



**APPLICATION ACCEPTED:** July 30, 2012  
**APPLICATION REVISED:** December 13, 2012  
**PLANNING COMMISSION:** January 10, 2013  
**BOARD OF SUPERVISORS:** Not yet scheduled

## County of Fairfax, Virginia

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# WS

December 27, 2012

### STAFF REPORT

**2232-Y12-5**  
**SE 2012-SU-015**

### SULLY DISTRICT

**APPLICANT:** Virginia Electric & Power Company

**ZONING:** R-1 (Residential, 1 du/ac) and  
WS (Water Supply Protection Overlay District)

**PARCEL:** 65-3 ((1)) 35

**ACREAGE:** 43,212 square feet

**FAR:** 0.01

**OPEN SPACE:** 11%

**PLAN MAP:** Utility and Residential at 2 du/ac

**SE CATEGORY:** Category 1 – Light Public Utility Uses

**PROPOSAL:** 3,757-square foot expansion of an existing  
electrical distribution substation

### STAFF RECOMMENDATIONS:

Staff recommends that the Planning Commission find that the facility proposed under 2232-Y12-5 satisfies the criteria of location, character, and extent as specified in §15.2-2232 of the Code of Virginia and is substantially in accord with the provisions of the Comprehensive Plan.

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Joe Gorney

Staff recommends approval of SE 2012-SU-015 subject to the proposed development conditions in Appendix 1.

Staff recommends approval of the transitional screening and barrier requirements modification; the 10-year canopy requirement modification; and the tree preservation target deviation, in lieu of the alternatives as shown on the proposed plat and as conditioned.

It should be noted that it is not the intent of staff to recommend that the Board, in adopting any conditions proffered by the owner, 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 recommendation of staff; it does not reflect the position of the Board of Supervisors.

The approval of this special exception 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.

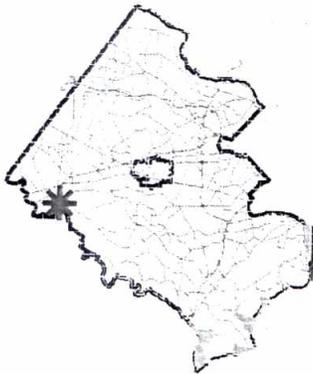
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Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 48 hours advance notice. For additional information on ADA call (703) 324-1334 or TTY 711 (Virginia Relay Center).

# Special Exception

SE 2012-SU-015



Applicant: VIRGINIA ELECTRIC & POWER COMPANY  
D/B/A DOMINION VIRGINIA POWER

Accepted: 07/30/2012

Proposed: EXISTING ELECTRIC UTILITY  
SUBSTATION EXPANSION

Area: 43,212 SF OF LAND; DISTRICT - SULLY

Zoning Dist Sect: 03-0104

Art 9 Group and Use: 1-01

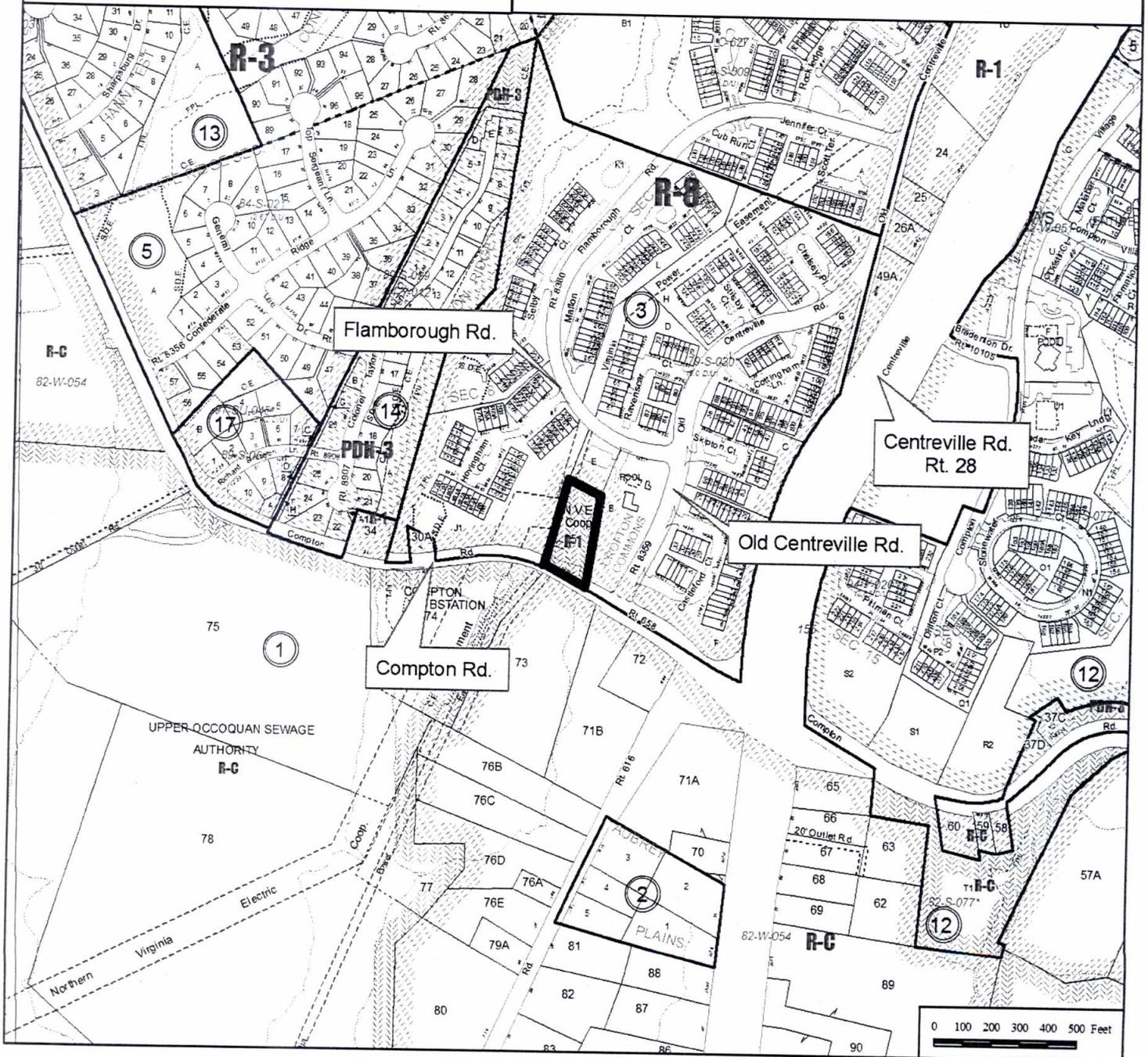
Located: 14600 COMPTON ROAD,  
CENTREVILLE, VA 20121

Zoning: R-1

Plan Area: 3

Overlay Dist: WS

Map Ref Num: 065-3- /01/ /0035



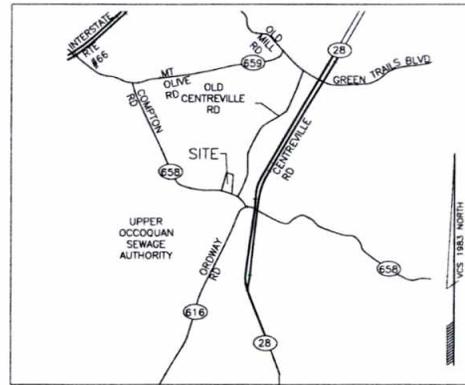
# HARRISON SUBSTATION

## SPECIAL EXCEPTION PLAT

Sully District Fairfax County, Virginia

ADDRESS: 14600 COMPTON ROAD CENTREVILLE, VA 20121

PARCEL# 65-3-((1))-35



VICINITY MAP

SCALE 1" = 1000'

### SHEET INDEX

1. COVER SHEET
2. NOTES, TABULATION & EXISTING VEGETATION MAP
3. EXISTING SITE MAP
4. SPECIAL EXCEPTION PLAT
5. LANDSCAPE
6. PHOTO SHEET
7. SWM/BMP NARRATIVE
8. PRE & POST DEVELOPMENT DRAINAGE MAPS & BMP COMPUTATIONS
9. ADEQUATE OUTFALL MAP
10. BMP MAP, COMPUTATIONS & DETAILS

Applicant: Dominion Virginia Power  
 Owner: Northern Virginia Electric Cooperative



COVER SHEET

HARRISON SUBSTATION  
 SPECIAL EXCEPTION PLAT

Fairfax County, Virginia

Plan Number

Drawn By ES

Designed By ES

Checked By

Date 06/15/2012

Scale

Sheet

1 of 10

File Number

EX-253

NO.	DATE	DESCRIPTION	BY
3	12-11-12	REVISED PER REVIEW AGENCY COMMENTS	ES/RL
2	12-01-12	REVISED PER REVIEW AGENCY COMMENTS	ES/RL
1	10-01-12	REVISED PER REVIEW AGENCY COMMENTS	ES
NO.		DATE	DESCRIPTION
		REVISIONS	BY



**NOTES:**

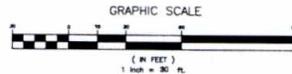
- THE PROPERTY THAT IS THE SUBJECT OF THIS SPECIAL EXCEPTION PLAT IS IDENTIFIED ON THE FAIRFAX COUNTY ZONING MAP AS 65-3(1)-35 AND IS ZONED R-1.
- THE TOTAL LAND AREA OF THE PARCEL IS 0.992± ACRES (43,212± SF).
- THIS SPECIAL EXCEPTION PLAT ACCOMPANIES AN APPLICATION PERMIT FOR THE EXPANSION OF AN ELECTRICAL SUBSTATION.
- THE BOUNDARY INFORMATION SHOWN HEREON IS ESTABLISHED TO INCLUDE ALL THE FACILITIES SUBJECT TO THIS SPECIAL EXCEPTION.
- THE TOPOGRAPHY SHOWN HEREON IS AT A CONTOUR INTERVAL OF ONE (1) FOOT FROM A COMBINATION OF FIELD SURVEYS PERFORMED BY DEWBERRY AND DAVIS IN 2011 AND 5 FOOT FAIRFAX COUNTY TOPOGRAPHY MAPS.
- A STATEMENT WHICH CONFIRMS THE OWNERSHIP OF THE SUBJECT PROPERTY AND THE NATURE OF THE APPLICANTS INTEREST IN SUCH PROPERTY IS PRESENTED IN A SEPARATE DOCUMENT.
- MINIMUM YARD REQUIREMENTS FOR ALL OTHER STRUCTURES IN THE R-1 DISTRICT ARE AS FOLLOWS:  
 FRONT: CONTROLLED BY A 50° ANGLE OF BULK PLANE, BUT NOT LESS THAN 40 FEET.  
 SIDE: CONTROLLED BY A 45° ANGLE OF BULK PLANE, BUT NOT LESS THAN 20 FEET.  
 REAR: CONTROLLED BY A 45° ANGLE OF BULK PLANE, BUT NOT LESS THAN 25 FEET.
- THE PROPOSED SUBSTATION WILL BE UNMANNED, AND THEREFORE DOES NOT REQUIRE SANITARY SEWER OR PUBLIC WATER.
- THERE IS NO FLOODPLAIN, RESOURCE PROTECTION AREA (RPA) OR ENVIRONMENTAL QUALITY CORRIDOR (EQC) ON THE SUBJECT PROPERTY.
- THERE ARE EXISTING UTILITY EASEMENTS HAVING A WIDTH OF TWENTY-FIVE (25) FEET OR MORE SHOWN ON THE GRAPHIC. THE LOCATION OF THE EASEMENTS SHOWN HEREON IS TAKEN FROM TAX RECORDS AND/OR DEEDS AND OTHER PUBLIC INFORMATION. THERE ARE NO MAJOR UNDERGROUND EASEMENTS, IN EXCESS OF 25 FEET, LOCATED ON THIS PROPERTY.
- TO THE BEST OF OUR KNOWLEDGE THERE ARE NO GRAVES LOCATED ON THE SUBJECT PROPERTY.
- EXCEPT AS QUALIFIED ABOVE, THE PROPOSED DEVELOPMENT CONFORMS TO ALL CURRENT APPLICABLE LAND DEVELOPMENT ORDINANCES AND ADOPTED STANDARDS.
- NO HAZARDOUS WASTE IS TO BE GENERATED, UTILIZED, STORED, TREATED, AND/OR DISPOSED OF ON SITE. NO STORAGE TANKS OR CONTAINERS ON-SITE THAT ARE HOUSING HAZARDOUS WASTE.
- IF PLANTING IN AREAS THAT HAVE BEEN PREVIOUSLY COMPACTED, THE SOIL SHALL BE PROPERLY PREPARED (TILLED AND AMENDED AS NEEDED BASED ON SOIL SAMPLES) TO A DEPTH OF 1 FOOT PRIOR TO INSTALLATION OF LANDSCAPE MATERIAL.
- CONNECTION POINT OF TRAILS TO BE DETERMINED AT FINAL ENGINEERING. THE APPLICANT WILL WORK WITH THE ADJACENT OWNERS TO DETERMINE THE LOCATION OF THE TRAIL CONNECTION.

**TABULATION:**

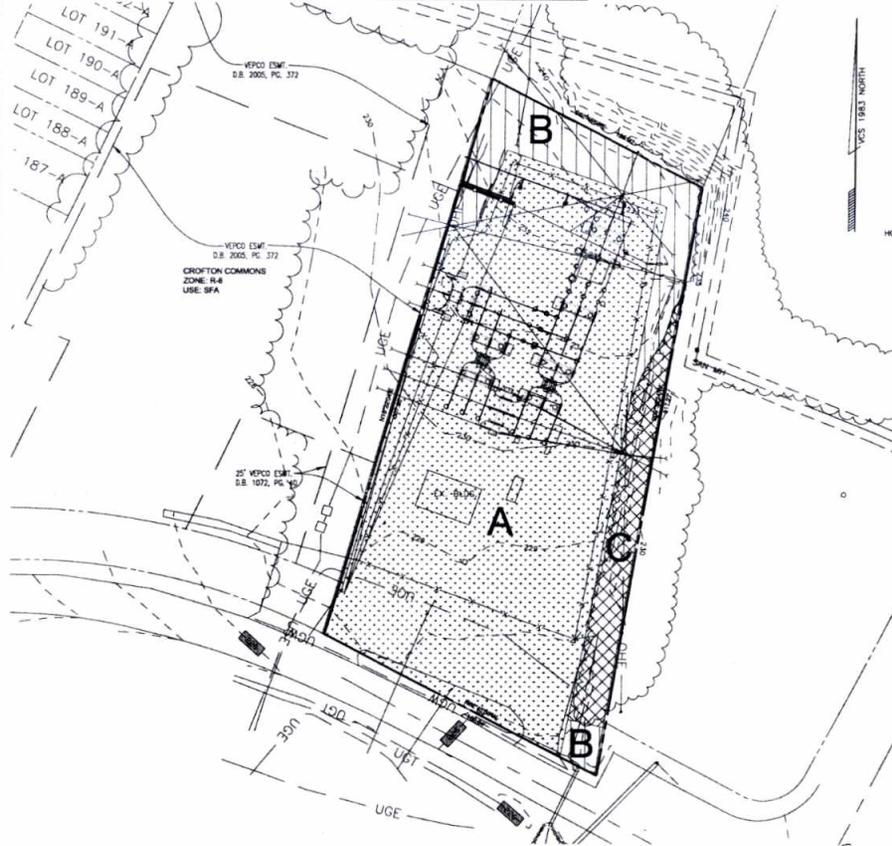
EXISTING/PROPOSED ZONING	R-1
TOTAL LAND AREA	0.992 ± AC (43,212 ± SF)
MAXIMUM FLOOR AREA RATIO PERMITTED	0.15
EXISTING/PROPOSED FLOOR AREA RATIO	0.01
MAXIMUM GROSS FLOOR AREA PERMITTED	6,481 ± SF
EXISTING/PROPOSED GROSS FLOOR AREA	560 ± SF
PARKING SPACES REQUIRED/PROVIDED	1 SPACE
MAXIMUM BUILDING HEIGHT PERMITTED	60 FT
MAXIMUM BUILDING HEIGHT PROPOSED	N/A
OPEN SPACE REQUIRED (N/A)	0.0 ± AC
OPEN SPACE PROVIDED (11%)	0.11 ± AC
TREE COVER REQUIRED/PROVIDED	30%

**EXISTING VEGETATION MAP COVER TYPE SUMMARY**

Cover Type	Primary Species	Successional Stage	Condition	Acreage	Comments
A Developed Land	n.a.	n.a.		34,330 ± sf	existing substation
B Maintained Grassland	n.a.		fair	0,432 ± sf	grass outside of gravel/fenced areas
C Old Field	red maple, red cedar		fair/good	2,450 ± sf	Butter
TOTAL =				43,212 ± sf	



**EXISTING VEGETATION MAP**



**10-YEAR TREE CANOPY CALCULATION**

A. Tree Preservation Target and Statement	
See table 12.3 on sheet 2	
B. Tree Canopy Requirement	
B1	Site's gross site area = 43,212 SF
B2	Site's area dedicated to paths, road footage and other paved areas = 4,480 SF
B3	Site's area of easements = N/A
B4	Adjusted gross site area (GSA) = 38,732 SF
B5	Site's site's zoning and/or use = R-1
B6	Percentage of 10-year tree canopy required = 30%
B7	Area of 10-year tree canopy required (R-1 30%) = 11,619.6 SF
B8	Modification of 10-year Tree Canopy Requirements = Notified
B9	75% or less than last plan sheet where modification needed = Notified
B5	Sheet 5
C. Tree Preservation	
C1	Tree Preservation Target Area = 1,037 SF
C2	Total canopy area meeting standards of 12-04-00 = 693 SF
C3	Total canopy area provided by removal of utility easements and other easements = 0
C4	Total canopy area provided by "average" residential lots = 0
C5	Total canopy area provided by "average" residential lots = 0
C6	Total canopy area provided by "average" residential lots = 0
C7	Canopy of trees within Resource Protection Areas and 100' year floodplains = 0
C8	Total of C3, C4, C5, C6, C7 and C8 = 693 SF
D. Tree Planting	
D1	Area of canopy to be met through tree planting (D1-D10) = 7,307 ± SF
D2	Area of canopy planned for a quality benefits = 0
D3	Area of canopy planned for energy conservation = 1 ± SF
D4	Area of canopy planned for water quality benefits = 1 ± SF
D5	Area of canopy planned for wildlife benefits = 1 ± SF
D6	Area of canopy planned for native trees = 1 ± SF
D7	Area of canopy provided by improved cultivars and genetics = 1 ± SF
D8	Area of canopy provided through tree seedlings = 1 ± SF
D9	Area of canopy provided through native shrubs or woody seed mix = 1 ± SF
D10	Percentage of D14 implemented by D15 = 1 ± SF
D11	Total of canopy area provided through tree planting = 1,500 SF
D12	is an off-site planting relief needed? No
D13	Tree Bank or Tree Fund? No
D14	Canopy area to be requested to be provided through off-site banking or tree bank? No
D15	Amount to be deposited into the Tree Preservation and Planting Fund = 0
E. Total of 10-year Tree Canopy Provided	
E1	Total of canopy area provided through tree preservation (C1-C10) = 693 SF
E2	Total of canopy area provided through tree planting (D1-D15) = 1,500 SF
E3	Total of canopy area provided through off-site banking (D16) = 0 SF
E4	Total of 10-year Tree Canopy Provided = 2,193 SF or 5.7%

