



APPLICATION ACCEPTED: September 26, 2016
PLANNING COMMISSION: February 1, 2017
BOARD OF SUPERVISORS: February 14, 2017

County of Fairfax, Virginia

January 18, 2017

STAFF REPORT

SE 2016-SP-019



SPRINGFIELD DISTRICT

APPLICANT: Virginia Electric and Power Company
d/b/a Dominion Virginia Dominion Power

ZONING: R-C (Residential Conservation District)

PARCEL: 97-3 ((1)) 14; 97-3 ((15)) 8; 106-1 ((1)) 1, 2

SITE AREA: 56.13 acres

SE CATEGORY: Category 1 Use 1

Electrical substations and distribution centers including transformer stations

PLAN MAP: Public Facility, Governmental, and Institutional

PROPOSAL: Approval for a security enhancement project to an existing electrical substation to include fencing 15 to 20 feet in height, 25 foot tall super poles, anti-ram barriers, emergency lighting, and camera enhancements.

STAFF RECOMMENDATIONS:

Staff recommends approval of SE 2016-SP-019, subject to development conditions consistent with those contained in Appendix 1.

Staff recommends approval for a modification of Sect. 13-303 of the Zoning Ordinance for transitional screening to permit the existing vegetation to meet the requirement, and waiver of Sect. 13-304 of the Zoning Ordinance for the barrier requirement.

Harold Ellis

Excellence * Innovation * Stewardship
Integrity * Teamwork * Public Service

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Zoning Evaluation Division
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DEPARTMENT OF
**PLANNING
& ZONING**

It should be noted that it is not the intent of staff to recommend that the Board, in adopting any conditions proffered by the owners, relieve the applicants/owners from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

It should be further noted that the content of this report reflects the analysis and recommendation of staff; it does not reflect the position of the Board of Supervisors.

The approval of this application does not interfere with, abrogate, or annul any easement, covenants, or other agreements between parties, as they may apply to the property subject to this application.

For information, contact the Zoning Evaluation Division, Department of Planning and Zoning, 12055 Government Center Parkway, Suite 801, Fairfax, Virginia 22035-5505, (703) 324-1290.



Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 48 hours advance notice. For additional information on ADA call (703) 324-1334 or TTY 711 (Virginia Relay Center).

Special Exception

SE 2016-SP-019

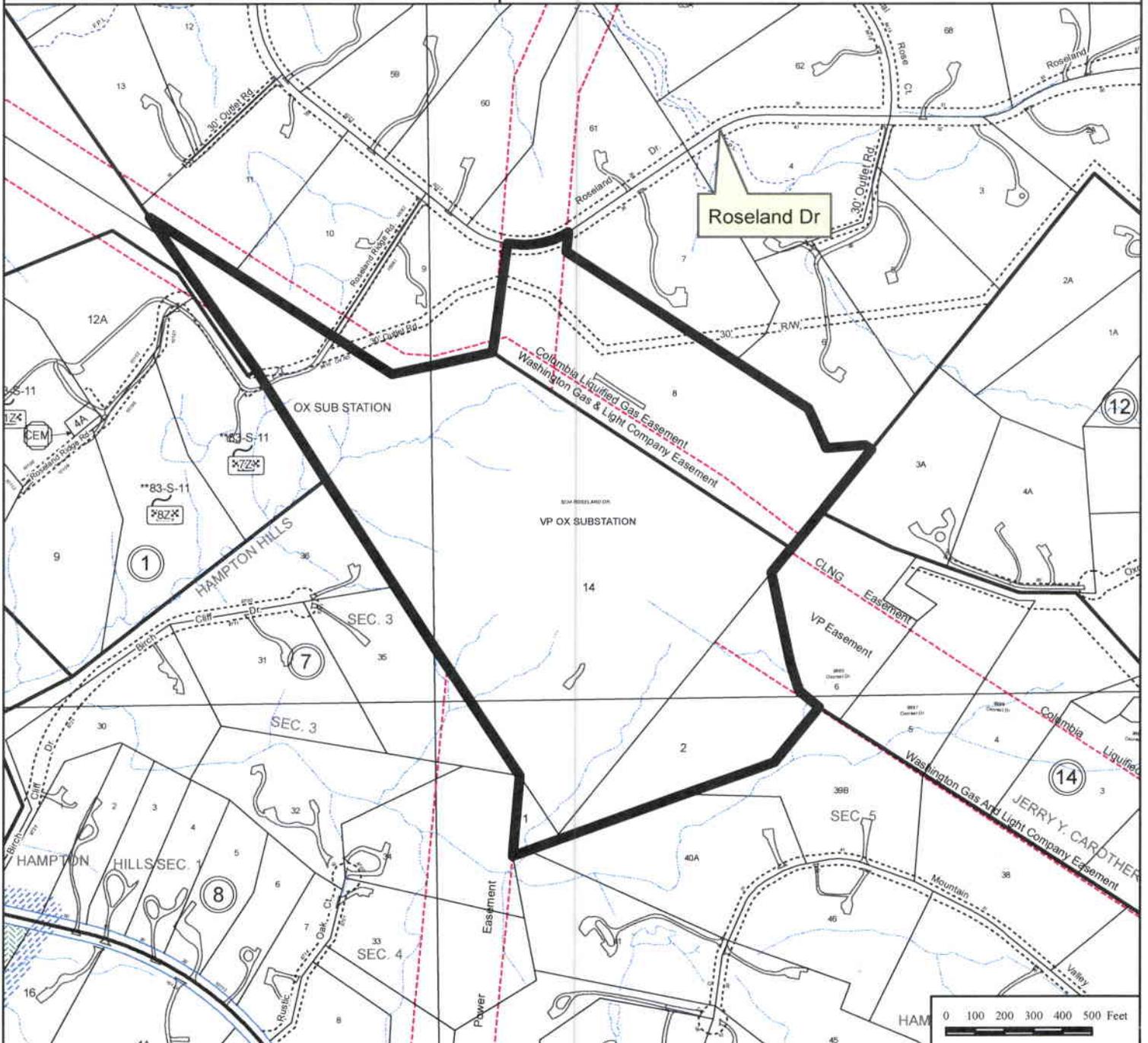


Applicant: VIRGINIA ELECTRIC AND POWER COMPANY D/B/A DOMINION VIRGINIA POWER
Accepted: 09/26/2016
Proposed: ELECTRIC SUBSTATION AND CONSTRUCTION OF A 15 TO 20 FOOT TALL SECURITY FENCE WITH 25 FOOT SUPER POLES AND ANTI-RAM BARRIER

Area: 56.13 AC OF LAND; DISTRICT - SPRINGFIELD

Zoning Dist Sect: 03-0C04
Located: 8234 ROSELAND DRIVE, FAIRFAX STATION, VA 22039

Zoning: R- C
Plan Area: 3,
Overlay Dist: WS
Map Ref Num: 097-3- /01/ /0014 /15/ /0008 106-1- /01/ /0001 /01/ /0002



DESCRIPTION OF THE APPLICATION

The applicant, Dominion Virginia Power, seeks a Category 1 Special Exception (SE) to permit a security enhancement project to an existing electric power substation located at 8234 Roseland Drive in Fairfax Station. The applicant proposes to construct a new security fence enclosure ranging in height from 15 to 20 feet tall around the perimeter of the existing electric substation facility, known as Ox Substation. Other enhancements to the site include an anti-ram barrier, 25 foot tall super poles, upgrades to monitoring and site emergency lighting. As detailed in the applicants statement of justification, the security enhancement project is a result of a Federal Energy Regulation Commission (FERC) directive to address risks of physical threats and vulnerabilities of bulk-power systems.

A reduced copy of the SE Plat is included at the front of this report. Copies of the proposed development conditions, the applicant's statement of justification, and affidavit are included in Appendices 1, 2 and 3, respectively.

Modifications/Waivers

Modification of Sect. 13-303 of the Zoning Ordinance for transitional screening to permit the existing vegetation to meet the requirement, and waiver of Sect. 13 – 304 of the Zoning Ordinance for the barrier requirement.

LOCATION AND CHARACTER

The subject property is located at 8234 Roseland Drive in Fairfax Station, and is approximately one half mile west of the intersection of Roseland Drive and Ox Road.

The 56.123 acre site is currently developed with an existing substation which was built in 1965. The current substation consumes 7.81 acres of the site, with the remainder of the site being used as access for substation and transmission line access and vegetation. The site contains lower-profile equipment such as electrical bussing and switching equipment, generally not exceeding 20 feet in height. The substation also includes higher-profile equipment such as transformers and backbones (transmission lines), which allows for high voltage electricity to be safely delivered to lower-profile equipment within the substation. The three existing backbones in the substation range from 83 feet to 123 feet in height. Currently, all of the existing features are surrounded by a chain link fence, which is proposed to be replaced with a taller more secure, powder-coated galvanized steel fence.

The subject site is zoned Residential Conservation District (RC). The land use designation of the subject property on the Comprehensive Plan is Public Facilities, Governmental and Institutional. Surrounding properties to the north, east, south and west are all also zoned RC District and developed as large lot, single family residential homes. The land use classification on the Comprehensive Plan for these areas is 0.1 - 0.2 dwelling units per acre.



Figure 1 Aerial photo of existing site

BACKGROUND

The substation is a longstanding feature in this area, originally constructed following the approval of a Special Permit in 1965, prior to the development of the Roseland subdivision. While the applicant has worked to upgrade the facility over time, no activities have occurred at the site since its original construction that would require Special Permit or Special Exception approval. Since the original Special Permit approval and now, processes for electrical substation approvals have changed and these types of requests are now handled through the Special Exception process.

COMPREHENSIVE PLAN PROVISIONS

Plan Area: Area III

Planning District: Pohick

Planning Sector: Dominion Community Planning Sector (P5)

The subject property is located in the Area III, Pohick Planning District, Dominion Community Planning Sector. The Comprehensive Plan Map identifies the property as planned for Public Facilities, Governmental and Institutional.

DESCRIPTION OF THE SPECIAL EXCEPTION PLAT

Title of SE Plat: Ox Substation Security Enhancement -
Special Exception Plat for Ox Substation

Prepared By: Burns McDonnell

Original Date: September 20, 2016

The Special Exception Plat provides a graphic representation of the entire site. Details include easements, topography lines, resource protection areas, vegetation areas, adjacent lot lines and residential homes. Site access is by way of existing private concrete drive, from Roseland Drive. Access within the site to various features of the substation is illustrated and provided by a dirt/gravel drive network. The plat also provides detail on the existing substation, shown to be centrally located on the property. Further details are provided on the existing substation including existing features/structures, fencing, as well as proposed enhancements (fence location and supporting equipment).

ZONING ORDINANCE PROVISIONS ANALYSIS

Special Exception Requirements

The standards used to evaluate this application can be found in Sect. 9-104, Standards for all Category 1 Uses and in 9-006, the General Standards for all Special Exception uses. There are no additional standards for electrical substations.

Standards for all Category 1 Uses (Sect 9-104)

Standard 1 states *Category 1 special exception uses shall not have to comply with the lot size requirements or the bulk regulations set forth for the zoning district in which located.*

The existing substation is set back approximately 85 feet from the closest residential lot, to the east. In other directions, the closest residential lots are in excess of 300 feet.

Standard 2 states *no land or building in any district other than I-5 and I-6 districts shall be used for the storage of materials or equipment, or for the repair or servicing of vehicles or equipment, or for the parking of vehicles except those needed by employees connected with the operation of the immediate facility.*

The applicant has not proposed storage of materials or equipment; the enclosures and facilities here are for the substation operation. Staff has proposed a development condition that no land or building on the subject site can be so used. In staff's opinion, this standard has been addressed.

Standard 3 states that *If the proposed location of a Category 1 use is in an R district,, there shall be a finding that there is no alternative site available for such use in a C or I district within 500 feet of the proposed location; except that in the case of electric*

transformer stations and telecommunication central offices, there shall be a finding that there is no alternative site available in a C or I district within a distance of one (1) mile, unless there is a substantial showing that it is impossible for satisfactory service to be rendered from an available location in such C or I district.

The electrical substation is currently in use and has been in operation since the Special Permit approval in 1965. Enlargement of the site is not proposed and there are no commercial or industrial district within proximity to the site. In staff's opinion, this standard has been addressed.

Standard 4 requires that, *before establishment, all uses, including modifications or alterations to existing uses, shall be subject to the provisions of Article 17, Site Plans.*

A development condition has been proposed noting that this use is subject to the site plan provisions of the Zoning Ordinance. In staff's opinion, this standard has been addressed.

General Standards (Sect. 9-006)

In addition to the specific standards set forth hereinafter with regard to particular special exception uses, all such uses shall satisfy the following general standards:

General Standard 1 requires that *the proposed use at the specified location be in harmony with the adopted comprehensive plan.*

The property is shown as Public Facilities, Governmental and Institutional uses on the Comprehensive Plan land use map. The site is in existence and not proposed to be expanded beyond security updates. In staff's opinion, this standard is satisfied.

General Standard 2 requires that *the proposed use shall be in harmony with the general purpose and intent of the applicable zoning district regulations.*

This application has demonstrated compliance with the zoning district regulations that apply to a Category 1 use. In staff's opinion, this standard is satisfied.

General Standard 3 requires that *the proposed use be such that it will be harmonious with and not adversely affect the use or development of neighboring properties in accordance with the applicable zoning district regulations and the adopted comprehensive plan. The location, size and height of buildings, structures, walls and fences, and the nature and extent of screening, buffering and landscaping shall be such that the use will not hinder or discourage the appropriate development and use of adjacent or nearby land and/or buildings or impair the value thereof.*

Staff believes that the proposed enhanced screening will improve aesthetics and reduce noise impacts to the adjacent properties from the substation. Staff has also proposed a development condition pertaining to these concerns. Therefore, in staff's opinion, this standard is satisfied. See Appendix 4, Environmental Analysis.

General Standard 4 requires that *the proposed use be such that pedestrian and vehicular traffic associated with such use will not be hazardous or conflict with the existing and anticipated traffic in the neighborhood.*

There are no concerns with this standard and staff finds this standard is satisfied. See Appendix 5, Fairfax County Department of Transportation Analysis.

General Standard 5 requires that, *in addition to the standards which may be set forth in this Article for a particular category or use, the Board shall require landscaping and screening in accordance with the provisions of Article 13.*

Due to the size of this site as well as significant existing landscape buffering between this site and existing homes, staff finds this standard is satisfied.

General Standard 6 requires that *open space be provided in an amount equivalent to that specified for the zoning district in which the proposed use is located.*

There is no open space requirement for the site; however, the Residential Conservation District encourages 50 percent undisturbed open space. There is no change in proposed open space.

General Standard 7 requires that *adequate utility, drainage, parking, loading and other necessary facilities to serve the proposed use be provided and that parking and loading requirements be in accordance with the provisions of Article 11.*

Site plan requirements, as addressed in proposed development conditions, will address this concern. As such, this standard has been satisfied.

General Standard 8 requires that *signs be regulated by the provisions of Article 12; however, the Board may impose more strict requirements for a given use than those set forth in this Ordinance.*

Any signage would be subject to the provisions of Article 12 of the Zoning Ordinance.

Modifications/Waivers

The applicant requests a modification of Sect. 13-303 of the Zoning Ordinance for transitional screening to permit existing vegetation to meet the requirement and waiver of Sect. 13-304 of the Zoning Ordinance for the barrier requirement. No enlargement of the site is being proposed, and no changes to existing site landscaping are proposed. Significant natural vegetation exists around the majority of the perimeter of the site, however there are areas of the site which do not meet the specific requirements of the above referenced section of the Zoning Ordinance, with regards to specific tree species and buffer width requirements, as well as specific barrier requirements. Staff has no objection to the modification and waiver request.

CONCLUSIONS AND RECOMMENDATIONS

Staff Conclusions

In staff's opinion, the proposal for a security enhancement project is in harmony with the Comprehensive Plan and in conformance with the applicable Zoning Ordinance provisions with the implementation of the Proposed Development Conditions contained in Appendix 1.

Staff Recommendations

Staff recommends approval of SE 2016-SP-019, subject to development conditions consistent with those contained in Appendix 1.

Staff recommends approval for a modification of Sect. 13-303 of the Zoning Ordinance for transitional screening to permit the existing vegetation to meet the requirement, and waiver of Sect. 13-304 of the Zoning Ordinance for the barrier requirement.

It should be noted that it is not the intent of staff to recommend that the Board, in adopting any conditions, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

It should be further noted that the content of this report reflects the analysis and recommendations of staff; it does not reflect the position of the Board of Supervisors.

