FAIRFAX COUNTY
PLANNING COMMISSION

January 15, 2014

PUBLIC HEARING
FOR
PLANNING DETERMINATION
Pursuant to
Va. Code Sec. 15.2 – 2232

Public Hearing Date: Wednesday, January 29, 2014 at 8:15 p.m.

Application Number:	2232-H13-11
Applicant:	NewPath Networks, LLC, a subsidiary of Crown Castle
Proposed Use:	Telecommunications Distributed Antenna System
Subject Property:	Va. Dept. of Transportation rights-of-way for portions of Hunter Mill Road and Lawyers Road and within a Dominion Virginia Power easement
Supervisor District:	Providence, Sully, and Hunter Mill
Application Received:	September 19, 2013
Application Accepted:	November 6, 2013
Recommendation:	In accordance with Va. Code Sec. 15.2-2232, as amended, staff recommends that the Planning Commission find the proposal by NewPath Networks, LLC, as amended, for seven (7) telecommunications Distributed Antenna System nodes on Hunter Mill and Lawyers Roads, substantially in accord with provisions of the adopted Comprehensive Plan.

PLANNING DETERMINATION

Section 15.2 -2232 of the Code of Virginia

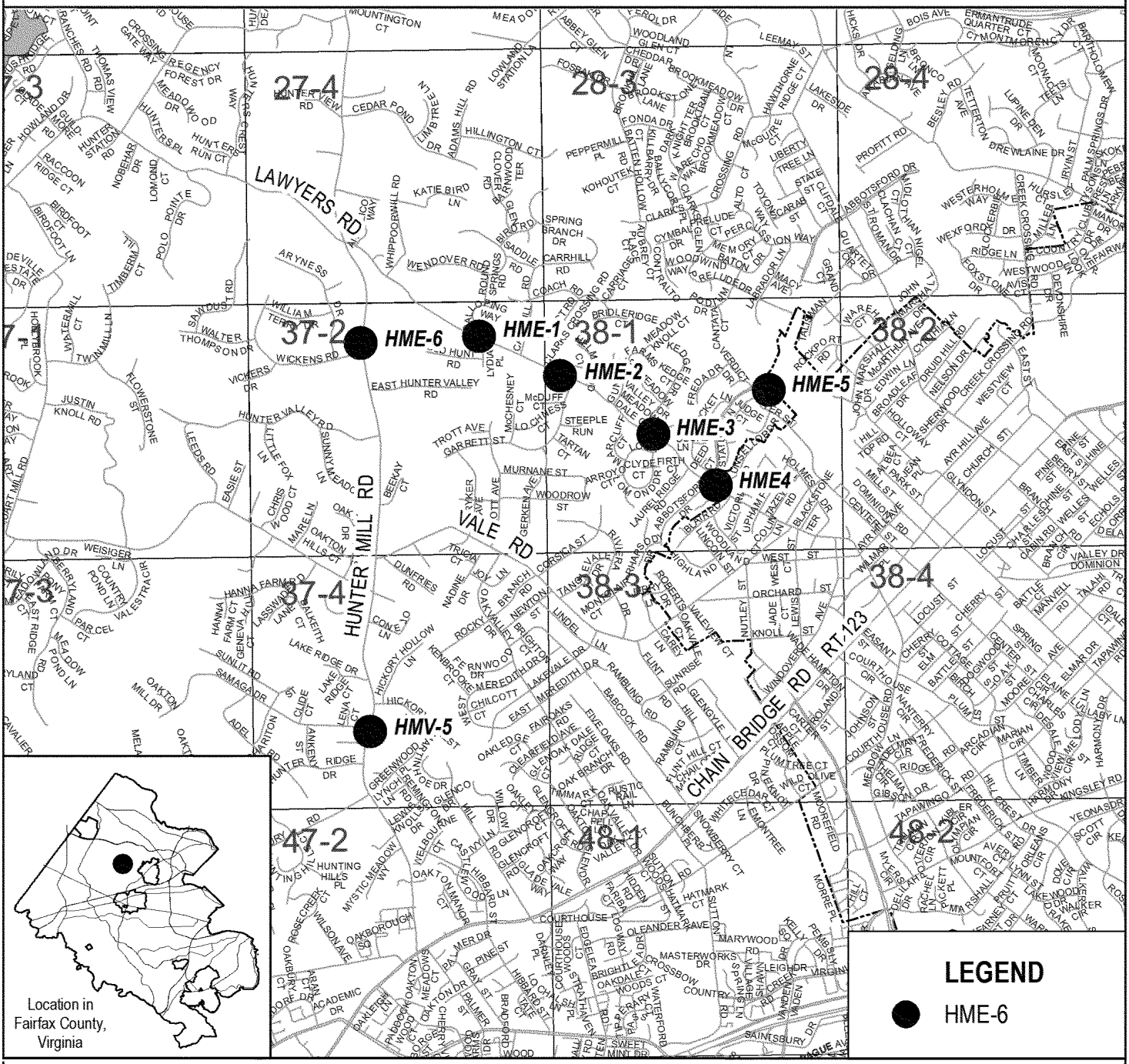
Number: 2232-H13-11 **Acreage:** N/A **District:** Hunter Mill, Providence and Sully

Tax Map I.D. Number: Pts. of 37-2, 37-4, 38-1 (Right-of-Way)

Applicant: NewPath Networks LLC/ Crown Castle

Planned Use: Public Right-of-Way (Pts. of: Hunter Mill Rd. and Lawyers Rd.; Utility Easement

Proposed Use: Telecommunications Facility - Distributed Antenna System (DAS)



PREPARED BY THE DEPARTMENT OF PLANNING AND ZONING
USING FAIRFAX COUNTY GIS

APPLICATION *Attachment A*

PROPOSAL: Construct a telecommunications facility (Distributed Antenna System).

APPLICANT: NewPath Networks, LLC ("NewPath")

SUBJECT PROPERTIES: Va. Dept. of Transportation rights-of-way for portions of Hunter Mill Road and Lawyers Road and within a Virginia Power easement in Tax Maps 37-2, 37-4, and 38-1.

PROPOSED USE: Distributed Antenna System ("DAS," "the system," or "the network").

Background: This is an expansion of a system that has progressed through numerous approvals. A single DAS node was approved by the Planning Commission in 2012 under application 2232-P12-1. As an extension of that network, DAS Nodes 6 and 7 were approved by the Planning Commission on February 24, 2011 under application 2232-P10-10. Three nodes were deferred and then eventually withdrawn by the applicant. A network of four node sites was approved by the Planning Commission in 2007 under application 2232-MD06-23.

Project Justification: The primary objective for the entire Hunter Mill system is to provide coverage along Hunter Mill Road and Lawyers Road, along with the surrounding residential communities. NewPath proposes to construct a Distributed Antenna System telecommunications facility, consisting of seven (7) nodes: five (5) antenna nodes collocated on replacement utility poles and two (2) new light poles. For these nodes, Crown Castle will be leasing utility and light poles owned by Dominion Virginia Electric Power Company ("Dominion") and Verizon Communications-Virginia ("Verizon"). Two additional utility poles, owned by Crown Castle, will also be erected.

Proposed Facility: Applicant requests approval for seven new DAS nodes as summarized below, which will include: antennas and cabinets attached to utility poles and aerial fiber-optic cable connecting the nodes to the hub; see application ***(Attachment A)*** for detailed description; all dimensions are approximate:

- Antennas — seven nodes of six panel antennas (23.2 in tall x 12.0 in wide x 7.1 in deep); five nodes mounted atop replacement utility poles and two nodes mounted atop new light poles concealed from view inside cylindrical sheath painted to match the pole; can be shared by multiple future co-located service providers.

- Equipment cabinets — seven brown cabinets (92 in tall x 35.52 in wide x 23.88 in deep), mounted on utility pole 10 ft above ground (no equipment will be placed on ground); can be shared by multiple future service providers.

- Poles — five replacement roadside wood utility poles within VDOT rights-of-way to replace five existing roadside wood utility poles owned by Dominion; two new roadside wood light poles within a VDOT rights-of-way and a Dominion utility easement; permits

will be obtained from Fairfax County and VDOT prior to construction; replacement poles will be taller than existing poles for several reasons:

- *VDOT* requires 10 ft clearance above roads and driveways;
- *Dominion and Verizon* require 4-10 ft between top of pole and antenna
- *National Electrical Safety Code ("NESC')* — minimum vertical clearance between cables;
- Compliance with NESC standards for worker safety; and
- *Wireless service providers* — radio frequency requirements.

POLE & NODE TABLE

Node	Location (nearest property)	Height Above Ground		
		Existing Pole	Replacement Pole	Top of Sheath
HME 1	2126 Galloping Way	No Pole	47 ft	53 ft 6 in
HME 2	10000 Garret Street	30 ft	38 ft	44 ft 6 in
HME 3	2103 Kedge Drive	No Pole	47 ft 6 in	53 ft 6 in
HME 4	2201 Abbotsford Road	35 ft	38 ft	44 ft 6 in
HME 5	9534 Center Street	30 ft	30 ft	36 ft 6 in
HME 6	2249 Hunter Mill Road	30 ft	47 ft	53 ft 6 in
HMV 5	2709 Hunter Mill Road	45 ft	47 ft	53 ft 6 in

- Cable — fiber-optic cable strung from utility poles to connect nodes to equipment hub.
- Operations — operates automatically 24 hours/day throughout the year; no on-site personnel; periodic and occasional visits by maintenance personnel for facility repairs or modifications.
- Heritage resources — NewPath will comply with all requirements of Section 106 of the National Historic Preservation Act of 1966 as related to the proposed facility.

Photographic Simulations: Application includes photographs of the existing utility poles and locations of new utility poles, and a photographic simulation depicting the appearance of the proposed nodes.

Alternatives: NewPath states there are no existing structures tall enough on which to locate antennas.

- New Structure — NewPath states that Verizon Wireless considered building a new structure in the Hunter Mill area, but due to the residential and nature of the area could not find an acceptable location.

Off-site impacts: NewPath states that the proposed facility will have no impact on traffic, light pollution, air quality, water quality, or radiation on adjoining properties, and will comply with County noise regulations.

COMPREHENSIVE PLAN PROVISIONS

CHARACTER AND ADJOINING LAND USES:
Light-to-moderate tree cover and other vegetation are proximate to the node sites. Existing utility poles and overhead cables are located along the roads proximate to proposed locations of the proposed DAS nodes. Existing land uses along the route of the proposed DAS include residential, public facility, and institutional uses.

COMPREHENSIVE PLAN MAP:
Planning Area and District: Area II, Vienna Planning District
Planning Sector: V4-Piney Branch Planning Sector

Land Use Recommendations: For properties near the proposed DAS nodes:

- Node HME 1: 1.0 – 2.0 dwelling units per acre ("du/ac") and public right-of-way
- Node HME 2: 1.0 – 2.0 dwelling units per acre ("du/ac") and public right-of-way
- Node HME 3: 1.0 – 2.0 dwelling units per acre ("du/ac") and public right-of-way
- Node HME 4: 2.0 – 3.0 dwelling units per acre ("du/ac") and public right-of-way
- Node HME 5: 2.0 – 3.0 dwelling units per acre ("du/ac") and utility easement
- Node HME 6: 0.5 – 1.0 dwelling units per acre ("du/ac") and public right-of-way
- Node HMV 5: 1.0 – 2.0 dwelling units per acre ("du/ac") and public right-of-way

COMPREHENSIVE PLAN CITATIONS: An assessment of this proposal for substantial conformance with recommendations of the Comprehensive Plan ("the Plan") is guided by the following Plan citations:

Policy Plan
In the Fairfax County Comprehensive Plan, 2013 Edition; Policy Plan; Public Facilities, as amended through April 30, 2013; **MOBILE AND LAND-BASED TELECOMMUNICATION SERVICES, GENERAL GUIDELINES,** pages 37 and 38:

"Objective 42: In order to provide for the mobile and land-based telecommunication network for wireless telecommunication systems licensed by the Federal Communications Commission, and to achieve opportunities for the co-location of related facilities and the reduction or elimination of their visual impact, locate the network's necessary support facilities which include any antennas, support structures and equipment buildings or equipment boxes in accordance with the following policies.

Policy a. Avoid the construction of new structures by locating proposed telecommunication facilities on available existing structures such as rooftops, telecommunication and broadcast support structures, electrical utility poles and towers, and water storage facilities when the telecommunication facilities can be placed inconspicuously to blend with such existing structures.

Policy b. When existing structures are not available for co-location, or co-location is not appropriate because of adverse visual impacts or service needs, locate

new structures that are required to support telecommunication antennas on properties that provide the greatest opportunity to conceal the telecommunication facilities and minimize their visual impact on surrounding areas.

Policy c. When new structures or co-locations are required to serve residential neighborhoods, consider minimizing visual impacts on the surrounding area by utilizing camouflage structure design and/or micro-cell technologies or similar miniaturization technologies, such as distributed antenna systems (DAS), if feasible.

Policy d. When multiple sites provide similar or equal opportunity to minimize impacts, public lands shall be the preferred location.

Policy f. Ensure that the use of public property by mobile and land-based telecommunication facilities does not interfere with the existing or planned operational requirements of the public use and complies with adopted policies and plans to protect natural resources.

. . .

Policy g. Co-locate mobile and land-based telecommunication facilities operated by different service providers on single sites and/or structures whenever appropriate. Locate single-use structures on a property only when a co-location structure for multiple service providers is not desirable or feasible due to technological differences, site limitations or visual impact concerns.

Policy h. Ensure that the height of the proposed telecommunication facility is no greater than necessary to allow for co-location on the telecommunication facility based on its service area requirements while still mitigating the visual impact of the facility.

Policy i. When new structures, co-locations and/or technologies (such as distributed antenna systems, micro-cell technology or miniaturization technology) are necessary to meet the service area requirements for the residential neighborhood(s), ensure that the height and mass of any appropriate co-location on the telecommunication facility is in character with the surrounding residential area and mitigates the visual impact of the facility on the surrounding residential area.

Policy j. Design, site and/or landscape proposed telecommunication facilities to minimize impacts on the character of the property and surrounding areas. Demonstrate the appropriateness of the design through facility schematics and plans which detail the type, location, height, and material of the proposed structures and their relationship to other structures on the property and surrounding areas.

Policy k. Demonstrate that the selected site for a new telecommunication facility provides the least visual impact on residential areas and the public way, as compared with alternate sites. Analyze the potential impacts from other vantage points in the area, especially from residential properties, to show

how the selected site provides the best opportunity to minimize its visual impact on the area and on properties near the proposed site.

Policy l. A key concept in assessing telecommunication facilities is mitigation which is defined as actions taken to reduce or eliminate negative visual impacts. Mitigate the visual impact of proposed telecommunication facilities and their equipment, by using effective design options appropriate to the site such as:

- Design, site and/or landscape the proposed facility to minimize impacts on the character of the area;
- Locate proposed telecommunication facilities near or within areas of mature vegetation and trees that effectively screen or provide an appropriate setting for the proposed structure provided such location does not adversely impact sensitive resources or cause fragmentation of forested communities. When viewed in context, consider perspective views, relative topography and other factors, to mitigate the visual presence and prominence of the structure;
- Blend proposed telecommunication facilities with an existing pattern of tall structures;

. . .

- Replace existing telecommunication facilities with taller structures or extend their overall height to reduce the need for another structure when such height increases or structure replacements are visually appropriate to the site, including the surrounding area and are consistent with the type, style and pattern of the existing structure.

Policy m. Locate proposed telecommunication facilities to ensure the protection of historically significant landscapes and cultural resources. …

Policy n. Site proposed telecommunication facilities to avoid areas of environmental sensitivity…

Objective 43: Design proposed telecommunication facilities to mitigate their visual presence and prominence, particularly when located in residential areas, by concealing their intended purpose in a way that is consistent with the character of the surrounding area."

In the Fairfax County Comprehensive Plan, Policy Plan, 2013 Edition; Heritage Resources, as amended through August 5, 2002; **COUNTYWIDE OBJECTIVES AND POLICIES,** page 4:

"Objective 3: Protect significant heritage resources from degradation, or damage and destruction by public or private action.

Policy a. Avoid adverse impacts on or destruction of significant heritage resources unless there is no prudent and feasible alternative, in which case, plan and carry out appropriate mitigation activities to minimize the adverse effect."

Fairfax County Comprehensive Plan, Policy Plan, 2013 Edition; Public Facilities, as amended through April 30, 2013; **MOBILE AND LAND-BASED TELECOMMUNICATION SERVICES, GENERAL GUIDELINES,** page 48: Figure 14 shows a telecommunications facility (not in Fairfax County), consisting of a 7-foot tall "radome cap" attached to the top of an electrical utility pole and an equipment box located on the distribution pole, as an example of a low-impact telecommunications facility.

STAFF ANALYSIS

ZONING *Attachment B*

Findings: Staff in the Zoning Administration Division of the Department of Planning and Zoning reviewed the subject application and noted that the proposed facility "meets the requirements of Par. 2 of Sect. 2-514 of the Zoning Ordinance." In addition, Staff noted that "the diameter of any replacement standard cannot exceed 42 inches."

HISTORIC PRESERVATION *Attachment C*

Findings: Staff in the Planning Division/Historic Preservation Planning of the Department of Planning and Zoning reviewed the subject application and notes that "Hunter Mill Road has been determined to be eligible for listing in the Virginia Landmarks Registry and the National Register of Historic Places." In addition, "several known and potentially significant heritage resources have been identified in the [V-4 Piney Branch Community Planning Sector]…."

The applicant should contact Virginia Department of Historic Resources for guidance whether Section 106 Review is required or not, if so, provide DPZ with a copy of the Section 106 Review report.

TRANSPORTATION *Attachment D*

Findings: Staff in the Fairfax County Department of Transportation reviewed the subject application and noted that

- No road or trail improvements shown on the Fairfax County Transportation Plan or Countywide Trails Plan maps will be impacted by the proposed soccer field lighting.
- There are no trail improvements shown on the Fairfax County Trails Plan that will be impacted by the replaced and new utility poles.
- There should be no effect on existing transit service.

FOREST CONSERVATION *Attachment E*

Findings: Staff in the Forest Conservations Branch of the Department of Public Works and Environmental Services reviewed the subject application and noted that there are no significant tree conflicts regarding the proposed antenna installations.

CONFORMANCE WITH THE COMPREHENSIVE PLAN *Attachment G*

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 are substantially in accord with the adopted Comprehensive Plan.

LOCATION: The proposed seven nodes will be located on property planned and developed for public right-of-way and utility easement use. Five nodes will occupy the same site as the existing pole it will replace and two will occupy new light poles. Although antennas will not be collocated on an *existing* utility pole per se, the proposal to locate antennas on *replacement* utility poles is consistent with Plan guidelines to avoid constructing new structures by locating telecommunications facilities on available utility poles. The two new light poles are necessary due to the lack of Dominion poles. The two proposed light poles will be designed to blend in with existing structures and mitigate visual impact. The ability for multiple future service providers to share antennas and equipment at the same nodes, as proposed, supports Plan guidelines to locate different providers on single structures. Finally, the proposed nodes will not be located in areas of environmental sensitivity.

The proposed locations for the sevens nodes also conform with Plan recommendations that public lands and utility easements should be considered as the *preferred* locations for telecommunications structures, subject to the availability and feasibility of a public site and the feasibility of using existing structures such as electrical utility poles, when such facilities can be placed inconspicuously to blend with existing structures. The nodes will blend with the existing structures and the visual impact will be mitigated by existing tree cover and other structures nearby. Therefore, the proposed locations comply with Plan recommendations for the location of telecommunications facilities.

CHARACTER: The proposed antennas will be located inside narrow cylindrical brown enclosures designed to conceal the antennas from view and mounted atop poles where they should blend visually with the replacement pole or remain in context with the light poles along the Lawyers Road. This enclosure is an effective design option and should, by itself, have no adverse visual impact on nearby properties. In addition, the pole-mounted cabinets will be compatible with similar pole-mounted cabinets visible on other roadside utility poles in the area, and the cabinets' visual impacst should be mitigated by their brown color and/or by nearby screening trees. Finally, the nodes should have no adverse impact on heritage resources. Staff evaluated potential visual impact by viewing NewPath's photographic simulations at each site. The photo simulations provide a reasonably accurate visual depiction of the type, location, and height of the nodes for use in assessing its potential visual impacts on nearby properties and the public way. Although the nodes will be visible from surrounding areas to varying degrees, the proposal conforms with Plan guidelines to mitigate its visual presence and prominence. Furthermore, utilizing camouflage structure design and/or micro-cell technologies or similar miniaturization technologies**,** such as distributed antenna systems (DAS) to minimize visual impacts on the surrounding area is in accordance with the Plan.

