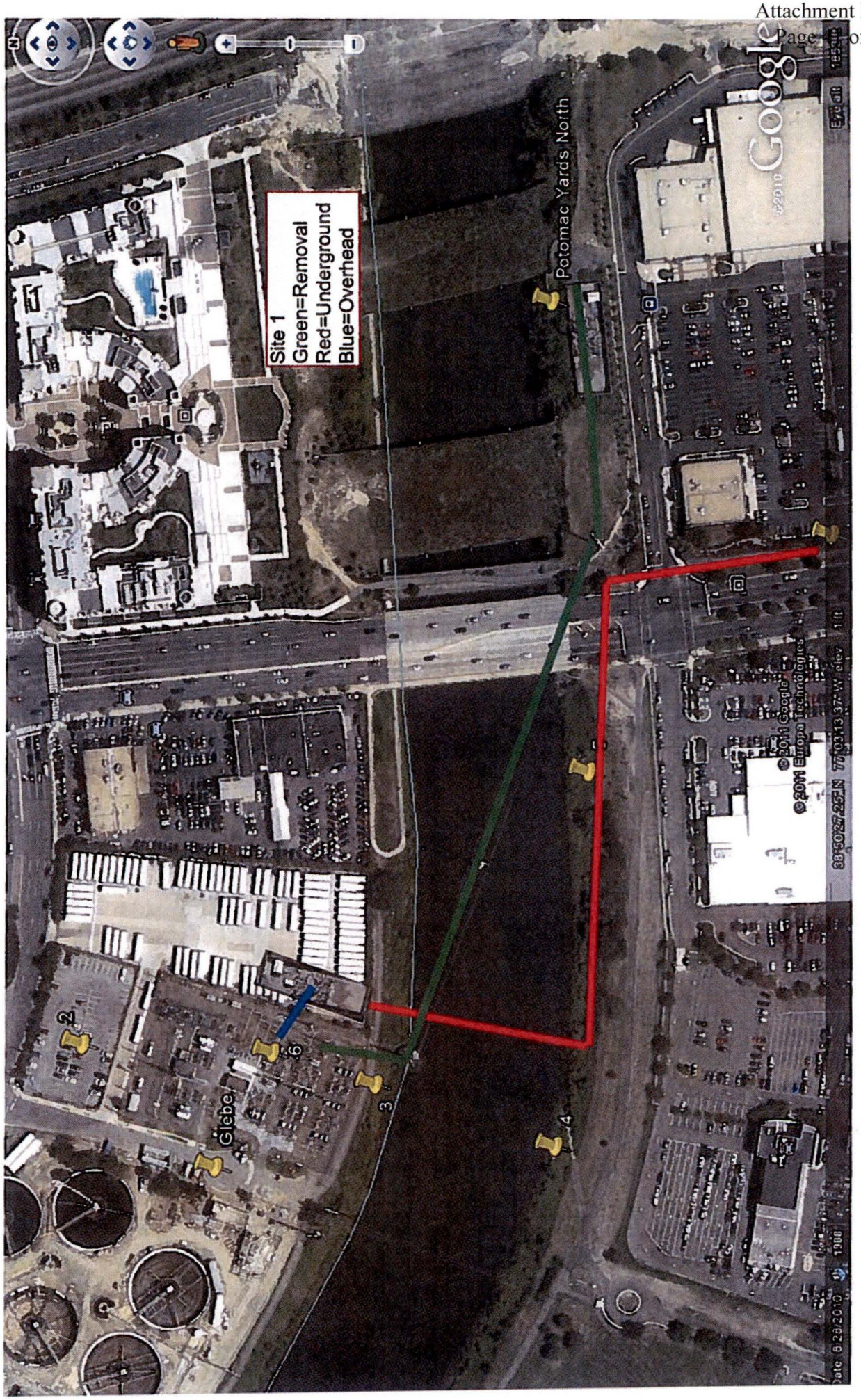
Site 1
Green=Removal
Red=Underground
Blue=Overhead
Potomac Yards North
Glebe
2
6
3
4
Google
©2011 Google
©2011 Europa Technologies

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 1)

Prepared by: R.J. Shevenock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Transmission Line (OPTION 1)							
Engineering							
Transmission Engineering	$19,601	$0	$0	$3,000	$0	$9,473	$32,074
Planning	$0	$0	$0	$0	$0	$0	$0
Engineering	**$19,601**	**$0**	**$0**	**$3,000**	**$0**	**$9,473**	**$32,074**
Project Management & Support							
Project Managers	$27,312	$0	$575	$0	$0	$12,567	$40,454
Project Marketing Managers	$3,085	$0	$0	$0	$5,000	$3,444	$11,529
Siting & Permitting	$16,162	$0	$181	$0	$263,900	$53,771	$334,013
Real Estate	$0	$0	$0	$0	$0	$0	$0
Survey	$6,775	$0	$368	$58,200	$0	$13,382	$78,725
Forestry	$0	$0	$0	$0	$0	$0	$0
Forestry (Herbicide Treatment)	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$53,334**	**$0**	**$1,124**	**$58,200**	**$268,900**	**$83,163**	**$464,721**
Construction Labor & Materials							
Contractor Mobilization	$0	$30,360	$0	$98,620	$2,500	$27,432	$158,912
Wires	$0	$5,214	$0	$5,507	$0	$2,455	$13,176
Structures	$0	$149,183	$0	$143,300	$0	$72,676	$365,159
Construction Management	$31,373	$2,650	$6,745	$0	$0	$15,970	$56,739
Construction Labor & Materials	**$31,373**	**$187,407**	**$6,745**	**$247,427**	**$2,500**	**$118,533**	**$593,985**

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 1)

Prepared by: R.J. Shevenock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Land Acquisition					$0		$0
TOTAL CAPITAL COSTS	$104,308	$187,407	$7,869	$308,627	$271,400	$211,170	$1,090,780
COST OF REMOVAL	$0		$0	$121,215		$21,295	$142,510
SALVAGE		($14,000)					($14,000)
O&M COSTS	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$104,308	$173,407	$7,869	$429,842	$271,400	$232,465	$1,219,290

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DOMINION TECHNICAL SOLUTIONS
UNDERGROUND TRANSMISSION SUMMARY

PROJECT NAME: Potomac Yards Subst Relo 230kV UG HPPT
PROJECT NO: Site 1
PREPARED BY: AK
REVISION: 1
PRINT DATE: 10/19/2011

DESCRIPTION	VP LABOR	VP MATERIAL	VP EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
TRANSMISSION ENGINEERING	$188,400	$0	$0	$392,500	$0	$0	$580,900
CATHODIC PROTECTION ENG	$23,550	$0	$0	$47,100	$0	$0	$70,650
TELECOMMUNICATION ENGINEERING	$23,550	$0	$0	$62,800	$0	$0	$86,350
ENGINEERING	**$235,500**	**$0**	**$0**	**$502,400**	**$0**	**$0**	**$737,900**
PROJECT MANAGERS	$39,250	$0	$0	$0	$0	$0	$39,250
REAL ESTATE	$0	$0	$0	$0	$0	$0	$0
SURVEY	$7,850	$0	$1,570	$117,750	$0	$0	$127,170
LEGAL/PERMITTING	$15,700	$0	$0	$157,000	$0	$0	$172,700
PROJECT MANAGEMENT & SUPPORT	**$62,800**	**$0**	**$1,570**	**$274,750**	**$0**	**$0**	**$339,120**
R/W CLEARING & REHAB	$0	$0	$0	$0	$0	$0	$0
CONTRACTOR MOBILZATION	$0	$0	$0	$219,800	$0	$0	$219,800
POWER & CONTROL CABLE & ACCESSORIES	$0	$7,317,842	$0	$709,855	$365,892	$0	$8,392,589
PIPE/CONDUIT & ACCESSORIES	$0	$735,938	$0	$10,010,634	$36,797	$0	$10,783,368
SUBSTATION FIXTURES	$0	$157,000	$0	$982,820	$7,850	$0	$1,147,670
CONSTRUCTION MANAGEMENT	$188,400	$0	$7,850	$0	$0	$0	$196,250
CONSTRUCTION LABOR & MATERIALS	**$188,400**	**$8,210,780**	**$7,850**	**$11,922,109**	**$410,539**	**$0**	**$20,739,678**
LAND ACQUISITION					**$0**	**$0**	**$0**
TOTAL CAPITAL COSTS	**$486,700**	**$8,210,780**	**$9,420**	**$12,699,259**	**$410,539**	**$0**	**$21,816,698**
COST OF OH LINE REMOVAL	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
SALVAGE	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
O&M COST	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
AFUDC	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
NET SITE COST	**$486,700**	**$8,210,780**	**$9,420**	**$12,699,259**	**$410,539**	**$0**	**$21,816,698**

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DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 99-2023
Printed From: Dominion Virginia Power Transmisssion (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS*	TOTAL COST
Terminal 1,2,4,5							
Engineering							
Substation Engineering	$7,642	$0	$0	$46,000	$0	$11,458	$65,100
System Protection Engineering	$21,840	$0	$0	$45,425	$0	$17,630	$84,896
Telecommunications Engineering	$12,661	$0	$0	$0	$0	$10,234	$22,895
EMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
DMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
Security System Engineering	$2,168	$0	$0	$0	$0	$1,752	$3,920
Engineering	**$51,249**	**$0**	**$0**	**$91,425**	**$0**	**$46,683**	**$189,357**
Project Management & Support							
Project Managers	$18,630	$0	$1,701	$0	$0	$8,683	$29,014
Project Marketing Managers	$0	$0	$0	$0	$0	$0	$0
Forestry	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$18,630**	**$0**	**$1,701**	**$0**	**$0**	**$8,683**	**$29,014**
Primary Cost							
Special Scada Engineering	$0	$0	$0	$0	$0	$0	$0
Real Estate / Permitting Fees	$0	$0	$0	$0	$100,000	$17,568	$117,568
Travel Expenses	$0	$0	$0	$0	$0	$0	$0
Primary Cost	**$0**	**$0**	**$0**	**$0**	**$100,000**	**$17,568**	**$117,568**
External Cost							
Contractor Survey (Survey, Plats)	$0	$0	$0	$0	$0	$0	$0
Contractor Survey (Construction , Staking)	$0	$0	$0	$0	$0	$0	$0
Crane Rental	$0	$0	$0	$0	$0	$0	$0
Contractor R/W Rehabilitation	$0	$0	$0	$0	$0	$0	$0
Contractor Clear and Grade Site	$0	$0	$0	$0	$0	$0	$0
Contractor Build Control House	$0	$0	$0	$0	$0	$0	$0
External Cost	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 99-2023
Printed From: Dominion Virginia Power Transmisssion (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Construction Labor & Materials							
Substation	$2,933	$178,075	$502	$174,711	$0	$74,842	$431,062
System Protection	$34,159	$95,574	$3,852	$28,689	$0	$57,465	$219,739
Telecommunications	$14,742	$72,000	$0	$0	$0	$36,175	$122,917
Substation Security	$6,938	$35,000	$0	$0	$0	$17,400	$59,338
Construction Management / Field Supervision	$45,488	$0	$5,311	$0	$0	$25,244	$76,042
Construction Labor & Materials	$104,259	$380,649	$9,664	$203,400	$0	$211,126	$909,098
Land Acquisition					$0		$0
TOTAL CAPITAL COSTS	$174,138	$380,649	$11,365	$294,825	$100,000	$284,060	$1,245,036
COST OF REMOVAL	$0		$0	$0			$0
SALVAGE		$0					$0
O&M COSTS	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$174,138	$380,649	$11,365	$294,825	$100,000	$284,060	$1,245,036

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Potomac Yards North Terminal Site
Relocation Study

Site 2:
Relocating the terminal station to this site removes the visual impacts of the overhead transmission lines and places the terminal station just north of the existing Glebe Substation, with the access road to the WMATA bus parking lot dividing the two electrical facilities. Impacts include the loss of a portion of WMATA's employee parking area, and temporary impacts associated with the work areas needed on each side of Four Mile Run and the east side of US Rte. 1 for the directional drill operation.

Real Estate

Contacts: 03/02/2011 - Mr. Mark Meister 08/01/2011 – Ms. Anabela Talaia
WMATA Office of Station Area Planning and Asset Management

Results: Property not available as it is required to support WMATA's Four Mile Run Metrobus Garage operations.

Transmission

Estimate

Overhead Section	$ 3,140,796
Underground Section	$24,311,037
Total	$27,451,833

Substation / System Protection

Estimate $1,245,036

Permits:
This alternative would require the construction of 230 kV underground transmission lines under US Route 1 and Four Mile Run and construction of a new terminal facility. Permits required:

- SCC Certificate
- Corps of Engineers Permit
- Va. Marine Resources Commission Permit
- Va. Dept. of Transportation Land Use Permit
- Arlington County Use Permit
- E&S/Land Disturbing Permit
- Va. Storm Water Management Permit

Operability and Work Ability:

Required outages:

- Line 248 Ox to Glebe
- Line 2023 Jefferson St. to Glebe
- Line 275 Glebe to Crystal
- Bus #5 at Glebe
- Delivery transformer #1 at Glebe

Both circuits 248 and 2023 cannot be out of service at the same time. This would create an undesirable reliability satiation. Another 230 kV transmission line would be over loaded and fail. This could cause a cascading effect to the system.

Removing bus #5 at Glebe effectively removes one of the circuits (line 275) to Crystal from service. This alone is acceptable, but if an unplanned event should occur on the adjacent line to Crystal (line 276) the

Potomac Yards North Terminal Site
Relocation Study

crews would have to stop work and release their outage on bus #5. This event would cause outages to customers in the area for a couple hours until the bus is returned to service.
The construction plan is acceptable with the understood limits, requiring two separate operations to accomplish the overall objective. Also, progress would stop if an unplanned event were to occur on line 276 Glebe to Crystal.

Conclusions / Recommendations
The current property owners will not make this site is available for a relocated terminal site.
Further consideration is not reasonable without WMATA agreement to sell the site.

Total estimated cost for this site is $28,696,869

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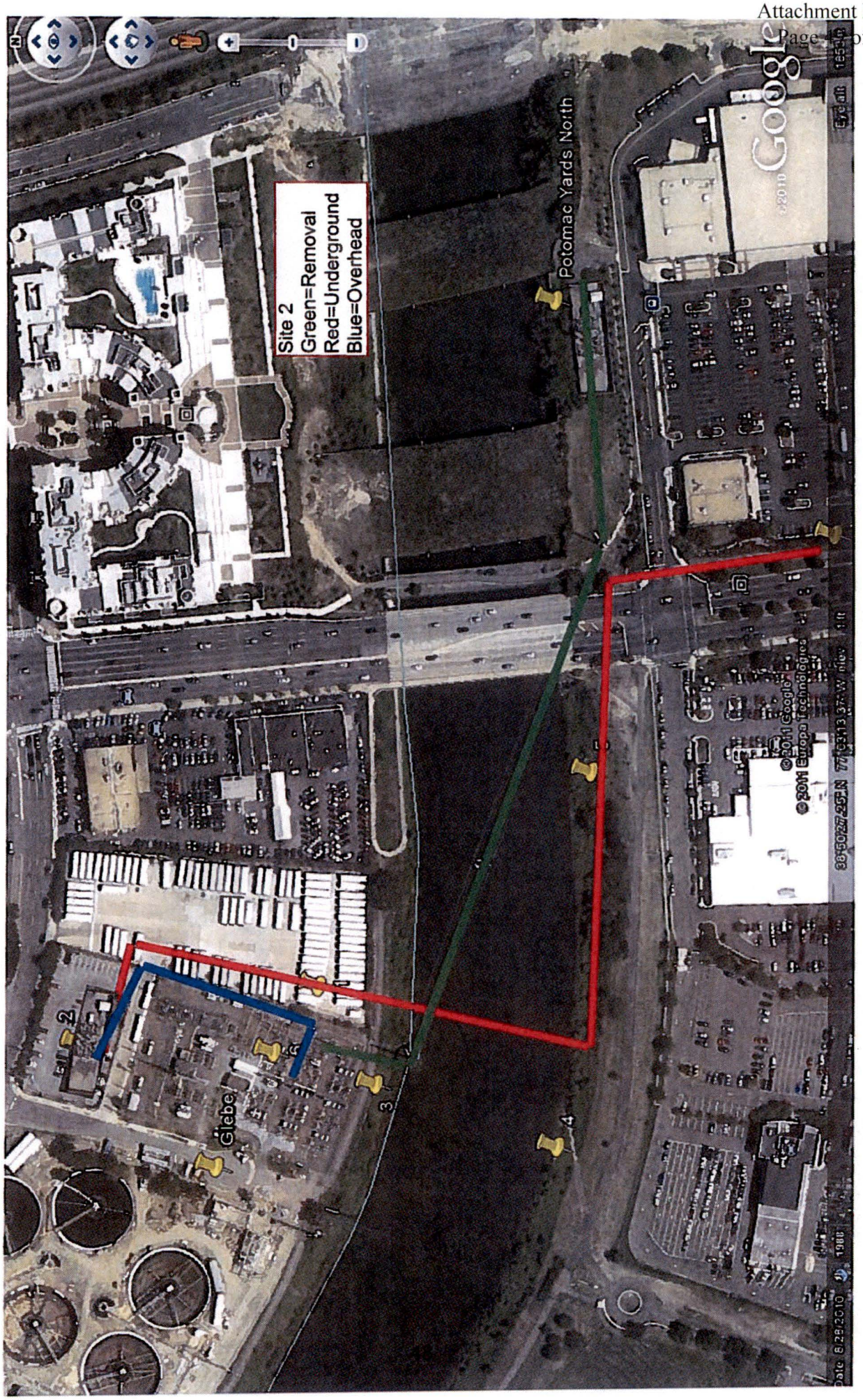
Site 2
Green=Removal
Red=Underground
Blue=Overhead
Potomac Yards North
Glebe
Google

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 2)

Prepared by: R.J. Shevenock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Transmission Line (OPTION 2)							
Engineering							
Transmission Engineering	$13,067	$0	$0	$45,943	$0	$14,036	$73,046
Planning	$0	$0	$0	$0	$0	$0	$0
Engineering	**$13,067**	**$0**	**$0**	**$45,943**	**$0**	**$14,036**	**$73,046**
Project Management & Support							
Project Managers	$27,312	$0	$575	$0	$0	$12,567	$40,454
Project Marketing Managers	$3,085	$0	$0	$0	$5,000	$3,444	$11,529
Siting & Permitting	$16,162	$0	$181	$0	$263,900	$53,771	$334,013
Real Estate	$4,790	$0	$578	$0	$0	$2,288	$7,656
Survey	$8,775	$0	$368	$58,200	$0	$13,382	$78,725
Forestry	$0	$0	$0	$0	$0	$0	$0
Forestry (Herbicide Treatment)	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$58,124**	**$0**	**$1,702**	**$58,200**	**$268,900**	**$85,451**	**$472,377**
Construction Labor & Materials							
Contractor Mobilization	$0	$30,360	$0	$98,620	$2,500	$27,432	$158,912
Wires	$0	$12,900	$0	$13,860	$0	$6,542	$33,303
Structures	$0	$426,691	$0	$445,000	$0	$214,039	$1,085,731
Construction Management	$31,373	$2,650	$6,745	$0	$0	$15,970	$56,739
Construction Labor & Materials	**$31,373**	**$472,601**	**$6,745**	**$557,480**	**$2,500**	**$263,984**	**$1,334,684**

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 2)

Prepared by: R.J. Shevenock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Land Acquisition					**$963,000**	**$169,180**	**$1,132,180**
TOTAL CAPITAL COSTS	**$102,565**	**$472,601**	**$8,447**	**$661,623**	**$1,234,400**	**$532,650**	**$3,012,286**
COST OF REMOVAL	**$0**		**$0**	**$121,215**		**$21,295**	**$142,510**
SALVAGE		**($14,000)**					**($14,000)**
O&M COSTS	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
NET SITE COST	$102,565	$458,602	$8,447	$782,838	$1,234,400	$553,945	$3,140,796

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DOMINION TECHNICAL SOLUTIONS
UNDERGROUND TRANSMISSION SUMMARY

PROJECT NAME: Potomac Yards Subst Relo 230kV UG HPPT **PREPARED BY:** AK **PRINT DATE:** 10/19/2011
PROJECT NO: Site 2 **REVISION:** 1

DESCRIPTION	VP LABOR	VP MATERIAL	VP EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
TRANSMISSION ENGINEERING	$188,400	$0	$0	$392,500	$0	$0	$580,900
CATHODIC PROTECTION ENG	$23,550	$0	$0	$47,100	$0	$0	$70,650
TELECOMMUNICATION ENGINEERING	$23,550	$0	$0	$62,800	$0	$0	$86,350
ENGINEERING	**$235,500**	**$0**	**$0**	**$502,400**	**$0**	**$0**	**$737,900**
PROJECT MANAGERS	$39,250	$0	$0	$0	$0	$0	$39,250
REAL ESTATE	$0	$0	$0	$0	$0	$0	$0
SURVEY	$7,850	$0	$1,570	$117,750	$0	$0	$127,170
LEGAL/PERMITTING	$15,700	$0	$0	$157,000	$0	$0	$172,700
PROJECT MANAGEMENT & SUPPORT	**$62,800**	**$0**	**$1,570**	**$274,750**	**$0**	**$0**	**$339,120**
R/W CLEARING & REHAB	$0	$0	$0	$0	$0	$0	$0
CONTRACTOR MOBILZATION	$0	$0	$0	$219,800	$0	$0	$219,800
POWER & CONTROL CABLE & ACCESSORIES	$0	$8,953,321	$0	$798,973	$447,666	$0	$10,199,960
PIPE/CONDUIT & ACCESSORIES	$0	$841,442	$0	$10,586,824	$42,072	$0	$11,470,338
SUBSTATION FIXTURES	$0	$157,000	$0	$982,820	$7,850	$0	$1,147,670
CONSTRUCTION MANAGEMENT	$188,400	$0	$7,850	$0	$0	$0	$196,250
CONSTRUCTION LABOR & MATERIALS	**$188,400**	**$9,951,762**	**$7,850**	**$12,588,417**	**$497,588**	**$0**	**$23,234,017**
LAND ACQUISITION					**$0**	**$0**	**$0**
TOTAL CAPITAL COSTS	**$486,700**	**$9,951,762**	**$9,420**	**$13,365,567**	**$497,588**	**$0**	**$24,311,037**
COST OF OH LINE REMOVAL	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
SALVAGE	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
O&M COST	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
AFUDC	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
NET SITE COST	**$486,700**	**$9,951,762**	**$9,420**	**$13,365,567**	**$497,588**	**$0**	**$24,311,037**

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DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 99-2023
Printed From: Dominion Virginia Power Transmission (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Terminal 1,2,4,5							
Engineering							
Substation Engineering	$7,642	$0	$0	$46,000	$0	$11,458	$65,100
System Protection Engineering	$21,840	$0	$0	$45,425	$0	$17,630	$84,896
Telecommunications Engineering	$12,661	$0	$0	$0	$0	$10,234	$22,895
EMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
DMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
Security System Engineering	$2,168	$0	$0	$0	$0	$1,752	$3,920
Engineering	**$51,249**	**$0**	**$0**	**$91,425**	**$0**	**$46,683**	**$189,357**
Project Management & Support							
Project Managers	$18,630	$0	$1,701	$0	$0	$8,683	$29,014
Project Marketing Managers	$0	$0	$0	$0	$0	$0	$0
Forestry	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$18,630**	**$0**	**$1,701**	**$0**	**$0**	**$8,683**	**$29,014**
Primary Cost							
Special Scada Engineering	$0	$0	$0	$0	$0	$0	$0
Real Estate / Permitting Fees	$0	$0	$0	$0	$100,000	$17,568	$117,568
Travel Expenses	$0	$0	$0	$0	$0	$0	$0
Primary Cost	**$0**	**$0**	**$0**	**$0**	**$100,000**	**$17,568**	**$117,568**
External Cost							
Contractor Survey (Survey, Plats)	$0	$0	$0	$0	$0	$0	$0
Contractor Survey (Construction , Staking)	$0	$0	$0	$0	$0	$0	$0
Crane Rental	$0	$0	$0	$0	$0	$0	$0
Contractor R/W Rehabilitation	$0	$0	$0	$0	$0	$0	$0
Contractor Clear and Grade Site	$0	$0	$0	$0	$0	$0	$0
Contractor Build Control House	$0	$0	$0	$0	$0	$0	$0
External Cost	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 99-2023
Printed From: Dominion Virginia Power Transmission (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Construction Labor & Materials							
Substation	$2,933	$178,075	$502	$174,711	$0	$74,842	$431,062
System Protection	$34,159	$95,574	$3,862	$28,689	$0	$57,485	$219,739
Telecommunications	$14,742	$72,000	$0	$0	$0	$36,175	$122,917
Substation Security	$6,938	$35,000	$0	$0	$0	$17,400	$59,338
Construction Management / Field Supervision	$45,488	$0	$5,311	$0	$0	$25,244	$76,042
Construction Labor & Materials	$104,259	$380,649	$9,664	$203,400	$0	$211,126	$908,098
Land Acquisition					$0		$0
TOTAL CAPITAL COSTS	$174,138	$380,649	$11,365	$294,825	$100,000	$284,060	$1,245,036
COST OF REMOVAL	$0		$0	$0			$0
SALVAGE		$0					$0
O&M COSTS	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$174,138	$380,649	$11,365	$294,825	$100,000	$284,060	$1,245,036

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Potomac Yards North Terminal Site
Relocation Study

Site 3:
Relocating the terminal station to this site removes the visual impact of the overhead transmission lines and places the terminal station adjacent to the south side of the existing Glebe Substation. This location would require a retaining wall and fill both for the terminal site and the relocated pedestrian path. This filled area would extend into Four Mile Run.

Real Estate

Contacts	Arlington County – Ms. Lisa D. Grandle, Park Development Division Chief
Results	County not interested in selling property to Dominion for this site, as it is an integral part of their plans for the Four Mile Run Restoration Project.

Transmission

Estimate

Overhead Section	$ 772,211
Underground Section	$20,972,615
Total	$21,744,826

Substation / System Protection
Estimate$2,798,492

Permits:
This alternative would require the construction of 230 kV underground transmission lines under US Route 1 and Four Mile Run and construction of a new terminal facility. Permits required:

- SCC Certificate
- Corps of Engineers Permit
- Va. Marine Resources Commission Permit
- Va. Dept. of Transportation Land Use Permit
- Arlington County Use Permit
- E&S/Land Disturbing Permit
- Va. Storm Water Management Permit

Because of the fill required at this location into Four Mile Run, it is unknown if the Corps of Engineers or VMRC would issue a permit for fill, or if such a permit could be obtained under the Corps Nationwide Permit program require an individual permit with mitigation.

Operability and Work Ability
Required outages:

- Line 248 Ox to Glebe
- Line 2023 Jefferson St. to Glebe
- Line 275 Glebe to Crystal
- Bus #5 at Glebe
- Delivery transformer #1 at Glebe

Both circuits 248 and 2023 cannot be out of service at the same time. This would create an undesirable reliability satiation. Another 230 kV transmission line would be over loaded and fail. This could cause a cascading effect to the system.

Removing bus #5 at Glebe effectively removes one of the circuits (line 275) to Crystal from service. This alone is acceptable, but if an unplanned event should occur on the adjacent line to Crystal (line 276) the crews would have to stop work and release their outage on bus #5. This event would cause outages to customers in the area for a couple hours until the bus is returned to service.

Potomac Yards North Terminal Site
Relocation Study

The construction plan is acceptable with the understood limits, requiring two separate operations to accomplish the overall objective. Also, progress would stop if an unplanned event were to occur on line 276 Glebe to Crystal

Conclusions / Recommendations
The current property owners will not make this site is available for a relocated terminal site.
Further consideration is not reasonable.

Total estimated cost for this site is $24,543,318

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Site 3
Green=Removal
Red=Underground
Blue=Overhead
Potomac Yards North
Glebe
1
2
4
5
6
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DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 3)

Prepared by: R.J. Shevenock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Transmission Line (OPTION 3)							
Engineering							
Transmission Engineering	$6,534	$0	$0	$0	$0	$2,982	$9,516
Planning	$0	$0	$0	$0	$0	$0	$0
Engineering	**$6,534**	**$0**	**$0**	**$0**	**$0**	**$2,982**	**$9,516**
Project Management & Support							
Project Managers	$27,312	$0	$575	$0	$0	$12,567	$40,454
Project Marketing Managers	$3,085	$0	$0	$0	$5,000	$3,444	$11,529
Siting & Permitting	$16,162	$0	$181	$0	$263,900	$53,771	$334,013
Real Estate	$0	$0	$0	$0	$0	$0	$0
Survey	$6,775	$0	$368	$58,200	$0	$13,382	$78,725
Forestry	$0	$0	$0	$0	$0	$0	$0
Forestry (Herbicide Treatment)	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$53,334**	**$0**	**$1,124**	**$58,200**	**$268,900**	**$83,163**	**$464,721**
Construction Labor & Materials							
Contractor Mobilization	$0	$30,360	$0	$85,485	$2,500	$25,124	$143,469
Wires	$0	$0	$0	$0	$0	$0	$0
Structures	$0	$0	$0	$0	$0	$0	$0
Construction Management	$14,518	$0	$3,066	$0	$1,060	$7,351	$25,995
Construction Labor & Materials	**$14,518**	**$30,360**	**$3,066**	**$85,485**	**$3,560**	**$32,475**	**$169,464**

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DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 3)

Prepared by: R.J. Shevenock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Land Acquisition					$0		$0
TOTAL CAPITAL COSTS	$74,386	$30,360	$4,190	$143,685	$272,460	$118,620	$643,701
COST OF REMOVAL	$0		$0	$121,215		$21,295	$142,510
SALVAGE		($14,000)					($14,000)
O&M COSTS	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$74,386	$16,360	$4,190	$264,900	$272,460	$139,915	$772,211

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DOMINION TECHNICAL SOLUTIONS
UNDERGROUND TRANSMISSION SUMMARY

PROJECT NAME: Potomac Yards Subst Relo 230kV UG HPPT **PREPARED BY:** AK **PRINT DATE:** 10/18/2011
PROJECT NO: Site 3 **REVISION:** 1

DESCRIPTION	VP LABOR	VP MATERIAL	VP EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
TRANSMISSION ENGINEERING	$188,400	$0	$0	$392,500	$0	$0	$580,900
CATHODIC PROTECTION ENG	$23,550	$0	$0	$47,100	$0	$0	$70,650
TELECOMMUNICATION ENGINEERING	$23,550	$0	$0	$62,800	$0	$0	$86,350
ENGINEERING	$235,500	$0	$0	$502,400	$0	$0	$737,900
PROJECT MANAGERS	$39,250	$0	$0	$0	$0	$0	$39,250
REAL ESTATE	$0	$0	$0	$0	$0	$0	$0
SURVEY	$7,850	$0	$1,570	$117,750	$0	$0	$127,170
LEGAL/PERMITTING	$15,700	$0	$0	$157,000	$0	$0	$172,700
PROJECT MANAGEMENT & SUPPORT	$62,800	$0	$1,570	$274,750	$0	$0	$339,120
R/W CLEARING & REHAB	$0	$0	$0	$0	$0	$0	$0
CONTRACTOR MOBILZATION	$0	$0	$0	$219,800	$0	$0	$219,800
POWER & CONTROL CABLE & ACCESSORIES	$0	$7,991,488	$0	$747,477	$399,574	$0	$9,138,540
PIPE/CONDUIT & ACCESSORIES	$0	$718,354	$0	$6,084,064	$35,918	$0	$6,838,335
SUBSTATION FIXTURES	$0	$157,000	$0	$3,337,820	$7,850	$0	$3,502,670
CONSTRUCTION MANAGEMENT	$188,400	$0	$7,850	$0	$0	$0	$196,250
CONSTRUCTION LABOR & MATERIALS	$188,400	$8,866,842	$7,850	$10,389,161	$443,342	$0	$19,895,595
LAND ACQUISITION					$0	$0	$0
TOTAL CAPITAL COSTS	$486,700	$8,866,842	$9,420	$11,166,311	$443,342	$0	$20,972,615
COST OF OH LINE REMOVAL	$0	$0	$0	$0	$0	$0	$0
SALVAGE	$0	$0	$0	$0	$0	$0	$0
O&M COST	$0	$0	$0	$0	$0	$0	$0
AFUDC	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$486,700	$8,866,842	$9,420	$11,166,311	$443,342	$0	$20,972,615

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DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 99-2023
Printed From: Dominion Virginia Power Transmisssion (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Terminal 3							
Engineering							
Substation Engineering	$18,048	$0	$0	$92,000	$0	$24,137	$134,186
System Protection Engineering	$21,840	$0	$0	$45,425	$0	$17,630	$84,898
Telecommunications Engineering	$12,661	$0	$0	$0	$0	$10,234	$22,895
EMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
DMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
Security System Engineering	$2,168	$0	$0	$0	$0	$1,752	$3,920
Engineering	**$61,655**	**$0**	**$0**	**$137,425**	**$0**	**$59,382**	**$258,442**
Project Management & Support							
Project Managers	$37,260	$0	$3,402	$0	$0	$17,365	$58,027
Project Marketing Managers	$16,969	$0	$0	$0	$0	$13,716	$30,685
Forestry	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$54,229**	**$0**	**$3,402**	**$0**	**$0**	**$31,081**	**$88,712**
Primary Cost							
Special Scada Engineering	$0	$0	$0	$0	$0	$0	$0
Real Estate / Permitting Fees	$0	$0	$0	$0	$100,000	$35,136	$135,136
Travel Expenses	$0	$0	$0	$0	$0	$0	$0
Primary Cost	**$0**	**$0**	**$0**	**$0**	**$100,000**	**$35,136**	**$135,136**
External Cost							
Contractor Survey (Survey, Plats)	$0	$0	$0	$0	$0	$0	$0
Contractor Survey (Construction , Staking)	$0	$0	$0	$0	$0	$0	$0
Crane Rental	$0	$0	$0	$0	$0	$0	$0
Contractor R/W Rehabilitation	$0	$0	$0	$0	$0	$0	$0
Contractor Clear and Grade Site	$0	$0	$0	$0	$0	$0	$0
Contractor Build Control House	$0	$0	$0	$0	$0	$0	$0
External Cost	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 99-2023
Printed From: Dominion Virginia Power Transmisssion (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Construction Labor & Materials							
Substation	$32,352	$524,802	$5,775	$1,071,024	$0	$339,097	$1,973,051
System Protection	$43,124	$107,402	$3,814	$22,951	$0	$66,804	$243,894
Construction Management / Field Supervision	$59,930	$0	$7,201	$0	$0	$32,126	$99,257
Construction Labor & Materials	$135,405	$632,205	$16,789	$1,093,975	$0	$437,827	$2,316,202
Land Acquisition					$0		$0
TOTAL CAPITAL COSTS	$251,289	$632,205	$20,191	$1,231,400	$100,000	$563,406	$2,798,492
COST OF REMOVAL	$0		$0	$0			$0
SALVAGE		$0					$0
O&M COSTS	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$251,289	$632,205	$20,191	$1,231,400	$100,000	$563,406	$2,798,492

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Potomac Yards North Terminal Site
Relocation Study

Site 4:
Relocating the terminal station to this site removes the overhead lines from over US Route 1, but maintains overhead lines from the relocated terminal to the existing Glebe Substation. This location would require a retaining wall and fill to level the site for the relocated terminal station. Temporary impacts would include the work areas needed on either side of US Route 1 for the directional drill operation.

Real Estate

Contacts	City of Alexandria – Mr. Timothy E. Wanamaker, Deputy Director, Administration
Results	City not interested in selling property to Dominion for this site, as it is required for open space as part of the Four Mile Run Multi-use Trail.

Transmission
Estimate

Overhead Section	$ 2,780,571
Underground Section	$20,218,646
Total	$22,999,217

Substation / System Protection
Estimate$1,245,036

Permits:
This alternative would require the construction of 230 kV underground transmission lines under US Route 1 to the new terminal site, construction of a new terminal facility, and overhead 230 kV lines across Four Mile Run to the existing Glebe Substation. Permits required:

- SCC Certificate
- Corps of Engineers Permit
- Va. Marine Resources Commission Permit
- Va. Dept. of Transportation Land Use Permit
- City of Alexandria Use Permit
- E&S/Land Disturbing Permit
- Va. Storm Water Management Permit

Operability and Work Ability
Required outages:

- Line 248 Ox to Glebe
- Line 2023 Jefferson St. to Glebe
- Line 275 Glebe to Crystal
- Bus #5 at Glebe
- Delivery transformer #1 at Glebe

Both circuits 248 and 2023 cannot be out of service at the same time. This would create an undesirable reliability satiation. Another 230 kV transmission line would be over loaded and fail. This could cause a cascading effect to the system.

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Potomac Yards North Terminal Site
Relocation Study

Removing bus #5 at Glebe effectively removes one of the circuits (line 275) to Crystal from service. This alone is acceptable, but if an unplanned event should occur on the adjacent line to Crystal (line 276) the crews would have to stop work and release their outage on bus #5. This event would cause outages to customers in the area for a couple hours until the bus is returned to service.
The construction plan is acceptable with the understood limits, requiring two separate operations to accomplish the overall objective. Also, progress would stop if an unplanned event were to occur on line 276 Glebe to Crystal

Conclusions / Recommendations
The current property owners will not make this site is available for a relocated terminal site.
Further consideration is not reasonable.