APPENDICES

1. Proposed Development Conditions
2. Statement of Justification
3. Affidavit
4. Environmental Analysis
5. Fairfax County Department of Transportation Analysis
6. Glossary of Terms

PROPOSED DEVELOPMENT CONDITIONS

SE 2016-SP-019

January 18, 2017

If it is the intent of the Board of Supervisors to approve SE 2016-SP-019 located at 8234 Roseland Drive, Tax Map Parcels 97-3 ((1)) 14; 97-3 ((15)) 8; 106-1 ((1)) 1, 2, for a security enhancement project to an existing electrical substation, known as Ox Road substation with anti-ram barriers, fencing 15 to 20 feet in height, emergency lighting, and camera enhancements, pursuant to Sect. 9-104 of the Fairfax County Zoning Ordinance, the staff recommends that the Board condition the approval by requiring conformance with the following development conditions:

1. This Special Exception is granted for and runs with the land indicated in this application and is not transferable to other land.
2. This Special Exception is granted only for the purpose(s), structure(s) and/or use(s) indicated on the special exception plat approved with the application, as qualified by these development conditions.
3. This Special Exception is subject to the provisions of Article 17, Site Plans. Any plan submitted pursuant to the Special Exception shall be in substantial conformance with the approved Special Exception (SE) Plat entitled "Ox Substation Security Enhancement – Special Exception Plat for Ox Substation" prepared by Burns McDowell, dated September 20, 2016, and these conditions. Minor modifications to the approved Special Exception may be permitted pursuant to Par. 4 of Sect. 9-004 of the Zoning Ordinance.
4. Construction hours shall be limited to Monday through Friday 7:30 am and 6:00 pm. Should work on Saturdays be necessary, hours shall be limited to 8:00 am to 4:00 pm. No construction work shall be performed on Sundays or major federal holidays. Signage shall be posted on-site in English and Spanish, or any other language which may become necessary based on construction personnel, notifying construction personnel of residential properties in close proximity to the substation and to limit truck idling. Construction vehicles shall not idle or park along Roseland Drive. Noise reducing efforts such as using flags or a single buzzer instead of beepers, use of temporary construction noise abatement techniques or such other measures shall be diligently pursued. The Applicant shall provide the Springfield District Supervisor's office with a point of contact for construction related issues. The applicant shall provide a response to construction related issues, questions, or complaints within 24 hours of receiving notice. The construction hours noted above shall only apply to the initial installation of the fence and security enhancements.
5. Storage of materials, equipment or trucks not needed for operation of the substation or adjacent power lines is not permitted onsite once construction activities for the security enhancement project have been completed.

6. Construction traffic shall be limited to the Roseland Drive entrances.

The above proposed conditions are staff recommendations and do not reflect the position of the Board of Supervisors unless and until adopted by that Board.

This approval, contingent on the above noted conditions, shall not relieve the applicant from compliance with the provisions of any applicable ordinances, regulations, or adopted standards. The applicant shall be himself responsible for obtaining the required Non-Residential Use Permit through established procedures, and this Special Exception shall not be valid until this has been accomplished.

Pursuant to Section 9-015 of the Zoning Ordinance, this Special Exception shall automatically expire, without notice, thirty (30) months after the date of approval unless the use has been established or construction has commenced and been diligently prosecuted. The Board of Supervisors may grant additional time to establish the use or to commence construction if a written request for additional time is filed with the Zoning Administrator prior to the date of expiration of the Special Exception. The request must explain why additional time is required, specify the amount of additional time requested, and explain the basis for the amount of time requested.



**Dominion Virginia Power Substation Security Enhancement Project, Ox Substation
Fairfax County Special Exception Requirements**

**STATEMENT OF JUSTIFICATION
And
Section 15.2-2232 Requirements**

RECEIVED
Department of Planning & Zoning

Zoning Evaluation Division

INTRODUCTION

Pursuant to §15.2-2232 of the Code of Virginia and Article 3 §3-C04 of the Fairfax County Zoning Ordinance (Zoning Ordinance), on behalf of Dominion Virginia Power (Dominion or the Company), Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) hereby requests approval of a Special Exception Permit (SEP) for the proposed Ox Substation Security Enhancement Project (Project). This document was prepared with the guidance of the Fairfax County Special Exception Application Packet and its requirements. A pre-application meeting was held with Mr. Bill Mayland, AICP, on April 20th, 2016. A meeting between Dominion Virginia Power and Mr. Pat Herrity, Springfield Board of Supervisors member, was held on April 12th, 2016.

The proposed Project includes the construction of a security fence that will be approximately 15 to 20 feet in height around the perimeter of an existing electric substation facility, known as the Ox Substation. The Ox Substation is located at 8234 Roseland Drive, Fairfax Station, Virginia 22039, and approximately 0.50 mile from the intersection of Roseland Drive and Ox Road (Route 123; Exhibit A). The Project's Special Exception Application includes four parcels: 0973-01-0014, 1061-01-0002, 1061-01-0001, and 0973-15-0008. These four parcels have a combined acreage of 56.13 acres, are located in the Springfield Magisterial District, and are zoned R-C (~~Residential~~-Conservation). The previous development of an electric utility facility is permitted by special exception as a Category 1 (Light Public Utility) use. This application will also satisfy the review of the Project's conformance with the Fairfax County Comprehensive Plan (Comprehensive Plan) as it relates to the Project's location, character, and extent, as required by § 15.2-2232 of the Code of Virginia.¹

¹ Virginia Decoded. (no date). *Code of Virginia, Legal Status of Plan (§15.2-2232)*. Retrieved from <https://vacode.org/15.2-2232/>.

REQUIREMENTS FOR THE PROPOSED USE

The following subsections describe the purpose and need for the Project, and why the Project is the preferred alternative to fulfill this purpose and need.

Why the New Facility is Needed

Due to concerns about substation security (Exhibit B), Dominion has reassessed its critical asset security measures and is taking proactive steps to protect these assets. The SEP would allow Dominion and other utilities to implement several protective strategies including a secure fence ranging in height from 15 to 20 feet, with 25-foot-tall poles located at every corner and at periodic intervals between corners.

The Federal Energy Regulatory Commission (FERC) is an independent Federal agency that regulates the interstate transmission of electricity and natural gas. FERC's responsibilities include the enforcement of regulatory requirements through the imposition of civil penalties and other means. As of March 7, 2014, FERC has directed the North American Electric Reliability Corporation (NERC), an entity whose mission is to ensure the reliability of the bulk power system in North America and is subject to oversight by FERC, to develop reliability standards requiring owners and operators of the bulk-power system to address risks due to physical security threats and vulnerabilities.

On February 12, 2014 (Exhibit C), the Director of FERC issued a statement pursuant to potential security breaches to substations. In her statement, Director Cheryl LaFleur emphasized that physical security of the electric grid needs to be strengthened because:

*"...a major interruption in service could have devastating effects on our nation's citizens and economy...FERC is working cooperatively with asset owners, grid operators, industry trade groups, state regulators, and other government agencies to share confidential information that they can use to enhance the security of the grid."*²

Director LaFleur went on to state that:

*"Resilience begins with how the system is planned, designed, constructed, and operated, and is informed by how asset owners and grid operators respond to and learn from events. Many of these factors are addressed in detail in the mandatory reliability standards developed by the North American Electric Reliability Corporation (NERC) under the oversight of FERC."*³

^{2,3} Federal Energy Regulatory Commission. (2014, February 12). *Senator's Letter on Physical Security of U.S. Electric Grid*. Acting Chairman Cheryl A. LaFleur Statement. Retrieved from <http://www.ferc.gov/media/statementspeeches/laflleur/2014/021214.asp#.VmX6QXarQgs>.

NERC defines a critical facility as:

“...any facility or combination of facilities, that, if severely damaged or destroyed, would have a significant impact on the ability to serve large quantities of customers for an extended period of time, would have a detrimental impact on the reliability or operability of the electric grid, or would cause significant risk to public health and safety.”⁴

Due to recent events and consistent with the March 7, 2014, FERC Directive on Physical Security Standards, Dominion has undertaken an audit of its substation facilities and found that current physical security at critical facilities, such as the Ox Substation, should be improved in order to effectively deter and delay modern threats to substation assets. To accomplish this, NERC has adopted eight physical security concepts for critical facilities of which two (deter and delay) are key to Dominion’s request for a SEP allowing a taller security enclosure:

- **Deter:** The first step in protecting a critical facility is to deter with visible physical security measures installed to induce individuals to seek other less secure targets.
- **Delay:** In the event of an attempted security breach at a substation, it is the job of physical security to delay an intruder’s access to a physical asset and provide time for incident assessment and response.

Dominion has determined that the existing security features at the Ox Substation would not sufficiently deter and delay potential intruders from accessing the substation. Approval of the proposed SEP would allow the appropriate security measures to be installed at the Ox Substation and help maintain reliable service by Dominion to its customers. Dominion’s overall response to substation security issues are outlined in Exhibit D.

Why the Proposed Location is the Best Location for the Proposed Use

This location is the best location for the Project because it is the location of the existing Ox Substation facility. Furthermore, this substation includes high voltage electric transmission lines operated by Dominion. The Company has identified those substations that include 500 kV facilities as a top priority for security enhancement due to their importance to both the regional and national power grid. Furthermore, with regard to the location of these existing electric utility facilities and the existing access to the facility, the Company believes that since this facility already exists, the requirements for location, character, and extent have been met for the proposed security enhancement improvements, as shown in the Fairfax County SEP application.

⁴ North American Electric Reliability Corporation. (2012, June 20). *Security Guideline for the Electricity Sector: Physical Security*. Retrieved from <http://www.nerc.com/comm/CIPC/Security%20Guidelines%20DL/Physical%20Security%20Guideline%202012-05-18-Final.pdf>.

Why the Proposed Location and Type of Facility is the Least Disruptive Alternative

No other alternatives were evaluated for this Project. The security enhancement improvement is needed at the existing Ox Substation facility. The proposed security enhancement would not provide any additional disruptions to the adjoining properties because the new equipment would not generate noise under normal operating conditions. Further, there would be only minor visual impacts associated with the Project, since the fence is designed to blend in with existing substation equipment (See Exhibit E).

Why a 15- to 20-foot Fence is Required

The 15- to 20-foot range in height, shown on the SEP Plat, was determined using line-of-sight surveys conducted at the Ox Substation. Consultants visited the site and determined the ability to see critical equipment from various vantage points. The 15 to 20 foot height range gives the best overall visual protection to critical substation equipment based on the findings from the survey. A security fence less than these heights is inadequate to visually protect critical equipment. A photo of a typical fence section can be found in Exhibit E.

DESCRIPTION OF THE PROPOSED SITE AND USE

The following sections describe the existing site and the proposed Project.

Nature of the Use

The Ox Substation is a major electric substation facility handling 230 and 500 kV transmission lines. The facility is a major component of the electric transmission grid on both a regional and national level due to the presence of the 500 kV transmission lines and substation equipment. In Fairfax County, the Ox Substation is a significant resource for maintaining regional electric capacity and reliability.

Substation facilities, like the Ox Substation, contain some lower-profile equipment such as electrical bussing and switching equipment that generally do not exceed 20 feet in height. Substation facilities also house higher-profile equipment such as transformers and backbones. The backbone allows for the high voltage electricity to be safely delivered to lower-profile equipment within the substation. In adherence to the clearance requirements established by the National Electric Safety Code (NESC) and the Institute of Electric and Electronic Engineer's Standard 1427, three backbones are located at the Ox Substation, and they range from 83 to 123 feet in height.

Site Description

The Ox Substation is a 7.74 acre fenced facility situated on two parcels of property 0973-01-0014 and ~~1061-01-0002~~. Adjacent parcels 1061-01-0001 and 0973-15-0008 are currently used for substation and transmission line access. These four parcels have a combined acreage of 56.13 acres and are approximately 0.50 mile from the intersection of Roseland Drive and Ox Road (Route 123). Ox Substation is approximately 4.7 miles northwest of the center of the Town of Occoquan. The substation facility contains electrical equipment and transmission lines entering

or exiting the substation from the north, south, northwest, and the southeast. Mature vegetation surrounds the site, as depicted in the site photos of Ox Substation in Exhibit H.

Project Description

As described above, the proposed security fence would range between 15 and 20 feet in height, with 25-foot-tall super poles. Additional site improvements would be made to support the proposed security fence, and these include limited land disturbance for the improvement of an existing access road to be used for construction and substation service access. Additionally, the southern section of the existing substation fence line would be expanded 0.04 acre to allow for the replacement of an existing concrete drainage ditch with a grass drainage channel. A security enclosure, 14 feet by 25 feet in size would be installed for electric substation equipment. A propane tank enclosure, including a propane tank, would also be installed to support an emergency backup generator as part of the overall Project.

SPECIFIC INFORMATION FOR THE COUNTY'S APPLICATION

The following provide specific information requested in the County's Special Exception Application Information document.⁵

- A. **Type of operation:** Electric Substation Facility
- B. **Hours of operation:** No change. It would continue to operate 24 hours/day.
- C. **Estimated number of daily employees/patrons:** Intermittent to none.
- D. **Proposed number of employees:** No permanent employees currently or are proposed. The facility is visited approximately once or twice per month by Dominion personnel for site inspection purposes, and as required for any needed repairs or alterations. The security enhancement Project would not generate any additional visits to the facility **after its** completion.
- E. **Estimated number of daily employees/patrons:** Intermittent to none
- F. **Service area of the proposed use:** The Ox Substation serves regional electric load in Fairfax County and Northern Virginia as a whole.
- G. **Material, color, or finish of buildings or structure:** The security fence structure would be a light grey resembling the galvanized structures that exist within the substation facility.
- H. **Hazardous or toxic substances:** The existing Ox Substation and the proposed security enhancements would not contain, utilize, treat, dispose, or store any hazardous or toxic

⁵ Fairfax County, Virginia: Zoning Evaluation Division, Department of Planning and Zoning. (2013, July 23). *Special Exception Application Information*. Retrieved from <http://www.fairfaxcounty.gov/dpz/zoning/applications/nofind/sepkg.pdf>.

substances as set forth in Title 40, Code of Federal Regulations Parts 116.4, 302.4 and 355; or as set forth by the Virginia Department of Environmental Quality (VDEQ) hazardous waste management regulations.

- I. **Dimensions of all buildings and structures and heights:** The security fence structure would range between 15 to 20 feet in height, with a 25-foot tall post located at every corner and at intervals no more than 280 linear feet.
- J. **Maintenance requirements and frequency:** The facility would be visited approximately once or twice per month by Dominion personnel for site inspection purposes, and as needed for any needed repairs or alterations.

ZONING ORDINANCE GENERAL STANDARDS FOR A SPECIAL EXCEPTION

The following provide specific information requested in the County's Special Exception Application Information document.⁶

- A. **The proposed use at the specific location shall be in harmony with the adopted Comprehensive Plan:** The electrical substation has been in use at this site since the mid 1960's and is in accordance with Comprehensive Plan's Section for public facilities.
- B. **The proposed use shall be in harmony with the general purpose and intent of the applicable zoning district regulations:** The use is existing and permitted by an existing Special Exception granted in 1965. The security enhancement Project is not proposed to be inconsistent with zoning regulations. The height of the fencing structure would not be exceptional due to the comparable heights of the existing electric transmission infrastructure located in the substation, thus in keeping with the original intent of the Special Exception.
- C. **The proposed use is in harmony with and will not affect the use or development of neighboring properties:** The Ox Substation is existing and has not affected the use of, or development of, adjoining properties. A number of neighboring residential properties have been develop adjacent to Ox Substation since it was placed into service in the mid 1960's. The security enhancement Project would not alter the character of the station in a way that would make it incompatible with surrounding uses or their potential development.
- D. **The proposed scale of development and screening will not discourage the appropriate development and use of adjacent properties:** The proposed security enhancement Project is not out of scale with the development onsite and would not affect the development of adjoining properties. The fencing structure is proposed to be a 15- to 20- foot-tall fence

⁶ Fairfax County, Virginia: Zoning Evaluation Division, Department of Planning and Zoning. (2013, July 23). *Special Exception Application Information*. Retrieved from <http://www.fairfaxcounty.gov/dpz/zoning/applications/nofind/sepkg.pdf>.

with 25-foot posts located at every corner and at intervals no more than 280 linear feet. Existing structures at the Ox Substation are in excess of 100 feet in height. The security fencing would screen substation equipment to a larger extent than the existing chain link/barbed wire fence used around the perimeter of the existing station.

- E. **Traffic impacts:** There is no pedestrian traffic associated with this use. Vehicular traffic would be minor. The existing Ox Substation and the proposed security enhancement would be unmanned, but the site would be visited by Dominion employees once or twice per month for maintenance purposes. Vehicle access would continue from the existing access road off of Roseland Drive.
- F. **Landscaping and Screening:** Mature vegetation currently surrounds the majority of the property, providing adequate screening to adjoining properties. The site would conform to Article 13 of the Zoning Ordinance as required.
- G. **Open Space Requirements:** No open space is required as part of this development. Per Article 3 §3-C09⁷, the R-C zoning district only requires open space for cluster subdivision applications.
- H. **Noise and Light Impacts:** The security enhancement equipment would not create any permanent noise. Sources of construction noise during the Project would include generators and standard construction equipment. The normal hours of work would be 7:00 AM through 5:30 PM, Monday through Thursday, excluding holidays.

During construction, typically 4 to 6 months in duration, temporary construction lighting would be illuminated through the night as a security measure for monitoring line-of-sight down the substation perimeter during hours of darkness. The light towers will be Ingersoll Rand LightSource L6 Light Tower or equivalent with, at minimum, four 1000-watt lamps for each line-of-sight required. No permanent lighting impacts would be associated with this Project. The fence perimeter would be monitored by Dominion's security staff during hours of darkness.