**TABLE 12.3 TREE PRESERVATION TARGET CALCULATION**

	REQUIREMENTS	RESULTS
A	PRE-DEVELOPMENT AREA OF EXISTING TREE CANOPY (FROM EXISTING VEGETATION MAP) =	3,450 SF
B	PERCENTAGE OF GROSS SITE AREA COVERED BY EXISTING TREE CANOPY =	8%
C	PERCENTAGE OF 10-YEAR TREE CANOPY REQUIRED FOR SITE =	30% = 11,619.60 SF
D	PERCENTAGE OF THE 10-YEAR CANOPY REQUIREMENT THAT SHOULD BE MET THROUGH TREE PRESERVATION =	5%
E	PROPOSED PERCENTAGE OF CANOPY REQUIREMENT THAT WILL BE MET THROUGH TREE PRESERVATION =	5.9% = 693 SF
F	HAS THE TREE PRESERVATION TARGET MINIMUM BEEN MET?	NO

NO.	DATE	DESCRIPTION	BY
3	12-13-12	REVISED PER REVIEW AGENCY COMMENTS	ES/RL
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1	10-03-12	REVISED PER REVIEW AGENCY COMMENTS	ES

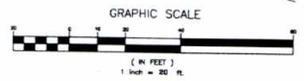
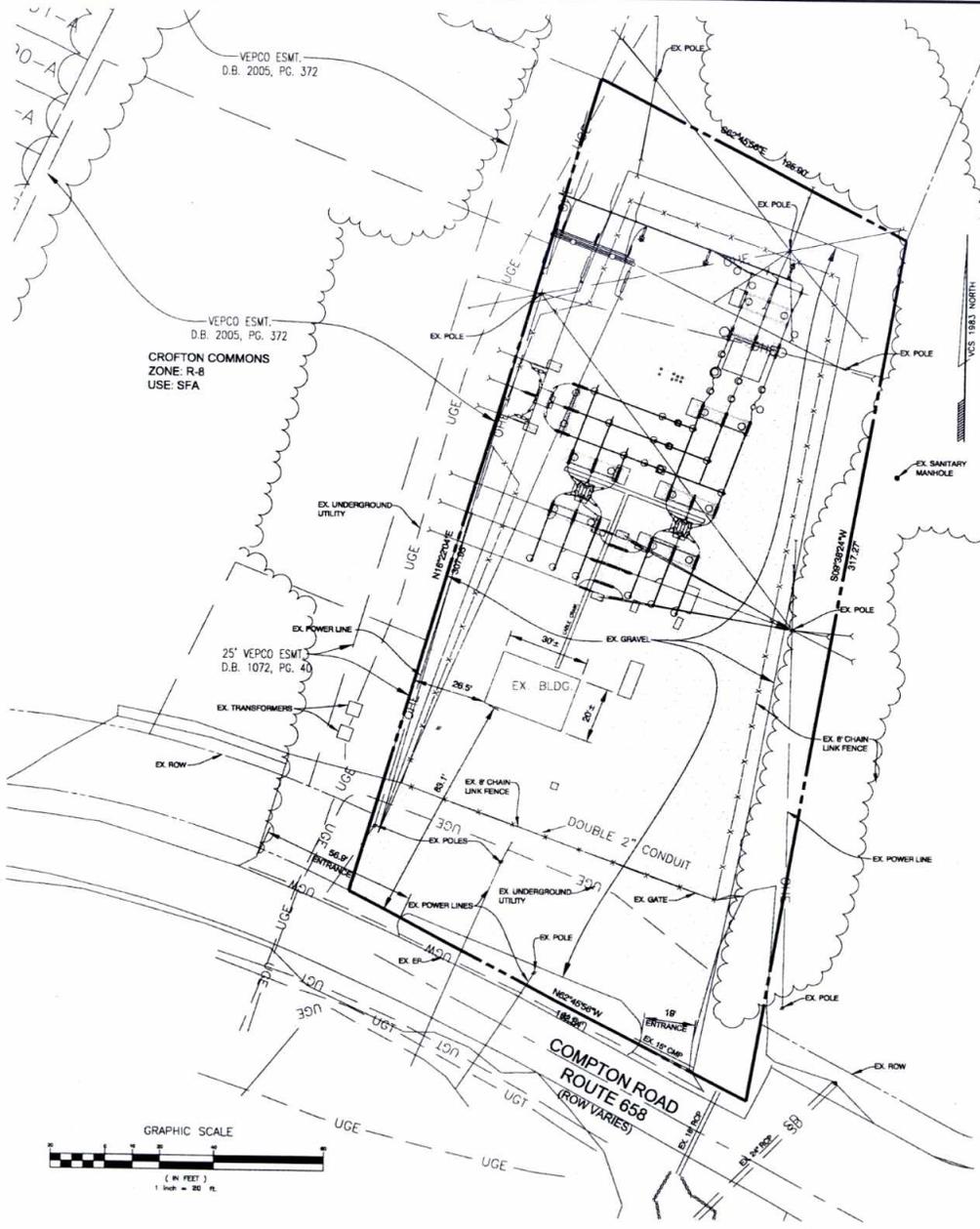


NOTES, TABULATION MAP & EXISTING VEGETATION MAP

HARRISON SUBSTATION SPECIAL EXCEPTION PLAT

Plan Number  
 Drawn By ES  
 Designed By ES  
 Checked By  
 Date 06/15/2012  
 Scale 1"=30'  
 Sheet 2 of 10  
 File Number  
 EX-253

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2	12-03-12	REVISED PER REVIEW AGENCY COMMENTS	ES/BL
1	10-03-12	REVISED PER REVIEW AGENCY COMMENTS	ES



**Dewberry**  
1800 BAYVIEW BLVD  
 DOWNTOWN 4  
 DOWNTOWN  
 DOWNTOWN LLC  
 FAYATW@DEWBERRY.COM  
 FAX: 703.961.2011

**EXISTING SITE MAP**

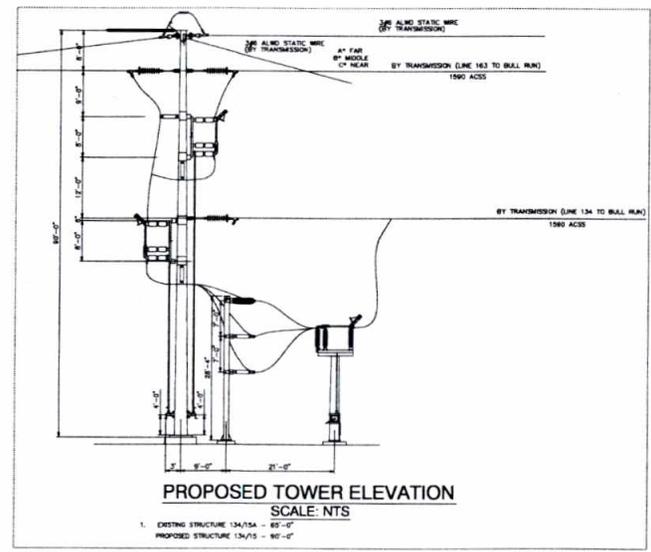
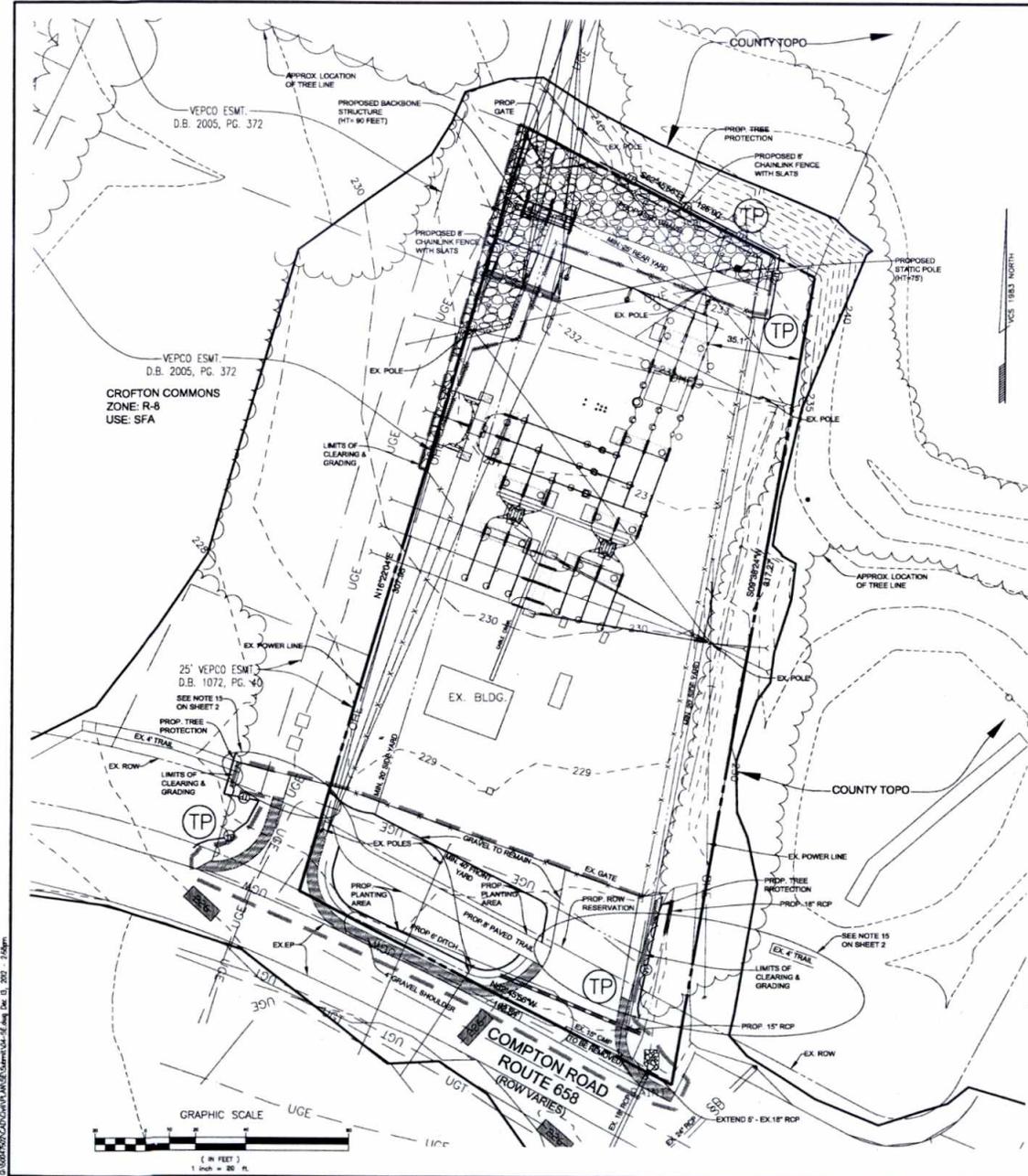
**HARRISON SUBSTATION  
 SPECIAL EXCEPTION PLAT**

Fairfax County, Virginia

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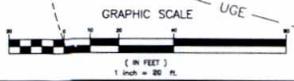
Sheet  
**3 of 10**

File Number  
**EX-253**



**LEGEND**

- X- EXISTING 8' CHAINLINK FENCE
- X- PROPOSED 8' CHAINLINK FENCE
- [Gravel symbol] PROPOSED GRAVEL
- (TP) PROPOSED TREE PROTECTION: (4' TALL, 14 GAUGE WELDED WIRE ATTACHED TO STEEL POST DRIVEN 18" INTO THE GROUND AND PLACED NO FURTHER THAN 10')
- - - APPROXIMATE LIMITS OF CLEARING AND GRADING



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1	10-03-12	REVISED PER REVIEW AGENCY COMMENTS	ES



**Dewberry**  
Dewberry & Davis LLP  
Dewberry LLC  
10000 WOODBRIDGE BLVD  
FACILITY SERVICES GROUP  
FACILITY SERVICES GROUP  
FACILITY SERVICES GROUP

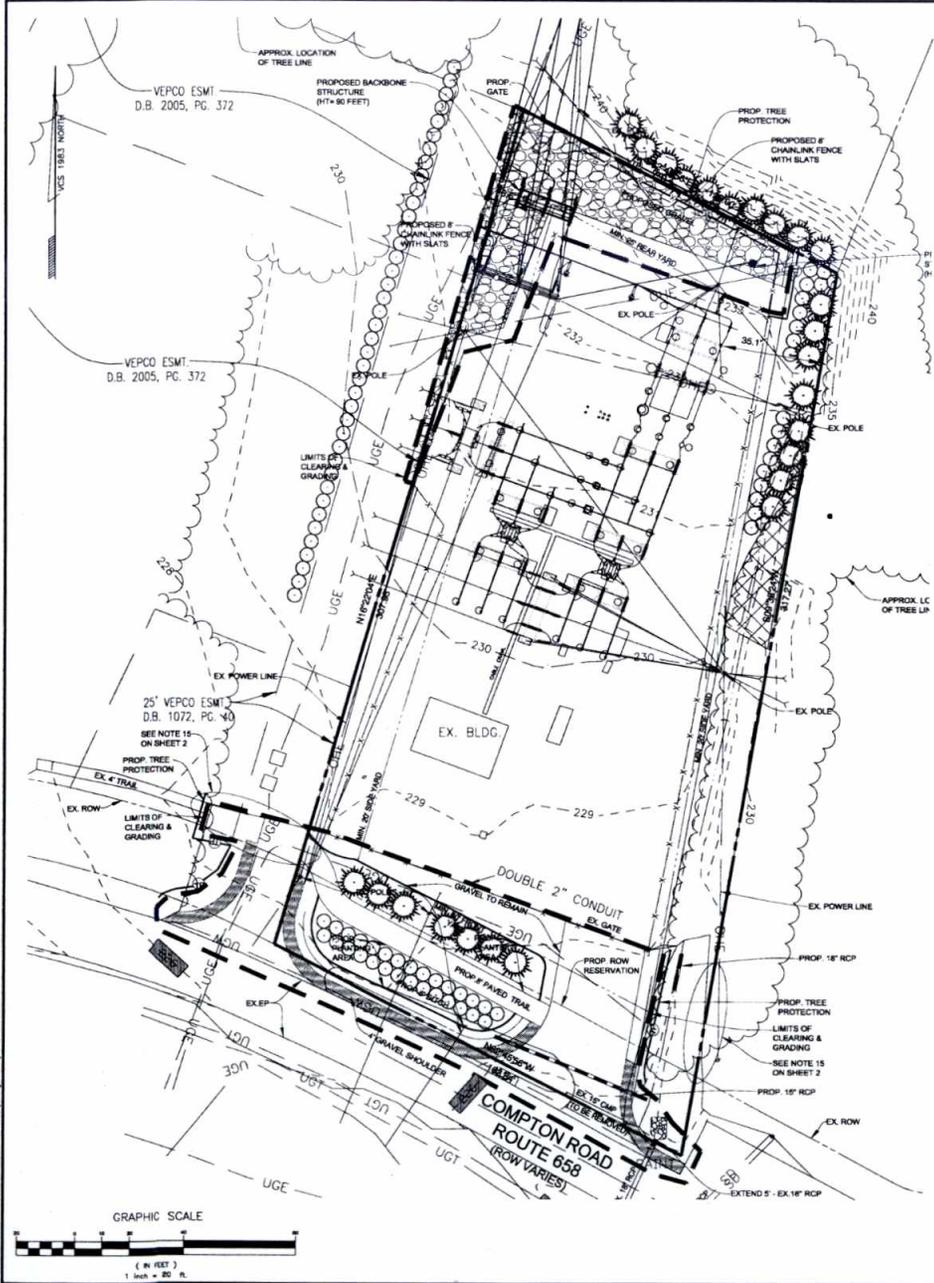
SPECIAL EXCEPTION PLAT

HARRISON SUBSTATION  
SPECIAL EXCEPTION PLAT

Fairfax County, Virginia

Plan Number	
Drawn By	ES
Designed By	ES
Checked By	
Date	06/15/2012
Scale	AS SHOWN
Sheet	4 of 10
File Number	EX-253

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**NOTES:**

1. IF PLANTING IN AREAS THAT HAVE BEEN PREVIOUSLY COMPACTED, THE SOIL SHALL BE PROPERLY PREPARED (TILLED AND AMENDED AS NEEDED BASED ON SOIL SAMPLES) TO A DEPTH OF 1 FOOT PRIOR TO INSTALLATION OF LANDSCAPE MATERIAL.

**LANDSCAPE SCHEDULE:**

KEY	QTY	NAME	SIZE	COVERAGE CALCULATIONS
☀️	15	Category II Evergreen Trees or Equivalents	6" FT	100 S.F.
		To be determined at final site plan. Plants may include but are not limited to Eastern Red Cedar, Serbian Spruce, or Carolina Hemlock.	1500 S.F.	
☀️	12	Category II Deciduous Trees or Equivalents	6" FT	0 S.F.
		To be determined at final site plan. Plants may include but are not limited to Eastern Red Cedar, Serbian Spruce, or Carolina Hemlock.	0 S.F.	
○	89	Medium Evergreen Shrubs	24" DB	0 S.F.
		To be determined at final site plan. Plants may include but are not limited to On & On Holly, Rhododendron or Viburnum.		0 S.F.
<b>TOTAL *</b>				<b>1800.00 S.F.</b>

**TRANSITIONAL SCREENING SCHEDULE:**

Required Transitional Screening to the Eastern, Northern & Western property lines	Type II
Minimum width of landscaped yard required	35 FT.
Minimum slope of landscaped yard provided	0 FT.
Barrier trees provided	
Eastern Property Line	0
Northern Property Line	10
Western Property Line	0
Total	10
Medium evergreen shrubs provided	
Eastern Property Line	20
Northern Property Line	0
Western Property Line	40
Total	60
Barrier required	Yes
Barrier provided	
Eastern Property Line	Type D
Northern Property Line	Type D
Western Property Line	Type D
Modification of Transitional Screening requirements requested?	Yes

**LEGEND:**

: EXISTING TREE PRESERVATION AREA, 693 SF.

**TRANSITIONAL SCREENING MODIFICATION:**

PURSUANT TO PAR. 2 OF SECT. 13-305 OF THE ZONING ORDINANCE A WAIVER OF THE TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS ARE HEREBY REQUESTED.

JUSTIFICATION: THE EXISTING SUB-STATION FACILITY LOCATED ON SITE WILL NOT ALLOW SUFFICIENT SPACE TO MEET THE REQUIREMENTS OF THE TYPE II TRANSITIONAL SCREENING REQUIREMENTS. THE BARRIER REQUIREMENTS WILL BE MET USING A CHAIN LINK FENCE WITH PLASTIC SLATS. LANDSCAPING IN THE AREA AVAILABLE ON-SITE AS WELL AS AREAS OFF-SITE HAS BEEN PROVIDED TO HELP PROVIDE SCREENING FOR THE ADJACENT PROPERTIES. EXISTING VEGETATION ALONG THE EASTERN PROPERTY LINE WILL NOT BE IMPACTED BY THE EXPANSION ASSOCIATED WITH THIS SPECIAL EXCEPTION AND WILL HELP TO PROVIDE SCREENING. ADDITIONALLY THE ADJACENT PROPERTIES TO THE EAST AND NORTH HAVE EXISTING EVERGREEN VEGETATION ALONG THE COMMON PROPERTY LINES THAT WILL PROVIDE SCREENING. THE PROPERTY TO THE NORTH ALSO SITS ON A HIGHER ELEVATION THAN THE SUBJECT SITE.