Total estimated cost for this site is $24,244,253

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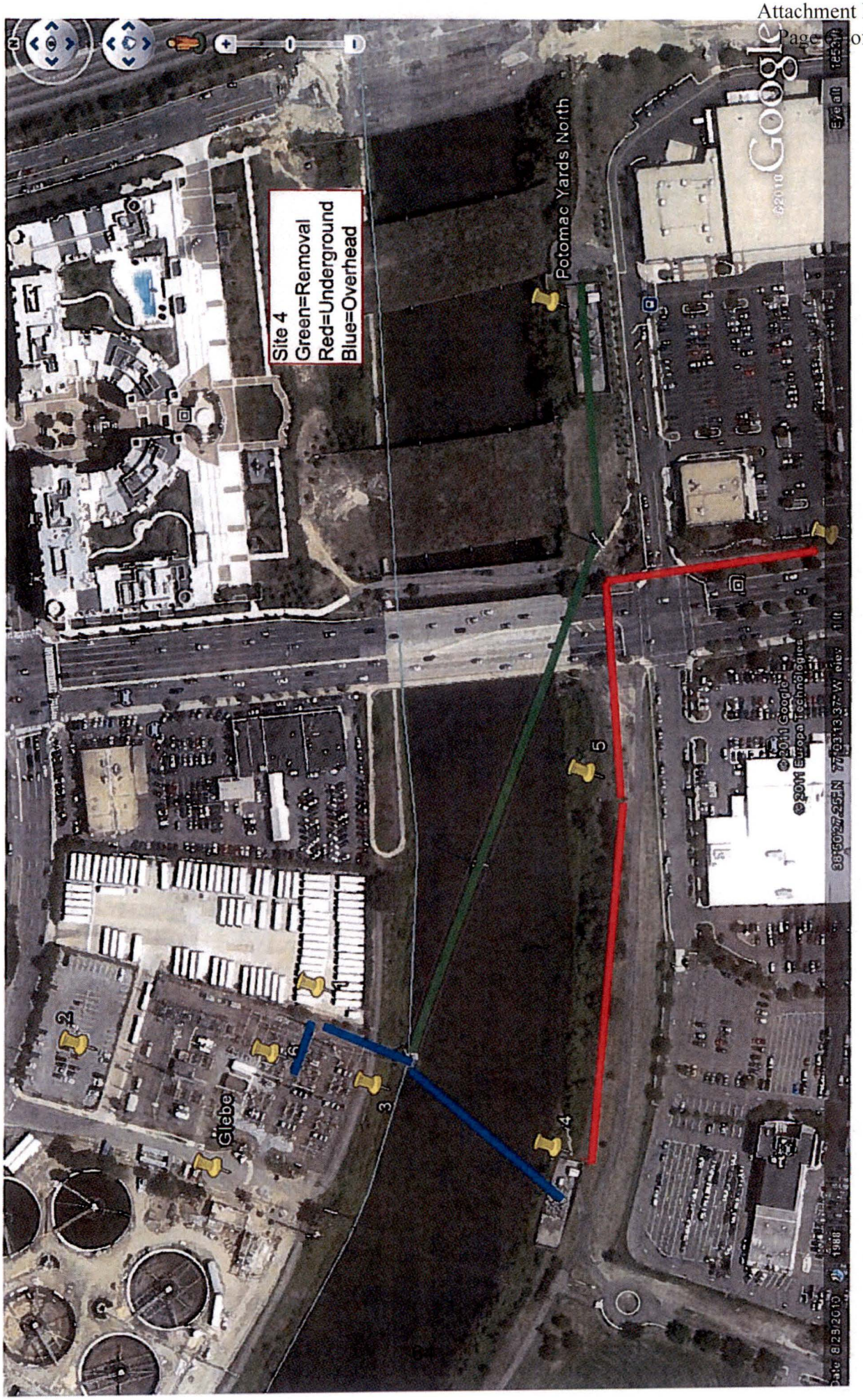
Site 4
Green=Removal
Red=Underground
Blue=Overhead
Potomac Yards North
Glebe
1
2
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4
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Google

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 4)

Prepared by: R.J. Shevenock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Transmission Line (OPTION 4)							
Engineering							
Transmission Engineering	$13,067	$0	$0	$45,943	$0	$14,036	$73,046
Planning	$0	$0	$0	$0	$0	$0	$0
Engineering	**$13,067**	**$0**	**$0**	**$45,943**	**$0**	**$14,036**	**$73,046**
Project Management & Support							
Project Managers	$27,312	$0	$575	$0	$0	$12,567	$40,454
Project Marketing Managers	$3,085	$0	$0	$0	$5,000	$3,444	$11,529
Siting & Permitting	$16,162	$0	$181	$0	$263,900	$53,771	$334,013
Real Estate	$4,790	$0	$578	$0	$0	$2,288	$7,656
Survey	$6,775	$0	$368	$58,200	$0	$13,382	$78,725
Forestry	$0	$0	$0	$0	$0	$0	$0
Forestry (Herbicide Treatment)	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$58,124**	**$0**	**$1,702**	**$58,200**	**$268,900**	**$85,451**	**$472,377**
Construction Labor & Materials							
Contractor Mobilization	$0	$30,360	$0	$98,620	$2,500	$27,432	$158,912
Wires	$0	$12,817	$0	$14,151	$0	$6,395	$33,363
Structures	$0	$287,837	$0	$294,150	$0	$143,358	$725,445
Construction Management	$31,373	$2,650	$6,745	$0	$0	$15,970	$56,739
Construction Labor & Materials	**$31,373**	**$333,764**	**$6,745**	**$406,921**	**$2,500**	**$193,155**	**$974,458**

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DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 4)

Prepared by: R.J. Shevenock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Land Acquisition					$963,000	$169,180	$1,132,180
TOTAL CAPITAL COSTS	$102,565	$333,764	$8,447	$511,084	$1,234,400	$461,821	$2,652,061
COST OF REMOVAL	$0		$0	$121,215		$21,295	$142,510
SALVAGE		($14,000)					($14,000)
O&M COSTS	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$102,565	$319,764	$8,447	$632,279	$1,234,400	$483,116	$2,780,571

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DOMINION TECHNICAL SOLUTIONS
UNDERGROUND TRANSMISSION SUMMARY

PROJECT NAME: Potomac Yards Subst Relo 230kV UG HPPT **PREPARED BY:** AK **PRINT DATE:** 10/19/2011
PROJECT NO: Site 4 **REVISION:** 1

DESCRIPTION	VP LABOR	VP MATERIAL	VP EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
TRANSMISSION ENGINEERING	$188,400	$0	$0	$392,500	$0	$0	$580,900
CATHODIC PROTECTION ENG	$23,550	$0	$0	$47,100	$0	$0	$70,650
TELECOMMUNICATION ENGINEERING	$23,550	$0	$0	$62,800	$0	$0	$86,350
ENGINEERING	**$235,500**	**$0**	**$0**	**$502,400**	**$0**	**$0**	**$737,900**
PROJECT MANAGERS	$39,250	$0	$0	$0	$0	$0	$39,250
REAL ESTATE	$0	$0	$0	$0	$0	$0	$0
SURVEY	$7,850	$0	$1,570	$117,750	$0	$0	$127,170
LEGAL/PERMITTING	$15,700	$0	$0	$157,000	$0	$0	$172,700
PROJECT MANAGEMENT & SUPPORT	**$62,800**	**$0**	**$1,570**	**$274,750**	**$0**	**$0**	**$339,120**
R/W CLEARING & REHAB	$0	$0	$0	$0	$0	$0	$0
CONTRACTOR MOBILZATION	$0	$0	$0	$219,800	$0	$0	$219,800
POWER & CONTROL CABLE & ACCESSORIES	$0	$7,310,206	$0	$708,855	$365,510	$0	$8,384,571
PIPE/CONDUIT & ACCESSORIES	$0	$716,354	$0	$5,084,064	$35,918	$0	$6,838,335
SUBSTATION FIXTURES	$0	$157,000	$0	$3,337,820	$7,850	$0	$3,502,670
CONSTRUCTION MANAGEMENT	$188,400	$0	$7,850	$0	$0	$0	$196,250
CONSTRUCTION LABOR & MATERIALS	**$188,400**	**$8,185,559**	**$7,850**	**$10,350,539**	**$409,278**	**$0**	**$19,141,626**
LAND ACQUISITION					**$0**	**$0**	**$0**
TOTAL CAPITAL COSTS	**$486,700**	**$8,185,559**	**$9,420**	**$11,127,689**	**$409,278**	**$0**	**$20,218,646**
COST OF OH LINE REMOVAL	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
SALVAGE	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
O&M COST	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
AFUDC	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
NET SITE COST	**$486,700**	**$8,185,559**	**$9,420**	**$11,127,689**	**$409,278**	**$0**	**$20,218,646**

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DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 99-2023
Printed From: Dominion Virginia Power Transmisssion (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS*	TOTAL COST
Terminal 1,2,4,5							
Engineering							
Substation Engineering	$7,642	$0	$0	$46,000	$0	$11,458	$65,100
System Protection Engineering	$21,840	$0	$0	$45,425	$0	$17,630	$84,896
Telecommunications Engineering	$12,661	$0	$0	$0	$0	$10,234	$22,895
EMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
DMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
Security System Engineering	$2,168	$0	$0	$0	$0	$1,752	$3,920
Engineering	**$51,249**	**$0**	**$0**	**$91,425**	**$0**	**$46,683**	**$189,357**
Project Management & Support							
Project Managers	$18,630	$0	$1,701	$0	$0	$8,683	$29,014
Project Marketing Managers	$0	$0	$0	$0	$0	$0	$0
Forestry	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$18,630**	**$0**	**$1,701**	**$0**	**$0**	**$8,683**	**$29,014**
Primary Cost							
Special Scada Engineering	$0	$0	$0	$0	$0	$0	$0
Real Estate / Permitting Fees	$0	$0	$0	$0	$100,000	$17,568	$117,568
Travel Expenses	$0	$0	$0	$0	$0	$0	$0
Primary Cost	**$0**	**$0**	**$0**	**$0**	**$100,000**	**$17,568**	**$117,568**
External Cost							
Contractor Survey (Survey, Plats)	$0	$0	$0	$0	$0	$0	$0
Contractor Survey (Construction , Staking)	$0	$0	$0	$0	$0	$0	$0
Crane Rental	$0	$0	$0	$0	$0	$0	$0
Contractor R/W Rehabilitation	$0	$0	$0	$0	$0	$0	$0
Contractor Clear and Grade Site	$0	$0	$0	$0	$0	$0	$0
Contractor Build Control House	$0	$0	$0	$0	$0	$0	$0
External Cost	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 99-2023
Printed From: Dominion Virginia Power Transmisssion (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Construction Labor & Materials							
Substation	$2,933	$178,075	$502	$174,711	$0	$74,842	$431,062
System Protection	$34,159	$95,574	$3,852	$28,689	$0	$57,465	$219,739
Telecommunications	$14,742	$72,000	$0	$0	$0	$36,175	$122,917
Substation Security	$6,838	$35,000	$0	$0	$0	$17,400	$59,338
Construction Management / Field Supervision	$45,488	$0	$5,311	$0	$0	$25,244	$76,042
Construction Labor & Materials	$104,259	$380,649	$9,664	$203,400	$0	$211,126	$909,098
Land Acquisition					$0		$0
TOTAL CAPITAL COSTS	$174,138	$380,649	$11,365	$294,825	$100,000	$284,060	$1,245,036
COST OF REMOVAL	$0		$0	$0			$0
SALVAGE		$0					$0
O&M COSTS	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$174,138	$380,649	$11,365	$294,825	$100,000	$284,060	$1,245,036

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Potomac Yards North Terminal Site
Relocation Study

Site 5:
Relocating the terminal station to this site removes the overhead lines from over US Route 1, but maintains overhead lines from the relocated terminal to the existing Glebe Substation. This location would require a retaining wall and fill to level the site for the relocated terminal station. Temporary impacts would include the work areas needed on either side of US Route 1 for the directional drill operation.

Real Estate

Contacts	City of Alexandria – Mr. Timothy E. Wanamaker, Deputy Director, Administration
Results	City not interested in selling property to Dominion for this site, as it is required for open space as part of the Four Mile Run Multi-use Trail.

Transmission

Estimate

Overhead Section	$ 2,746,107
Underground Section	$18,729,598
Total	$21,475,705

Substation / System Protection

Estimate$1,245,036

Permits:
This alternative would require the construction of 230 kV underground transmission lines under US Route 1 to the new terminal site, construction of a new terminal facility, and overhead 230 kV lines across Four Mile Run to the existing Glebe Substation. Permits required:

- SCC Certificate
- Corps of Engineers Permit
- Va. Marine Resources Commission Permit
- Va. Dept. of Transportation Land Use Permit
- City of Alexandria Use Permit
- E&S/Land Disturbing Permit
- Va. Storm Water Management Permit

Operability and Work Ability

Required outages:

- Line 248 Ox to Glebe
- Line 2023 Jefferson St. to Glebe
- Line 275 Glebe to Crystal
- Bus #5 at Glebe
- Delivery transformer #1 at Glebe

Both circuits 248 and 2023 cannot be out of service at the same time. This would create an undesirable reliability satiation. Another 230 kV transmission line would be over loaded and fail. This could cause a cascading effect to the system.

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Potomac Yards North Terminal Site
Relocation Study

Removing bus #5 at Glebe effectively removes one of the circuits (line 275) to Crystal from service. This alone is acceptable, but if an unplanned event should occur on the adjacent line to Crystal (line 276) the crews would have to stop work and release their outage on bus #5. This event would cause outages to customers in the area for a couple hours until the bus is returned to service.
The construction plan is acceptable with the understood limits, requiring two separate operations to accomplish the overall objective. Also, progress would stop if an unplanned event were to occur on line 276 Glebe to Crystal

Conclusions / Recommendations
The current property owners will not make this site is available for a relocated terminal site.
Further consideration is not reasonable.

Total estimated cost for this site is $22,720,741

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Site 5
Green=Removal
Red=Underground
Blue=Overhead
Potomac Yards North
Glebe
1
2
3
4
5
6
Google
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DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 5)

Prepared by: R.J. Shevenock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Transmission Line (OPTION 5)							
Engineering							
Transmission Engineering	$13,067	$0	$0	$45,943	$0	$14,036	$73,046
Planning	$0	$0	$0	$0	$0	$0	$0
Engineering	**$13,067**	**$0**	**$0**	**$45,943**	**$0**	**$14,036**	**$73,046**
Project Management & Support							
Project Managers	$27,312	$0	$575	$0	$0	$12,567	$40,454
Project Marketing Managers	$3,085	$0	$0	$0	$5,000	$3,444	$11,529
Siting & Permitting	$16,162	$0	$181	$0	$263,900	$53,771	$334,013
Real Estate	$4,790	$0	$578	$0	$0	$2,288	$7,656
Survey	$6,775	$0	$368	$58,200	$0	$13,382	$78,725
Forestry	$0	$0	$0	$0	$0	$0	$0
Forestry (Herbicide Treatment)	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$58,124**	**$0**	**$1,702**	**$59,200**	**$268,900**	**$85,451**	**$472,377**
Construction Labor & Materials							
Contractor Mobilization	$0	$30,360	$0	$99,620	$2,500	$27,432	$158,912
Wires	$0	$7,168	$0	$7,670	$0	$3,458	$18,296
Structures	$0	$287,937	$0	$294,150	$0	$143,358	$725,445
Construction Management	$31,373	$0	$6,745	$0	$2,650	$15,970	$56,739
Construction Labor & Materials	**$31,373**	**$325,465**	**$6,745**	**$400,440**	**$5,150**	**$190,217**	**$959,391**

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 5)

Prepared by: R.J. Shevenock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Land Acquisition					$963,000	$169,180	$1,132,180
TOTAL CAPITAL COSTS	$102,565	$325,465	$8,447	$504,583	$1,237,050	$458,883	$2,636,993
COST OF REMOVAL	$0		$0	$100,575		$17,669	$118,244
SALVAGE		($9,130)					($9,130)
O&M COSTS	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$102,565	$316,335	$8,447	$605,158	$1,237,050	$476,552	$2,746,107

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DOMINION TECHNICAL SOLUTIONS
UNDERGROUND TRANSMISSION SUMMARY

PROJECT NAME:	Potomac Yards Subst Relo 230kV UG HPPT	**PREPARED BY:**	AK	**PRINT DATE:**	10/19/2011
PROJECT NO:	Site 5	**REVISION:**	1		

DESCRIPTION	VP LABOR	VP MATERIAL	VP EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
TRANSMISSION ENGINEERING	$188,400	$0	$0	$392,500	$0	$0	$580,900
CATHODIC PROTECTION ENG	$23,550	$0	$0	$47,100	$0	$0	$70,650
TELECOMMUNICATION ENGINEERING	$23,550	$0	$0	$62,800	$0	$0	$86,350
ENGINEERING	**$235,500**	**$0**	**$0**	**$502,400**	**$0**	**$0**	**$737,900**
PROJECT MANAGERS	$39,250	$0	$0	$0	$0	$0	$39,250
REAL ESTATE	$0	$0	$0	$0	$0	$0	$0
SURVEY	$7,850	$0	$1,570	$117,750	$0	$0	$127,170
LEGAL/PERMITTING	$15,700	$0	$0	$157,000	$0	$0	$172,700
PROJECT MANAGEMENT & SUPPORT	**$62,800**	**$0**	**$1,570**	**$274,750**	**$0**	**$0**	**$339,120**
R/W CLEARING & REHAB	$0	$0	$0	$0	$0	$0	$0
CONTRACTOR MOBILZATION	$0	$0	$0	$219,800	$0	$0	$219,800
POWER & CONTROL CABLE & ACCESSORIES	$0	$6,583,104	$0	$670,233	$329,155	$0	$7,582,492
PIPE/CONDUIT & ACCESSORIES	$0	$612,850	$0	$5,507,874	$30,642	$0	$6,151,366
SUBSTATION FIXTURES	$0	$157,000	$0	$3,337,820	$7,850	$0	$3,502,670
CONSTRUCTION MANAGEMENT	$188,400	$0	$7,850	$0	$0	$0	$196,250
CONSTRUCTION LABOR & MATERIALS	**$188,400**	**$7,352,954**	**$7,850**	**$9,735,727**	**$367,648**	**$0**	**$17,652,578**
LAND ACQUISITION					**$0**	**$0**	**$0**
TOTAL CAPITAL COSTS	**$486,700**	**$7,352,954**	**$9,420**	**$10,512,877**	**$367,648**	**$0**	**$18,729,598**
COST OF OH LINE REMOVAL	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
SALVAGE	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
O&M COST	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
AFUDC	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
NET SITE COST	**$486,700**	**$7,352,954**	**$9,420**	**$10,512,877**	**$367,648**	**$0**	**$18,729,598**

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DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 99-2023
Printed From: Dominion Virginia Power Transmisssion (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS*	TOTAL COST
Terminal 1,2,4(5)							
Engineering							
Substation Engineering	$7,642	$0	$0	$46,000	$0	$11,458	$65,100
System Protection Engineering	$21,840	$0	$0	$45,425	$0	$17,630	$84,896
Telecommunications Engineering	$12,661	$0	$0	$0	$0	$10,234	$22,895
EMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
DMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
Security System Engineering	$2,168	$0	$0	$0	$0	$1,752	$3,920
Engineering	**$51,249**	**$0**	**$0**	**$91,425**	**$0**	**$46,683**	**$189,357**
Project Management & Support							
Project Managers	$18,630	$0	$1,701	$0	$0	$8,683	$29,014
Project Marketing Managers	$0	$0	$0	$0	$0	$0	$0
Forestry	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$18,630**	**$0**	**$1,701**	**$0**	**$0**	**$8,683**	**$29,014**
Primary Cost							
Special Scada Engineering	$0	$0	$0	$0	$0	$0	$0
Real Estate / Permitting Fees	$0	$0	$0	$0	$100,000	$17,568	$117,568
Travel Expenses	$0	$0	$0	$0	$0	$0	$0
Primary Cost	**$0**	**$0**	**$0**	**$0**	**$100,000**	**$17,568**	**$117,568**
External Cost							
Contractor Survey (Survey, Plats)	$0	$0	$0	$0	$0	$0	$0
Contractor Survey (Construction , Staking)	$0	$0	$0	$0	$0	$0	$0
Crane Rental	$0	$0	$0	$0	$0	$0	$0
Contractor R/W Rehabilitation	$0	$0	$0	$0	$0	$0	$0
Contractor Clear and Grade Site	$0	$0	$0	$0	$0	$0	$0
Contractor Build Control House	$0	$0	$0	$0	$0	$0	$0
External Cost	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 89-2023
Printed From: Dominion Virginia Power Transmisssion (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Construction Labor & Materials							
Substation	$2,833	$178,075	$502	$174,711	$0	$74,842	$431,062
System Protection	$34,159	$95,574	$3,852	$28,689	$0	$57,465	$219,739
Telecommunications	$14,742	$72,000	$0	$0	$0	$36,175	$122,917
Substation Security	$6,938	$35,000	$0	$0	$0	$17,400	$59,338
Construction Management / Field Supervision	$45,488	$0	$5,311	$0	$0	$25,244	$76,042
Construction Labor & Materials	$104,259	$380,649	$9,664	$203,400	$0	$211,126	$909,098
Land Acquisition					$0		$0
TOTAL CAPITAL COSTS	$174,138	$380,649	$11,365	$294,825	$100,000	$284,080	$1,245,036
COST OF REMOVAL	$0		$0	$0			$0
SALVAGE		$0					$0
O&M COSTS	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$174,138	$380,649	$11,365	$294,825	$100,000	$284,080	$1,245,036

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Potomac Yards North Terminal Site
Relocation Study

Site 6:
Relocating the terminal facility inside the existing Glebe Substation would remove the overhead transmission lines from over US Route 1 and Four Mile Run. Minor rearrangement in the substation would be necessary. Temporary impacts associated with this alternative are the work areas needed on each side of Four Mile Run and the east side of US Route 1.

Real Estate

Contacts	Virginia Electric and Power Company (dba Dominion Virginia Power)
Results	As the site is used for the existing substation, the additional of the terminal facilities would be acceptable with some minor rearrangement.

Transmission
Estimate

Overhead Section	$ 772,211
Underground Section	$21,110,198
Total	$21,882,409

Substation / System Protection
Estimate $348,615

Permits:
This alternative would require the construction of 230 kV underground transmission lines under US Route 1 and Four Mile Run and work within the substation for a new terminal facility. Permits required:

- SCC Certificate
- Corps of Engineers Permit
- Va. Marine Resources Commission Permit
- Va. Dept. of Transportation Land Use Permit
- E&S/Land Disturbing Permit
- Va. Storm Water Management Permit

Operability and Work Ability
Required outages:

- Line 248 Ox to Glebe
- Line 2023 Jefferson St. to Glebe
- Line 275 Glebe to Crystal
- Bus #5 at Glebe
- Delivery transformer #1 at Glebe

Both circuits 248 and 2023 cannot be out of service at the same time. This would create an undesirable reliability satiation. Another 230 kV transmission line would be over loaded and fail. This could cause a cascading effect to the system.

Removing bus #5 at Glebe effectively removes one of the circuits (line 275) to Crystal from service. This alone is acceptable, but if an unplanned event should occur on the adjacent line to Crystal (line 276) the crews would have to stop work and release their outage on bus #5. This event would cause outages to customers in the area for a couple hours until the bus is returned to service.

Potomac Yards North Terminal Site
Relocation Study

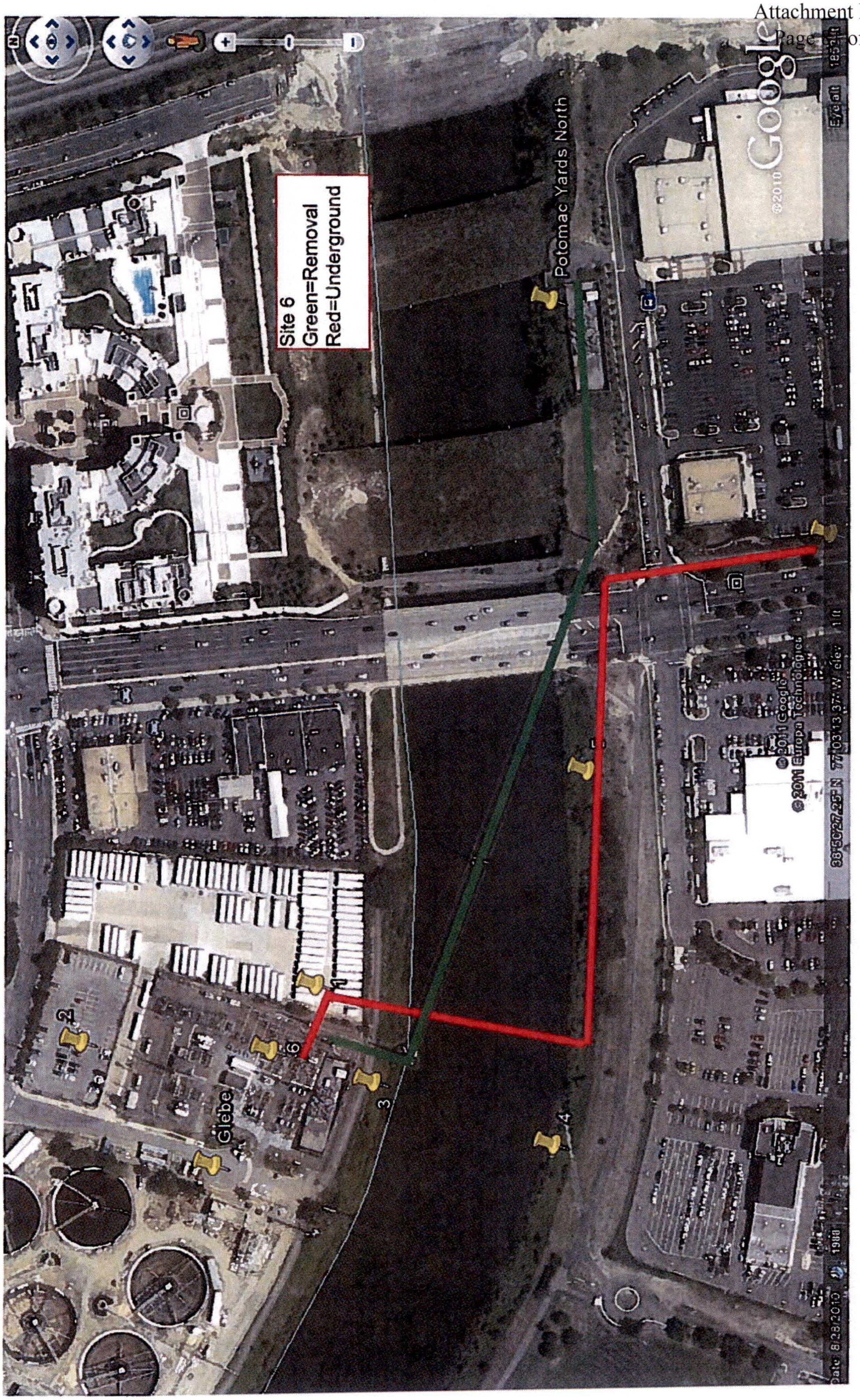
The construction plan is acceptable with the understood limits, requiring two separate operations to accomplish the overall objective. Also, progress would stop if an unplanned event were to occur on line 276 Glebe to Crystal

Conclusions / Recommendations
This is the only site where a physical site for a terminal relocation is available. This site achieves the desired removal of the terminal station from the City of Alexandria and it removes the overhead transmission lines over US Route 1 and Four Mile Run.

There are challenges to this relocation, and construction would be in phases, with some risks of outages.

A certificate of approval from the SCC would be required and obtaining that approval may be challenging. The SCC considers the necessity, the cost, the environmental impacts, the benefits to the transmission system, the impacts to community at large, and the impacts to the immediate property owners. If the City of Alexandria requests that Dominion proceed with an application to the SCC, both written and oral testimony would be beneficial from the City of Alexandria and the County of Arlington

Total estimated cost for this site is $22,231,024


Site 6
Green=Removal
Red=Underground
Potomac Yards North
Glebe
1
2
3
4
6
Google

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 6)

Prepared by: R.J. Sheverock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Transmission Line (OPTION 6)							
Engineering							
Transmission Engineering	$6,534	$0	$0	$0	$0	$2,982	$9,516
Planning	$0	$0	$0	$0	$0	$0	$0
Engineering	**$6,534**	**$0**	**$0**	**$0**	**$0**	**$2,982**	**$9,516**
Project Management & Support							
Project Managers	$27,312	$0	$575	$0	$0	$12,567	$40,454
Project Marketing Managers	$3,085	$0	$0	$0	$5,000	$3,444	$11,529
Siting & Permitting	$16,162	$0	$181	$0	$263,900	$53,771	$334,013
Real Estate	$0	$0	$0	$0	$0	$0	$0
Survey	$6,775	$0	$368	$58,200	$0	$13,382	$78,725
Forestry	$0	$0	$0	$0	$0	$0	$0
Forestry (Herbicide Treatment)	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$53,334**	**$0**	**$1,124**	**$58,200**	**$268,900**	**$83,163**	**$464,721**
Construction Labor & Materials							
Contractor Mobilization	$0	$30,360	$0	$85,485	$2,500	$25,124	$143,469
Wires	$0	$0	$0	$0	$0	$0	$0
Structures	$0	$0	$0	$0	$0	$0	$0
Construction Management	$14,518	$0	$3,066	$0	$1,060	$7,351	$25,995
Construction Labor & Materials	**$14,518**	**$30,360**	**$3,066**	**$85,485**	**$3,560**	**$32,475**	**$169,464**

DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: Potomac North Relocation
Project No: 99-2023
Printed From: Transmission Line (OPTION 6)

Prepared by: R.J. Shevenock
Revision: 0
Date: 8/30/11

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Land Acquisition					$0		$0
TOTAL CAPITAL COSTS	$74,386	$30,360	$4,190	$143,685	$272,460	$118,620	$643,701
COST OF REMOVAL	$0		$0	$121,215		$21,295	$142,510
SALVAGE		($14,000)					($14,000)
O&M COSTS	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$74,386	$16,360	$4,190	$264,900	$272,460	$139,915	$772,211

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DOMINION TECHNICAL SOLUTIONS
UNDERGROUND TRANSMISSION SUMMARY

PROJECT NAME: Potomac Yards Subst Relo 230kV UG HPPT **PREPARED BY:** AK **PRINT DATE:** 10/19/2011

PROJECT NO: Site 6 **REVISION:** 1

DESCRIPTION	VP LABOR	VP MATERIAL	VP EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
TRANSMISSION ENGINEERING	$188,400	$0	$0	$392,500	$0	$0	$580,900
CATHODIC PROTECTION ENG	$23,550	$0	$0	$47,100	$0	$0	$70,650
TELECOMMUNICATION ENGINEERING	$23,550	$0	$0	$62,800	$0	$0	$86,350
ENGINEERING	$235,500	$0	$0	$502,400	$0	$0	$737,900
PROJECT MANAGERS	$39,250	$0	$0	$0	$0	$0	$39,250
REAL ESTATE	$0	$0	$0	$0	$0	$0	$0
SURVEY	$7,850	$0	$1,570	$117,750	$0	$0	$127,170
LEGAL/PERMITTING	$15,700	$0	$0	$157,000	$0	$0	$172,700
PROJECT MANAGEMENT & SUPPORT	$62,800	$0	$1,570	$274,750	$0	$0	$339,120
R/W CLEARING & REHAB	$0	$0	$0	$0	$0	$0	$0
CONTRACTOR MOBILZATION	$0	$0	$0	$219,800	$0	$0	$219,800
POWER & CONTROL CABLE & ACCESSORIES	$0	$7,317,842	$0	$708,855	$365,892	$0	$8,392,589
PIPE/CONDUIT & ACCESSORIES	$0	$735,938	$0	$6,949,134	$36,797	$0	$7,721,868
SUBSTATION FIXTURES	$0	$157,000	$0	$3,337,820	$7,850	$0	$3,502,670
CONSTRUCTION MANAGEMENT	$188,400	$0	$7,850	$0	$0	$0	$196,250
CONSTRUCTION LABOR & MATERIALS	$188,400	$8,210,780	$7,850	$11,215,609	$410,539	$0	$20,033,178
LAND ACQUISITION					$0	$0	$0
TOTAL CAPITAL COSTS	$486,700	$8,210,780	$9,420	$11,992,759	$410,539	$0	$21,110,198
COST OF OH LINE REMOVAL	$0	$0	$0	$0	$0	$0	$0
SALVAGE	$0	$0	$0	$0	$0	$0	$0
O&M COST	$0	$0	$0	$0	$0	$0	$0
AFUDC	$0	$0	$0	$0	$0	$0	$0
NET SITE COST	$486,700	$8,210,780	$9,420	$11,992,759	$410,539	$0	$21,110,198

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DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 99-2023
Printed From: Dominion Virginia Power Transmission (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Terminal 6							
Engineering							
Substation Engineering	$4,133	$0	$0	$23,000	$0	$5,867	$32,999
System Protection Engineering	$21,840	$0	$0	$22,425	$0	$13,590	$57,855
Telecommunications Engineering	$3,989	$0	$0	$0	$0	$3,224	$7,214
EMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
DMS Programming	$3,469	$0	$0	$0	$0	$2,804	$6,273
Security System Engineering	$0	$0	$0	$0	$0	$0	$0
Engineering	**$36,899**	**$0**	**$0**	**$45,425**	**$0**	**$28,289**	**$110,613**
Project Management & Support							
Project Managers	$18,630	$0	$1,701	$0	$0	$8,683	$29,014
Project Marketing Managers	$0	$0	$0	$0	$0	$0	$0
Forestry	$0	$0	$0	$0	$0	$0	$0
Project Management & Support	**$18,630**	**$0**	**$1,701**	**$0**	**$0**	**$8,683**	**$29,014**
Primary Cost							
Special Scada Engineering	$0	$0	$0	$0	$0	$0	$0
Real Estate / Permitting Fees	$0	$0	$0	$0	$100,000	$17,568	$117,568
Travel Expenses	$0	$0	$0	$0	$0	$0	$0
Primary Cost	**$0**	**$0**	**$0**	**$0**	**$100,000**	**$17,568**	**$117,568**
External Cost							
Contractor Survey (Survey, Plats)	$0	$0	$0	$0	$0	$0	$0
Contractor Survey (Construction , Staking)	$0	$0	$0	$0	$0	$0	$0
Crane Rental	$0	$0	$0	$0	$0	$0	$0
Contractor R/W Rehabilitation	$0	$0	$0	$0	$0	$0	$0
Contractor Clear and Grade Site	$0	$0	$0	$0	$0	$0	$0
Contractor Build Control House	$0	$0	$0	$0	$0	$0	$0
External Cost	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

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DOMINION - ELECTRIC TRANSMISSION / DISTRIBUTION
SITE SUMMARY REPORT

Project Name: North Potomac Yard Relocations
Project No: 99-2023
Printed From: Dominion Virginia Power Transmisssion (and Substation) Projects Estimate

Prepared by: Tony Spears
Revision: 0
Date: 7/11/2011

DESCRIPTION	VP/DTECH LABOR	VP MATERIAL	VP/DTECH EQUIPMENT	CONTRACTOR SERVICES	OTHER COSTS	MARKUPS	TOTAL COST
Construction Labor & Materials							
Substation	$0	$0	$0	$42,699	$0	$7,501	$50,200
Construction Management / Field Supervision	$23,825	$0	$2,476	$0	$0	$14,921	$41,221
Construction Labor & Materials	**$23,825**	**$0**	**$2,476**	**$42,699**	**$0**	**$22,422**	**$91,421**
Land Acquisition					**$0**		**$0**
TOTAL CAPITAL COSTS	**$79,354**	**$0**	**$4,177**	**$88,124**	**$100,000**	**$76,961**	**$348,615**
COST OF REMOVAL	**$0**		**$0**	**$0**			**$0**
SALVAGE		**$0**					**$0**
O&M COSTS	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
NET SITE COST	$79,354	$0	$4,177	$88,124	$100,000	$76,961	$348,615

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Potomac Yards North Terminal Site
Relocation Study

#7.

Maintain the Existing Site and Terminal Station:

Dominion continues to support the existing site for the terminal station. Though the surrounding area will be redeveloped to an area of high-rise residential units, Dominion believes that the most cost effective solution is to work with an architect or landscape architect to integrate the terminal station and overhead lines into the new design of the redevelopment. The impacts to the area from the existing transmission facilities are visual in nature There are no impacts from sound levels and the present arrangement does not impact the safe use of the surrounding properties. Dominion would share the cost for developing and implementing the new design with the developer of the immediate surrounding property.

The cost of construction of both an alternative terminal station and placing the overhead transmission lines underground is significant. Dominion Virginia Power cannot justify asking the electric ratepayer to support the cost of this project as the existing facilities are safe and reliable.

If the City of Alexandria and County of Arlington request reconstruction and relocation of the overhead head line to underground, please see § 15.2-2404.F of the Code of Virginia for possible funding options.

Attachments

Existing Special Use Permit
Request for SUP Amendment
SCC Approval Process
Real Estate Communications
§ 15.2-2404 Code of Virginia

Attachment

SUP Approval
June 25, 1996

SPECIAL USE PERMIT CERTIFICATE

Article XI, Division A, Section 11-510 of the 1992 Zoning Ordinance of the City of Alexandria, Virginia requires that you display this special use permit in a conspicuous and publicly accessible place. A copy of the list of conditions associated with the special use permit shall be kept on the premises and made available for examination by the public upon request.

Special Use Permit No. 96-0091 **Approved by City Council on** 6-25-96

Permission is hereby granted to VEPCO

to use the premises located at 3601 JEFFERSON DAVIS Hy.

for the following purpose see attached

It is the responsibility of the special use permit holder to adhere to the conditions approved by City Council. The Department of Planning and Community Development will periodically inspect the property to identify compliance with the approved conditions. If any condition is in violation, the permit holder will be cited and issued a ticket. The first violation carries [redacted] a monetary fine. Continued violations will cause staff to docket the special use permit for review by City Council for possible revocation.

7-17-96
Date

Sheldon Lynn
Sheldon Lynn, Director
Planning and Community Development

F-PLN-0012 7/92

Docket Item #41
SPECIAL USE PERMIT #96-0091

Planning Commission Meeting
June 4, 1996

ISSUE: Consideration of a request for a special use permit to install an overhead-to-underground electric transmission terminal facility.

APPLICANT: Virginia Electric and Power Company (VEPCO) by Jonathan P. Rak, attorney

LOCATION: 3601 Jefferson Davis Highway Potomac Yard

ZONE: CDD-10/Coordinated Development District, Potomac Yard/Greens

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CITY COUNCIL ACTION, JUNE 25, 1996: City Council approved the recommendation of the Planning Commission, as amended, and approved the request, subject to compliance with all applicable codes, ordinances and staff recommendations and amended Condition #5 and added a Condition #6, shown below:

5. A 15-year expiration, for removal of the terminal facility.

6. The applicant shall come back in the Fall (1996) for an amendment to the Sunset Drive special use permit [SUP 95-0209].