- I. **Impacts on environmental features of site:** The existing Ox Substation is already graveled. Land disturbance associated with this Project will employ erosion and sediment control measures that meet the requirements of Fairfax County and the VDEQ. Stormwater management will meet the requirements of Fairfax County.
- J. **Impacts on air and water quality:** Air quality would not be affected by the development of this security enhancement Project because a fence emits no air pollutants. Water quality

⁷ Fairfax County, Virginia. (no date). *The Fairfax County Zoning Ordinance, Article 3 §3-C09*. Retrieved from <http://www.fairfaxcounty.gov/dpz/zoningordinance/articles/art03.pdf>.

also would not be affected by the security enhancement upgrade. Stormwater management would meet the requirements of Fairfax County.

- K. **Visual impacts:** The site would have only minor visual impact to the surrounding area due to the height and density of the existing mature tree canopy. The most visible part of the development of the Project would be the 15- to 20-foot-tall fence structure. However, due to its close proximity to the existing transmission structures, which measure in excess of 100 feet in height, the fencing structure's visual impact would be minimized.

SECTION 15.2-2232 PROVISIONS

The Project meets the objectives for Public Facilities outlined in the Comprehensive Plan, even though substations and delivery points are rarely recommended in the Comprehensive Plan for site-specific properties. An electric substation facility already exists on the subject property and has existed there since the mid 1960's. The Ox Substation directly serves the region in which it resides, including southern Fairfax County. If the security enhancements were approved, the site would continue to provide needed and convenient electrical service to the significant number of consumers. The Project would serve to maintain acceptable levels of service and would allow Dominion the operational flexibility to address security concerns to the site and to maintain the security of the facility, which is vital to the electric load growth in the area (Public Facilities - Objectives 1(a)(b), and 2(b)(c))⁸.

The Ox Substation is in a strategic location within the overall utility system to provide an improved level of service to current and future electrical needs. It would provide service with only minor effect on adjacent properties because the security enhancement Project does not propose expanding the facility. The site is properly screened and buffered by mature vegetation, thereby reducing visual impact and meeting the requirements of the Zoning Ordinance. An electrical utility facility at this strategic location provides valuable infrastructure critical to the public interest, and thus must be secured in a way that is acceptable to FERC and NERC standards. (Public Facilities – Objective 4(d))

No environmentally sensitive issues have been identified at the property, and the site has mature vegetation on and off site to shield views. Site access to the Ox Substation was created with the construction of the substation in the mid 1960's. The site is not only appropriate for the facility's specific purpose, but also meets or exceeds development criteria. (Public Facilities – Objective 5(b)(f)).

⁸ Fairfax County, Virginia. (2014). *Fairfax County Comprehensive Plan, 2013 Edition: Public Facilities, Amended through 3-4-2014*. Retrieved from <http://www.fairfaxcounty.gov/dpz/comprehensiveplan/policyplan/pubfacilities.pdf>.

SUMMATION

The above-described statement of justification proposes a SEP that would allow this public utility facility to meet current security standards as mandated by the FERC and NERC. Recent security breaches to substations, not in Dominion's service territory, have caused FERC, NERC, and Dominion to audit and reevaluate security measures to protect critical assets. These audits have determined that current fencing heights should be increased in order to effectively deter and delay modern threats to Dominion's Ox Substation. The proposed use conforms to applicable ordinances, regulations, adopted standards and applicable conditions, or, if any waiver, exception or variance is sought by the applicant from such ordinances, regulations, standards, and conditions, such shall be specifically noted with the justification for such modification. For these reasons herein, Burns & McDonnell respectfully requests, on the behalf of Dominion, that this SEP be approved.

Attachments:

- Exhibit A - Project Vicinity Map
- Exhibit B - Journal Articles Regarding Substation Threats
- Exhibit C - FERC Directive
- Exhibit D - Dominion Threat Response
- Exhibit E - Security Fence
- Exhibit F - Agent Authorization and Affidavit
- Exhibit G - Dominion Ownership & County Tax Cards
- Exhibit H - Ox Substation Site Photographs
- Exhibit I - Fairfax County Map
- Exhibit J - Site Plat

EXHIBIT A - PROJECT VICINITY MAP

EXHIBIT B - JOURNAL ARTICLES REGARDING SUBSTATION THREATS

Wall Street Journal

Transformers Expose Limits In Securing Power Grid

By

REBECCA SMITH

March 3, 2014 7:34 p.m. ET

http://online.wsj.com/news/articles/SB10001424052702304071004579409631825984744?mod=WSJ_LatestHeadlines&mq=reno64-wsj

The U.S. electric grid could take months to recover from a physical attack due to the difficulty in replacing one of its most critical components.

The glue that holds the grid together is a network of transformers, the hulking gray boxes of steel and copper that weigh up to 800,000 pounds and make it possible to move power long distances. Transformers were badly damaged in an attack on a California substation last year, and government reports have warned for years that saboteurs could cause sustained damage the grid by targeting the massive machines.

Only a handful of companies build transformers in the U.S., and it can take weeks or months to ship transformers in from overseas. The manufacturing process itself can last more than a year, in part because a transformer can't be bought off the shelf but rather must be made to measure for its substation.

If attackers damaged enough of the nation's 2,000 biggest transformers at critical locations, they could cause extended blackouts.

Such worries moved beyond the hypothetical recently after The Wall Street Journal reported details about the attack last April on a substation that funnels electricity to Silicon Valley. Unknown gunmen shot up 17 large transformers, knocking PG&E Corp.'s Metcalf substation out of service until repairs were made.

A 2012 report by the National Research Council, written for the Department of Homeland Security, said that the "greatest vulnerability in the event of a terrorist physical attack on the power system will likely be securing needed replacements of high-voltage transformers." It said restoring power "could take weeks, months, or even longer."

Transformers are critical because they boost voltages of electricity, so it can travel long distances efficiently. As electricity nears users, transformers reduce voltages so it's suitable for consumption.

Buying and installing a giant transformer is time-consuming and labor-intensive. Depending on size, the transformers can cost \$1 million to \$8 million.

When FirstEnergy Corp. added a new substation in Pennsylvania a couple of years ago, a South Korean factory took about a year to make one of the big transformers, which then traveled by ship for 26 days to Newark, N.J.

There, a crane lifted the 400,000-pound box onto a train to Pennsylvania. At the end of its 7,000-mile journey in 2012, the equipment traveled on a centipede-like contraption with 192 wheels called a crawler, used to keep the heavy transformer from cracking axles on the road.

Total elapsed time from purchase order to delivery: about two years.

Bill Westerman, police chief for Adams Township, Pa., provided some of the 30 escorts it took to move the transformer nine very slow miles to its substation. If utilities had to transport lots of transformers to end a blackout, "we'd be in real trouble," he said. "You'd better go buy yourself a portable generator."

Just one U.S. factory, in Memphis, Tenn., has the capacity to build the biggest 765,000-volt transformers, according to its owner, Mitsubishi Electric Power Products Inc. Seven companies make big transformers in the U.S., but only three or four make the largest sizes that most experts think would be the likely targets of terrorists. Some of the companies declined to comment, citing security concerns.

In 2012, the U.S. International Trade Commission found that Korean companies were dumping large transformers in the U.S. market at unfairly low prices, threatening the last few makers and prompting the federal government to impose duties on those imports.

American factories, which were running at only about 40% of capacity at the time, said business improved last year.

Recently, new U.S. factories have started up, partly to build replacements for aging equipment.

ABB Inc. of Zurich, Switzerland, would mobilize its three factories in North America and 10 overseas in the event of an emergency, said De'ore E. Cusack, senior vice president in Raleigh, N.C. Even so, she said, it could take several months to build and deliver units.

The industry isn't organized for speed, said Ravi Rahangdale, who owns Pennsylvania Transformer Technologies Inc. in Pittsburgh. Units often last 40 or 50 years, he said, giving utilities plenty of time to plan for replacements.

"We never have had the situation where someone said, 'we need one tomorrow,'" Mr. Rahangdale said, adding that even if his company added another shift, it only could build 20 units in six months.

Jiangsu Huapeng Co. Ltd. has one of the biggest factories in the world in Jiangsu Province, China. Jim Cai, the company's U.S. representative, said his company would try to fill a rush order, but he figured the shortest time it could take is three or four months.

Efforts to speed delivery run into practical problems. When the Phoenix utility known as the Salt River Project needed to get a transformer to Arizona from Texas, it ended up renting the world's largest cargo plane, a Russian Antonov-225, built to carry the Soviet space shuttle.

Utilities say they are trying to address the transformer problem. About 50 electric companies participate in a program to share spares that's run by the Edison Electric Institute, a trade association. The North American Electric Reliability Corp., another power industry group, keeps a database of spares. Neither will say how many are in inventory. Since transformers are custom-designed, it's unclear how helpful the programs would be.

And there are limits to how much equipment utilities are willing to share. When it comes to transformers, "you're not going to give up one that's critical to you," said Rick O'Callaghan, director of transmission and substation engineering for FirstEnergy in Akron, Ohio.

The utility industry is trying to come up with a universal transformer—or something close to it—but the effort is still in an early stage. It is also reconsidering the common practice of storing spares alongside working transformers, exposing both to attacks.

Some suppliers say that the best solution is the most obvious: protect the transformers. Steve Newman, vice president of Delta Star Inc., of Lynchburg, Va., said the problem is, "we've always known that with a couple dollar bullets, you can take out a transformer. rebecca.smith@wsi.com

2013 attack on utility in Calif. raises alarm

One official fears it was test run for an even larger assault

McClatchy-Tribune

Shooters armed with assault rifles and some knowledge of electrical utilities have prompted new worries on the vulnerability of California's vast power grid.

A 2013 attack on an electric substation near San Jose that nearly knocked out Silicon Valley's power supply was initially downplayed as vandalism by Pacific Gas & Electric Co., the facility's owner.

Gunfire from semiautomatic weapons did extensive damage to 17 transformers that sent grid operators scrambling to avoid a blackout.

But last week, a former top power regulator offered a far more ominous interpretation: The attack was terrorism, he said, and if circumstances had been a little different, it could have been disastrous.

Jon Wellinghoff, who was chairman of the Federal Energy Regulatory Commission when the shooting took place, said the attack was executed by well-trained individuals seeking to do significant damage to the area, and he fears it was a test run for

an even larger assault.

"It would not be that hard to bring down the entire region west of the Rockies if you, in fact, had a coordinated attack like this against a number of substations," he said.

On Friday, several U.S. senators called on regulators to review security operations at utilities and consider imposing new rules to protect against future attacks.

Dominion Virginia Power said last week that it will spend hundreds of millions of dollars over the next decade to protect transmission substations

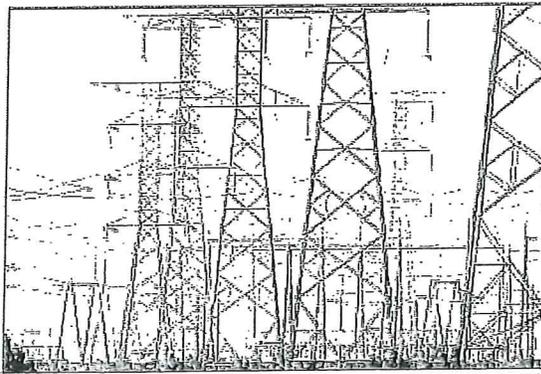
against security threats. The utility also plans to build a "hardened" system operations center to replace the one in western Henrico County, which would become the company's backup operations headquarters.

The Richmond-based energy company has more than 400 electrical substations on its 6,400 miles of high-voltage transmission lines.

FBI officials said they are taking the California attack very seriously.

"Based on the information we have right now, we don't believe it's related to terrorism," said Peter Lee, an FBI spokesman in San Francisco. But, he added, "Until we understand the motives, we won't be 100 percent sure it's not terrorism."

Staff writer Peter Bacqué contributed to this report.



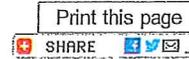
Knock out enough transformers, experts warn, and an entire region can be crippled for an extended period.

EXHIBIT C - FERC DIRECTIVE



FERC
FEDERAL ENERGY REGULATORY COMMISSION

News Release: March 7, 2014
Docket No. RD14-6-000
Order PDF



CONTACT
Mary O'Driscoll
Telephone: 202-502-
8680 Email: MediaDL

FERC Directs Development of Physical Security Standards

The Federal Energy Regulatory Commission (FERC) took action today to provide for the resilience of the transmission grid by directing the North American Electric Reliability Corporation (NERC) to develop reliability standards requiring owners and operators of the Bulk-Power System to address risks due to physical security threats and vulnerabilities.

"Because the grid is so critical to all aspects of our society and economy, protecting its reliability and resilience is a core responsibility of everyone who works in the electric industry." FERC Acting Chairman Cheryl LaFleur said. "Today's order enhances the grid's resilience by requiring physical security for the facilities most critical to the reliable operation of the Bulk-Power System. It will complement the ongoing efforts of FERC and facility owners and operators to ensure the physical security of the grid."

The reliability standards directed by today's order require owners and operators of the Bulk-Power System to take at least three steps to protect physical security. First, owners and operators must perform a risk assessment of their system to identify facilities that, if rendered inoperable or damaged, could have a critical impact on the operation of the interconnection through instability, uncontrolled separation, or cascading failures of the Bulk-Power System. Second, owners and operators of critical facilities must evaluate potential threats and vulnerabilities to those facilities. Finally, owners and operators must develop and implement a security plan to address potential threats and vulnerabilities. NERC has 90 days to submit the proposed standards.

Recognizing that critical facilities identified pursuant to the required reliability standards could contain sensitive or confidential information that, if publicized, could jeopardize the operation of the grid, FERC directed NERC to include a procedure that ensures confidential treatment of sensitive or confidential information but still allows for the appropriate oversight to ensure compliance.

Today's action follows Acting Chairman LaFleur's directive last month that FERC staff work with NERC to determine whether mandatory reliability standards are necessary to protect the physical security of critical facilities.

R-14-12

(30)

Print this page

Updated: March 7, 2014

EXHIBIT D - DOMINION THREAT RESPONSE

Substation Security

As part of Dominion Virginia Power's overall strategy to improve its transmission system resiliency and security, the company is installing additional physical security measures at substations throughout Virginia.

PREVENTION

- Physical barriers
- Additional access control
- Equipment design, hardening

DETECTION & EVENT MITIGATION

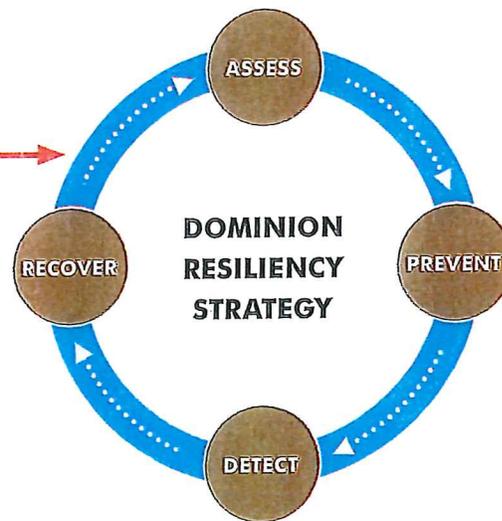
- IT and security initiatives
- Polymer bushing installation
- Electromagnetic Pulse (EMP) protection

RECOVERY

- Additional spare equipment
- Relocation of spare equipment to off-site storage areas

Adapting to Escalating Threats

- Cyber Attacks
- Physical Breaches
- Extreme Weather
- The Unknown



IMPORTANT FACILITIES — Substations are electrical facilities that transform high voltage power sent from generation stations to lower voltage power for local use. In light of new concerns, the Company performed a risk-assessment to identify key substations that pose the greatest risk to reliability. Our resiliency and security program prioritizes the most serious potential vulnerabilities in the transmission system.

NEED FOR NEW SECURITY MEASURES — As the region's largest electricity supplier, Dominion has proposed to spend up to \$500 million within the next five to seven years to harden its transmission substations and other critical infrastructure against armed assaults and natural disasters, and stockpile crucial equipment for major damage recovery.

BENEFITS — Dominion plans to build reinforced perimeter barriers around selected substations, designed to defeat attempts to cut through, climb over, or otherwise breach. Enhanced electronic security systems will not only protect against crime but will also control access and monitor facilities from remote locations. These and other enhanced security measures provide greater flexibility to grid operators to respond to any event — whether natural or man-made. Dominion's continued investment in mobile and spare equipment, including power transformers, helps ensure faster restoration should an interruption in service occur.

TIMELINE — Dominion's enhanced substation security efforts began in 2013. System hardening measures are currently underway and will continue over the next five to seven years in a systematic, prioritized approach.