**10-YEAR TREE CANOPY MODIFICATION:**

PURSUANT TO 12-0513.3 THE DIRECTOR MAY APPROVE A MODIFICATION OF THE 10-YEAR TREE CANOPY REQUIREMENTS FOR ADDITIONS TO OR MODIFICATIONS OF EXISTING STRUCTURES OR USES TO THE MINIMUM EXTENT NECESSARY SO THAT THE REQUIREMENT WOULD NOT RESULT IN THE EXISTING STRUCTURE OR USE BEING UNABLE TO MEET SOME OTHER REQUIREMENT OF THE CODE OR THE PUBLIC FACILITIES MANUAL.

JUSTIFICATION: THE EXISTING SUB-STATION FACILITY LOCATED ON SITE WILL NOT ALLOW SUFFICIENT SPACE TO MEET THE 10-YEAR TREE COVER REQUIREMENTS OF THE R-1 ZONING DISTRICT. 79.5% OF THE SITE IS CURRENTLY BEING USED BY THE EXISTING SUB-STATION FACILITY. WITH THE MINOR EXPANSION PROPOSED, 88.9% OF THE EXISTING SITE WILL BE OCCUPIED BY THE SUB-STATION FACILITY. WITH ONLY 11.1% OF THE SITE BEING LEFT IN OPEN SPACE IT WILL NOT BE FEASIBLE TO PROVIDE 30% 10-YEAR TREE COVER REQUIRED BY THE R-1 ZONING DISTRICT.

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LANDSCAPE PLAN

HARRISON SUBSTATION  
SPECIAL EXCEPTION PLAT

Plan Number  
Drawn By ES  
Designed By ES  
Checked By  
Date 06/15/2012  
Scale AS SHOWN  
Sheet 5 of 10  
File Number EX-253

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SITE PHOTOS TAKEN ON 1/31/2012

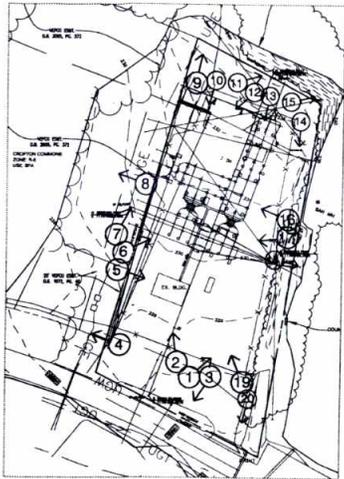
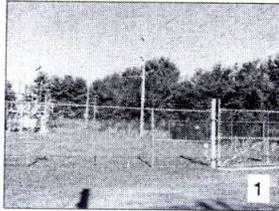


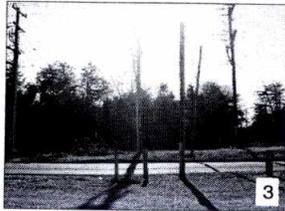
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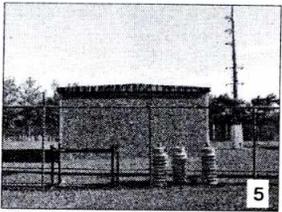
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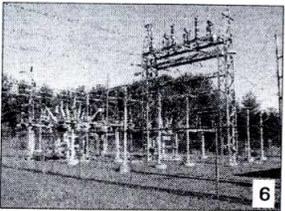
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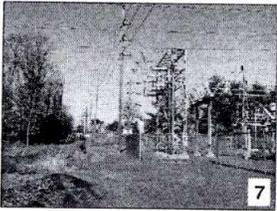
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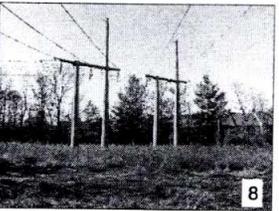
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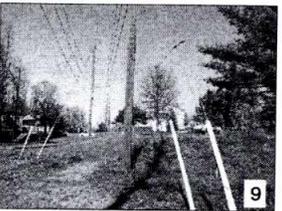
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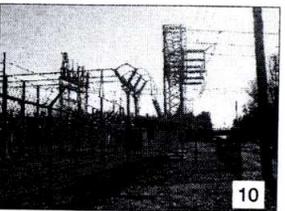
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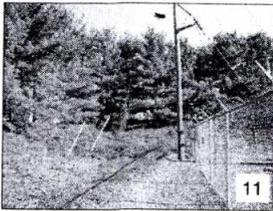
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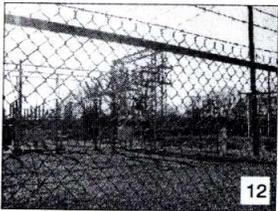
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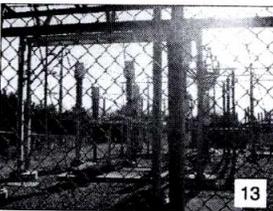
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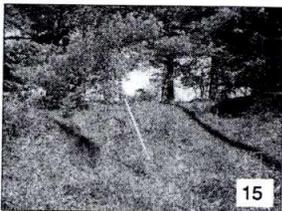
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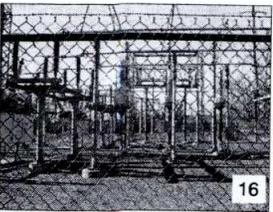
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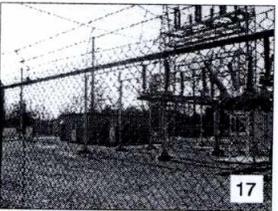
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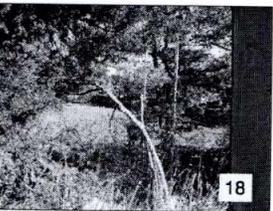
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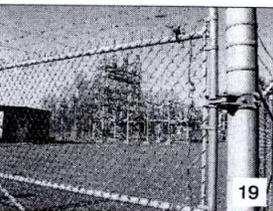
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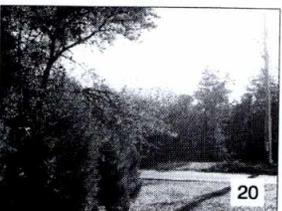
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18



19



20

**Dewberry**  
 1875 WAINWORTH BLVD.  
 SUITE 200  
 CHARLOTTE, NC 28211  
 PHONE 704.366.8000  
 FAX 704.366.8011

PHOTO SHEET

HARRISON SUBSTATION  
 SPECIAL EXCEPTION PLAT  
 Fairfax County, Virginia

Plan Number  
 Drawn By ES  
 Designed By ES  
 Checked By  
 Date 06/15/2012  
 Scale 1"=50'  
 Sheet  
**6 of 10**  
 File Number  
 EX-253



**STORM WATER MANAGEMENT CHECKLIST**

**MINIMUM STORMWATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS**

The following information is required to be shown or provided in all zoning applications, or a waiver request of the submission requirement with justification shall be attached. Note: Waivers will be acted upon separately. Failure to adequately address the required submission information may result in a delay in processing this application.

This information is required under the following Zoning Ordinance paragraphs:  
 Special Permits (8-011 2J & 2L) Special Exceptions (9-011 2J & 2L)  
 Cluster Subdivision (9-015 1G & 1H) Commercial Reinvestment Districts (9-027 2A (12) & (14))  
 Development Plans PRC (District) (16-202 3 & 4) PRC Plan (16-203 1E & 1G)  
 FDP P Districts (except PRC) (16-502 1F & 1G) Amendments (16-202 1D & 1O)

- 1. Plot is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100')
- 2. A graphic depicting the stormwater management facilities and limits of clearing and grading accommodate the stormwater management facilities; storm drainage pipe systems and outlet protection; pond spillways; access roads; site outfalls; energy dissipation devices; and stream stabilization measures as shown on Sheet \_\_\_\_\_
- 3. Provide:
 

Facility Name / Type & No.	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sq ft)	Storage Volume (cu ft)	Height (ft)
18" RCP (100' x 100')						
18" RCP (100' x 100')						
18" RCP (100' x 100')						
<b>Totals</b>						
- 4. On-site drainage channels, outfalls and pipe systems are shown on Sheet \_\_\_\_\_  
 Pond inlet and outlet pipe systems are shown on Sheet \_\_\_\_\_
- 5. Maintenance access (road) to stormwater management facilities are shown on Sheet \_\_\_\_\_  
 Type of maintenance access road structure noted on this sheet is \_\_\_\_\_
- 6. Landscaping and tree preservation shown in and near the stormwater management facility as shown on Sheet \_\_\_\_\_
- 7. A stormwater management narrative which contains a description of how detention and outlet management practices requirements will be met as provided on Sheet \_\_\_\_\_
- 8. A description of the existing conditions of each numbered site outlet extended downstream from the site to a point which is at least 100' from the site area or which has a drainage area of at least one acre (640 acres) is provided on Sheet \_\_\_\_\_
- 9. A description of how the outlet requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet \_\_\_\_\_
- 10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets \_\_\_\_\_
- 11. A submission waiver is requested for \_\_\_\_\_
- 12. Stormwater management is not required because \_\_\_\_\_

**STORMWATER MANAGEMENT & BMP NARRATIVE**

**STORMWATER MANAGEMENT (SWM) NARRATIVE**  
 THIS PROJECT, LOCATED NORTHWEST OF THE INTERSECTION OF COMPTON ROAD AND OLD CENTREVILLE ROAD, PROPOSES AN ADDITION OF 3,500 SF OF GRAVE AREA ON AN EXISTING ELECTRICAL SUBSTATION.  
 MAJORITY OF THE STORM WATER FROM THE SITE (SUBSTATION LIMITS) SHEET FLOWS TOWARDS THE SOUTHEAST CORNER OF THE PROPERTY AND CONVEYED VIA AN EXISTING DITCH TO AN EXISTING 18" RCP CULVERT CROSSING EXISTING COMPTON ROAD. AT OUTFALL #1, STORM WATER IS THEN CONVEYED THROUGH THE EXISTING CULVERT PIPE AND OUTFALLS INTO AN EXISTING RIP-RAP LINED CHANNEL.  
 THE OTHER PORTION OF THE SITE SHEET FLOWS TO THE WEST OF THE PROPERTY TO OPEN SPACE, OUTFALL #2.  
 DUE TO SITE RESTRICTIONS SUCH AS EASEMENTS AND LIMITED SPACE AVAILABLE, STORMWATER MANAGEMENT FOR THIS SITE HAS NOT BEEN MET BASED ON THE RESULTS SHOWN BELOW FOR PRE-DEVELOPED CONDITIONS AND POST DEVELOPED CONDITIONS FOR OUTFALL #2. A WAIVER WILL BE SUBMITTED.

**SWM OUTFALL ANALYSIS**  
 THE COMPUTATIONS BELOW COMPARING THE 3-YEAR AND 10-YEAR PRE-DEVELOPED RUNOFF AND POST DEVELOPED RUNOFF FOR THE SITE VALIDATE THAT THE PRE-DEVELOPMENT RUNOFF CONDITIONS HAVE NOT BEEN EXCEEDED FOR OUTFALL #1. THE PRE-DEVELOPED RUNOFF CONDITIONS HAVE BEEN SLIGHTLY EXCEEDED FOR OUTFALL #2. THE RATIONAL METHOD IS USED FOR DETERMINING THE PRE AND POST DEVELOPED RUNOFF. FAIRFAX IDF RAINFALL CURVE DATA AND THE IDF CONCENTRATION (T) OF 6 MINUTES WAS USED FOR THE DESIGN. THE PRE-DEVELOPMENT AND POST-DEVELOPMENT DISCHARGES ARE AS FOLLOWS. (ALSO SEE DRAINAGE DIVIDE MAPS ON SHEET #1)

**OUTFALL #1: PRE-DEVELOPMENT CONDITIONS**  
 THIS IS FOR COMPARISON WITH THE POST-DEVELOPMENT DISCHARGE AT THE OUTFALL POINT

A=0.84 Ac	C=0.70
T=5.0 min	S=5.45 in/hr
Q=0.79 x 5.45 in/hr x 0.84 Ac = 3.64 cfs	
Q=0.79 x 7.27 in/hr x 0.84 Ac = 5.13 cfs	

**POST-DEVELOPMENT CONDITIONS**

A=0.84 Ac	C=0.74
T=5.0 min	S=5.45 in/hr
Q=0.74 x 5.45 in/hr x 0.84 Ac = 3.79 cfs	
Q=0.74 x 7.27 in/hr x 0.84 Ac = 5.08 cfs	

**TOTAL Q = 3.79 cfs < 5.13 cfs PRE-DEV**  
**TOTAL Q = 5.08 cfs < 5.13 cfs PRE-DEV**

**OUTFALL #2: PRE-DEVELOPMENT CONDITIONS**  
 THIS IS FOR COMPARISON WITH THE POST-DEVELOPMENT DISCHARGE AT THE OUTFALL POINT.

A=0.84 Ac	C=0.70
T=5.0 min	S=5.45 in/hr
Q=0.79 x 5.45 in/hr x 0.84 Ac = 3.64 cfs	
Q=0.79 x 7.27 in/hr x 0.84 Ac = 5.13 cfs	

**POST-DEVELOPMENT CONDITIONS**

A=0.84 Ac	C=0.84
T=5.0 min	S=5.45 in/hr
Q=0.84 x 5.45 in/hr x 0.84 Ac = 4.10 cfs	
Q=0.84 x 7.27 in/hr x 0.84 Ac = 5.13 cfs	

**TOTAL Q = 5.13 cfs > 5.13 cfs PRE-DEV**  
**TOTAL Q = 5.13 cfs > 5.13 cfs PRE-DEV**

**BMP WATER QUALITY NARRATIVE**  
 THIS PROJECT IS A REDEVELOPMENT NOT SERVED BY A BMP MEASURE. THE BMP REQUIREMENT IS CALCULATED ON SHEET 10 PER PFM SECTION 8-007.2B. THE PLAN PROPOSES AN AREA OF REFORESTATION ON THE NORTHEASTERN BOUNDARY OF THE SITE. THE REFORESTATION WILL ATTENUATE THE PEAK RATE AND VOLUME OF STORMWATER RUNOFF AS MUCH AS POSSIBLE TO ENCOURAGE POLLUTANT REMOVAL. DUE TO SITE RESTRICTIONS SUCH AS EASEMENTS AND LIMITED SPACE AVAILABLE, THE BMP REQUIREMENT HAS NOT BEEN MET AND A WAIVER WILL BE SUBMITTED.

**ADEQUATE OUTFALL ANALYSIS**

THE DISBURSE FLOWS OF THE EXISTING SUBSTATION IS DIVIDED INTO TWO AREAS. ONE AREA DRAINS TOWARDS THE SOUTHWEST CORNER (OUTFALL #1) AND THE OTHER SHEET FLOWS ACROSS THE PROPERTY LINE TOWARDS THE WEST (OUTFALL #2). THE PROPOSED ADDITIONAL GRAVE AREA ON THE NORTHERN PART OF THE PROPERTY WILL BE PLACED ON GRADE AND WILL SHEET FLOW TOWARDS OUTFALL #1 AND OUTFALL #2 AS DEPICTED IN THE CALCULATIONS SHOWN UNDER THE SWM NARRATIVE. PEAK FLOWS FOR THE SITE IS BEING DECREASED AT OUTFALL #1 AND INCREASED AT OUTFALL #2.

**OUTFALL #1:**  
 PORTION OF THE SITE AND SOME OFFSITE SHEET FLOWS AND DRAINS TOWARDS THE SOUTHWEST CORNER VIA AN EXISTING DITCH TO OUTFALL #1. AND TO AN EXISTING 18" RCP CULVERT CROSSING EXISTING COMPTON ROAD. THE FLOW IS CONVEYED THROUGH THE EXISTING 18" RCP CULVERT AND OUTFALLS TO AN EXISTING RIP-RAP OUTLET WHERE IT THEN MEETS WITH ADDITIONAL RUNOFF FROM ANOTHER OUTFALL COMING FROM AN OFFSITE AREA. THIS OFFSITE RUNOFF INCLUDES DISCHARGE FROM AN EXISTING BIRM POND LOCATED TO THE EAST OF THE SITE. THE FLOW CONTINUES INTO AND THROUGH A WOODED AREA ALONG A MANMADE TRAPEZOIDAL RIP-RAP LINED CHANNEL, WHERE IT THEN DISPERSES TO SHALLOW CONCENTRATED IN THE WOODED AREA AND ULTIMATELY TO THE FLOORPLAN.  
 THE EXISTING 18" RCP CULVERT HAS BEEN CHECKED FOR ADEQUACY. THE CULVERT COMPUTATION SHOWN ON THIS SHEET SHOWS THE PONDING ELEVATION DOES NOT OVERTOP THE ROAD AND IS 18" BELOW THE SHOULDER ELEVATION. THE CHECK DAMS WILL ATTENUATE THE PEAK FLOW TO OUTFALL #1. A VISUAL INSPECTION OF THE EXISTING 18" RCP CULVERT SHOWS THAT IT IS ONE-THIRD FILLED WITH SEDIMENT DEPOSIT WHICH SHOULD BE CLEANED OUT. IN ADDITION, THE UPSTREAM CULVERT END WILL BE EXTENDED APPROXIMATELY 5' AND INLET PROTECTION WILL BE INSTALLED TO REDUCE THE POTENTIAL FOR EROSION CROSS SECTIONS A-A AND B-B DOWNSTREAM OF THE EXISTING CULVERT ALONG THE FLOW TRAVEL PATH. DEMONSTRATES THE ADEQUACY OF THE EXISTING RIP-RAP LINED TRAPEZOIDAL CHANNEL. THE DITCH IS BEING CONSIDERED AS MAINTAINED AND THEREFORE MUST RESIST THE EROSION DURING THE TWO YEAR STORM AND THE TEN YEAR FLOW DEPTH MUST NOT EXCEED THE BANK ELEVATIONS. THE VELOCITIES RANGING FROM 1.19 FT/SEC TO 1.93 FT/SEC ARE NONE BROSE FOR THE RIP-RAP LINED CHANNEL. DUE TO THE DECREASE IN PEAK FLOW, THE ADEQUACY OF THE EXISTING CULVERT AFTER MINOR MAINTENANCE NOTED ABOVE, THE STABILIZED CONDITIONS OF THE RECEIVING DITCH CHANNEL AND DEPTHS OF FLOWS DURING THE TEN YEAR STORM EVENT RANGING FROM 0.41 FT TO 0.28 FT. ARE WITHIN THE AVAILABLE CAPACITY OF THE EXISTING BED AND BANKS. THEREFORE, IT IS THE OPINION OF THE ENGINEER THAT THE EXISTING OUTFALL CHANNEL FOR THE PROPOSED DOMINION SUBSTATION EXPANSION.