Mr. Rak stated that they would consent and be happy to come back in the Fall, and if delayed because of this track relocation, will give all of the details and explain the source of the delay.

CITY COUNCIL ACTION, JUNE 15, 1996: Deferred until June 25, 1996 regular meeting.

PLANNING COMMISSION ACTION, JUNE 4, 1996: On a motion by Mr. Wagner, seconded by Mr. Komoroske, the Planning Commission voted to recommend approval of the request, subject to compliance with all applicable codes, ordinances and staff recommendations and to add Condition #5. The motion carried on a vote of 5 to 1. Mr. Ragland voted against the motion and Mr. Leibach was absent.

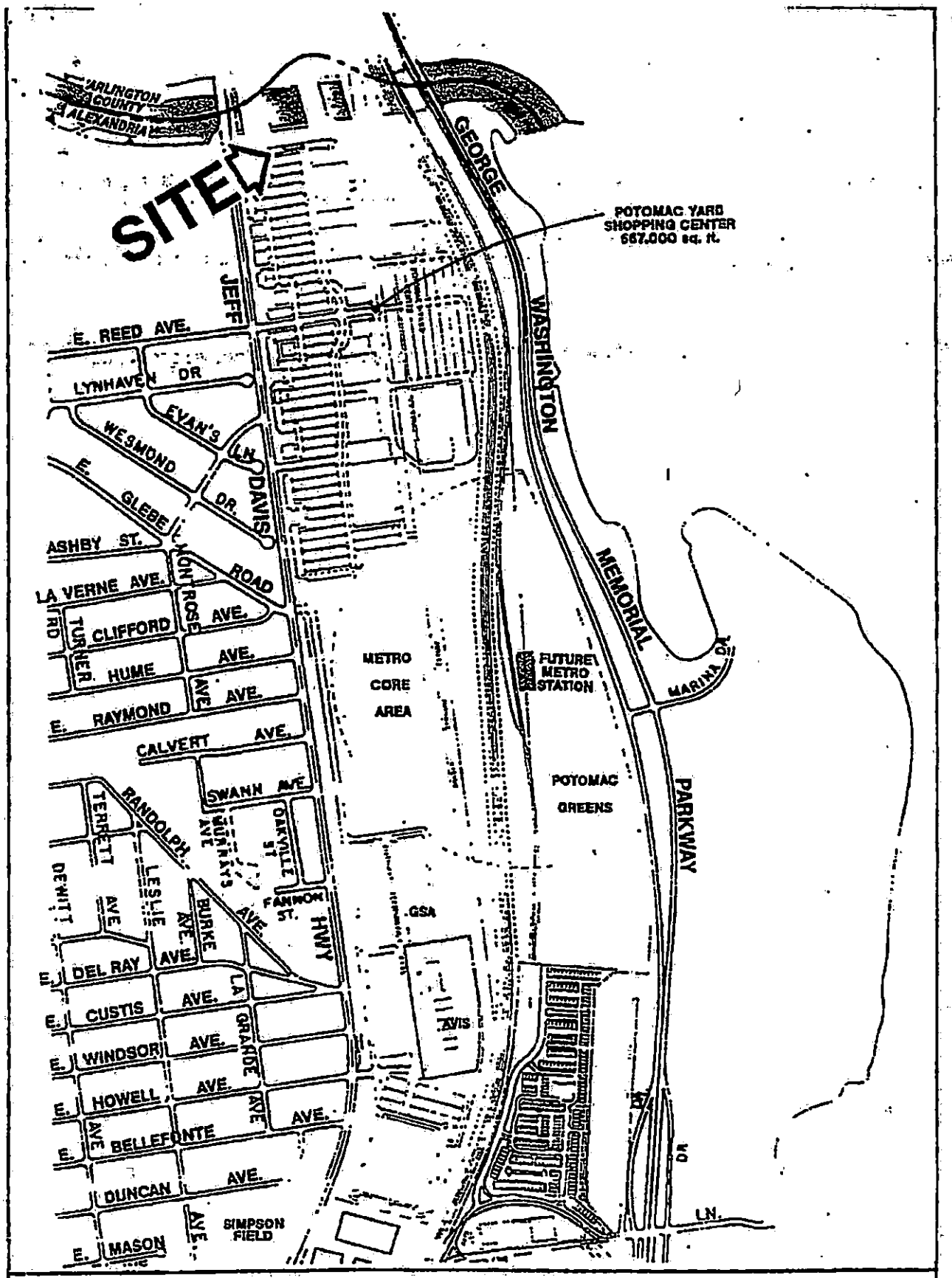
Reason: A majority of the Planning Commission believed that VEPCO should be forced to find a different and less prominent location for the terminal facility and added a condition requiring the facility to be removed from the proposed site within two years.

SUP 96-0091

Speakers:

Jonathan Rak, representing the applicant, presented the application.

Marc Allen, VEPCO, explained the problems finding a suitable site.



SUP # 96-0091 **6/4/96**

(Not to Scale)

SUP 96-0091

STAFF RECOMMENDATION:

Staff recommends approval of the request subject to compliance with all codes and ordinances and the following conditions:

1. The applicant shall submit a plan to the satisfaction of the Director of P&Z which includes proposed landscaping, fencing and other measures to the terminal structure, around its base and along Jefferson Davis Highway, the combination of which screens the terminal facility to the maximum reasonable extent. (P&Z)

2. All landscaping shall be maintained in good condition. (P&Z)

3. A final site plan in conformance with Section 11-410 of the zoning ordinance shall be approved by the Director of Transportation and Environmental Services before any permits will be issued for construction. (T&ES) (Code)

4. No final site plan shall be released and no construction activity shall take place until the applicant submits a Health and Safety Plan to the satisfaction of the directors of Health and T&ES indicating measures to be taken during any remediation and/or construction to minimize the potential risks to workers, the neighborhood and the environment. (T&ES) (Health)

5. A 15-year expiration, for removal of the terminal facility. (City Council)

6. The applicant shall come back in the Fall (1996) for an amendment to the Sunset Drive special use permit [SUP 95-0209]. (City Council)

Staff Note: In accordance with section 11-506(c) of the zoning ordinance, construction or operation shall be commenced and diligently and substantially pursued within 18 months of the date of granting of a special use permit by City Council or the special use permit shall become void.

Request for SUP Amendment
March 10, 2011

APPLICATION
SPECIAL USE PERMIT

SPECIAL USE PERMIT # 96-00091

PROPERTY LOCATION: 3601 Jefferson Davis Highway

TAX MAP REFERENCE: portions of 016.01-05-01 **ZONE:** CDD #10
008.03-02-01

APPLICANT:

Name: Virginia Electric and Power Company (dba Dominion Virginia Power)
Attn: Liz Harper, GSRP-12

Address: 701 E. Cary Street, Richmond VA 23219

PROPOSED USE: existing transmission line, underground to overhead terminal station (Four Mile Run North Terminal Site)

[✓] **THE UNDERSIGNED**, hereby applies for a Special Use Permit in accordance with the provisions of Article XI, Section 4-11-500 of the 1992 Zoning Ordinance of the City of Alexandria, Virginia.

[✓] **THE UNDERSIGNED**, ~~having obtained permission from the property owner~~ holding a perpetual easement agreement from the property owners, hereby grants permission to the City of Alexandria staff and Commission Members to visit, inspect, and photograph the building premises, land etc., connected with the application.

[✓] **THE UNDERSIGNED**, ~~having obtained permission from the property owner~~ holding a perpetual easement agreement from the property owners, hereby grants permission to the City of Alexandria to post placard notice on the property for which this application is requested, pursuant to Article IV, Section 4-1404(D)(7) of the 1992 Zoning Ordinance of the City of Alexandria, Virginia.

[✓] **THE UNDERSIGNED**, hereby attests that all of the information herein provided and specifically including all surveys, drawings, etc., required to be furnished by the applicant are true, correct and accurate to the best of their knowledge and belief. The applicant is hereby notified that any written materials, drawings or illustrations submitted in support of this application and any specific oral representations made to the Director of Planning and Zoning on this application will be binding on the applicant unless those materials or representations are clearly stated to be non-binding or illustrative of general plans and intentions, subject to substantial revision, pursuant to Article XI, Section 11-207(A)(10), of the 1992 Zoning Ordinance of the City of Alexandria, Virginia.

Elizabeth Harper Print Name of Applicant or Agent	Elizabeth Harper Signature	3/10/2011 Date
701 E. Cary Street, GSRP 12 Mailing/Street Address	(804) 771-6145 Telephone #	(804) 771-6303 Fax #
Richmond, VA 23219 City and State Zip Code	liz.harper@dom.com Email address	

ACTION-PLANNING COMMISSION:	**DATE:**
ACTION-CITY COUNCIL:	**DATE:**

SUP # 96-00091

PROPERTY OWNER'S AUTHORIZATION please see enclosed easement agreements dated 12/23/2004 and recorded on 03/2005 Instrument Nos. 050000048 and 050000050.

As the property owner of _____, I hereby
(Property Address)

grant the applicant authorization to apply for the _____ use as
(use)

described in this application.

Name: _____ Phone _____
Please Print

Address: _____ Email: _____

Signature: _____ Date: _____

1. Floor Plan and Plot Plan. As a part of this application, the applicant is required to submit a floor plan and plot or site plan with the parking layout of the proposed use. The SUP application checklist lists the requirements of the floor and site plans. The Planning Director may waive requirements for plan submission upon receipt of a written request which adequately justifies a waiver.

[✓] **Required floor plan and plot/site plan attached.** Enclosed is the original plan used for SUP 96-0091

[ ] **Requesting a waiver. See attached written request.**

2. The applicant is the *(check one)*:
[ ] Owner
[ ] Contract Purchaser
[ ] Lessee or
[✓] Other: permanent easement holder of the subject property.

State the name, address and percent of ownership of any person or entity owning an interest in the applicant or owner, unless the entity is a corporation or partnership, in which case identify each owner of more than ten percent.

Virginia Electric and Power Company is a subsidiary of Dominion Resources, Inc. No person or entity owns an interest in Dominion Resources, Inc. of more than 10%.

962

SUP # 96-00091

OWNERSHIP AND DISCLOSURE STATEMENT
Use additional sheets if necessary

1. Applicant. State the name, address and percent of ownership of any person or entity owning an interest in the applicant, unless the entity is a corporation or partnership, in which case identify each owner of more than ten percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. none		
2.		
3.		

2. Property. State the name, address and percent of ownership of any person or entity owning an interest in the property located at _____ (address), unless the entity is a corporation or partnership, in which case identify each owner of more than ten percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application. NA . Please see enclosed easement agreement

Name	Address	Percent of Ownership
1. —		
2.		
3.		

3. Business or Financial Relationships. Each person or entity listed above (1 and 2), with an ownership interest in the applicant or in the subject property is required to disclose any business or financial relationship, as defined by Section 11-350 of the Zoning Ordinance, existing at the time of this application, or within the12-month period prior to the submission of this application with any member of the Alexandria City Council, Planning Commission, Board of Zoning Appeals or either Boards of Architectural Review.

Name of person or entity	Relationship as defined by Section 11-350 of the Zoning Ordinance	Member of the Approving Body (i.e. City Council, Planning Commission, etc.)
1. none		
2.		
3.		

NOTE: Business or financial relationships of the type described in Sec. 11-350 that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings.

As the applicant or the applicant's authorized agent, I hereby attest to the best of my ability that the information provided above is true and correct.

2/24/2011 — Date
Elizabeth Harper — Printed Name
Elizabeth Harper — Signature

SUP # 96-00091

PROPERTY OWNER'S AUTHORIZATION Please see recorded easement agreements dated 12/23/2004 and recorded 1/03/2005, Instrument Nos 050000048 and 050000050

As the property owner of _____, I hereby
(Property Address)

grant the applicant authorization to apply for the _____ use as
(use)

described in this application.

Name:_____ Phone_____
Please Print

Address:_____ Email: _____

Signature:_____ **Date:** _____

1. Floor Plan and Plot Plan. As a part of this application, the applicant is required to submit a floor plan and plot or site plan with the parking layout of the proposed use. The SUP application checklist lists the requirements of the floor and site plans. The Planning Director may waive requirements for plan submission upon receipt of a written request which adequately justifies a waiver.

[✓] Required floor plan and plot/site plan attached.

[ ] Requesting a waiver. See attached written request.

2. The applicant is the *(check one)*:
[ ] Owner
[ ] Contract Purchaser
[ ] Lessee or
[✓] Other: permanent easement holder of the subject property.

State the name, address and percent of ownership of any person or entity owning an interest in the applicant or owner, unless the entity is a corporation or partnership, in which case identify each owner of more than ten percent.

Virginia Electric & Power Company is a subsidary of Dominion Resources, Inc. No individual owns more than 10% interest or stock in Dominion Resources, Inc.

SUP # 96-0071

OWNERSHIP AND DISCLOSURE STATEMENT
Use additional sheets if necessary

1. Applicant. State the name, address and percent of ownership of any person or entity owning an interest in the applicant, unless the entity is a corporation or partnership, in which case identify each owner of more than ten percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. No person or entity owns more than 10% interest or stock.		
2.		
3.		

2. Property. State the name, address and percent of ownership of any person or entity owning an interest in the property located at _____ (address), unless the entity is a corporation or partnership, in which case identify each owner of more than ten percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application. Not required as applicant is permanent easement holder of subject site.

Name	Address	Percent of Ownership
1.		
2.		
3.		

3. Business or Financial Relationships. Each person or entity listed above (1 and 2), with an ownership interest in the applicant or in the subject property is required to disclose any business or financial relationship, as defined by Section 11-350 of the Zoning Ordinance, existing at the time of this application, or within the12-month period prior to the submission of this application with any member of the Alexandria City Council, Planning Commission, Board of Zoning Appeals or either Boards of Architectural Review.

Name of person or entity	Relationship as defined by Section 11-350 of the Zoning Ordinance	Member of the Approving Body (i.e. City Council, Planning Commission, etc.)
1. no persons or entity listed above		
2.		
3.		

NOTE: Business or financial relationships of the type described in Sec. 11-350 that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings.

As the applicant or the applicant's authorized agent, I hereby attest to the best of my ability that the information provided above is true and correct.

4/18/2011 — Date
Elizabeth Harper for Dominion Va. Power — Printed Name
Elizabeth P.H. Harper — Signature

Alexandria City Council
William Euille
Kerry Donely
Frank Fannon IV
Alicia Hughes
Rob Krupicka
Redella "Del" Pepper
Paul Smedberg

Planning Commission
John Komoroske
H. Stewart Dunn
Jesse Jennings
Donna Fossum
Mary Lyman
J. Lawrence Robinson
Eric Wagner

Board of Zoning Appeals
Mark Allen
Geoffrey Goodale
John Keegan
Stephen Koenig
David Lantzy
Jennifer Lewis
Eric Zander

Board of Architectural Review
Old and Historic District
Chip Carlin
Oscar Fitzgerald
Thomas Hulfish
Arthur Keleher
Wayne Neale
Peter Smeallie
John Von Senden

Board of Architectural Review
Parker-Gray District
William Conkey
Robert Duffy
Christina Kelley
H. Richard Lloyd, III
Douglas Meick
Philip Moffat
Deborah Rankin

Updated 7/27/2010

Definition of business and financial relationship.

Section 11-305 of the Zoning Ordinance defines a business or financial relationship as any of the following:
(1) a direct one;
(2) by way of an ownership entity in which the member or a member of his immediate household is a partner, employee, agent or attorney;
(3) through a partner of the member or a member of his immediate household;
(4) through a corporation in which any of them is an officer, director, employee, agent or attorney or holds 10 percent or more of the outstanding bonds or shares of stock of a particular class. In the case of a condominium, this threshold shall apply only if the applicant is the title owner, contract purchaser, or lessee of 10% or more of the units in the condominium;
(5) not as an ordinary customer or depositor relationship with a professional or other service provider, retail establishment, public utility or bank, which relationship shall not be considered a business or financial relationship;
(6) created by the receipt by the member, or by a person, firm, corporation or committee on behalf of the member, of any gift or donation having a value of more than $100, singularly or in the aggregate, during the 12-month period prior to the hearing on the application from the applicant.

SUP # 96-00091

If property owner or applicant is being represented by an authorized agent such as an attorney, realtor, or other person for which there is some form of compensation, does this agent or the business in which the agent is employed have a business license to operate in the City of Alexandria, Virginia? NA

[ ] **Yes.** Provide proof of current City business license

[ ] **No.** The agent shall obtain a business license prior to filing application, if required by the City Code.

NARRATIVE DESCRIPTION

3. The applicant shall describe below the nature of the request **in detail** so that the Planning Commission and City Council can understand the nature of the operation and the use. The description should fully discuss the nature of the activity. (Attach additional sheets if necessary.)

Please see attached narrative

Dominion Virginia Power
Four Mile Run North Terminal Site
Request for Amendment to SUP #96-00091
3. NARRATIVE DESCRIPTION

Background

By the terms of an easement right-of-way agreement dated 6/1/1969 with the Richmond, Fredericksburg and Potomac Railroad Company (RF&P), Dominion Virginia Power (Dominion)was compelled in the mid- to late 1990's to underground the existing double circuit 230 kV overhead transmission lines in Potomac Yard property, at that time owned by the RF&P. Typically, Dominion's transmission lines continue from one substation to another as either completely overhead or completely underground. In this situation, the Glebe substation, which is the northern end of the two 230 kV circuits, did not have the space within the substation for the equipment required to support the lines as they transition from underground to overhead so they could be brought into the station. Communication was made with WMATA concerning the possibility of Dominion obtaining property from the adjacent bus parking lot to expand the Glebe Substation for this purpose. WMATA responded that the bus garage and maintenance area would continue to be a presence at this site and the parking area was needed for their operations.

Dominion proposed a site at the northern edge of Potomac Yard along Four Mile Run to locate a small terminal station for this equipment to transition these electric transmission lines from underground to overhead, and continue into Glebe Substation. The overhead portion of these lines already in place could then be used from the terminal site to the Glebe Substation with some slight adjustment to connect to the terminal site.

Dominion obtained Special Use Permit 96-0091 on June 25, 1996 from the City of Alexandria for the Four Mile Run North Terminal Site. That approval contained Condition #5, which provided that the SUP would expire in 15 years.

Present Conditions

In the 15 years since SUP approval, the property situation has remained unchanged. Inquiry has continued concerning the availability of that area adjacent to Glebe Substation for the expansion needed to bring the currently overhead portion of the two 230 kV overhead lines into the substation as underground. That area remains unavailable. There are no reasonable options available that would allow the underground lines to extend into Glebe Substation and allow the North Terminal Site to be removed.

Need for the facilities

The North Potomac Yards Terminal Station is part of Dominion's critical energy infrastructure needed to provide continued reliable electric service to over 80,000 customers located in the City of Alexandria and Arlington County. The loss of this facility would potential disrupt continued reliable service to many facilities that the City of Alexandria and Arlington County depend on to provide critical services to their population. Many facilities like 911 Call Centers, water treatment, pumping stations and hospitals could face extended periods of time without electrical service thus impacting the City of Alexandria and Arlington County's ability to provide vital services.

Request

Dominion is requesting the City of Alexandria to remove Condition #5 of Special Use Permit 96-0091 and allow the Special Use Permit to become perpetual.

SUP # 96-00091

USE CHARACTERISTICS

4. The proposed special use permit request is for *(check one)*:

[ ] a new use requiring a special use permit,
[ ] an expansion or change to an existing use without a special use permit,
[ ] an expansion or change to an existing use with a special use permit,
[X] other. Please describe: Amend SUP # 96-00091 to remove Condition #5.

5. Please describe the capacity of the proposed use:

A. How many patrons, clients, pupils and other such users do you expect? Specify time period (i.e., day, hour, or shift).

NA

B. How many employees, staff and other personnel do you expect? Specify time period (i.e., day, hour, or shift).

unmanned site

6. Please describe the proposed hours and days of operation of the proposed use: continuos elatrical operation

Day:	Hours:

7. Please describe any potential noise emanating from the proposed use.

A. Describe the noise levels anticipated from all mechanical equipment and patrons.

none

B. How will the noise be controlled?

NA

SUP # 96-00091

8. Describe any potential odors emanating from the proposed use and plans to control them:

none.

9. Please provide information regarding trash and litter generated by the use. NA

A. What type of trash and garbage will be generated by the use? (I.e. office paper, food wrappers)

B. How much trash and garbage will be generated by the use? (I.e. # of bags or pounds per day or per week)

C. How often will trash be collected?

D. How will you prevent littering on the property, streets and nearby properties?

10. Will any hazardous materials, as defined by the state or federal government, be handled, stored, or generated on the property?

[ ] Yes. [✓] No.

If yes, provide the name, monthly quantity, and specific disposal method below:

SUP # 96-00091

11. Will any organic compounds, for example paint, ink, lacquer thinner, or cleaning or degreasing solvent, be handled, stored, or generated on the property?

[ ] Yes. [✓] No.

If yes, provide the name, monthly quantity, and specific disposal method below:

12. What methods are proposed to ensure the safety of nearby residents, employees and patrons?

The terminal is surrounded by a 12' tall brick enclosure with a secured gate.

ALCOHOL SALES

13.

A. Will the proposed use include the sale of beer, wine, or mixed drinks?

[ ] Yes [✓] No

If yes, describe existing (if applicable) and proposed alcohol sales below, including if the ABC license will include on-premises and/or off-premises sales.

SUP # 96-0087

PARKING AND ACCESS REQUIREMENTS

14. A. How many parking spaces of each type are provided for the proposed use: NA

_____ Standard spaces
_____ Compact spaces
_____ Handicapped accessible spaces.
_____ Other.

Planning and Zoning Staff Only

Required number of spaces for use per Zoning Ordinance Section 8-200A_____

Does the application meet the requirement?

[ ] Yes [ ] No

B. Where is required parking located? *(check one)* NA

[ ] on-site
[ ] off-site

If the required parking will be located off-site, where will it be located?

_____

PLEASE NOTE: Pursuant to Section 8-200 (C) of the Zoning Ordinance, commercial and industrial uses may provide off-site parking within 500 feet of the proposed use, provided that the off-site parking is located on land zoned for commercial or industrial uses. All other uses must provide parking on-site, except that off-street parking may be provided within 300 feet of the use with a special use permit.

C. If a reduction in the required parking is requested, pursuant to Section 8-100 (A) (4) or (5) of the Zoning Ordinance, complete the PARKING REDUCTION SUPPLEMENTAL APPLICATION. NA

[ ] Parking reduction requested; see attached supplemental form

15. Please provide information regarding loading and unloading facilities for the use: NA

A. How many loading spaces are available for the use? _____

Planning and Zoning Staff Only

Required number of loading spaces for use per Zoning Ordinance Section 8-200_____

Does the application meet the requirement?

[ ] Yes [ ] No

SUP # 96-00091

B. Where are off-street loading facilities located? _____

C. During what hours of the day do you expect loading/unloading operations to occur?

D. How frequently are loading/unloading operations expected to occur, per day or per week, as appropriate?

16. Is street access to the subject property adequate or are any street improvements, such as a new turning lane, necessary to minimize impacts on traffic flow?

existing entrance and driveway are adequate

SITE CHARACTERISTICS

17. Will the proposed uses be located in an existing ~~building~~ area? [✓] Yes [ ] No

Do you propose to construct an addition to the building? [ ] Yes [✓] No

How large will the addition be? ____ square feet.

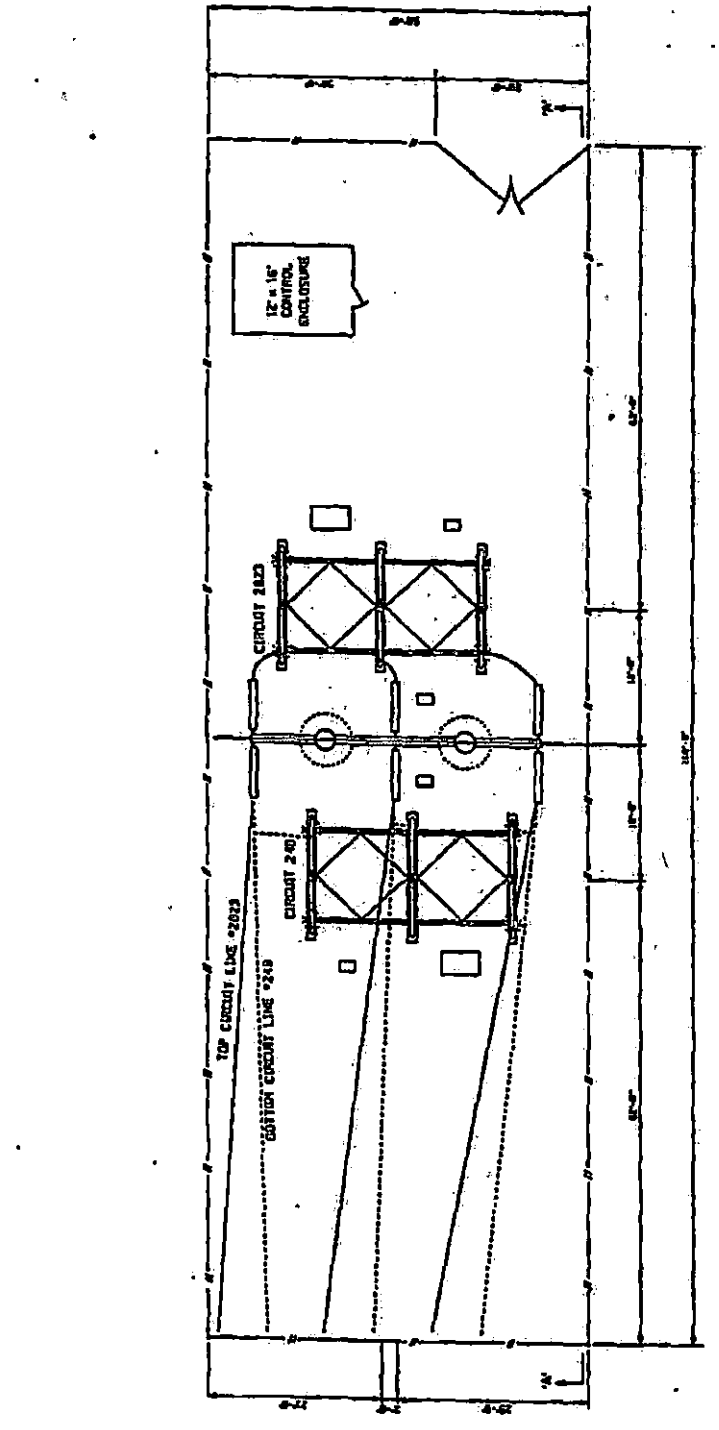
18. What will the total area occupied by the proposed use be? 50' x 160' walled site

8000 sq. ft. (existing) + _____ sq. ft. (addition if any) = 8000 sq. ft. (total)

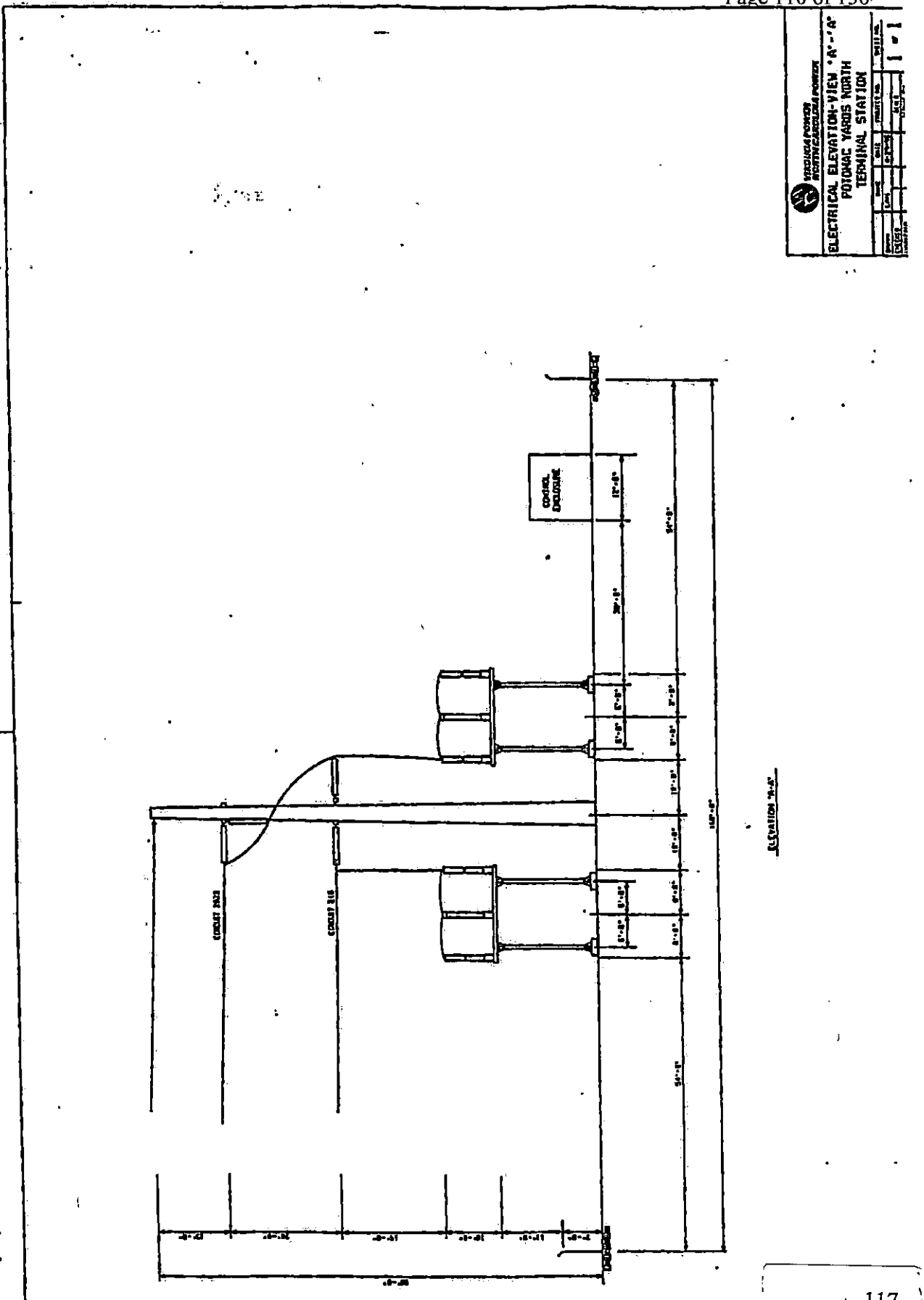
19. The proposed use is located in: *(check one)*

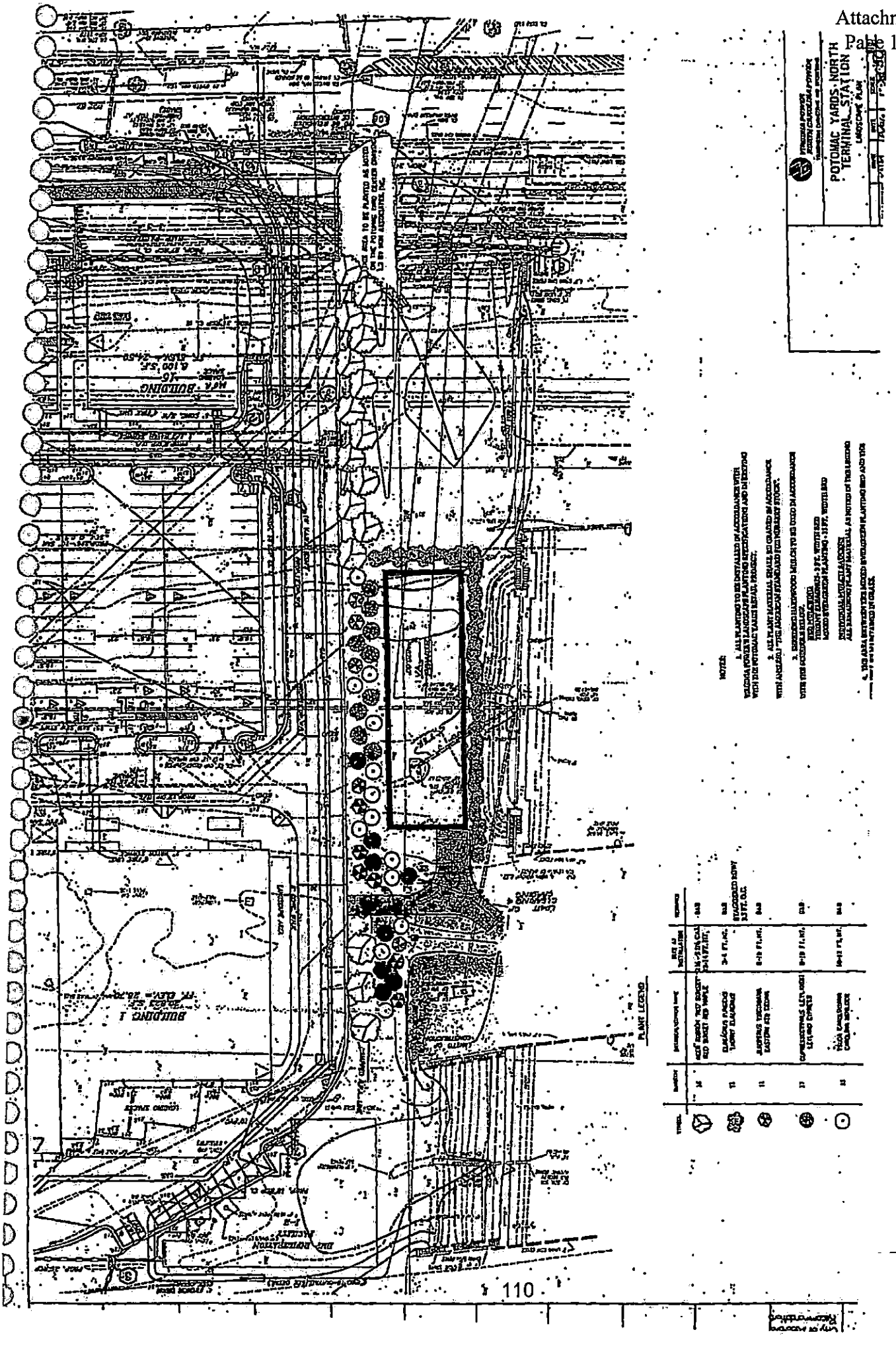
[ ] a stand alone building
[ ] a house located in a residential zone
[ ] a warehouse
[ ] a shopping center. Please provide name of the center: _____
[ ] an office building. Please provide name of the building: _____
[✓] other. Please describe: existing 50' x 160' walled site

End of Application



GENERAL ARRANGEMENT PLAN
POTOMAC YARDS NORTH
TERMINAL STATION

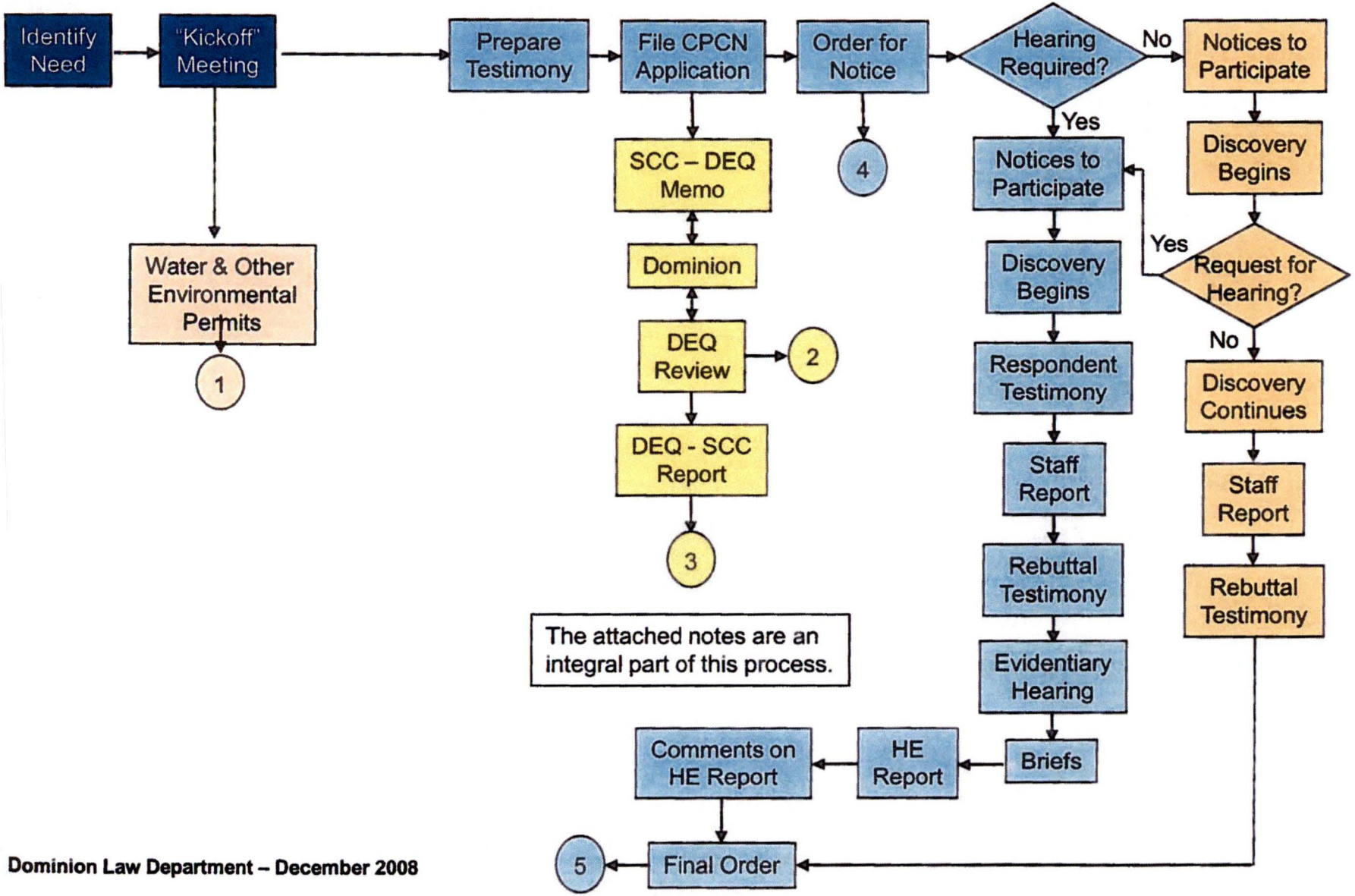

ELECTRICAL ELEVATION-VIEW 'A'-'A'
POTOMAC YARDS NORTH
TERMINAL STATION
CONTROL ENCLOSURE
CIRCUIT 2033
CIRCUIT 2115


POTOMAC YARDS NORTH
TERMINAL STATION
LANDSCAPE PLAN
NOTES:
PLANT LEGEND
BUILDING 1
BUILDING 16

SCC Approval Process

Dominion

Transmission
Certificate of Public Convenience and Necessity
Litigation Process



Dominion Law Department – December 2008

Dominion

Transmission
Certificate of Public Convenience and Necessity
Litigation Process

Notes:

1. Once the need has been identified, the Company will apply with the appropriate local, state and federal agencies to obtain all other necessary permits.