New System Operations Center

As part of Dominion Virginia Power's overall strategy to improve its transmission system resiliency and security, the company is building a new System Operations Center (SOC)

PREVENTION

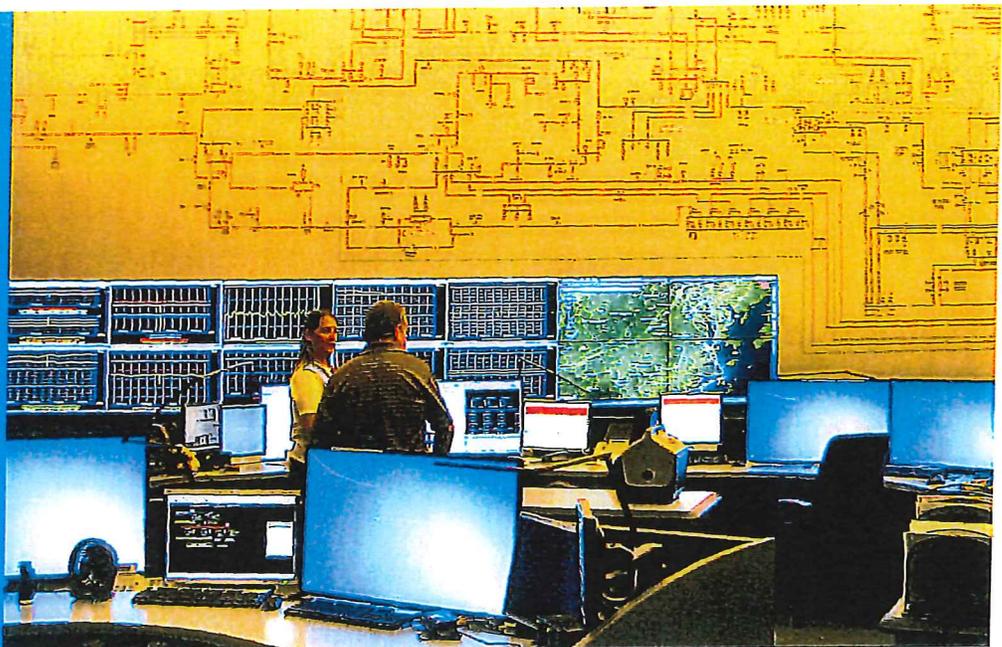
- Natural threats
- Man-made threats
- Facility design, hardening

DETECTION & EVENT MITIGATION

- Perimeter and systems monitoring
- Linear state estimator
- State-of-the-art visual displays

RECOVERY

- Full redundancy of all systems
- Remote full-scale backup operating center for extended period of operation



IMPORTANT FACILITY — The SOC is the brains of the system and performs real-time monitoring of the transmission grid to maintain reliability. Operators communicate with the regional transmission organization (PJM), Dominion's Regional Operations Centers, and other interconnected distribution and transmission companies.

NEED FOR NEW SOC — The company's current SOC facility was designed in the 1980s and is nearing the end of its technical life. The current center has size limitations impeding modernization and growth potential. Moreover, the aging systems require replacement to provide the capability to support rising industry and regulatory requirements.

BENEFITS — The design of the new center will incorporate state-of-the-art technologies for security as well as new systems for improved situational awareness and efficient work processes. A high degree of redundancy will be incorporated into the design of the facility to allow continuous operation following any severe events should they occur. The existing Innsbrook center will be converted into the backup and training SOC.

TIMELINE — Construction of the new center is expected to start in late summer 2014 after all necessary permits are received. Full commercial operation is expected by mid-2017.

EXHIBIT E - SECURITY FENCE

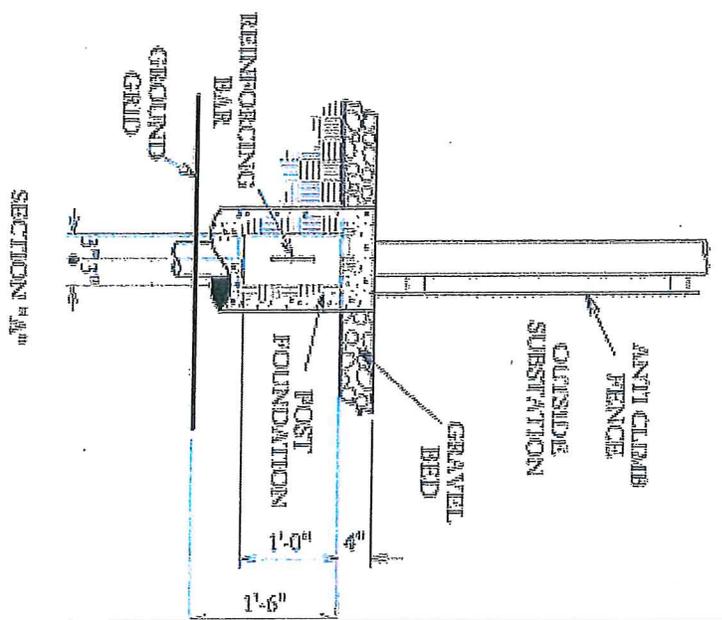
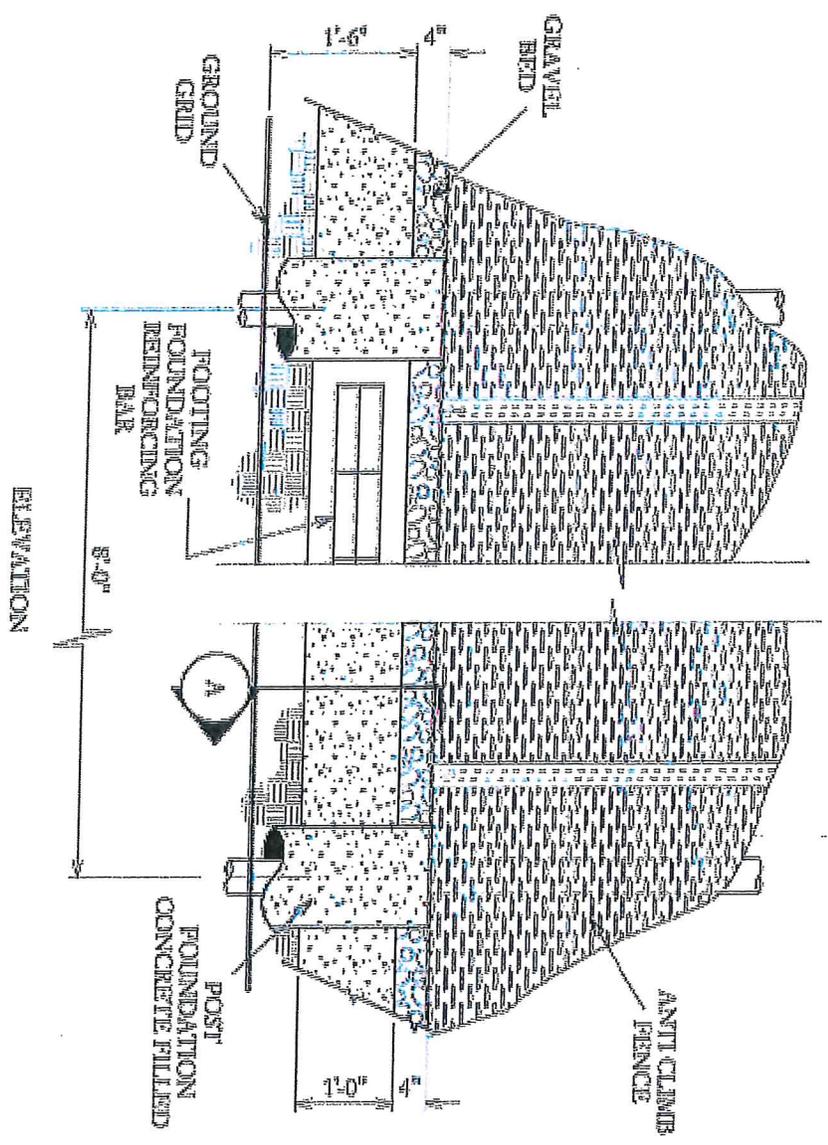


Dominion

Chester Training Center
Security Panel (20-foot, outside)



FIGURE 2 - FOUNDATION/FOOTING REQUIREMENTS



DIG IN BARRIER

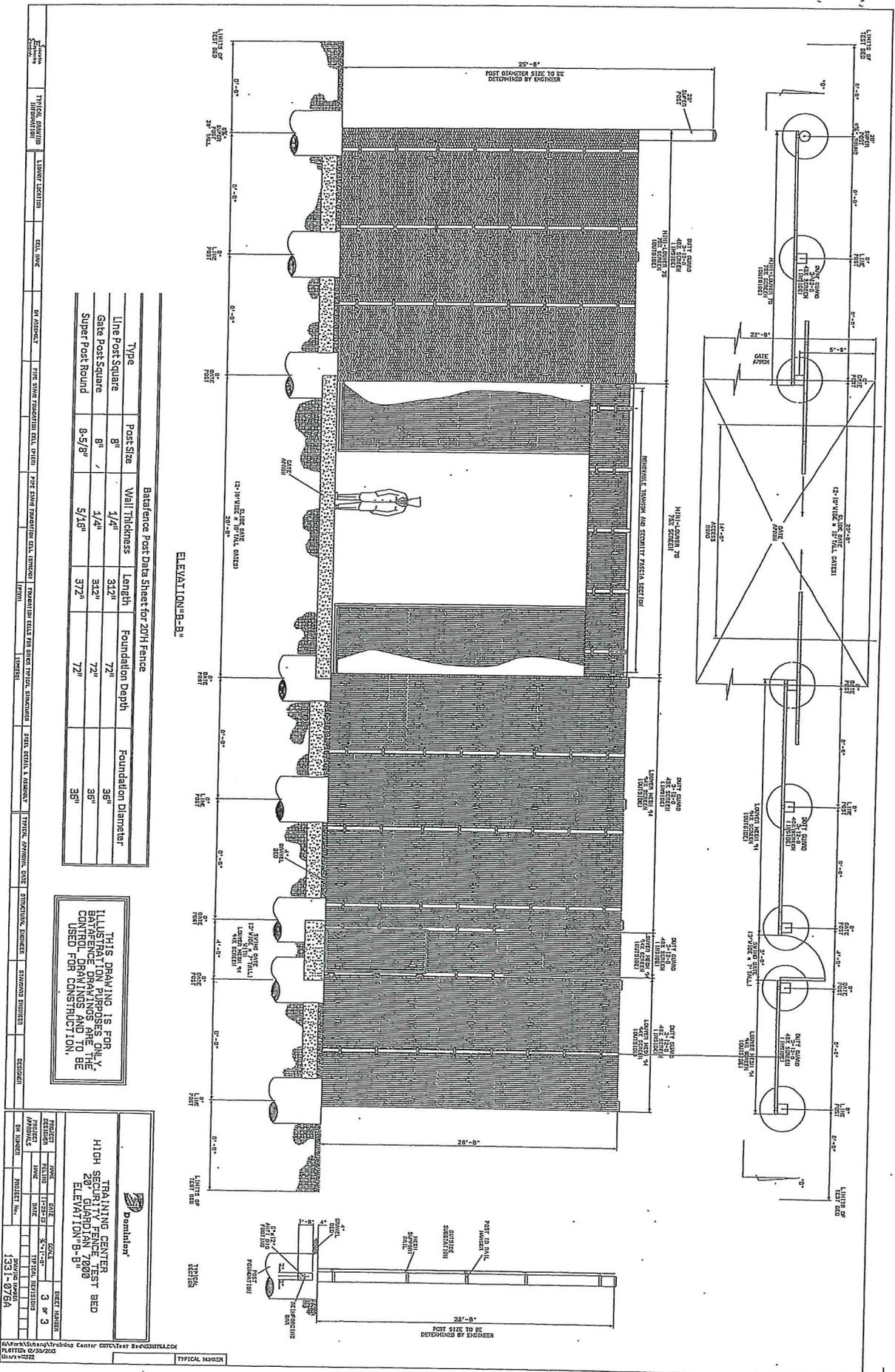


EXHIBIT F - AGENT AUTHORIZATION AND AFFIDAVIT

SPECIAL EXCEPTION AFFIDAVIT

DATE: July 6, 2016
 (enter date affidavit is notarized)

I, Thomas A. Egeland, Jr., do hereby state that I am an
 (enter name of applicant or authorized agent)

(check one) applicant
 applicant's authorized agent listed in Par. 1(a) below

in Application No.(s): _____
 (enter County-assigned application number(s), e.g. SE 88-V-001)

and that, to the best of my knowledge and belief, the following information is true:

1(a). The following constitutes a listing of the names and addresses of all **APPLICANTS, TITLE OWNERS, CONTRACT PURCHASERS, and LESSEES** of the land described in the application,* and, if any of the foregoing is a **TRUSTEE,**** each **BENEFICIARY** of such trust, and all **ATTORNEYS** and **REAL ESTATE BROKERS**, and all **AGENTS** who have acted on behalf of any of the foregoing with respect to the application:

(NOTE: All relationships to the application listed above in **BOLD** print are to be disclosed. Multiple relationships may be listed together, e.g., **Attorney/Agent, Contract Purchaser/Lessee, Applicant/Title Owner**, etc. For a multiparcel application, list the Tax Map Number(s) of the parcel(s) for each owner(s) in the Relationship column.)

NAME (enter first name, middle initial, and last name)	ADDRESS (enter number, street, city, state, and zip code)	RELATIONSHIP(S) (enter applicable relationships listed in BOLD above)
Bob McGuire	701 East Cary Street Richmond VA, 23219	Applicant/Owner
Benjamin Saunders	same as above	Applicant/Owner
Thomas Egeland, Jr.	6600 West Broad Street Suite 175 Richmond, VA 23230	Agent/Land User Planner
John Bailey	same as above	Agent/Senior Environmental Scientist
Patrick Meier	same as above	Agent/Wetlands Specialist
Christie Hoffmeyer	same as above	Agent/Branch Office Manager
Mark Smedvig	9400 Ward Parkway Kansas City, MO 64114	Agent/Engineer
Amanda Olson	same as above	Agent/Engineer

(check if applicable) There are more relationships to be listed and Par. 1(a) is continued on a "Special Exception Attachment to Par. 1(a)" form.

* In the case of a condominium, the title owner, contract purchaser, or lessee of 10% or more of the units in the condominium.

** List as follows: Name of trustee, Trustee for (name of trust, if applicable), for the benefit of: (state name of each beneficiary).

SPECIAL EXCEPTION AFFIDAVIT

DATE: July 6th, 2016
(enter date affidavit is notarized)

for Application No. (s):
(enter County-assigned application number(s))

1(b). The following constitutes a listing*** of the SHAREHOLDERS of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 10 or less shareholders, a listing of all of the shareholders:

(NOTE: Include SOLE PROPRIETORSHIPS, LIMITED LIABILITY COMPANIES, and REAL ESTATE INVESTMENT TRUSTS herein.)

CORPORATION INFORMATION

NAME & ADDRESS OF CORPORATION: (enter complete name and number, street, city, state, and zip code)

Virginia Electric and Power Company d/b/a Dominion Virginia Power
701 East Cary Street
Richmond, VA 23219

DESCRIPTION OF CORPORATION: (check one statement)

- [] There are 10 or less shareholders, and all of the shareholders are listed below.
[] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[X] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF SHAREHOLDERS: (enter first name, middle initial and last name)

(check if applicable) [] There is more corporation information and Par. 1(b) is continued on a "Special Exception Affidavit Attachment 1(b)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed. Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

SPECIAL EXCEPTION AFFIDAVIT

DATE: July 6th, 2016
(enter date affidavit is notarized)

for Application No. (s):
(enter County-assigned application number(s))

1(c). The following constitutes a listing*** of all of the PARTNERS, both GENERAL and LIMITED, in any partnership disclosed in this affidavit:

PARTNERSHIP INFORMATION

PARTNERSHIP NAME & ADDRESS: (enter complete name, and number, street, city, state, and zip code)

(check if applicable) [] The above-listed partnership has no limited partners.

NAMES AND TITLE OF THE PARTNERS (enter first name, middle initial, last name, and title, e.g. General Partner, Limited Partner, or General and Limited Partner)

N/A

(check if applicable) [] There is more partnership information and Par. 1(c) is continued on a "Special Exception Affidavit Attachment to Par. 1(c)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed. Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

SPECIAL EXCEPTION AFFIDAVIT

DATE: July 6th, 2016
(enter date affidavit is notarized)

for Application No. (s):
(enter County-assigned application number(s))

1(d). One of the following boxes **must** be checked:

In addition to the names listed in Paragraphs 1(a), 1(b), and 1(c) above, the following is a listing of any and all other individuals who own in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE*** of the land:

Other than the names listed in Paragraphs 1(a), 1(b), and 1(c) above, no individual owns in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE*** of the land.

2. That no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household owns or has any financial interest in the subject land either individually, by ownership of stock in a corporation owning such land, or through an interest in a partnership owning such land.

EXCEPT AS FOLLOWS: (NOTE: If answer is none, enter "NONE" on the line below.)

None

(check if applicable) There are more interests to be listed and Par. 2 is continued on a "Special Exception Attachment to Par. 2" form.

SPECIAL EXCEPTION AFFIDAVIT

DATE: 7/6/2016
(enter date affidavit is notarized)

Application No.(s): _____
(county-assigned application number(s), to be entered by County Staff)

3. That within the twelve-month period prior to the public hearing of this application, no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household, either directly or by way of partnership in which any of them is a partner, employee, agent, or attorney, or through a partner of any of them, or through a corporation in which any of them is an officer, director, employee, agent, or attorney or holds 10% or more of the outstanding bonds or shares of stock of a particular class, has, or has had any business or financial relationship, other than any ordinary depositor or customer relationship with or by a retail establishment, public utility, or bank, including any gift or donation having a value of more than \$100, singularly or in the aggregate, with any of those listed in Par. 1 above.