The existing poles are currently visible in line with other existing roadside utility poles and should blend with the existing pattern of utility poles, thus mitigating the visual presence and prominence in the surrounding area in support of Plan objectives. Although the existing poles will be replaced by taller poles, they will be compatible with other roadside poles. The two new light poles will also be in keeping with the current pattern of light poles lining Lawyers Road. Furthermore, the nodes' visibility to motorists will be of short duration, and the visual impacts

on the public way will be effectively mitigated by existing roadside utility poles and cables or trees. Thus, the proposed nodes should have no adverse visual impact on the character of surrounding areas. The proposal will have minimal adverse impact on surrounding areas, in accordance with Plan recommendations.

EXTENT: Although NewPath proposes to replace five existing utility poles with taller poles and install two new light poles with similar height, the proposal attempts to limit the number of utility poles added to the landscape, consistent with Plan objectives to increase the height of an existing structure in order to reduce the need for another structure when visually appropriate. NewPath notes that the design of the node pole is based on wireless service provider's radio-frequency coverage requirements, VDOT's minimum requirements for cable clearance above roads and driveways, NESC's standards for separation between cables, and Dominion's requirements for a worker safety zone between the upper power lines and the lowest antenna. The height increase proposed for the nodes is consistent with Plan recommendations to increase the height of an existing structure to reduce the need for another structure when such increases are appropriate to the surrounding area, and that pole heights be no greater than required to achieve service area requirements when visually appropriate. Furthermore, NewPath has negotiated a new accommodation with Dominion that reduces the previous safety zone standard from a minimum of 10 ft clearance in all circumstance to a minimum of 4 ft clearance, thus reducing the height of each pole.

With no equipment proposed on the ground, no adverse impact on the use or operational requirements of the public right-of-way is expected, as recommended by the Plan. As previously discussed, the visual impact of the proposed height increase should be mitigated by nearby trees and other utility poles. The proposed height increase should have no adverse visual impact on the surrounding area, and is appropriate to the site, consistent with Plan recommendations. Finally, the telecommunications facility shown in Figure 14 in the "Public Facilities" section of the Policy Plan is similar in appearance to the nodes proposed by NewPath. Thus, the extent of the seven proposed nodes is consistent with the spirit and intent of the Comprehensive Plan recommendations for the siting of telecommunications facilities.

CONCLUSIONS AND RECOMMENDATIONS

Department of Planning and Zoning staff concludes that the subject proposal by NewPath Networks, LLC, as amended, for seven telecommunications Distributed Antenna System nodes in the Hunter Mill area, 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-H13-11** substantially in accord with provisions of the adopted Comprehensive Plan.

Attachments

ATTACHMENT A
2232 Application

COUNTY OF FAIRFAX, VIRGINIA
APPLICATION FOR DETERMINATION
PURSUANT TO VIRGINIA CODE SECTION 15.2–2232

*** This area to be completed by staff ***

APPLICATION NUMBER 2232-H13-11

Date application received Sept 19, 2013 by Admin Staff (DPZ)

Date(s) Revised

Date application accepted Nov 6, 2013 by Richard Lambert

RECEIVED
SEP 19 2013
DEPARTMENT OF PLANNING & ZONING
PLANNING DIVISION

(Please Type or Clearly Print)

PART I: APPLICATION SUMMARY

LOCATION OF PROPOSED USE

Address [Please see Node Chart attached]

City/Town Vienna Zip Code 22181

Place Name (example: Dale High School)

Tax Map I.D. Number(s) [Please see Node Chart attached]

Fairfax County Supervisor District Hunter Mill / Sully / Providence

APPLICANT(S)

Name (Company or Agency) NewPath Networks, LLC

Agent Name Mike Bortz

(Note: Failure to notify County of a change in agent may result in application processing delays)

Agent's Mailing Address 7380 Coca Cola Dr, Ste 106

City/Town Hanover State MD Zip Code 21076

Telephone Number (410) 712-7092 x1004 Fax (410) 712-4056

E-mail mbortz@nbcllc.com

Secondary Contact Sean Hughes

Telephone Number (703) 906-0184 E-mail shughes@nbcllc.com

BRIEF DESCRIPTION OF PROPOSED USE

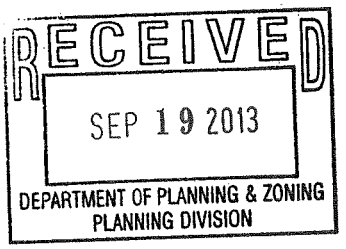
Replace (2) existing light poles and (3) existing utility poles; and install (2) new utility poles. (6) antennas will be collocated on each pole for use in a distributed antenna system. (1) new cabinet will also be installed on to each pole along with a required Dominion electrical meter. Please note that all antennas will be screened by a cylindrical sheath that will be painted to match the pole.

Total Area of Subject Parcel(s) _____

Zoning District RE

Applicant's previous Zoning Approvals for all uses on site (proffered conditions, special permits, special exceptions, variances, development plans)

N/A



PROPERTY OWNER(s) OF RECORD

Owner Virginia Department of Transportation

Street Address 1401 E Broad Street

City/Town Richmond State VA Zip Code 23219

Has property owner been contacted about this proposed use? ☑ YES ☐ NO

SIGNATURE

The undersigned acknowledges that additional Fairfax County land use review requirements may be identified during the review of this 2232 Review application and the fulfillment of such requirements is the responsibility of the applicant. The undersigned also acknowledges that all Fairfax County Zoning Ordinance requirements pertaining to this project shall be fulfilled.

In the event a new agent is assigned responsibility for this application, the applicant agrees to provide a letter to the Department of Planning and Zoning authorizing the transfer of responsibility for the application and providing all new contact information. In the event the applicant fails to notify County staff of a change in agent, the application may be subject to processing delays.

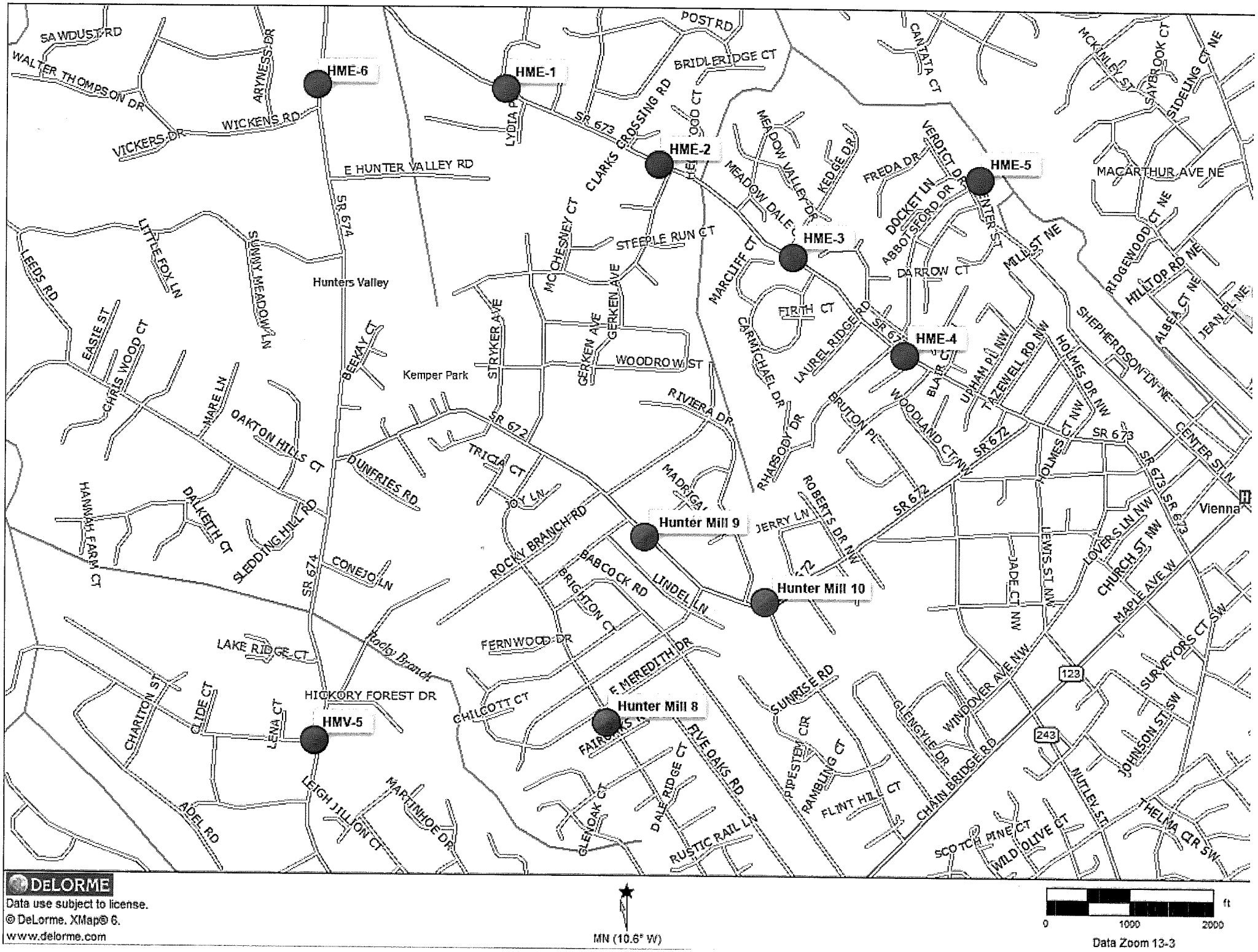
Signature of Applicant or Agent _____

Date 9/18/13

Submit completed application to:

Chris Caperton, Chief, Facilities Planning Branch
Fairfax County Department of Planning and Zoning
12055 Government Center Parkway, Suite 730
Fairfax, Virginia 22035-5507
(703) 324-1380

PART II: STATEMENT OF JUSTIFICATION


HME-6
HME-1
HME-2
HME-3
HME-4
HME-5
Hunter Mill 9
Hunter Mill 10
Hunter Mill 8
HMV-5
Hunters Valley
Kemper Park
Vienna
SAWDUST RD
WALTER THOMPSON DR
VICKERS DR
WICKENS RD
ARYNESS DR
POST RD
BRIDLERIDGE CT
LYDIA PL
SR 673
CLARKS CROSSING RD
E HUNTER VALLEY RD
SR 674
MEADOW VALLEY DR
KEDGE DR
FREDA DR
VERDICT DR
DOCKET LN
ABBOTSFORD DR
CANTATA CT
MCKINLEY ST
SAYBROOK CT
SIDELING CT NE
MACARTHUR AVE NE
RIDGEWOOD CT NE
HILLTOP RD NE
ALBEA CT NE
JEAN PL NE
MILL ST NE
DARROW CT
MARCLIFF CT
FIRTH CT
LAUREL RIDGE RD
SR 672
CARMICHAEL DR
RHAPSODY DR
BRUTON PL
WOODLAND CT NW
BLAIR CT
UPHAM PL NW
TAZEWELL RD NW
HOLMES DR NW
SHEPHERDSON LN NE
CENTER ST N
SR 673
HOLMES CT NW
JERRY LN
ROBERTS DR NW
JADE CT NW
LEWIS ST NW
LOVERS LN NW
CHURCH ST NW
MAPLE AVE W
SURVEYORS CT SW
JOHNSON ST SW
NUTLEY ST
THELMA CIR SW
123
243
WINDOVER AVE NW
GLENGYLE DR
CHAIN BRIDGE RD
SUNRISE RD
PIPESTEM CIR
RAMBLING CT
FLINT HILL CT
SCOTCH PINE CT
WILD OLIVE CT
FIVE OAKS RD
DALE RIDGE CT
RUSTIC RAIL LN
GLENOAK CT
FAIRBANKS LN
F MEREDITH DR
FERNWOOD DR
CHILCOTT CT
LINDEL LN
BABCOCK RD
BRIGHTON CT
ROCKY BRANCH RD
MADRIGAL
TRICIA CT
JOY LN
DUNFRIES RD
CONEJO LN
SLEDDING HILL RD
HANNAH FARM CT
DALKEITH CT
OAKTON HILLS CT
MARE LN
CHRIS WOOD CT
EASIE ST
LEEDS RD
LITTLE FOX LN
SUNNY MEADOW LN
BEEKAY CT
STRYKER AVE
MCCHESNEY CT
STEEPLE RUN CT
GERKEN AVE
WOODROW ST
RIVIERA DR
LAKE RIDGE CT
Rocky Branch
HICKORY FOREST DR
CHARITON ST
CLIDE CT
LENA CT
LEIGH JILLION CT
MARTINHOE DR
ADEL RD
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DESCRIPTION OF PROPOSED USE:

Crown Castle is a carrier-neutral provider of radio frequency (RF) transport for small solutions, including wireless distributed antenna systems (DAS). Instead of using one tall antenna support structure, such as a tower, to provide wireless coverage to a several-mile radius, a DAS uses numerous existing structures, typically utility poles, to provide service within a targeted area. Crown designs its systems so that multiple providers can share the same facilities. The DAS also includes pole-mounted equipment cabinets, aerial or underground fiber optic cable, and a "hub" radio equipment cabinet.

For these nodes, Crown Castle will be leasing utility and light poles owned by Dominion Virginia Electric Power Company ("Dominion") and Verizon Communications-Virginia ("Verizon"). Two additional utility poles, owned by Crown Castle, will also be erected. Fiber optic cable will be strung from the poles and connected to the proposed hub located within an existing tower compound located at 1977 Hunter Mill Road. The fiber optic cable will be strung alongside the other cable lines running from pole to pole.

Replacement poles are needed for several reasons: 1) VDOT requires 10 feet of clearance from roads and driveways; 2) Dominion and Verizon require a clearance of 4-10 feet between the top of the pole and the antennas to comply with the National Safety Electrical Code ("NESC") standards to protect workers; 3) NESC requires minimum vertical clearance between the conducting service cables on the poles, and 4) the radio-frequency requirements of wireless service provider (WSP) tenants on the system.

In order to accommodate these requirements, each new pole will be taller than the existing pole. The pole is not custom-made for each replacement; they are available in five-foot increment lengths. Most of the replacement poles will be between 5 to 15 feet taller than the existing poles. These heights are dictated by Dominion and WSP requirements. Dominion is not subject to local zoning and may replace poles at any time for utility needs. Crown Castle has been working with Dominion to lower electrical clearance and reduce pole height and has recently been successful to this end and thus the reason why these replacement poles are slightly shorter than in the past.

The diameter of the replacement poles will be, at most, several inches more than the diameter of the existing poles.

Six panel antennas will be mounted on top of the replacement pole, inside of a cylindrical sheath which will be painted to match. Each antenna measures 23.2" x 12.0" x 7.1" and will be stacked vertically in pairs, as shown on the zoning drawings. The cylindrical sheath adds an additional six feet of height to each replacement pole. An equipment box measuring 92.0" x 23.88" x 35.52" will be installed on each pole. The cabinet is designed to be shared by multiple carriers.

The facility will operate automatically and will not require personnel or hours of attendance. It will operate twenty-four (24) hours a day, three hundred and sixty-five days a year. Maintenance personnel will visit the site periodically and occasionally for repairs or modifications to the facility.

REQUIREMENT FOR PROPOSED USE:

Telecommunications carriers must locate antenna sites according to a network design within relatively limited geographic parameters in order to provide uninterrupted coverage. When carriers cannot locate a site within these geographic parameters, network users will pass through an area where the lost signal results in interrupted or "dropped" calls. In addition, an incomplete system is not consistent with VerizonWireless' legal requirements to provide continuous coverage and to provide coverage to a percentage of the population within specific time parameters as required by its FCC license.

The coverage areas for the seven (7) nodes are shown on the propagation maps. Verizon Wireless' primary objective for the entire Hunter Mill system is to provide coverage on Hunter Mill Road and Lawyers Road, along with the surrounding residential communities.

There were no structures tall enough on which to locate antennas. Verizon Wireless considered building a new structure on which to mount antennas in the Hunter Mill area, but due to the residential and nature of the area could not find an acceptable location.

A DAS is the ideal way to meet wireless coverage objectives in the Hunter Mill area, while still protecting its scenic character.

ANTICIPATED IMPACTS ON ADJOINING PROPERTIES

The proposed facility will have no material impact as to traffic, light, pollution, air quality, water quality, or radiation on the adjoining properties. As stated previously, this proposal will replace existing utility distribution poles so that there will be minimal visual impact on surrounding properties. To accommodate Verizon Wireless' needs, additional new vertical structures will not be built in the area for the purpose of telecommunications except for 2 new utility poles within the existing overhead utility corridor in the right-of-way. The DAS will have the positive impact of enabling residents, visitors and businesses within the reach of the signal to be served by wireless telecommunication.

RELATIONSHIP OF THE PROPOSAL TO THE COMPREHENSIVE PLAN

The proposed facility is consistent with and furthers the transcendent goals of the Fairfax County Comprehensive Land Use Plan ("Plan") as well as the applicable objectives. DAS is recommended in the Policy Plan of the Fairfax County Comprehensive Plan (Public Facilities/Mobile & Land-based Telecommunication Services) as the most appropriate solution for wireless communications in residential and other visually-sensitive areas.

The location, character and extent of the application should be found to be in substantial accord with the Comprehensive Plan. In terms of location, the nodes are within the public right-of-way. In terms of character, the system makes use of the existing infrastructure of poles. In terms of extent, the installations are designed to be as minimally intrusive as possible due to a stealth design. While the pole height will be increased minimally, no additional vertical elements will be added to the landscape. The proposed facility poses no encroachment on any existing easements or services, and the antenna mounting heights are the minimum needed to serve the facility's goals for the applicant. No equipment will be placed on the ground.

The instant application is also consistent with the objectives found under the Policy Plan of the Comprehensive Plan concerning "Mobile and Land-Based Telecommunication Services."

Under the "General Guidelines" section, it states:

Objective 42): In order to provide for the multiple and land-based telecommunication network for wireless telecommunication systems licensed by the Federal Communications Commission, and to achieve opportunities for the collocation of related facilities and the reduction of their visual impact, locate the network's necessary support facilities which include antennas, monopoles, lattice towers and equipment building in accordance with the following policies:

Policy a. ***Avoid construction of new structures by locating mobile and land-based telecommunication facilities on available existing structures such as building rooftops, telecommunication and broadcast poles and towers, electrical utility poles and towers, and water storage facilities when the telecommunications facilities can be placed inconspicuously to blend with such existing structure.***

By utilizing the existing infrastructure of network utility distribution poles, applicants further this objective of the Comprehensive Plan. The Comprehensive Plan did not anticipate that utility companies require the vertical separation required by VDOT and utility companies to meet the NESC requirements. So while poles will need to be replaced, the system utilizes an existing network. Two new utility poles will need to be constructed due to the lack of available Dominion poles. Poles in these areas are currently loaded with a vast amount of equipment. These new poles will, however, be designed to blend in with utility structures.

Policy b. ***When existing structures are not available for co-location, or co-location is not appropriate because adverse visual impacts or service needs, locate new structures that are required to support telecommunication antennas on properties that provide the greatest opportunity to conceal the telecommunication facilities and minimize their visual impact on surrounding areas.***

The proposed utility poles that were chosen for co-location offer the least visual impact to the surrounding residential community, and were based upon which poles Verizon and Dominion had available. Two new light poles will need to be constructed due to the lack of available Dominion poles. Poles in these areas are currently loaded with a vast amount of equipment. The new light poles will, be designed to blend in with existing structures, mitigating visual impact.

Policy c. ***When new structures or co-locations are required to serve residential neighborhoods, consider minimizing visual impacts on the surrounding area by utilizing camouflage structure design and/or micro-cell technologies or similar miniaturization technologies, such as distributed antenna systems (DAS), if feasible.***

Crown Castle and Verizon Wireless have proposed the utilization of existing utility poles for the proposed DAS installation in an attempt to minimize visual impacts on the surrounding community. The two proposed light poles will be designed to blend in with existing structures and mitigate visual impact.

Policy g. ***Co-locate mobile and land-based telecommunications facilities operated by different service providers on single sites and/or structures whenever appropriate. Locate single-use structures on a property only when a collocation structure for multiple service providers is not desirable or feasible due to technological differences, site limitations or visual impact concerns.***

With a distributed antenna system (DAS), multiple carriers can utilize one structure with minimal visual impact on the community. Only one antenna node per utility pole will be installed. This antenna can be used for multiple carriers.