**OUTFALL #2:**  
 PORTION OF THE SITE SHEET FLOWS TOWARDS THE WEST ACROSS THE PROPERTY LINE INTO AN EXISTING EASEMENT AREA FOR THE EXISTING OVERHEAD POWERLINES. THE GROUND UNDER THE POWER LINES IS COVERED WITH DENSE TALL GRASS AND WEEDS WHICH APPEARS TO BE TRIMMED INFREQUENTLY. THE RUNOFF SHEET FLOWS INTO AN EXISTING GRASS DITCH ALONG COMPTON ROAD. THE FLOW IS CONVEYED THROUGH AN EXISTING PIPE INTO AN EXISTING DETENTION SYSTEM OUTFALLING INTO MAINTAINED TRAPEZOIDAL RIP-RAP LINED CHANNEL, WHERE IT THEN DISPERSES INTO A WOODED AREA AND INTO THE FLOORPLAN.  
 CROSS SECTION C-C ALONG THE GRASS DITCH AND CROSS SECTION D-D DOWNSTREAM OF THE EXISTING DETENTION SYSTEM ALONG THE FLOW TRAVEL PATH DEMONSTRATES THE ADEQUACY OF THE EXISTING DITCH AND THE EXISTING RIP-RAP LINED TRAPEZOIDAL CHANNEL. THE DITCH IS BEING CONSIDERED AS MAINTAINED AND THEREFORE MUST RESIST THE EROSION DURING THE TWO YEAR STORM AND THE TEN YEAR FLOW DEPTH MUST NOT EXCEED THE BANK ELEVATIONS. THE VELOCITIES RANGING FROM 1.39 FT/SEC TO 3.38 FT/SEC ARE NONE BROSE FOR THE DITCH AND RIP-RAP LINED CHANNEL. THE STABILIZED CONDITIONS OF THE RECEIVING OUTFALL CHANNEL AND DEPTHS OF FLOWS DURING THE TEN YEAR STORM EVENT RANGING FROM 0.34 FT TO 0.28 FT. ARE WITHIN THE AVAILABLE CAPACITY OF THE EXISTING BED AND BANKS. THEREFORE, IT IS THE OPINION OF THE ENGINEER THAT OUTFALL #2 PROVIDES AN ADEQUATE OUTFALL FOR THE PROPOSED DOMINION SUBSTATION EXPANSION.

**CULVERT COMPUTATIONS**  
**EX. 18" RCP CULVERT CROSSING COMPTON ROAD**

<b>PROJECT:</b> HARRISON SUBSTATION	<b>STATION:</b> SUBSTATION	<b>CULVERT DESIGN FORM</b> DESIGNER / DATE
<b>METHOD:</b> RATIONAL	<b>HYDROLOGICAL DATA:</b> NO. OF PIPES = 1 DIAMETER = 1.5 MANNING'S "N" = 0.013 K <sub>1</sub> = 0.2 K <sub>2</sub> = 222.74 E <sub>1</sub> = 221.90 E <sub>2</sub> = 225.62 E <sub>3</sub> = 225.47 L = 38.4	
<b>CULVERT DESCRIPTION:</b> MATERIAL: SHAPE-SIZE-ENTRANCE	<b>FLOW PER BARREL:</b> GPM	<b>HEADWATER CALCULATIONS:</b> INLET CONTROL: TW, dc, (dc+D)/2, h <sub>1</sub> , K <sub>1</sub> , h <sub>2</sub> , E <sub>1</sub> (ft), E <sub>2</sub> (ft) OUTLET CONTROL: TW, dc, (dc+D)/2, h <sub>1</sub> , K <sub>2</sub> , h <sub>2</sub> , E <sub>1</sub> (ft), E <sub>2</sub> (ft)
1. 18" dia. RCP, projecting socket edge (PSP)	5.06	223.99
2. 18" dia. RCP, projecting socket edge (PSP)	5.06	223.99

**TECHNICAL FOOTNOTES:**  
 1) HW BASED ON POLYNOMIAL BEST-FIT EQUATIONS FROM THE PMA PUBLICATION ENTITLED CALCULATOR DESIGN SERIES #3  
 2) HW MAY NOT BE ACCURATE FOR VALUES < 0.50 AND > 4.50  
 3) E<sub>1</sub>(ft) = HW + E<sub>1</sub> (HEIGHT OF INLET CONTROL SECTION)  
 4) TW BASED ON DOWNSTREAM CONTROL OR FLOW DEPTH IN CHANNEL  
 5) h<sub>2</sub> = TW OR (dc+D)/2 WHICHEVER IS GREATER  
 6) H = (1 + K<sub>2</sub> + (29 n<sup>2</sup> L / H<sup>1.33</sup>) V<sup>2</sup> / 2g  
 7) E<sub>2</sub>(ft) = E<sub>1</sub> + H + h<sub>2</sub>  
 (CULVERT #01, VER-1, Q/C / 6-7-83)

**CROSS SECTIONS**

	Tc	"d" (ft)	"q" (cfs)	SLOPE %	Z1	Z2	B	TYPE OF LINING	PERMISSIBLE VELOCITY (ft/sec)	DEPTH OF DITCH (ft.)	d 10-YEAR (ft.)	2-YEAR (ft.)	VEL. (ft/sec)	N
A-A	5 min.	5.06	3.79	5.0	3	4	8	RIP RAP	10	2	0.41	1.19	0.040	
B-B	20 min.	49.56	37.17	2.5	4	4	2	RIP RAP	10	3	2.21	1.93	0.040	
C-C	5 min.	1.05	0.79	9.5	1	1	0.5	GRASS	4	0.4	0.33	3.53	0.040	
D-D	20 min.	2.27	1.70	2.5	3.5	3.5	1.5	RIP RAP	10	1	0.26	3.36	0.040	

-PERMISSIBLE VELOCITIES AND N VALUES FROM VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VDOT DRAINAGE MANUAL

**TYPICAL DITCH SECTION**

NTS

**Dewberry**  
 1818 N. GREENWOOD BLVD.  
 SUITE 200  
 CHARLOTTE, NC 28207  
 PHONE: 704.366.1000  
 FAX: 704.366.1001

**SWM / BMP NARRATIVE**

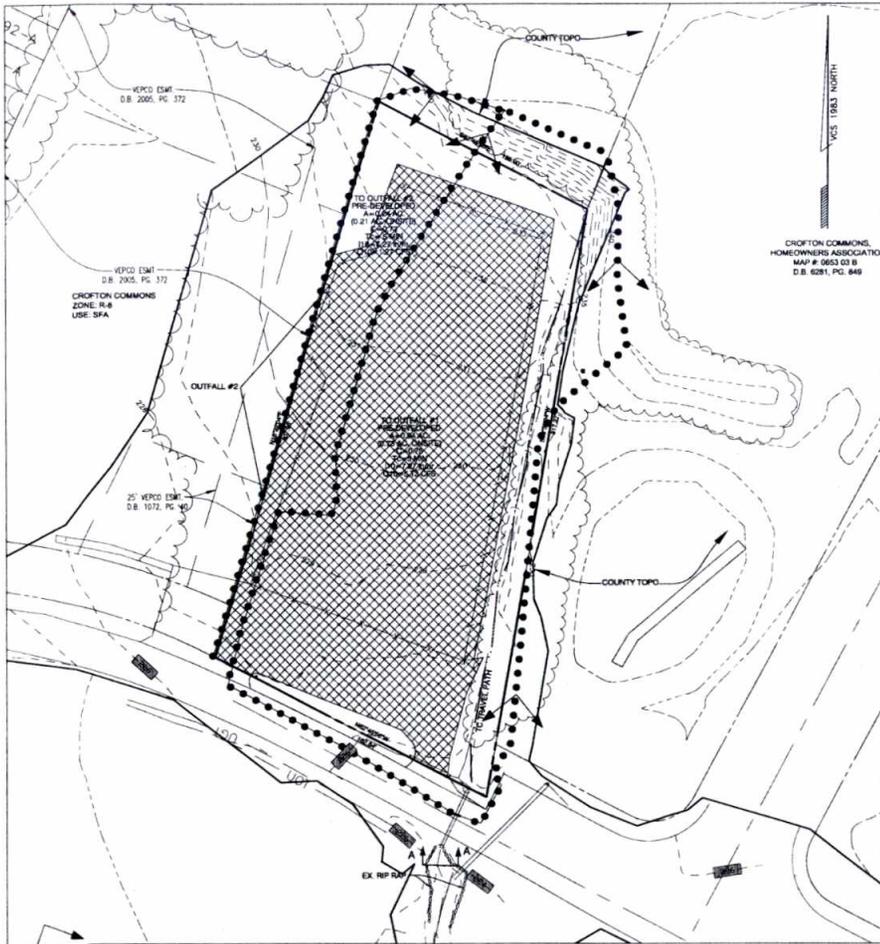
**HARRISON SUBSTATION**  
**SPECIAL EXCEPTION PLAN**

Fairfax County, Virginia

Plan Number	
Drawn By	ES
Designed By	ES
Checked By	
Date	06/15/2012
Scale	N/A
Sheet	7 of 10
File Number	EX-253

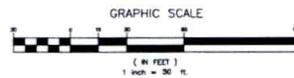


PRE-DEVELOPMENT DRAINAGE MAP

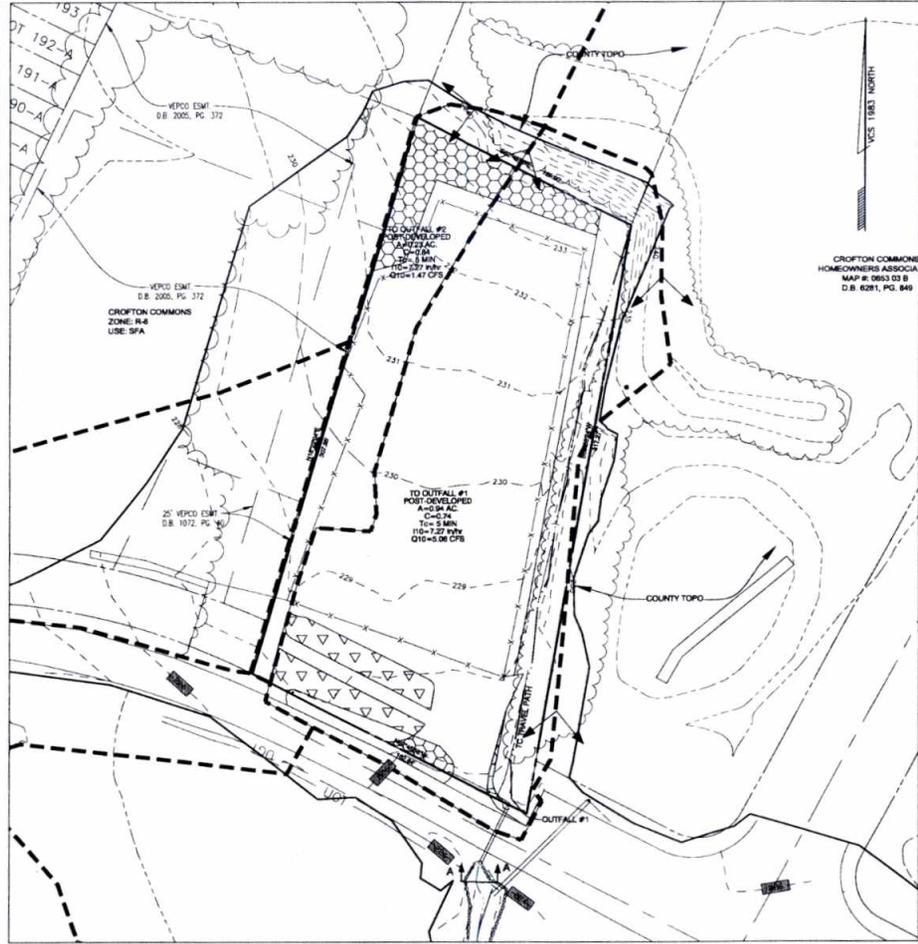


LEGEND:

 EXISTING IMPERVIOUS



POST-DEVELOPMENT DRAINAGE MAP



LEGEND:

 PROPOSED ADDITIONAL IMPERVIOUS

 PROPOSED CONVERSION OF IMPERVIOUS TO GRASS

NO.	DATE	DESCRIPTION	BY
3	12-13-12	REVISED PER REVIEW AGENCY COMMENTS	ES/BL
2	12-03-12	REVISED PER REVIEW AGENCY COMMENTS	ES/BL
1	10-03-12	REVISED PER REVIEW AGENCY COMMENTS	ES



PRIE & POST DEVELOPMENT DRAINAGE MAPS

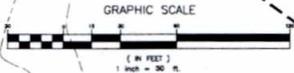
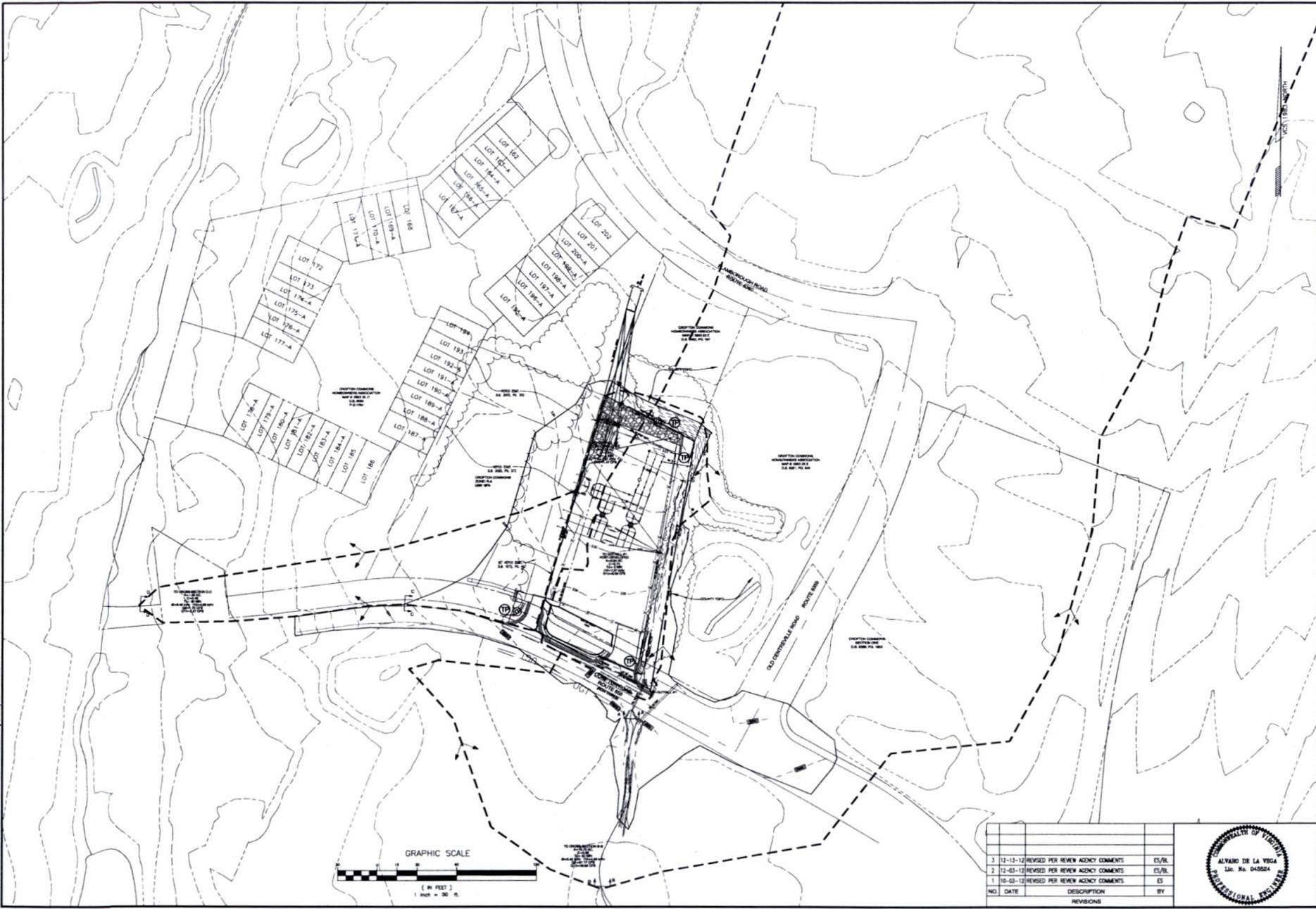
HARRISON SUBSTATION SPECIAL EXCEPTION PLAT

Fairfax County, Virginia

Plan Number  
 Drawn By ES  
 Designed By ES  
 Checked By  
 Date 06/15/2012  
 Scale 1"=30'  
 Sheet 8 of 10  
 File Number EX-253

G:\WORKSPACE\CAD\CAD\PLANS\HARRISON\PRE-POST DRAINAGE\HWP.dwg, Dec. 13, 2012, 11:30am

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NO.	DATE	DESCRIPTION	BY
3	12-13-12	REVISED PER REVIEW AGENCY COMMENTS	ES/RL
2	12-03-12	REVISED PER REVIEW AGENCY COMMENTS	ES/RL
1	10-03-12	REVISED PER REVIEW AGENCY COMMENTS	ES



**Dewberry**  
Dewberry & Davis LLP  
 10000 Lakeside Drive, Suite 100  
 Fairfax, VA 22030  
 Tel: 703.261.1000

**HARRISON SUBSTATION  
 SPECIAL EXCEPTION PLAT**

Fairfax County, Virginia

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Plan Number

Drawn By: ES

Designed By: ES

Checked By:

Date: 06/15/2012

Scale: 1"=30'

Sheet: **9 of 10**

File Number: EX-253

**ADEQUATE OUTFALL MAP**



**A GLOSSARY OF TERMS FREQUENTLY  
USED IN STAFF REPORTS WILL BE FOUND  
AT THE BACK OF THIS REPORT**

**DESCRIPTION OF THE APPLICATIONS**

**2232-Y12-5:**

The applicant, Virginia Electric and Power Company, d/b/a Dominion Virginia Power, has filed for review by the Planning Commission to determine whether an 3,757-square foot expansion of an existing electrical distribution substation and the associated construction of a 90-foot tall electrical "backbone" structure; a 75-foot tall static pole structure; and other equipment generally 20 feet or less in height on the property of the Northern Virginia Electric Cooperative (NOVEC) satisfies the criteria of general location, character, and extent pursuant to Section 15.2-2232 of the Code of Virginia and therefore may be determined to be in substantial accord with the Comprehensive Plan.

**SE 2012-SU-015:**

The applicant requests approval of a special exception to permit a 3,757-square foot expansion of an existing electrical distribution substation and the associated construction of a 90-foot tall electrical "backbone" structure; a 75-foot tall static pole structure; and other equipment generally 20 feet or less in height on the site of the NOVEC Harrison Substation located at 14600 Compton Road, Centreville. The existing substation is an unstaffed 43,212-square foot facility that is operational 24 hours per day, seven days a week, with weekly to monthly inspections. The proposed expansion would not result in any changes to the current operations of the facility.