2. Upon receipt of the Company's Application, the Commission Staff will notify the Department of Environmental Quality (DEQ). The DEQ will consult with appropriate governmental agencies and will conduct a coordinated review and prepare a Wetland Impacts Consultation (WIC).

3. Once the WIC and coordinated review are completed, the DEQ will submit a written report to the Commission which includes the WIC, a summary of findings, and recommendations for the Commission's consideration that resulted from the review and a list of any Virginia Water Protection permits and approvals required for the proposed facility, which were identified during the coordinated review and WIC.

4. Upon receipt of the Company's Application, the Commission will issue either an Order for Notice and Comment or Request for Hearing or an Order for Notice and Hearing, establishing a hearing from the onset. In either case, the Order will establish a procedural schedule, provide for discovery and public comment, and may schedule public hearings. The Order will also instruct the Company to provide notice of the project to governmental officials, the public and affected landowners. (During the Evidentiary Hearing, public witnesses will also be heard.) If an Evidentiary Hearing is required by the Order, the Commission usually will appoint a Hearing Examiner (HE) to hear the case and provide recommendations to the Commission. In extraordinary circumstances, the Commission will conduct the evidentiary hearing, in which case a HE usually will be appointed to handle procedural issues and the discovery process.

5. Receipt of a Final Order does not reflect the possibility of an appeal to the Virginia Supreme Court or a remand by the Commission on certain issues.

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Real Estate Communications

Larry Tucker (VirginiaPower - 6)

From: Talala, Anabela [ATalala@wmata.com]
Sent: Monday, August 01, 2011 1:00 PM
To: Larry Tucker (VirginiaPower - 6)
Subject: RE: Glebe Sub Expansion

Mr. Tucker,

The requested property is not available for sale as it is required for bus parking in support of WMATA's Four Mile Run Metrobus Garage operations.

Anabela Talala
Office of Station Area Planning
and Asset Management (SAAM)
WMATA
600 5th Street, NW
Washington, DC 20001
W = 202-962-1588
C = 202-236-5149

From: Larry Tucker [mailto:larry.tucker@dom.com]
Sent: Monday, August 01, 2011 12:17 PM
To: Talala, Anabela
Subject: RE: Glebe Sub Expansion

Talala,

FYI, see attach.

Larry E. Tucker
Dominion Virginia - North Carolina Power
Electric Transmission Rights of Way
Sr. Real Estate Specialist
701 East Cary Street - 12th Floor
Richmond, Virginia 23219
Office (804) 771-5255
Mobile (804) 381-8316

Dominion

From: Talala, Anabela [mailto:ATalala@wmata.com]
Sent: Monday, August 01, 2011 11:37 AM
To: Larry Tucker (VirginiaPower - 6)
Subject: Glebe Sub Expansion

Larry, as you may know, Mark Meister retired last Friday. Please send me the attachments you refer to in the earlier email. I apologize for the inconvenience.

Anabela Talaia
Office of Station Area Planning
and Asset Management (SAAM)
WMATA
600 5th Street, NW
Washington, DC 20001
W = 202-962-1588
C = 202-236-5149

From: Larry Tucker [mailto:larry.tucker@dom.com]
Sent: Tuesday, July 26, 2011 2:21 PM
To: Meister, Mark K.
Cc: Talaia, Anabela
Subject: RE: Glebe Sub Expansion

Thanks

Larry T.

From: Meister, Mark K. [mailto:MMeister@wmata.com]
Sent: Tuesday, July 26, 2011 1:22 PM
To: Larry Tucker (VirginiaPower - 6)
Cc: Talaia, Anabela
Subject: RE: Glebe Sub Expansion

Larry,

By copy of this email, I am requesting Anabela Talaia to respond to your inquiry.

Mark

From: Larry Tucker [mailto:larry.tucker@dom.com]
Sent: Tuesday, July 26, 2011 11:42 AM
To: Meister, Mark K.
Cc: Ackerman, Heidi
Subject: RE: Glebe Sub Expansion

Mark,

Due to the City of Alexandria request that we relocate our terminal site, I have to revisit this and ask again if WMATA would consider selling a portion of the bus parking lot at 3224 S. Dale St. Their appear to be a discrepancy with Arlington County tax records. Please see attachment for property info. which has the owner as Commonwealth of Va. Transportation. Any help would be greatly appreciated.

Thanks

Larry E. Tucker
Dominion Virginia - North Carolina Power
Electric Transmission Rights of Way

Sr. Real Estate Specialist
701 East Cary Street - 12th Floor
Richmond, Virginia 23219
Office (804) 771-6255
Mobile (804) 381-8316

Dominion

From: Meister, Mark K. [mailto:MMeister@wmata.com]
Sent: Wednesday, March 02, 2011 3:36 PM
To: Larry Tucker (VirginiaPower - 6)
Cc: Ackerman, Heidi
Subject: FW:

Larry,

The requested property is not available for sale as it is required for bus parking in support of WMATA's Four Mile Run Metrobus Garage operations.

Mark

Mark K. Meister
Program Manager, Real Estate
Office of Station Area Planning and Asset Management
Washington Metropolitan Area Transit Authority
600 Fifth Street, NW
Washington, DC 20001
Tel: 202-962-1589
Fax: 202-962-2396
Email: mmeister@wmata.com

From: Ackerman, Heidi
Sent: Wednesday, March 02, 2011 3:25 PM
To: Meister, Mark K.
Subject: FW:

From: Larry Tucker [mailto:larry.tucker@dom.com]
Sent: Wednesday, March 02, 2011 3:01 PM
To: Ackerman, Heidi
Subject:

Heidi,

Please see attachment for area Dominion would like to know if WMATA would consider selling a portion of bus lot property near Four Mile Run. We would like to extend the substation out 50ft. Let me if you have any questions.

Thanks

Larry E. Tucker

Dominion Virginia - North Carolina Power
Electric Transmission Rights of Way
Sr. Real Estate Specialist
701 East Cary Street - 12th Floor
Richmond, Virginia 23219
Office (804) 771-6255
Mobile (804) 381-8316

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ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS, RECREATION, AND CULTURAL RESOURCES
Park Development Division
2100 Clarendon Boulevard, Suite 414, Arlington, VA 22201
TEL 703.228.3332 FAX 703.228.3328 www.arlingtonva.us

October 18, 2011

Mr. Larry E. Tucker
Senior Real Estate Specialist
Dominion Virginia Power
P.O. Box 26666
Richmond, VA 23261

Re: **Request to Acquire Land at Jefferson Davis Highway RPC: 37037061 and 37037065**

Dear Mr. Tucker:

This letter is in response to your correspondence to Mr. Leon Vignes dated September 29, 2011 regarding the availability for sale of County parcels RPC 37037061 and RPC 37037065. The property is a vital part of the County's long-term planning effort, the Four Mile Run Restoration Project. The parcels are integral to the open space and circulation networks that are planned. The County is not interested in selling the parcels to Dominion Virginia Power. If you have any questions, please call me at (703)228-3332 or email lgrand@arlingtonva.us.

Sincerely,

Lisa D. Grandle
Park Development Division Chief

CC: Shannon Flanagan-Watson, County Managers Office
Leon Vignes, Department of Community Planning, Housing and Development
Scott McPartlin, Department of Parks, Recreation and Cultural Resources
Jason Papacosma, Department of Environmental Services

Administration Division
703.838.4770
FAX 703.519.3332

Facilities Maintenance Division
703.838.4770
FAX 703.519.3332

Printing Services
703.838.4940
FAX 703.838.3810

DEPARTMENT OF GENERAL SERVICES
110 North Royal Street - Suite 300
Alexandria, Virginia 22314
alexandriava.gov

Fleet Services Division
703.519.5989
FAX 703.519.5992

Capital Projects Division
703.519.6500
FAX 703.519.3351

Mailroom Services
703.838.4982
FAX 703.838.4948

August 19, 2011

Dominion Virginia Power
701 East Cary Street, Richmond,
Richmond, Virginia 23219

ATTN: Larry E. Tucker, Sr. Real Estate Specialist

Re: Request to Acquire Land at 3900 Jefferson Davis Highway (TM # 008.03-01-04).

Dear Mr. Tucker:

The City of Alexandria Department of General Services (DGS) received your letter dated August 1, 2011 regarding interest in purchasing the property addressed as 3900 Jefferson Davis Highway. After review of the records it has been determined that the property is not for sale. The City was donated the property for continued use as open space as part of the Four Mile Run Multi-use Trail.

Please feel free to contact me if you have any questions at tim.wanamaker@alexandriava.gov or at 703.746.3208.

Sincerely,

Timothy E. Wanamaker
Deputy Director, Administration

cc: Jeremy McPike, Director
Linda Dickerman, Lease Management Specialist

§ 15.2-2404 Code of Virginia

prev | next

§ 15.2-2404. Authority to impose taxes or assessments for local improvements; purposes.

A. A locality may impose taxes or assessments upon the owners of abutting property for constructing, improving, replacing or enlarging the sidewalks upon existing streets, for improving and paving existing alleys, and for the construction or the use of sanitary or storm water management facilities, retaining walls, curbs and gutters. Such taxes or assessments may include the legal, financial or other directly attributable costs incurred by the locality in creating a district, if a district is created, and financing the payment of the improvements. The taxes or assessments shall not be in excess of the peculiar benefits resulting from the improvements to such abutting property owners. No tax or assessment for retaining walls shall be imposed upon any property owner who does not agree to such tax or assessment.

B. In addition to the foregoing, a locality may impose taxes or assessments upon the owners of abutting property for the construction, replacement or enlargement of waterlines; for the installation of street lights; for the construction or installation of canopies or other weather protective devices; for the installation of lighting in connection with the foregoing; and for permanent amenities, including, but not limited to, benches or waste receptacles. With regard to installation of street lights, a locality may provide by ordinance that upon a petition of at least 60 percent of the property owners within a subdivision, or such higher percent as provided in the ordinance, the locality may impose taxes or assessments upon all owners within the subdivision who benefit from such improvements. The taxes or assessments shall not be in excess of the peculiar benefits resulting from the improvements to such property owners.

C. In the Cities of Chesapeake, Hopewell, Newport News, Norfolk, Richmond, and Virginia Beach, the governing body may impose taxes or assessments upon the abutting property owners for the initial improving and paving of an existing street provided not less than 50 percent of such abutting property owners who own not less than 50 percent of the property abutting such street request the improvement or paving. The taxes or assessments permitted by this paragraph shall not be in excess of the peculiar benefits resulting from the improvements to such abutting property owners and in no event shall such amount exceed the sum of $10 per front foot of property abutting such street or the sum of $1,000 for any one subdivided lot or parcel abutting such street, whichever is the lesser.

D. The governing bodies of the Cities of Buena Vista and Waynesboro and the County of Augusta may, by duly adopted ordinance, impose taxes or assessments upon abutting property owners subjected to frequent flooding for special benefits conferred upon that property by the installation or construction of flood control barriers, equipment or other improvements for the prevention of flooding in such area and shall provide for the payment of all or any part of the above projects out of the proceeds of such taxes or assessments, provided that such taxes or assessments shall not be in excess of the peculiar benefits resulting from the improvements to such abutting property owners.

E. In the Cities of Poquoson and Williamsburg, the governing body may impose taxes or assessments upon the owners of abutting property for the underground relocation of distribution lines for electricity, telephone, cable television and similar utilities. Notwithstanding the provisions of § 15.2-2405, such underground relocation of distribution lines may only be ordered by the governing body and the cost thereof apportioned in pursuance of an agreement between the governing body and the abutting landowners. Notice shall be given to the abutting landowners, notifying them when and where they may appear before the governing body, or some committee thereof, or the administrative board or other similar board of the locality to whom the matter may be referred, to be heard in favor of or against such improvements.

F. The governing body of any locality may request an electric utility that proposes to construct an overhead electric transmission line of 150 kilovolts or more, any portion of which would be located in such locality, to enter into an agreement with the locality that provides (i) the locality will impose a tax or assessment on electric utility customers in a special rate district in an amount sufficient to cover the utility's additional costs of constructing that portion of the proposed line to be located in such locality, or any smaller portion thereof as the utility and the locality may agree, as an underground rather than an overhead line; (ii) the tax or assessment will be shown as a separate item on such customers' electric bills and will be collected by the utility on behalf of the locality; (iii) the utility will construct, operate, and maintain the agreed portion of the line underground; (iv) the locality will pay to the utility its full additional costs of constructing that portion of the line underground rather than overhead; and (v) such other terms and conditions as the parties may agree. This provision shall not apply, however, to lines in operation as of March 1, 2005.

If the locality and the utility enter into such an agreement, the locality shall by ordinance (a) set the boundaries of the special rate

district within a reasonable distance of the route of that portion of the line to be placed underground pursuant to the agreement, and (b) fix the amount of such tax or assessment, which shall be based on the assessed value of real property within such district. Thereafter, owners of real property comprising not less than 60 percent of the assessed value of real property within such district may petition the locality to impose such tax or assessment. If such petition is filed, the locality shall submit the agreement to the State Corporation Commission on or before the date by which respondents must prefile testimony and exhibits in any application for approval of the line before the State Corporation Commission, which, after notice and opportunity for hearing, shall approve the agreement if it finds it to be in the public interest. If there exists a practicably feasible overhead alternative for construction of the electric transmission line, the State Corporation Commission shall not approve the agreement unless the governing body of every locality in which the underground segment of the line would be located requests the electric utility to construct the line underground in accordance with this subdivision. If the agreement is approved by the State Corporation Commission, the locality shall impose such tax or assessment on electric utility customers within the district, and the locality and the utility shall carry out the agreement according to its terms and conditions.

G. In the County of Loudoun, the governing body may impose taxes or assessments upon the abutting property owners of Crooked Bridge Lane, located in the Blue Ridge District, for the improvement of the bridge located on Crooked Bridge Lane, including construction, repair and maintenance, provided not less than 50 percent of such abutting property owners who own not less than 50 percent of the property abutting such street request the improvement. The taxes or assessments permitted by this paragraph shall not be in excess of the peculiar benefits resulting from the improvements to such abutting property owners.

(Code 1950, § 15-669; 1962, c. 623, § 15.1-239; 1966, c. 127; 1971, Ex. Sess., c. 126; 1972, cc. 704, 767; 1976, cc. 512, 617; 1977, c. 225; 1981, c. 581; 1985, c. 59; 1989, cc. 24, 564; 1991, c. 422; 1997, c. 587; 1998, cc. 324, 864; 1999, c. 386; 2005, c. 854; 2007, cc. 260, 813; 2008, c. 355; 2008, Sp. Sess. II, c. 8; 2009, c. 335; 2010, c. 392.)

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THE JBG COMPANIES

September 11, 2013

Jeffrey Farner, Deputy Director
Department of Planning & Zoning
301 King Street
Alexandria VA 22314

Re: Dominion Power Terminal Station Relocation
Potomac Yard Retail Center – Landbay – F

Dear Mr. Farner

On behalf of JBG, acting as an agent for the property owner CPYR, LLC., we are submitting a letter supporting the special use permit (SUP# 2011-0014), which requires relocation of the terminal facility, associated structures including removal of the 3 poles associated with the facility. In order to relocate the facility, you have indicated that an alternative parking location for WMATA 110 buses is needed on LandBay F. We have determined that Landbay F can accommodate the alternative parking location subject to the constraints of the existing tenant leases and future development plans for Landbay F. To enable the implementation of the proposed special use permit condition to relocate the terminal facility, CPYR is able to provide space on Landbay F for the WMATA buses subject to the following:

1. Within six months of written request by the City, CPYR shall provide access within Landbay-F for the provision of parking for 110 Washington Metropolitan Area Transit Authority (WMATA) buses. However, the WMATA bus parking shall not be provided earlier than January 1, 2019;
2. The location and operating duration of the facility can not preclude future redevelopment of the site. As we have previously discussed, we currently intend to begin new development at Landbay F concurrently with the termination of the Hoyts lease in December of 2018. The location of the temporary parking facility will be dependent on our development plans and subject to our approval;
3. CPYR shall be responsible for providing the WMATA bus parking within the existing asphalt parking lot with temporary chain link fencing and temporary lighting.
4. The 110 spaces for WMATA bus parking-storage shall be located in a continuous block within Landbay-F;
5. The WMATA bus parking shall be for a period not to exceed twenty-four(24) months from the commencement of the bus parking-storage by WMATA;

THE JBG COMPANIES

6. The bus parking space width and drive aisle width shall be subject to WMATA standards, but in no event shall the bus parking-storage exceed two (2) acres; and
7. In the event the WMATA bus parking requires a site plan or plot plan approval(s), CPYR shall consent to the filing of all responsible and necessary approval(s).

The approvals and commitments referenced herein are subject to approval of special use permit (SUP # 2011-0014), approval of the State Corporation Commission (SCC) and commencement of the relocation of the Dominion Power terminal facility. In the event the necessary approvals are not obtained, or commencement of the relocation of the Dominion Power terminal facility has not begun by January 1, 2019, CPYR shall have no obligation to provide the WMATA bus parking.

CPYR understands and appreciates the City's efforts to coordinate the relocation of the terminal facility. CPYR will have more flexibility and a better understanding of its ability to accommodate the relocation after the expiration of the existing leases. If the above conditions and parameters are not sufficient for all parties to move forward with the relocation, CPYR is willing to revisit this issue after the expiration of the existing leases in 2019 or anytime thereafter.

Sincerely,

Andrew VanHorn

ARLINGTON
VIRGINIA

OFFICE OF THE COUNTY MANAGER

2100 Clarendon Boulevard, Suite 302, Arlington, VA 22201
TEL 703-228-3120 FAX 703-228-3218 TTY 703-228-4611 www.arlingtonva.us

September 19, 2013

Jeffrey C. Farner, Deputy Director
Department of Planning and Zoning
301 King Street, # 2100
Alexandria, VA 22314

Dear Mr. Farner:

For informational purposes for Alexandria's elected and administrative leadership, this letter is intended to communicate Arlington's support for the relocation of the existing Dominion Virginia Power (DVP) terminal facility located in Alexandria to a new location within the existing DVP substation located in Arlington County. For more than two years, Arlington County staff has been collaborating closely with City of Alexandria staff, along with DVP and other stakeholders, to work through the logistic s associated with the expiration of DVP's special use permit for its substation located in Alexandria. We are excited about the outcome of these efforts.

As part of the proposed relocation of the substation, three large utility towers (two located in Four Mile Run stream and one on the south bank in Alexandria) will be removed during the undergrounding and will be a benefit improving the ecology and physical conditions in the area. This proposal supports the vision and framework of the Four Mile Run Restoration Master Plan, adopted by the Arlington County Board and Alexandria City Council in 2006.

The benefits to Arlington and Alexandria from removing this infrastructure from the visible landscape are significant, especially when considered in conjunction with several other master plan efforts currently underway. These include the demolition of the westernmost abandoned bridge (along with new bicycle and pedestrian access), the design of a new bicycle/pedestrian bridge connecting Arlington and Alexandria to the immediate west of the Arlington substation, and work to restore and naturalize the banks of Four Mile Run in both jurisdictions, improving ecology, aesthetics, and access.

Our understanding based upon information provided by DVP Is that the physical impact on Arlington County from the relocation of the DVP terminal station will be negligible, limited to the addition of relatively short (<20') structures within the footprint of the existing substation on the Arlington banks of Four Mile Run. Construction work will involve staging areas on both sides of Four Mile Run to put the lines underground, as well as temporary relocation of WMATA bus storage to Alexandria in the Potomac Yards movie theater complex.

With three large towers and power lines no longer visible and the removal of the bridge and Alexandria substation, the ecological and waterfront restoration vision of the Four Mile Run Restoration Master Plan can begin to take shape in the Potomac Yards portion of the corridor where the idea to restore the entire corridor began.

The current zoning for the existing Glebe Road Substation site in Arlington where the improvements are planned is CM which is the Limited Industrial District. The Arlington County

Zoning Code Article 8.2 describes it thusly; "The purpose for the CM, Limited Industrial District is to provide areas for light manufacturing, wholesale businesses and distribution centers and other uses inappropriate to residential or service business areas." The Industrial Use Table in Section 8.1 of the Code also states that; "Public service, including electric distributing substation, fire or police station, telephone exchange, and the like" are uses that are allowed by right. So no special use permit would be required. It would be considered as physical improvements to the existing use. The usual permits would be required prior to construction.

We look forward to a continued partnership in support of a shared vision for the Four Mile Run Restoration Master Plan.

Sincerely,

Barbara M. Donnellan
Arlington County Manager

From: Christopher Spera
To: Jhowardmiddleton
Cc: Amy Friedlander; Jeffrey Farner; Ryan W. Boggs; Lawrence Allen; Steven Quarberg; Deborah T. Johnson; Lisa S Booth
Subject: RE: New easements for relocated electric lines
Date: Monday, September 16, 2013 1:48:17 PM

Howard –

As we have previously discussed, in the context of the City of Alexandria's requested relocation of Dominion Virginia Power's North Potomac Yards distribution substation as a condition of Dominion's SUP, the City of Alexandria is aware that under the current relocation plan, new permanent easements will have to be granted to Dominion on land owned by the City. Given the state law limitations on localities granting permanent easements, we will work around this in the manner we have previously done with Dominion by the following process: 1) The City will convey the necessary land to Dominion; 2) Dominion will encumber the land with the necessary easements and record same; and 3) Dominion will convey the land back to the City subject to the easements. All of the foregoing conveyances will be without any additional cost to either Dominion or the City.

Please let me know if you have any questions.

Chris Spera

From: Jhowardmiddleton [mailto:jhowardmiddleton@aol.com]
Sent: Wednesday, September 11, 2013 12:20 PM
To: Christopher Spera
Cc: Amy Friedlander; Jeffrey Farner; Ryan W. Boggs; Lawrence Allen; Steven Quarberg; Deborah T. Johnson; Lisa S Booth
Subject: Re: New easements for relocated electric lines

Thanks Chris.

Sent from my iPad

On Sep 11, 2013, at 10:52 AM, Christopher Spera <Christopher.Spera@alexandriava.gov> wrote:

> Those changes are fine.
>
> ---
>
> **From:** Jhowardmiddleton [mailto:jhowardmiddleton@aol.com]
> **Sent:** Wednesday, September 11, 2013 10:46 AM
> **To:** Amy Friedlander; Christopher Spera; Jeffrey Farner
> **Subject:** Re: New easements for relocated electric lines
>
> Thanks for the draft letter. I have two requests: (1) Add a sentence which makes it clear that the exchange of easements will occur without cost to either Dominion Virginia Power or the City of Alexandria; and (2) Amend the first sentence to the

following: ..."in the context of the City of Alexandria's requested relocation of Dominion Virginia Power's North Potomac Yard facility as a condition to Dominion's SUP",...

Sent from my iPad

On Sep 10, 2013, at 10:29 AM, Amy Friedlander <amy.friedlander@alexandriava.gov> wrote:

Amy Friedlander | Urban Planner
City of Alexandria | Planning and Zoning
301 King Street, Alexandria, VA 22314
703.746.3858 | www.alexandriava.gov/planning

From: Christopher Spera
Sent: Thursday, September 05, 2013 2:18 PM
To: jhowardmiddleton@aol.com
Cc: Jeffrey Farner; Amy Friedlander
Subject: New easements for relocated electric lines

Howard –

As we have previously discussed, in the context of Dominion Virginia Power's proposed relocation of its North Potomac Yards distribution substation, the City of Alexandria is aware that under the current relocation plan, new permanent easements will have to be granted to Dominion on land owned by the City. Given the state law limitations on localities granting permanent easements, we will work around this in the manner we have previously done with Dominion by the following process: 1) The City will convey the necessary land to Dominion; 2) Dominion will encumber the land with the necessary easements and record same; and 3) Dominion will convey the land back to the City subject to the easements.

Please let me know if you have any questions.

Chris Spera

Christopher P. Spera
Deputy City Attorney
Office of the City Attorney
301 King Street – Suite 1300
Alexandria, Virginia 22314

703-746-3750

From:	Matt Ginivan
To:	Jeffrey Farner; Andrew Vanhorn
Cc:	Faroll Hamer; Christopher Spera; Amy Friedlander; Rak, Jonathan P. (jrak@mcguirewoods.com); Wire, Kenneth W. (kwire@mcguirewoods.com)
Subject:	RE: Terminal Station - North Potomac Yard
Date:	Friday, September 20, 2013 10:07:53 AM

Jeff,

Confirmed. Subject to the conditions of the letter, we would not charge rent.

Matt

From: Jeffrey Farner [mailto:Jeffrey.Farner@alexandriava.gov]
Sent: Friday, September 20, 2013 9:47 AM
To: Andrew Vanhorn; Matt Ginivan
Cc: Faroll Hamer; Christopher Spera; Amy Friedlander
Subject: Terminal Station - North Potomac Yard

Andy – Matt

We are in the process of finalizing the staff report and forwarding to the Planning Commission for the October 1st hearing.

Dominion Power has raised an issue of whether Landbay-F could charge rent (from the City, WMATA or Dominion). I said it was the intent not to charge rent and we felt comfortable with the letter. However they requested something in writing – email from Landbay-F confirming. Please send an email to me – just confirming that the intent of the letter is to not charge rent – subject to the conditions of the letter.

Also – it would be helpful if someone from your team was at the Planning Commission to answer any questions.

Thanks and have a good weekend.

Jeffrey C. Farner, Deputy Director
City of Alexandria, Virginia
Department of Planning and Zoning
(703) 746-3803 (Direct)
(571)641-5458 (Cell)
www.alexandriava.gov

ARLINGTON
VIRGINIA

OFFICE OF THE COUNTY MANAGER

2100 Clarendon Boulevard, Suite 302, Arlington, VA 22201
TEL 703-228-3120 FAX 703-228-3218 TTY 703-228-4611 www.arlingtonva.us

September 19, 2013

Jeffrey C. Farner, Deputy Director
Department of Planning and Zoning
301 King Street, # 2100
Alexandria, VA 22314

Dear Mr. Farner:

For informational purposes for Alexandria's elected and administrative leadership, this letter is intended to communicate Arlington's support for the relocation of the existing Dominion Virginia Power (DVP) terminal facility located in Alexandria to a new location within the existing DVP substation located in Arlington County. For more than two years, Arlington County staff has been collaborating closely with City of Alexandria staff, along with DVP and other stakeholders, to work through the logistic s associated with the expiration of DVP's special use permit for its substation located in Alexandria. We are excited about the outcome of these efforts.

As part of the proposed relocation of the substation, three large utility towers (two located in Four Mile Run stream and one on the south bank in Alexandria) will be removed during the undergrounding and will be a benefit improving the ecology and physical conditions in the area. This proposal supports the vision and framework of the Four Mile Run Restoration Master Plan, adopted by the Arlington County Board and Alexandria City Council in 2006.

The benefits to Arlington and Alexandria from removing this infrastructure from the visible landscape are significant, especially when considered in conjunction with several other master plan efforts currently underway. These include the demolition of the westernmost abandoned bridge (along with new bicycle and pedestrian access), the design of a new bicycle/pedestrian bridge connecting Arlington and Alexandria to the immediate west of the Arlington substation, and work to restore and naturalize the banks of Four Mile Run in both jurisdictions, improving ecology, aesthetics, and access.

Our understanding based upon information provided by DVP Is that the physical impact on Arlington County from the relocation of the DVP terminal station will be negligible, limited to the addition of relatively short (<20') structures within the footprint of the existing substation on the Arlington banks of Four Mile Run. Construction work will involve staging areas on both sides of Four Mile Run to put the lines underground, as well as temporary relocation of WMATA bus storage to Alexandria in the Potomac Yards movie theater complex.

With three large towers and power lines no longer visible and the removal of the bridge and Alexandria substation, the ecological and waterfront restoration vision of the Four Mile Run Restoration Master Plan can begin to take shape in the Potomac Yards portion of the corridor where the idea to restore the entire corridor began.

The current zoning for the existing Glebe Road Substation site in Arlington where the improvements are planned is CM which is the Limited Industrial District. The Arlington County

Zoning Code Article 8.2 describes it thusly; "The purpose for the CM, Limited Industrial District is to provide areas for light manufacturing, wholesale businesses and distribution centers and other uses inappropriate to residential or service business areas." The Industrial Use Table in Section 8.1 of the Code also states that; "Public service, including electric distributing substation, fire or police station, telephone exchange, and the like" are uses that are allowed by right. So no special use permit would be required. It would be considered as physical improvements to the existing use. The usual permits would be required prior to construction.

We look forward to a continued partnership in support of a shared vision for the Four Mile Run Restoration Master Plan.

Sincerely,

Barbara M. Donnellan
Arlington County Manager

September 30, 2013

Re: North Potomac Yard Terminal Facility Relocation

Members of Planning Commission and City Council,

We would like to express the support of the Arlington-Alexandria Joint Task Force on Four Mile Run for the relocation of the North Potomac Yard Terminal Facility to the existing Dominion Virginia Power substation facility in Arlington County. Removing the existing terminal facility and three poles from Four Mile Run Park and is consistent with the Four Mile Run Restoration Master Plan. It will dramatically improve the attractiveness of Four Mile Run as a community amenity and recreation space.

The Four Mile Run Restoration Master Plan is an inter-jurisdictional planning document developed and approved by the City of Alexandria and Arlington County in 2006. The Master Plan was developed in response to increased development near the lower Four Mile Run corridor along the 2.3 miles of stream separating the two municipalities as well as a renewed awareness of the potential for ecological restoration and the creation of new recreation and public amenities in Alexandria and Arlington.

While the Master Plan was developed with the possibility that the terminal station would remain in place, it also discussed the potential for further improvements through the elimination of the power lines along the stream. Relocating the Dominion terminal is an important first step in achieving this major improvement for public use of Four Mile Run.

Undergrounding the transmission lines currently connecting the terminal station in Alexandria to the substation across the stream in Arlington will have a significant impact on the aesthetics and viewshed opportunities of Four Mile Run Park as well as the entryway to both jurisdictions, which represents a Guiding Principle of the Master Plan. Removing the poles from the stream will help improve stream ecology and visual impact and removing the terminal station will allow streambank stabilization in addition to aesthetic improvements.

We support the efforts of City staff, Arlington County, Dominion Virginia Power, WMATA and JBG Companies, acting on behalf of the landowner of Landbay F, to make this relocation possible. We request that you approve the Special Use Permit application to return the land currently occupied by the terminal facility to high-quality open space.

Sincerely,

Judy Noritake
Alexandria Co-chair
Four Mile Run Joint Task Force

Liz Birnbaum
Arlington Co-chair
Four Mile Run Joint Task Force

DEPARTMENT OF RECREATION, PARKS AND CULTURAL ACTIVITIES
1108 Jefferson Street
James B. Spengler Alexandria, Virginia 22314 Phone (703)746-4343
Director Fax (703)746-5585

Park and Recreation Commission

Alexandria Planning Commission

September 30, 2013

Re: North Potomac Yard Terminal Facility Relocation

Chairman Komoroske and Members of Planning Commission,

I am writing to you on behalf of the Park and Recreation Commission to express our support for the relocation of the North Potomac Yard Terminal Facility functions to the existing Dominion Virginia Power substation facility in Arlington County. As a part of this relocation the existing brick terminal building and three large transmission line support structures will be removed from the stream and the adjacent park, making way for the quality restoration and redevelopment Alexandria has envisioned at this site for almost a decade. This is fully consistent with the intent of the Four Mile Run Restoration Master Plan's goals to reclaim quality open space, improve the stream ecology and provide better opportunities for the new neighborhoods being developed nearby.

The Four Mile Run Restoration Master Plan is an inter-jurisdictional planning document developed and approved by the City of Alexandria, Arlington County and the Northern Virginia Regional Commission in 2006. The Master Plan was developed in response to increased urban development near the lower Four Mile Run corridor along the 2.3 miles of stream separating the two municipalities as well as a renewed awareness of the potential for ecological restoration and the reclamation of open space for Alexandria and Arlington.

The relocation of the terminal facility is particularly important to the Park and Recreation Commission because it is currently located at the gateway between Alexandria and Arlington on an important greenway and directly adjacent to an existing bridge which will eventually provide a major urban plaza over the Run. While the Master Plan was developed with the possibility that the terminal station would remain in place, it also laid out a vision of the tremendous improvement that would occur if it was removed, along with the in-stream support structures.

Undergrounding the transmission lines currently connecting the terminal station in Alexandria to the substation across the stream in Arlington, along with the removal of three support structures, will have a significant impact on the aesthetics of Four Mile Run Park. This was a Guiding Principle of the adopted Master Plan. Removing the transmission support structures from the stream will help improve its ecology. Removing the terminal building from the stream bank will allow for creative stabilization techniques to be implemented when one of the current rail road bridges nearby is removed.

The Park & Recreation Commission is in full support of Alexandria and Arlington's efforts, working with Dominion Virginia Power, WMATA and JBG Companies, acting on behalf of the landowner of Landbay F, to make this relocation possible and ask that you approve the Special Use Permit application to return the land currently occupied by the terminal facility to high-quality open space.

With kind regard,

Judy R. Ouse-Noritake, Chair
Park & Recreation Commission

Cc: Park & Recreation Commission

From: Abadian, James B. [mailto:JBAbadian@wmata.com]
Sent: Friday, December 14, 2018 3:30 PM
To: Larry Tucker (PowerDelivery - 6)
Cc: Talaia, Anabela
Subject: [External] Glebe Rebuild

Larry,

Wanted to confirm in writing what I relayed in our conversation; that the property you inquired about is fully utilized and not an asset that would be offered for sale.

Best,

James Abadian
Senior Real Estate Specialist
Office of Real Estate and Parking (LAND)
Washington Metropolitan Area Transit Authority (WMATA)
600 5th Street, NW
Washington, DC 20001
202-962-2558

From: Larry Tucker <larry.tucker@dominionenergy.com>
Sent: Friday, December 14, 2018 2:23 PM
To: Talaia, Anabela <ATalaia@wmata.com>
Subject: <External>Glebe Rebuild

Anabela,

Back in 2011 I was task to find additional property for Glebe Sub. I have to revisit this and ask again if WMATA would consider selling a portion of the bus parking lot at 3224 S. Dale St. If you are no longer responsible for managing this asset, please put me in contact with who is.
Thanks

Larry E. Tucker
Sr. Real Estate Specialist
Electric Transmission Services

Dominion Energy Technical Solutions, Inc.
10900 Nuckols Road, 4th Floor
Glen Allen, VA 23060
O: 804.771-6255 M: 804 381-8316

email: Larry.Tucker@dominionenergy.com
www.dominionenergy.com

CONFIDENTIALITY NOTICE: This electronic message contains information which may be legally confidential and or privileged and does not in any case represent a firm ENERGY COMMODITY bid or offer relating thereto which binds the sender without an additional express written confirmation to that effect. The information is intended solely for the individual or entity named above and access by anyone else is unauthorized. If you are not the intended recipient, any disclosure, copying, distribution, or use of the contents of this information is prohibited and may be unlawful. If you have received this electronic transmission in error, please reply immediately to the sender that you have received the message in error, and delete it. Thank you.

Dominion Transmission Zone: Baseline
Potomac Yards North SUP Expiration

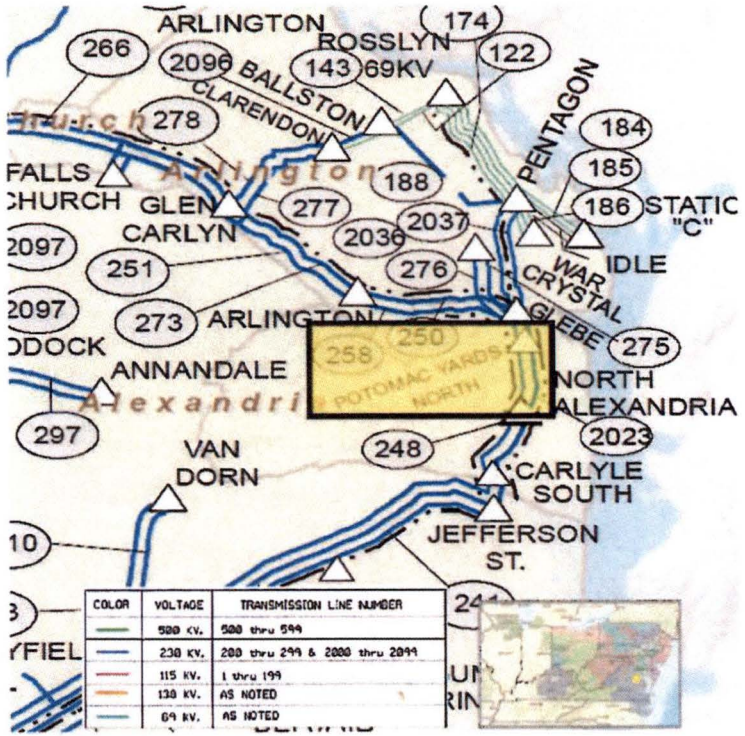
Baseline Reliability: Operational Performance

Problem Statement: Expiration of Special Use Permit

The special use permit (SUP), issued by the City of Alexandria, for Potomac Yards North substation expires on 01/01/2021. The City of Alexandria has indicated they will not extend, nor renew, the permit further.