EXCEPT AS FOLLOWS: (NOTE: If answer is none, enter "NONE" on line below.)

None

NOTE: Business or financial relationships of the type described in this paragraph that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings. See Par. 4 below.)

(check if applicable) There are more disclosures to be listed and Par. 3 is continued on a "Special Exception Attachment to Par. 3" form.

4. That the information contained in this affidavit is complete, that all partnerships, corporations, and trusts owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land have been listed and broken down, and that prior to each and every public hearing on this matter, I will reexamine this affidavit and provide any changed or supplemental information, including business or financial relationships of the type described in Paragraph 3 above, that arise on or after the date of this application.

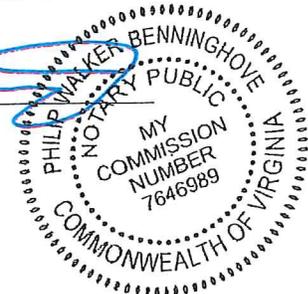
WITNESS the following signature:

(check one) Thomas A. Egeland, Jr.
 Applicant Applicant's Authorized Agent

Thomas A. Egeland, Jr. Staff Land Use Planner
(type or print first name, middle initial, last name, and & title of signee)

Subscribed and sworn to before me this 6th day of July, 20 16, in the State/Comm. of Virginia, County/City of Richmond.

Philip W. Benninghove
Notary Public



My commission expires: 12/31/2019

VIRGINIA ELECTRIC AND POWER COMPANY
Transcript From Records Effective December 3, 2014

I hereby delegate to Bobby E. McGuire (the "Authorized Representative") the authority to enter into, execute, acknowledge, deliver and accept, in the name and on behalf of Virginia Electric and Power Company (the "Company") any and all contracts, agreements, instruments, waivers, consents and any other documents that may be necessary, expedient in, or incidental in the conduct of electric transmission service agreements and related business of the Company. Bobby E. McGuire shall observe all limitations on the authority delegated as established from time to time by the Companies' approval policies.

This delegation of authority shall be effective as of December 3, 2014 and all related actions committed prior to this electronic transmission by Bobby E. McGuire are hereby ratified, authorized and approved. This delegation shall not restrict or limit my authority, and may be revoked at anytime by written instrument or electronic transmission. Unless earlier revoked, this delegation shall terminate upon the termination of the Authorized Representative's employment with the Company.

VIRGINIA ELECTRIC AND POWER COMPANY

By: /s/ Robert M. Blue
Robert M. Blue
President

VIRGINIA ELECTRIC AND POWER COMPANY
Secretary's Certificate

I, the undersigned, hereby certify that I am Assistant Corporate Secretary of Virginia Electric and Power Company, a Virginia public service corporation (the "Company").

I further certify that the signature and delegation of authority (Attachment 1) has not been amended or revoked and that the same is now in full force and effect until revoked.

I further certify that the below named person has been duly authorized by said corporation and is the incumbent of the respective office below set opposite his name.

Bobby E. McGuire

Authorized Representative

IN WITNESS WHEREOF, I have hereunto set my hand and have affixed the corporate seal of said Company this 29th day of January, 2015.



Karen W. Doggett



Letter of Authorization

I, Bob McGuire, Director, Electric Transmission Project Development and Execution and duly authorized representative of Virginia Electric & Power Company d/b/a Dominion Virginia Power ("Dominion") do hereby authorize pursuant to the Ox Substation Physical Security Enhancement Project located at 8234 Roseland Drive, Fairfax Station, Virginia, Fairfax County Parcel Numbers 1061-01-0001, 1061-01-0002, 0973-15-0008, and 0973-01-0014: (1) authorizes Benjamin Saunders with Dominion Virginia Power and/or Thomas A. Egeland, Jr. and/or John B. Bailey and/or Christie Hoffmeyer and/or Mark Smedvig, and/or Amanda Olson and/or Patrick Meier of Burns & McDonnell Engineering Company, Inc. to act as agents on behalf of the applicant, Dominion, for any and all land use applications, including but not limited to: Conditional/Special Use Permits, Special Exceptions, Variances, Re-Zonings, Site Plans, Easement Plats, Building, Zoning and Land Disturbance Permits, (2) authorizes Benjamin Saunders with Dominion Virginia Power and/or Thomas A. Egeland, Jr. and/or John B. Bailey and/or Christie Hoffmeyer and/or Mark Smedvig, and/or Amanda Olson and/or Patrick Meier of Burns & McDonnell Engineering Company, Inc. to amend in whole or in part any of the documents relating to the above referenced applications and (3) authorizes Benjamin Saunders with Dominion Virginia Power and/or Thomas A. Egeland, Jr. and/or John B. Bailey and/or Christie Hoffmeyer and/or Mark Smedvig, and/or Amanda Olson and/or Patrick Meier of Burns & McDonnell Engineering Company, Inc. the authority to appear before Federal, State, County, City or Town officials to present the case in support of the application(s) on behalf of Dominion.

Bob McGuire // 6-27-16
Bob McGuire Date

COMMONWEALTH/STATE OF VIRGINIA
COUNTY/CITY OF Richmond, to wit:

I the undersigned, a Notary Public in and for the county and state aforesaid, do hereby certify that Bob McGuire, whose name is signed to the foregoing document, has personally acknowledged the same before me in my aforesaid jurisdiction.

GIVEN under my hand and seal this 27th day of June, 20 16.

Philip Walker Benninghove
Notary Public

My Commission Expires: 12/31/2019

Registration Number: 7646989



EXHIBIT G - DOMINION OWNERSHIP COUNTY TAX CARDS

MAP #: 0973 01 0014
ELECTRIC AND POWER

8234 ROSELAND DR

Owner

Name	ELECTRIC AND POWER, CO VIRGINIA
Mailing Address	PO BOX 27007 FLR 12TH DOMINION RESOURCES INC C/O BLAINE GARRETT RICHMOND VA 23261
Book	02395
Page	0414

Parcel

Property Location	8234 ROSELAND DR
Map #	0973 01 0014
Tax District	80000
District Name	SPRINGFIELD
Land Use Code	Electric,transmission ROW,plants,substat
Land Area (acreage)	36.1568
Land Area (SQFT)	
Zoning Description	RC(Res Conservation 1DU/5AC)
Utilities	WATER NOT AVAILABLE SEWER NOT AVAILABLE GAS NOT AVAILABLE
County Historic Overlay District	NO For further information about Historic Overlay Districts, CLICK HERE
Street/Road	PAVED
Site Description	BUILDABLE-AVERAGE LOT

Legal Description

Legal Description	OX ROAD 3048 721 3227 572 ASSESSED BY SCC
-------------------	---

Values

Tax Year	2016
Current Land	\$0
Current Building	\$0
Current Assessed Total	\$0
Tax Exempt	NO
Note	PARCEL IS ASSESSED BY THE STATE CORP COMMISSION

Values History

Tax Year	Land	Building	Assessed Total	Tax Exempt	
2016	\$0	\$0	\$0	NO	
2015	\$0	\$0	\$0	NO	
2014	\$0	\$0	\$0	NO	
2013	\$0	\$0	\$0	NO	
2012	\$0	\$0	\$0	NO	
2011	\$0	\$0	\$0	NO	
2010	\$0	\$0	\$0	NO	
2009	\$0	\$0	\$0	NO	

6/23/2016

Fairfax County

2008	\$0	\$0	\$0	NO
2007	\$0	\$0	\$0	NO
2006	\$0	\$0	\$0	NO
2005	\$0	\$0	\$0	NO
2004	\$0	\$0	\$0	NO
2003	\$0	\$0	\$0	NO
2002	\$0	\$0	\$0	NO
2001	\$0	\$0	\$0	NO
2000	\$0	\$0	\$0	NO

Primary Building

Building Use	Other
Style	1 Story
Exterior Wall Material	Block
Roof	Tar/Gravel
Basement	NONE
Basement Rec Room Size (sq.ft)	
Basement Type	
Dormers	
Year Built	1966
Effective Year Built	
Year Addition	
Year House Remodeled	
Model Name	OX SUBSTATION
Bedrooms	
Full Baths	
Half Baths	
Number of Fireplaces	
# Basement Bedrooms/Dens	
Heating	None
Construction Quality	
Physical Condition	FR-Fair

Structure Size

Above Grade Living Area Total Sq. 0
 Ft
 Basement Garage # Cars

Attached Accessory Structures

Structure	Size	% Complete
Other (ex:utility)	160 SQ. FT.	100%
Other (ex:utility)	425 SQ. FT.	100%
VECTORS	952 SQ. FT.	100%

Detached Accessory Structures

Structure	Size	% Complete	Units
Misc or Small Building	340 SQ. FT.	100%	

Additional Details

Card Line	Structure (Lower)	Structure (First)	Structure (Second)	Structure (Third)	Year Built	Area
1 1		Other (ex:utility)				160
1 2		Other (ex:utility)				425

1	3	Other (ex:utility)	0
1	4	VECTORS	952

General Information

Need Help?

For questions and requests for information about the Real Estate site, call 703-222-8234 or [CLICK HERE](#)

Disclaimer/Privacy Policy

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Last Refresh

Date

Data last refreshed: 21/Jun/2016 DB:P14CUR

Source: Fairfax County Department of Tax Administration, Real Estate Division.

**MAP #: 1061 01 0001
ELECTRIC AND POWER**

N/A

Owner

Name	ELECTRIC AND POWER, CO VIRGINIA
Mailing Address	PO BOX 27007 FLR 12TH DOMINION RESOURCES INC C/O BLAINE GARRETT RICHMOND VA 23261
Book	03822
Page	0092

Parcel

Property Location	
Map #	1061 01 0001
Tax District	80000
District Name	SPRINGFIELD
Land Use Code	Electric,transmission ROW,plants,subst
Land Area (acreage)	.5149
Land Area (SQFT)	
Zoning Description	RC(Res Conservation 1DU/5AC)
Utilities	WATER NOT AVAILABLE SEWER NOT AVAILABLE GAS NOT AVAILABLE
County Historic Overlay District	NO For further information about Historic Overlay Districts, CLICK HERE
Street/Road	UNPAVED
Site Description	NOT-BUILDABLE-NON ACCESSIBLE

Legal Description

Legal Description	OX ROAD OUTLOT A ASSESSED BY SCC
-------------------	--

Sales History

Date	Amount	Seller	Buyer
05/02/1973	\$0		ELECTRIC AND POWER

Sales

Date	05/02/1973
Amount	\$0
Seller	
Buyer	ELECTRIC AND POWER
Notes	Valid and verified sale
Deed Book and Page	03822-0092
Additional Notes	

Values

Tax Year	2016
----------	------

Current Land \$0
 Current Building \$0
 Current Assessed Total \$0
 Tax Exempt NO
 Note PARCEL IS ASSESSED BY THE STATE CORP
 COMMISSION

Values History

Tax Year	Land	Building	Assessed Total	Tax Exempt
2016	\$0	\$0	\$0	NO
2015	\$0	\$0	\$0	NO
2014	\$0	\$0	\$0	NO
2013	\$0	\$0	\$0	NO
2012	\$0	\$0	\$0	NO
2011	\$0	\$0	\$0	NO
2010	\$0	\$0	\$0	NO
2009	\$0	\$0	\$0	NO
2008	\$0	\$0	\$0	NO
2007	\$0	\$0	\$0	NO
2006	\$0	\$0	\$0	NO
2005	\$0	\$0	\$0	NO
2004	\$0	\$0	\$0	NO
2003	\$0	\$0	\$0	NO
2002	\$0	\$0	\$0	NO
2001	\$0	\$0	\$0	NO
2000	\$0	\$0	\$0	NO

General Information

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Last Refresh

Date

Data last refreshed: 12/Jun/2016 DB:P14CUR

Source: Fairfax County Department
of Tax Administration, Real Estate Division.

**MAP #: 1061 01 0002
ELECTRIC AND POWER**

N/A

Owner

Name	ELECTRIC AND POWER, CO VIRGINIA
Mailing Address	PO BOX 27007 FLR 12TH DOMINION RESOURCES INC C/O BLAINE GARRETT RICHMOND VA 23261
Book	03822
Page	0092

Parcel

Property Location	
Map #	1061 01 0002
Tax District	80000
District Name	SPRINGFIELD
Land Use Code	Electric,transmission ROW,plants,substat
Land Area (acreage)	6.5454
Land Area (SQFT)	
Zoning Description	RC(Res Conservation 1DU/5AC)
Utilities	WATER NOT AVAILABLE SEWER NOT AVAILABLE GAS NOT AVAILABLE
County Historic Overlay District	NO For further information about Historic Overlay Districts, CLICK HERE
Street/Road	UNPAVED
Site Description	NON-BUILDABLE-FLOOD PLAIN

Legal Description

Legal Description	OX ROAD PCLS B AND C ASSESSED BY SCC
-------------------	--

Sales History

Date	Amount	Seller	Buyer
05/02/1973	\$0		ELECTRIC AND POWER

Sales

Date	05/02/1973
Amount	\$0
Seller	
Buyer	ELECTRIC AND POWER
Notes	Valid and verified sale
Deed Book and Page	03822-0092
Additional Notes	

Values

Tax Year	2016
----------	------

Current Land \$0
 Current Building \$0
 Current Assessed Total \$0
 Tax Exempt NO
 Note PARCEL IS ASSESSED BY THE STATE CORP
 COMMISSION

Values History

Tax Year	Land	Building	Assessed Total	Tax Exempt
2016	\$0	\$0	\$0	NO
2015	\$0	\$0	\$0	NO
2014	\$0	\$0	\$0	NO
2013	\$0	\$0	\$0	NO
2012	\$0	\$0	\$0	NO
2011	\$0	\$0	\$0	NO
2010	\$0	\$0	\$0	NO
2009	\$0	\$0	\$0	NO
2008	\$0	\$0	\$0	NO
2007	\$0	\$0	\$0	NO
2006	\$0	\$0	\$0	NO
2005	\$0	\$0	\$0	NO
2004	\$0	\$0	\$0	NO
2003	\$0	\$0	\$0	NO
2002	\$0	\$0	\$0	NO
2001	\$0	\$0	\$0	NO
2000	\$0	\$0	\$0	NO

General Information

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Last Refresh

Date

Data last refreshed: 12/Jun/2016 DB:P14CUR

Source: Fairfax County Department
of Tax Administration, Real Estate Division.

MAP #: 0973 15 0008
DOMINION VIRGINIA POWER

8232 ROSELAND DR

Owner

Name	DOMINION VIRGINIA POWER,
Mailing Address	PO BOX 26666 ATTN DIRECTOR T & D RE RICHMOND VA 23261
Book	09888
Page	1479

Parcel

Property Location	8232 ROSELAND DR
Map #	0973 15 0008
Tax District	80000
District Name	SPRINGFIELD
Land Use Code	Vacant Land
Land Area (acreage)	12.9427
Land Area (SQFT)	
Zoning Description	RC(Res Conservation 1DU/5AC)
Utilities	SEWER NOT AVAILABLE
County Historic Overlay District	NO For further information about Historic Overlay Districts, CLICK HERE

Street/Road
Site Description

Legal Description

Legal Description	ESTS AT ROSELAND THE LT 8 ASSESSED BY SCC
-------------------	---

Sales History

Date	Amount	Seller	Buyer
12/26/1996	\$150,000		DOMINION VIRGINIA POWER

Sales

Date	12/26/1996
Amount	\$150,000
Seller	
Buyer	DOMINION VIRGINIA POWER
Notes	Valid and verified sale
Deed Book and Page	09888-1479
Additional Notes	

Values

Tax Year	2016
----------	------

Current Land \$0
 Current Building \$0
 Current Assessed Total \$0
 Tax Exempt NO
 Note PARCEL IS ASSESSED BY THE STATE CORP
 COMMISSION

Values History

Tax Year	Land	Building	Assessed Total	Tax Exempt	
2016	\$0	\$0	\$0	\$0	NO
2015	\$0	\$0	\$0	\$0	NO
2014	\$0	\$0	\$0	\$0	NO
2013	\$0	\$0	\$0	\$0	NO
2012	\$0	\$0	\$0	\$0	NO
2011	\$0	\$0	\$0	\$0	NO
2010	\$0	\$0	\$0	\$0	NO
2009	\$0	\$0	\$0	\$0	NO
2008	\$0	\$0	\$0	\$0	NO
2007	\$0	\$0	\$0	\$0	NO
2006	\$0	\$0	\$0	\$0	NO
2005	\$0	\$0	\$0	\$0	NO
2004	\$0	\$0	\$0	\$0	NO
2003	\$0	\$0	\$0	\$0	NO
2002	\$0	\$0	\$0	\$0	NO
2001	\$0	\$0	\$0	\$0	NO
2000	\$0	\$0	\$0	\$0	NO