**Waivers and Modifications:**

The applicant requests a modification of the transitional screening and barrier requirements in favor of existing vegetation, off-site plantings, plantings along Compton Road, and plastic fence slats as shown on the plat. Additionally, the applicant requests a modification to the 10-year tree canopy requirements due to the extent of the current and proposed electrical facilities, the presence of overhead electric lines, and the limited size of the property. The applicant also requests a modification to the tree preservation target due to the poor quality of the vegetation in the area to be impacted by the expansion.

**Category and Use:**

A Category 1 special exception use is proposed on the subject property. This use must comply with the Use Limitations of §3-105, the General Standards of §9-006, and the Standards for all Category 1 Uses of §9-104, among others (Appendix 5).

A reduced copy of the submitted special exception plat is included at the front of this report. Copies of the proposed development conditions, the affidavit, and the applicant's statement of justification are included in Appendices 1, 2 and 3, respectively. Staff analyses are included in Appendix 4 and the applicable Zoning Ordinance standards are included in Appendix 5.

**LOCATION AND CHARACTER**

**Site Description:**

The 43,212-square foot site is located on Tax Map 65-3 ((1)) 35, at 14600 Compton Road, approximately 600 feet west of its intersection with Centreville Road (Route 28). The site is currently developed with a fenced electrical distribution facility featuring a 80-foot tall "backbone" structure and related shorter cabinets and switching equipment on a gravel surface. The existing open chain-linked fence is eight feet tall and topped with approximately one foot of barbed wire. Abutting properties to the west, north, and east are owned by the Crofton Commons Homeowners Association (CCHOA), which contain parking to the north; a community pool and dry stormwater basin to the east; and power lines and their associated easements to the west. Townhomes are located beyond the easements to the west, on Hovingham Court. Vacant wooded land owned by the Capital Worship Center is located across Compton Road to the south and southeast. NOVEC's Compton Substation is located across Compton Road to the southwest. A summary of the surrounding land use, zoning, and comprehensive plan recommendations are provided in the following table:

<b>SURROUNDING AREA DESCRIPTION</b>			
<b>Direction</b>	<b>Use</b>	<b>Zoning</b>	<b>Comprehensive Plan Recommendation</b>
<b>North</b>	Parking Lot for HOA Pool	R-8	Residential at 2-3 du/ac
<b>East</b>	Stormwater Basin & HOA Pool	R-8	Residential at 2-3 du/ac
<b>South</b>	Wooded Area/Undeveloped	R-C	Residential at 0.1 to 0.2 du/ac
<b>West</b>	HOA Open Space, Power Lines, & Electrical Easements	R-8	Residential at 2-3 du/ac

**BACKGROUND**

Ca. 1960: The site was developed by the Prince William Electric Cooperative (now NOVEC) for an electrical substation.

SE 91-S-008: On August 5, 1991, the Board of Supervisors approved a special exception to allow the construction of a electric transformer station (Compton) on the south side of Compton Road to the southwest of the subject site. The construction of the transformer station corresponded to the upgrading of the Harrison facility to a transmission delivery point and breaker station (no distribution) fed by a 115 kV line.

115 kV Line Rebuild: Dominion Virginia Power is replacing the 80-foot tall 115 kV wooden transmission towers with metal poles to the north of the site. The towers are contained within a north-south running transmission corridor, which runs along the western edge of the subject site. The applicant has coordinated the rebuild project with affected property owners along the route and has received approval from the State. Local approval was not necessary for the transmission tower replacement project.

## COMPREHENSIVE PLAN PROVISIONS

<b>Plan Area:</b>	III
<b>Planning District:</b>	Bull Run
<b>Planning Sector:</b>	BR-6 - Centreville
<b>Plan Map:</b>	Residential at 2-3 du/ac
<b>Plan Text:</b>	

### Area Plan

Fairfax County Comprehensive Plan, Area III, 2011 Edition; Bull Run Planning District, as amended through 6-19-2012, Overview, Figure 6: Existing Public Facilities, page 15:

Figure 6 identifies the Virginia Dominion Power Bull Run Substation and the NOVEC Substation as existing public facilities in Centreville Planning Sector.

### Policy Plan

Fairfax County Comprehensive Plan, Policy Plan, 2011 Edition; Public Facilities, as amended through January 10, 2005, Countywide Objectives and Policies, pages 2-4:

#### **Objective 1: Locate new facilities to provide convenient service to the greatest number of people or service consumers and users.**

- Policy a. Site facilities appropriately to the area they are intended to serve.
- Policy b. Reduce service area overlap between like facilities, unless overlap is necessary to correct service deficiencies.
- Policy c. Site facilities in accordance with locational standards that maintain accepted levels of service while reducing duplication or underutilization.

#### **Objective 4: Mitigate the impact of public facilities on adjacent planned and existing land uses.**

- Policy b. Co-locate public facilities whenever appropriate to achieve convenience and economies of scale, as long as the integrity of the Comprehensive Plan is not impinged.

- Policy d. Ensure that public facilities are properly screened and buffered in order to mitigate visual impact on adjacent planned development of a different use or nature.
- Policy e. Ensure that site size and development conforms to all requirements of the Fairfax County Zoning Ordinance and exceeds site acreage requirements, as possible, to achieve maximum compatibility with surrounding land uses.

Fairfax County Comprehensive Plan, Policy Plan, 2011 Edition; Public Facilities, as amended through January 10, 2005, Electrical and Land-Line Utility Services, pages 33-37:

**Objective 40: Locate electrical and land-line service facilities to provide maximum service levels as unobtrusively as possible (See Figure 7).**

- Policy b. Collocate facilities such as distribution and transmission poles, switching and hub centers and electrical substations whenever feasible and appropriate to minimize visual and neighborhood impacts.
- Policy c. Plan for existing and future needs of facilities in conjunction with emerging development designs.
- Policy d. Provide adequate acreage for expansion of substations, hub centers, and equipment areas and maintain levels of screening to accommodate expansion.
- Policy i. Utilize existing towers and poles to support electrical and land-line utility services, whenever possible, to reduce the need for new towers and poles. However, avoid overloading existing towers and poles with related equipment.

**Objective 41: Meet service area requirements with a minimum of facilities and ensure that those facilities are designed to minimize impacts on adjacent properties.**

- Policy b. Mitigate the visual impact of switching and hub centers, equipment areas, and electrical substations from adjacent development. Land with existing mature vegetation is preferable, as are access roads which obscure entrances, berms which provide screening, and slopes that provide localized lower elevations.
- Policy e. Provide for the appropriate screening and buffering of proposed facilities.
- Policy f. Design and site proposed facilities to preserve areas necessary for future right-of-way dedication and ancillary easements for construction of road improvements.

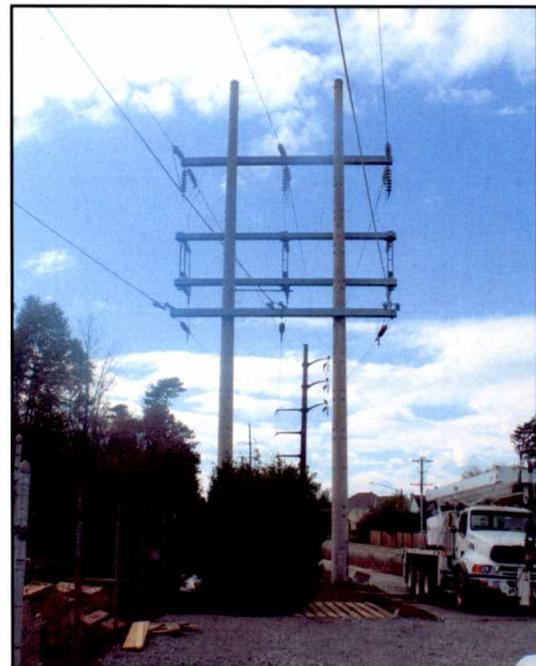
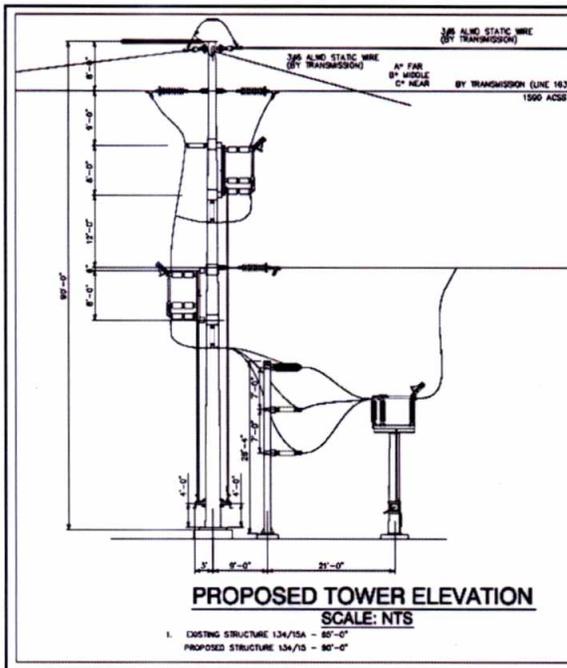
### ANALYSIS

#### Special Exception Amendment Plat (Copy at front of staff report)

**Title:** Harrison Substation  
**Prepared By:** Dewberry & Davis, LLC  
**Original and Revision Dates:** June 15, 2012 as revised through December 13, 2012

**Number of Pages:** 10

Proposal: The proposal includes a 3,757-square foot expansion on the northern portion of the site to include the construction of a 90-foot tall electrical "backbone" structure, a 75-foot tall static pole structure, connecting overhead electric lines, and other equipment generally 20 feet or less in height.



**Proposed Backbone Structure  
(Side Elevation)**

**Similar Structure  
(Bull Run Substation)**

Current Site Layout: The 43,212-square foot site is rectangular in shape and currently developed with an electrical distribution substation owned by the Northern Virginia Electric Cooperative (NOVEC). The current substation includes a "backbone" structure 80 feet in height along with related shorter switching equipment and cabinets on a gravel surface. The equipment is enclosed by an eight foot tall chain link fence topped with approximately one foot of barbed wire. Several overhead electric lines, transmission towers, underground wires, and electric utility easements are connected or adjacent to the facility.



**Site Map**

**Access and Parking:** Access to the site is currently provided by a gravel driveway from Compton Road. The area between the southern fence line and Compton Road is almost entirely gravel. One parking space is provided within the fenced area. A four-foot wide asphalt trail extends to the site from the east and west. The proposal would maintain the existing access point onto Compton Road, but reconstruct it to commercial entrance standards. The project also includes the construction of an 8-foot wide asphalt trail to connect with the adjoining trail sections. Staff notes the presence of a portion of another gravel driveway near the southwest corner of the site. The entrance is part of an access easement for an adjacent north-south transmission line corridor. Although largely off-site on CCHOA property, the applicant intends to reconstruct the driveway to meet commercial entrance standards in conjunction with this project.

**Plantings and Open Space:** The substation abuts the pool area for the CCHOA to the northeast and a dry stormwater management basin to the east. Several electrical power line easements are located to the west. Beyond the easements are townhomes. Vacant wooded land and a NOVEC substation are located across Compton Road to the south and southwest, respectively. A line of trees is located along the northern and eastern boundaries of the project area.

The existing trees to the north and east of the site will be retained. These will be supplemented with additional plantings. A row of evergreen shrubs is proposed to the west of the site on property owned by the CCHOA. Three rows of plantings are planned along the frontage of Compton Road, bisected by an 8-foot wide paved trail.

**Land Use/2232** (Appendix 4)

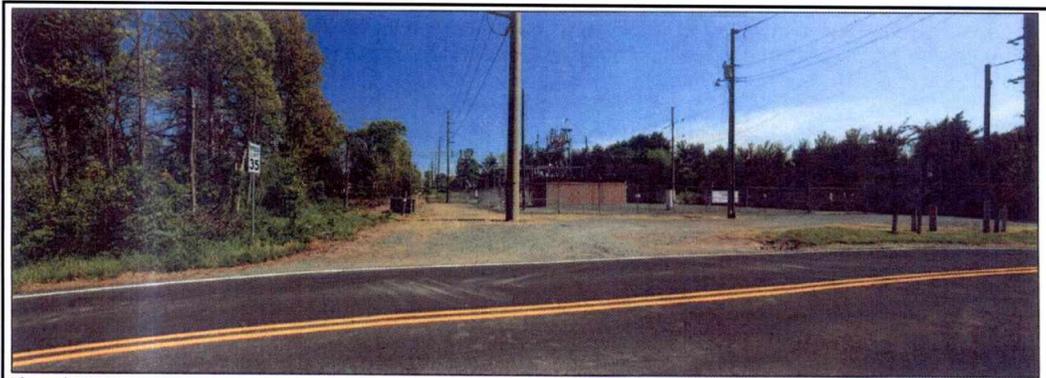
Section 15.2-2232 of the Code of Virginia, as amended, requires the Planning Commission to determine whether the general location or approximate location, character, and extent of the proposed facility are substantially in accord with the adopted Comprehensive Plan.

Location:

By expanding an existing electrical utility facility, the proposal is consistent with Plan objectives to locate new facilities to provide convenient service to the greatest number of people or service consumers and users and to site facilities appropriately to the area they are intended to serve. The expansion would help meet increased demands for electrical power within Fairfax County. Additionally, the expansion would facilitate the transmission of electrical power from Dominion Virginia Power to NOVEC, which purchases bulk wholesale power from Dominion Virginia Power to transmit to their customers. The proposed expansion is also consistent with policies to accommodate the expansion of substations, hub centers, and equipment areas. The proposed expansion to the existing facility and the adjacency to another related substation meet Plan objectives to collocate facilities, such as switching and hub centers, whenever feasible.

Character:

The proposed expansion will occur within the existing disturbed and developed area of the property and will not affect the existing mature vegetation to the north and west of the property, which currently provides a visual buffer from the adjacent areas. There is little to no vegetation on the western and southern boundaries of the property. The proposal will improve this condition through the addition of evergreen plantings on each side of the property. As such, the proposal is consistent with Plan guidance to properly screen and buffer electrical facilities to mitigate visual impacts on adjacent development. The visual impact of the proposed 90-foot and 75-foot tall structures will be minimized as they will be located within an area already developed with an 80-foot tall "backbone" structure and nearby 80-foot tall transmission towers. The expansion area at the north of the site is approximately ten feet lower than the surrounding terrain, thereby lessening the perceived height of the structures from surrounding areas. Additionally, an existing berm with mature plantings lies between the site and the adjacent community pool. Views of the proposed facilities are expected to be minimized from Compton Road due to the proposed screening along Compton Road and the location of the expansion at the rear of the existing site. The applicant completed a visual impact analysis, included below, simulating views of the proposed facilities under existing conditions.



**Viewpoint 03** - Compton Road looking North East - *Existing View*

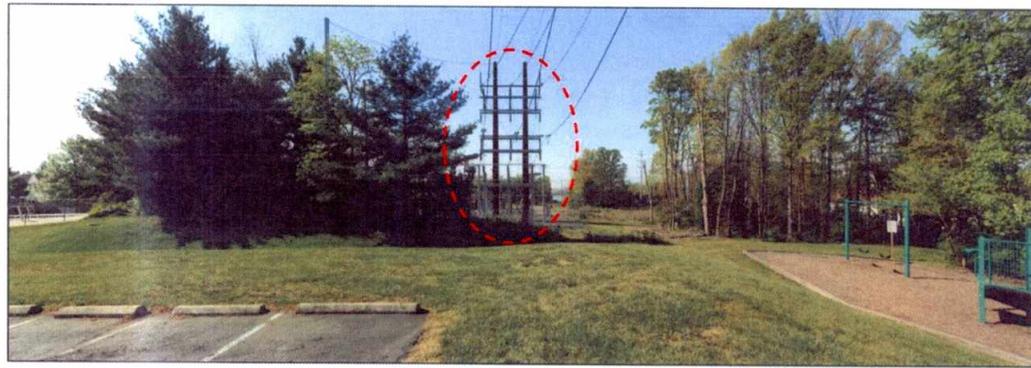


**Viewpoint 03** - Compton Road looking North East - *Proposed View*

**Views from Compton Road (Existing & Proposed)**



**Viewpoint 01** - North of Substation looking South West - *Existing View*



**Views from the CCHOA Property (Existing & Proposed)**

Extent:

The proposed expansion is consistent with Plan guidance to ensure that site size and development conform to Zoning Ordinance requirements. There are no additional access points proposed to the substation and the facility would remain unstaffed, with minimal traffic. Consideration has been given to the provision of right-of-way for future Compton Road construction through a right-of-way reservation. The reservation would match the right-of-way boundaries both east and west of the site consistent with Plan guidance for electrical facilities, to design and site proposed facilities to preserve areas necessary for future right-of-way dedication and ancillary easements for construction of road improvements. Additionally, the expansion would be no larger than necessary to accommodate the new "backbone" structure, static pole, shorter equipment, and vehicular access and would be placed in a previously cleared and leveled area.

Conclusion:

Staff concludes that the subject proposal satisfies the criteria of location, character, and extent as specified in Section 15.2-2232 of the Code of Virginia, as amended.

**Environmental** (Appendix 5)

Staff of the Environment and Development Review Branch of the Department of Planning and Zoning reviewed the application. Staff discussed matters of water quality protection and stormwater management and noted that stormwater management control measures would be subject to review and approval by the Department of Public Works and Environmental Services (DPWES).

Additionally, staff discussed tree restoration and encouraged the applicant to work with the Urban Forest Management Division of DPWES to identify suitable areas for additional tree and shrub plantings.

Staff also noted that the Countywide Trails Plan depicts a major paved trail along the north side of Compton Road along the frontage of the property, which has since been incorporated into the proposal; a note on the revised plans reflects the fact that the final location of the trail connections will be engineered at site plan, in coordination with the adjacent property owners.

**Transportation** (Appendix 6)

The substation is currently accessed by a gravel driveway onto Compton Road. The facility is and would remain unstaffed. It would continue to require only routine maintenance and would generate minimal traffic with little impact to adjacent roadways. The applicant has agreed to the reconstruction of the entrance per Virginia Department of Transportation (VDOT) commercial standards. The applicant has also agreed to a right-of-way reservation coincident with the right-of-way boundaries both east and west of the site and the construction of an 8-foot wide paved trail along the frontage of the property. There are no outstanding transportation issues.

### **Urban Forest Management** (Appendix 7)

The applicant has worked with staff from the Forest Conservation Branch of the Urban Forest Management Division (UFMD) of DPWES to determine landscaping options that would provide screening for the substation but not interfere with existing vegetation, utility easements, or equipment. The applicant subsequently incorporated changes to resolve major planting and screening issues as described above. The limits of clearing and grading are now outside of the dripline of the existing vegetation. Additionally, the proposed conditions of approval related to stormwater management controls have been updated to preclude disturbance to an existing swale and vegetation along the eastern side of the property.

Staff noted that some of the proposed plantings are to be provided on the adjacent CCHOA land and recommended a development condition to ensure that permission would be sought from the CCHOA for the specified plantings. A development condition regarding plantings is proposed.

Staff also recommended some minor changes to text regarding tree preservation targets, 10-year canopy requirements, and tree banking, which have been incorporated into the plat.