Reliability Studies indicate that the removal of 230 kV Lines #248 & #2023 which currently are located at Potomac Yards North terminal station, result in numerous NERC criteria violations. Specifically, Category P1, P4 & P7 criteria violations and significant load loss scenarios in the Arlington – Alexandria area.

Recommended Solution:
Convert the OH portion (approx. 1500 Feet) of 230 kV Lines #248 & #2023 to underground to maintain the current configuration of the 230 kV system in this load area. There is not adequate space at the existing Glebe substation to terminate the 230 kV underground circuits and expansion of the existing footprint is not practical. Therefore, Glebe substation will be converted to GIS to accommodate the additional space requirements of the two underground cable terminations and be converted from its existing configuration into a breaker and a half scheme. **(b3090)**



Continued on next slide…

Dominion Transmission Zone: Baseline
Potomac Yards North SUP Expiration

Continued from previous slide…

Alternative:

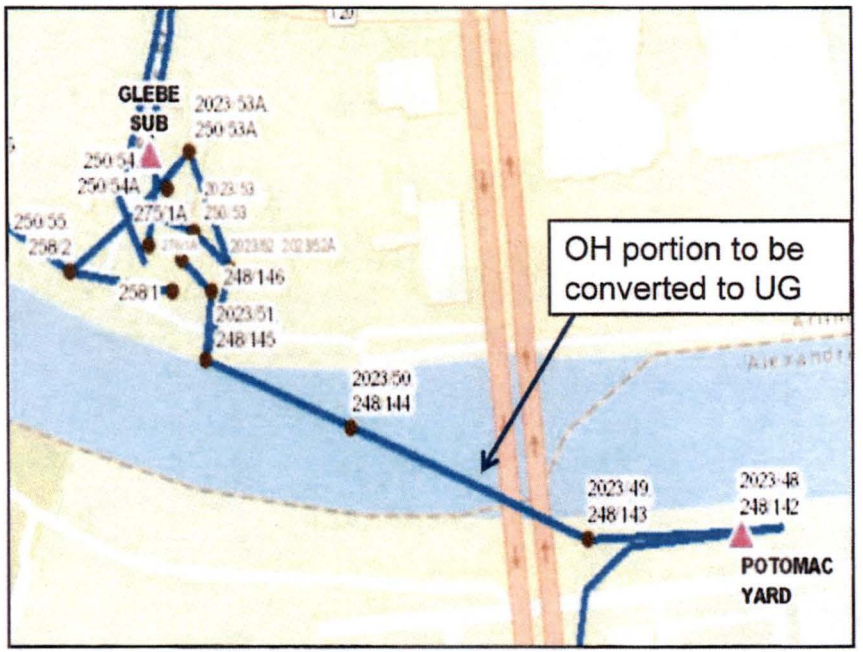
No feasible alternatives are available.

Estimated Project Cost: $120 M

Required In-service Date: Immediate Need

Projected In-service Date: May 1, 2022

Project Status: Conceptual



I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: [1] For a detailed description of the engineering justification for the Project, see Section I.A.

[2] There are no known future projects that require the Project to be constructed. The need for the Project is described in Section I.A.

[3] The Summer 2023 RTEP Power Flow Case contained the future transmission projects located in the Project area.

[4] Specifically, the Idylwood breaker-and-a-half scheme (b1696) and the Idylwood-Tyson 230 kV UG Line (b2361) are modeled in the power flow case.

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: Attachment I.G.1 shows the portion of the Company's transmission system in the area of the Project, and its critical location in the regional transmission system. The existing transmission Lines #248 and 2023 consist of a combination of underground and overhead construction in the area of the Project. Currently at the Potomac Yards Station, the existing Line #248 (Glebe-Ox) transitions from underground to overhead and continues overhead across Four Mile Run in the area of the Project. Line #2023 (Glebe-North Alexandria) also transitions from underground to overhead at Potomac Yards North Transition and also continues as an overhead line across Four Mile Run into Glebe Substation. Between Arlington Substation and Glebe Substation transmission Line #250 and Line #258 essentially parallel Four Mile Run overhead on double circuit transmission structures. Underground 230 kV lines Line #275 & Line #276 are located between Crystal and Glebe Substations. Underground 230 kV Line # 2036 is located between Glebe and Radnor Heights Substations and underground 230 kV Line #2037 is located between Davis and Glebe Substations.

See Attachment I.C.1, which, as discussed in Section I.A, includes present and projected future electrical load demand requirements, as well as pertinent load growth data (including five years of historical summer and winter peak demands and ten years of projected summer and winter peak loads), based on actual loads and the PJM 2019 Load Forecast.

ATTACHMENT I.C.1

Historical Loads (MW)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Dominion Zone - Summer	**18,137**	**19,140**	**20,061**	**19,249**	**18,763**	**18,692**	**18,980**	**19,538**	**18,902**	**19,244**
Growth (%)		(5.53%)	4.81%	(4.05)%	(2.52%)	(0.38%)	1.54%	2.94%	(3.25%)	1.81%
Date	8/10/2009	7/24/2010	7/22/2011	6/29/2012	7/18/2013	7/02/2014	6/23/2015	7/25/2016	7/14/2017	7/02/2018
Dominion Zone - Winter	**17,904**	**17,612**	**17,689**	**16,881**	**17,623**	**19,785**	**21,651**	**18,948**	**19,661**	**21,232**
Growth (%)		(1.63%)	0.4%	(4.56%)	4.39%	12.27%	9.43%	(12.48)%	3.76%	7.99%
Date	1/16/2009	1/11/2010	12/15/2010	1/4/2012	1/23/2013	1/30/2014	2/20/2015	1/19/2016	1/9/2017	1/07/2018

Projected Loads (MW)*

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Dominion Zone - Summer	**19,391**	**19,552**	**19,848**	**20,137**	**20,399**	**20,569**	**20,714**	**20,788**	**20,892**	**21,066**
Growth (%)	--	0.8%	1.5%	1.5%	1.3%	0.8%	0.7%	0.4%	0.5%	0.8%
Dominion Zone - Winter	**18,144**	**18,503**	**18,763**	**19,123**	**19,419**	**19,588**	**19,703**	**19,814**	**19,926**	**20,067**
Growth (%)	--	2.0%	1.4%	1.9%	1.5%	0.9%	0.6%	0.6%	0.6%	0.7%

* PJM 2019 Load Forecast (includes losses) and includes adjustments for distribution solar and block load additions.

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: Because the need for this Project is not being driven by contingencies and the associated violations, this section is not applicable.

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: No feasible alternatives have been submitted to PJM specifically limited to this Project, which includes the Potomac Yards Undergrounding and Glebe GIS Conversion, because a key driver for the Project is the undergrounding requirement of the City of Alexandria's SUP.[3]

Pursuant to the Commission's November 26, 2013, Order entered in Case No. PUE-2012-00029, and its November 1, 2018, Final Order entered in Case No. PUR-2018-00075 ("2018 Final Order"), the Company is required to provide analysis of demand-side resources ("DSM") incorporated into the Company's planning studies. DSM is the broad term that includes both energy efficiency ("EE") and demand response ("DR"). In this case, PJM and the Company have identified a need for the Project based on the undergrounding of Lines #248 and #2023 as required by Condition #5 of the SUP, and the need to convert Glebe Substation to GIS in order to, among other things, maintain critical energy infrastructure needed to provide continued reliable electric service to facilities depended upon to provide critical services and terminate the new underground lines.[4] Notwithstanding, when performing an analysis based on PJM's 50/50 load forecast, there is no adjustment in load for DR programs that are bid into the PJM reliability pricing model ("RPM") auction because PJM only dispatches DR when the system is under stress (i.e., a system emergency). Accordingly, while existing DSM is considered to the extent the load forecast accounts for it, DR that has been bid into PJM's RPM market is not a factor in this particular application based on the identified need for the Project. Based on these considerations, the evaluation of the Project demonstrated that despite accounting for DSM consistent with PJM's methods, the Project is necessary. In response to the 2018 Final Order, pursuant to the Grid Transformation and Modernization Act of 2018, the

[3] Since the SUP originally was issued by the City of Alexandria in 1996, it has been the intent of the Company, consistent with Condition #5, to comply with the SUP and remove the Potomac Yards Station and to underground the related overhead portions of Lines #248 and #2023. As such, the Glebe GIS Conversion and Potomac Yards Conversion were components of an earlier project proposed by the Company (but never filed with the Commission), which included a new 230 kV underground line between the Company's Glebe Substation and Pepco's Potomac River substation ("Glebe-Potomac River Project"). The Glebe-Potomac River Project initially was reviewed as a potential solution to identified violations of NERC Reliability Standards at the December 12, 2013 TEAC meeting and was approved by the PJM Board of Directors at its February 2014 meeting (b2443). Since that time, changes in the PJM Load Forecasts eliminated the NERC violations driving the need for the Glebe-Potomac River Project, as discussed at the December 13, 2018 TEAC meeting. Nevertheless, the Company continues to be required to remove the Potomac Yards Station and underground portions of Lines #248 and #2023 consistent with Condition #5 of the SUP, and as proposed by the Company's Project described herein.

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

Company must propose $870 million of EE programs by 2028. To date, the Company has filed for approval of approximately $262 million of EE programs towards meeting the $870 million requirement. The implementation of these programs is subject to Commission approval, which as of this filing has not been received. As such, these programs, which were proposed to be implemented over five years, have not been accounted for in PJM's load forecast, and thus, was not part of the Company's planning studies.

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: The proposed Project includes the removal and replacement of portions of Lines #248 and #2023, as described in see Section I.A. While certain facilities will be removed and replaced, there will be no lines permanently taken out of service as part of the proposed Project. See Section II.C as it pertains to station work at the Glebe Substation.

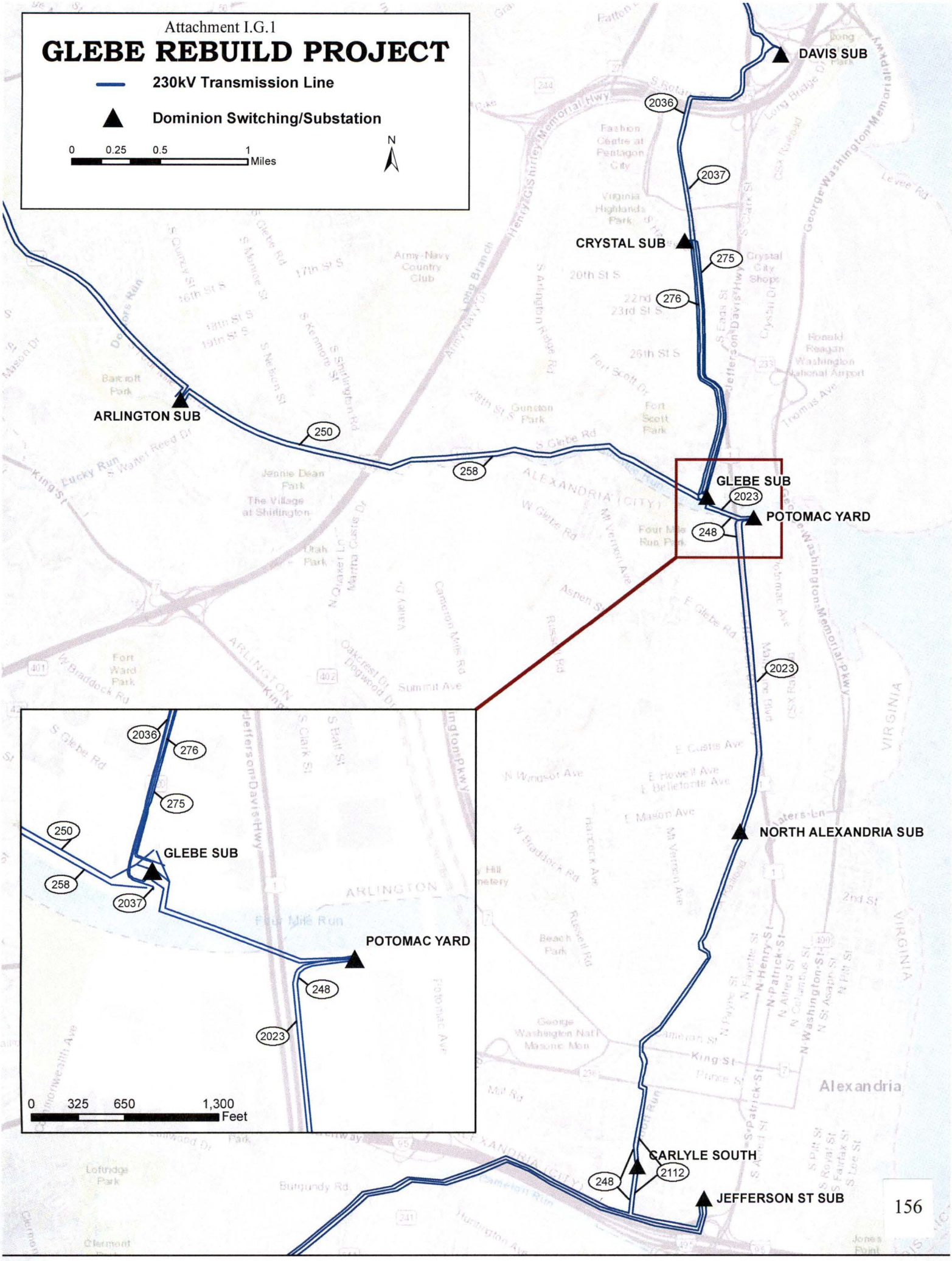
The section of overhead line to be removed for Lines #248 and #2023 between Potomac Yards Station and Glebe Substation consisting of 3-phase 2500 ACAR conductor has a normal and emergency rating of 788 MVA.

The section of underground line to be removed for Lines #248 and #2023 between Potomac Yards Station and manhole #110 consisting of 3-phase 2500 kcmil copper conductor has a normal and emergency rating of 633 MVA.

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: See Attachment I.G.1 for a map of the Dominion Energy Virginia's existing transmission facilities in the area of the Project.


Attachment I.G.1
GLEBE REBUILD PROJECT
230kV Transmission Line
Dominion Switching/Substation
0 0.25 0.5 1 Miles
N
DAVIS SUB
2036
2037
CRYSTAL SUB
275
276
ARLINGTON SUB
250
258
GLEBE SUB
2023
POTOMAC YARD
248
2023
NORTH ALEXANDRIA SUB
CARLYLE SOUTH
248
2112
JEFFERSON ST SUB
2036
276
275
250
GLEBE SUB
258
2037
POTOMAC YARD
248
2023
0 325 650 1,300 Feet

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: The expected in service date for the Project is May 2022. To accommodate this in-service date, the Company met with City of Alexandria representatives and asked that the City agree to extend the SUP until such time as the Project is complete, assuming Commission approval is granted in this proceeding.

The Company estimates it will take approximately 30 months for detailed engineering, materials procurement, permitting, and construction after a final order from the Commission. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order by December 31, 2019. Should the Commission issue a final order by December 31, 2019, the Company estimates that construction should begin on March 1, 2020 and be completed by May 31, 2022. While the Company believes that this construction timeline will enable it to meet the targeted in-service date for the Project, these estimates do not account for timing risks associated with underground construction, such as the long lead times required for material, unpredictable subterranean characteristics, unexpected permitting delays, and limited contractor resources, which could result in further delays in construction.

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: The estimated conceptual cost of the Project is approximately $122.8 million, which includes approximately $59.3 million for transmission-related work and approximately $63.5 million for substation-related work (2019 dollars). A breakdown of the conceptual cost by component is provided below:

Potomac Yards Undergrounding

- Retirement of Potomac Yards Station – approximately $0.9 million
- Removal of overhead portion of Lines #248 and #2023 – approximately $2.2 million
- Removal and installation of underground portion of Lines #248 and #2023 – approximately $50.5 million.

Glebe GIS Conversion

- Conversion of Glebe Substation to GIS – approximately $61.7 million
- Supplemental substation work at Arlington, Carlyle South, Crystal, and North Alexandria – approximately $0.9 million
- Supplemental underground transmission-related work – approximately $5.4 million
- Supplemental overhead transmission-related work – approximately $1.2 million

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: The proposed Project, including the undergrounding of the section of transmission Lines #248 and #2023 in the vicinity of Four Mile Run, initially was reviewed as currently proposed at the December 13, 2018 TEAC Meeting and was recommended for approval at the February 2019 PJM Board Meeting.[5] Upon approval by the PJM Board, the Project was designated as PJM baseline upgrade (b3090).

PJM's Consolidated Transmission Owners Agreement obligates Transmission Owners to build transmission facilities approved by PJM that are needed to meet reliability standards and other reliability requirements. This requirement provides all PJM stakeholders much needed certainty in resolving reliability concerns. Regardless of who bears responsibility for the actual construction of new transmission facilities, the cost of such facilities is paid for by load-serving entities in the transmission zones that cause the need for the project. Costs are allocated among the transmission zones in proportion to their contribution to the reliability criteria violation resolved by the required transmission facility. It should be noted, however, that the cost allocation procedure is based on a number of specific rules that may have the result that not all load customers contributing to the need for a transmission upgrade bear a share of the cost of that upgrade. Transmission owners recover their costs through FERC-approved transmission service rates.

For purposes of the Potomac Yards Undergrounding component of the proposed Project, costs will be allocated 100% to Dominion Energy Virginia.

[5] *See, supra*, n. 3.

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: The need for the Potomac Yards Undergrounding is not driven by outage history of the lines being rebuilt, but rather by the need to remove the Potomac Yards Station and underground the related portions of Lines #248 and #2023 consistent with Condition #5 of the SUP. See Section I.A of this Appendix.

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: As discussed in Section I.A of this Appendix, the Project will allow the Company to maintain critical energy infrastructure needed to provide continued reliable electric service to facilities depended upon to provide critical service, as well as replace aging substation infrastructure that would otherwise require repair or replacement, mitigate existing operational constraints, and make required physical security upgrades in order to maintain the overall long-term reliability of the transmission system, as well as improve the operational reliability of the distribution and transmission systems. A Transmission Asset Assessment for Glebe Substation, including representative photographs detailing the condition of the substation ("Assessment"), has been prepared by the Company for Glebe Substation, which contains confidential critical energy infrastructure information. This Assessment can be provided by the Company upon request, subject to any Protective Ruling or Order entered in this proceeding.

I. NECESSITY FOR THE PROPOSED PROJECT

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

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

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

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

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

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

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

Response: Not applicable.

I. NECESSITY FOR THE PROPOSED PROJECT

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

Response: There are no proposed or existing generating sources, except as addressed in Section I.C of this Appendix, and no new substations, switching stations, or ground facilities associated with the Project. For a description of the load centers to be served by the Project, see Section I.C of this Appendix.

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: The length of the proposed corridor is approximately 2,100 feet, which includes 1,000 feet between existing manhole #110 and new manhole #111, and approximately 1,100 feet between new manhole #111 and Glebe Substation. The route selected is the most direct and least impactful route with an underground termination point at the southeast corner of Glebe Substation. Accordingly, no other route alternatives were considered.

The Company has developed the proposed route in consideration of and consultation with the state and local governmental stakeholders' and private landholders' interests. The Company expects such consideration and consultation with stakeholders to continue. Therefore, in order to allow the Company to work with these stakeholders to refine the route and further minimize impact after approval, the Company requests that, if the Project is approved, the Commission grant it the flexibility to continue to make minor engineering and impact minimization variations to the route and line location.

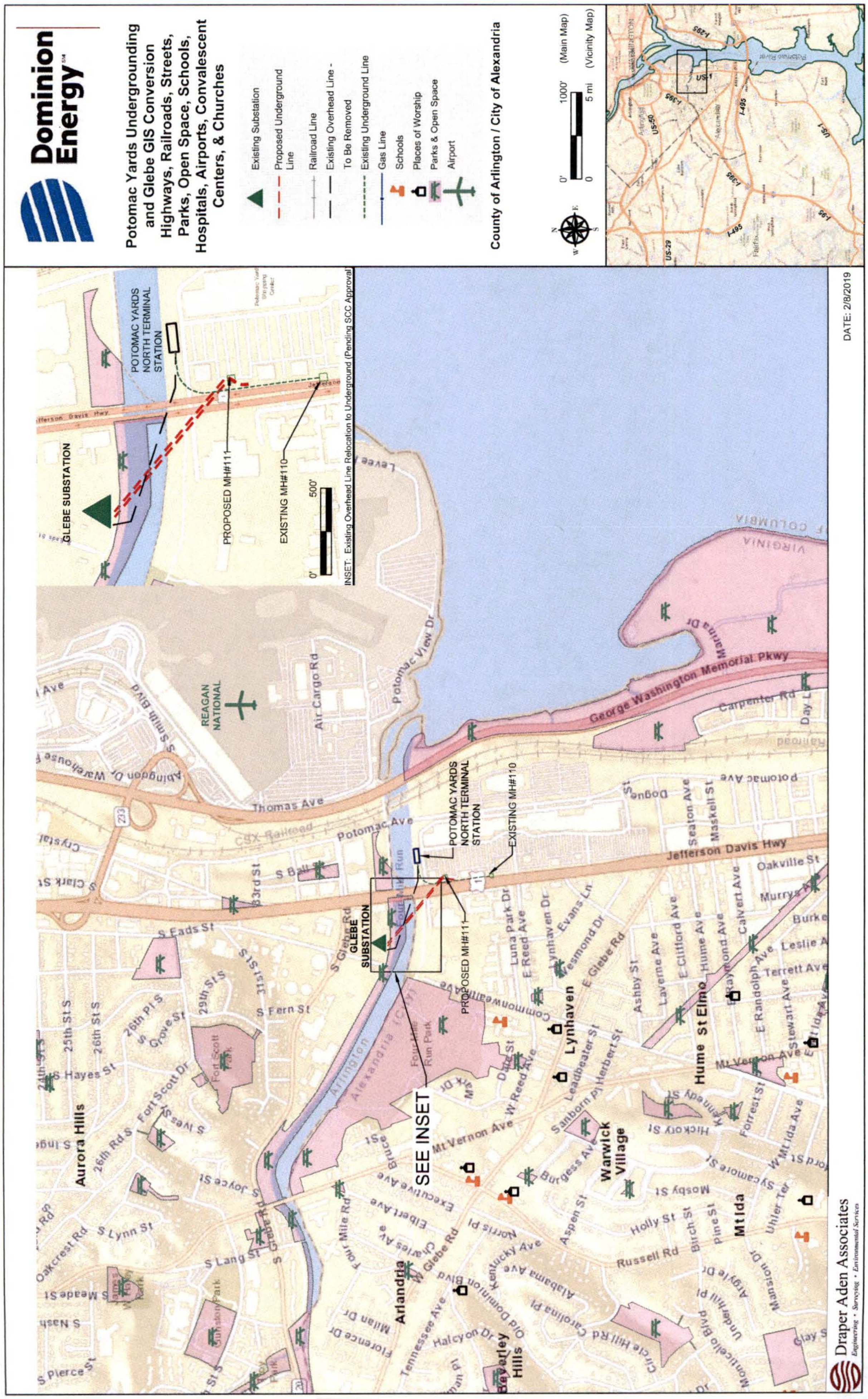
II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: See Attachment II.A.2, which includes existing linear utilities paralleled by the existing right-of-way. The Company is still in the process of reviewing the right-of-way for any section that may be quitclaimed or relinquished.

The Company will make the digital Geographic Information Systems shapefile available to interested persons upon request to counsel for the Company as identified in the Application.


Dominion Energy
Potomac Yards Undergrounding and Glebe GIS Conversion
Highways, Railroads, Streets, Parks, Open Space, Schools, Hospitals, Airports, Convalescent Centers, & Churches
Existing Substation
Proposed Underground Line
Railroad Line
Existing Overhead Line - To Be Removed
Existing Underground Line
Gas Line
Schools
Places of Worship
Parks & Open Space
Airport
County of Arlington / City of Alexandria
0' 1000' (Main Map)
0 5 mi (Vicinity Map)
GLEBE SUBSTATION
POTOMAC YARDS NORTH TERMINAL STATION
PROPOSED MH#111
EXISTING MH#110
0' 500'
INSET: Existing Overhead Line Relocation to Underground (Pending SCC Approval)
SEE INSET
REAGAN NATIONAL
Jefferson Davis Hwy
George Washington Memorial Pkwy
Potomac Ave
Four Mile Run
Aurora Hills
Arlandria
Lynhaven
Warwick Village
Hume
St Elmo
Mt Ida
Beverley Hills
DATE: 2/8/2019
Draper Aden Associates
Engineering • Surveying • Environmental Services

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: See Attachment I.G.1.

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: While the existing right-of-way easement does include underground rights (see Attachment II.A.6.a), the majority of the existing overhead right-of-way from Potomac Yards Station to the Glebe Substation cannot adequately serve the needs for the Potomac Yards Undergrounding, as the location geometry would not allow the U.S. Route 1 circuit connection into Glebe Substation. In addition, the existing towers within Four Mile Run would present a construction conflict for drilling operations as the line is installed across Four Mile Run.

Accordingly, for the 1,100 feet of the route between new manhole #111 and the Glebe Substation, only approximately 220 feet of the route west of U.S. Route 1 will be within the existing overhead right-of-way (see Attachment II.A.6.a), with the remaining 880 feet requiring a new 40-foot-wide right-of-way. For the portion of the route extending approximately 1,000 feet between new manhole #111 and existing manhole #110, approximately 800 feet will be within the existing underground right-of-way and the remaining 200 feet will be constructed within the new right-of-way used for the launching pit for microtunneling, as discussed in Section II.A.5. See Attachment II.A.4.a.


NEW CONTROL ENCLOSURE
RELOCATE BACKBONE GUY WIRES
EXISTING GLEBE SUBSTATION
OPEN AREA FOR ACCESS
ANTICIPATED NEW CABLE TROUGH
AREA OF RELOCATED UNDERGROUND DISTRIBUTION
RELOCATED SOLID INSULATED BUS WORK
EXISTING SINGLE CIRCUIT STEEL POLE #2023/52 80'± HIGH (TO BE REMOVED)
AREA TO LAND UNDERGROUND TRANSMISSION
EXISTING DOUBLE CIRCUIT STEEL POLE #248/145 AND #2023/51 100'± HIGH (TO BE REMOVED)
NEW 230kV GIS ENCLSOURE
EXISTING OVERHEAD TRANSMISSION LINES #248 AND #2023 (TO BE REMOVED)
EXISTING SINGLE CIRCUIT STEEL POLE #248/146 80'± HIGH (TO BE REMOVED)
EXISTING DOUBLE CIRCUIT STEEL POLE #248/144 AND #2023/50 95'± HIGH (TO BE REMOVED)
EXISTING DOUBLE CIRCUIT STEEL POLE #248/143 AND #2023/49 125'± HIGH (TO BE REMOVED)
Four Mile Run
EXISTING POTOMAC YARDS NORTH TERMINAL STATION (TO BE REMOVED)
PROPOSED UNDERGROUND (MICRO-TUNNEL) TRANSMISSION LINES #248 AND #2023
APPROX. 550 FT OF CABLE REMOVAL
EXISTING DOUBLE CIRCUIT STEEL BACKBONE #248/142 AND #2023/48 80'± HIGH (TO BE REMOVED)
APPROX. 1100 FT OF NEW CABLE ALIGNMENT
U.S. Route 1
EXISTING UNDERGROUND TRANSMISSION LINES #248 AND #2023
PROPOSED MANHOLE #111 (2) 19'X9'
APPROX. 1000 FT OF CABLE REPLACEMENT BETWEEN PROPOSED MH #111 AND EXISTING MH #110
SEE INSERT A FOR EXISTING MH #110
8.0
14.0
20.0
℄
EXISTING MANHOLE #110
3.0
35.0
15.0
3.0
8.0
INSERT A
0' 40' 80'
1" = 40'
Draper Aden Associates
Engineering • Surveying • Environmental Services
DATE: 2/11/2019
Dominion Energy℠
Potomac Yards Undergrounding and Glebe GIS Conversion Proposed Layout
County of Arlington / City of Alexandria
0' 200' (Main Map)
0 5 mi (Vicinity Map)
WARRINGTON
Arlington
Alexandria
Fairfax
Potomac River

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

a. ROW width for each cross section drawing;

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

c. Existing utility facilities on the ROW; and

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

Response: (a)-(c) See Attachment II.A.5.a and II.A.5.b for cross sections showing the configuration of the HPFF cable system utilizing the microtunneling construction method between Glebe Substation and manhole #111, and between manhole #111 and manhole #110, respectively.

The Company selected microtunneling over other construction methods based on several advantages, including superior capability of working in wet soils, accuracy in alignment, and minimal risk of tunnel collapse. Additionally, microtunneling does not require cofferdam construction. A launching shaft would be constructed where the existing HPFF lines parallel U.S. Route 1 away from the main parking lot area, thereby lowering the impact to businesses in the Potomac Yard Center shopping center.

The Company also considered open trenching across Four Mile Run, whereby a cofferdam would be installed. The cofferdam would have to be constructed in two sections, with approximately half of the cofferdam installed across Four Mile Run to allow for storm water flow to the Potomac River, followed by installation of the second half across Four Mile Run and into Glebe Substation. The Company rejected this construction method due in part to the need for a cofferdam, which poses a risk for upstream flooding.

Another construction method considered was horizontal directional drill ("HDD"). For this method, four individual drills would be required each approximately 1,100 feet long. The drill rig would be placed further away from U.S. Route 1 in the shopping center parking lot, and additional parking space would be required for pipe delivery, storage and assembly.

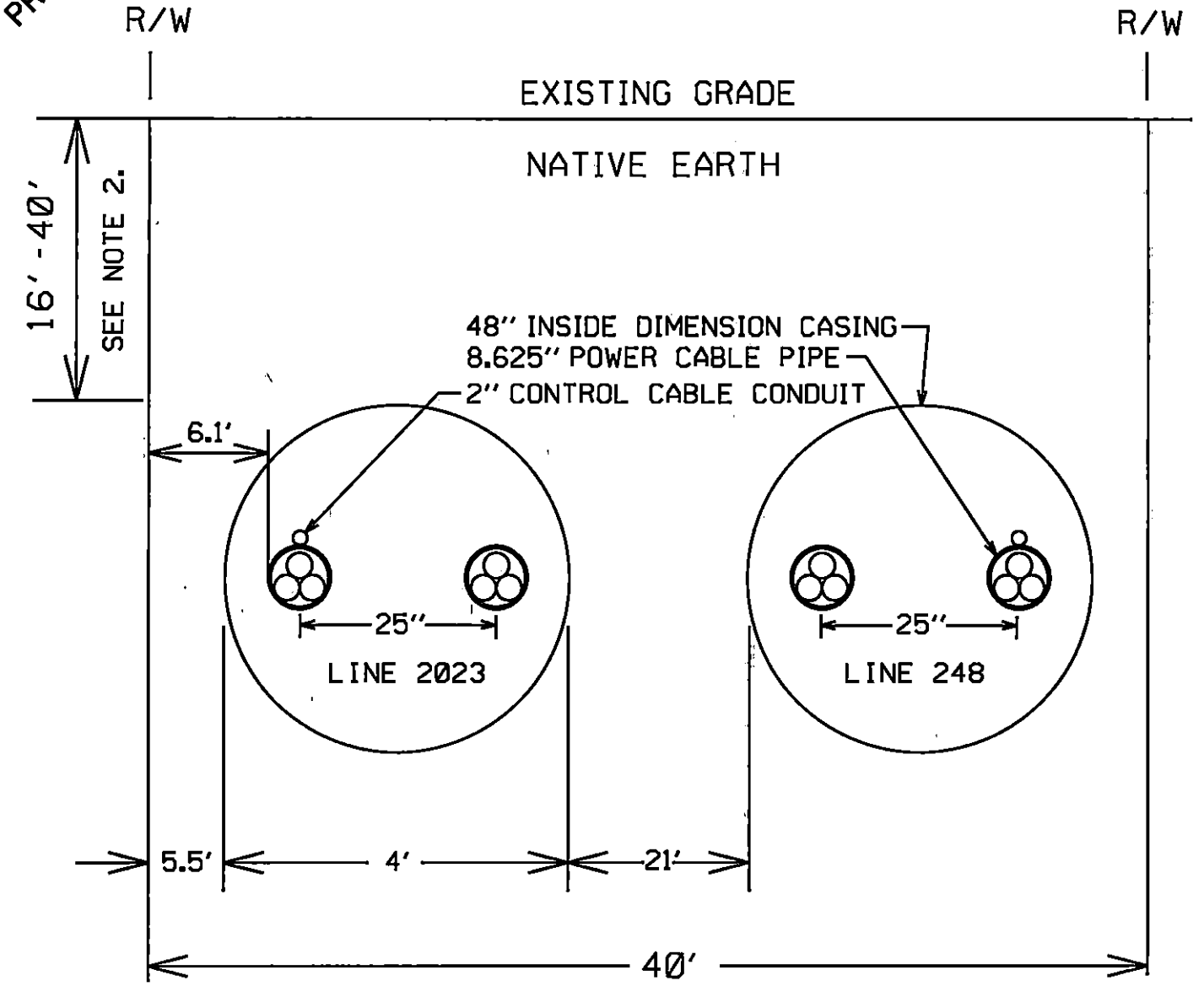
(d) Not applicable, as the underground lines are not being constructed within existing right-of-way for the majority of the route. See Section II.B.6 for representative photographs of the overhead lines as they currently exist in the

right-of-way, and illustrative simulations of the right-of-way at the conclusion of the Project.

OX - GLEBE
NORTH ALEXANDRIA - GLEBE

230 kV HPFF DOUBLE CIRCUIT
PROPOSED RELOCATION
ACROSS ROUTE 1 LOOKING AT GLEBE SUBSTATION

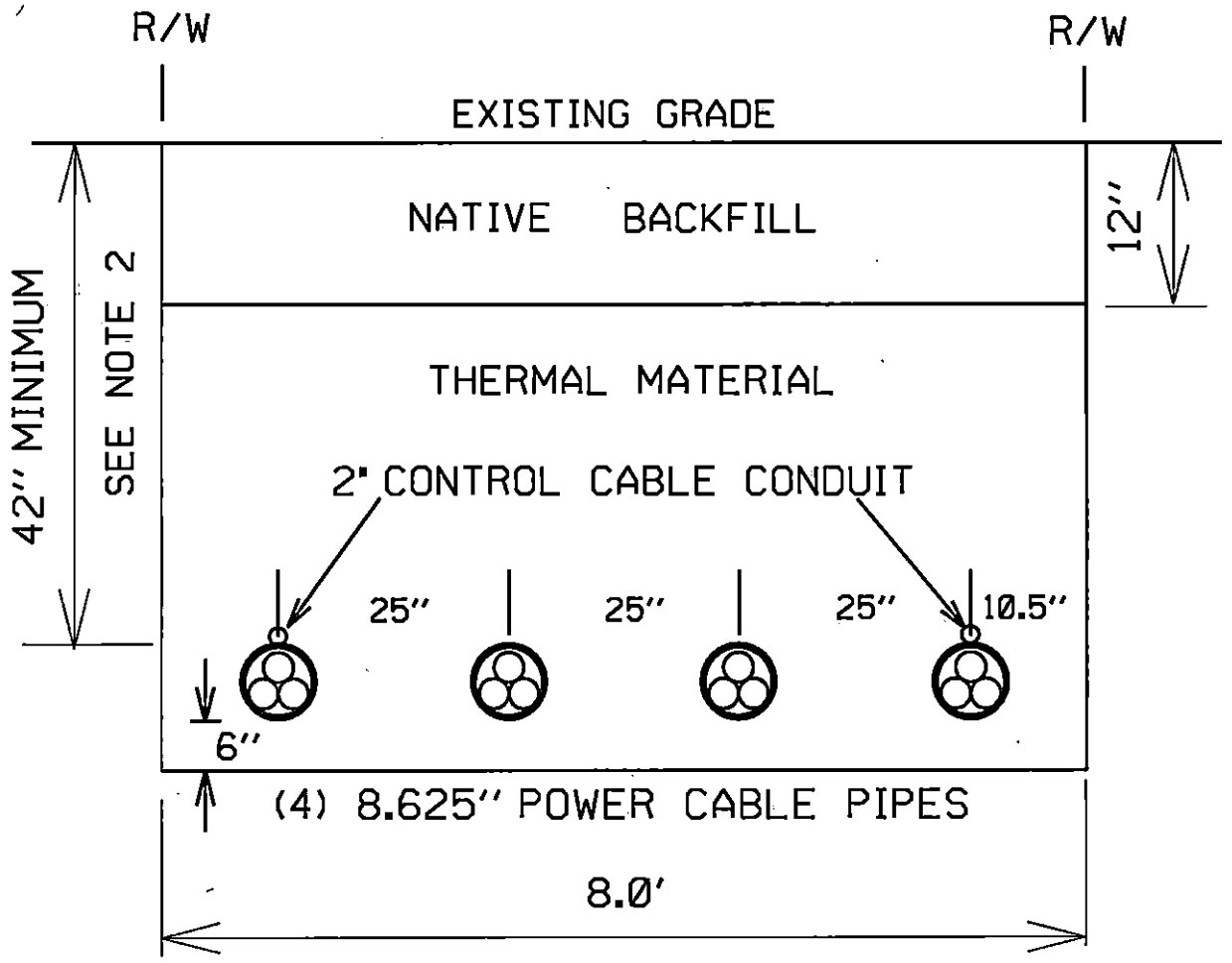
PRELIMINARY



NOTE: 1. RELOCATION PROJECT INSTALLS 3500 KCMIL CABLE FROM MANHOLE 111 TO GLEBE.
2. FINAL DEPTH DEPENDANT UPON FINAL ENGINEERING.
3. THERMAL MATERIAL INSTALLED IN CASING ANNULAS.