Policy h. ***Ensure that the height of the proposed telecommunication facility is no greater than necessary to allow for co-location on the telecommunication facility based on its service area requirements while still mitigating the visual impact of the facility.***

A distributed antenna system (DAS) is a shared-infrastructure or neutral host model for expanding a wireless network footprint by adding coverage and capacity in hard to reach areas, resulting in increased quality. Multiple carriers can use the same antenna nodes to limit the visual aesthetic impact of multiple antennas on a new monopole or tower.

Policy i. ***When new structures, co-locations and/or technologies (such as distributed antenna systems, micro-cell technology or miniaturization technology) are necessary to meet the service area requirements for the residential neighborhood(s), ensure that the height and mass of any appropriate co-location on the telecommunication facility is in character with the surrounding residential area and mitigates the visual impact of the facility on the surrounding residential area.***

Crown Castle and Verizon Wireless would submit that the design chosen for this particular installation effectively minimizes the impact on the surrounding residential area. Namely antennas mounted inside a stealth sheath painted to match, and equipment cabinets placed directly on the replacement utility distribution poles in question. This is demonstrated through the photo simulations.

Policy j. ***Design, site and/or landscape mobile and land-based telecommunication facilities to minimize impacts on the character of the property and surrounding area. Demonstrate the appropriateness of the design through facility schematics and plans which detail the type, location, height, and material of the proposed structures and their relationship to other structures on the property and surrounding area.***

Crown Castle and Verizon Wireless would submit that the design chosen for this particular installation, namely stealth sheath mounted antennas, and equipment cabinets placed directly on the replacement utility distribution poles in question, effectively minimizes the impact on the surrounding residential area. This is demonstrated in the zoning drawings. Because of extensive vegetation in the area, the extra minimal height of the replacement poles will not have a significant visual impact. Given ever-increasing utility demands of the area, utility poles would otherwise be replaced over time with taller, stronger poles to accommodate more utility installations and current safety codes.

Policy k. ***Demonstrate that the selected site for a new telecommunications facility provides the least visual impact on residential areas and the public way, as compared with alternate sites. Analyze the potential impacts from other vantage points in the area, especially from residential properties, to show how the selected site provides the best opportunity to minimize its visual impact on the area and on properties near the proposed site.***

By replacing existing utility poles, the applicants are avoiding the need for a new tower or monopole, effectively mitigating any negative visual impact on communities in the Hunter Mill district. In the areas where there are no available

Dominion poles, new light poles will be installed. These light poles will be designed to match existing structures in the area, still minimizing visual impact.

Policy m. ***Locate telecommunication facilities to ensure the protection of historically significant landscapes. The views of and vistas from architecturally and/or historically significant structures should not be impaired or diminished by the placement of telecommunication facilities.***

Due to the minimal height of the replacement poles, there will be no significant effect on historically significant landscapes. These landscapes are protected by avoiding the installation of another new, tall tower.

Policy n. ***Site proposed facilities to avoid areas of environmental sensitivity.***

(See description of compliance with Policy m.)

Objective 43: Design proposed telecommunication facilities to mitigate their visual presence and prominence, particularly when located in residential areas, by concealing their intended purpose in a way that is consistent with the character of the surrounding area:

Policy a. ***Disguise or camouflage the appearance of the proposed telecommunication facilities to resemble other man-made structures and natural features (such as flagpoles, bell towers, and trees) that are typically found in a similar context and belong to the setting where placed.***

Crown Castle and Verizon Wireless are currently proposing the use of existing utility poles to co-locate their antenna nodes. All antennas will be mounted inside of a stealth sheath, which will be painted to match the pole.

Policy b. ***Design proposed telecommunication facilities that are disguised and camouflaged to be a bulk, mass and height typical of and similar to the feature selected.***

Crown Castle and Verizon Wireless plan on taking advantage of existing utility poles. The design chosen for this particular installation, namely a cap mounted antenna and equipment cabinets placed directly on the replacement utility distribution poles in question, effectively minimizes the impact on the surrounding residential area.

Policy c. ***Use other new and existing structures and vegetation of comparable form and style to establish a grouping that complements a camouflaged telecommunication facility and supports its design, location and appearance.***

Crown Castle and Verizon Wireless will submit that the design chosen adequately satisfies this requirement.

ALTERNATIVE SITES CONSIDERED FOR THIS PROPOSAL

Verizon Wireless has several existing tower and rooftop locations in the surrounding area (detailed in the included maps), and there are no other existing structures tall enough on which to locate antennas to accomplish the coverage objective. Verizon Wireless considered building a new structure on which to mount antennas in the Hunter Mill area, but due to the residential and historic nature of the area, could not find an acceptable location.

The applicants, Crown Castle and Verizon Wireless, respectfully submit to the Planning Commission that the proposed facility is consistent with the Comprehensive Plan as to character, location and extent.

Please contact me at 410-712-7092 ext1004 (**mbortz@nbcllc.com**) if you have any questions with reference to this submission.

Sincerely,

Mike Bortz
Network Building & Consulting, LLC
Consultant for Crown Castle

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PART IV: TELECOMMUNICATION USES

(Do not submit for non-telecommunications public facility uses)

A. TYPE OF PROPOSED FACILITY Check the appropriate box(es) and provide the required information

	Yes	No
New monopole* or tower	☑	☐
Collocation on existing monopole or tower	☐	☑
Collocation on building facade or rooftop	☐	☑
Collocation on replacement light pole or utility pole	☑	☐
Located in utility or transportation easement and/or right-of-way	☑	☐
Modification to approved telecommunications facility	☐	☑
Collocation on other structure _____	☐	☑

**Including treepoles, flagpoles and other freestanding stealth structures.*

B. CALCULATION OF FACILITY MODIFICATIONS for modifications to an approved telecommunications facility, provide the following:

1. Application number(s) (456-, 2232-, FS-, FSA-) for all applicant's prior telecommunications uses on site:

N/A

2. Calculate the surface area, in square inches (height x width **or** height x diameter), of the applicant's antennas organized in the following categories:
   a. approved N/A
   b. existing N/A
   c. proposed [6 per/42 total] 23.2" x 12.0"

3. Calculate the volume (height x width x depth) of the applicant's equipment cabinets (in cubic inches) and/or shelter (in cubic feet) organized in the following categories:
   a. approved N/A
   b. existing N/A
   c. proposed [1 per/7 total] 92.0" x 35.52" x 23.88"

C. ANTENNA(S) Provide a separate page for each provider listed as part of the application

Provider Amphenol

Model # or name	Type Panel, Dish, Omni	Quantity	Height	Width	Diameter	Location height on the structure
HTXCWW63111414Fx00	Panel	[6 per/42 total]	22.3"	12.0"		38' - 52'6"

Existing structure color: Brown Antenna color: Grey

Is antenna painted to match existing structure? Yes ☐ No ☑

If No, please explain: Antennas will be screened by a cylindrical sheath, painted to match

Will the antennas be screened? Yes ☑ No ☐ If Yes, describe the screening to be provided:

Antennas will be screened by a cylindrical sheath, painted to match

Will the antennas be flush-mounted to the structure on which they are located? Yes ☑ No ☐

If No, please explain:

Additional information:

D. EQUIPMENT

Model # or name	Type cabinet or shelter	Quantity	Height	Width	Depth	Location
Pole Mount Cabinet (Vertical)	Cabinet	[1 per/7 total]	92.0"	35.52"	23.88"	Flushmounted to pole

How will the equipment cabinet or shelter be screened? Painted to match

Screen material: Screen color: Brown

Additional information:

All cabinets will be mounted at a minimum of 10' above grade.

Dominion Virginia Power
3072 Centreville Rd.
Herndon, VA 20171
Web Address: www.dom.com

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Dominion®

Aug 1, 2013

Marco A. Morales
Site Development Manager
DAS Development and Implementation
Crown Castle
1200 MacArthur Blvd, Suite 200
Mahwah, New Jersey 07430

RE: New Permit Request
Location: near Vienna, VA
Nodes: HM 9&10, HME 2,4,&6 and HMV 5
NJUNS Ticket # 82701

Mr. Morales:

Per your request, Dominion VA Power has reviewed the following locations as suitable sites for potential pole top antenna applications with regard to electric facilities:

1. HM-09, Pole C0519-BC45; Nearest address: 9907 Vale Rd, Vienna, VA 22181
2. HM-10, Pole C0519-EC42; Nearest address: 2421 Carey Ln, Vienna, VA 22181
3. HME-2, Pole C0519-AM73; Nearest address: 9953 Lawyers Rd, Vienna, VA 22181
4. HME-4, Pole C0519-GH89; Nearest address: 9633 Lawyers Rd, Vienna, VA 22181
5. HMV-5, Pole C0418-QN65; Nearest address: 2708 Hunter Mill Rd, Vienna, VA 22181
6. HMV-6, Pole C0418-QN46; Nearest address: 2250 Hunter Mill Rd, Vienna, VA 22181

Pending county approval documentation, contract agreement ratification, final design, and all payments received, DVP will obtain all necessary VDOT work permits and schedule the required pre-construction work needed to facilitate installation of new pole top antenna equipment at the sites referenced above. All NEC and NESC code requirements must be maintained by Crown Castle construction during antenna installation. Proper identification tags displaying 272 are mandatory.

If you have any questions, please contact me via email at Jarred.T.Lampe@dom.com or I may be reached by phone at (571) 203-5332.

Jarred Lampē
Joint Use Northern Region
Dominion Virginia Power
3072 Centreville Road
Herndon, VA 20171

NETWORK BUILDING
& CONSULTING, LLC
Over 25 years experience

NODE CHART

Hunter Mill Node HME 1
Closes Address: *2126 Galloping Wy*
Tax Map: *0372-18-0001*
Latitude: 38° 54' 54"
Longitude: -77° 17' 49"
Proposed Pole: 47'-0"
Top of Cylindrical Sheath: 53'-6"

Hunter Mill Node HME 2
Closest Address: *10000 Garrett St*
Tax Map: *0381-19-0074A*
Latitude: 38° 54' 45.10"
Longitude: -77° 17' 23.02"
Existing Pole: 30'-0"
Replacement Pole: 38'-0"
Top of Cylindrical Sheath: 44'-6"

Hunter Mill Node HME 3
Closest Address: *2103 Kedge Dr*
Tax Map: *0381-33-0056*
Latitude: 39° 54' 33.46"
Longitude: -77° 17' 1.53"
Proposed Pole: 47'-6"
Top of Cylindrical Sheath: 53'-6"

Hunter Mill Node HME 4
Closest Address: *2201 Abbotsford Rd*
Tax Map: *0381-22-0109*
Latitude: 38° 54' 22.54"
Longitude: -77° 16' 46.37"
Existing Pole: 35'-0"
Replacement Pole: 38'-0"
Top of Cylindrical Sheath: 44'-6"

Hunter Mill Node HME 5
Closest Address: *9534 Center St*
Tax Map: *0381-18-0161*
Latitude: 38° 54' 43.38"
Longitude: -77° 16' 35.11"
Existing Pole: 30'-0"
Replacement Pole: 30'-0"
Top of Cylindrical Sheath: 36'-6"

Hunter Mill Node HME 6
Closest Address: *2249 Hunter Mill Rd*
Tax Map: *0372-22-0004*
Latitude: 38° 54' 51.40"
Longitude: -77° 18' 14.40"
Existing Pole: 30'-0"
Replacement Pole: 47'-0"
Top of Cylindrical Sheath: 53'-6"

Hunter Mill Node HMV 5
Closest Address: *2709 Hunter Mill Rd*
Tax Map: *0374-01-0023*
Latitude: 38° 53' 36.78"
Longitude: -77° 18' 14.01"
Existing Pole: 45'-0"
Replacement Pole: 47'-0"
Top of Cylindrical Sheath: 53'-6"

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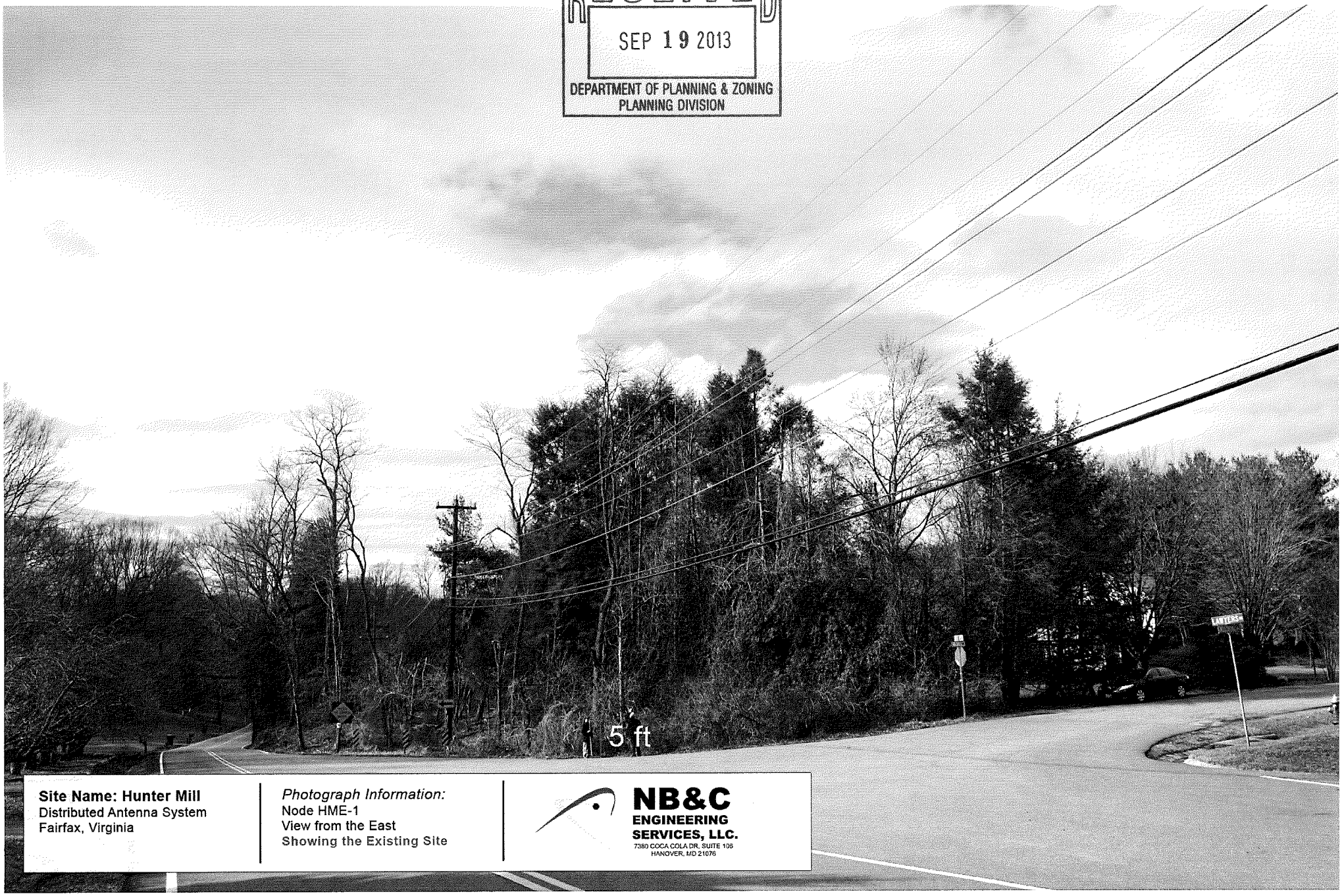

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-1
View from the East
Showing the Existing Site

NB&C
ENGINEERING SERVICES, LLC.
7380 COCA COLA DR. SUITE 105
HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-1
View from the East
Showing the Proposed Site

NB&C
ENGINEERING SERVICES, LLC.
7380 COCA COLA DR. SUITE 106
HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-1
View from the West
Showing the Existing Site

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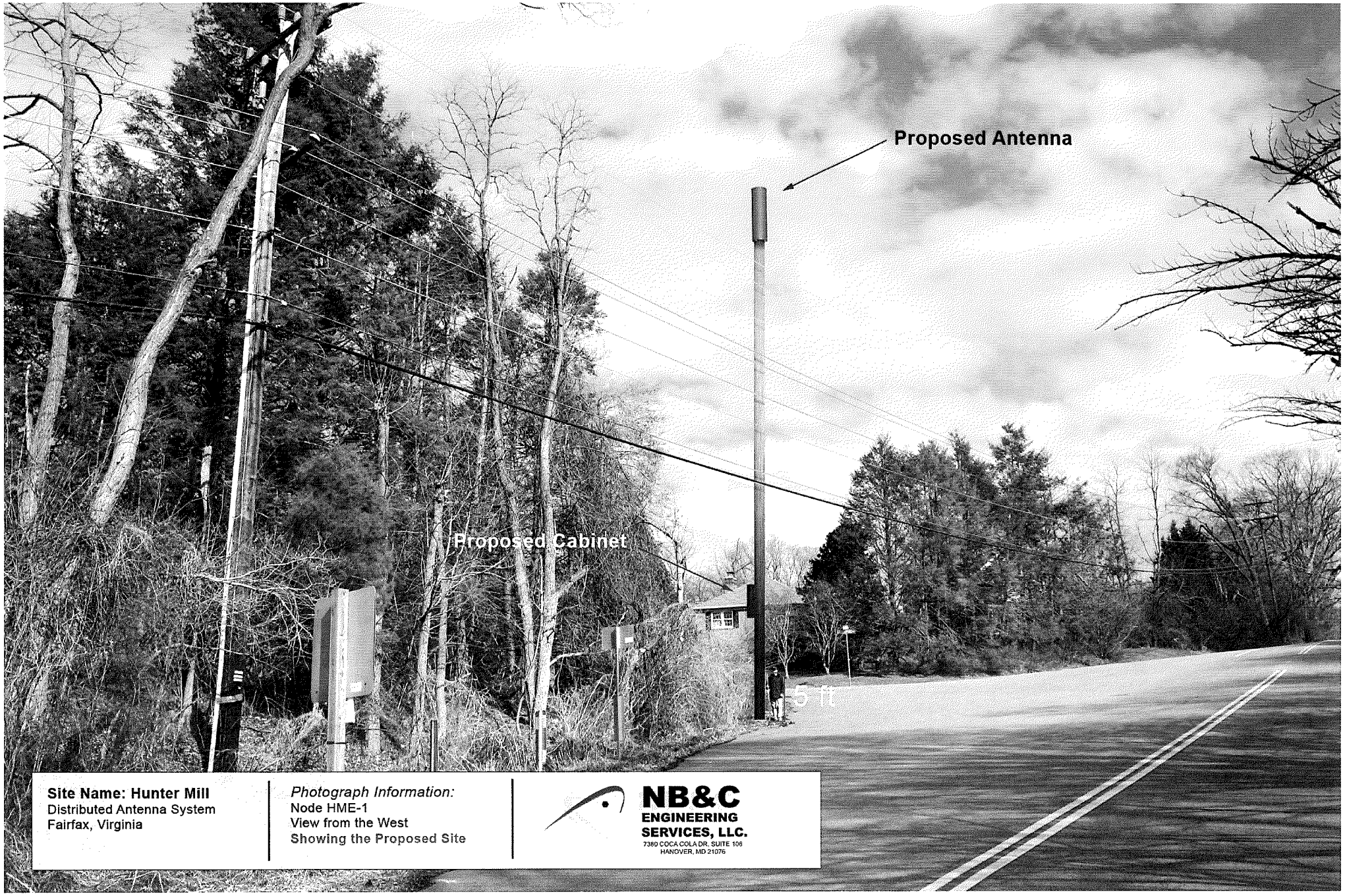
ENGINEERING SERVICES, LLC.
7380 COCA COLA DR. SUITE 106
HANOVER, MD 21076



Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

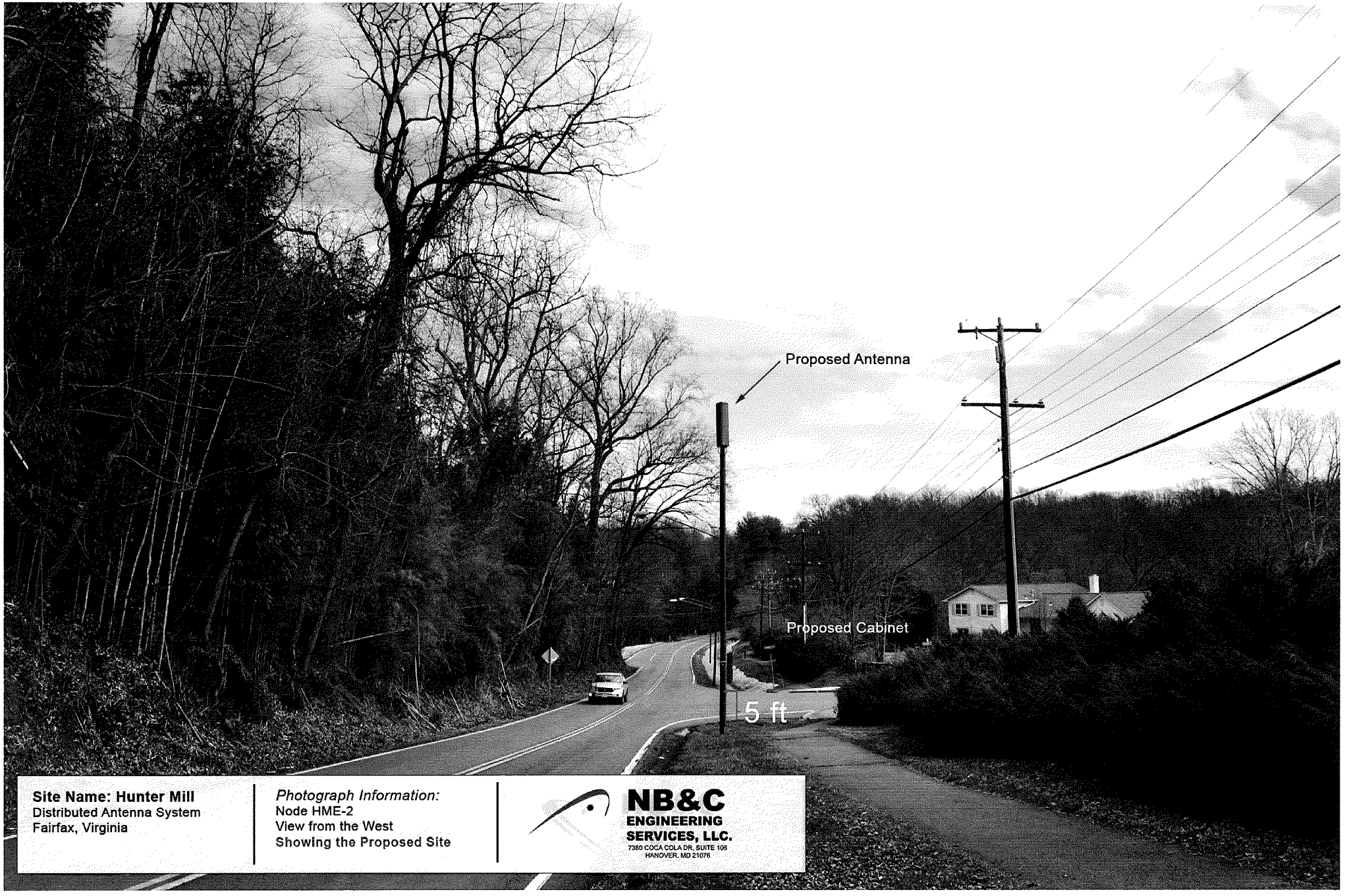
Photograph Information:
Node HME-1
View from the West
Showing the Proposed Site

NB&C
ENGINEERING SERVICES, LLC.
7380 COCA COLA DR. SUITE 106
HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-2
View from the West
Showing the Existing Site

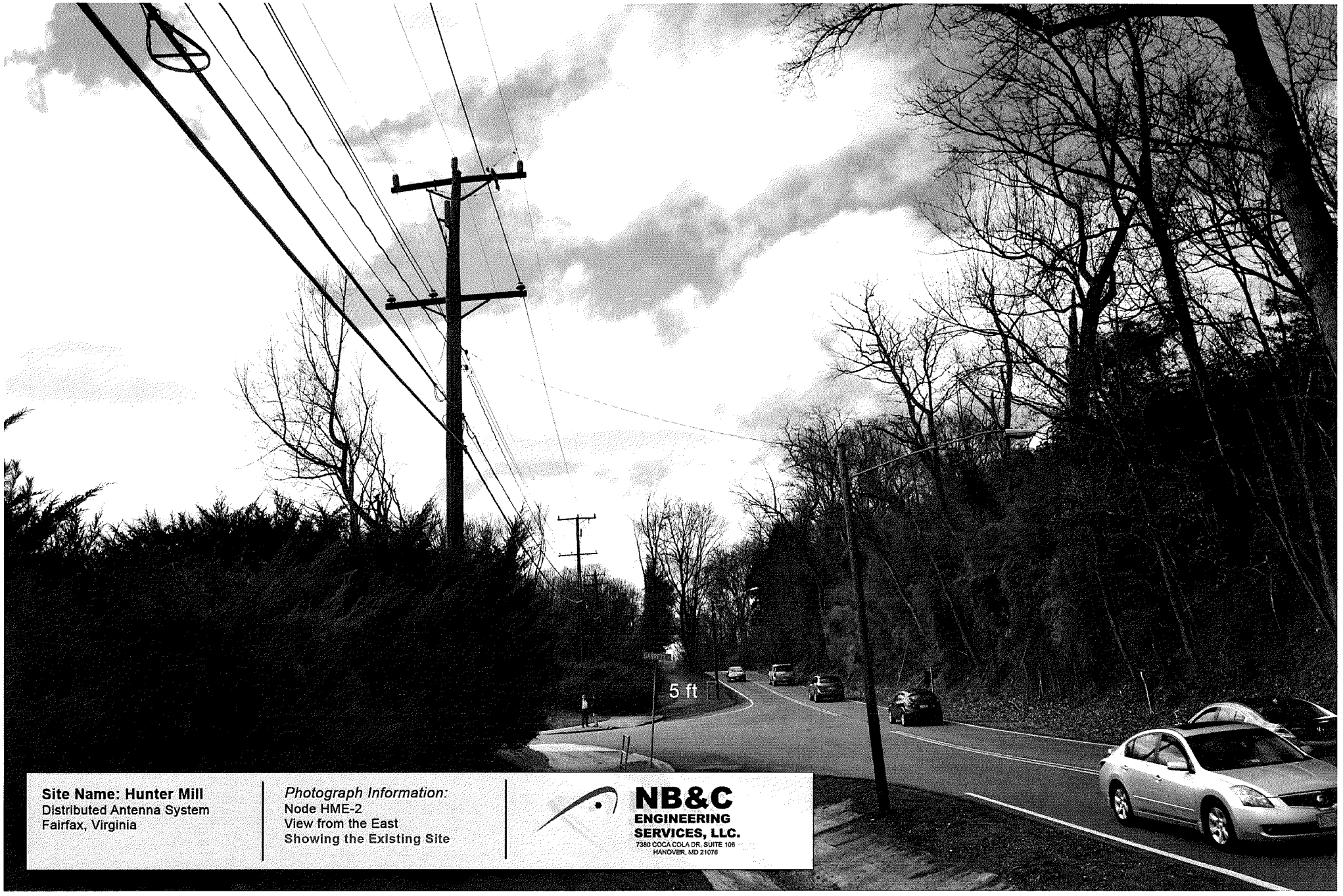
NB&C
ENGINEERING SERVICES, LLC.
7360 COCA COLA DR, SUITE 105
HANOVER, MD 21076



Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-2
View from the West
Showing the Proposed Site

NB&C
ENGINEERING SERVICES, LLC.
7380 COCA COLA DR, SUITE 106
HANOVER, MD 21076



Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-2
View from the East
Showing the Existing Site

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ENGINEERING SERVICES, LLC.
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Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-2
View from the East
Showing the Proposed Site

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HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-3
View from the West
Showing the Existing Site

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Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-3
View from the West
Showing the Proposed Site

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SERVICES, LLC.
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Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-3
View from the East
Showing the Existing Site

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Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-3
View from the East
Showing the Proposed Site

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HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-4
View from the West
Showing the Existing Site

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HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-4
View from the West
Showing the Proposed Site

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ENGINEERING SERVICES, LLC.
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HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-4
View from the East
Showing the Existing Site

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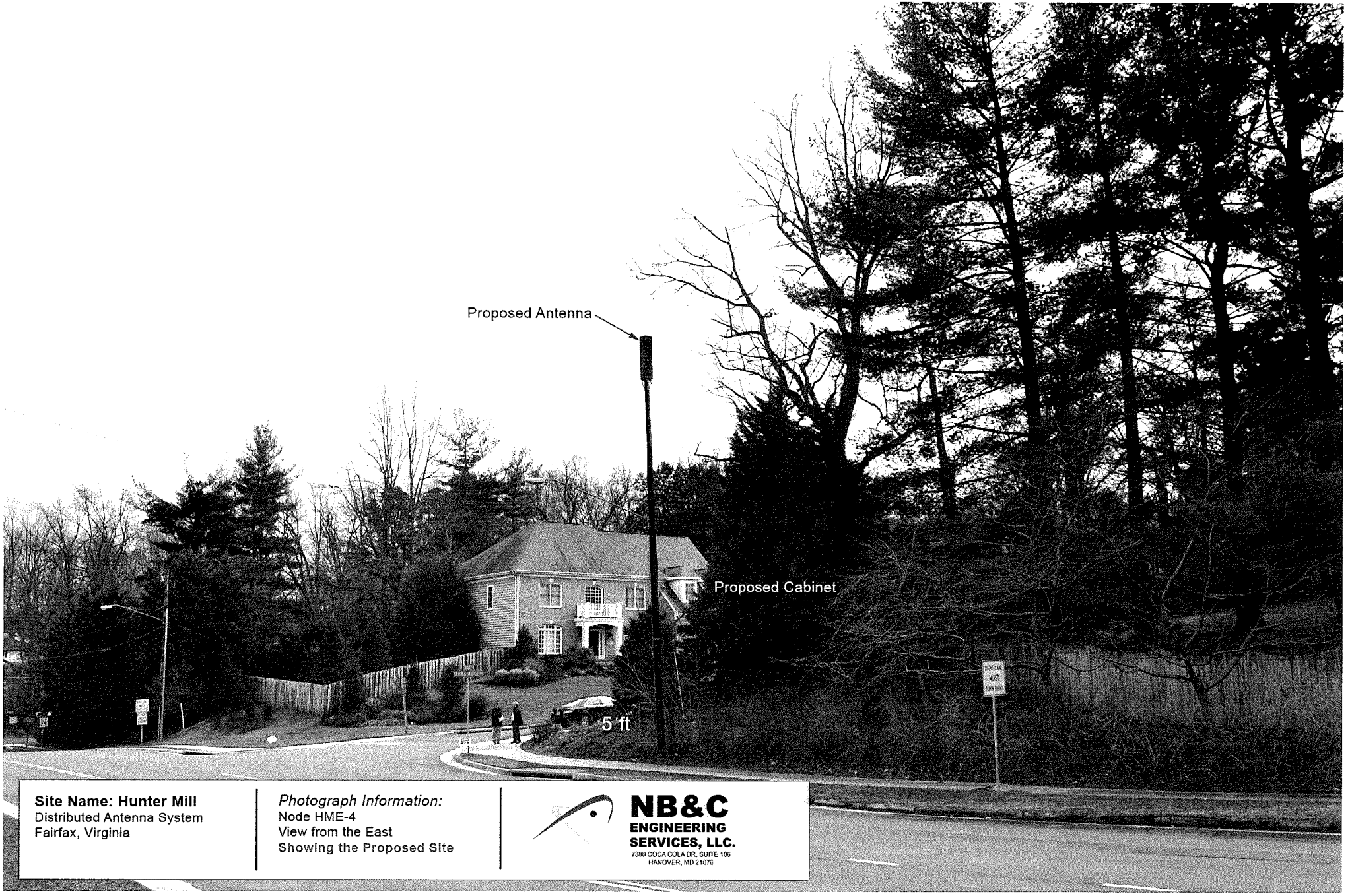

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-4
View from the East
Showing the Proposed Site

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ENGINEERING SERVICES, LLC.
7380 COCA COLA DR, SUITE 106
HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-5
View from the South
Showing the Existing Site

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HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-5
View from the South
Showing the Proposed Site

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ENGINEERING SERVICES, LLC.
7380 COCA COLA DR, SUITE 106
HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-5
View from the West
Showing the Existing Site

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7380 COCA COLA DR, SUITE 106
HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-5
View from the West
Showing the Proposed Site

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HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-6
View from the North
Showing the Existing Site

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HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-6
View from the South
Showing the Proposed Site

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HANOVER, MD 21076

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HME-6
View from the South
Showing the Existing Site

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Site Name: Hunter Mill
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Fairfax, Virginia

Photograph Information:
Node HME-6
View from the North
Showing the Proposed Site

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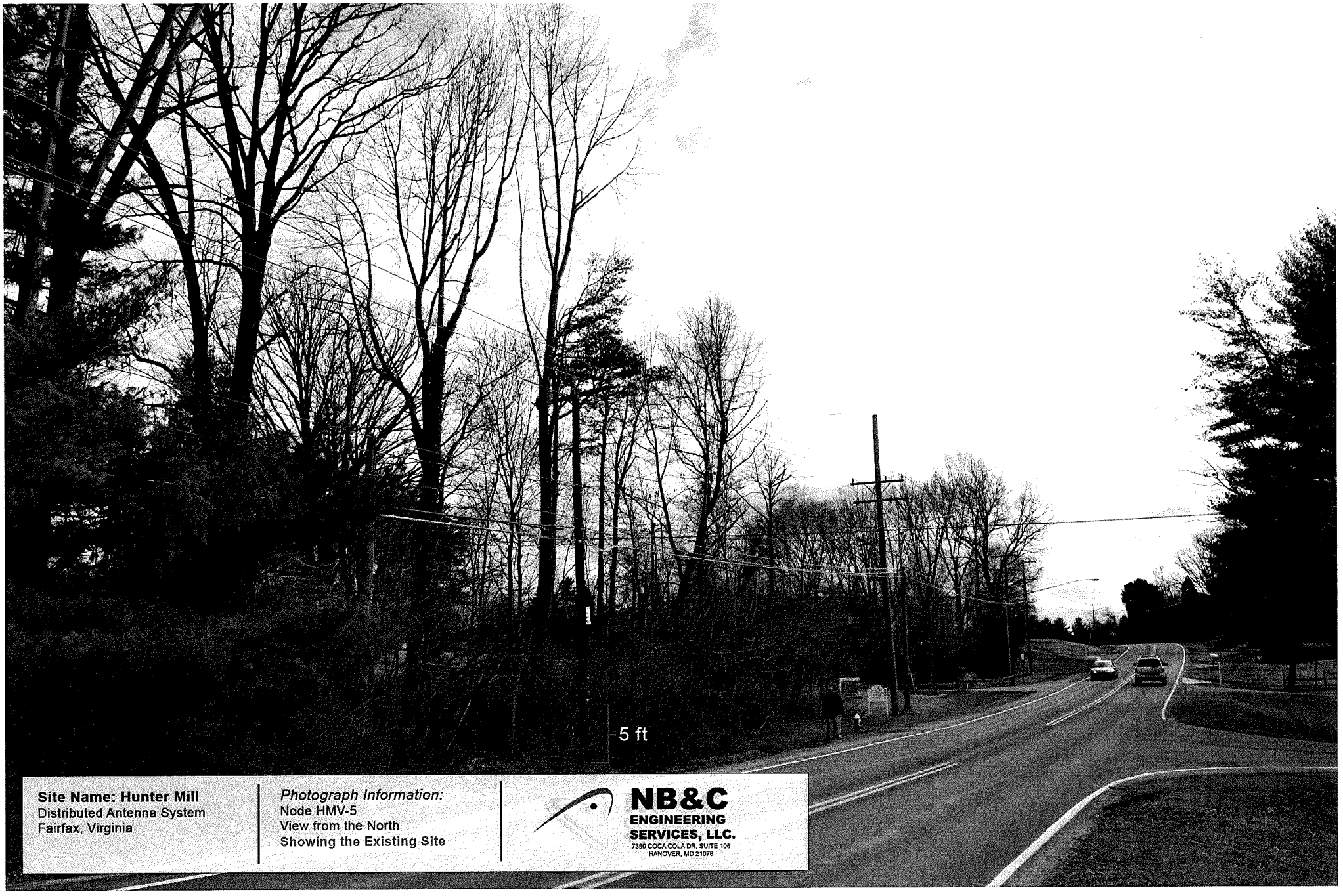

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HMV-5
View from the North
Showing the Existing Site

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Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HMV-5
View from the North
Showing the Proposed Site

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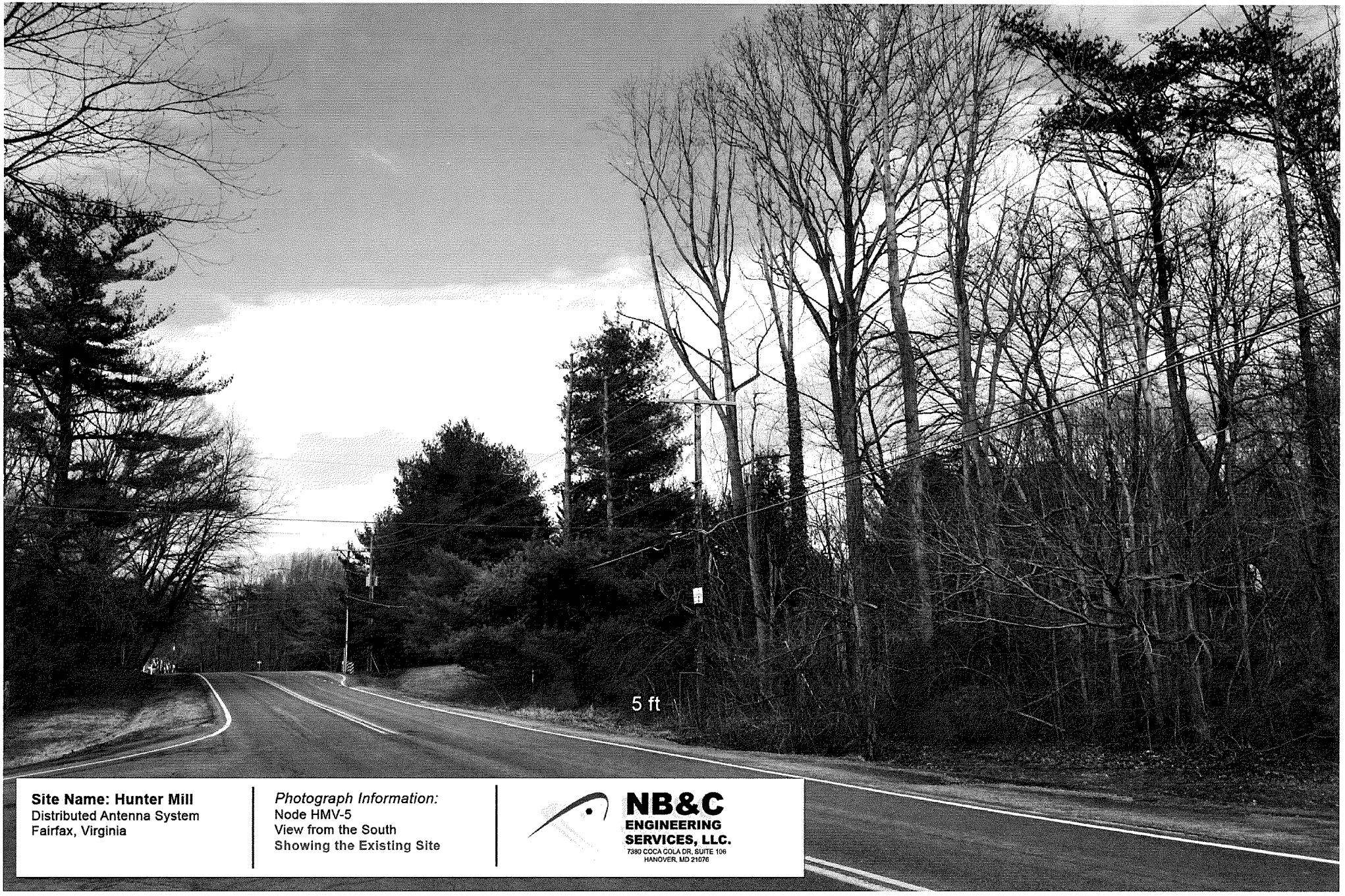

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HMV-5
View from the South
Showing the Existing Site