### **Stormwater Management** (Appendix 8)

The site currently contains a vegetated swale along its eastern boundary. Given the constraints imposed by the existing use and the site, the applicant is unable to completely fulfill the detention and Best Management Practice (BMP) requirements of the Public Facilities Manual (PFM) while maintaining the current use. In lieu of the measures specified in the PFM, the applicant has proposed the reconditioning of gravel areas for plantings and enhanced infiltration and the installation of check dams along the eastern swale to slow runoff and enhance infiltration. Staff recommends a condition of approval stating that stormwater management shall be provided as generally depicted on the plat and as approved by the Department of Public Works and Environmental Services unless waived or modified; the adequacy of the proposed measures will be determined at the time of site plan review.

### **Park Authority Analysis** (Appendix 9)

Fairfax County Park Authority (FCPA) staff reviewed the application. Staff noted that the site has been graded and disturbed by previous construction. No cultural resource issues are anticipated. If federal permits are required, consultation with the Virginia Department of Historic Resources (VDHR) would be required. Staff also recommended a major paved trail along Compton Road, which has since been incorporated into the proposal.

**ZONING ORDINANCE PROVISIONS**

**Lot Size Requirements and Bulk Regulations**

In accordance with Paragraph 1 of §9-104 of the Zoning Ordinance, a Category 1 Special Exception use is not required to comply with the lot size requirements or the bulk regulations set forth for the zoning district in which it is located.

**Transitional Screening and Barrier Requirements**

Transitional screening and barriers are required on all four sides of the substation, as specified below:

Direction	Transitional Screening; & Barrier Requirements	Provided
North (HOA property)	Screening 1; Barrier D, E or F	Supplemental plantings on HOA property; 8-Foot tall chain link fence with slats
East (HOA property)	Screening 1; Barrier D, E or F	Existing vegetation & supplemental plantings; 8-Foot tall chain link fence
South (Wooded, R-C)	Screening 3; Barrier D, E or F	Plantings as shown on plat along Compton Road; 8-Foot tall chain link fence
West (HOA property)	Screening 1; Barrier D, E or F	Supplemental plantings on HOA property; 8-Foot tall chain link fence with slats

Transitional Screening:

Transitional Screening 1 consists of an unbroken strip of open space, a minimum of twenty-five (25) feet wide and planted with all of the following:

- A mixture of large and medium evergreen trees and large deciduous trees that achieve a minimum ten (10) year tree canopy of seventy-five (75) percent or greater;
- A mixture of trees consisting of at least seventy (70) percent evergreen trees, and consisting of no more than thirty-five (35) percent of any single species of evergreen or deciduous tree; and
- A mixture of predominately medium evergreen shrubs at a rate of three (3) shrubs for every ten (10) linear feet for the length of the transition yard area. The shrubs shall generally be located away from the barrier and staggered along the outer boundary of the transition yard.

Transitional Screening 3 consists of an unbroken strip of open space, a minimum of fifty (50) feet wide planted with all of the following:

- A mixture of large and medium evergreen trees and large deciduous trees that achieves a minimum ten (10) year tree canopy of seventy-five (75) percent or greater;

- A mixture of trees consisting of at least seventy (70) percent evergreen trees, and consisting of no more than thirty-five (35) percent of any single species of evergreen or deciduous tree; and
- A mixture of predominately medium evergreen shrubs at a rate of three (3) shrubs for every ten (10) linear feet for the length of the transition yard area. The shrubs shall generally be located away from the barrier and staggered along the outer boundary of the transition yard.

Barriers:

- Barrier D shall consist of a 42-48-inch chain link fence and may be required by the Director to have inserts in the fence fabric, to be coated, or to be supplemented by trees and/or shrubs.
- Barrier E shall consist of a 6-foot wall, brick or architectural block faced on the side facing the existing use and may be required to be so faced on both sides as determined by the Director.
- Barrier F shall consist of a 6-foot high solid wood or otherwise architecturally solid fence.

**Waivers/Modifications**

The applicant has requested a modification of the transitional screening and barrier requirements for all four property lines in accordance with §13-305 of the Zoning Ordinance and a modification to the 10-year tree canopy requirements in accordance with §12-0513 of the Public Facilities Manual, as discussed below.

Transitional Screening and Barrier Requirements:

Transitional screening and barriers may be waived or modified by the Director in certain circumstances in accordance with §13-305 of the Zoning Ordinance. The Director may attach conditions to any modification which would assure that the results of the modification would be in accordance with the purpose and intent of the Zoning Ordinance. Transitional screening and barriers may be waived or modified for any public use when such use has been specifically designed to minimize adverse impact on adjacent properties.

The existing substation has been operational for approximately 50 years with most of the site fully developed with gravel and electrical equipment. Overhead electric lines, easements, and underground wire networks are within, adjacent to, and connected to the subject site, severely limiting planting space.

In response to these constraints, the applicant has proposed the planting of evergreens along Compton Road and along the northeast corner. The applicant has also agreed to coordinate with the CCHOA and install additional off-site plantings to mitigate the impact of the existing and the proposed equipment, as depicted on the plat.

Additionally, the applicant has proposed slats within the chain link fence along the north and west fence lines. The slats will help block views of the gravel and the bottom 8 feet of the electrical equipment. No slats are proposed along the eastern fence line given that the existing berm, trees, and topography and the proposed plantings would help filter views from the east. The chain link fence is intended to remain open along Compton Road so that security patrols and utility workers can see into the fenced complex.

Given the constraints associated with the site and the operations of an electrical substation, staff recommends approval of the modifications to the transitional screening and barrier requirements for all four property lines in favor of the plantings and fence slats as depicted on the proposed plat and as conditioned.

#### 10-year Tree Canopy Requirements

§12-0513.2 of the Public Facilities Manual states that the Director may approve a modification of 10-year Tree Canopy Requirements where strict application of the requirements would reduce the usable area of a lot due to lot configuration or size to a point that would preclude a reasonable use of the lot or would otherwise cause an unreasonable or unnecessary hardship to the developer.

Strict adherence to the tree canopy requirements would preclude the use of the site for its historical function. Staff recommends approval of the modification to the 10-Year Tree Canopy Requirement in favor of the plantings as depicted on the proposed plat.

#### Tree Preservation Target

§12-0508.3 of the Public Facilities Manual states that the Director may approve a deviation from the site's Tree Preservation Target when meeting the Target would require the preservation of trees that do not meet standards for health and structural condition and other vegetation and risk management requirements of the Public Facilities Manual.

The quality of the vegetation in the area to be impacted by the expansion is generally poor and consists primarily of scrub-type invasives. Accordingly, the applicant is requesting a deviation from the tree preservation target pursuant to §12-0508 of the Public Facilities Manual. Given the above conditions, staff supports the deviation request in favor of the proposed on-site and off-site plantings as shown on the plat.

#### **Special Exception Requirements**

##### General Special Exception Standards (§9-006)

General Standard 1 requires that the proposed use at the specified location be in harmony with the adopted Comprehensive Plan. As stated in the Land Use/2232 Analysis, staff concludes that the proposal is in harmony with the Comprehensive Plan.

General Standard 2 requires that the proposed use be in conformance with the general purpose and intent of the applicable zoning district regulations. The R-1 District permits light public utility uses as a special exception use. The site is designed to be compatible with the adjacent residentially zoned land.

General Standard 3 requires that the proposed use 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. As stated in the Land Use/2232 Analysis, the proposed project has been designed to minimize the impact of both the existing facility and the proposed expansion on the neighboring properties. (Staff notes that the original substation was built in 1957.) The parcel to the west was rezoned to R-8 in 1979, and the parcels to the north and east were rezoned to R-8 in 1980. The parcel to the south remains undeveloped. It is staff's opinion that the proposed expansion will not hinder future development of adjacent parcels, owing to the existing vegetation, supplemental plantings, and the distance to residential units.

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. Access for the site is provided from a proposed paved driveway onto Compton Road. Traffic associated with the facility is expected to be minimal to include weekly or monthly maintenance inspections, in keeping with the current use. Due to the low number of trips generated by the use, staff concludes that the proposed use will not create any hazardous traffic conditions.

General Standards 5, 6, and 7 require landscaping, screening, open space, adequate utility, drainage, parking, loading, and other necessary facilities to serve the proposed use to be regulated in accordance with the Zoning Ordinance. The applicant has met or exceeded the requirements of the Zoning Ordinance with the exception of the transitional screening and barrier requirements, which staff has recommended to be modified. Staff concludes that these standards have been met.

General Standard 8 states that signs shall be regulated by the provisions of Article 12 and that the Board may impose more strict requirements for a given use than those set forth in the Zoning Ordinance. This application does not include any signs.

#### Category 1 Special Exception Standards (§9-104)

Standard 1 states that Category 1 special exception uses are not required to comply with the lot size requirements or the bulk regulations set forth in the Zoning Ordinance.

Standard 2 states that there shall be no storage of materials or equipment, 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 proposal meets these stipulations.

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. There are no C or I districts within 500 feet of the facility that would accommodate the substation's function as a delivery point, which allows the transfer of electrical power between Dominion Virginia Power and NOVEC transmission lines and service areas. The existing facility has been sited to effectively fulfill this function given the current electrical transmission and distribution network and the current service areas. The expansion of the facility would help ensure its continued effectiveness.

Standard 4 states that before establishment, all uses, including modifications or alterations to existing uses, shall be subject to the provisions of Article 17, Site Plans. The applicant expects to submit a site plan following the special exception review process.

### **Overlay District Requirements**

#### Water Supply Protection Overlay District (WS) (§7-808)

The Water Supply Protection Overlay District requires that developments provide water quality control measures designed to reduce by one-half the projected phosphorus runoff pollution for the proposed use. Such water quality control measures or Best Management Practices (BMPs) shall be reviewed, modified, waived, and/or approved by the Director in accordance with the Public Facilities Manual (PFM). In no instance shall the requirement for BMPs be modified or waived except where existing site characteristics make the provision impractical or unreasonable on-site and an alternative provision is not or cannot be accommodated off-site, and where it can be established that the modification or waiver will not affect the achievement of the water quality goals for the public water supply watershed as set forth in the adopted comprehensive plan.

Given the constraints imposed by the existing use and the site, the applicant is unable to completely fulfill the detention and Best Management Practice (BMP) requirements of the PFM. Construction of these facilities would result in impacts to existing vegetation and reduce the screening of the facility. In lieu of these measures, staff recommends a condition of approval stating that stormwater management shall be provided as generally depicted on the plat and as approved by the Department of Public Works and Environmental Services unless waived or modified. Staff recommends that the adequacy of these measures be determined at the time of site plan review.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Staff Conclusions**

In staff's opinion, the proposed expansion of the existing delivery point and substation facility satisfies the criteria of location, character, and extent as specified in §15.2-2232 of the Code of Virginia.

In staff's opinion, with the adoption of the proposed development conditions, the special exception is in harmony with the Comprehensive Plan and in conformance with all applicable Zoning Ordinance provisions.

### **Staff Recommendations**

Staff recommends that the Planning Commission find that the facility proposed under 2232-Y12-5 satisfies the criteria of location, character, and extent as specified in §15.2-2232 of the Code of Virginia and is substantially in accord with the provisions of the Comprehensive Plan.

Staff recommends approval of SE 2012-SU-015 subject to the proposed development conditions in Appendix 1.

Staff recommends approval of the transitional screening and barrier requirements modification; the 10-year canopy requirement modification; and the tree preservation target deviation, in lieu of the alternatives as shown on the proposed plat and as conditioned.

It should be noted that it is not the intent of staff to recommend that the Board, in adopting any conditions proffered by the owner, 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 recommendation of staff; it does not reflect the position of the Board of Supervisors.

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

## **APPENDICES**

1. Proposed Development Conditions
2. Affidavit
3. Statement of Justification
4. 2232 Analysis
5. Environmental Analysis
6. Transportation Analysis
7. Urban Forest Management Analysis
8. Stormwater Management Analysis
9. Park Authority Analysis
10. Applicable Zoning Ordinance Provisions
11. Glossary

**PROPOSED DEVELOPMENT CONDITIONS**

**SE 2012-SU-015**

**December 27, 2012**

If it is the intent of the Board of Supervisors to approve SE 2012-SU-015 located at 14600 Compton Road, Tax Map 65-3 ((1)) 35, for an expansion to an existing electric utility facility 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 "Harrison Substation," consisting of ten sheets prepared by Dewberry & Davis, LLC, dated June 15, 2012, as revised through December 13, 2012, 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. The applicant shall reserve right-of-way along the Compton Road frontage to match that of the adjacent properties to be dedicated in fee simple to the Board of Supervisors upon request by either Fairfax County or the Virginia Department of Transportation, whichever occurs first.
5. The entrances to the substation and the adjacent transmission line easement to the west of the site shall be improved to meet the commercial entrance standards of the Virginia Department of Transportation, as depicted on the plat and subject to the conditions of the easement.
6. An 8-foot wide asphalt trail shall be constructed across the site and extended onto the adjacent properties to connect with the trail sections to the west and the east. The applicant shall work with, and gain permission from, the Crofton Commons Homeowners' Association (CCHOA) for trail extensions within property owned by the CCHOA; the final location and design of the trail connection will be determined at site plan.

7. Stormwater management shall be provided as generally depicted on the plat and as approved by the Department of Public Works and Environmental Services (DPWES), unless waived or modified at the site plan stage.
8. The limits of clearing and grading shall be outside the drip line of existing vegetation, as depicted on the plat.
9. Any construction within the existing swale, such as gravel installed for check dams, shall be installed by hand to minimize disturbance to existing vegetation, which will be coordinated with the site review engineer and the Urban Forest Management Division. Any vegetation damaged or removed shall be replaced as determined and recommended by the Urban Forest Management Division.
10. The applicant shall provide management practices for the protection of understory plant materials, leaf litter, and soil conditions found in areas to be left undisturbed, subject to the approval of the Urban Forest Management Division. The applicant shall actively monitor the site to ensure that inappropriate activities such as the storage of construction materials, dumping of construction debris, and traffic by construction equipment and personnel do not occur within these areas. The applicant shall restore understory plant materials, leaf litter, and soil conditions to the satisfaction of the Urban Forest Management Division if these are found to be damaged, removed, or altered in manner not allowed in writing by the Urban Forest Management Division.
11. The applicant shall provide additional landscaping both on and off-site, as depicted on the plat, in order to meet the intent of the Type 2 Transitional Screening requirement subject to the review and approval of the Urban Forest Management Division. The applicant shall work with, and gain permission from, the Crofton Commons Homeowners' Association (CCHOA) for plantings within property owned by the CCHOA.
12. All areas designated to be left undisturbed shall be protected by tree protection fencing and signage, as coordinated with the Urban Forest Management Division and as depicted on the plat. Tree protection shall include 4-foot tall 14-gauge welded wire attached to 6-foot tall steel posts driven 18 inches into the ground and placed no further than 10 feet apart.
13. Construction activities shall be limited to Monday through Friday and 7:30 a.m. to 5:30 p.m. Saturday construction will be allowed if the hours of construction are coordinated with the Crofton Common Homeowners' Association. No work shall be performed on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
14. Construction traffic access to the site will be limited to Compton Road.

15. The applicant shall obtain a Virginia Stormwater Management Program permit from the Virginia Department of Conservation and Recreation prior to the commencement of construction. The site will be maintained in accordance with the Stormwater Pollution Prevention Plan and the requirements of the aforementioned General Permit for Discharges of Stormwater from Construction Activities (VAR10).

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.

**SPECIAL EXCEPTION AFFIDAVIT**DATE: September 3, 2012  
(enter date affidavit is notarized)I, Jonathon W. Schultis of Virginia Electric & Power Company, 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

117358

in Application No.(s): SE 2012-SU-015  
(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.)

<b>NAME</b> (enter first name, middle initial, and last name)	<b>ADDRESS</b> (enter number, street, city, state, and zip code)	<b>RELATIONSHIP(S)</b> (enter applicable relationships listed in <b>BOLD</b> above)
Virginia Electric & Power Company d/b/a Dominion Virginia Power	701 E. Cary Street, Richmond, VA 23219	Applicant/Agent
Jonathon W. Schultis	701 E. Cary Street, Richmond, VA 23219	Agent for Applicant
Gerald W. Jackson	701 E. Cary Street, Richmond, VA 23219	Agent for Applicant
Northern Virginia Electric Cooperative	10432 Balls Ford Road, Manassas, VA 20109	Title Owner
George E. Coutts	10432 Balls Ford Road, Manassas, VA 20109	Agent for Title Owner

(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: September 3, 2012  
(enter date affidavit is notarized)

119 358

for Application No. (s): SE 2012-SU-015  
(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 & Power Company d/b/a Dominion Virginia Power, 701 E. 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 Attachment to Par. 1(b)**

DATE: SEPTEMBER 3, 2012  
(enter date affidavit is notarized)

117358

for Application No. (s): SE 2012-SU-015  
(enter County-assigned application number (s))

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

Northern Virginia Electric Cooperative ("NOVEC")  
10432 Balls Ford Road  
Manassas, VA 20109

**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 THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

NOVEC is a customer-owned and locally based distribution system that provides electricity to more than 148,000 residential business customers throughout NOVA.	As a cooperative, NOVEC is unlike investor owned utilities, such as Dominion Virginia Power, because its members are its customers. No one customer owns more than 10% of the cooperative.
--	--

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

**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 THE SHAREHOLDERS:** (enter first name, middle initial, and last name)

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

SPECIAL EXCEPTION AFFIDAVIT

DATE: September 3, 2012  
(enter date affidavit is notarized)

117358

for Application No. (s): SE 2012-SU-015  
(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)

(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: September 3, 2012  
(enter date affidavit is notarized)

117358

for Application No. (s): SE 2012-SU-015  
(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: September 3, 2012  
(enter date affidavit is notarized)

117358

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.

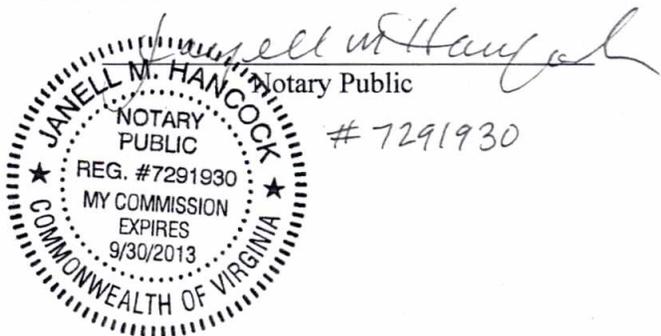
WITNESS the following signature:

(check one) [ ] Applicant [x] Applicant's Authorized Agent

Jonathan W. Scholtis  
(type or print first name, middle initial, last name, and & title of signee)

Subscribed and sworn to before me this 4th day of September 20 12, in the State/Comm. of Virginia, County/City of Richmond.