General Information

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Last Refresh

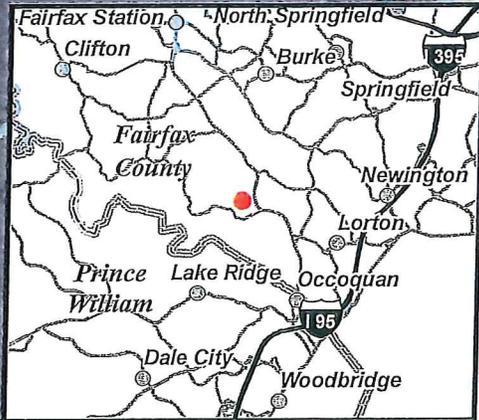
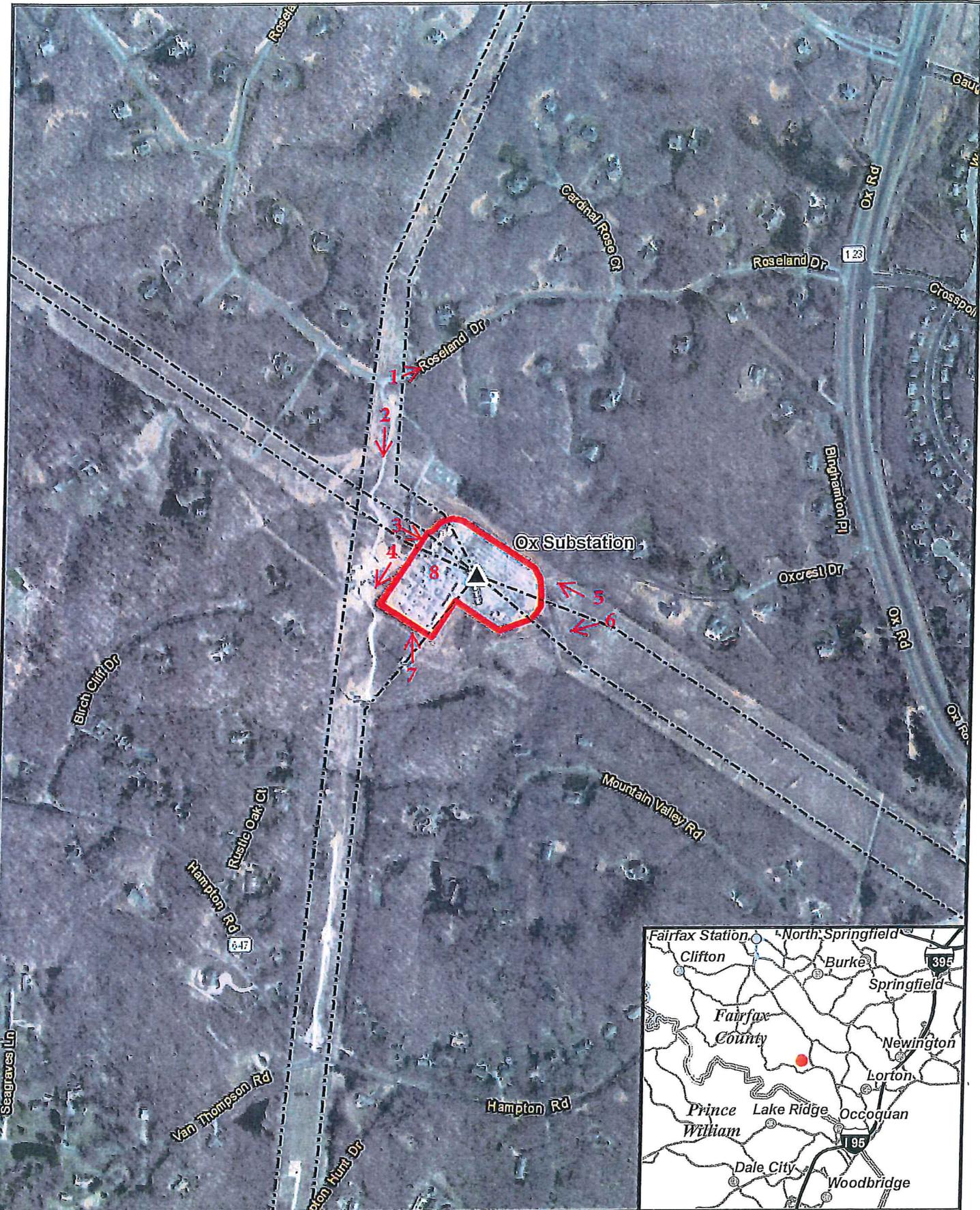
Date

Data last refreshed: 12/Jun/2016 DB:P14CUR

Source: Fairfax County Department
of Tax Administration, Real Estate Division.

EXHIBIT H - OX SUBSTATION SITE PHOTOGRAPHS

Path: Z:\Clients\TND\Dominion\Emr\Ox\77957_SC944666\Studies\Geospatial\DataFiles\ArcDocs\VicinityMap.mxd barker 5/23/2016
 COPYRIGHT © 2016 BURNS & McDONNELL ENGINEERING COMPANY, INC.
 Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
 Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors



- - - - - Electric transmission lines
 Substation footprint


 0 350 700
 Scale in Feet



Vicinity Map
 Ox Substation
 Fairfax County, VA



Photograph H-1: Main road looking east onto Roseland Drive.



Photograph H-2: Property on the northwest side of Ox Substation and dirt construction access road, looking south.

Dominion Virginia Power
Ox Substation



Photographs
June 20th, 2016
Fairfax County, Virginia



Photograph H-3: West entrance to Ox Substation, looking east.

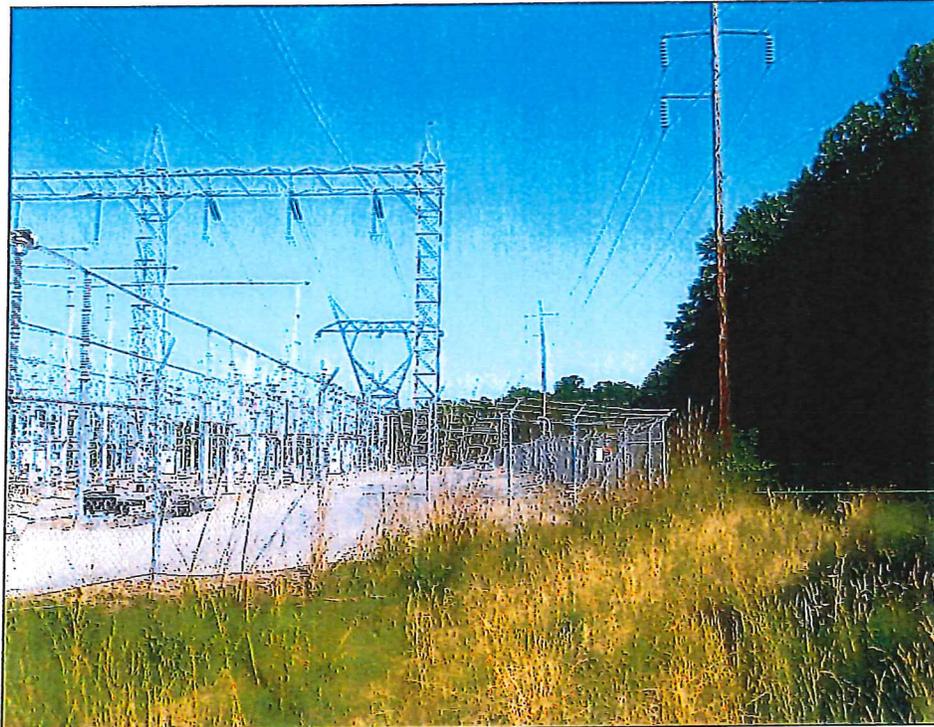


Photograph H-4: West entrance to Ox Substation, looking south along fence line.

Dominion Virginia Power
Ox Substation



Photographs
June 20th, 2016
Fairfax County, Virginia



Photograph H-5: East Side of Ox Substation and construction access road, looking west.



Photograph H-6: East Side of Ox Substation and construction access road, looking west.

Dominion Virginia Power
Ox Substation



Photographs
June 20th, 2016
Fairfax County, Virginia



Photograph H-7: South side Ox Substation, looking northwest.



Photograph H-8: Examples of tall structures currently at Ox Substation.

Dominion Virginia Power
Ox Substation



Photographs
June 20th, 2016
Fairfax County, Virginia

EXHIBIT I - FAIRFAX COUNTY MAP



GENERAL NOTES

ARBITRARY AND FOREVER

L&P
Expire on 01-01-2017

ADMINISTRATIVE INDEX

96-1	96-2	97-1
96-3	96-4	97-3
105-1	105-2	106-1



PROPERTY MAP ZONING

96-4

Revised to : 01 - 01 - 2016

GENERAL NOTES

ARBITRARY AND FOREVER

L&P
Expire on 01-01-2016

ADMINISTRATIVE INDEX

96-2	97-1	97-2
96-4	97-3	97-4
105-2	106-1	106-2

PROPERTY MAP ZONING

97-3

Revised to : 01 - 01 - 2016



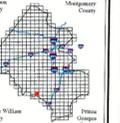
GENERAL NOTES

ARBITRARY AND FOREVER

L&P
Expire on 01-01-2016

ADMINISTRATIVE INDEX

96-3	96-4	97-3
105-1	105-2	106-1
105-3	106-3	106-3



PROPERTY MAP ZONING

105-2

Revised to : 01 - 01 - 2016

GENERAL NOTES

ARBITRARY AND FOREVER

L&P
Expire on 01-01-2016

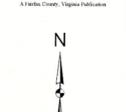
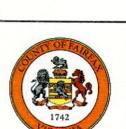
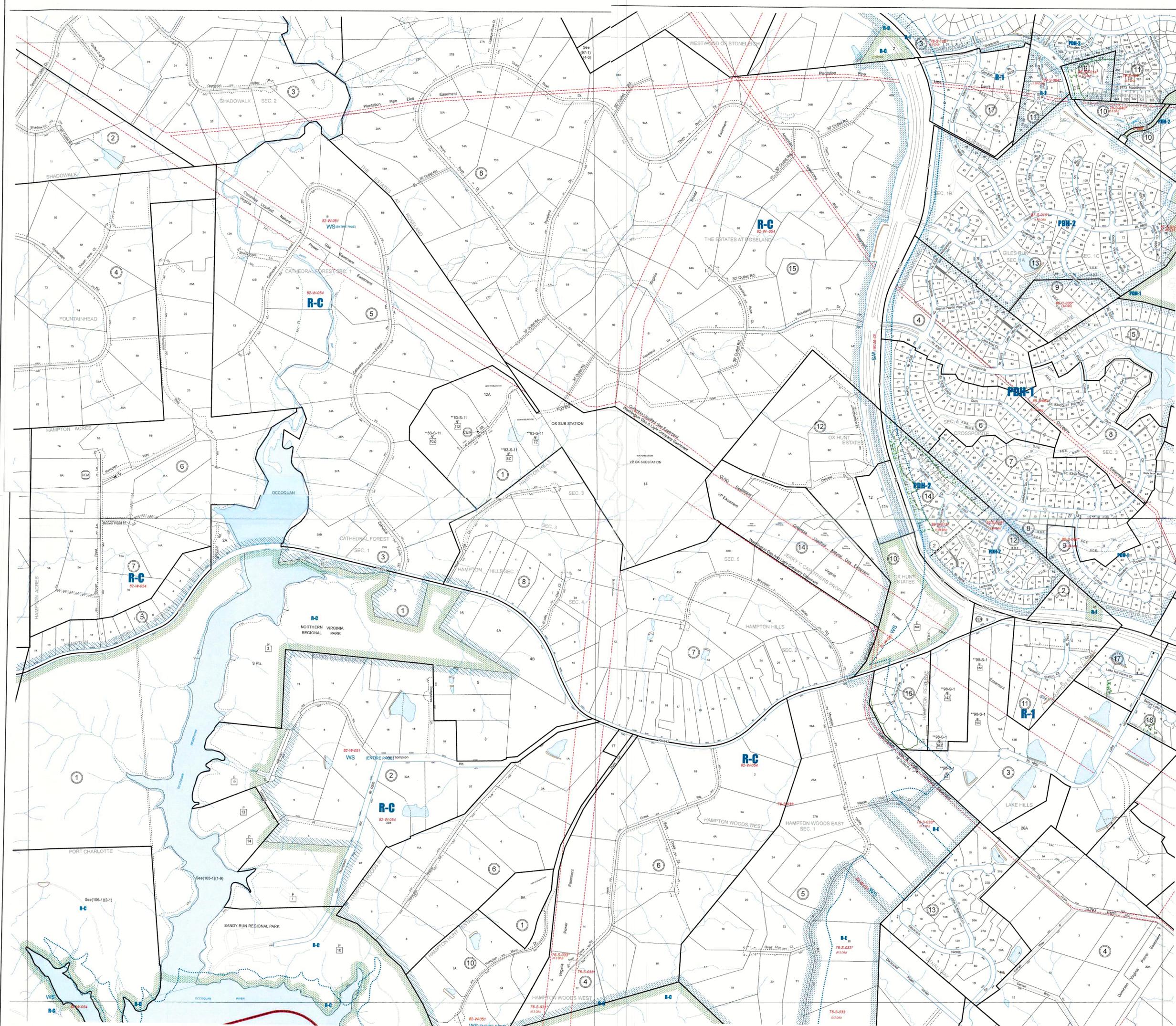
ADMINISTRATIVE INDEX

96-4	97-3	97-4
105-2	106-2	106-2
105-4	106-3	106-4

PROPERTY MAP ZONING

106-1

Revised to : 08 - 02 - 2016



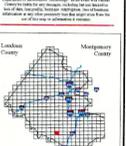
GENERAL NOTES

ARBITRARY AND FOREVER

L&P
Expire on 01-01-2016

ADMINISTRATIVE INDEX

96-2	97-1	97-2
96-4	97-3	97-4
105-2	106-1	106-2



PROPERTY MAP ZONING

97-3

Revised to : 01 - 01 - 2016

GENERAL NOTES

ARBITRARY AND FOREVER

L&P
Expire on 01-01-2016

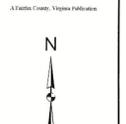
ADMINISTRATIVE INDEX

96-3	96-4	97-3
105-1	105-2	106-1
105-3	106-3	106-3

PROPERTY MAP ZONING

106-1

Revised to : 08 - 02 - 2016



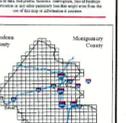
GENERAL NOTES

ARBITRARY AND FOREVER

L&P
Expire on 01-01-2016

ADMINISTRATIVE INDEX

96-4	97-3	97-4
105-2	106-2	106-2
105-4	106-3	106-4



PROPERTY MAP ZONING

106-1

Revised to : 08 - 02 - 2016

GENERAL NOTES

ARBITRARY AND FOREVER

L&P
Expire on 01-01-2016

ADMINISTRATIVE INDEX

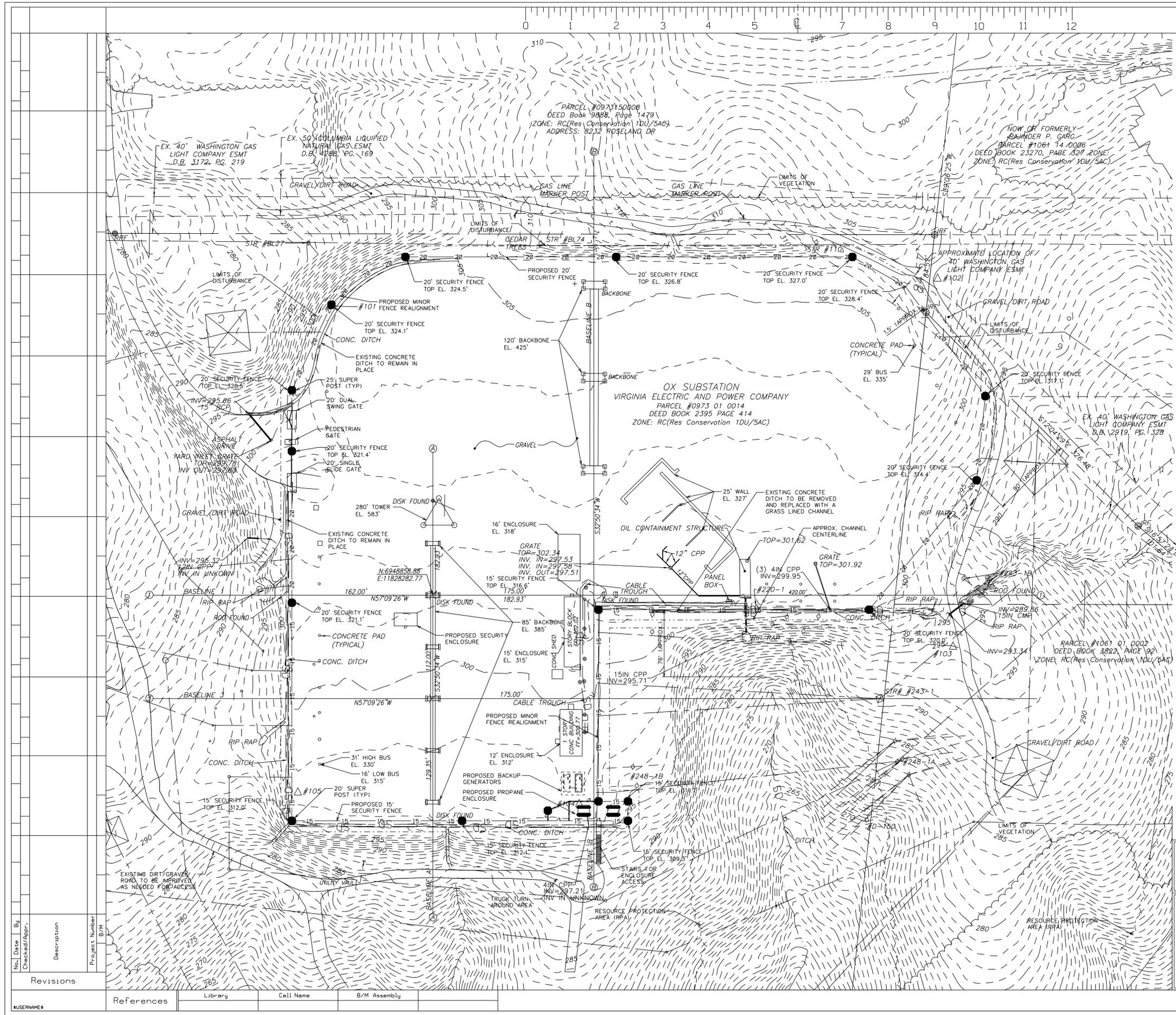
96-4	97-3	97-4
105-2	106-2	106-2
105-4	106-3	106-4

PROPERTY MAP ZONING

106-1

Revised to : 08 - 02 - 2016

EXHIBIT J - SITE PLAT



LEGEND:
 IPF - IRON PIPE FOUND
 IRF - IRON ROD FOUND
 RRF - RAILROAD SPIKE FOUND
 - CONTROL POINT

NOTES:

1. THIS TOPOGRAPHIC SURVEY WAS PREPARED BY DEWBERRY CONSULTANTS LLC IN MARCH OF 2014. REVISED JUNE 12, 2014 - ADDED WASHINGTON GAS LIGHT EASEMENT LOCATION.