OX - GLEBE
NORTH ALEXANDRIA - GLEBE

230 kV HPFF DOUBLE CIRCUIT
PROPOSED RECABLING IN EXISITNG DUCTBANK
ROUTE 1 TO CAMERON STREET



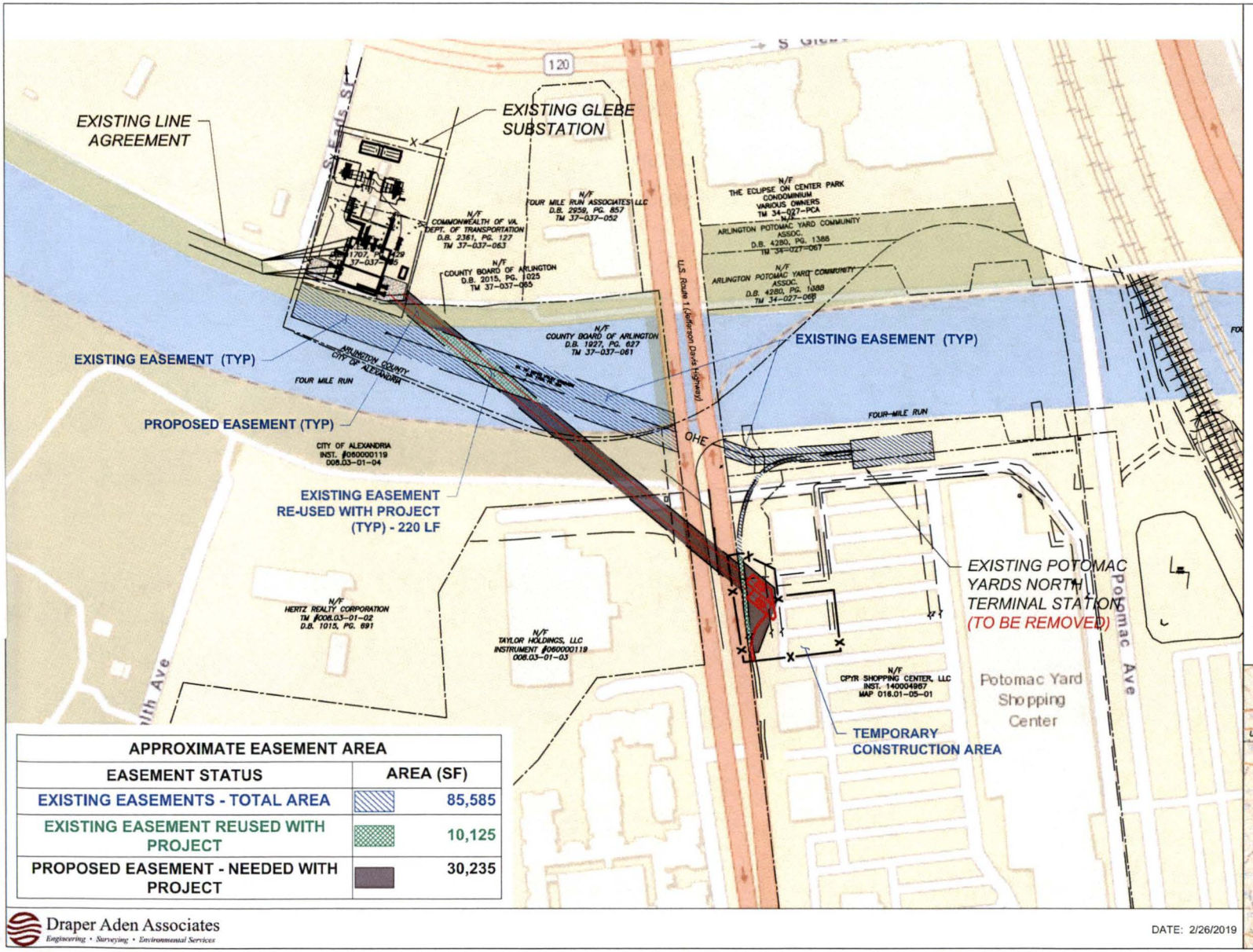
NOTE: 1. RELOCATION PROJECT REPLACES EXISTING 2500 KCMIL CABLE WITH LARGER 3500 KCMIL CABLE FROM MANHOLE 110 TO NEW MANHOLE 111.
2. FINAL DEPTH VARIES DEPENDING UPON CLEARANCES NEEDED WHEN CROSSING OTHER FACILITIES

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: For purposes of the Potomac Yards Undergrounding, the Company will require new easements for the majority of the route and relocation, as discussed in Section II.A.4. Due to the urban nature of the area, numerous existing, underground utilities, including electric distribution, natural gas, water, sewage, transit, and communications intersect the entire area. See Attachment II.A.6.a.



APPROXIMATE EASEMENT AREA	
EASEMENT STATUS	AREA (SF)
EXISTING EASEMENTS - TOTAL AREA	85,585
EXISTING EASEMENT REUSED WITH PROJECT	10,125
PROPOSED EASEMENT - NEEDED WITH PROJECT	30,235

Draper Aden Associates
Engineering • Surveying • Environmental Services

DATE: 2/26/2019

Dominion Energy℠

Potomac Yards Undergrounding and Glebe GIS Conversion

Right of Way Exhibit

County of Arlington / City of Alexandria

0' 200' (Main Map)
0 5 mi (Vicinity Map)

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: Clearing for the Project will be minimal. The majority of the route is under the Four Mile Run tributary, or existing roadways, parking lots, sidewalks and paths that have been previously cleared. If clearing is required, the Company will follow the applicable regulations for restoration. Pavement will be restored in accordance with the Virginia Department of Transportation ("VDOT") and/or City of Alexandria permits as the construction phase progresses.

Site rehabilitation during the construction of the Potomac Yards Undergrounding is a continuous operation. Erosion control will be maintained and temporary stabilization for all soil-disturbing activities will be used until the right-of-way has been restored. Installation, inspections and reports of the erosion control. Devices and stormwater best management practices ("BMPs") will be performed as required by regulations for both erosion and sediment control and for the Virginia Stormwater Protection Program permit. Upon completion of the Potomac Yards Undergrounding, the Company will restore the right-of-way utilizing site procedures outlined in the Company's *Standards & Specifications for Erosion & Sediment Control and Stormwater Management for Construction and Maintenance of Linear Electric Transmission Facilities* that is submitted early, for approval by the Virginia Department of Environmental Quality. Time of year and weather conditions may affect when permanent stabilization takes place.

Periodic maintenance to control woody growth consists of hand cutting, machine mowing, and herbicide application. This right-of-way maintenance program will be on a regular cycle to prevent interruptions to electric service.

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

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

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

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

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

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: The Company's route selection for transmission lines begins with a review of existing rights-of-way. This approach generally minimizes impacts on the natural and human environments and is consistent with FERC Guideline #1, included as Attachment 1 to the Transmission Guidelines, which states that existing rights-of-way should be given priority when adding new transmission facilities, and §§ 56-46.1 and 56-529 of the Code of Virginia, which also promote the use of existing rights-of-way for new transmission facilities. For the proposed Project, due to the nature of undergrounding, the existing right-of-way corridor that currently contains Lines #248 and #2023 is not adequate as the existing structure foundations and associated pilings and U.S. Route 1 bridge piers create a construction conflict for the microtunneling, as discussed in Section II.A.4. Therefore, the Company has selected a route that maximizes utilization of existing right-of-way where feasible; however new right-of-way is required for the majority of the new alignment.

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: Though the Company does not anticipate any service disruption to the affected load area, the Company will take outages on specific circuits to perform the work necessary for that stage of construction. The Company plans to construct the Potomac Yards Undergrounding and the Glebe GIS Conversion simultaneously. These are separate construction methods, with the one common point being the line terminations in Glebe Substation.

Potomac Yards Undergrounding

The majority of the work to install the underground lines will be done with no impact to existing circuits. Only near completion will an outage be required. Only one circuit (Line #248 or #2023) will be taken out at a time.

To underground these lines will require two separate drills, both of which will be launched from an area adjacent to the Potomac Yards Station. These drills will both be approximately 1,100 ft. long, and will run beneath U.S. Route 1 and Four Mile Run and terminate in Glebe Substation. A casing is being pushed in, in segments as the drills progress.

Pipe installation for the cables would next be installed in the drilled casing. This will be installed in approximately 50-foot sections each being welded together. Next, one of the existing circuits (Line #248 or #2023) would be taken out of service, including the overhead portion. Existing cables will be removed from Potomac Yards Station to manhole #110. Pipe will be installed from manhole #111 to the existing pipe connected to manhole #110. New cable would be pulled from existing manhole #110 to new manhole #111, and then from new manhole #111 to Glebe Substation.

The GIS terminations are planned to be completed at this point, and the cable would be terminated at Glebe Substation and spliced in manholes #110 and #111. At this point, the new cable system can be energized completing one of the Underground Circuits to Glebe.

This process would next be completed for the remaining circuit.

Once both circuits are energized, the demolition of Potomac Yards Station can begin. This would include demolition of the station, the overhead conductors, structures and foundations, along with the sections of underground ductbank from manhole #111 to the Potomac Yards Station.

Glebe GIS Conversion

The Company plans to undertake construction of the Glebe GIS Conversion sequenced in the following steps.

First, the Company will remove the Line #258 and #2036 breaker row and the Line #248 terminal. As part of this step, the Company will tie Lines #258 and #248 to bypass the Glebe Substation and create an Ox-Arlington Line. Line #2036 will not be in service. The removal of this breaker row will create enough space to build two Gas Insulated Switchgear breaker rows, which should create positions for four line terminals.

The second step will include potentially energizing six Gas Insulated Switchgear breakers and at least terminate three to four lines into that Switchgear.

The third step will include removal of the Lines #2037, #2023 and #250 terminals. This will create the required space to complete the Gas Insulated Switchgear breakers. Line #2037 will be terminated on the breakers installed in the first step. The Company would then install the remaining Gas Insulated Switchgear breakers, which would be ready to be energized.

The final step will include transfer of the remaining Line #250, #275, #276 and #2023 line terminals into the Gas Insulated Switchgear breakers as well as the distribution transformers. Following completion of this step, the Project will be complete.

The Company has not yet requested the referenced line outages from PJM.

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: The FERC Guidelines, included as Attachment 1 to the Transmission Appendix Guidelines, are a tool routinely used by the Company in routing its transmission line projects.

Consistent with Va. Code § 56-259, FERC Guideline #1 states that existing right-of-way should be given priority when adding additional facilities. Constructability limitations do not allow the route to be completed within the confines of the existing overhead right-of-way corridor. The Potomac Yards Undergrounding will maximize the utilization of existing right-of-way, where feasible. However, new right-of-way will be required. The line will be underground, minimizing visual impacts and preserving the character of the area, which has previously been impacted with the existing overhead line.

The Project will minimize impact to any site listed on the National Register of Historic Places ("NRHP"). Thus, the Project is consistent with Guideline #2 (where practical, rights-of-way should avoid sites listed on the National Register of Historic Places). NRHP-listed and NRHP-eligible properties are presented in the table below and provides the findings of impact to these properties. See Section III.A for the Stage I Pre-Application Analysis prepared by Stantec, which is included with the DEQ Supplement as Attachment 2.H.1. The Company will coordinate with the Virginia Department of Historic Resources ("VDHR") through review of the Stage 1 Pre-Application Analysis regarding these findings and ways to minimize the impact to historic properties listed or eligible for listing on the NRHP.

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

VDHR #	Resource Name	VDHR/NRHP Status	Distance to Line (Feet)	Impact
000-0045	Washington National Airport Terminal and South Hanger Line	NRHP Listed	1,886	None
029-0218	George Washington Memorial Highway	NRHP Listed	624	None
100-0136	Town of Potomac Historic District	NRHP Listed	2,143	None
100-5021	Lynhaven Historic District	NRHP Eligible	840	None
500-0001	Richmond, Fredericksburg, and Potomac Railroad Historic District	NRHP Eligible	444	None
000-9706	Aurora Highlands Historic District	NRHP-Listed	2,854	None

Through the development of the Project, the Company has coordinated with local,

state and federal agencies (Guideline #4 - where government land is involved the applicant should contact agencies early in the planning process), and the Company follows FERC construction methods on a site specific basis for typical construction projects (Guideline ##8, 10, 11-16, 18, 22 and 23).

The Company utilizes FERC guidelines in the clearing of right-of-way, construction facilities and maintaining rights-of-way after construction. Moreover, secondary uses of the right-of-way that are consistent with the safe maintenance and operation of facilities are permitted (Guideline ##46-50).

II. DESCRIPTION OF THE PROPOSED PROJECT

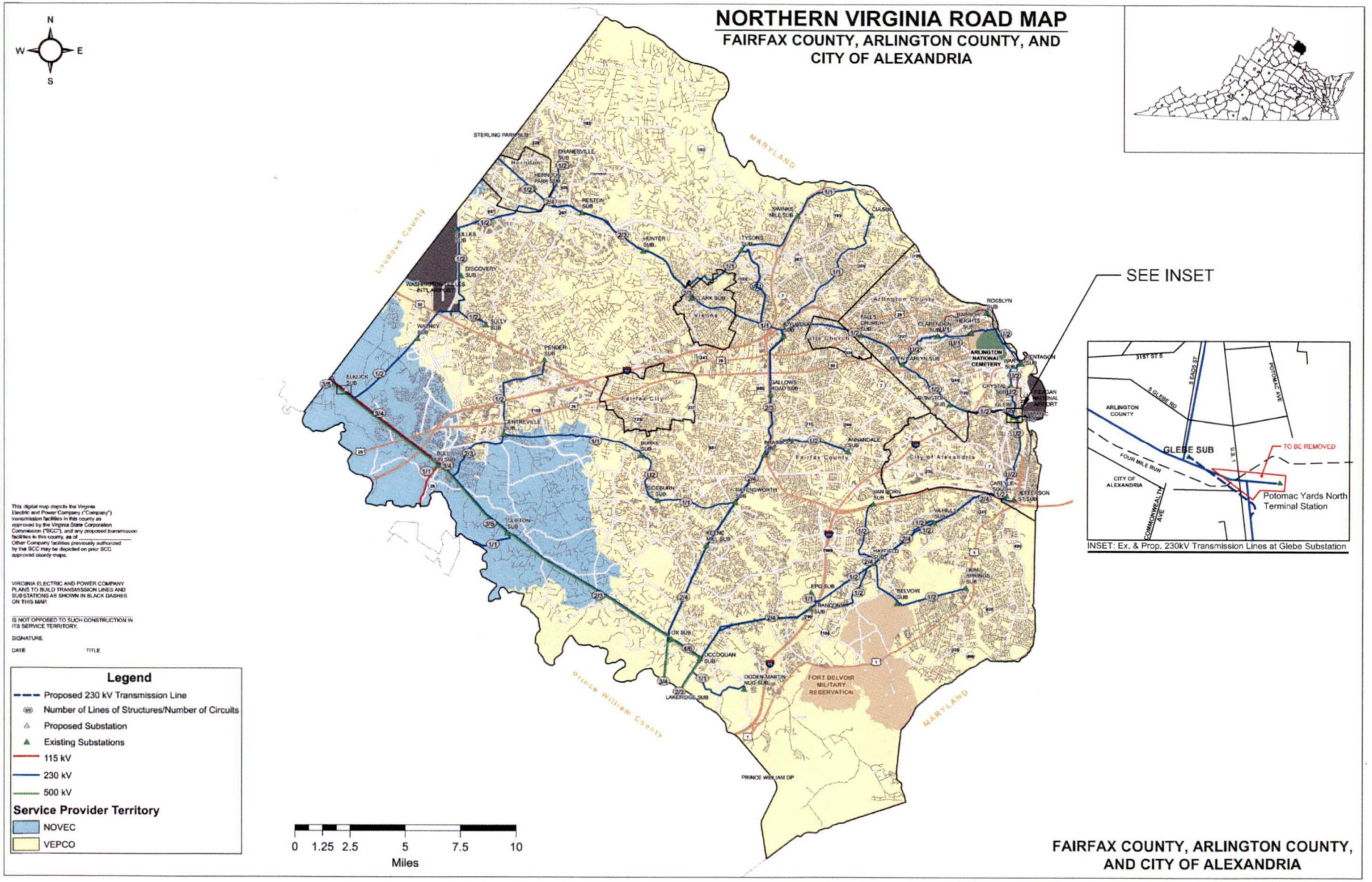
A. Right-of-way ("ROW")

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

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

Response: a. The Project is located in Arlington County and the City of Alexandria, Virginia. The proposed route of the Potomac Yards Undergrounding is located entirely within the Company's service territory.

b. Three color copies each of the Virginia Department of Transportation "General Highway Map" of Arlington County and the City of Alexandria are marked as required and filed with the Application in this case. Attachment II.A.12.b includes reduced copies of those maps.


NORTHERN VIRGINIA ROAD MAP
FAIRFAX COUNTY, ARLINGTON COUNTY, AND
CITY OF ALEXANDRIA
N
W
E
S
SEE INSET
INSET: Ex. & Prop. 230kV Transmission Lines at Glebe Substation
TO BE REMOVED
Potomac Yards North
Terminal Station
GLEBE SUB
ARLINGTON COUNTY
CITY OF ALEXANDRIA
FOUR MILE RUN
COMMONWEALTH AVE
POTOMAC AVE
S GLEBE RD
31ST ST S
This digital map depicts the Virginia Electric and Power Company ("Company") transmission facilities in this county as approved by the Virginia State Corporation Commission ("SCC"), and any proposed transmission facilities in this county, as of _____. Other Company facilities previously authorized by the SCC may be depicted on prior SCC approved county maps.
VIRGINIA ELECTRIC AND POWER COMPANY PLANS TO BUILD TRANSMISSION LINES AND SUBSTATIONS AS SHOWN IN BLACK DASHES ON THIS MAP.
IS NOT OPPOSED TO SUCH CONSTRUCTION IN ITS SERVICE TERRITORY.
SIGNATURE
DATE
TITLE
Legend
Proposed 230 kV Transmission Line
Number of Lines of Structures/Number of Circuits
Proposed Substation
Existing Substations
115 kV
230 kV
500 kV
Service Provider Territory
NOVEC
VEPCO
0 1.25 2.5 5 7.5 10
Miles
MARYLAND
Loudoun County
Prince William County
Fairfax County
City of Alexandria
Arlington County
FORT BELVOIR MILITARY RESERVATION
PRINCE WILLIAM DP
FAIRFAX COUNTY, ARLINGTON COUNTY,
AND CITY OF ALEXANDRIA

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

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

Response: The proposed underground lines between manhole #110 and the Glebe Substation will have a power transfer capability of approximately 700 MVA each, pending final design. The two lines will operate at initial operational voltage of 230 kV; no voltage upgrade is anticipated.

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

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

Response: The Potomac Yards Undergrounding will utilize four HPFF cable pipes installed by microtunneling. One three-conductor bundle will be installed in each pipe. Lines #248 and # 2023 require two three-conductor bundles making a total of six phase conductors for each line. The conductor will be a 3,500 kcmil copper segmental HPFF cable with laminated paper/polypropylene/paper insulation, and was selected in order to ensure that the Company meets the minimum power transfer requirement of 633 MVA.

The Glebe GIS Conversion will require additional work to the existing underground transmission facilities, as follows:

- HPFF Lines #2036 and #2037 will temporarily be removed and reinstalled into the new GIS at Glebe Substation. Approximately 250 feet of two three-conductor cable bundles, six open air terminations, 12 current transformers and one pull-through vault will be removed to allow for construction. When the GIS is readied, a new splice vault, two splices and six new GIS terminations will be installed reconnecting these two lines.

- The existing metallic protection control cables for HPFF Lines #275 and #276 (Glebe to Crystal) need to be replaced to work with the upgraded protection equipment at Glebe. The new protection equipment, SEL-311L relays, requires fiber optic control cables to protect these existing lines. The metallic control cables have two splice locations, which require excavation, splice removal and conduit repair to remove the existing cable in order to have a continuous conduit path for the fiber optic control cable.

- Two cross-linked polyethylene ("XLPE") cable feeds approximately 335 feet constructed inside Glebe Substation are required to connect the existing 230-34.5 kV transformers to the new GIS at Glebe Substation. Six GIS and six open-air terminations and six line arrestors will be installed. The existing open-air bus feeding the two transformers is being removed.

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

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

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

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

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

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

e. the foundation material;

f. the average width at cross arms;

g. the average width at the base;

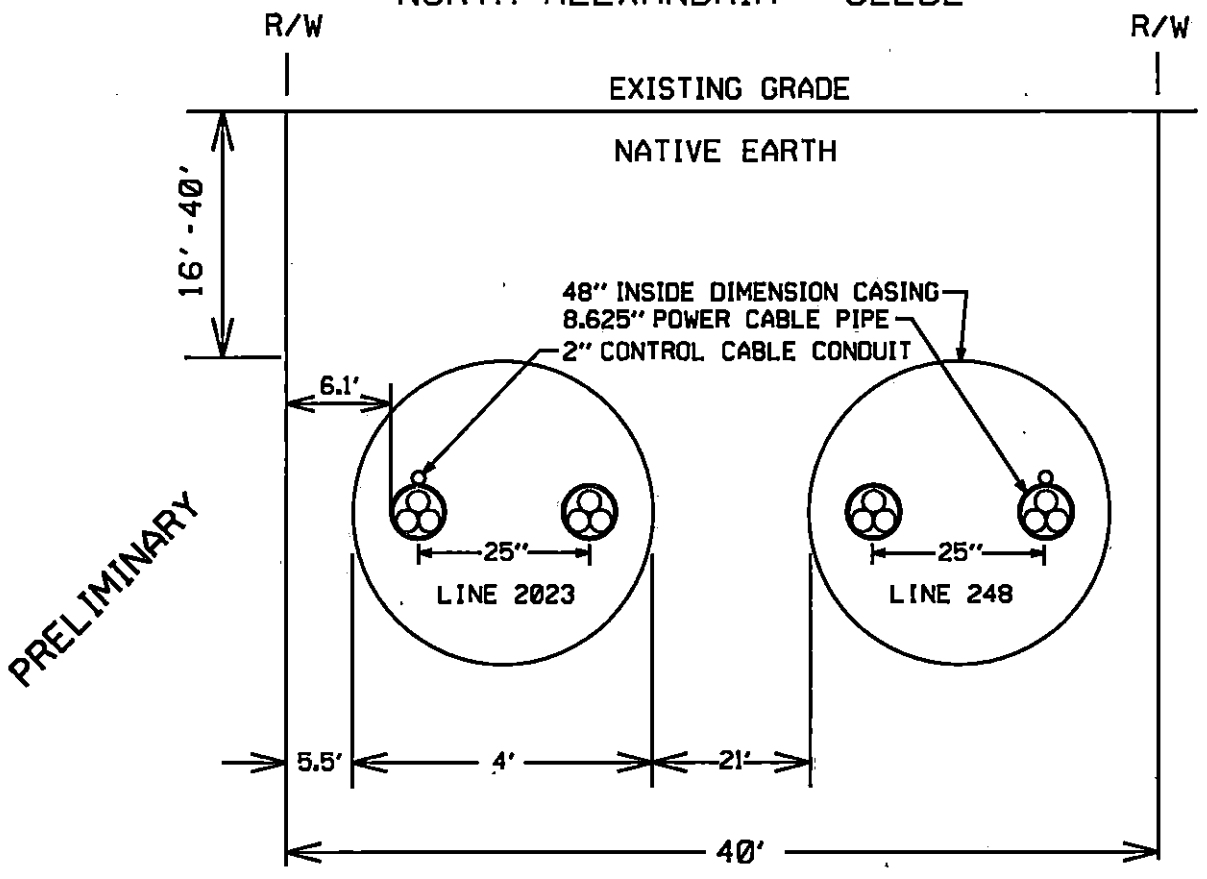
h. the maximum, minimum and average structure heights;

i. the average span length; and

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

Response: Attachment II.B.3.a provides the data requested for the proposed underground configuration between Glebe Substation and manhole #111, as shown in Attachment II.A.5.a. Attachment II.B.3.b provides the data requested for the proposed underground configuration between manhole #111 and manhole #110, as shown in Attachment II.A.5.b.

OX - GLEBE
NORTH ALEXANDRIA - GLEBE



PROPOSED UNDERGROUND FACILITY

a. MAPPING THAT IDENTIFIES EACH PORTION OF THE PREFERRED ROUTE:
SEE ATTACHMENT II.A.2

b. RATIONALE FOR THE SELECTION OF THE STRUCTURE TYPE:
MATCH THE REMAINING CABLE SYSTEM

c. NUMBER OF EACH TYPE OF STRUCTURE AND LENGTH OF EACH PORTION OF THE R/W:
4 PIPES, EACH PIPE IS 1100 FEET LONG

d. STRUCTURE MATERIAL AND RATIONALE FOR THE SELECTION OF SUCH MATERIAL:
STEEL PIPE SELECTED TO MATCH REMAINING CABLE SYSTEM

e. FOUNDATION MATERIAL: N/A

f. AVERAGE WIDTH AT CROSSARM: N/A

g. AVERAGE WIDTH AT BASE: 30 FEET

h. MAX, MIN, AND AVERAGE STRUCTURE HEIGHTS: N/A

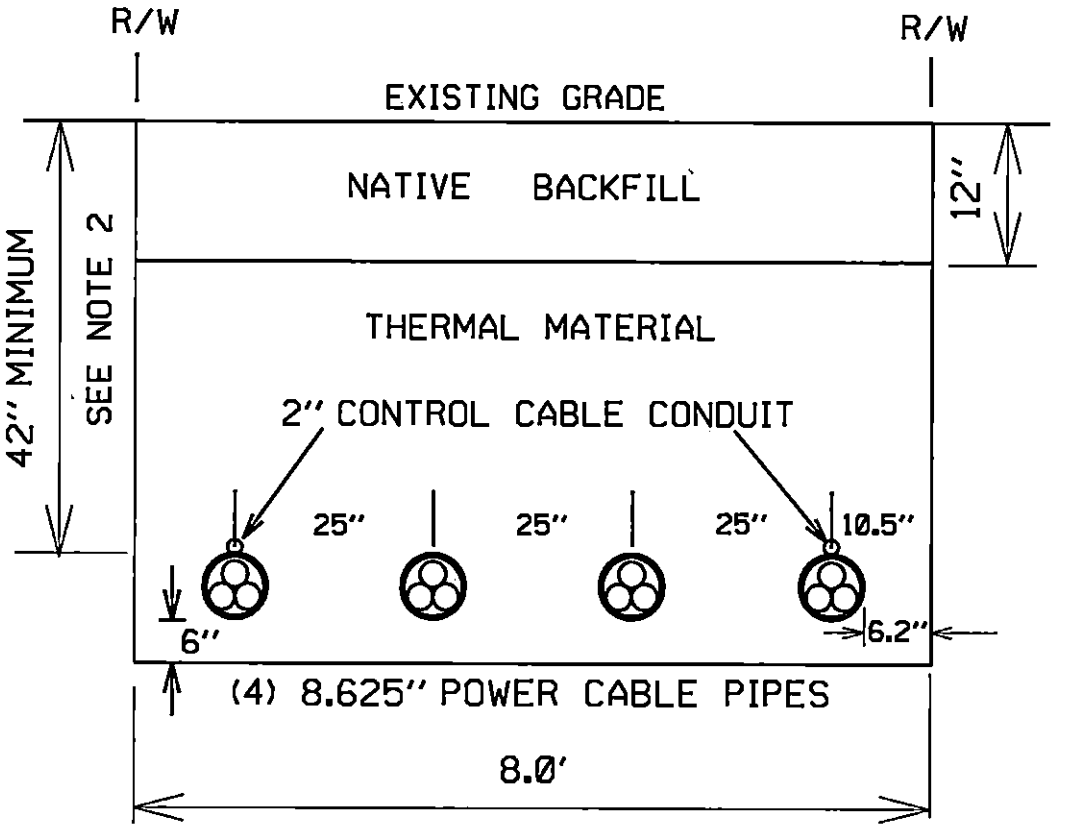
i. AVERAGE SPAN LENGTH: 1100 FEET

j. MINIMUM CONDUCTOR-GROUND CLEARANCE UNDER MAXIMUM OPERATING CONDITIONS:
UNDERGROUND HV CABLE SHALL BE 42 INCHES BELOW SURFACE

NOTE: Information contained on drawing is to be considered preliminary in nature and subject to change based on final design.

$UGNSPEC$

OX - GLEBE
NORTH ALEXANDRIA - GLEBE



PROPOSED UNDERGROUND FACILITY

a. MAPPING THAT IDENTIFIES EACH PORTION OF THE PREFERRED ROUTE:
SEE ATTACHMENT II.A.2

b. RATIONALE FOR THE SELECTION OF THE STRUCTURE TYPE:
MATCH THE REMAINING CABLE SYSTEM

c. NUMBER OF EACH TYPE OF STRUCTURE AND LENGTH OF EACH PORTION OF THE R/W:
4 PIPES, EACH PIPE IS 1000 FEET LONG

d. STRUCTURE MATERIAL AND RATIONALE FOR THE SELECTION OF SUCH MATERIAL:
STEEL PIPE SELECTED TO MATCH REMAINING CABLE SYSTEM

e. FOUNDATION MATERIAL: N/A

f. AVERAGE WIDTH AT CROSSARM: N/A

g. AVERAGE WIDTH AT BASE: 8 FEET

h. MAX, MIN, AND AVERAGE STRUCTURE HEIGHTS: N/A

i. AVERAGE SPAN LENGTH: 1000 FEET

j. MINIMUM CONDUCTOR-GROUND CLEARANCE UNDER MAXIMUM OPERATING CONDITIONS:
UNDERGROUND HV CABLE SHALL BE 42 INCHES BELOW SURFACE

NOTE: Information contained on drawing is to be considered preliminary in nature and subject to change based on final design.

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

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

Response: The Potomac Yards Undergrounding is designed for underground construction; therefore, there are no proposed overhead supporting structures.

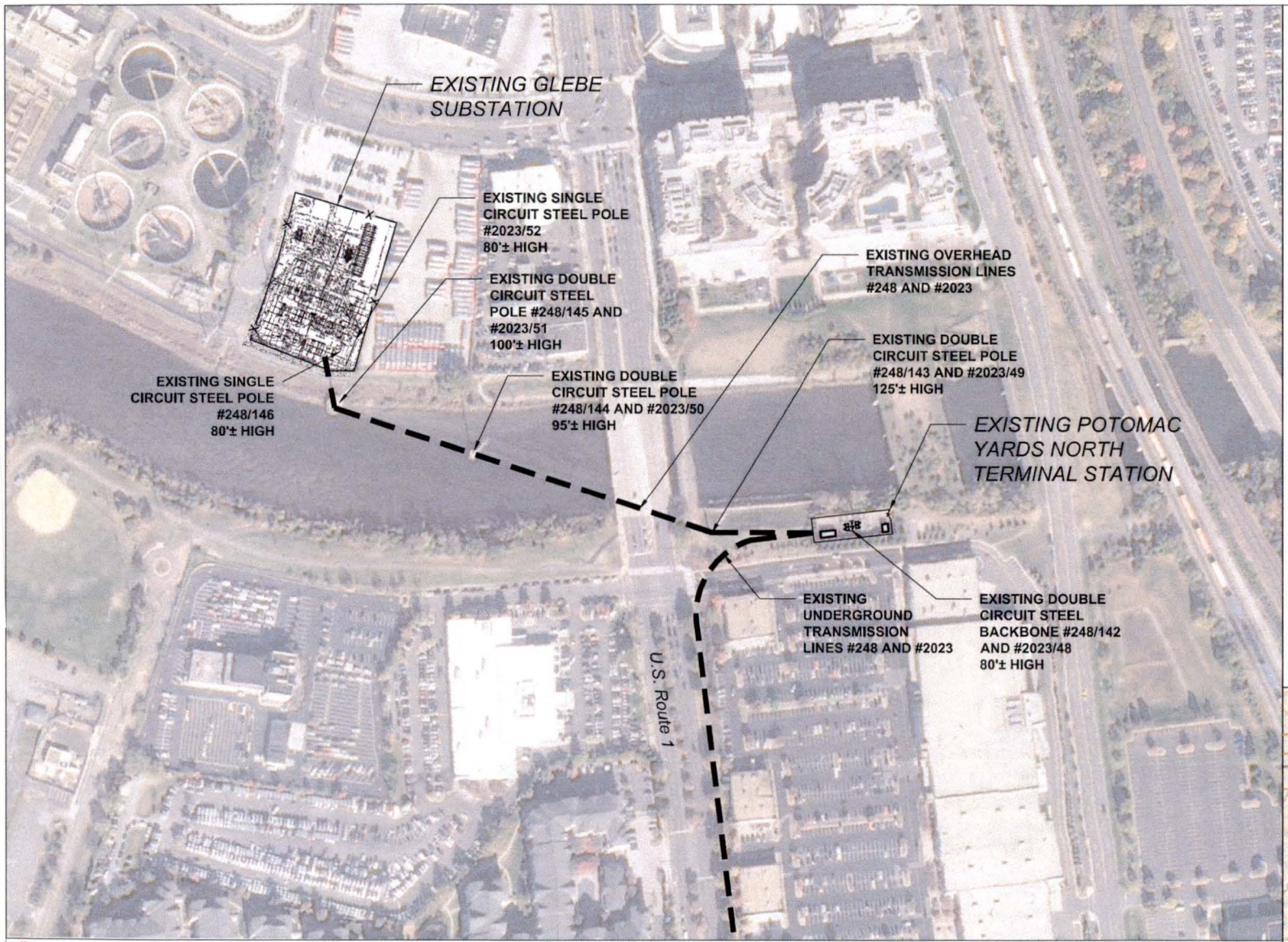
II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

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

Response: The Potomac Yards Undergrounding is designed for underground construction; therefore, there are no proposed overhead supporting structures. See Attachment II.B.5.a for existing overhead structure locations for the Potomac Yards Undergrounding. Listed below are the existing structure heights, which do not include foundation reveal.

Circuit #/ Structure #	Circuit #/ Structure #	Existing Structure Height (feet)	Structure Description
248/146		80	Single circuit steel pole
	2023/52	80	Single circuit steel pole
248/145	2023/51	100	Double circuit steel pole
248/144	2023/50	95	Double circuit steel pole
248/143	2023/49	125	Double circuit steel pole
248/142	2023/48	80	Double circuit steel backbone



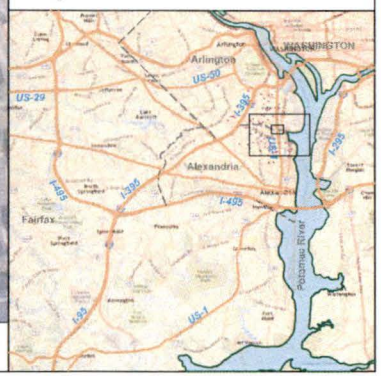
Dominion Energy

Potomac Yards Ungergrounding and Glebe GIS Conversion Existing Layout

County of Arlington / City of Alexandria

0' 200' (Main Map)

0 5 mi (Vicinity Map)



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DATE: 2/112019

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

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

Response: *(a) Photographs for typical existing facilities to be removed*

A representative photograph of each of the following typical existing structures is provided:

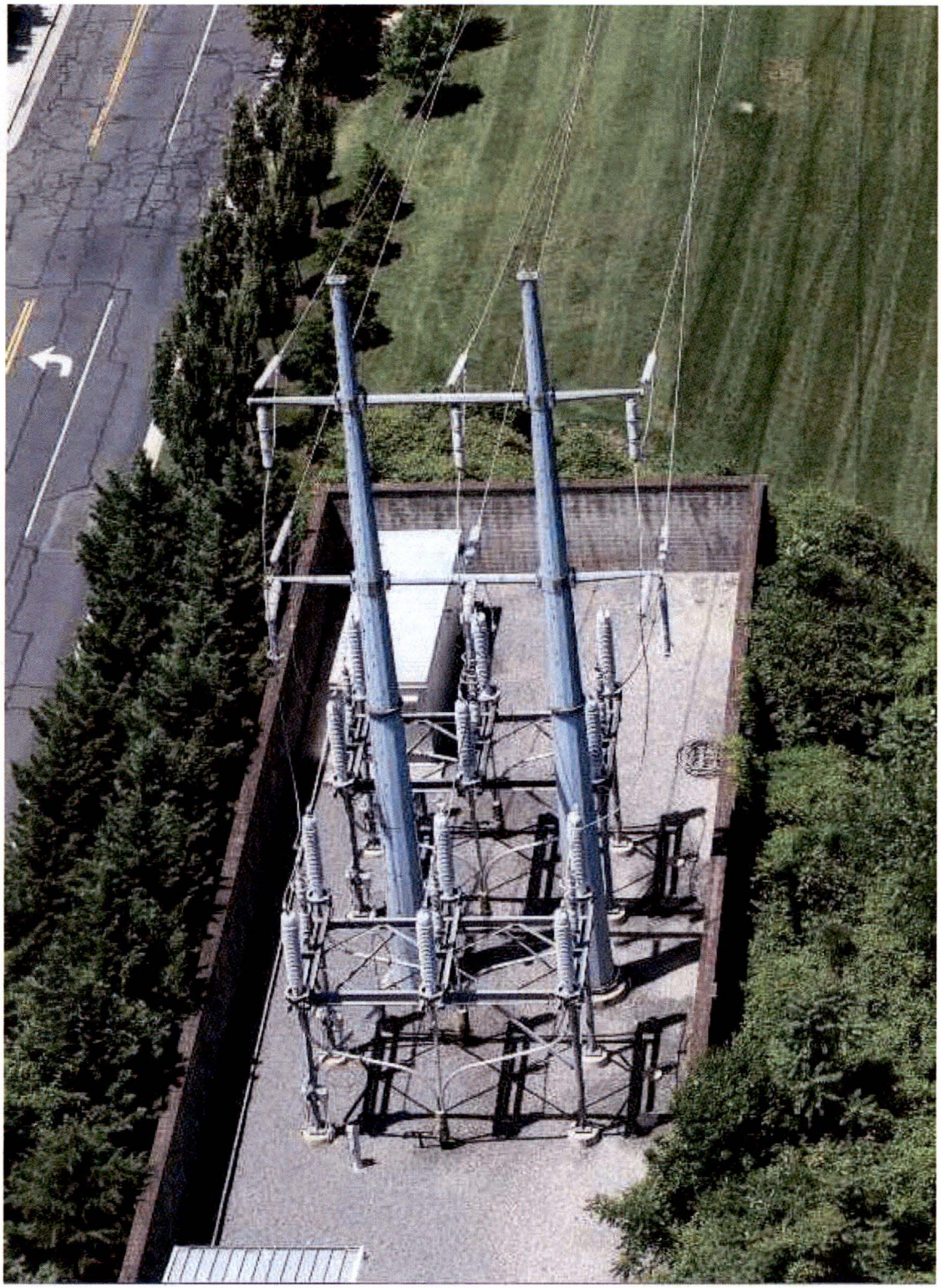
Double Circuit Steel Backbone (Attachment II.B.6.a.1)
Double Circuit Steel Pole (Attachment II.B.6.a.2)
Double Circuit Steel Pole (Attachment II.B.6.a.3)
Double Circuit Steel Pole (Attachment II.B.6.a.4)
Single Circuit Steel Pole (Attachment II.B.6.a.5)

(b) Comparable photographs or representations for proposed structures

Assuming transmission "structures" refers to transmission "towers," there are no such structures for purposes of the proposed undergrounding of Lines #248 and #2023 under the Potomac Yards Undergrounding.