NB&C
ENGINEERING SERVICES, LLC.
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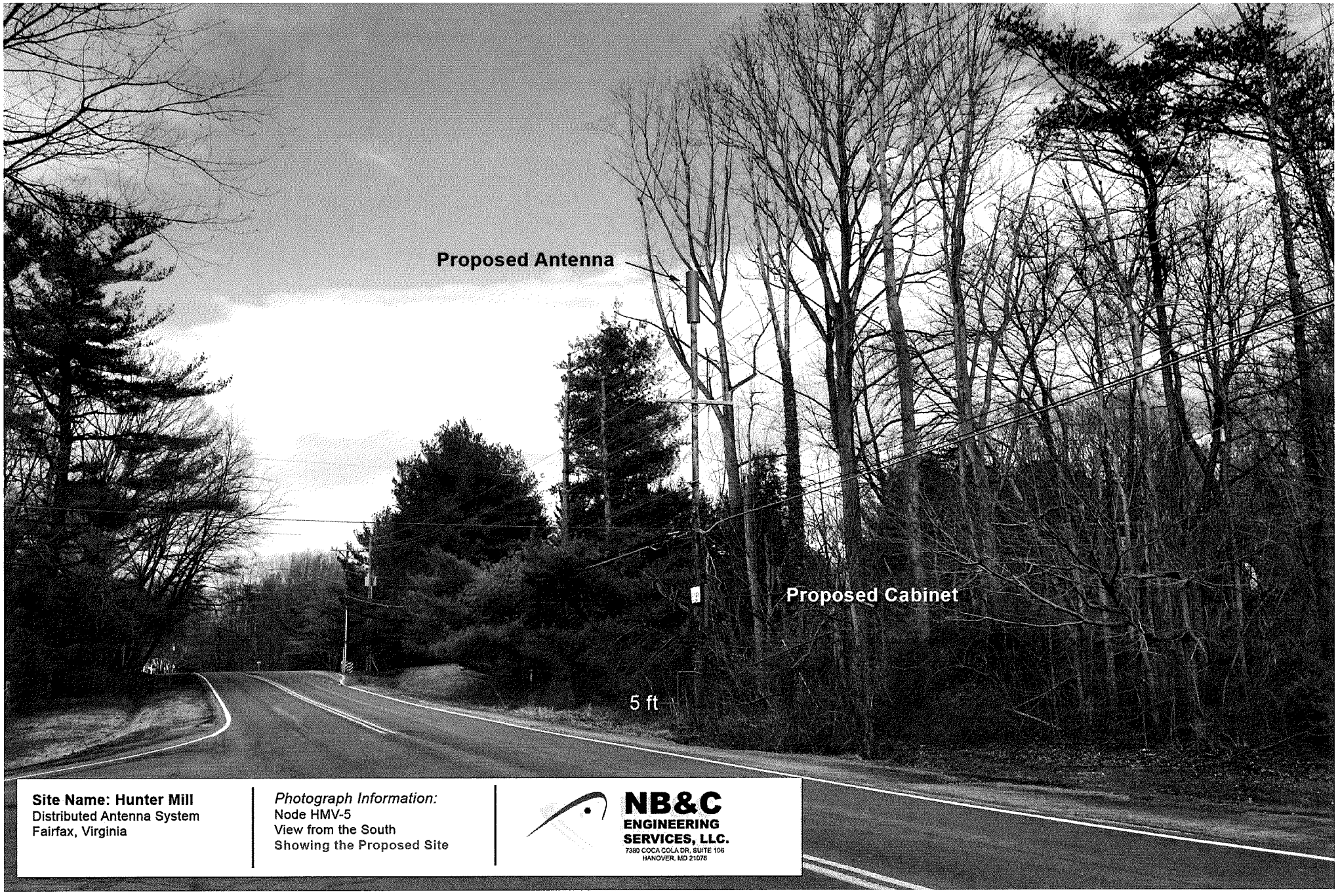

Site Name: Hunter Mill
Distributed Antenna System
Fairfax, Virginia

Photograph Information:
Node HMV-5
View from the South
Showing the Proposed Site

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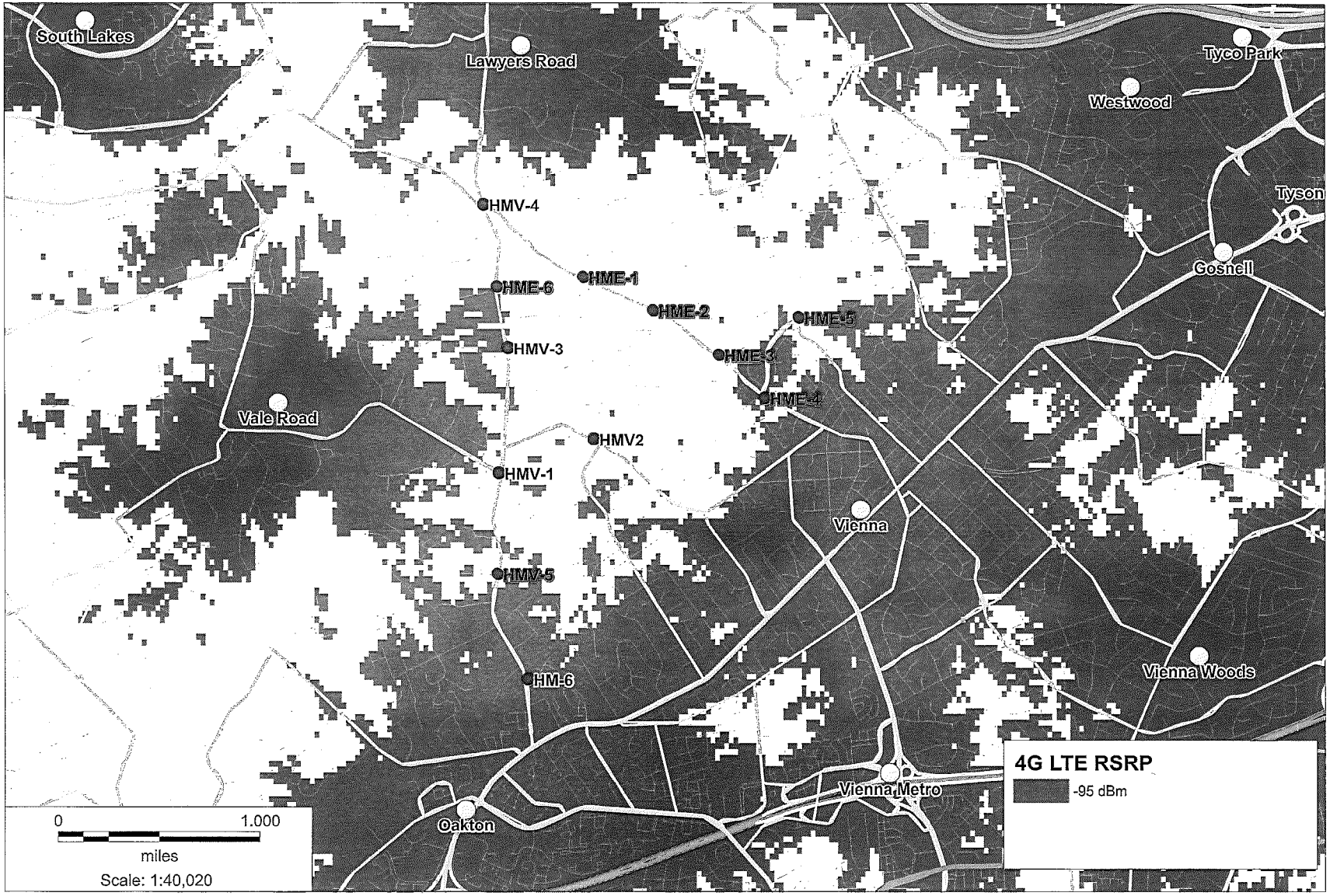
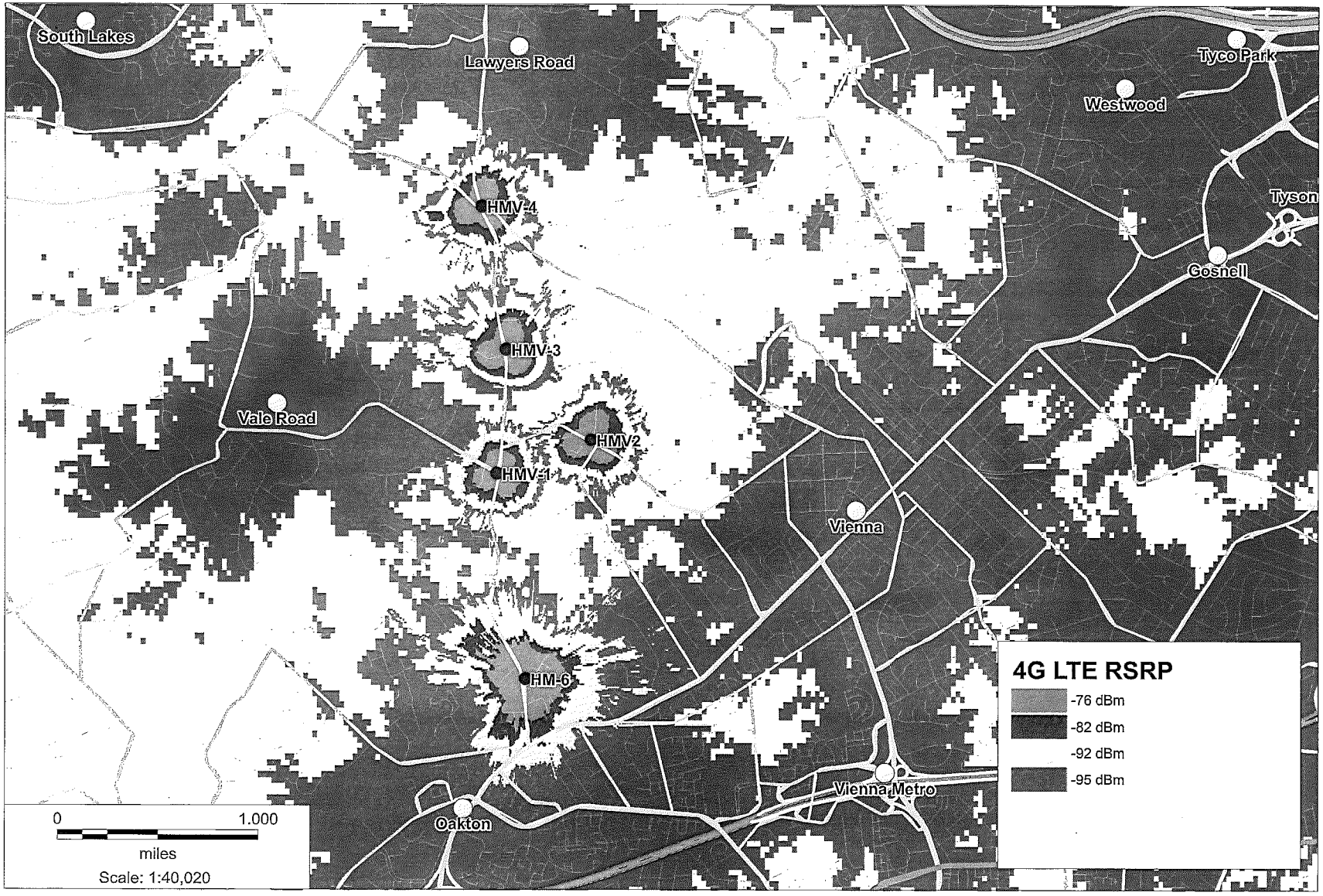
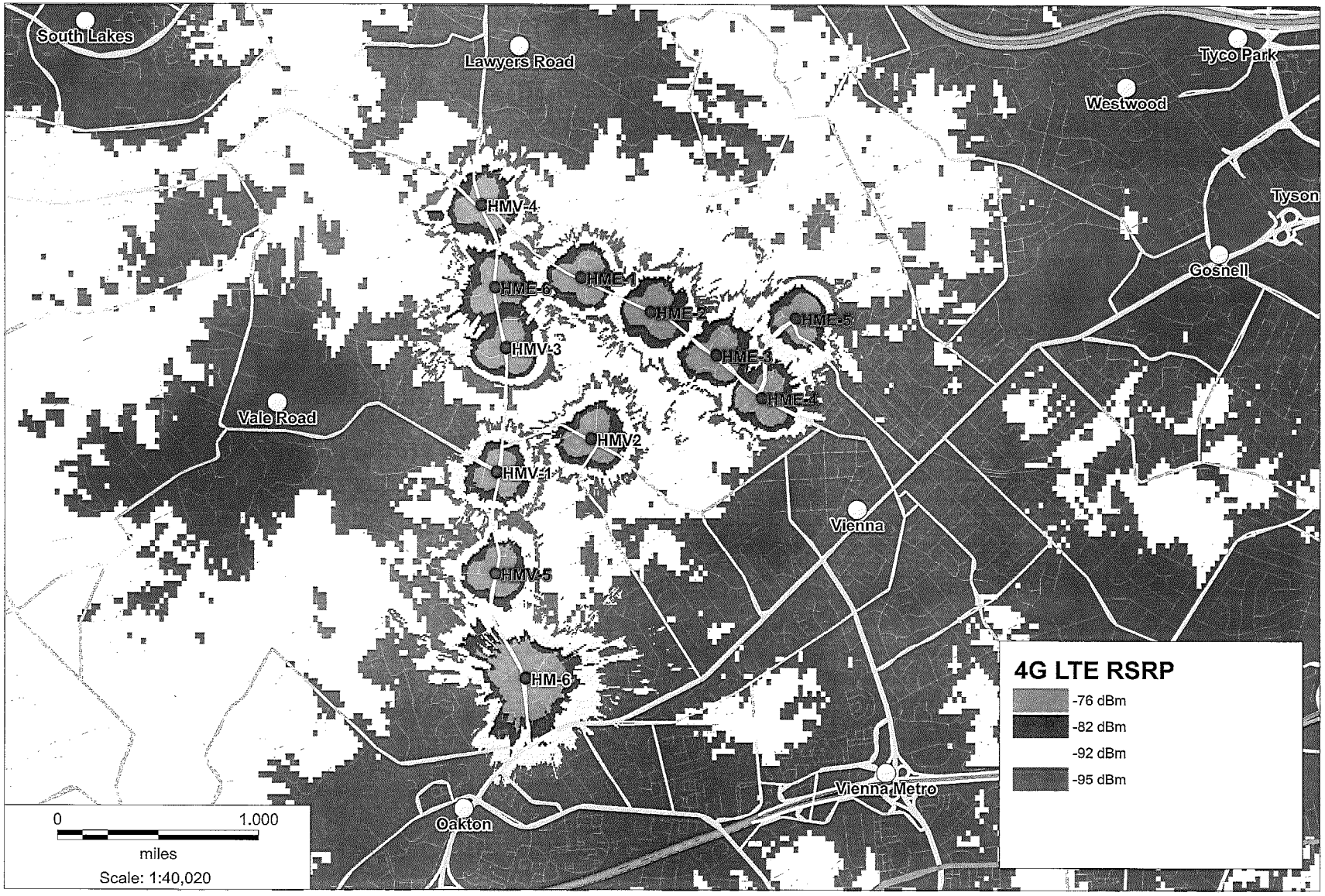
VZW - 4G LTE Existing Coverage



VZW 4G LTE existing coverage, and proposed coverage on Permitted Hunter Mill (Clarks Crossing) DAS Nodes



VZW 4G LTE existing coverage, and proposed coverage on Permitted Hunter Mill (Clarks Crossing) DAS Nodes and on new nodes HME-1, HME-2, HME-3, HME-4, HME-5, HME-6 and HMV-5

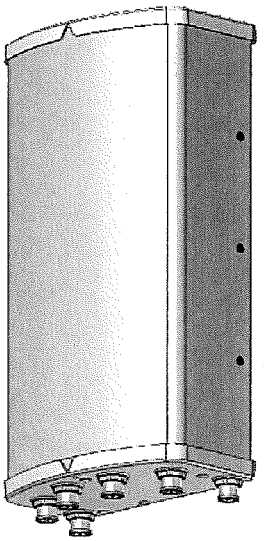


Amphenol ANTENNA SOLUTIONS

HTXCWW63111414Fx00

Replace "x" with desired electrical downtilt.

XXX-Pol | Tri Band FET Panel | 65° | 11.0 / 14.0 / 14.0 dBi

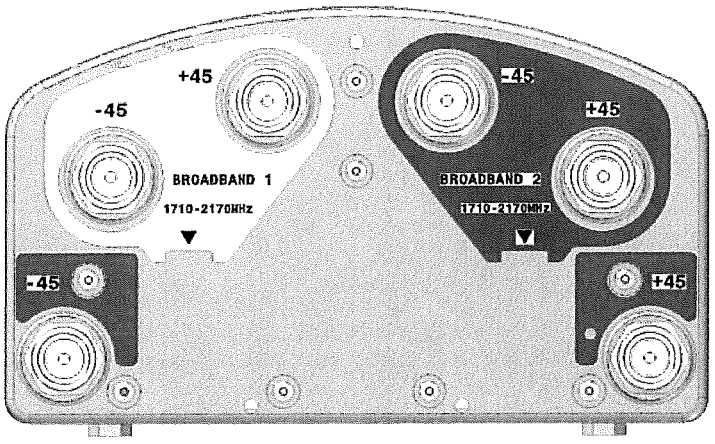


Electrical Characteristics	696-960 MHz		2 x 1710-2170 MHz		
Frequency bands (MHz)	696-806	806-960	1710-1880	1850-1990	1900-2170
Polarization	±45°		±45°		
Horizontal beamwidth	75°	70°	65°	70°	75°
Vertical beamwidth	42°	40°	18°	16°	14°
Gain	10.5 dBi	11.0 dBi	13.5 dBi	14.0 dBi	14.0 dBi
Electrical downtilt (x)	0 (Other tilts available upon request)		0 (Other tilts available upon request)		
Impedance	50Ω		50Ω		
VSWR	≤1.5:1		≤1.5:1		
Front-to-back ratio	> 20 dB	> 20 dB	> 25 dB	> 25 dB	> 25 dB
Isolation between ports	> 25 dB		> 25 dB		
Input power	500 W		300 W		
IM3 (2x20W carriers)	< -150 dBc		< -150 dBc		
Lightning protection	Direct Ground				
Connector(s)	6 Ports / 7/16 DIN / Female / Bottom				

Mechanical Characteristics		
Dimensions Length x Width x Depth	589 x 305 x 180 mm	23.2 x 12.0 x 7.1 in
Weight without mounting brackets	5.9 kg	13 lbs
Survival wind speed	241 km/hr	150 mph
Wind area	Front: 0.18 m²; Side: 0.11 m²	Front: 1.9 ft²; Side: 1.1 ft²
Wind loads (160 km/hr or 100 mph)	Front: 219 N; Side: 129 N	Front: 49 lbf; Side: 29 lbf

Mounting Options	Part Number	Fits Pipe Diameter	Weight
2-Point Mounting Bracket Kit	MKS04P01	40-115 mm 1.57-4.5 in	2.9 kg 6.4 lbs
2-Point Mounting & Downtilt Bracket Kit	MKS04T03	40-115 mm 1.57-4.5 in	4.1 kg 9.0 lbs

Bottom View

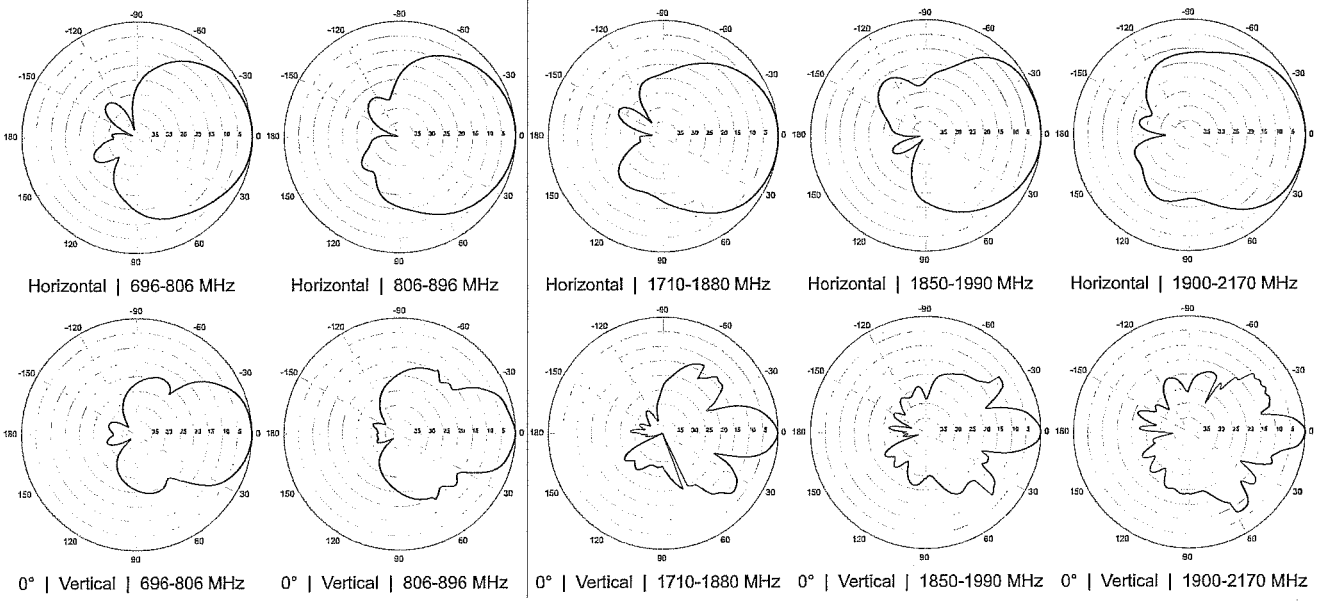


Quoted performance parameters are provided to offer typical or range values only and may vary as a result of normal manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to product may be made without notice.