My commission expires: 9/30/2013



**DOMINION VIRGINIA POWER  
Harrison Delivery Point Expansion  
Fairfax County Special Exception Requirements**

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

Submitted, April 15, 2012  
Amended, June 1, 2012  
Amended, October 3, 2012  
Amended, December 3, 2012

**I. Introduction**

Pursuant to Section 15.2-2232 of the Code of Virginia and Section 3-104 of the Fairfax County Zoning Ordinance ("Zoning Ordinance"), Dominion Virginia Power ("Dominion" or "the Company") hereby requests approval to permit the development of an expansion to an existing electric delivery point facility known as the Harrison Delivery Point by approximately three thousand seven hundred and fifty seven (3,757) square feet, on property owned by the Northern Virginia Electric Cooperative ("NOVEC") through this Special Exception application. The subject property is a 0.992 acre parcel identified as Tax Map Reference Number 65-3-((1))-35, located at 14600 Compton Road, approximately 700 feet northwest from the intersection of Compton Road (SR 658) and Ordway Road (SR 616). The property is located in the Sully Magisterial District and is zoned R-1 (Residential District); accordingly, development of an electric utility facility is permitted by special exception as a Category 1 (Light Public Utility) use. A Special Exception application is required by Section 3-104 of the Fairfax County Zoning Ordinance for the R-1 Zoning District. This application will also satisfy the review of the substation's conformance with the Comprehensive Plan as it relates to its location, character, and extent as required by Section 15.2-2232 of the Code of Virginia.

**II. Requirements for the Proposed Use**

**Why the new facility is needed:**

The Harrison Delivery Point Expansion is needed due to the area's growth of electric demand. The proposed utility delivery point expansion is necessary to provide continued reliable electrical service for this area in Fairfax County. Additionally, the expansion is needed to provide operational flexibility between the Dominion and NOVEC transmission systems. The Harrison Delivery Point facility is owned by NOVEC, the expansion of this facility by Dominion would provide NOVEC with more reliable service from Dominion's transmission system.

**Why the proposed location is the best location for the proposed use:**

This location is the best location for the proposed use because an electrical delivery point facility already exists. Furthermore, high voltage electric transmission lines operated by both Dominion and NOVEC are

located adjacent to the site. In addition, another electric substation facility operated by NOVEC is located across the street from this facility. Moreover, the Harrison Delivery Point has convenient access to State Route 658. Due to the location of these existing electric utility facilities, and the existing access to the facility, the Company believes the requirements for location, character and extent have been met for the proposed expansion of this facility.

Why the proposed location and type of facility is the least disruptive alternative:

No other alternatives were evaluated for this project. The expansion is needed at the existing Harrison Delivery Point facility. The expansion will not provide any additional disruptions to the adjoining properties because the new equipment will not generate noise. Further, any visual impacts are already established in this area by the existing electric transmission infrastructure.

**III. Description of the Proposed Site and Use**

Nature of the Use:

The Harrison Delivery Point is a NOVEC facility that includes Dominion's transmission facilities inside the existing fence. The equipment needed for this expansion will be Dominion's equipment, located within the expanded NOVEC facility. The purpose of the Harrison Delivery Point is to provide the delivery of electric transmission at 115,000 volts ("115 kV") from Dominion to NOVEC; NOVEC; as well as other electric cooperatives and a few municipalities, purchase bulk wholesale power from Dominion in order to transmit and distribute this electricity among their customers. Delivery point facilities, like the Harrison Delivery Point, contain lower-profile equipment such as bussing and switching that generally do not exceed twenty (20) feet in height. Delivery Point facilities also house higher-profile equipment such as backbones. For the Harrison Delivery Point, there are two backbones proposed. The taller structure will be approximately ninety (90) feet in height and the second will be approximately seventy-five (75) feet in height. The transmission structures that currently occupy the area in and around the Harrison Delivery Point are approximately eighty (80) feet in height.

The backbone allows for the high voltage electricity to be safely delivered to lower-profile equipment within the delivery point. Due to the clearance requirements established by the National Electric Safety Code ("NESC") and the Institute of Electric and Electronic Engineer's ("ITTT") Standard 1427, Dominion has determined that the backbone proposed for the Harrison Delivery Point expansion must be ninety (90) in height. There are no engineering alternatives that would reduce the height of the backbone and still meet the prescribed clearance requirements. In addition to the back bone, there will also be a static pole structure, which is seventy-five feet in height.

As stated, the proposed utility facility use is permitted by Special Exception in the R-1 District. Its development will meet or exceed Zoning Ordinance requirements and performance standards; further, development will be subject to site plan approval to ensure that these requirements will be met.

Site Description:

The proposed site for the expansion is zoned R-1 and currently developed with a gravel lot. The expansion will increase the size of the existing facility by approximately three thousand seven hundred and fifty seven (3,757) square feet. Adjacent properties include townhouses/multifamily developments to the north, east and west of the subject property. There is also a small pool and recreation site,

associated with the multi-family development located to the northeast of the proposed expansion site. These townhomes/multifamily developments and recreation area are buffered from the facility by an existing vegetated buffer of mature trees.

Pursuant To Par. 2 Of Sect. 13-305 Of The Zoning Ordinance A Waiver Of The Transitional Screening And Barrier Requirements Are Hereby Requested.

Justification: The Existing Sub-Station Facility Located On Site Will Not Allow Sufficient Space To Meet The Requirements Of The Type Ii Transitional Screening Requirements. The Barrier Requirements Will Be Met Using A Chain Link Fence With Plastic Slats. Landscaping In The Area Available On-Site As Well As Areas Off-Site Has Been Provided To Help Provide Screening For The Adjacent Properties. Existing Vegetation Along The Eastern Property Line Will Be Preserved To Help Provide Screening. Additionally The Adjacent Properties To The East And North Have Existing Evergreen Vegetation Along The Common Property Lines That Will Provide Screening. The Property To The North Also Sits On A Higher Elevation Than The Subject Site.

Pursuant To 12-0513.3 The Director May Approve A Modification Of The 10-Year Tree Canopy Requirements For Additions To Or Modifications Of Existing Structures Or Uses To The Minimum Extent Necessary So That The Requirement Would Not Result In The Existing Structure Or Use Being Unable To Meet Some Other Requirement Of The Code Or The Public Facilities Manual.

Justification: The Existing Sub-Station Facility Located On Site Will Not Allow Sufficient Space To Meet The 10-Year Tree Cover Requirements Of The R-1 Zoning District. 79.5% Of The Site Is Currently Being Used By The Existing Sub-Station Facility. With The Minor Expansion Proposed, 88.9% Of The Existing Site Will Be Occupied By The Sub-Station Facility. With Only 11.1% Of The Site Being Left In Open Space It Will Not Be Feasible To Provide 30% 10-Year Tree Cover Required By The R-1 Zoning District.

Additionally, there is an existing Dominion Virginia Power transmission line easement to the north and south of the facility, populated by 115 kV structures that average approximately eighty (80) feet in height. The adjacent power lines allow Dominion immediate access to its power source. Across Compton Road to the south, there is another public utility, an electric substation facility operated by NOVEC. The closest single-family residential home is located to the west, approximately six hundred and forty (640) feet away from the proposed expansion site, and nearest multifamily development is approximately two hundred sixty two (262) feet away to the west of the proposed expansion site.

The existing delivery point site is currently a compacted graded gravel lot with substation equipment including an existing backbone and switching and bussing structures, surrounded by a 7-foot high chain-link fence topped with one foot of barbed wire. An additional graveled area outside of the fencing area exists that Dominion intends to use as part of the delivery point expansion.

#### **IV. Description of Use**

- A. Type of operation: Electric Transmission Delivery Point Facility
- B. Dimensions of all buildings and structures and heights: The new Delivery Point equipment will consist of the following: a 90' backbone and a 75' static pole structure,

Electric transmission switches less than 20' in height and high voltage bussing less than 20' in height.

- C. Material, color, or finish of buildings or structure: The backbones and bussing are galvanized aluminum and the switches are light gray metal structures.
- D. Hours of operation: 24 hours/day
- E. Estimated number of daily employees/patrons: None
- F. Proposed number of employees: No permanent employees are proposed. The facility will be visited approximately once or twice per month by Dominion and/or NOVEC personnel for site inspection purposes, and for any needed repairs or alterations.
- G. Service area of the proposed use: The use will serve the NOVEC transmission system by providing a delivery of electricity at 115 kV.
- H. Maintenance requirements and frequency: The facility will be visited approximately once or twice per month by Dominion and/or NOVEC personnel for site inspection purposes, and for any needed repairs or alterations.
- I. Hazardous or Toxic Substances: The existing Harrison Delivery Point facility and the proposed expansion do not contain, utilize, treat, dispose or store any hazardous or toxic 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 hazardous waste management regulations. Furthermore, the existing Harrison Delivery Point facility and the proposed expansion do not contain, utilize, store, treat or dispose of petroleum products as defined by Title 40, Code of Federal Regulations part 280.

#### **V. Anticipated Impacts on Adjoining Properties**

- A. Traffic Impacts: There is no pedestrian traffic associated with this use. Vehicular traffic will be minimal. The existing Harrison Delivery Point and the proposed expansion will be unmanned, but the site is expected to be visited by Dominion employees once or twice per month for maintenance purposes. Vehicle access will be from the existing access to the Harrison Delivery Point off of Compton Road.
- B. Noise and Light Impacts: There is no equipment within the facility that generates any noise. When the transmission facilities are loaded near capacity, they can generate a very slight humming noise; however, that sound level will be well below the Fairfax County Noise Ordinance regulations at the property line. There will be no additional lighting impacts associated with this project.
- C. Impacts on environmental features of site: Part of the site proposed for the expansion is already graveled. Land disturbance associated with this site will employ erosion and sediment control measures that meet the requirements of Fairfax County and the Virginia Department of Conservation and Recreation.

- D. Impacts on air and water quality: Air quality will not be affected by the development of this delivery point expansion because it emits no air pollutants. Water quality will be improved by a proposed grass swale and 4 check dams provided on site.
  
- E. Visual impacts: The site will have minimal visual impact to the surrounding area due to the height and density of the existing tree canopy and the proposed landscaping. The most visible part of the development of this site will be the ninety foot (90) high backbone structure. However, due to its close proximity to the existing transmission structures which measure approximately eighty (80) feet in height, the expansion's visual impact is minimized.

#### **VI. Section 15.2-2232 Provisions**

The proposed use meets the objectives for Public Facilities outlined in the Fairfax County Comprehensive Plan ("Comprehensive Plan"), even though substations and delivery points are rarely recommended in the Comprehensive Plan for site-specific properties. An Electric Delivery Point facility already exists on the subject property; further, an electrical substation is located across the street from the existing delivery point facility. The expansion of the Harrison Delivery Point facility will directly serve NOVEC; however, it will indirectly provide electric service to an area of need in southern Fairfax County through NOVEC's transmission and distribution networks. If approved, the delivery point expansion will provide needed and convenient service to the greatest number of consumers; it will serve to maintain acceptable levels of service, and will allow NOVEC the operational flexibility to address future growth expected in the area. (Public Facilities - Objectives 1, 2, and 3).

The existing Harrison Delivery Point and the proposed expansion of said facility are in a strategic location within the overall utility system to provide an improved level of service to current and future electrical needs. At the same time, it will provide service with minimum effect on adjacent properties because it is surrounded by electric transmission facilities. It will be properly screened and buffered onsite to reduce visual impact and will meet the requirements of the Zoning Ordinance. An electrical utility facility at this strategic location provides valuable infrastructure critical to the public interest. (Public Facilities – Objective 4)

There are no environmentally sensitive issues at the property, and the site has mature vegetation on and off site to shield views. Site access to the Harrison Delivery Point is already in place. Thus Dominion will be able to construct the expansion at the smallest size necessary and yet provide the adequate level of service. The site is not only appropriate for the facility's specific purpose, but also meets or exceeds development criteria. (Public Facilities – Objective 5).

#### **VII. Conclusion**

The above-described statement of justification proposes a necessary public utility facility expansion that will provide needed electrical service in Fairfax County and meets the standards for approval. The site proposed is uniquely situated adjacent to an existing delivery point facility, and in the area of existing electric transmission and utility development. With approval of the requested Special Exception application, the proposal will conform to the provisions of all applicable ordinances, regulations, standards, and conditions. Furthermore, the proposed use conforms to the Zoning Ordinance and the recommendations of the Comprehensive Plan. For the reasons set forth herein, Dominion respectfully requests the approval of this Special Exception application.

Respectfully submitted,

Jonathon W. Schultis  
Senior Siting & Permitting Specialist  
Electric Transmission Projects  
Dominion Virginia Power



# County of Fairfax, Virginia

## MEMORANDUM

**DATE:** November 9, 2012

**TO:** Barbara C. Berlin, Director  
Zoning Evaluation Division, DPZ

**FROM:** Chris Caperton, Chief  
Public Facilities Planning Branch, DPZ

**SUBJECT:** Section 15.2-2232 Review  
**Application 2232-Y12-5** (concurrent with **SE 2012-SU-015**)  
Virginia Electric & Power Co. d/b/a Dominion Virginia Power  
Harrison Delivery Point Expansion  
14600 Compton Road, Centreville, VA 20121  
Tax Map 65-3 ((1)) 35

Pursuant to Va. Code Sec. 15.2-2232, the Public Facilities Planning Branch of the Planning Division offers the following comments and recommendation on the proposed Harrison Delivery Point expansion.

### PROJECT DESCRIPTION

The applicant, Virginia Electric & Power Co., d/b/a Dominion Virginia Power ("Dominion"), proposes to expand the Harrison Delivery Point electrical utility facility as described in the 2232 Review Application. The proposal is also subject to review and approval of SE 2012-SU-015. The applicant states that the facility currently serves as a delivery point for transmission voltage between Dominion and the Northern Virginia Electric Cooperative ("NOVEC"). The expansion is needed for new electrical equipment that will allow both companies to continue to provide reliable electrical service in Fairfax County.

The proposed facility is summarized below (the 2232 Review Application is attached and includes by reference the plans included with the SE 2012-SU-015 staff report).

**Location:** 14600 Compton Road, Centreville, VA 20121. The 0.99 acre property is located on the north side of Compton Road, to the west of Old Centreville Road.

**Site:** The site is currently developed with an electrical distribution facility owned by NOVEC on a gravel lot. The fenced compound includes an 80' "backbone" structure and related cabinets and switching equipment. This equipment generally does not exceed 20' in height.

**Proposed Facility:** The proposed 3,747 square foot expansion into a gravel lot area will include the addition of two new structures (one 90' backbone structure and one 75' static pole structure) and additional equipment to consist of electric transmission switches less than 20' in height and high voltage bussing less than 20' in height.

**Screening:** The site is currently screened by a chain link fence with mature vegetation to the north and east of the property. The expanded facility would include an 8' chain link fence with supplemental evergreen plantings along each boundary. The western boundary will include evergreen shrubs and the northern boundary will include evergreen trees 6-7 feet in height at planting time. The southern and eastern boundaries will include a combination of evergreen trees and shrubs.

**Access:** Access to be provided from the two existing access points from Compton Road.

**Operations:** 24 hours per day, 7 days per week. Unmanned facility. The facility will be visited approximately once or twice per month by Dominion and/or NOVEC personnel for site inspection purposes, and for any needed repairs or alternations.

**Service Area:** The proposed use will serve the NOVEC transmission system by providing delivery of electricity at 115kV.

#### **COMPREHENSIVE PLAN GUIDANCE**

The subject property is located in the Area III, Bull Run Planning District, BR-6 Centreville Community Planning Sector. The Comprehensive Plan Map identifies the property as planned for residential use at 2-3 du/ac.

#### **Area Plan**

Fairfax County Comprehensive Plan, Area III, 2011 Edition; Bull Run Planning District, as amended through 6-19-2012, Overview, Figure 6: Existing Public Facilities, page 15:

**Figure 6** identifies the Va. Power Bull Run Substation and NOVEC Substation as existing public facilities in BR-6.

#### **Policy Plan**

Fairfax County Comprehensive Plan, Policy Plan, 2011 Edition; Public Facilities, as amended through January 10, 2005, Countywide Objectives and Policies, pages 2-4:

**“Objective 1: Locate new facilities to provide convenient service to the greatest number of people or service consumers and users.**

Policy a. Site facilities appropriately to the area they are intended to serve.

Policy b. Reduce service area overlap between like facilities, unless overlap is necessary to correct service deficiencies.

Policy c. Site facilities in accordance with locational standards that maintain accepted levels of service while reducing duplication or underutilization...

**Objective 4: Mitigate the impact of public facilities on adjacent planned and existing land uses...**

Policy b. Co-locate public facilities whenever appropriate to achieve convenience and economies of scale, as long as the integrity of the Comprehensive Plan is not impinged...

Policy d. Ensure that public facilities are properly screened and buffered in order to mitigate visual impact on adjacent planned development of a different use or nature.

Policy e. Ensure that site size and development conforms to all requirements of the Fairfax County Zoning Ordinance and exceeds site acreage requirements, as possible, to achieve maximum compatibility with surrounding land uses."

Fairfax County Comprehensive Plan, Policy Plan, 2011 Edition; Public Facilities, as amended through January 10, 2005, Electrical and Land-Line Utility Services, pages 33-37:

**"Objective 40: Locate electrical and land-line service facilities to provide maximum service levels as unobtrusively as possible. (See Figure 7.)...**

Policy b. Collocate facilities such as distribution and transmission poles, switching and hub centers and electrical substations whenever feasible and appropriate to minimize visual and neighborhood impacts.

Policy c. Plan for existing and future needs of facilities in conjunction with emerging development designs.

Policy d. Provide adequate acreage for expansion of substations, hub centers and equipment areas and maintain levels of screening to accommodate expansion...

Policy i. Utilize existing towers and poles to support electrical and land-line utility services whenever possible, to reduce the need for new towers and poles. However, avoid overloading existing towers and poles with related equipment...

**Objective 41: Meet service area requirements with a minimum of facilities and ensure that those facilities are designed to minimize impacts on adjacent properties...**

Policy b. Mitigate the visual impact of switching and hub centers, equipment areas and electrical substations from adjacent development. Land with existing mature vegetation is preferable, as are access roads which obscure entrances, berms which provide screening, and slopes that provide localized lower elevations...

- Policy e. Provide for the appropriate screening and buffering of proposed facilities.
- Policy f. Design and site proposed facilities to preserve areas necessary for future right-of-way dedication and ancillary easements for construction of road improvements...”

## **STAFF ANALYSIS**

### **CONFORMANCE WITH THE COMPREHENSIVE PLAN**

Va. Code Sec. 15.2-2232, as amended, requires the Planning Commission to determine whether the general location or approximate location, character, and extent of the proposed facility, as amended, are substantially in accord with the adopted Comprehensive Plan:

#### **Location**

By expanding an existing electrical utility facility, the proposal is consistent with Plan objectives to locate new facilities to provide convenient service to the greatest number of people or service consumers and users and to site facilities appropriately to the area they are intended to serve. The proposed expansion is also consistent with policies to accommodate expansion of substations, hub centers and equipment areas. The proposed expansion at the current location, adjacent to another existing substation, meets Plan objectives to collocate facilities such as switching and hub centers whenever feasible.

#### **Character**

The proposed expansion will occur within the existing disturbed and developed area of the property, and will not impact the existing mature vegetation to the north and west of the property that currently provides a visual buffer from the adjacent areas. There is little to no vegetation on the western and southern boundaries of the property; this condition will be improved as the proposal includes the addition of evergreen plantings on each side of the property to further minimize the visual impact of the facility on the surrounding areas. As such, the proposed expansion is consistent with Plan guidance to properly screen and buffer electrical facilities to mitigate visual impacts on adjacent development. The visual impact of the height of the two new structures will be minimized as they are located within the property that is developed with 80' poles. The addition of one backbone structure (90' in height) and one pole structure (75' in height) is consistent with the height of the existing structures. From the northern property line, the impact of the height is further minimized due to the topography and the existing berm between the site and the adjacent community pool.