(c) Visual simulations from historic and other key locations

There are no planned overhead transmission structures for purposes of the proposed undergrounding of Lines #248 and #2023 under the Potomac Yards Undergrounding. Therefore, there will be no new or additional visual impacts on identified historic locations within one mile of the proposed centerline of the Potomac Yards Undergrounding. See Attachments II.B.6.c.1 and II.B.6.c.2 for existing and proposed conditions from the George Washington Memorial Parkway, which is a scenic byway.



LOOKING NORTH WEST – EXISTING POTOMAC YARDS NORTH TERMINAL STATION – EXISTING TRANSMISSION STRUCTURE #248/142 AND #2023/48 – 80' HIGH DOUBLE CIRCUIT STEEL BACKBONE

Photograph provided by Dominion

Existing Structure Type:
Double Circuit Steel Backbone

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LOOKING NORTHWEST – EXISTING TRANSMISSION STRUCTURE #248/143 AND #2023/49 – 125' HIGH DOUBLE CIRCUIT STEEL POLE

Photograph provided by Dominion

Existing Structure Type:
Double Circuit Steel Pole

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Dominion Energy

LOOKING NORTHWEST – EXISTING TRANSMISSION STRUCTURE #248/144 AND #2023/50 – 95' HIGH DOUBLE CIRCUIT STEEL POLE

Photograph provided by Dominion

Existing Structure Type:
Double Circuit Steel Pole

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Dominion Energy

LOOKING WEST – EXISTING TRANSMISSION STRUCTURE #248/145 AND #2023/51 – 100' HIGH DOUBLE CIRCUIT STEEL POLE

Photograph provided by Dominion

Existing Structure Type: Double Circuit Steel Pole

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LOOKING WEST – EXISTING TRANSMISSION STRUCTURES AT GLEBE SUBSTATION #248/146 AND #2023/52 – EACH A 80' HIGH SINGLE CIRCUIT STEEL POLE

Photograph provided by Dominion

Existing Structure Type:
Single Circuit Steel Poles

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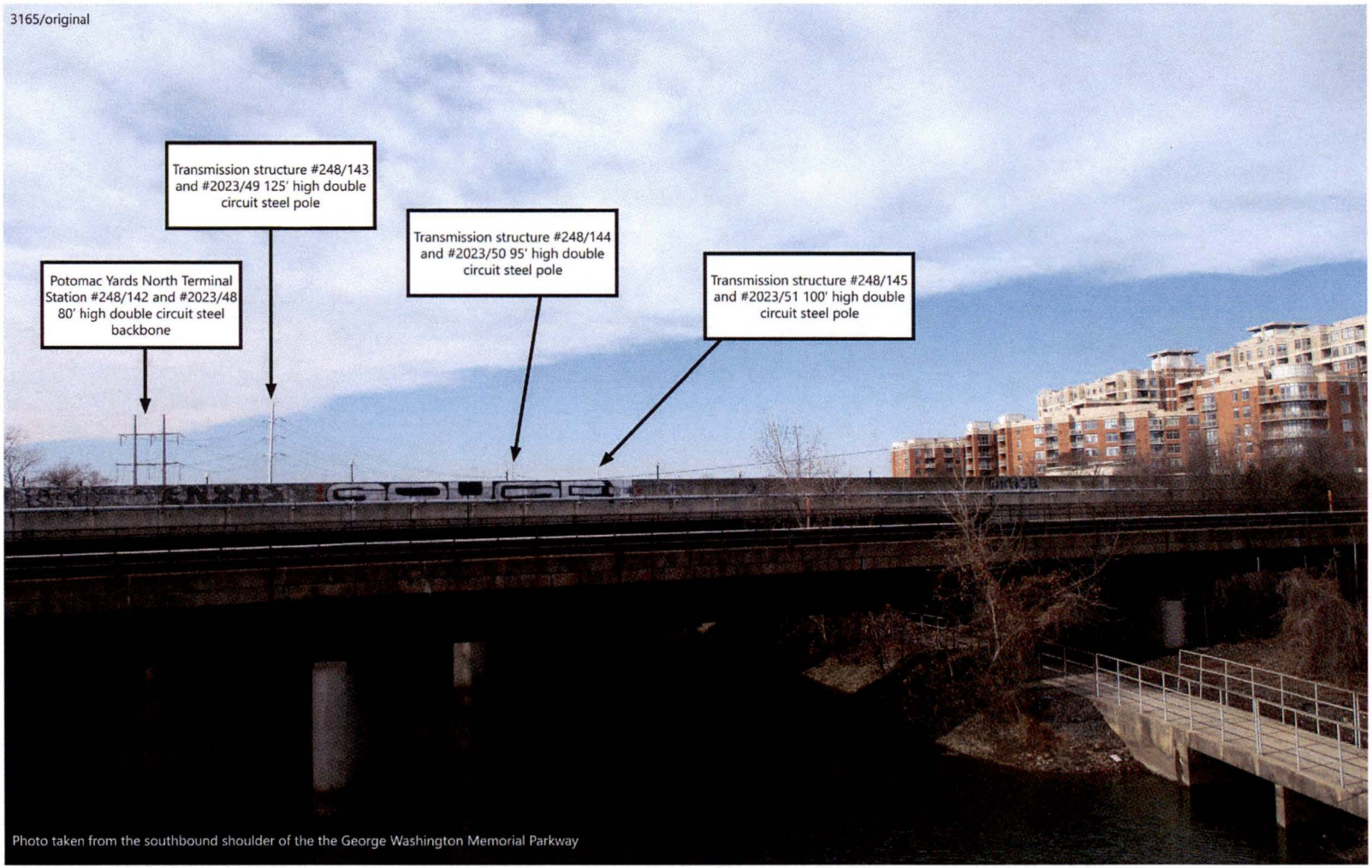
Dominion Energy

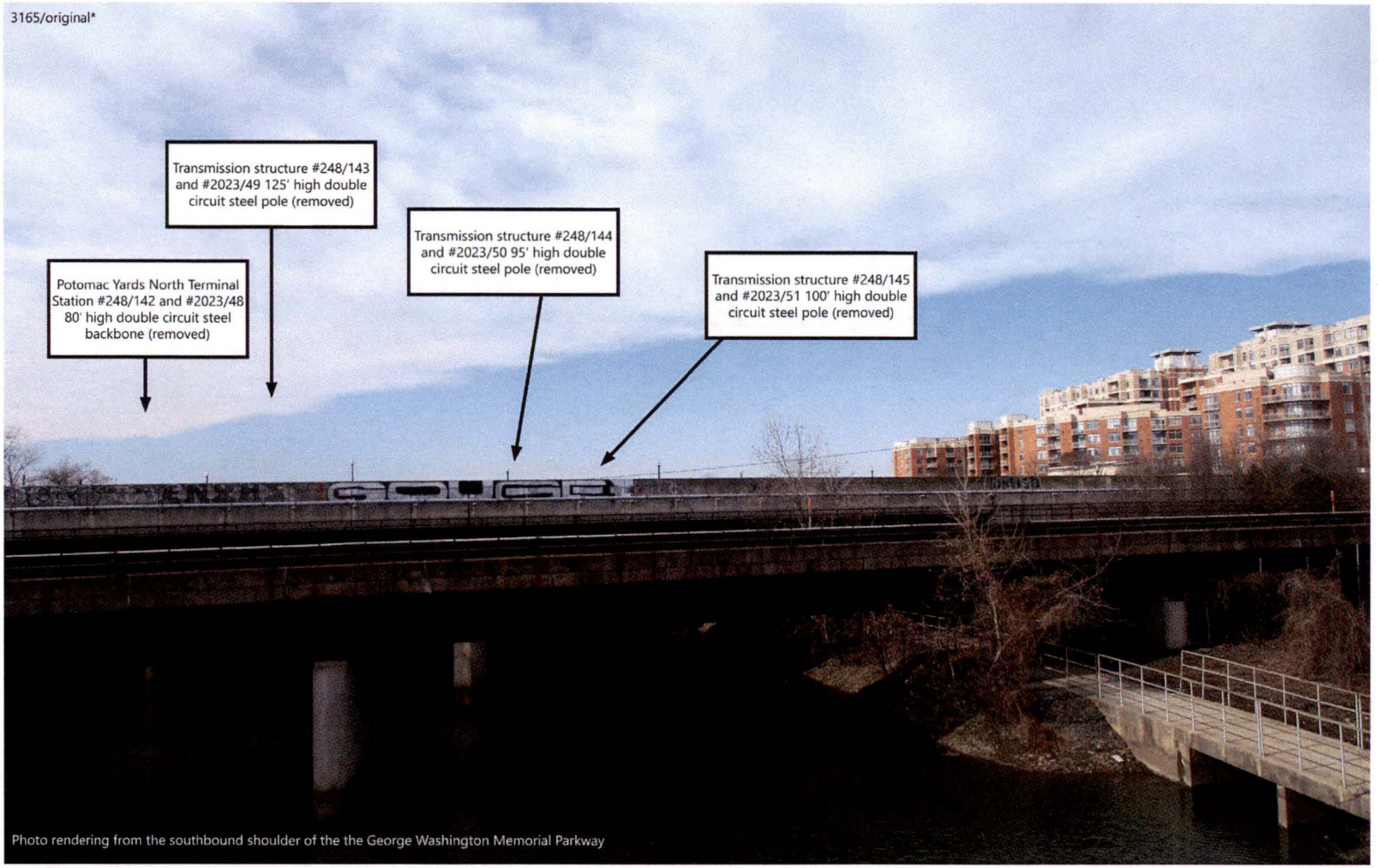


VISUAL IMPACT – VIEW FROM THE GEORGE WASHINGTON MEMORIAL PARKWAY

Photograph provided by Draper Aden 1-28-2019

Existing Conditions

Draper Aden Associates | Dominion Energy



VISUAL SIMULATION BY PROPOSED PROJECT – VIEW FROM THE GEORGE WASHINGTON MEMORIAL PARKWAY

Photograph provided by Draper Aden 1-28-2019

Proposed Conditions

Draper Aden Associates | Dominion Energy

II. DESCRIPTION OF THE PROPOSED PROJECT

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

Response: The Project includes a rebuild of the 230 kV Air Insulated Substation ("AIS") at the Company's existing Glebe Substation in Arlington County, Virginia. Due to the removal of the existing Potomac Yards Station, which provides a transition from overhead to underground for Line #248 and Line #2023 as discussed in Section I.A, this Project provides for two new terminal points to accept these transmission lines underground directly at Glebe Substation.

The Company's Glebe Substation presently includes eight 230 kV transmission lines that terminate at the station and two distribution transformers. Four of the lines that terminate at the station are overhead lines, including Lines #250, #258, #248, and #2023. Four are underground lines, including radial Lines #275, #276, and #2037 and network Line #2036.

The Project allows the undergrounding of existing overhead Lines #248 and #2023 from Potomac Yards Station under Four Mile Run into the rebuilt Glebe GIS Substation. The GIS station contains the ancillary equipment necessary to terminate the two underground lines comprised of two three-conductor bundles within the existing footprint. With the present air insulated configuration of the substation, it is not possible to relocate Lines #248 and #2023 underground into Glebe Substation.

In addition to the footprint limitations, the existing electrical arrangement is not configured to today's standard design. The current configuration has radial Lines #275 and #276 now attached to the end buses that should be moved to new positions within the breaker rows. A physical expansion of the station to accommodate the two new underground terminals is not feasible since the station is landlocked, with no room for expansion in any direction (see Section I.A). For these reasons, the Company proposes to procure Gas Insulated Switchgear equipment for the rebuild of the station.

The proposed new Gas Insulated Switchgear arrangement includes four breaker rows in order to provide terminations for all existing lines, as well as to terminate the two newly undergrounded Lines #248 and #2023 from Potomac Yards Station. Existing equipment, including nine 230 kV circuit breakers, eighteen 230 kV switches, six 230 kV line terminations equipment, and associated bus work and foundations will all be removed to accommodate this installation.

This arrangement also provides additional reliability for customers served by the two distribution transformers at Glebe Substation. These transformers in the past have been connected directly to transmission Lines #2023 and #250. Any

electrical disturbance on these lines also affects the connected transformers. The new arrangement as discussed above connects the transformers to the GIS bus end bus so there is much less exposure. Connecting the transformers this way is a current design standard practice.

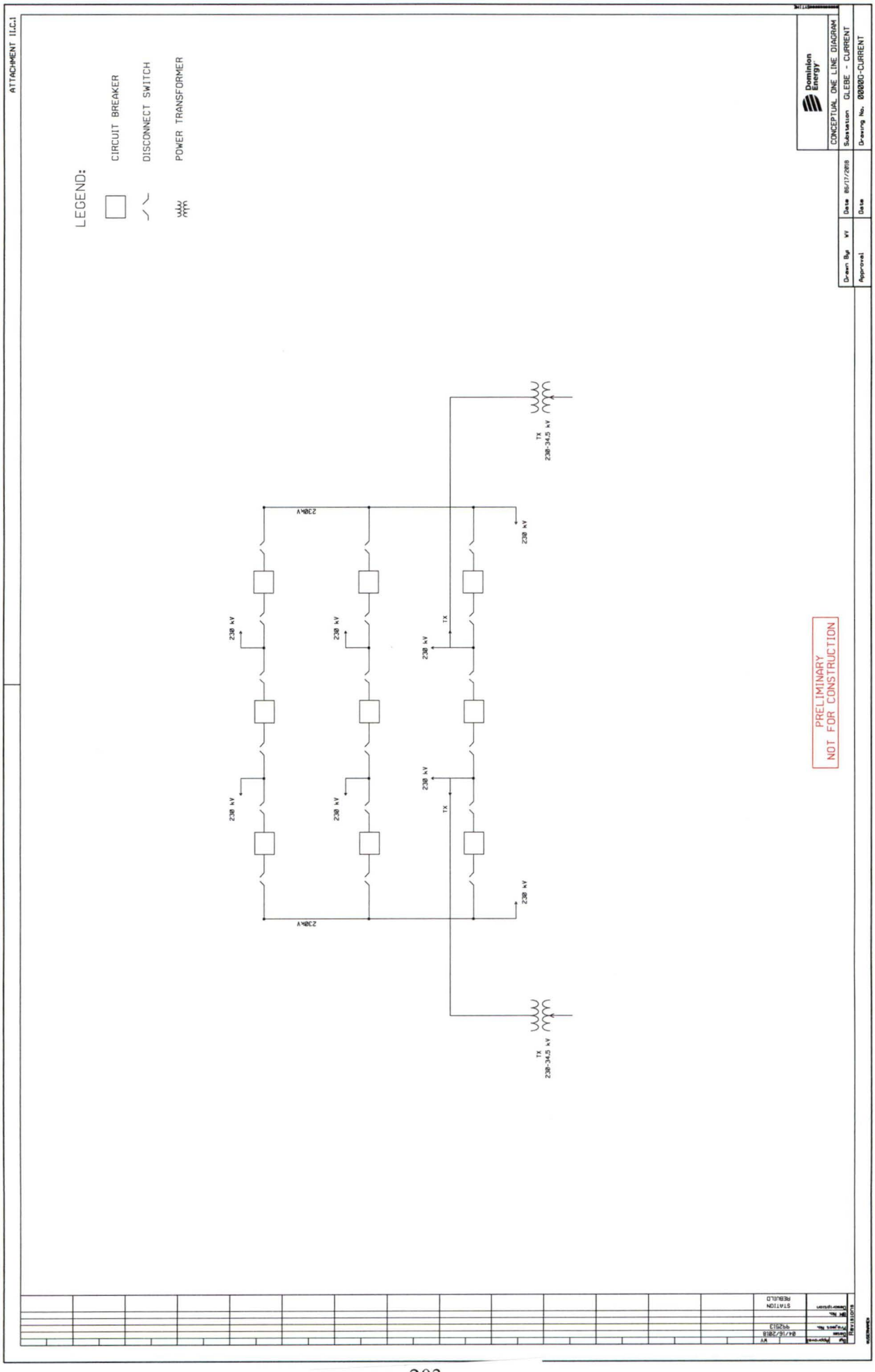
A new relay control enclosure is also included as part of this Project since the existing enclosure is full.

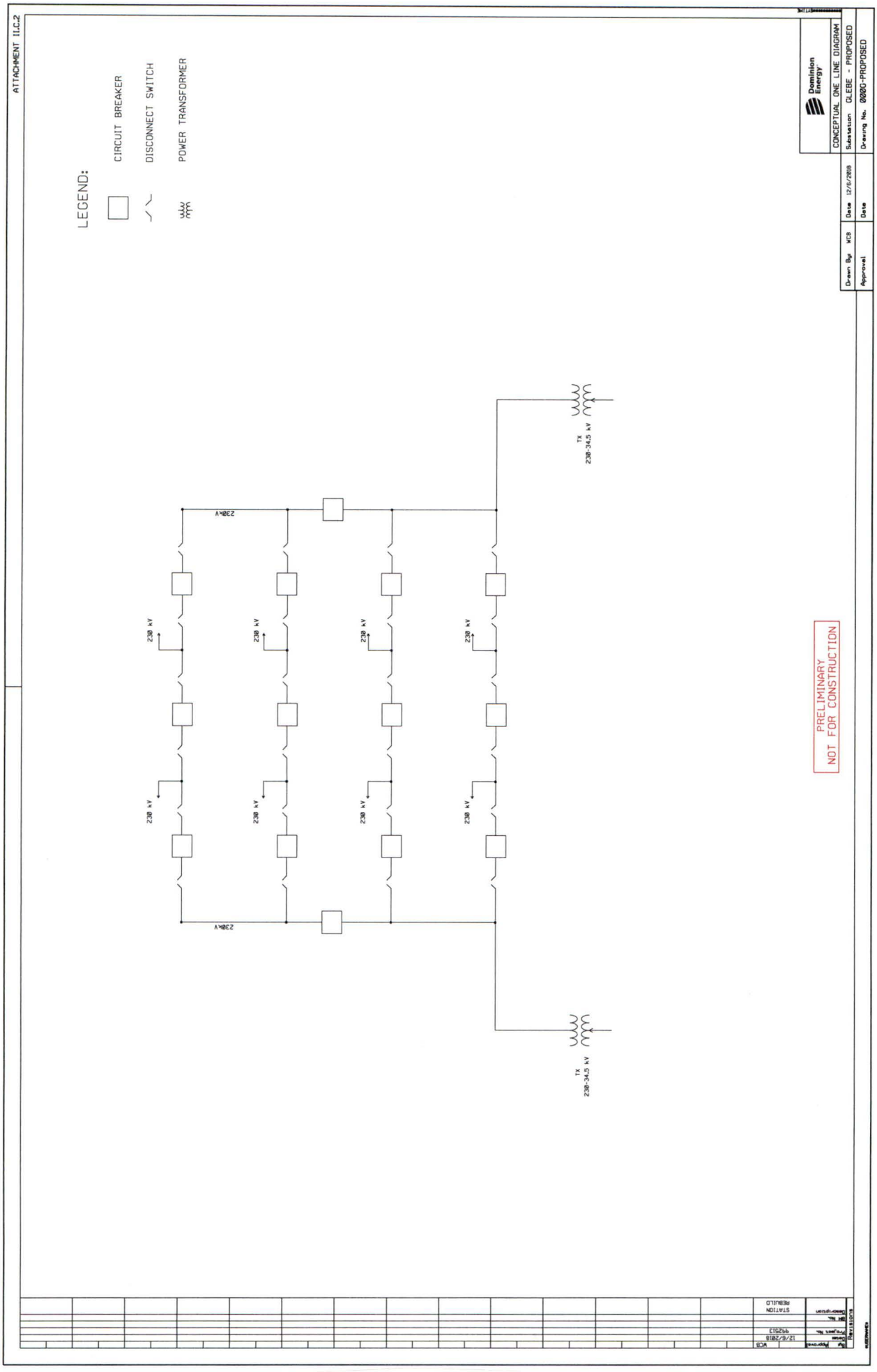
Supplemental work on this Project will be required, including minor relay and drawing work at Crystal Substation, Arlington Substation, Carlyle South Substation and North Alexandria Substation. The retirement of the existing Potomac Yards will also be included on this Project.

The one-line diagram of the current arrangement for Glebe Substation is shown on Attachment II.C.1.

The one-line diagram of the proposed arrangement for Glebe Substation is shown on Attachment II.C.2.

Due to the minor nature of the supplemental work being performed at Crystal Substation, Arlington Substation, Carlyle South Substation and North Alexandria Substation, and the proposed retirement of the existing Potomac Yards Station, no one-line diagrams are provided for these stations.


ATTACHMENT II.C.1
LEGEND:
CIRCUIT BREAKER
DISCONNECT SWITCH
POWER TRANSFORMER
Dominion Energy
CONCEPTUAL ONE LINE DIAGRAM
Substation GLEBE - CURRENT
Drawing No. 00000-CURRENT
Drawn By VV
Date 05/17/2018
Approval
Date
230kV
230 kV
TX
TX
230-34.5 kV
PRELIMINARY
NOT FOR CONSTRUCTION
STATION
REBUILD
04/16/2018
VV
992513


ATTACHMENT II.C.2
LEGEND:
CIRCUIT BREAKER
DISCONNECT SWITCH
POWER TRANSFORMER
Dominion Energy
CONCEPTUAL ONE LINE DIAGRAM
Substation GLEBE - PROPOSED
Drawing No. 0000-PROPOSED
Drawn By WCB
Date 12/6/2018
Approval
Date
230kV
230 kV
TX
230-34.5 kV
PRELIMINARY
NOT FOR CONSTRUCTION
STATION
REBUILD
12/6/2018
WCB

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

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

Response: The Potomac Yards Undergrounding would be constructed in a combination of existing Company-owned property/rights-of-way and new right-of-way across Four Mile Run. The line exits Glebe Substation and crosses under the Arlington linear park/path and continues under Four Mile Run crossing and utilizing approximately 220 linear foot of existing easement continuing to the south bank where it crosses under the City of Alexandria linear park/path, under the corner of an existing Car Dealership parking/green space, continuing under U.S. Route 1, and into the CPYR Shopping Center, LLC parcel where the microtunnel will terminate at new manhole #111. From new manhole #111, four new three-conductor bundles of HPFF cables will be installed to existing manhole #110 located south in existing right-of-way adjacent to U.S. Route 1. Along this section of the route, the surroundings include a shopping center, linear parks, bikes paths and an electric transmission terminal station.

The Potomac Yards Station abuts Four Mile Run, adjacent to the northern boundary of commercial property. The Potomac Yards Station was constructed under a City of Alexandria SUP, which was extended in 2013, as discussed in Section I.A. In renewing the SUP, however, the City of Alexandria required Dominion Energy Virginia to remove and/or relocate the Potomac Yards Station by January 1, 2021. See Attachment I.A.1. The Potomac Yards Undergrounding will relocate the existing overhead lines underground, and will cross City of Alexandria rights-of-way/easements/property and private property.

The Potomac Yards Undergrounding will cross and impact Four Mile Run Park leaving the tie-in point at Glebe Substation. Additionally, at the tie-in point in the CPYR Shopping Center, LLC parcel parking lot, the Potomac Yards Undergrounding will impact the asphalt sidewalk adjacent to U.S. Route 1 and a small area of the shopping center parking lot on the south side of Four Mile Run. Work at existing manhole #110 will impact the asphalt sidewalk at the intersection of U.S. Route 1 and E. Reed Avenue in front of the shopping center.

An on-site delineation of wetlands and other waters of the U.S. was completed by Stantec Consulting Services, Inc. ("Stantec") in January 2019. The delineation was conducted using the *Routine Determination Method* as outlined in the *1987 Corps of Engineers Wetland Delineation Manual* and methods described in the *2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0).* Jurisdictional features identified by Stantec within the Project limits may be classified as

emergent tidal wetland and a tidal riverine system. Four Mile Run is the primary jurisdictional feature present within the Project area. The table below provides the area of wetlands and other waters of the U.S. within the Project area.

Table 1
Wetland and Waters of the U.S. Summary Table
Crossing Areas

Total Area (Ac)	Forested (Ac)	Non-forested					
		Shrub (Ac)	Emergent (Ac)	Open Water (Ac)	Riverine (tidal-Ac)	Riverine (non-tidal-Ac)	Stream Crossings (Number)
1.95	--	--	0.006	--	1.94	--	1 (w/ 2 circuits)

In accordance with the Guidelines for Assessing Impacts of Proposed Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia (2008), a Stage I Pre-Application Analysis was conducted by Stantec. This report was forwarded to the VDHR on March 1, 2019, and is included as Attachment 2.H.1 to the DEQ Supplement. The background archival research identified zero National Historic Landmarks within the 1.5-mile buffer; four NRHP-listed resources within the 1-mile buffer; three NRHP-listed and two NRHP-eligible resources within the 0.5-mile buffer; and no NRHP-listed or -eligible resources within the right-of-way. There are two archaeological sites that have not been evaluated for listing within the right-of-way.

As the Potomac Yards Undergrounding involves underground construction, any impacts to land cover would be minimal. The land cover within the Potomac Yards Undergrounding area is largely developed with improvements such as roadways, sidewalks, and pathways. The remainder is managed turf areas. Land cover conditions would be restored upon completion of construction.[6]

Buildings (including dwellings) within 500 feet of the Potomac Yards Undergrounding were identified through a review of various digital data sets and maps, and current aerial photography. There are no churches, cemeteries, or schools within 500 feet of the Potomac Yards Undergrounding. Buildings located within 500 feet are primarily commercial in nature with one multi-family development within this buffer.

[6] As discussed above in Section II.A.1, the Company has been and will continue to coordinate with stakeholders to minimize impacts to their interests.

Table 2 Proximities of Potomac Yards Undergrounding to Residential and Industrial/Commercial Buildings	
	Potomac Yards Undergrounding
Within 500 feet of centerline	
Townhomes/Condos	0
Multi-family residential	1
Single family residential	0
Industrial/Commercial	7
Within 200 feet of centerline	
Townhomes/Condos	0
Multi-family residential	0
Single family residential	0
Industrial/Commercial	4
Within 100 feet of centerline	
Townhomes/Condos	0
Multi-family residential	0
Single family residential	0
Industrial/Commercial	2
Within 60 feet of centerline	
Townhomes/Condos	0
Multi-family residential	0
Single family residential	0
Industrial/Commercial	2

The Potomac Yards Undergrounding is partially within the North Potomac Yard Small Area Plan ("SAP") area, mainly north of the mixed-use development. The Potomac Yards Undergrounding will directly impact the North Potomac Yard SAP park area connecting Four Mile Run Park and Potomac Yard Park.

The Four Mile Run Restoration Master Plan has a direct impact on the cost and construction method for the Potomac Yards Undergrounding crossing Four Mile Run, and any construction impacts to Four Mile Run would need to be coordinated with the restoration efforts.

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

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

Response: The proposed Project scope originated as a portion of a larger project.[7] Correspondence and public outreach efforts outlined below relate largely to the original project, but have consistently addressed the need to maintain reliability, improve operational performance, and remove the Potomac Yards Station, consistent with Condition #5 of the SUP.

In the first quarter of 2014, Dominion Energy Virginia representatives began meeting with staff and key contacts with the City of Alexandria to discuss the larger, original PJM-approved project. After these initial meetings, the project team presented preliminary study information on need and scope of original project before City Council.

At that time, Dominion Energy Virginia team members also reached out to Arlington County key staff and stakeholders, including Deputy Manager Wilfredo Calderon and County Manager Barbara Donnellan, to discuss the original project and future work at the Company's Glebe Substation in Arlington County.

Beginning in 2014, the Company hosted five public open house events to discuss the potential solutions to the identified local energy needs, and to outline the scope of work to be completed at Glebe Substation.[8] Additionally, the Company sent approximately 3,400 letters of invitation to surrounding parcels within 500 feet of the original project proposed routes and Glebe Substation. Area homeowner associations and civic groups were also mailed and emailed invitations to the open houses. Approximately 100 community members attended the first open house, while approximately 30 combined to attend the 2016 set of open houses, as well as the 2018 open houses.

Additional information is provided to the public through a website dedicated to the Project: https://dominionenergy.com/glebe. The project web page includes overview slides, maps, a written explanation of need, materials from open houses and information on the Commission review process, among other information.

See also Sections III.J and V.D of this Appendix.

[7] *See, supra*, n. 3.
[8] *See, supra*, n. 3.

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

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

Response: The Company is not aware of any residences encroaching within the right-of-way and does not expect to have any residences demolished or relocated as a result of the Project.

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

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

Response: The Potomac Yards Undergrounding is located to the west of the Potomac Yards Station, which has been in operation at this location since 1996.

The Potomac Yards Undergrounding route extends under U.S. Route 1 and crosses numerous existing underground utilities, including electric distribution, natural gas, water, sewage, storm, transit, communications, and a USGS Stream Monitoring Station.

Four Mile Run is a channel that drains portions of the Cities of Alexandria and Falls Church, as well as the Counties of Arlington and Fairfax. The Company owns an existing 230 kV overhead line and easement crossing Four Mile Run.

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

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

Response: As noted above in Section III.B, Dominion Energy Virginia met with the local Planning Department staff from each of the counties and cities impacted by the Project components to investigate existing and proposed land use plans. In addition, the comprehensive plans for each of these counties and municipalities were reviewed to determine potential impacts.

The Comprehensive Plan for the City of Alexandria and Arlington County was reviewed to evaluate the potential effect the Potomac Yards Undergrounding could have on future development. The Potomac Yards Undergrounding falls within the Four Mile Run Restoration Area, Potomac Yards Station, and North Potomac Yard areas. The placement and construction of electric transmission lines is addressed in the zoning ordinance under Article 7, specifically, § 7-1201 Permitted Utilities. These objectives discuss maximizing the service available but minimizing the impact on the environment and the community. The Potomac Yards Undergrounding was designed specifically to avoid impacts to future development including the North Potomac Yard Small Area Plan. As it relocates aboveground transmission lines to underground, the Potomac Yards Undergrounding avoids areas identified for potential development and is aligned to be within future park areas, existing public rights-of-way and existing road.

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

F. Government Bodies

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

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

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

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

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

Response: 1. The City of Alexandria and Arlington County have not designated any such farmland.

2. Not applicable.

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

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

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

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

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

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

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

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

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

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

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

10. **Any state scenic river;**

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

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

Response:

1. There are no NRHP-listed resources in the right-of-way of or adjacent to the proposed route of the Potomac Yards Undergrounding. While not within or adjacent to the proposed right-of-way, there is one NRHP-listed resource that was identified within 1,000 feet of the Project: the George Washington Memorial Highway (VDHR #029-0218).
2. There are no historic properties determined eligible for listing on the NRHP by the VDHR in the right-of-way of or adjacent to the proposed route of the Potomac Yards Undergrounding. While not within or adjacent to the proposed right-of-way, there are two NRHP-eligible properties within 1000 feet of the Project: Lynhaven Historic District (VDHR #100-5021) and Richmond, Fredericksburg, and Potomac Railroad Historic District (VDHR #500-0001).
3. There are no historic districts designated by a governing body of any city or county in the right-of-way of or adjacent to the proposed route of the Potomac Yards Undergrounding. While not within or adjacent to the proposed right-of-way, there is one historic district designated by the City of Alexandria within 1,000 feet of the Project: the Old and Historic Alexandria district. The Old and Historic Alexandria District includes a corridor along the George Washington Memorial Highway. Arlington County has not designated any historic districts in the vicinity of the Project.
4. There are two previously-identified state archaeological sites or zones designated by the VDHR Director in the right-of-way of or adjacent to the proposed route of the Potomac Yards Undergrounding. These two previously-recorded archaeological resources were identified to be within the right-of-way for the Potomac Yards Undergrounding. Site 44AX0028 is recorded as the nineteenth-century Alexandria Canal. The portion of the Alexandria Canal in proximity to the Potomac Yards Undergrounding has not been investigated archaeologically; however, it appears likely that the canal has been destroyed or significantly altered in this location. Site 44AX0207 is a map-projected site dating to the third quarter of the eighteenth century. The site is documented as Campsite No. 1 of the American Wagon Train with an assigned date of September 1781. The site has not been archaeologically verified and has not been evaluated. Both sites were reviewed as part of the DC2RVA high speed rail project and the associated reporting notes that the site was not able to be identified in that survey corridor and that it is likely to have been significantly disturbed (McCloskey et al. 2016).
5. There are no designated underwater historic assets in or adjacent to the right-of-way of the proposed route of the Potomac Yards Undergrounding.
6. There are no National Natural Landmarks designated by the U.S. Secretary of the Interior in the right-of-way of or adjacent to the proposed route of the Potomac Yards Undergrounding.
7. There are no areas or features included in the Virginia Registry of Natural Areas in the right-of-way of or adjacent to the proposed route of the Potomac

Yards Undergrounding.

8. There are no areas accepted by the Director of the Virginia Department of Conservation and Recreation ("VDCR") for the Virginia Natural Area Preserves System in the right-of-way of or adjacent to the proposed route of the Potomac Yards Undergrounding.

9. There are no conservation or open space easements qualifying under Va. Code §§ 10.1-1009-1016 or §§ 10.1-1700-1705 (or comparable prior or subsequent provisions) in the right-of-way of or adjacent to the proposed route of the Potomac Yards Undergrounding.

10. There are no state scenic rivers in the right-of-way of or adjacent to the proposed route of the Potomac Yards Undergrounding.

11. There is one property owned by a municipality or school district in the right-of-way of or adjacent to the proposed route of the Potomac Yards Undergrounding: Four Mile Run Park. Four Mile Run Park is owned by Arlington County on the north shore of Four Mile Run tributary and is held by the City of Alexandria on the south shore of Four Mile Run tributary.

12. There are no other federal, state or local battlefields, parks, forests, game or wildlife preserves, recreational areas, or similar facilities that are not identified in the responses above.

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

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

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

The Potomac Yards Undergrounding would be installed underground; as such, no components of the proposed Project would exceed Notice Criteria and notification to the FAA is not required. However, to the extent temporary structures are needed onsite during the construction process, the Company will coordinate with the FAA as necessary.

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

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

Response: The George Washington Memorial Parkway, which is a scenic byway, is located approximately 600 feet east of the Project. The Potomac Yards Undergrounding will remove existing overhead structures, thereby eliminating any existing visual impacts to the George Washington Memorial Parkway. See Attachments II.B.6.c.1 and II.B.6.c.2.

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

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

Response: See Appendix Sections III.B and V.D of this Appendix and the table provided below for coordination conducted by the Company with appropriate municipal, state and federal agencies regarding the proposed Project. Dominion Energy Virginia has continued to provide the staffs of Arlington County and the City of Alexandria with updates on need and scope of the Project.

In addition, in February 2019, the Company solicited comments via letter from several federally recognized Native American tribes, including the Chickahominy, Eastern Chickahominy, Nansemond, Pamunkey, Rappahannock, and Upper Mattaponi, and several state recognized Native American tribes, including the Cheroenhaka, Mattaponi, Nottoway of Virginia, and Patawomeck. A copy of the letter template is included as Attachment III.J.1.

Potomac Yards Undergrounding and Glebe GIS Conversion Communication Log

Date	Correspondence Contacts	Summary of Correspondence
February 27, 2019	Dominion Energy Virginia / Area Civic Associations	Meeting with Arlington, Aurora Highlands, Crystal City, Long Branch Creek Civic Associations
February 5, 2019	Dominion Energy Virginia Stakeholder Letter	Letter to Cultural Advocacy Stakeholder list soliciting feedback on Project
January 30, 2019	Dominion Energy Virginia / Localities	Meeting with City of Alexandria and Arlington County
September 25, 2018		Meeting with Fairfax County Executive Hill Meeting with Fairfax County Planning Commission Chair Murphy City Council Hearing
September 2018		Meeting with Staff
August 13, 2018		Meeting with Staff and City Manager
July 26, 2018		Meeting with Chamber CEO
July 5, 2018		Meeting with Staff
July 2, 2018		Meeting with Fairfax Supervisor Herrity

Potomac Yards Undergrounding and Glebe GIS Conversion Communication Log		
Date	Correspondence Contacts	Summary of Correspondence
June 2018		City Council community hearing
May 8, 2018		Dr. Mezei presentation and Q&A
May 7, 2018		Meeting with Fairfax Supervisor Herrity
May 2018		Meeting with Staff
April 17, 2018'		Meeting with Staff
April 2, 2018		Meeting with Board Chair Bulova
April 2018		Meeting with Staff
March 29, 2018		Meeting with Staff
March 27, 2018		Meeting to discuss status of project
March 22, 2018		Meeting with Staff
February 21, 2018		Meeting with Staff
February 13, 2018		Meeting with Chamber CEO
February 8, 2018		Meeting with Fairfax Supervisor McKay
February 1, 2018		Meeting with Fairfax Supervisor Herrity
January 11, 2018		Meeting to provide update on project and answer questions
October 17, 2017		Meeting with PYD Group
September 20, 2017		Meeting with Fairfax Supervisor McKay
July 25, 2017		Briefed Staff on project
June 12, 2017		Memorandum to City Council providing update on Project status

Potomac Yards Undergrounding and Glebe GIS Conversion Communication Log		
Date	Correspondence Contacts	Summary of Correspondence
June 12, 2017	City of Alexandria	Memorandum to City Council providing update on Project status.
October 5, 2016	Dominion Energy Virginia	Informational Open House (no formal presentation)
August 19, 2016	Dominion Energy Virginia / City of Alexandria	Notify of intention of SCC filing.
July 21, 2016	United States Department of the Interior (DOI) / Dominion Energy Virginia	DOI comments on the route proposal. NPS does not support alternatives that are routed along and/or across the George Washington Memorial Parkway.
June 1, 2016	Dominion Energy Virginia / City of Alexandria Department of Transportation and Environmental Services	Update of SCC filing date, provided "Preliminary" Study Results from the Summer 2020 RTEP Power Flow Model (based on PJM 2016 Load Forecast), and study results from Power GEM Transmission Adequacy & Reliability Assessment Program.
May 5, 2016	City of Alexandria	230 kV Underground Transmission Line Work Group Meeting Agenda. Review of draft resolution & recommendations memo, SCC process, subdivision of Exelon substation plan, and citizen comment period.
January 22, 2015	City of Alexandria	Memorandum from City Manager to City Council. Submittal of Working Group recommendations to City Council.
November 20, 2014	City of Alexandria Underground Transmission Line & Substation Working Group	Meeting #5. Agenda: Receive Dominion Energy Virginia and Exelon updates. Discuss draft memo to council. Recommended strongly opposing all overhead line options, the Mt. Jefferson Park Trail Route, Mainline Boulevard Route, Route 1/Slaters Lane Route, and Commonwealth Avenue/East Glebe Road Route. "Least objectionable" routes identified: CSX, Four Mile Run/Potomac River and Four Mile Run / Potomac River/GW Parkway, GW Parkway, and Potomac Avenue.
October 23, 2014	City of Alexandria Underground Transmission Line & Substation Working Group	Meeting #4. Agenda: Discuss draft memo to council, matrix and alignment narratives, and develop Working Group recommendations.
October 16, 2014	Dominion Energy Virginia / City of Alexandria Underground Transmission Line & Substation Working Group	Response to September 23, 2014 Working Group letter.