HTXCWW63111414Fx00

XXX-Pol | Tri Band FET Panel | 65° | 11.0 / 14.0 / 14.0 dBi

696-896 MHz | **1710-2170 MHz**

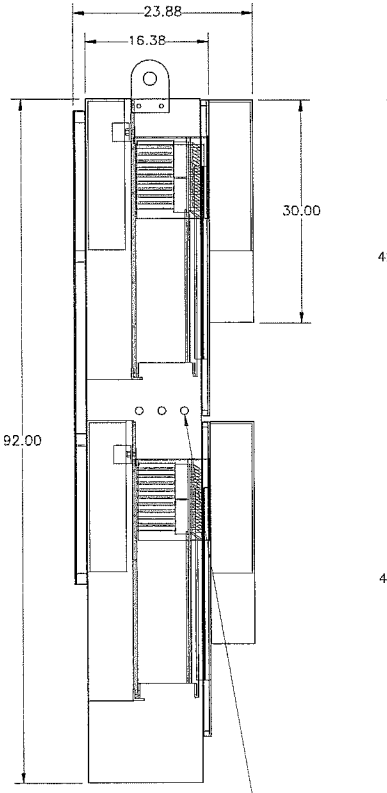


Horizontal | 696-806 MHz | Horizontal | 806-896 MHz | Horizontal | 1710-1880 MHz | Horizontal | 1850-1990 MHz | Horizontal | 1900-2170 MHz

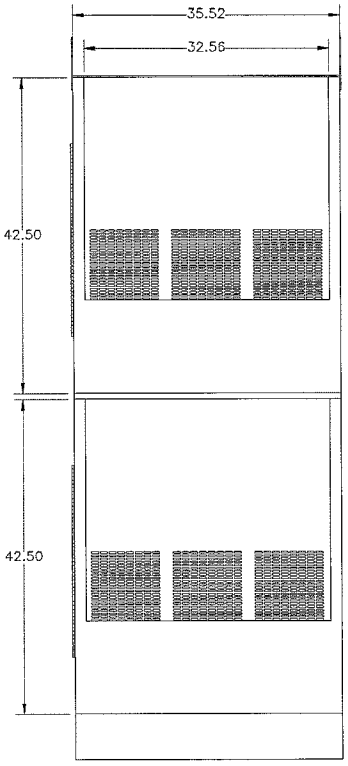
0° | Vertical | 696-806 MHz | 0° | Vertical | 806-896 MHz | 0° | Vertical | 1710-1880 MHz | 0° | Vertical | 1850-1990 MHz | 0° | Vertical | 1900-2170 MHz

Quoted performance parameters are provided to offer typical or range values only and may vary as a result of normal manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to product may be made without notice.

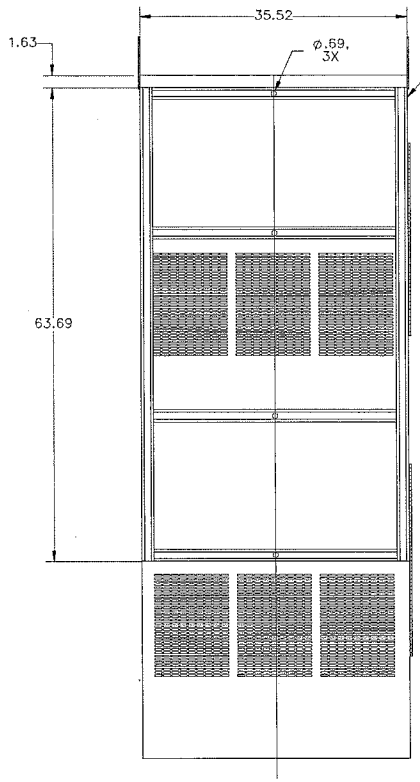
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ELECTRO MECHANICAL INDUSTRIES, INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF ELECTRO MECHANICAL IND., IS PROHIBITED.



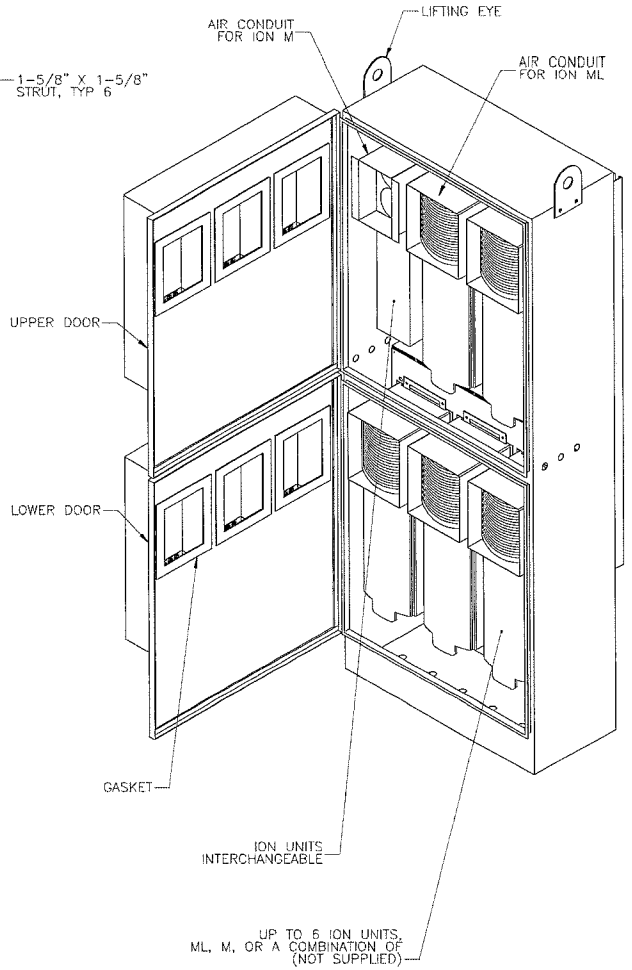
LEFT

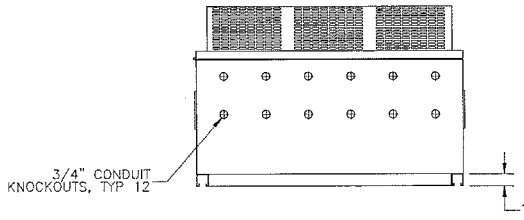


FRONT VIEW WITH DOORS REMOVED



BACK





BOTTOM

NOTES:
1. EMPTY WEIGHT: APPROX. 530 LBS.
2. WEIGHT WITH (6) ION M UNITS: APPROX. 1,060 LBS.

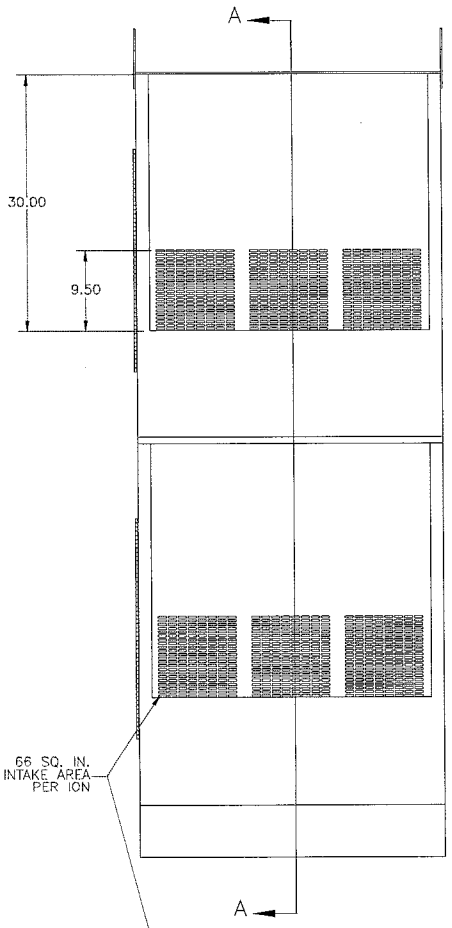
SURFACE FINISH: UNLESS OTHERWISE SPECIFIED	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVALS	DATE
MATERIAL: 14 GA CARBON STEEL, POWDER COAT PAINT FINISH TBD	TOLERANCES .0 ± .1, .00 ± .01, .000 ± .005	DRAWN: CS	6.21.13
THIRD ANGLE PROJECTION	FRACTIONS ± 1/16, ANGLES ± .05°	CHECKED	
	HOLES: .013 THRU .125 +.005 −.002; .126 THRU 1.500 +.012 −.003	ENGINEER/DESIGNER	
NEXT ASSY / USED ON		PRODUCTION	
APPLICATIONS			

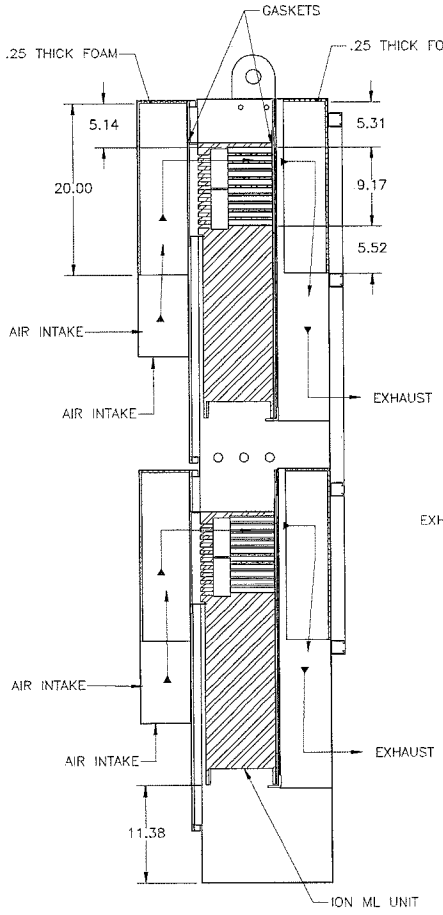
EMI PRODUCTS, LLC
11230 NEEDHAM DRIVE
HOUSTON, TEXAS 77065
1-800-453-0050

TITLE: POLE MOUNT CABINET (VERTICAL)

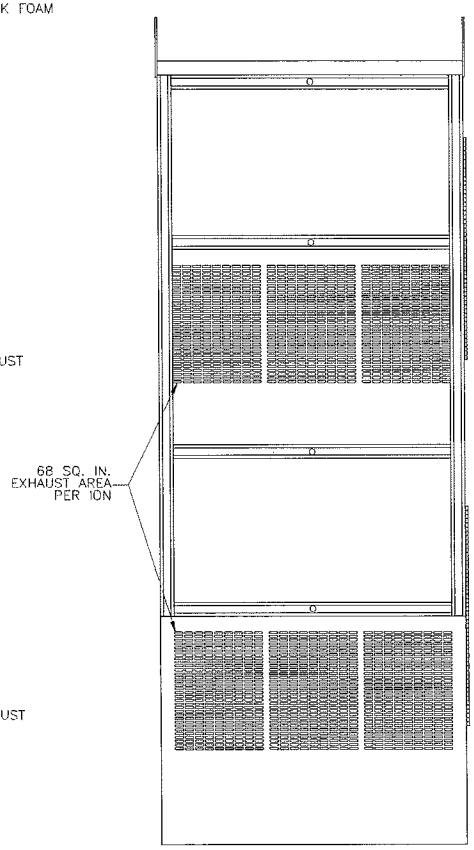
SIZE	DRAWING NO.	REV
B	300-116-2931	B

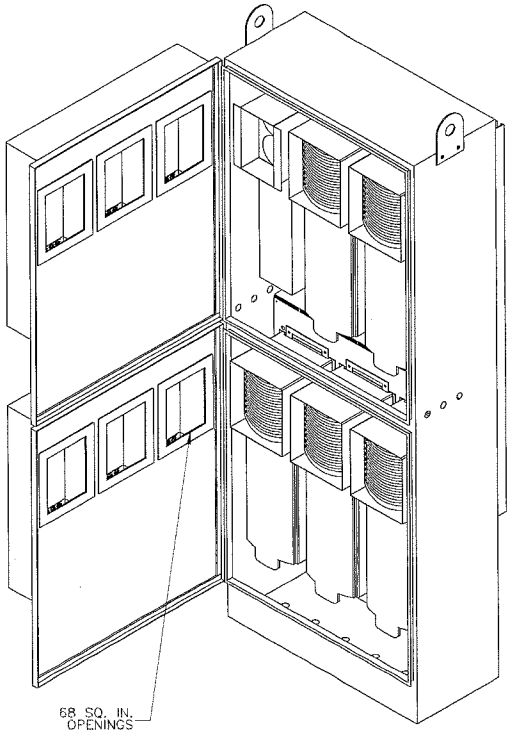
SCALE: 1:16 | SHEET 1 OF 2

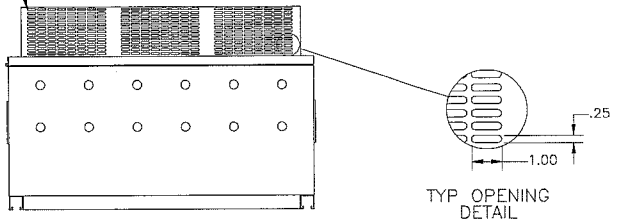




SECTION A–A







TYP OPENING
DETAIL

ELECTRO MECHANICAL INDUSTRIES, INC.
11250 NEEDHAM DRIVE
HOUSTON, TEXAS 77065
1-800-453-3050

SIZE	DRAWING NO.	REV
B	300-116-2931	B
SCALE: 1:14		SHEET 2 OF 2

RECEIVED
SEP 19 2013
DEPARTMENT OF PLANNING & ZONING
PLANNING DIVISION

CROWN CASTLE INTERNATIONAL

NODES HME 1-6 & HMV 5
HUNTER MILL EXPANSION
FAIRFAX, VA

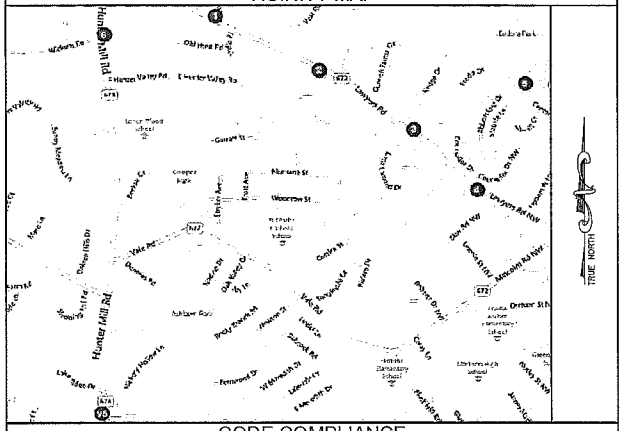
2232 REVIEW

811 Know what's below. Call before you dig.

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICE AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAS MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NERVELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT IF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE CONSTRUCTION MANAGER OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWING/CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATION UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDEND OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTIONS MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
11. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
12. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
13. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
14. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT IS RESOLVED BY THE CONSTRUCTION MANAGER.
15. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE PROJECT.
16. OWNER/CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 1-800-257-7777 MINIMUM 72 HOURS PRIOR TO THE START OF CONSTRUCTION FOR LOCATION OF EXISTING UNDERGROUND UTILITIES.
17. THE PROJECT IS EXEMPT FROM THE ELECTRICAL ENERGY CERTIFICATION FORM PER ASHRAE SECTION 2.3(C) "EQUIPMENT AND PORTIONS OF BUILDING THAT USE ENERGY PRIMARILY TO PROVIDE FOR INDUSTRIAL, MANUFACTURING, OR COMMERCIAL PROCESSES."

VICINITY MAP



CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

- 2012 INTERNATIONAL BUILDING CODE
- 2005 NATIONAL ELECTRICAL CODE
- 2009 NFPA 101, LIFE SAFETY CODE
- 2009 IPC
- AMERICAN CONCRETE INSTITUTE
- FAIRFAX STRUCTURAL DESIGN LOADS AND RELATED FACTORS
  - ** GROUND SNOW LOAD = 25 PSF
  - ** BASIC WIND SPEED = 90 MPH
  - ** EARTHQUAKE SPECTRAL RESPONSE ACCELERATIONS SS = 0.16 AND S1 = 0.053

APPROVAL BLOCK

PROPERTY OWNER _____ DATE _____

APPROVED	APPROVED AS NOTED	DISAPPROVED/ REVISE
☐	☐	☐

DRAWING INDEX

T-1	TITLE SHEET
C-1	HME-1 - NEW POLE SITE PLAN & ELEVATION - CORNER OF LAWYERS ROAD AND GALLOPING WAY
C-2	HME-2 - POLE #AN73 SITE PLAN & ELEVATIONS - CORNER OF VALE ROAD AND TROTT AVENUE
C-3	HME-3 - NEW POLE SITE PLAN & ELEVATION - NEAR 2103 KEDGE DRIVE
C-4	HME-4 - POLE #GH89 SITE PLAN & ELEVATIONS - CORNER OF LAWYERS ROAD AND TERRA RIDGE DRIVE
C-5	HME-5 - POLE #IL28 SITE PLAN & ELEVATIONS - NEAR 9534 CENTER STREET
C-6	HME-6 - POLE #QN37 SITE PLAN & ELEVATIONS - NEAR 2249 HUNTER MILL ROAD
C-7	HMV-5 - POLE #QN55 SITE PLAN & ELEVATIONS - NEAR 2709 HUNTER MILL ROAD

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 24"X36". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

PROJECT TEAM

APPLICANT:	CROWN CASTLE INTERNATIONAL 2000 CORPORATE DRIVE CANONSBURG, PA 15317 (713) 570-3000
PROJECT MANAGEMENT FIRM:	NETWORK BUILDING & CONSULTING, LLC. 7380 COCA COLA DRIVE, SUITE 106 HANOVER, MD 21076 (410) 712-7092
ENGINEERING FIRM:	NB&C ENGINEERING SERVICES, LLC. 7380 COCA COLA DRIVE, SUITE 106 HANOVER, MD 21076 (410) 712-7092

PROJECT INFORMATION

1. REPLACE UTILITY POLES AT (5) LOCATIONS.
2. INSTALL NEW UTILITY POLES AT (2) LOCATIONS.
3. INSTALL (1) EQUIPMENT CABINET AND (6) PANEL ANTENNAS INSIDE A CONCEALMENT ENCLOSURE.
4. PROVIDE NEW ELECTRICAL SERVICE FROM DEMARCATION POINT AT EACH NODE LOCATION.