2. HORIZONTAL DATUM BASED ON VIRGINIA STATE PLANE NAD 1983 NORTH ZONE.

3. VERTICAL DATUM BASED ON NGVD 1929.

4. CONTOUR INTERVAL IS 1 FOOT.

5. PARCEL ADDRESS: 8234 ROSELAND DRIVE, FAIRFAX STATION, VIRGINIA 22039.

6. TOTAL AREA = 56.132 ACRES. SUBSTATION PAD = 7.81 ACRES.

7. FLOOD NOTE: BY GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES IN ZONE X, (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD); MAP NUMBER 51059C0360E EFFECTIVE DATE OF SEPTEMBER 17, 2010.

8. LOCATIONS OF UTILITIES SHOWN ON THIS SURVEY WERE DETERMINED BY OBSERVED EVIDENCE AND LOCATION OF ABOVE GROUND UTILITY APPURTENANCES. UNDERGROUND UTILITIES ARE NOT SHOWN, CONTRACTOR MUST VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

9. GROUND SPOT ELEVATIONS WITHIN THE SUBSTATION FENCE WERE TAKEN AT DIRT GRADE (BELOW GRAVEL SURFACE) WHERE GRAVEL WAS PRESENT.

10. NOT ALL OVERHEAD UTILITIES SHOWN HEREON.

11. NOT ALL EXISTING SUBSTATION COMPONENTS ARE SHOWN.

12. THERE ARE NO KNOWN GRAVES OR BURIAL SITES IN THE VICINITY OF THIS SITE. WITHIN THE AREA OF THE EXISTING OX SUBSTATION, THE FAIRFAX COUNTY PARKWAY TRAIL IS PROPOSED AS A 6 TO 8 FOOT WIDE STONE DUST OR NATURAL SURFACE TRAIL LEADING SOUTH FROM FAIRFAX COUNTY PARKWAY.

13. THIS SURVEY HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT PURPORT TO REFLECT ALL EASEMENTS, ENCUMBRANCES OR OTHER CONDITIONS AFFECTING THE TITLE TO THE SAID PROPERTY.

14. THE PROPOSED USE OF THIS DRAWING PACKAGE WAS INTENDED TO CONFORM TO THE PROVISIONS OF ALL APPLICABLE ORDINANCES, REGULATIONS, ADOPTED STANDARDS, AND ANY APPLICABLE CONDITIONS, OR IF ANY WAIVER, EXCEPTION OR VARIANCE IS SOUGHT BY THE APPLICANT FROM SUCH ORDINANCES, REGULATIONS, STANDARDS, AND CONDITIONS, SUCH SHALL BE SPECIFICALLY NOTED WITH JUSTIFICATIONS FOR SUCH MODIFICATIONS HEREON.

15. ALL INTERNAL EXISTING SUBSTATION EQUIPMENT WILL REMAIN UNMODIFIED.

16. SURVEY PRODUCED FROM LIDAR MAPPING, GROUND SHOTS INCORPORATED INTO BASE LIDAR MAP ALONG THE PERIMETER FENCE LINE.

YARD/BUILDING SETBACK REQUIREMENTS:
 2. Minimum yard requirements
 A. Single family dwellings
 (1) Front yard: 40 feet
 (2) Side yard: 20 feet
 (3) Rear yard: 25 feet
 B. All other structures
 (1) Front yard: Controlled by a 50° angle of bulk plane, but not less than 40 feet
 (2) Side yard: Controlled by a 45° angle of bulk plane, but not less than 20 feet
 (3) Rear yard: Controlled by a 45° angle of bulk plane, but not less than 25 feet
 C. All major structure heights are indicated on this drawing and are below the required angle of bulk plane.

SOURCE: FAIRFAX COUNTY ZONING ORDINANCES

BURNS & MCDONNELL
 PROFESSIONAL ENGINEER
 APPROVAL



**OX SUBSTATION SECURITY ENHANCEMENT
 SPECIAL EXCEPTION PLAT
 FOR A PORTION OF OX SUBSTATION
 FAIRFAX COUNTY, VIRGINIA**

Name	Date	Project No.	Sheet No.
Designed by: BMC (MSS)	09-01-16	94-4666	3 OF 5
Approvals	Scale		
Approvals	1" = 50'		
B/M No.		Revisions	
Cad File Name: 0872SEP02A.dgn		Drawing No. 0872-SEP-02	
PLOTTED: *****SYTIME			

No.	Date	By	Description

References	Library	Cell Name	B/M Assembly

BORDER

SPECIAL EXCEPTION AFFIDAVIT

DATE: November 8, 2016
 (enter date affidavit is notarized)

I, Laura Angeline Crowder, do hereby state that I am an
 (enter name of applicant or authorized agent)

136936

(check one) applicant
 applicant's authorized agent listed in Par. 1(a) below

in Application No.(s): SE 2016-SP-019
 (enter County-assigned application number(s), e.g. SE 88-V-001)

and that, to the best of my knowledge and belief, the following information is true:

1(a). The following constitutes a listing of the names and addresses of all **APPLICANTS, TITLE OWNERS, CONTRACT PURCHASERS, and LESSEES** of the land described in the application,* and, if any of the foregoing is a **TRUSTEE,**** each **BENEFICIARY** of such trust, and all **ATTORNEYS and REAL ESTATE BROKERS**, and all **AGENTS** who have acted on behalf of any of the foregoing with respect to the application:

(NOTE: All relationships to the application listed above in **BOLD** print are to be disclosed. Multiple relationships may be listed together, e.g., **Attorney/Agent, Contract Purchaser/Lessee, Applicant/Title Owner**, etc. For a multiparcel application, list the Tax Map Number(s) of the parcel(s) for each owner(s) in the Relationship column.)

NAME (first name, middle initial, last name)	ADDRESS (enter number, street, city, state, and zip code)	RELATIONSHIP(S) (enter applicable relationships listed in BOLD above)
Virginia Electric & Power Company d/b/a Dominion Virginia Power	701 East Cary Street Richmond, VA 23219	Applicant/Title Owner of parcels: 1061-01-0001, 1061-01-0002, 0973-15-0008, 0973-01-0014
Bobby E. McGuire	Same as above	Agent
Benjamin A. Saunders	Same as above	Agent
Laura A. Crowder	6600 West Broad Street, Suite 175 Richmond, VA 23230	Agent/Senior Land Use Planner
Thomas A. Egeland, Jr.	Same as above	Agent/Land Use Planner
John B. Bailey	Same as above	Agent/Sr. Environmental Scientist
Patrick K. Meier	Same as above	Agent/Wetlands Specialist
Christie R. Hoffmeyer	Same as above	Agent/Branch Manager
Mark Smedvig, Jr.	9400 Ward Parkway Kansas City, MO 64114	Agent/Engineer
Amanda K. Olson	Same as above	Agent/Engineer

(check if applicable) There are more relationships to be listed and Par. 1(a) is continued on a "Special Exception Attachment to Par. 1(a)" form.

* In the case of a condominium, the title owner, contract purchaser, or lessee of 10% or more of the units in the condominium.
 ** List as follows: Name of trustee, Trustee for (name of trust, if applicable), for the benefit of: (state name of each beneficiary)

SPECIAL EXCEPTION AFFIDAVIT

DATE: November 8, 2016
(enter date affidavit is notarized)

136936

for Application No. (s): SE 2016-SP-019
(enter County-assigned application number(s))

1(b). The following constitutes a listing*** of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 10 or less shareholders, a listing of all of the shareholders:

(NOTE: Include **SOLE PROPRIETORSHIPS, LIMITED LIABILITY COMPANIES, and REAL ESTATE INVESTMENT TRUSTS** herein.)

CORPORATION INFORMATION

NAME & ADDRESS OF CORPORATION: (enter complete name and number, street, city, state, and zip code)

Virginia Electric and Power Company d/b/a Dominion Virginia Power
701 East Cary Street
Richmond, VA 23219

DESCRIPTION OF CORPORATION: (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF SHAREHOLDERS: (enter first name, middle initial and last name)

(check if applicable) There is more corporation information and Par. 1(b) is continued on a "Special Exception Affidavit Attachment 1(b)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. *In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed.* Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

SPECIAL EXCEPTION AFFIDAVIT

DATE: November 8, 2016
(enter date affidavit is notarized)

136936

for Application No. (s): SE 2016-SP-019
(enter County-assigned application number(s))

1(c). The following constitutes a listing*** of all of the **PARTNERS**, both **GENERAL** and **LIMITED**, in any partnership disclosed in this affidavit:

PARTNERSHIP INFORMATION

PARTNERSHIP NAME & ADDRESS: (enter complete name, and number, street, city, state, and zip code)

(check if applicable) The above-listed partnership has no limited partners.

NAMES AND TITLE OF THE PARTNERS (enter first name, middle initial, last name, and title, e.g. **General Partner, Limited Partner, or General and Limited Partner**)

N/A

(check if applicable) There is more partnership information and Par. 1(c) is continued on a "Special Exception Affidavit Attachment to Par. 1(c)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. *In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed.* Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

SPECIAL EXCEPTION AFFIDAVIT

DATE: November 8, 2016
(enter date affidavit is notarized)

136936

for Application No. (s): SE 2016-SP-019
(enter County-assigned application number(s))

1(d). One of the following boxes **must** be checked:

In addition to the names listed in Paragraphs 1(a), 1(b), and 1(c) above, the following is a listing of any and all other individuals who own in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE*** of the land:

Other than the names listed in Paragraphs 1(a), 1(b), and 1(c) above, no individual owns in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE*** of the land.

2. That no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household owns or has any financial interest in the subject land either individually, by ownership of stock in a corporation owning such land, or through an interest in a partnership owning such land.

EXCEPT AS FOLLOWS: (NOTE: If answer is none, enter "NONE" on the line below.)

Planning Commissioner Timothy Sargeant is employed by Virginia Electric and Power Company, d/b/a Dominion Virginia Power, which is listed in Paragraph 1 (a) of affidavit as Applicant/Title Owner of the subject property.

(check if applicable) There are more interests to be listed and Par. 2 is continued on a "Special Exception Attachment to Par. 2" form.

SPECIAL EXCEPTION AFFIDAVIT

136A36

DATE: November 8, 2016
(enter date affidavit is notarized)

for Application No. (s): SE 2016-SP-019
(county-assigned application number(s), to be entered by County Staff)

3. That within the twelve-month period prior to the public hearing of this application, no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household, either directly or by way of partnership in which any of them is a partner, employee, agent, or attorney, or through a partner of any of them, or through a corporation in which any of them is an officer, director, employee, agent, or attorney or holds 10% or more of the outstanding bonds or shares of stock of a particular class, has, or has had any business or financial relationship, other than any ordinary depositor or customer relationship with or by a retail establishment, public utility, or bank, including any gift or donation having a value of more than \$100, singularly or in the aggregate, with any of those listed in Par. 1 above.

EXCEPT AS FOLLOWS: (NOTE: If answer is none, enter "NONE" on line below.)

None

NOTE: Business or financial relationships of the type described in this paragraph that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings. See Par. 4 below.)

(check if applicable) [] There are more disclosures to be listed and Par. 3 is continued on a "Special Exception Attachment to Par. 3" form.

4. That the information contained in this affidavit is complete, that all partnerships, corporations, and trusts owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land have been listed and broken down, and that prior to each and every public hearing on this matter, I will reexamine this affidavit and provide any changed or supplemental information, including business or financial relationships of the type described in Paragraph 3 above, that arise on or after the date of this application.

WITNESS the following signature:

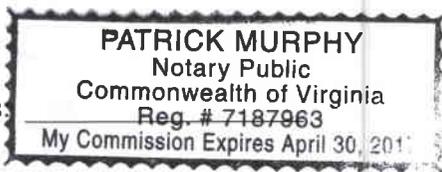
(check one)

[] Applicant

[X] Applicant's Authorized Agent

Laura Angeline Crowder
(type or print first name, middle initial, last name, and & title of signee)

Subscribed and sworn to before me this 8th day of November, 2016, in the State/Comm. of Virginia, County/City of Henrico.



Patrick Murphy
Notary Public

My commission expires:

FORM SEA-1 Updated (7/1/06)



County of Fairfax, Virginia

MEMORANDUM

DATE: December 2, 2016

TO: Barbara Berlin, Director
Zoning Evaluation Division, DPZ

FROM: Denise M. James, Chief *DMJ*
Environment and Development Review Branch, DPZ

SUBJECT: **Environmental Assessment: SE 2016-SP-019**
Dominion Virginia Power, Ox Substation Security

The subject Special Exception application proposes to construct a 15-20 feet high security fence with 25 foot super poles around the periphery of the Ox Road Substation located 8234 Rosedale Drive, Fairfax Station, Virginia. The fence will enclose approximately 7.74 acres of the 56.13 acre facility where the high voltage equipment is located. This proposal for a security fence is Dominion Virginia Power's response to the Federal Energy Regulatory Commission's directive to ensure protection and to avoid risks to power systems due to physical security threats and vulnerabilities.

The environmental concern identified with by this application is the potential creation of significant stockpiles of loose soil resulting from installing 25 foot poles to support the security fence. Staff recommends that the applicant implement erosion control measures in order to contain the soil stockpiles and to ultimately prevent runoff from entering the unnamed tributaries of Sandy Run which are in close proximity to the substation.

Except for erosion and sedimentation control, as noted above, this application raises no significant environmental concerns.

DMJ: MAW

Department of Planning and Zoning
Planning Division
12055 Government Center Parkway, Suite 730
Fairfax, Virginia 22035-5509
Phone 703-324-1380
Fax 703-653-9447
www.fairfaxcounty.gov/dpz/



Excellence * Innovation * Stewardship
Integrity * Teamwork * Public Service



County of Fairfax, Virginia

MEMORANDUM

DATE: October 25, 2016

TO: Barbara Berlin, Director
Zoning Evaluation Division
Department of Planning and Zoning

FROM: Michael A. Davis, Acting Chief 
Site Analysis Section
Department of Transportation

FILE: 3-5 (SE 2016-SP-019)

SUBJECT: Transportation Impact

REFERENCE: SE 2016-SP-019
Virginia Electric & Power Company d/b/a Dominion Virginia Power
Land Identification Map: 97-3 ((1)) 14, 97-3 ((15)) 8; 106-1 ((1)) 1, 2

Transmitted herewith are the comments from the Department of Transportation with respect to the referenced application. These comments are based on plats made available to this office dated September 1, 2016. The applicant requests approval of a Special Exception to permit the Ox Substation Security Enhancement Project. The proposed Project includes the construction of a security fence that will be approximately 15 to 20 feet in height around the perimeter of an existing electric substation facility. Additional site improvements would include the improvement of an existing access road to be used for construction and substation service access. There are no permanent employees and none are proposed. The site is visited approximately one or twice per month for inspection and as required for any needed service.

This department has no transportation issues with this application.

MAD/LAH/lah

cc: Harold Ellis, DPZ

GLOSSARY

This Glossary is provided to assist the public in understanding the staff evaluation and analysis of development proposals. It should not be construed as representing legal definitions. Refer to the Fairfax County Zoning Ordinance, Comprehensive Plan or Public Facilities Manual for additional information.

ABANDONMENT: Refers to road or street abandonment, an action taken by the Board of Supervisors, usually through the public hearing process, to abolish the public's right-of-passage over a road or road right-of way. Upon abandonment, the right-of-way automatically reverts to the underlying fee owners. If the fee to the owner is unknown, Virginia law presumes that fee to the roadbed rests with the adjacent property owners if there is no evidence to the contrary.