Potomac Yards Undergrounding and Glebe GIS Conversion Communication Log		
Date	Correspondence Contacts	Summary of Correspondence
October 9, 2014	City of Alexandria Underground Transmission Line & Substation Working Group	Meeting #3. Agenda: Discuss Dominion Energy Virginia open house summary, Pepco Potomac River Substation presentation, review of routing matrix, development of recommendations. Recommendations include: opposition to all overhead line options, consolidate Potomac Yards Station with Glebe Substation and place lines underground, incorporate existing Potomac River Substation with new substation & screen entire area, identify least objectionable alignments, identify mitigation or other potential benefits, and the City/consultants to perform due diligence and review Project need.
October 2, 2014	City of Alexandria Department of Transportation and Environmental Services / Dominion Energy Virginia	City of Alexandria response to September 16, 2014 Dominion Energy Virginia consultant scoping letter request for comment. City expressed concern with civic engagement timeline.
September 25, 2014	City of Alexandria Underground Transmission Line & Substation Working Group	Meeting #2. Agenda: Discuss Project need, Dominion Energy Virginia alternatives information and staff matrix draft, and timeline for the Project.
September 24, 2014	PJM / City of Alexandria	Response to September 3, 2014 information request letter.
September 23, 2014	City of Alexandria Underground Transmission Line & Substation Working Group / Dominion Energy Virginia	Working Group response to September 16, 2014 Dominion Energy Virginia consultant scoping letter request for comment. Working Group expressed concern with civic engagement timeline.
September 16, 2014	Dewberry / City of Alexandria	Scoping letter requesting comments
September 11, 2014	City of Alexandria Underground Transmission Line & Substation Working Group	Meeting #1. Agenda: Discuss the Underground Transmission Line Working Group role & goals and provide an overview of the Project.
September 8, 2014	Dominion Energy Virginia / City of Alexandria	Letter outlining additional details regarding the Project need, alternatives discussion (follow-up to August 20, 2014 meeting), indication that an Alternatives Analysis report would be included in the SCC filing, contact information for Exelon, and confirmation that Dominion Energy Virginia will conduct an EMF analysis.
September 3, 2014	City of Alexandria / PJM	City of Alexandria requesting detailed, technical information regarding the need for the Project and an invitation for PJM to present at the September Work Group meeting.

Potomac Yards Undergrounding and Glebe GIS Conversion Communication Log		
Date	Correspondence Contacts	Summary of Correspondence
August 26, 2014	City of Alexandria / Dominion Energy Virginia	Information request from the City of Alexandria. City requested need reports / PJM information to justify the need for the Project, the options evaluated, requested alternatives: Potomac River/Four Mile Run, George Washington Memorial Parkway, Norfolk Southern spur and CSX main line tracks, and abandoned Old Dominion Railroad right-of-way, alternatives to expanding the Exelon substation, and an EMF evaluation.
August 14, 2014	Dominion Energy Virginia / NOTICe	Dominion Energy Virginia response to July 24, 2014 NOTICe letter. Dominion Energy Virginia outlined need for the Project, the SCC approval process, and the Project website.
July 24, 2014	North Old Town Independent Citizens Civic Association (NOTICe) / Dominion Energy Virginia	Letter documenting July 21, 2014 meeting between NOTICe and Dominion Energy Virginia. NOTICe requested alternatives to the location of Potomac River Substation and the route of the 230 kV line.
July 10, 2014	Dominion Energy Virginia / City of Alexandria	Dominion Energy Virginia response to June 24, 2014 letter. Responded to questions regarding SCC review process, anticipated construction duration, coordination with City Work Group, and cost estimate information.
June 24, 2014	City of Alexandria / Dominion Energy Virginia	Letter from City Manager informing Dominion Energy Virginia of his recommendation to City Council that the Work Group be established.
June 21, 2014	City of Alexandria City Council	Resolution 2633 to establish the Underground Transmission Line Working Group
June, 2014	Dominion Energy Virginia	Public outreach, letters, Dominion Energy Virginia Project website created, open house sessions
June 5, 2014	Dominion Energy Virginia / City of Alexandria	Response to June 2, 2014 letter, indicating City Council presentation on June 11, 2014.
June 2, 2014	City of Alexandria / Dominion Energy Virginia	Letter citing City concerns regarding underground transmission line. City requested a Needs Assessment, Alternatives Feasibility Report, Civic Community Outreach, and Overall Work Program.
February 11, 2014	PJM Staff/Board Reliability Committee	Summary of 2013 RTEP thermal and reliability issues (shared with City of Alexandria

February 5, 2019

«Name», «Title»
«Organization»
«Address»
«City», «State» «Zip»

Proposed Potomac Yards Undergrounding and Glebe Rebuild

Dear «Name»,

At Dominion Energy Virginia, we are dedicated to finding the best energy solutions for the communities we proudly serve. As a valued stakeholder with a vested interest in the community, we are reaching out to you for input on a proposed transmission line undergrounding and electric transmission substation rebuild project in Northern Virginia.

Today, two transmission lines located underground in U.S. Route 1 in Alexandria connect to an overhead terminal station (known as Potomac Yards North Terminal Station, or Potomac Yards Station) just south of Four Mile Run on the northern end of the Potomac Yards shopping center. From that terminal station, those lines cross over Route 1 and Four Mile Run overhead and connect to our Glebe Substation. Glebe Substation is located at the intersection of S. Glebe Road and S. Eads Street in Arlington County. The terminal station is subject to a special use permit issued by Alexandria that, by its terms, requires Dominion Energy Virginia to remove and/or relocate underground the overhead terminal station and lines by January 2021. With this in mind, this project will remove the existing terminal station and overhead lines and poles, and place those lines under Route 1 and Four Mile Run to allow them to continue to connect to Glebe Substation. A new, approximately 1,100-foot right of way will be needed for this rearrangement.

In addition to the undergrounding part of the project, we will be rebuilding Glebe Substation to replace aging infrastructure, improve operational performance and to create the necessary space to allow for the connection of the relocated, undergrounded lines from the retired Potomac Yards Station. The rebuild of Glebe Substation will occur entirely within existing company-owned property. Please see the enclosed overview map for the location of these facilities.

We are seeking your input on how we can best balance system needs with your values and priorities prior to submitting an application to the Virginia State Corporation Commission (SCC) in March 2019. We would like to hear from you regarding any considerations you feel are important as we review the site area in detail and solicit further feedback. Please feel free to notify other relevant organizations that may have an interest in the project area. For reference, other recipients of this letter include countywide and statewide historic, cultural, and scenic organizations, as well as Native American tribes.

Please provide your comments by February 22, 2019 so we have adequate time to consider them in our project design and as part of our SCC application. We appreciate your assistance as we move through the planning process.

To access information on current project or historical material on original line project, please visit www.DominionEnergy.com/Glebe.

If you have any questions or would like to set up a meeting to discuss the project, please do not hesitate to contact me by sending an email to T.Taylor-Minor@dominionenergy.com or calling 804-771-4936.

Best Regards,

Tiffany Taylor-Minor
Electric Transmission Communications

Enclosure: Project Overview Map

ATTACHMENT II.A.2

Dominion Energy

Potomac Yards Undergrounding and Glebe GIS Conversion
Highways, Railroads, Streets, Parks, Open Space, Schools, Hospitals, Airports, Convalescent Centers, & Churches

- Existing Substation
- Existing Overhead Line Relocation to Underground
- Railroad Line
- Existing Overhead Line
- Existing Underground Line
- Gas Line
- Schools
- Places of Worship
- Parks & Open Space
- Airport

County of Arlington / City of Alexandria

0' 1000' (Main Map)
0 5 mi (Vicinity Map)

Draper Aden Associates
Engineering • Surveying • Environmental Services

DATE: 1/29/2019

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

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

Response: In February 2019, the Company solicited comments via letter from the non-governmental identified in the table below. Additionally, representatives from Long Branch Creek, Arlington Ridge, Aurora Highlands, and the Crystal City Civic Associations were contacted to provide information on the Project and address any questions or concerns. A copy of the letter template is included as Attachment III.J.1. See also Section III.B.

Name	Organization
Ms. Elizabeth S. Kostelny	Preservation Virginia
Mr. Thomas Gilmore	Civil War Trust
Mr. Jim Campi	Civil War Trust
Mr. Adam Gillenwater	Civil War Trust
Ms. Kym Hall	Colonial National Historical Park
Mr. Jack Gary	Council of Virginia Archaeologists
Ms. Leighton Powell	Scenic Virginia
Mr. Alexander Macaulay	Macaulay & Jamerson
Ms. Sharee Williamson	National Trust for Historic Preservation
Mr. Dan Holmes	Piedmont Environmental Council
Dr. Newby- Alexander	Norfolk State University
Mr. Roger Kirchen	Virginia Department of Historic Resources
Ms. Adrienne Birge-Wilson	Virginia Department of Historic Resources
Mr. Dave Dutton	Dutton + Associates, LLC

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

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

Response: The following are the anticipated environmental permits or special permissions for the Potomac Yards Undergrounding and the Glebe GIS Conversion:

Activity	Permit or License	Agency Granting Permit or License
Potomac Yard Station Removal	Site Plan Approval	City of Alexandria Department of Planning & Zoning
Discharge of Stormwater from Construction Activity	Construction General Permit	Virginia Department of Environmental Quality
Impacts to Wetlands and waters of the U.S.	Nationwide Permit 12	U. S. Army Corps of Engineers
Work within, over or under state subaqueous bottom	Subaqueous Bottom Permit	Virginia Marine Resource Commission
Underground Transmission Road Crossing	VDOT Construction Permit	Virginia Department of Transportation
Work in the Street	Work in the Street Permit	City of Alexandria Department of Planning & Zoning
Glebe GIS Conversion	Development Special Use Permit & Site Plan Approval	Arlington County Department of Planning & Zoning
Glebe GIS Conversion	Building Permit	Arlington County Department of Planning & Zoning

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

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

Response: In an underground cable, the electric field is contained entirely within the cable insulation. Therefore, there is no electric field at any point external to the cables.

Potomac Yards Undergrounding: Glebe Substation to Manhole #111

Between Glebe Substation and manhole #111, the Potomac Yards Undergrounding will be installed utilizing the microtunneling construction method at a depth of approximately 16-40 feet. The highest magnetic field will occur directly over each casing, when both circuits are energized and at the shallowest installation depth located in Four Mile Run.

The calculated peak magnetic field strength for the proposed underground facilities operating at average loading capability (*i.e.*, 215 MVA for Line #248 and 118 MVA for Line #2023) is 0.05 milligauss ("mG") for Line #248 and 0.02 mG at one meter above ground in this section of the Potomac Yards Undergrounding.

Maximum EMF Level at 1.0 Meter Above Ground
for Various Casing Burial Depths and Lines In-Service
Potomac Yards Undergrounding – Glebe Substation and Manhole #111

Line In-Service	Max EMF Level at 1 meter above ground (mG)	
	Above casing 16 ft. depth	Above casing 36 ft. depth
248	0.05	0.01
2023	0.04	0.01
248 & 2023	0.06	0.02

Line In-Service	Max EMF Level at 1 meter above ground (mG)	
	Edge ROW casing depth 16 ft.	Edge ROW casing depth 36 ft.
248	0.02	0.01
2023	0.01	0.01
248 & 2023	0.03	0.01

Potomac Yards Undergrounding: Manhole #111 to Manhole #110

Between manhole #111 and manhole #110, the Potomac Yards Undergrounding will be installing new cables in existing pipes in this section at an existing depth of approximately 4.5 feet. The highest magnetic field will occur in the center of

the 8-foot-wide corridor directly above when both circuits are energized.

The calculated peak magnetic field strength for the proposed underground facilities operating at average loading capability (*i.e.*, 215 MVA for Line #248 and 118 MVA for Line #2023) is 0.5 mG one meter above ground in this section of the Potomac Yards Undergrounding.

Maximum EMF Level at 1.0 Meter Above Ground
4.5 feet Burial Depths and Lines In-Service
Potomac Yards Undergrounding – Manhole #111 and Manhole #110

Line In-Service	Max EMF Level at 1 meter above ground (mG)	
	Center ROW 4.5 ft. depth	Edge ROW 4.5 ft. depth
248	0.35	0.33
2023	0.24	0.23
248 & 2023	0.50	0.46

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

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

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

The most recent major reviews on this topic include the report of the Scientific Committee on Emerging and Newly Identified Health Risks ("SCENIHR") of the European Commission, which was published in 2015. The SCENIHR report, similar to previous reviews, found that the scientific evidence does not confirm the existence of any adverse health effects of environmental or community exposures. This conclusion is consistent with conclusions of previous reviews conducted for other agencies, including the European Health Risk Assessment Network on Electromagnetic Fields Exposure ("EFHRAN"), the International Commission on Non-Ionizing Radiation Protection ("ICNIRP"), the World Health Organization ("WHO"), and the International Committee on Electromagnetic Safety ("ICES") (EFHRAN, 2010, 2012; ICNIRP, 2010; WHO, 2007; ICES, 2002).

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

The general scientific consensus of the health agencies that have reviewed this research is that the scientific evidence does not show that common sources of EMF in the environment, including transmission lines and other parts of the electric system, appliances, etc., are a cause of any adverse health effects. The WHO, for example, states on their website: "Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not

confirm the existence of any health consequences from exposure to low level electromagnetic fields" (WHO, 2018).

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

References

European Health Risk Assessment Network on Electromagnetic Fields Exposure (EFHRAN). Report on the Analysis of Risks Associated to Exposure to EMF: *In Vitro* and *In Vivo* (Animals) Studies. Milan, Italy: EFHRAN, 2010.

European Health Risk Assessment Network on Electromagnetic Fields Exposure (EFHRAN). Risk Analysis of Human Exposure to Electromagnetic Fields (Revised). Report D2 of the EFHRAN Project. Milan, Italy: EFHRAN, 2012.

International Commission on Non-ionizing Radiation Protection (ICNIRP). Guidelines for limiting exposure to time-varying electric and magnetic fields (1 Hz to 100 kHz). Health Phys 99: 818-36, 2010.

International Committee on Electromagnetic Safety (ICES). IEEE Standard for Safety Levels with Respect to Human Exposure to Electromagnetic Fields 0 to 3 kHz. Piscataway, NJ: IEEE, 2002; Reaffirmed 2007.

Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR). Opinion on Potential Health Effects of Exposure to Electromagnetic Fields (EMF). Brussels, Belgium: European Commission, 2015.

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

World Health Organization (WHO). Electromagnetic fields (EMF). World Health Organization, 2018.

http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html (last accessed May 10, 2018).

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

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

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

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

3. Have been subjected to peer review.

Response: The Virginia Department of Health ("VDH") conducted its most recent review and issued its report on the scientific evidence on potential health effects of extremely low frequency ("ELF") EMF in 2000: "[T]he Virginia Department of Health is of the opinion that there is no conclusive and convincing evidence that exposure to extremely low frequency EMF emanated from nearby high voltage transmission lines is causally associated with an increased incidence of cancer or other detrimental health effects in humans."[9]

The continuing scientific research on EMF exposure and health has resulted in a number of peer-reviewed publications since 2000. The accumulating research results have been regularly and repeatedly reviewed and evaluated by national and international health, scientific, and government agencies. One of the most comprehensive and detailed reviews of the relevant scientific peer-reviewed literature was published by the WHO in 2007. The conclusion of the WHO, as currently expressed on its website, is consistent with the earlier VDH conclusions: "Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields."[10]

Research published in the peer-reviewed literature subsequent to the WHO report has been reviewed by several scientific organizations, including most notably:

- SCENIHR, a committee of the European Commission, that published its assessments in 2009 and 2015;

- The Swedish Radiation Safety Authority ("SSM"), formerly the Swedish Radiation Protection Authority ("SSI"), that has published annual reviews of the relevant peer-reviewed scientific literature since 2003, with its most recent

[9] *See* http://www.vdh.virginia.gov/content/uploads/sites/12/2016/02/highfinal.pdf.
[10] See http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html.

review published in 2016; and,

- EFHRAN, that published its reviews in 2010 and 2012.

The above reviews provide detailed analyses and summaries of relevant recent peer-reviewed scientific publications. The conclusions of these reviews that the evidence overall does not confirm the existence of any adverse health effects due to exposure to EMF are consistent with the conclusions of the VDH and the WHO reports. With respect to the statistical association observed in some of the childhood leukemia epidemiologic studies, the most recent comprehensive review of the literature by SCENIHR, published in 2015, concluded that "no mechanisms have been identified and no support is existing [sic] from experimental studies that could explain these findings, which, together with shortcomings of the epidemiological studies prevent a causal interpretation" (SCENIHR, 2015, p. 16).

While research is continuing on various aspects of EMF exposure and health, many of the recent publications have focused on an epidemiologic assessment of EMF exposure and childhood leukemia and neurodegenerative diseases. Of these, the following recent publications provided additional evidence and contributed to clarification of previous findings. Overall, new research results have not provided evidence to alter the previous conclusions of scientific and health organizations.

Recent epidemiologic studies of EMF and childhood leukemia:

- Sermage-Faure et al. (2013) used geocoded information on residential addresses and power line locations in France to evaluate distance of residence to high-voltage power lines and the risk of childhood leukemia. The study included 2,779 cases of childhood leukemia diagnosed between 2002 and 2007, and 30,000 control children. Overall, no statistically significant associations were reported between childhood leukemia risk and residential distance to high-voltage power lines.

- Bunch et al. (2014) included over 53,000 childhood cancer cases, diagnosed between 1962 and 2008, and over 66,000 healthy children as controls, in their case-control epidemiologic study in the United Kingdom. The study provided an update and extension of an earlier study (Draper et al., 2005). The update extended the study period by 13 years, included Scotland in addition to England and Wales, and included 132 kV transmission lines in addition to 275 kV and 400 kV transmission lines. Unlike the earlier study (Draper et al., 2005) that relied on a smaller sample, the updated study by Bunch et al. (2014) reported no overall association between residential proximity to power lines and childhood cancer development. Data were also analyzed from the same case-control study in the United Kingdom to assess the potential association between residential proximity to high-voltage underground cables and childhood cancer development (Bunch et al., 2015). No statistically significant associations or trends were reported with either distance to underground cables or calculated magnetic fields from underground cables for

any type of childhood cancers.

- Pedersen et al. (2014, 2015) published two case-control studies that investigated the potential association between residential proximity to power lines and childhood cancer in Denmark. One of the studies included 1,698 childhood leukemia cases and twice as many controls; no statistical association with residential distance to power lines was reported (Pedersen et al., 2014). The other study included all cases of leukemia (n=1,536), central nervous system tumor, and malignant lymphoma (n=417) diagnosed before the age of 15 between 1968 and 2003 in Denmark, along with 9,129 healthy control children matched on sex and year of birth (Pedersen et al., 2015). Considering the entire study period, no statistically significant increases were reported for any of the childhood cancer types.

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

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

Recent epidemiologic studies of EMF and neurodegenerative diseases:

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

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

neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, and ALS) were observed with various measures of calculated magnetic fields.

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

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

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

- Pedersen et al. (2017) investigated the occurrence of central nervous system diseases among approximately 32,000 male Danish electric power company workers. Cases were identified through the national patient registry between 1982 and 2010. Exposure to ELF magnetic fields was determined for each worker based on their job titles and area of work. A statistically significant increase was reported for dementia in the high exposure category when

compared to the general population, but no exposure-response pattern was identified, and no similar increase was reported in the internal comparisons among the workers. No other statistically significant increases among workers were reported for the incidence of Alzheimer's disease, Parkinson's disease, motor neuron disease, multiple sclerosis, or epilepsy, when compared to the general population, or when incidence among workers was analyzed across estimated exposure levels.

References

Bunch KJ, Keegan TJ, Swanson J, Vincent TJ, Murphy MF. Residential distance at birth from overhead high-voltage powerlines: childhood cancer risk in Britain 1962-2008. Br J Cancer 110: 1402-1408, 2014.

Bunch KJ, Swanson J, Vincent TJ, Murphy MF. Magnetic fields and childhood cancer: an epidemiological investigation of the effects of high-voltage underground cables. J Radiol Prot 35: 695-705, 2015.

Crespi CM, Vergara XP, Hooper C, Oksuzyan S, Wu S, Cockburn M, Kheifets L. Childhood leukaemia and distance from power lines in California: a population-based case-control study. Br J Cancer 115: 122-128, 2016.

Draper G, Vincent T, Kroll ME, Swanson J. Childhood cancer in relation to distance from high voltage power lines in England and Wales: a case-control study. BMJ 330: 1290, 2005.

European Health Risk Assessment Network on Electromagnetic Fields Exposure (EFHRAN). Report on the Analysis of Risks Associated to Exposure to EMF: *In Vitro* and *In Vivo* (Animals) Studies. Milan, Italy: EFHRAN, 2010.

European Health Risk Assessment Network on Electromagnetic Fields Exposure (EFHRAN). Risk Analysis of Human Exposure to Electromagnetic Fields (Revised). Report D2 of the EFHRAN Project. Milan, Italy: EFHRAN, 2012.

Fischer H, Kheifets L, Huss A, Peters TL, Vermeulen R, Ye W, Fang F, Wiebert P, Vergara XP, Feychting M. Occupational Exposure to Electric Shocks and Magnetic Fields and Amyotrophic Lateral Sclerosis in Sweden. Epidemiology 26: 824-830, 2015.

Koeman T, Schouten LJ, van den Brandt PA, Slottje P, Huss A, Peters S, Kromhout H, Vermeulen R. Occupational exposures and risk of dementia-related mortality in the prospective Netherlands Cohort Study. Am J Ind Med 58: 625-635, 2015.

Koeman T, Slottje P, Schouten LJ, Peters S, Huss A, Veldink JH, Kromhout H, van den Brandt PA, Vermeulen R. Occupational exposure and amyotrophic lateral sclerosis in a prospective cohort. Occup Environ Med 74: 578-585, 2017 [Epub ahead of print].

Pedersen C, Raaschou-Nielsen O, Rod NH, Frei P, Poulsen AH, Johansen C, Schuz J. Distance from residence to power line and risk of childhood leukemia: a population-based case-control study in Denmark. Cancer Causes Control 25: 171-177, 2014.

Pedersen C, Johansen C, Schuz J, Olsen JH, Raaschou-Nielsen O. Residential exposure to extremely low-frequency magnetic fields and risk of childhood leukaemia, CNS tumour and lymphoma in Denmark. Br J Cancer 113: 1370-1374, 2015.

Pedersen C, Poulsen AH, Rod NH, Frei P, Hansen J, Grell K, Raaschou-Nielsen O, Schuz J, Johansen C. Occupational exposure to extremely low-frequency magnetic fields and risk for central nervous system disease: an update of a Danish cohort study among utility workers. Int Arch Occup Environ Health, 2017 [Epub ahead of print].

Salvan A, Ranucci A, Lagorio S, Magnani C. Childhood leukemia and 50 Hz magnetic fields: findings from the Italian SETIL case-control study. Int J Environ Res Public Health 12: 2184-2204, 2015.

Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR). Health Effects of Exposure to EMF. Brussels, Belgium: European Commission, 2009.

Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR). Opinion on Potential Health Effects of Exposure to Electromagnetic Fields (EMF). Brussels, Belgium: European Commission, 2015.

Seelen M, Vermeulen RC, van Dillen LS, van der Kooi AJ, Huss A, de Visser M, van den Berg LH, Veldink JH. Residential exposure to extremely low frequency electromagnetic fields and the risk of ALS. Neurology 83: 1767-1769, 2014.

Sermage-Faure C, Demoury C, Rudant J, Goujon-Bellec S, Guyot-Goubin A, Deschamps F, Hemon D, Clavel J. Childhood leukaemia close to high-voltage power lines–the Geocap study, 2002-2007. Br J Cancer 108: 1899-1906, 2013.

Sorahan T and Mohammed N. Neurodegenerative disease and magnetic field exposure in UK electricity supply workers. Occup Med (Lond) 64: 454-460, 2014.

Swedish Radiation Safety Authority (SSM). Research 2016:15. Recent Research on EMF and Health Risk – Eleventh report from SSM's Scientific Council on Electromagnetic Fields, 2016. Including Thirteen years of electromagnetic field research monitored by SSM's Scientific Council on EMF and health: How has the evidence changed over time? Stockholm, Sweden: Swedish Radiation Safety Authority (SSM), 2016.

Vergara X, Mezei G, Kheifets L. Case-control study of occupational exposure to

electric shocks and magnetic fields and mortality from amyotrophic lateral sclerosis in the US, 1991-1999. J Expo Sci Environ Epidemiol 25: 65-71, 2015.

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

V. NOTICE

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

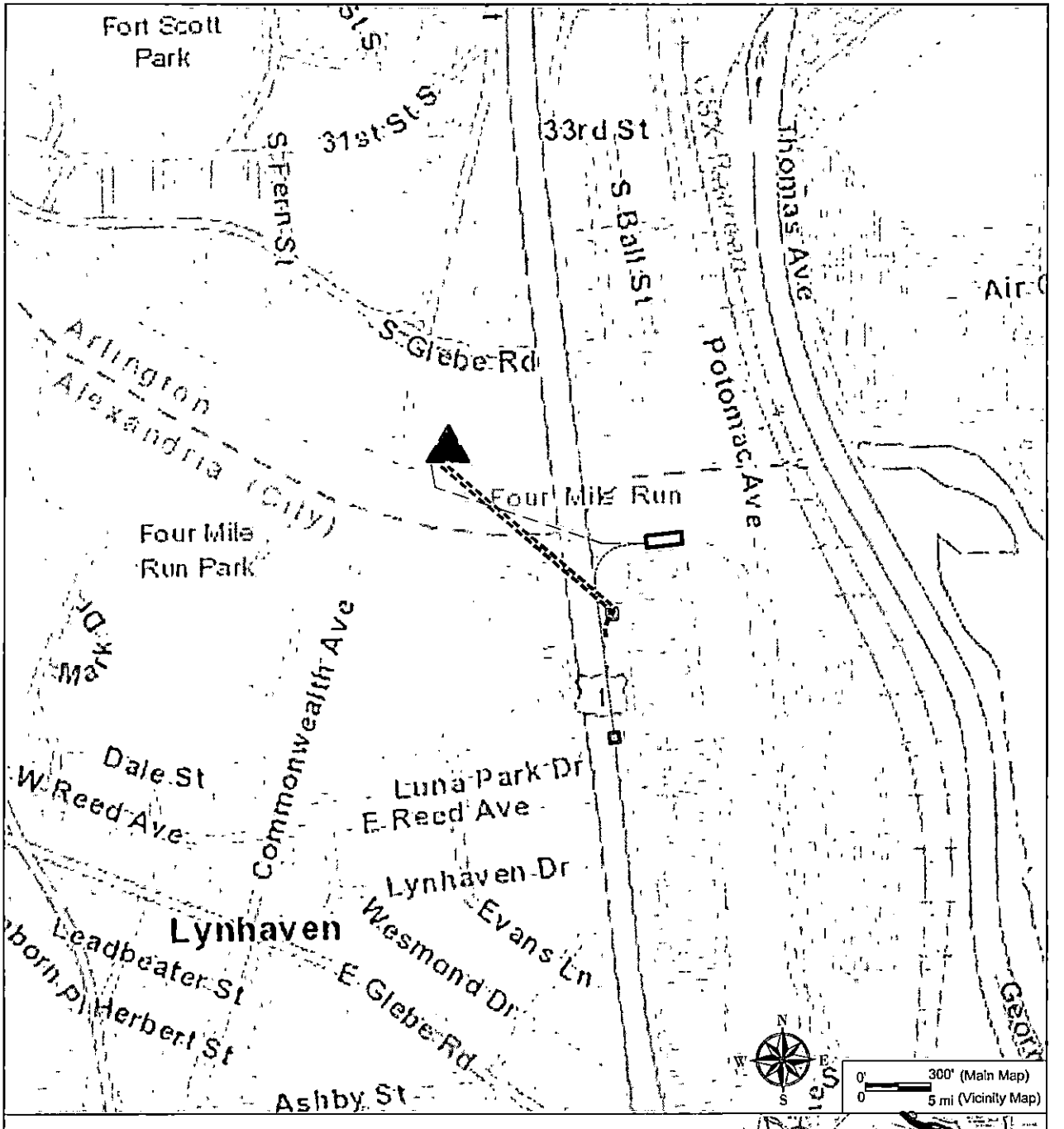
Response: A map of the proposed route of the Potomac Yards Undergrounding is provided as Attachment V.A, with written descriptions as follows:

Potomac Yards Undergrounding

For the existing line relocation under the Potomac Yards Undergrounding, the entire Potomac Yards North Terminal Station, including three double circuit 230 kV structures, two single circuit structures and conductors will be removed. Also, approximately 550 feet of two existing double circuit underground lines, currently entering Potomac Yards North Terminal Station, will be removed and the connection relocated directly into Glebe Substation. Each line consists of two sets of three conductor bundles, with one three-conductor bundle per line. At the tie-in point 550 feet from the existing Potomac Yards North Terminal Station, four new steel pipes will be installed turning northwest, crossing U.S. Route 1, going under Four Mile Run, and proceeding north into Glebe Substation. Four three-conductor bundles, HPFF cables will be removed from Potomac Yards North Terminal Station to existing manhole #110, where the cables could be removed to facilitate this undergrounding project. This is approximately 1,550 feet. The distance of this line relocation is approximately 1,100 feet.

After the four HPFF cable pipes are installed into Glebe Substation, approximately 2,100 feet of new cable for each pipe will be installed in each pipe from existing manhole #110 into Glebe Substation.

Because the Potomac Yards Undergrounding would be constructed underground, no overhead structure heights are provided.



▲ Existing Substation
--- Proposed Underground Line
------ Existing Undergound Line
—— Railroad Line
— — Existing Overhead Line - To Be Removed

Potomac Yards Undergrounding and Glebe GIS Conversion Notice Map

County of Arlington / City of Alexandria

Dominion Energy™

Draper Aden Associates
Engineering • Surveying • Environmental Services

DATE: 3/5/2019

V. NOTICE

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

Response: An electronic version of the application is available on Dominion Energy Virginia website, at www.dominionenergy.com/glebe. In addition, a hard copy of the application can be reviewed by the public at the following locations:

Dominion Energy Virginia
10900 Nuckols Road
Suite 400
Glen Allen, Virginia 23060
Attn: John Mulligan

City of Alexandria Planning & Zoning
Room 2100
301 King Street
Alexandria, Virginia 22314
Attn: Karl Moritz

Arlington County Department of Community
Planning Housing and Development
Suite 700, 2100 Clarendon Blvd
Arlington, Virginia 22201
Attn: Steven Cover

V. NOTICE

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

Response: The following agency representatives may reasonably be expected to have an interest in the Project. Instead of furnishing a copy of the application, the Company has sent a letter to these parties noting the availability of this Application on the Company's website.

Mr. Erik Schwenke
Metropolitan Washington Airports Authority
Office of Engineering
45045 Aviation Drive, Suite 300
Dulles, VA 20166

Mrs. Jessica Shea
U.S. Coast Guard
Fifth Coast Guard District
431 Crawford Street
Portsmouth, VA 23704

Ms. Theresita Crockett-Augustine
U.S. Army Corps of Engineers - Norfolk District
Northern Virginia Field Office
18139 Triangle Plaza, Suite 213
Dumfries, VA 22026

Mr. Thomas Crone, Manager Adjacent Construction
Washington Metropolitan Area Transit Authority
Office of Joint Development & Adjacent Construction
3500 Pennsy Drive, Bldg. C, Room C106
Landover, MD 20785

Ms. Valerie Fulcher, Executive Secretary Senior
Office of Environmental Impact Review
Department of Environmental Quality
629 East Main Street, 6th Floor
Richmond, Virginia 23219

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

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

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

Ms. Amy M. Ewing
Virginia Department of Games and Inland Fisheries
7870 Villa Park, Suite 400
Henrico, Virginia 23228

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

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

Mr. Tony Watkinson
Habitat Management Division
Virginia Marine Resources Commission
2600 Washington Avenue, 3rd Floor
Newport News, Virginia 23607

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

Mr. Jeff Steers
Virginia Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060

Mr. Robert Alexander
Obstruction Evaluation Specialist
Federal Aviation Administration
FAA Eastern Regional Office
159-30 Rockaway Blvd
Jamaica, New York 11434

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

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

Ms. Trisha Beasley
Virginia Department of Environmental Quality
Wetlands Protection Program
13901 Crown Court
Woodbridge, VA 22193

Ms. Eileen Sobeck, Assistant Administrator for Fisheries
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
1315 East-West Highway
Silver Spring, MD 20910

Helen Cuervo, P.E.
Virginia Department of Transportation
Northern Virginia District
4975 Alliance Drive
Fairfax, VA 22030

V. NOTICE

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

Response: In accordance with Va. Code § 15.2-2202 E, letters dated January 28, 2019, included as Attachment V.D.1, were mailed to Mr. Mark Jinks, City Manager of the City of Alexandria and Mr. Mark Schwartz, County Manager of the County of Arlington, advising of the Company's intention to file this Application and inviting these localities to consult with the Company about the Project.

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

January 28, 2019

Mr. Mark B. Jinks, City Manager
City of Alexandria City Manager's Office
301 King Street, Room 3500
Alexandria, VA 22314

Reference: **Dominion Energy Virginia's Proposed Potomac Yards Undergrounding and Glebe GIS Conversion**
City of Alexandria and County of Arlington, Virginia
Notice Pursuant to Va. Code §15.2-2202 E
Applicant: Virginia Electric and Power Company (Dominion Energy Virginia)

Dear Mr. Jinks,

Dominion Energy Virginia (the "Company") is proposing a new project which, if approved, will take place in both the City of Alexandria, Virginia and the County of Arlington, Virginia. The project has two components (collectively, the "Project"):

(i) to convert the overhead portion of Lines #248 and #2023 located between Glebe Substation located in Arlington County, Virginia, and Potomac Yards North Terminal Station ("Potomac Yards Station") located in the City of Alexandria, Virginia, to underground lines and to tie the converted lines into Glebe Substation ("Potomac Yards Undergrounding"); and

(ii) to convert and rebuild the Company's existing Glebe Substation to a Gas Insulated Substation ("GIS") to allow the Potomac Yards Undergrounding to be terminated in the Glebe Substation ("Glebe GIS Conversion")

The Project is necessary in order to comply with the expiration of an existing special use permit ("SUP") issued by the City of Alexandria, to improve operational performance, and to maximize available land use to accommodate necessary transmission terminations.

The Company will be filing an application with the State Corporation Commission ("SCC") seeking a Certificate of Public Convenience and Necessity for the Project. Pursuant to Virginia Code § 15.2-2202 E, the Company is writing to notify the City of Alexandria of the proposed Project in advance of this SCC filing. We respectfully request that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter. Enclosed is a Project Overview Map depicting the Project location. If you would like to receive a GIS shapefile of the rebuild route to assist in your Project review or if you have any questions, please do not hesitate to contact me at (804) 771-6937 or John.A.Mulligan@dominionenergy.com.

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

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

Regards,

John A. Mulligan
Sr. Siting and Permitting Specialist
Dominion Energy – Power Delivery Group

Enclosure: Project Overview Map

ATTACHMENT II.A.2

Dominion Energy

Potomac Yards Undergrounding and Glebe GIS Conversion Highways, Railroads, Streets, Parks, Open Space, Schools, Hospitals, Airports, Convalescent Centers, & Churches

- Existing Substation
- Proposed Underground Line
- Railroad Line
- Existing Overhead Line - To Be Removed
- Existing Underground Line
- Gas Line
- Schools
- Places of Worship
- Parks & Open Space
- Airport

County of Arlington / City of Alexandria

0' 1000' (Main Map)
0 5 mi (Vicinity Map)

Draper Aden Associates
Engineering • Surveying • Environmental Services

DATE: 1/29/2019

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

January 28, 2019

Mr. Mark Schwartz, County Manager
Arlington County Manager's Office
2100 Clarendon Blvd., Suite 302
Arlington, VA 22201

Reference: **Dominion Energy Virginia's Proposed Potomac Yards Undergrounding and Glebe GIS Conversion**
City of Alexandria and County of Arlington, Virginia
Notice Pursuant to Va. Code §15.2-2202 E
Applicant: Virginia Electric and Power Company (Dominion Energy Virginia)

Dear Mr. Schwartz,

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

Regards,

John A. Mulligan
Sr. Siting and Permitting Specialist
Dominion Energy – Power Delivery Group

Enclosure: Project Overview Map

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County of Arlington / City of Alexandria

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DATE: 1/29/2019