JURISDICTION: FAIRFAX COUNTY

ENGINEER
NB&C ENGINEERING SERVICES, LLC.
7380 COCA COLA DRIVE, SUITE 106
HANOVER, MD 21076
(410) 712-7092

APPLICANT
CROWN CASTLE INTERNATIONAL
2000 CORPORATE DRIVE
CANONSBURG, PA 15317
WWW.CROWNCASTLE.COM

SITE INFORMATION
NODES HME 1-6 & HMV 5
HUNTER MILL EXPANSION
FAIRFAX, VA
2232 REVIEW

DESIGN RECORD

REVISIONS

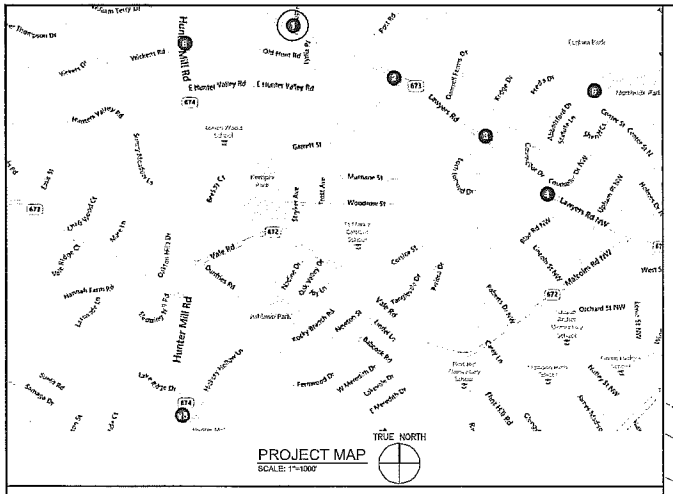
REV	DATE	DESCRIPTION	BY
F	09/11/13	CLIENT COMMENTS	MKJ
E	08/06/13	REVISED EQUIPMENT CABINET	MG
D	08/02/13	REVISED EQUIPMENT CABINET	MG
C	07/23/13	REVISED TO (6) ANTENNAS	MG
B	07/15/13	CLIENT COMMENTS	MKJ
A	07/11/13	PRELIMINARY	MKJ

PROFESSIONAL STAMP

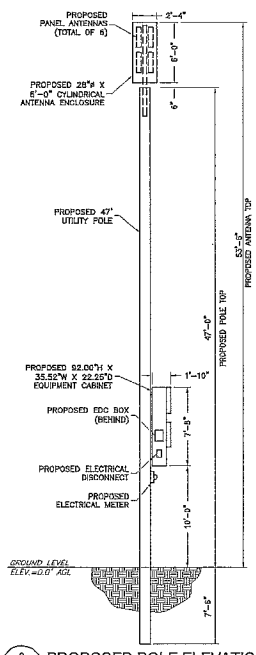
ENGINEER
PHILIP BURTNER, P.E.
VA PROFESSIONAL ENGINEER LIC. #022023

TITLE
TITLE SHEET

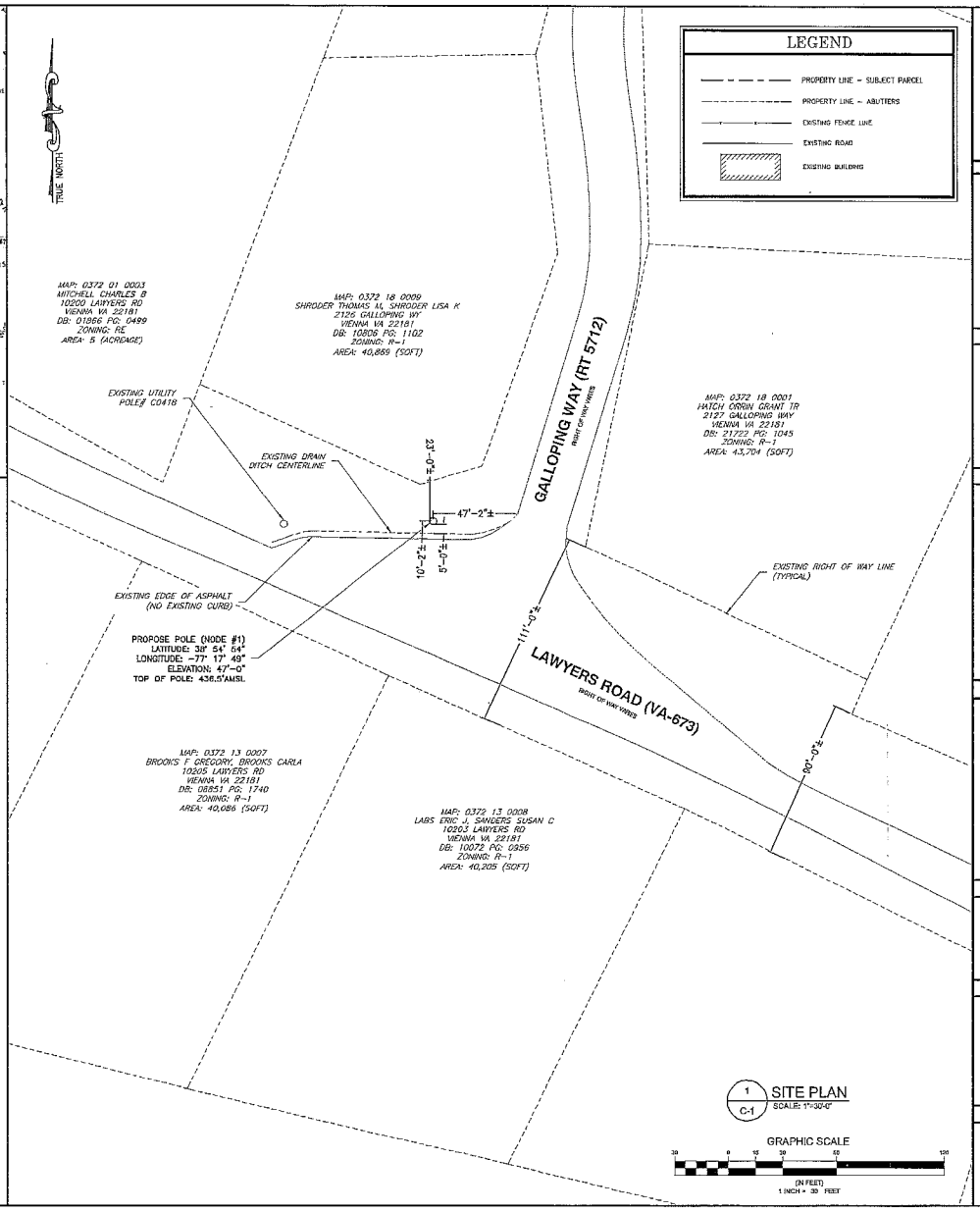
SHEET NUMBER
T-1



PROJECT MAP
SCALE: 1"=1000'



2 C-1 PROPOSED POLE ELEVATION
SCALE: 3/16"=1'-0"



1 C-1 SITE PLAN
SCALE: 1"=30'-0"

ENGINEER

NB&C ENGINEERING SERVICES, LLC.
7389 COCA COLA DRIVE, SUITE 106
HANOVER, MD 21076
(416) 712-2002

APPLICANT

CROWN CASTLE INTERNATIONAL
2000 CORPORATE DRIVE
CANONSBURG, PA 15317
WWW.CROWNCASTLE.COM

SITE INFORMATION

NODES HME 1-6 & HMV 5
HUNTER MILL EXPANSION
FAIRFAX, VA
2232 REVIEW

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
F	09/11/13	CLIENT COMMENTS	MKJ
E	09/08/13	REVISED EQUIPMENT CABINET	MG
D	08/30/13	REVISED EQUIPMENT CABINET	MG
C	07/23/13	REVISED TO (6) ANTENNAS	MG
B	07/15/13	CLIENT COMMENTS	MKJ
A	07/11/13	PRELIMINARY	MKJ

PROFESSIONAL STAMP

ENGINEER

PHILIP BURTNER, P.E.
VA PROFESSIONAL ENGINEER LIC. #022023

TITLE

HME1 - NEW POLE
SITE PLAN & ELEVATION
CORNER OF LAWYERS RD
AND GALLOPING WAY
VIENNA VA 22181

SHEET NUMBER

C-1

PROJECT MAP
SCALE: 1"=1000'

2 C-2 EXISTING POLE ELEVATION
SCALE: 3/16" = 1'-0"

3 C-2 PROPOSED POLE ELEVATION
SCALE: 3/16" = 1'-0"

1 C-2 SITE PLAN
SCALE: 1" = 20'-0"

ENGINEER

NB&C ENGINEERING SERVICES, LLC.
7380 COCA-COLA DRIVE, SUITE 106
HANOVER, MD 21076
(410) 712-7092

APPLICANT

CROWN CASTLE INTERNATIONAL
2000 CORPORATE DRIVE
CANONSBURG, PA 15317
WWW.CROWNCASTLE.COM

SITE INFORMATION

NODES HME 1-6 & HMV 5
HUNTER MILL EXPANSION
FAIRFAX, VA
2232 REVIEW

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
F	08/11/13	CLIENT COMMENTS	MKJ
E	09/09/13	REVISED EQUIPMENT CABINET	MG
D	08/30/13	REVISED EQUIPMENT CABINET	MG
C	07/23/13	REVISED TO (6) ANTENNAS	MG
B	07/15/13	CLIENT COMMENTS	MKJ
A	07/11/13	PRELIMINARY	MKJ

PROFESSIONAL STAMP

ENGINEER

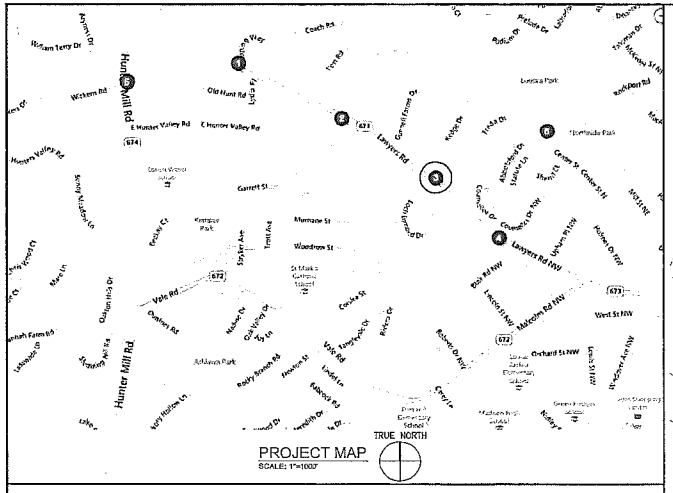
PHILIP BURTNER, P.E.
VA PROFESSIONAL ENGINEER LIC. #022023

TITLE

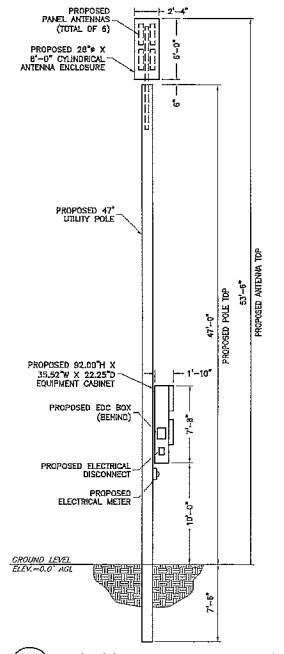
HME2
POLE AM73 SITE PLAN & ELEVATIONS CORNER OF LAWYERS ROAD AND GARRETT STREET VIENNA VA 22181

SHEET NUMBER

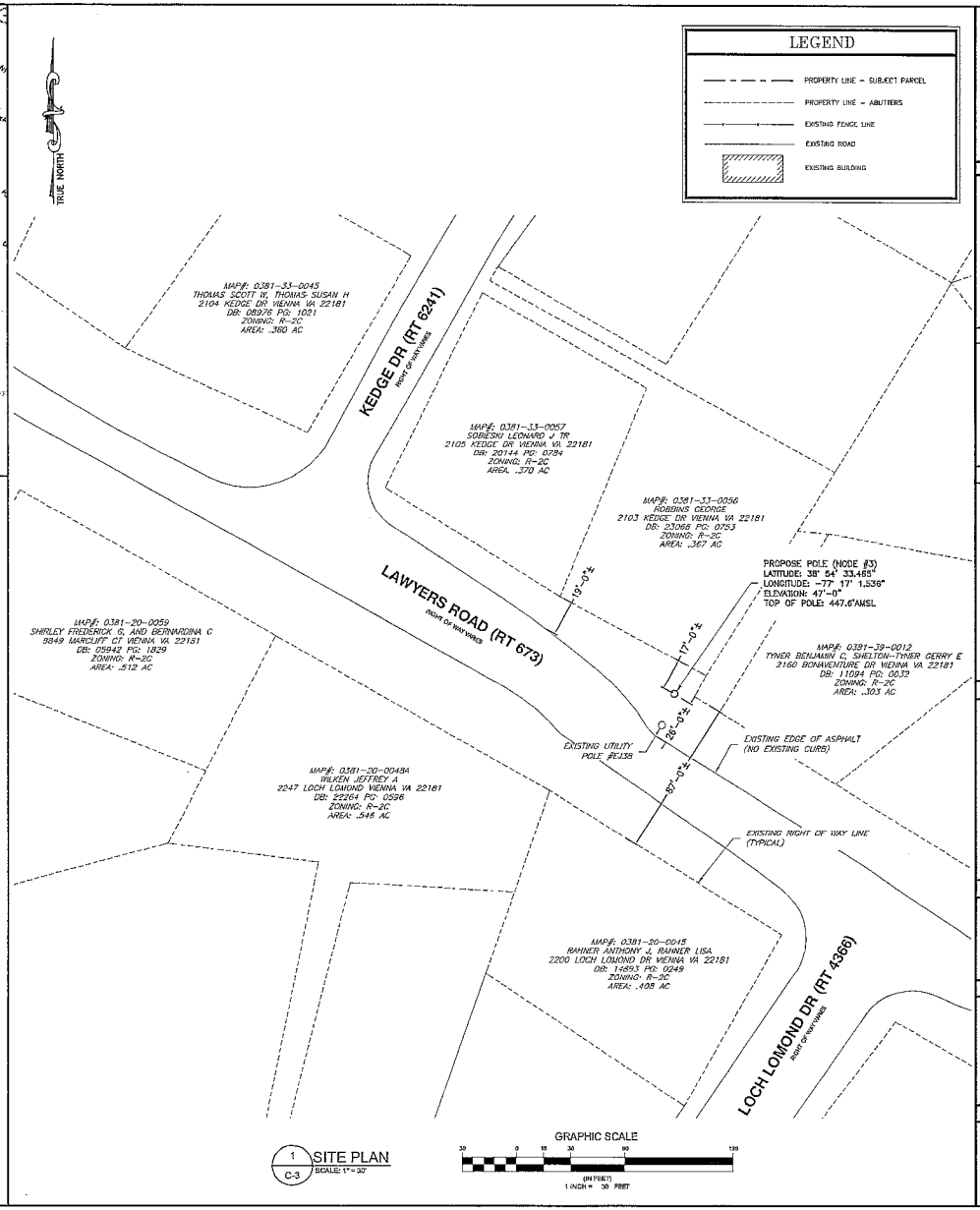
C-2



PROJECT MAP
SCALE: 1"=1000'



2 C-3 PROPOSED POLE ELEVATION
SCALE: 3/16" = 1'-0"



1 C-3 SITE PLAN
SCALE: 1" = 30'

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 INCH = 30 FEET

ENGINEER
NB&C ENGINEERING SERVICES, LLC.
7946 IVORY DR & RINGS, SUITE 104 HANOVER, MD 21076 (410) 712-7002

APPLICANT
CROWN CASTLE INTERNATIONAL
2000 CORPORATE DRIVE CANONSBURG, PA 15317
WWW.CROWNCASTLE.COM

SITE INFORMATION
NODES HME 1-6 & HMV 5
HUNTER MILL EXPANSION
FAIRFAX, VA
2232 REVIEW

DESIGN RECORD

REVISIONS

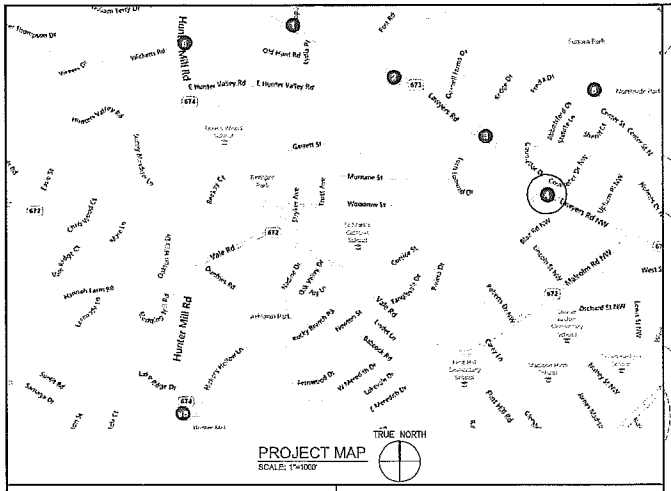
REV	DATE	DESCRIPTION	BY
F	09/11/13	CLIENT COMMENTS	MKJ
E	08/08/13	REVISED EQUIPMENT CABINET	MG
D	08/02/13	REVISED EQUIPMENT CABINET	MG
C	07/23/13	REVISED TO (6) ANTENNAS	MG
B	07/15/13	CLIENT COMMENTS	MKJ
A	07/11/13	PRELIMINARY	MKJ

PROFESSIONAL STAMP

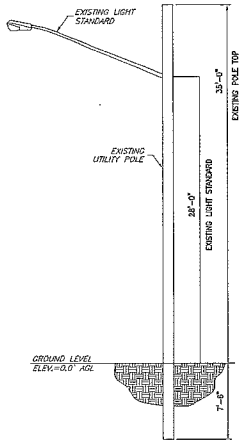
ENGINEER
PHILIP BURTNER, P.E.
VA PROFESSIONAL ENGINEER LIC. #022023

TITLE
HME3 - NEW POLE
SITE PLAN & ELEVATION
2103 KEDGE DR
VIENNA VA 22181

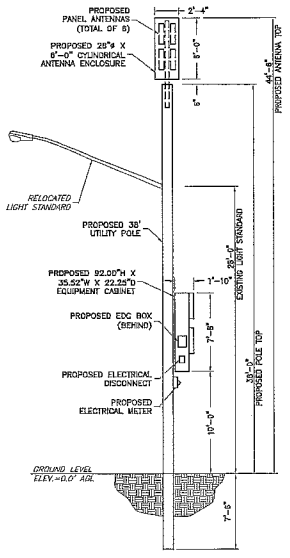
SHEET NUMBER
C-3



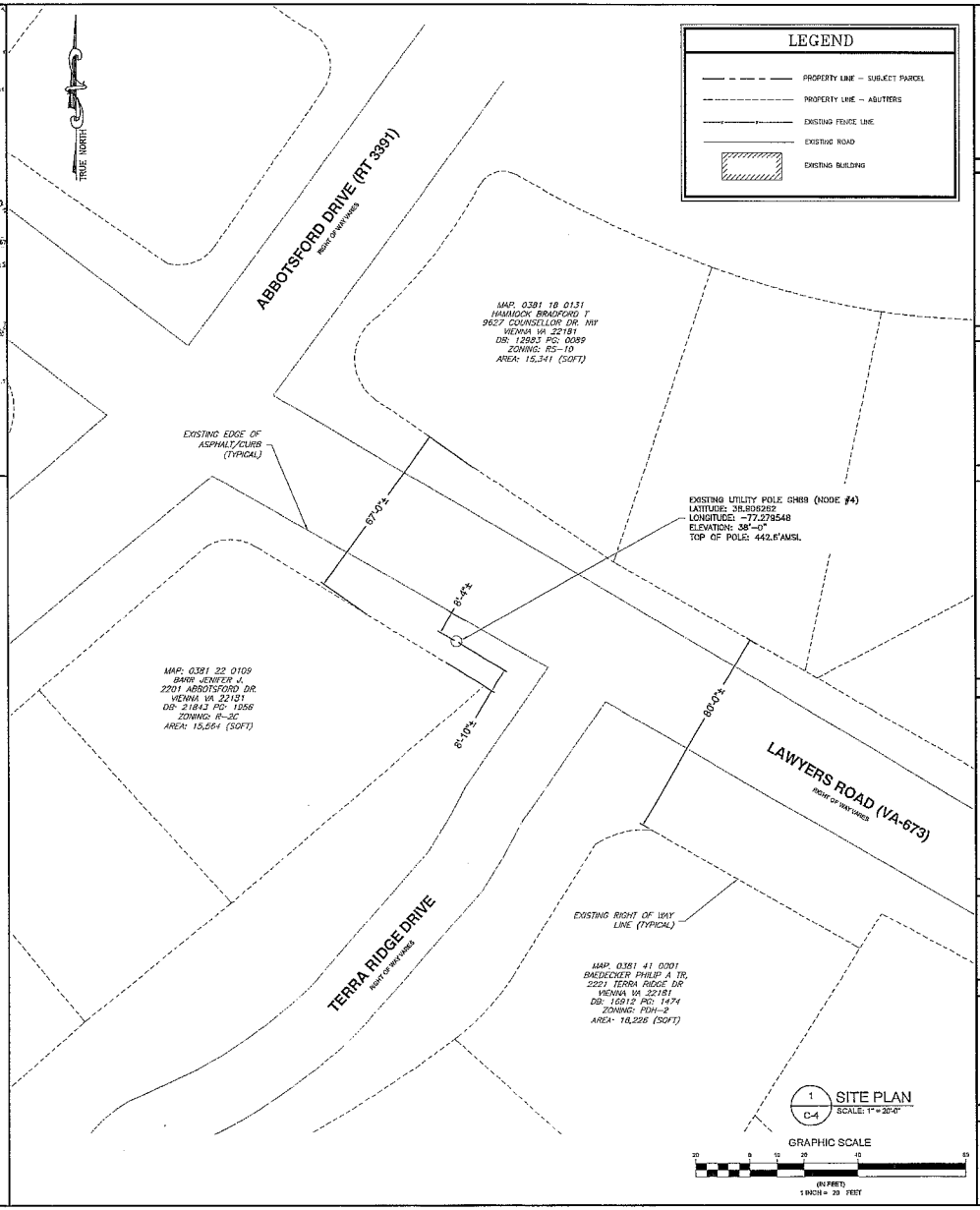
PROJECT MAP
SCALE: 1"=1000'