#### **Extent**

The proposed expansion is consistent with Plan guidance to ensure that site size and development conform to Zoning Ordinance requirements. There are no additional access points to the site proposed with this application. The proposed facility will remain an unmanned facility with minimal traffic impact. Consideration should be given to the provision of right-of-way for future Compton Road improvements, consistent with Plan guidance for electrical facilities to design and site proposed facilities to preserve areas

Barbara Berlin  
2232-Y12-5 (concurrent with SE 2012-SU-015)  
Page 5

necessary for future right-of-way dedication and ancillary easements for construction of road improvements.

#### **CONCLUSION AND RECOMMENDATIONS**

Staff concludes that the subject proposal, as amended, by Virginia Electric & Power Co. d/b/a Dominion Virginia Power, to expand the Harrison Delivery Point at 14600 Compton Road, Centreville, VA 20121, satisfies the criteria of location, character, and extent as specified in Va. Code Sec. 15.2-2232, as amended.

Staff therefore recommends that the Planning Commission find the subject Application **2232-Y12-5**, as amended, substantially in accord with provisions of the adopted Comprehensive Plan.

CBC/LHO



## County of Fairfax, Virginia

**MEMORANDUM**

DATE: November 8, 2012

**TO:** Barbara Berlin, Director  
Zoning Evaluation Division, DPZ

Chris Caperton, Chief  
Facilities Planning Branch, DPZ

**FROM:** Pamela G. Nee, Chief *PJN*  
Environment and Development Review Branch, DPZ

**SUBJECT:** ENVIRONMENTAL ANALYSIS: SE 2012-SU-015  
2232-Y12-5  
Harrison Station

This memorandum, prepared by Mary Ann Welton, includes citations from the Comprehensive Plan that list and explain environmental policies for this property. Plan citations are followed by a discussion of concerns including a description of potential impacts that may result from the proposed revised Special Exception (SE) Plat dated October, 2012. Possible solutions to remedy identified issues are suggested. Other solutions may be acceptable, provided that they achieve the desired degree of mitigation and are in harmony with Plan policies.

**COMPREHENSIVE PLAN CITATIONS:**

Fairfax County Comprehensive Plan, 2011 Edition, Policy Plan, Environment, as amended through July 27, 2010, on pages 7-9, the Plan states:

**“Objective 2: Prevent and reduce pollution of surface and groundwater resources. Protect and restore the ecological integrity of streams in Fairfax County.**

Policy a. Maintain a best management practices (BMP) program for Fairfax County and ensure that new development and redevelopment complies with the County’s best management practice (BMP) requirements. . . .

- Policy j. Regulate land use activities to protect surface and groundwater resources.
- Policy k. For new development and redevelopment, apply better site design and low impact development (LID) techniques. . . .”

Fairfax County Comprehensive Plan, 2011 Edition, Policy Plan, Environment, as amended through July 27, 2010, on page 10, the Plan states:

**“Objective 3: Protect the Potomac Estuary and the Chesapeake Bay from the avoidable impacts of land use activities in Fairfax County.**

- Policy a. Ensure that new development and redevelopment complies with the County's Chesapeake Bay Preservation Ordinance. . . .”

Fairfax County Comprehensive Plan, 2011 Edition, Policy Plan, Environment, as amended through July 27, 2010, on page 18, the Plan states:

**“Objective 10: Conserve and restore tree cover on developed and developing sites. Provide tree cover on sites where it is absent prior to development.**

- Policy a: Protect or restore the maximum amount of tree cover on developed and developing sites consistent with planned land use and good silvicultural practices.”

## ENVIRONMENTAL ANALYSIS

This section characterizes the environmental concerns raised by an evaluation of this site and the proposed development. Solutions are suggested to remedy the concerns that have been identified by staff. There may be other acceptable solutions. Particular emphasis is given to opportunities provided by this application to conserve the county's remaining natural amenities.

**Water Quality Protection/Stormwater Management:** The .99 acre site currently serves as an electrical distribution facility owned by Northern Virginia Electric Cooperative (NOVEC), and this application requests expansion of that facility. The site is located on the north side of Compton Road west of Old Centreville Road and it falls within the Cub Run Watershed. Orthophotography of the site shows that the property is entirely impervious surface. According to the water quality narrative in the special exception plat, 3,500 square feet of existing impervious gravel will be removed from the site and replaced with 3,500 square feet

of another type of gravel, which is “pervious material” compared to the existing aggregate material. The adequacy of stormwater best management practice will be determined by the Department of Public Works and Environmental Services (DPWES).

According to the outfall analysis for this application some sheet flow drains to the southeast corner of the site and flows into a pipe under Compton Road. The analysis also describes erosion at the head of the pipe and a build-up of sedimentation within the pipe. The analysis seems to indicate that work and maintenance are necessary to ensure that adequacy is restored to this outfall.

In the second outfall location, runoff from the site sheet flows to an area situated midway along the western property line into a densely overgrown field under the power lines. In the opinion of the consulting engineer the second outfall is adequate.

Stormwater management control measures will be subject to review and approval by DPWES.

**Tree Restoration:** Sheet 3 of the special exception plat depicts proposed vegetation for the property which includes 16 evergreen trees placed on the northeastern corner of the facility and a fewer number placed along the southern property boundary facing Compton Road. More than fifty evergreen shrubs are proposed to be installed along the western property boundary, some onsite and some offsite. The applicant is encouraged to work with the Urban Forestry Management Branch of DPWES to identify other suitable areas for tree and shrub planting.

### **COUNTYWIDE TRAILS MAP**

The Countywide Trails Plan depicts a major paved trail on the north side of Compton Road immediately adjacent to the subject property. Orthophotography for the site depicts the trail existing immediately east and west of the subject property, but it does not appear to connect through this site. The trail is not depicted on the current special exception plat.

PGN: MAW

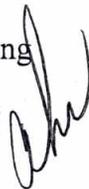


# County of Fairfax, Virginia

## MEMORANDUM

**DATE:** September 26, 2012

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

**FROM:** Angela Kadar Rodeheaver, Chief  
Site Analysis Section  
Department of Transportation 

**FILE:** 3-5 (SE 2012-SU-015)

**SUBJECT:** Transportation Impact

**REFERENCE:** SE 2012-SU-015  
Virginia Electric & Power Company d/b/a Dominion Virginia Power  
Land Identification Map: 65-3 ((1)) 35

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 July 6, 2012. The applicant wishes to expand the existing Harrison Electric Delivery Point Facility by approximately 3,757 square feet with the addition of two "backbones", higher profile equipment that delivers high voltage electricity to lower profile equipment. The taller structure will be about 90 feet high and the second ill be about 75 feet high. The facility will be visited once or twice a month by Dominion and/or NOVEC employees for inspection and repair purpose. Access is from Compton Road.

- The eastern entrance should be closed and the western entrance should meet VDOT's commercial entrance standards.
- The applicant should reserve right-of-way to match that on adjacent properties to be dedicated upon request by either Fairfax County or VDOT.
- There is a trail shown on this side of Compton Road on the County Trails Plan and there appear to be trail ends on adjacent sites, so the trail should be connected across this site or a trail waiver filed.

AKR/LAH/lah



# County of Fairfax, Virginia

## MEMORANDUM

**DATE:** December 6, 2012

**TO:** Joe Gorney, Senior Staff Coordinator  
Zoning Evaluation Division, DPZ

**FROM:** Nicholas J. Drunasky, Urban Forester II  
Forest Conservation Branch, UFMD

**SUBJECT:** Harrison Substation 14600 Compton Road, SE 2012-SU-015

**RE:** Request for assistance dated December 4, 2012

**Site Description:** The site consists of an existing electrical substation surrounding by a townhome community. Some early successional vegetation is present on the eastern periphery of the property primarily in the form of Virginia pines.

This review is based upon the rezoning application SE 2012-SU-015 stamped as "Received by the Department of Planning & Zoning December 4, 2012." Several comments have not been fully addressed with this submission, so are being repeated.

1. **Comment:** Staff from UFMD feels that the modification request for the Type II (35 foot wide) transitional screening and barrier required (D, E, or F) around the western and northern sides of the property as shown on the SE Plat stamped as "Received by the Department of Planning & Zoning December 4, 2012," satisfies the requirement. However, with this submission the limits of clearing and grading as proposed along with tilling for the installation of a grass swale has been added through the middle of existing vegetation on the eastern side of the property, which will require removal of most of the existing vegetation used as screening along with causing significant impacts to any existing vegetation left both on and off site. In addition to the removal of existing vegetation which is required to help meet the intent of the transitional screening yard for the eastern side of the property, the existing overhead electric wires within this area will not allow any landscaping to be added and therefore falling short of meeting the intent of transitional screening.

**Recommendation:** The applicant should consider revising the limits of clearing and grading to stay outside the drip line of existing vegetation on the eastern side of the property along with revising the stormwater control to not involve any disturbance to the existing swale. Any gravel installed for check dams within the existing swale



should be installed by hand to minimize disturbance to existing vegetation, which should be discussed with the site review engineer.

- 2. Comment:** In addition to providing screening to meet the intent of the Type II Transitional Screening, it appears that some of the proposed landscaping is being provided off-site on the adjacent Crofton Commons land, which would require permission from Crofton Commons and could be achieved through a development condition.

**Recommendation:** It is recommended that the applicant agree to a development condition to “Provide additional landscaping both on and off-site for the western, northern, and eastern sides of the property with permission from Crofton Commons in order to meet the intent of the Type II Transitional Screening requirement subject to review and approval of the Urban Forest Management Division.” In addition to this development condition, as part of the SE Plat, the applicant should provide a letter of permission from the off-site property owner which allows for the planting of landscape material.

- 3. Comment:** With the third submission, the Tree Preservation Target calculations have been provided. However, tree canopy being used to meet the Tree Preservation Target contains overhead electric lines running parallel within this area, which are likely within an easement. Even if there is not an easement, trees within the area immediately adjacent to the overhead electric lines cannot be used to meet the Tree Preservation Target or 10-Year Canopy Requirement for the site.

**Recommendation:** If there is an easement for the overhead electric wires running parallel within the existing vegetation on the eastern side of the site, it should be clearly depicted and labeled on the SE Plat. Any existing vegetation within either the easement for the overhead electric lines or within the area that would contain an easement where activities or maintenance practices could potentially threaten the long term health, structural integrity, safety, and biological, ecological, or environmental functionality of trees and/or forested areas should not be counted towards meeting the Tree Preservation Target or the 10-Year Canopy Requirements for the site.

- 4. Comment:** The 10-Year Canopy Requirement numbers are different between tables 12.3 and 12.10, which is unclear.

**Recommendation:** The 10-Year Canopy requirement should be revised so that it is the same number used in tables 12.3 and 12.10.

- 5. Comment:** It appears that a 1.25 canopy multiplier is being used for the narrow tree preservation area on the eastern side of the site that is being broken up by the limits of clearing and grading and is not eligible for a canopy multiplier.

**Recommendation:** The tree preservation area is only eligible for a 1.0 10-Year Canopy multiplier due to its narrow size and should be revised to only use that.

6. **Comment:** The 1000 square feet of 10-Year Canopy shown to be provided off-site does not qualify as tree banking since no conservation easement is set up to protect these trees and therefore cannot be counted towards 10-Year Canopy Credit for the site.

**Recommendation:** On line D19 of table 12.10, the applicant should remove banking or fund and just state offsite planting unless a conservation easement is set up for tree planting.

If further assistance is desired, please contact me at 703-324-1770.

NJD/

UFMID #: 173443

cc: RA File





# County of Fairfax, Virginia

## MEMORANDUM

**DATE:** December 14, 2012

**TO:** Joe Gorney, Senior Staff Coordinator  
Zoning Evaluation Division  
DPZ Department of Planning and Zoning

**FROM:** Dong-Eun (Ashley) Lee, Engineer III  
Site Development and Inspections Division  
Department of Public Works and Environmental Services

**SUBJECT:** Special Exception Plat #SE 2012-SU-015, Harrison Substation  
SE Plat "Received by the Department of Planning & Zoning December 4, 2012."  
LDS Project #25632-ZONA-001-1  
Tax Map #065-3-01-0035  
Sully District

We have reviewed the subject application and offer the following Stormwater management comments.

### Chesapeake Bay Preservation Ordinance (CBPO)

There is no Resource Protection Area (RPA) on this property.

Water quality controls must be satisfied for this development (PFM 6-0401.2). At the time of site plan submission, BMP must be provided if not waived.

The property has an existing landscape strip along the eastern property line, comprised of trees and encumbered by existing overhead wires and poles. The use of a grass swale in the area had been discussed; however, in further review of the details and discussion with Forest Conservation Branch, it has been determined that the disturbance of this area to install the grass swale is not the best approach as this would impact the existing vegetation significantly. In favor of the existing vegetation, which serves as transitional screening yard for the eastern side of the property, it is recommended that the applicant consider non-invasive options such as designating reforestation area or any other measures deemed appropriate by SDID at the time of site plan to achieve the BMP credit.

### Floodplain

There are no regulated floodplains on the site.

### Downstream Drainage Complaints

There are no recent downstream drainage complaints on file.

Department of Public Works and Environmental Services  
Land Development Services, Site Development and Inspections Division  
12055 Government Center Parkway, Suite 535  
Fairfax, Virginia 22035-5503  
Phone 703-324-1720 • TTY 711 • FAX 703-324-8359



Stormwater Detention

Stormwater detention must be met, if not waived (PFM 6-0301.3).

The engineer states in the letter that the runoff computation has been revised per the previous comment to use the runoff coefficient of 0.9 for the proposed gravel area. There is an insignificant increase in the peak runoff.

Downstream Drainage System

The outfall narrative provided in the plan states that an adequate outfall exists; and the applicant proposes minor improvements to the downstream culvert such as cleaning out the sediment deposit and installing inlet protection. Additional information with respect to adequate outfall may be required at the time of site plan.

Stormwater Planning Comments

The site is located in the Cub Run Watershed. There are several watershed management plans close to the subject site (CU9601, BR9102). Please visit [http://www.fairfaxcounty.gov/dpwes/watersheds/cubrun\\_docs.htm](http://www.fairfaxcounty.gov/dpwes/watersheds/cubrun_docs.htm) for more details.

Dam Breach

No part of this property is within the dam breach inundation zone.

These comments are based on the 2011 version of the Public Facilities Manual (PFM). A new Stormwater ordinance and updates to the PFM's Stormwater requirements are being developed as a result of changes to state code (see 4VAC50-60 adopted May 24, 2011). The site plan for this application may be required to conform to the updated PFM and the new ordinance.

Please contact me at 703-324-1720 if you require additional information.

AL/

cc: Fred Rose, Chief, Watershed Planning & Assessment Branch, Stormwater Planning  
Division, DPWES  
Shahab Baig, Chief, North Branch, SDID, DPWES  
Zoning Application File



# FAIRFAX COUNTY PARK AUTHORITY



## M E M O R A N D U M

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

**FROM:** Sandy Stallman, AICP, Manager *SS*  
Park Planning Branch, PDD

**DATE:** August 27, 2012

**SUBJECT:** SE 2012-SU-015, Harrison Substation  
Tax Map Number: 65-3 ((1)) 35

### BACKGROUND

The Park Authority staff has reviewed the proposed Development Plan dated July 6, 2012, for the above referenced application. The Special Exception Plat shows an expansion to an existing facility, increasing the size by 3,757 feet. The site is zoned R-1 and located within the Sully Supervisory District.

### COMPREHENSIVE PLAN GUIDANCE

The County Comprehensive Plan includes both general and specific guidance regarding parks and resources. The Policy Plan describes the need to mitigate adverse impacts to park and recreation facilities caused by growth and development (Parks and Recreation, Objective 6, p.8) and addresses resource protection in multiple objectives, focusing on protection, preservation, and sustainability of resources (Parks and Recreation Objectives 2 and 5, p.5-7).

### ANALYSIS AND RECOMMENDATIONS

#### Cultural Resources Impact:

While located within an intense area of Civil War Activity, the site has been graded and disturbed by previous construction. No cultural resource issues exist and no archaeological work is warranted for this site, unless Federal Permits are required. If there are permitting issues, the staff would recommend consultation with the Virginia Department of Historic Resources (VDHR).

Trails:

The Countywide Trails Plan Map shows a major paved trail along Compton Road, crossing the frontage of the subject site. In a note #12 on Sheet 2, the applicant requests a waiver from the trail requirement.

Park Authority staff does not support this trail waiver request. The segment is one part of a larger set of trails that are essential for connecting residential areas with local and regional parks and other amenities. Construction of the required trail segment will allow pedestrian and bike access along Compton Road, providing access to the Park Authority's Military Railroad trail and park as well as other public parkland.

**SUMMARY OF RECOMMENDATIONS**

This section summarizes the recommendations included in the preceding analysis section. The analysis identified the following major issues:

- If there are federal permits required, staff recommends consultation with the Virginia Department of Historic Resources (VDHR)
- Construct a major paved trail along the southern end of the property on Compton Road, in accordance with the Countywide Trails Plan Map

Please note the Park Authority would like to review and comment on development conditions related to park and recreation issues. We request that draft and final development conditions be submitted to the assigned reviewer noted below for review and comment prior to completion of the staff report and prior to final Board of Supervisors approval.

FCPA Reviewer: Anna Bentley  
DPZ Coordinator: Brent Krasner

Copy: Cindy Walsh, Director, Resource Management Division  
Liz Crowell, Manager, Cultural Resource Management & Protection Section  
Elizabeth Cronauer, Trail Coordinator, Special Projects Branch  
Chron Binder  
File Copy

FAIRFAX COUNTY ZONING ORDINANCE

2. Category 1 uses may be allowed by special exception in the following districts:

R-A District: Limited to uses 5, 6, 7 and 8

All other R Districts: All uses

All C Districts: All uses

I-I District: Limited to use 4

I-1, I-2 Districts: All uses

I-3, I-4, I-5, I-6 Districts: Limited to uses 3 and 8

**9-103 Additional Submission Requirements**

In addition to the submission requirements set forth in Sect. 011 above, all applications for Category 1 uses shall be accompanied by the following items:

1. Four (4) copies of a map showing the utility system of which the proposed use will be an integral part, together with a written statement outlining the functional relationship of the proposed use to the utility system.
2. Four (4) copies of a statement, prepared by a certified engineer, giving the exact technical reasons for selecting the particular site as the location for the proposed facility and certifying that the proposed use will meet the performance standards of the district in which located.

**9-104 Standards for all Category 1 Uses**

In addition to the general standards set forth in Sect. 006 above, all Category 1 special exception uses shall satisfy the following standards:

1. 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.
2. No land or building in any district other than the I-5 and I-6 District 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.
3. 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.
4. Before establishment, all uses, including modifications or alterations to existing uses, shall be subject to the provisions of Article 17, Site Plans.

## 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		