ACCESSORY DWELLING UNIT (OR APARTMENT): A secondary dwelling unit established in conjunction with and clearly subordinate to a single family detached dwelling unit. An accessory dwelling unit may be allowed if a special permit is granted by the Board of Zoning Appeals (BZA). Refer to Sect. 8-918 of the Zoning Ordinance.

AFFORDABLE DWELLING UNIT (ADU) DEVELOPMENT: Residential development to assist in the provision of affordable housing for persons of low and moderate income in accordance with the affordable dwelling unit program and in accordance with Zoning Ordinance regulations. Residential development which provides affordable dwelling units may result in a density bonus (see below) permitting the construction of additional housing units. See Part 8 of Article 2 of the Zoning Ordinance.

AGRICULTURAL AND FORESTAL DISTRICTS: A land use classification created under Chapter 114 or 115 of the Fairfax County Code for the purpose of qualifying landowners who wish to retain their property for agricultural or forestal use for use/value taxation pursuant to Chapter 58 of the Fairfax County Code.

BARRIER: A wall, fence, earthen berm, or plant materials which may be used to provide a physical separation between land uses. Refer to Article 13 of the Zoning Ordinance for specific barrier requirements.

BEST MANAGEMENT PRACTICES (BMPs): Stormwater management techniques or land use practices that are determined to be the most effective, practicable means of preventing and/or reducing the amount of pollution generated by nonpoint sources in order to improve water quality.

BUFFER: Graduated mix of land uses, building heights or intensities designed to mitigate potential conflicts between different types or intensities of land uses; may also provide for a transition between uses. A landscaped buffer may be an area of open, undeveloped land and may include a combination of fences, walls, berms, open space and/or landscape plantings. A buffer is not necessarily coincident with transitional screening.

CHESAPEAKE BAY PRESERVATION ORDINANCE: Regulations which the State has mandated must be adopted to protect the Chesapeake Bay and its tributaries. These regulations must be incorporated into the comprehensive plans, zoning ordinances and subdivision ordinances of the affected localities. Refer to Chesapeake Bay Preservation Act, Va. Code Section 10.1-2100 et seq and VR 173-02-01, Chesapeake Bay Preservation Area Designation and Management Regulations.

CLUSTER DEVELOPMENT: Residential development in which the lots are clustered on a portion of a site so that significant environmental/historical/cultural resources may be preserved or recreational amenities provided. While smaller lot sizes are permitted in a cluster subdivision to preserve open space, the overall density cannot exceed that permitted by the applicable zoning district. See Sect. 2-421 and Sect. 9-615 of the Zoning Ordinance.

COUNTY 2232 REVIEW PROCESS: A public hearing process pursuant to Sect. 15.2-2232 (Formerly Sect. 15.1-456) of the Virginia Code which is used to determine if a proposed public facility not shown on the adopted Comprehensive Plan is in substantial accord with the plan. Specifically, this process is used to determine if the general or approximate location, character and extent of a proposed facility is in substantial accord with the Plan.

dBA: The momentary magnitude of sound weighted to approximate the sensitivity of the human ear to certain frequencies; the dBA value describes a sound at a given instant, a maximum sound level or a steady state value. See also Ldn.

DENSITY: Number of dwelling units (du) divided by the gross acreage (ac) of a site being developed in residential use; or, the number of dwelling units per acre (du/ac) except in the PRC District when density refers to the number of persons per acre.

DENSITY BONUS: An increase in the density otherwise allowed in a given zoning district which may be granted under specific provisions of the Zoning Ordinance when a developer provides excess open space, recreation facilities, or affordable dwelling units (ADUs), etc.

DEVELOPMENT CONDITIONS: Terms or conditions imposed on a development by the Board of Supervisors (BOS) or the Board of Zoning Appeals (BZA) in connection with approval of a special exception, special permit or variance application or rezoning application in a "P" district. Conditions may be imposed to mitigate adverse impacts associated with a development as well as secure compliance with the Zoning Ordinance and/or conformance with the Comprehensive Plan. For example, development conditions may regulate hours of operation, number of employees, height of buildings, and intensity of development.

DEVELOPMENT PLAN: A graphic representation which depicts the nature and character of the development proposed for a specific land area: information such as topography, location and size of proposed structures, location of streets trails, utilities, and storm drainage are generally included on a development plan. A development plan is a submission requirement for rezoning to the PRC District. A **GENERALIZED DEVELOPMENT PLAN (GDP)** is a submission requirement for a rezoning application for all conventional zoning districts other than a P District. A development plan submitted in connection with a special exception (SE) or special permit (SP) is generally referred to as an SE or SP plat. A **CONCEPTUAL DEVELOPMENT PLAN (CDP)** is a submission requirement when filing a rezoning application for a P District other than the PRC District; a CDP characterizes in a general way the planned development of the site. A **FINAL DEVELOPMENT PLAN (FDP)** is a submission requirement following the approval of a conceptual development plan and rezoning application for a P District other than the PRC District; an FDP further details the planned development of the site. See Article 16 of the Zoning Ordinance.

EASEMENT: A right to or interest in property owned by another for a specific and limited purpose. Examples: access easement, utility easement, construction easement, etc. Easements may be for public or private purposes.

ENVIRONMENTAL QUALITY CORRIDORS (EQCs): An open space system designed to link and preserve natural resource areas, provide passive recreation and protect wildlife habitat. The system includes stream valleys, steep slopes and wetlands. For a complete definition of EQCs, refer to the Environmental section of the Policy Plan for Fairfax County contained in Vol. 1 of the Comprehensive Plan.

ERODIBLE SOILS: Soils that wash away easily, especially under conditions where stormwater runoff is inadequately controlled. Silt and sediment are washed into nearby streams, thereby degrading water quality.

FLOODPLAIN: Those land areas in and adjacent to streams and watercourses subject to periodic flooding; usually associated with environmental quality corridors. The 100 year floodplain drains 70 acres or more of land and has a one percent chance of flood occurrence in any given year.

FLOOR AREA RATIO (FAR): An expression of the amount of development intensity (typically, non-residential uses) on a specific parcel of land. FAR is determined by dividing the total square footage of gross floor area of buildings on a site by the total square footage of the site itself.

FUNCTIONAL CLASSIFICATION: A system for classifying roads in terms of the character of service that individual facilities are providing or are intended to provide, ranging from travel mobility to land access. Roadway system functional classification elements include Freeways or Expressways which are limited access highways, Other Principal (or Major) Arterials, Minor Arterials, Collector Streets, and Local Streets. Principal arterials are designed to accommodate travel; access to adjacent properties is discouraged. Minor arterials are designed to serve both through traffic and local trips. Collector roads and streets link local streets and properties with the arterial network. Local streets provide access to adjacent properties.

GEOTECHNICAL REVIEW: An engineering study of the geology and soils of a site which is submitted to determine the suitability of a site for development and recommends construction techniques designed to overcome development on problem soils, e.g., marine clay soils.

HYDROCARBON RUNOFF: Petroleum products, such as motor oil, gasoline or transmission fluid deposited by motor vehicles which are carried into the local storm sewer system with the stormwater runoff, and ultimately, into receiving streams; a major source of non-point source pollution. An oil-grit separator is a common hydrocarbon runoff reduction method.

IMPERVIOUS SURFACE: Any land area covered by buildings or paved with a hard surface such that water cannot seep through the surface into the ground.

INFILL: Development on vacant or underutilized sites within an area which is already mostly developed in an established development pattern or neighborhood.

INTENSITY: The magnitude of development usually measured in such terms as density, floor area ratio, building height, percentage of impervious surface, traffic generation, etc. Intensity is also based on a comparison of the development proposal against environmental constraints or other conditions which determine the carrying capacity of a specific land area to accommodate development without adverse impacts.

Ldn: Day night average sound level. It is the twenty-four hour average sound level expressed in A-weighted decibels; the measurement assigns a "penalty" to night time noise to account for night time sensitivity. Ldn represents the total noise environment which varies over time and correlates with the effects of noise on the public health, safety and welfare.

LEVEL OF SERVICE (LOS): An estimate of the effectiveness of a roadway to carry traffic, usually under anticipated peak traffic conditions. Level of Service efficiency is generally characterized by the letters A through F, with LOS-A describing free flow traffic conditions and LOS-F describing jammed or grid-lock conditions.

MARINE CLAY SOILS: Soils that occur in widespread areas of the County generally east of Interstate 95. Because of the abundance of shrink-swell clays in these soils, they tend to be highly unstable. Many areas of slope failure are evident on natural slopes. Construction on these soils may initiate or accelerate slope movement or slope failure. The shrink-swell soils can cause movement in structures, even in areas of flat topography, from dry to wet seasons resulting in cracked foundations, etc. Also known as slippage soils.

OPEN SPACE: That portion of a site which generally is not covered by buildings, streets, or parking areas. Open space is intended to provide light and air; open space may function as a buffer between land uses or for scenic, environmental, or recreational purposes.

OPEN SPACE EASEMENT: An easement usually granted to the Board of Supervisors which preserves a tract of land in open space for some public benefit in perpetuity or for a specified period of time. Open space easements may be accepted by the Board of Supervisors, upon request of the land owner, after evaluation under criteria established by the Board. See Open Space Land Act, Code of Virginia, Sections 10.1-1700, et seq.

P DISTRICT: A "P" district refers to land that is planned and/or developed as a Planned Development Housing (PDH) District, a Planned Development Commercial (PDC) District or a Planned Residential Community (PRC) District. The PDH, PDC and PRC Zoning Districts are established to encourage innovative and creative design for land development; to provide ample and efficient use of open space; to promote a balance in the mix of land uses, housing types, and intensity of development; and to allow maximum flexibility in order to achieve excellence in physical, social and economic planning and development of a site. Refer to Articles 6 and 16 of the Zoning Ordinance.

PROFFER: A written condition, which, when offered voluntarily by a property owner and accepted by the Board of Supervisors in a rezoning action, becomes a legally binding condition which is in addition to the zoning district regulations applicable to a specific property. Proffers are submitted and signed by an owner prior to the Board of Supervisors public hearing on a rezoning application and run with the land. Once accepted by the Board, proffers may be modified only by a proffered condition amendment (PCA) application or other zoning action of the Board and the hearing process required for a rezoning application applies. See Sect. 15.2-2303 (formerly 15.1-491) of the Code of Virginia.

PUBLIC FACILITIES MANUAL (PFM): A technical text approved by the Board of Supervisors containing guidelines and standards which govern the design and construction of site improvements incorporating applicable Federal, State and County Codes, specific standards of the Virginia Department of Transportation and the County's Department of Public Works and Environmental Services.

RESOURCE MANAGEMENT AREA (RMA): That component of the Chesapeake Bay Preservation Area comprised of lands that, if improperly used or developed, have a potential for causing significant water quality degradation or for diminishing the functional value of the Resource Protection Area. See Fairfax County Code, Ch. 118, Chesapeake Bay Preservation Ordinance.

RESOURCE PROTECTION AREA (RPA): That component of the Chesapeake Bay Preservation Area comprised of lands at or near the shoreline or water's edge that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may result in significant degradation of the quality of state waters. In their natural condition, these lands provide for the removal, reduction or assimilation of sediments from runoff entering the Bay and its tributaries, and minimize the adverse effects of human activities on state waters and aquatic resources. New development is generally discouraged in an RPA. See Fairfax County Code, Ch. 118, Chesapeake Bay Preservation Ordinance.

SITE PLAN: A detailed engineering plan, to scale, depicting the development of a parcel of land and containing all information required by Article 17 of the Zoning Ordinance. Generally, submission of a site plan to DPWES for review and approval is required for all residential, commercial and industrial development except for development of single family detached dwellings. The site plan is required to assure that development complies with the Zoning Ordinance.

SPECIAL EXCEPTION (SE) / SPECIAL PERMIT (SP): Uses, which by their nature, can have an undue impact upon or can be incompatible with other land uses and therefore need a site specific review. After review, such uses may be allowed to locate within given designated zoning districts if appropriate and only under special controls, limitations, and regulations. A special exception is subject to public hearings by the Planning Commission and Board of Supervisors with approval by the Board of Supervisors; a special permit requires a public hearing and approval by the Board of Zoning Appeals. Unlike proffers which are voluntary, the Board of Supervisors or BZA may impose reasonable conditions to assure, for example, compatibility and safety. See Article 8, Special Permits and Article 9, Special Exceptions, of the Zoning Ordinance.

STORMWATER MANAGEMENT: Engineering practices that are incorporated into the design of a development in order to mitigate or abate adverse water quantity and water quality impacts resulting from development. Stormwater management systems are designed to slow down or retain runoff to re-create, as nearly as possible, the pre-development flow conditions.

SUBDIVISION PLAT: The engineering plan for a subdivision of land submitted to DPWES for review and approved pursuant to Chapter 101 of the County Code.

TRANSPORTATION DEMAND MANAGEMENT (TDM): Actions taken to reduce single occupant vehicle automobile trips or actions taken to manage or reduce overall transportation demand in a particular area.

TRANSPORTATION SYSTEM MANAGEMENT (TSM) PROGRAMS: This term is used to describe a full spectrum of actions that may be applied to improve the overall efficiency of the transportation network. TSM programs usually consist of low-cost alternatives to major capital expenditures, and may include parking management measures, ridesharing programs, flexible or staggered work hours, transit promotion or operational improvements to the existing roadway system. TSM includes Transportation Demand Management (TDM) measures as well as H.O.V. use and other strategies associated with the operation of the street and transit systems.

URBAN DESIGN: An aspect of urban or suburban planning that focuses on creating a desirable environment in which to live, work and play. A well-designed urban or suburban environment demonstrates the four generally accepted principles of design: clearly identifiable function for the area; easily understood order; distinctive identity; and visual appeal.

VACATION: Refers to vacation of street or road as an action taken by the Board of Supervisors in order to abolish the public's right-of-passage over a road or road right-of-way dedicated by a plat of subdivision. Upon vacation, title to the road right-of-way transfers by operation of law to the owner(s) of the adjacent properties within the subdivision from whence the road/road right-of-way originated.

VARIANCE: An application to the Board of Zoning Appeals which seeks relief from a specific zoning regulation such as lot width, building height, or minimum yard requirements, among others. A variance may only be granted by the Board of Zoning Appeals through the public hearing process and upon a finding by the BZA that the variance application meets the required Standards for a Variance set forth in Sect. 18-404 of the Zoning Ordinance.

WETLANDS: Land characterized by wetness for a portion of the growing season. Wetlands are generally delineated on the basis of physical characteristics such as soil properties indicative of wetness, the presence of vegetation with an affinity for water, and the presence or evidence of surface wetness or soil saturation. Wetland environments provide water quality improvement benefits and are ecologically valuable. Development activity in wetlands is subject to permitting processes administered by the U.S. Army Corps of Engineers

TIDAL WETLANDS: Vegetated and nonvegetated wetlands as defined in Chapter 116 Wetlands Ordinance of the Fairfax County Code: includes tidal shores and tidally influenced embayments, creeks, and tributaries to the Occoquan and Potomac Rivers. Development activity in tidal wetlands may require approval from the Fairfax County Wetlands Board.

Abbreviations Commonly Used in Staff Reports

A&F	Agricultural & Forestal District	PDH	Planned Development Housing
ADU	Affordable Dwelling Unit	PFM	Public Facilities Manual
ARB	Architectural Review Board	PRC	Planned Residential Community
BMP	Best Management Practices	RC	Residential-Conservation
BOS	Board of Supervisors	RE	Residential Estate
BZA	Board of Zoning Appeals	RMA	Resource Management Area
COG	Council of Governments	RPA	Resource Protection Area
CBC	Community Business Center	RUP	Residential Use Permit
CDP	Conceptual Development Plan	RZ	Rezoning
CRD	Commercial Revitalization District	SE	Special Exception
DOT	Department of Transportation	SEA	Special Exception Amendment
DP	Development Plan	SP	Special Permit
DPWES	Department of Public Works and Environmental Services	TDM	Transportation Demand Management
DPZ	Department of Planning and Zoning	TMA	Transportation Management Association
DU/AC	Dwelling Units Per Acre	TSA	Transit Station Area
EQC	Environmental Quality Corridor	TSM	Transportation System Management
FAR	Floor Area Ratio	UP & DD	Utilities Planning and Design Division, DPWES
FDP	Final Development Plan	VC	Variance
GDP	Generalized Development Plan	VDOT	Virginia Dept. of Transportation
GFA	Gross Floor Area	VPD	Vehicles Per Day
HC	Highway Corridor Overlay District	VPH	Vehicles per Hour
HCD	Housing and Community Development	WMATA	Washington Metropolitan Area Transit Authority
LOS	Level of Service	WS	Water Supply Protection Overlay District
Non-RUP	Non-Residential Use Permit	ZAD	Zoning Administration Division, DPZ
OSDS	Office of Site Development Services, DPWES	ZED	Zoning Evaluation Division, DPZ
PCA	Proffered Condition Amendment	ZPRB	Zoning Permit Review Branch
PD	Planning Division		
PDC	Planned Development Commercial		