2 C-4 EXISTING POLE ELEVATION
SCALE: 3/16" = 1'-0"



3 C-4 PROPOSED POLE ELEVATION
SCALE: 3/16" = 1'-0"



1 C-4 SITE PLAN
SCALE: 1" = 20'-0"

ENGINEER

NB&C ENGINEERING SERVICES, LLC.
7349 COCA COLA DRIVE, SUITE 106
HANOVER, MD 21076
(410) 712-0002

APPLICANT

CROWN CASTLE INTERNATIONAL
2000 CORPORATE DRIVE
CANONSBURG, PA 15317
WWW.CROWNCASTLE.COM

SITE INFORMATION

NODES HME 1-6 & HMV 5
HUNTER MILL EXPANSION
FAIRFAX, VA
2232 REVIEW

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
F	09/11/13	CLIENT COMMENTS	MKJ
E	09/06/13	REVISED EQUIPMENT CABINET	MG
D	08/30/13	REVISED EQUIPMENT CABINET	MG
C	07/23/13	REVISED TO (6) ANTENNAS	MG
B	07/15/13	CLIENT COMMENTS	MKJ
A	07/11/13	PRELIMINARY	MKJ

PROFESSIONAL STAMP

ENGINEER

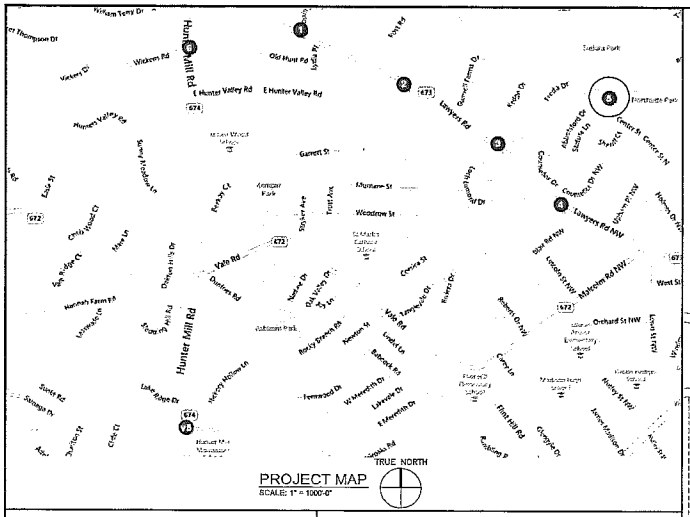
PHILIP BURTNER, P.E.
VA PROFESSIONAL ENGINEER LIC. #022023

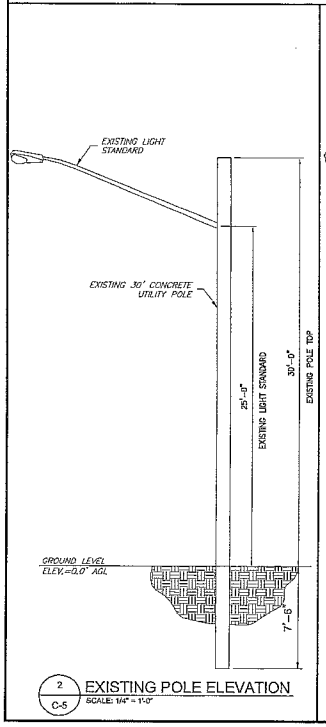
TITLE

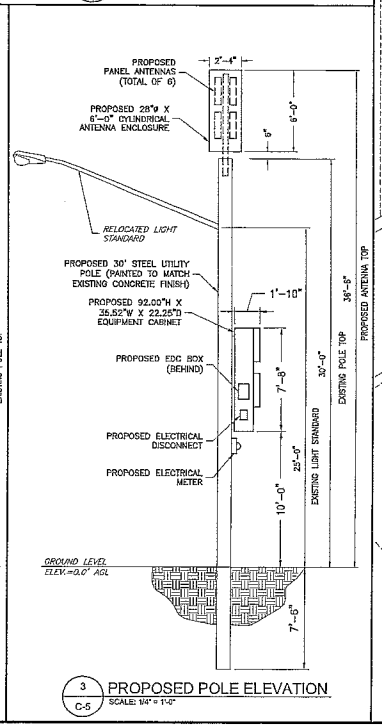
HME4
POLE GH89 - SITE PLAN & ELEVATIONS CORNER OF LAWYERS ROAD AND TERRA RIDGE DRIVE
VIENNA VA 22181

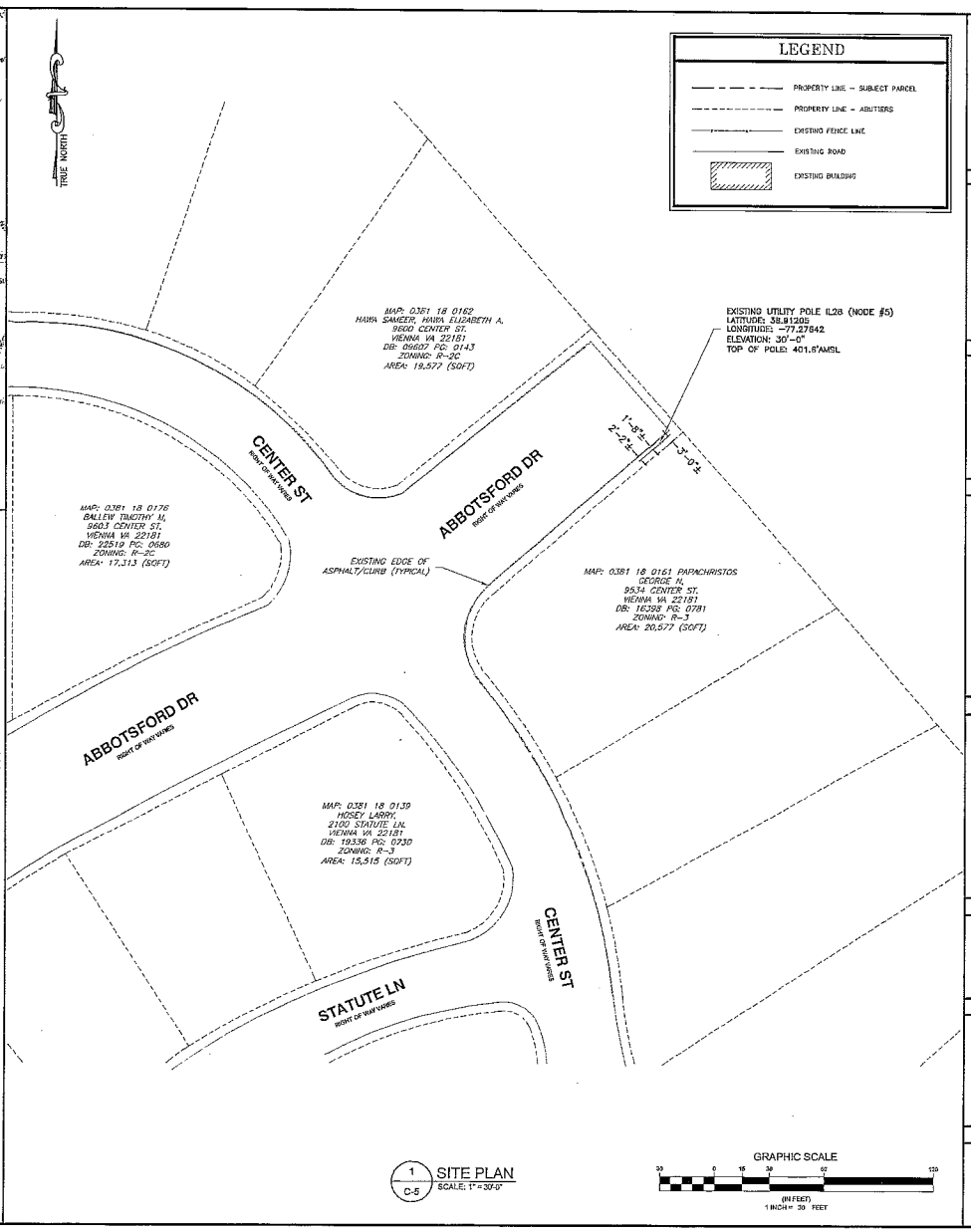
SHEET NUMBER

C-4









ENGINEER

NB&C ENGINEERING SERVICES, LLC.
7389 COCA COLA DRIVE, SUITE 106
HANOVER, MD 21076
(410) 712-7092

APPLICANT

CROWN CASTLE INTERNATIONAL
2000 CORPORATE DRIVE
CANONSBURG, PA 15317
WWW.CROWNCASTLE.COM

SITE INFORMATION

NODES HME 1-6 & HMV 5
HUNTER MILL EXPANSION
FAIRFAX, VA
2232 REVIEW

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
F	09/11/13	CLIENT COMMENTS	MKJ
E	09/05/13	REVISED EQUIPMENT CABINET	MS
D	08/30/13	REVISED EQUIPMENT CABINET	MS
C	07/23/13	REVISED TO (6) ANTENNAS	MS
B	07/15/13	CLIENT COMMENTS	MKJ
A	07/11/13	PRELIMINARY	MKJ

PROFESSIONAL STAMP

ENGINEER

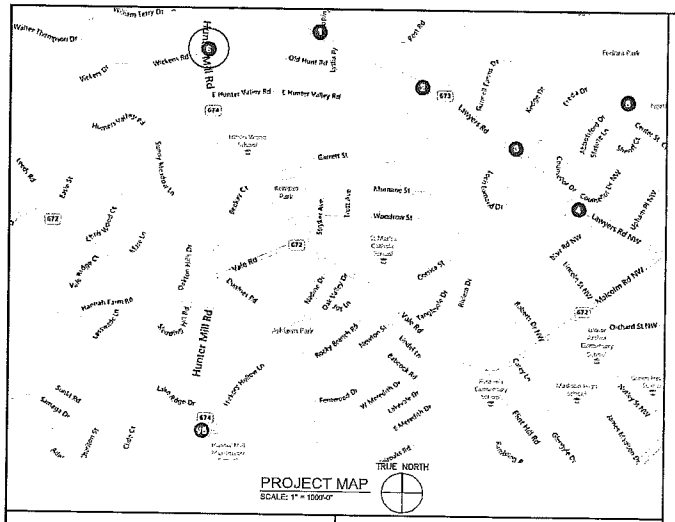
PHILIP BURTNER, P.E.
VA PROFESSIONAL ENGINEER LIC. #020023

TITLE

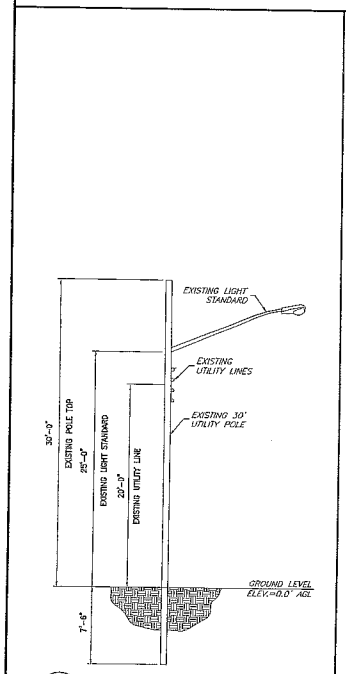
HME5
POLE IL28 - SITE PLAN & ELEVATIONS
9534 CENTER STREET
VIENNA, VA 22181

SHEET NUMBER

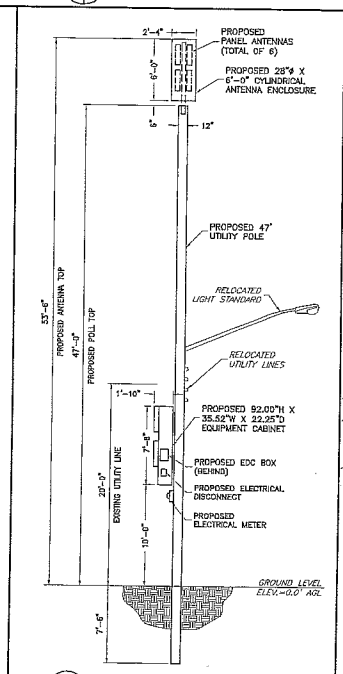
C-5



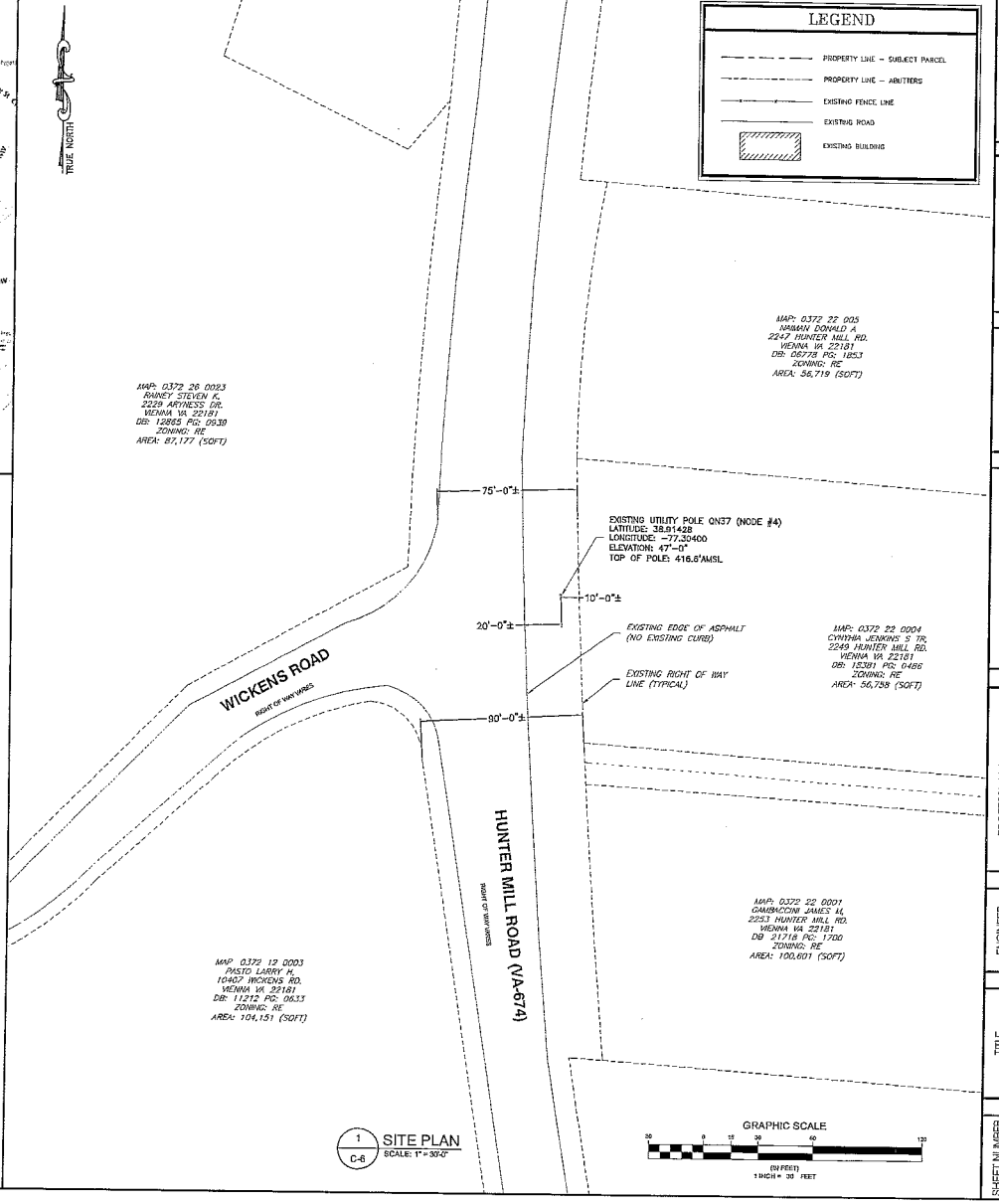
PROJECT MAP
SCALE: 1" = 1000'-0"



2 C-6 EXISTING POLE ELEVATION
SCALE: 3/16" = 1'-0"



3 C-6 PROPOSED POLE ELEVATION
SCALE: 3/16" = 1'-0"



1 C-6 SITE PLAN
SCALE: 1" = 30'-0"

ENGINEER

NB&C ENGINEERING SERVICES, LLC.
7380 COCA COLA DRIVE, SUITE 100
HANOVER, MD 21076
(410) 712-7002

APPLICANT

CROWN CASTLE INTERNATIONAL
2000 CORPORATE DRIVE
CANONSBURG, PA 15317
WWW.CROWNCASTLE.COM

SITE INFORMATION

NODES HME 1-6 & HMV 5
HUNTER MILL EXPANSION
FAIRFAX, VA
2232 REVIEW

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
F	08/11/13	CLIENT COMMENTS	MKJ
E	08/06/13	REVISED EQUIPMENT CABINET	MG
D	08/30/13	REVISED EQUIPMENT CABINET	MG
C	07/23/13	REVISED TO (6) ANTENNAS	MG
B	07/15/13	CLIENT COMMENTS	MKJ
A	07/11/13	PRELIMINARY	MKJ

PROFESSIONAL STAMP

ENGINEER

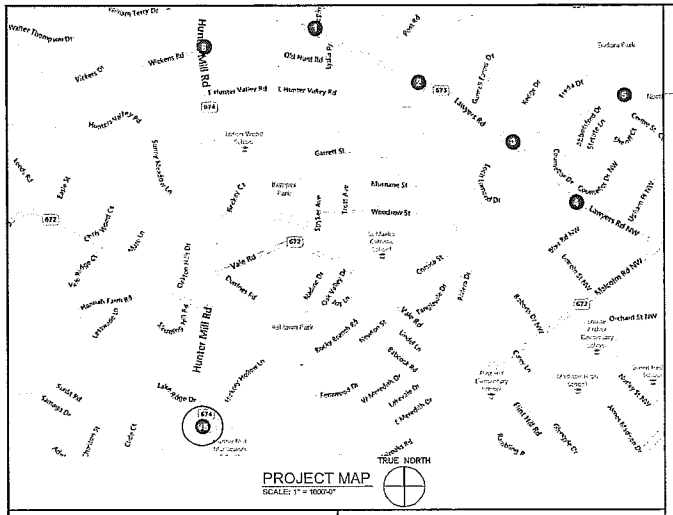
PHILIP BURTNER, P.E.
VA PROFESSIONAL ENGINEER LIC. #022023

TITLE

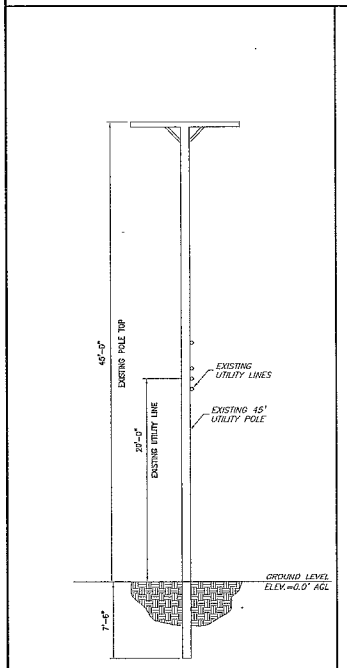
HME6
POLE QN37 - SITE PLAN & ELEVATIONS
2249 HUNTER MILL ROAD
VIENNA, VA

SHEET NUMBER

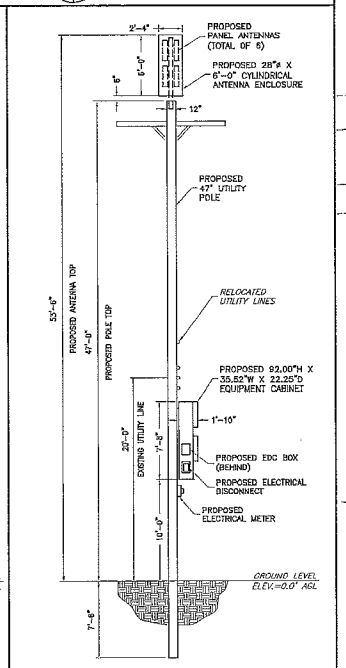
C-6



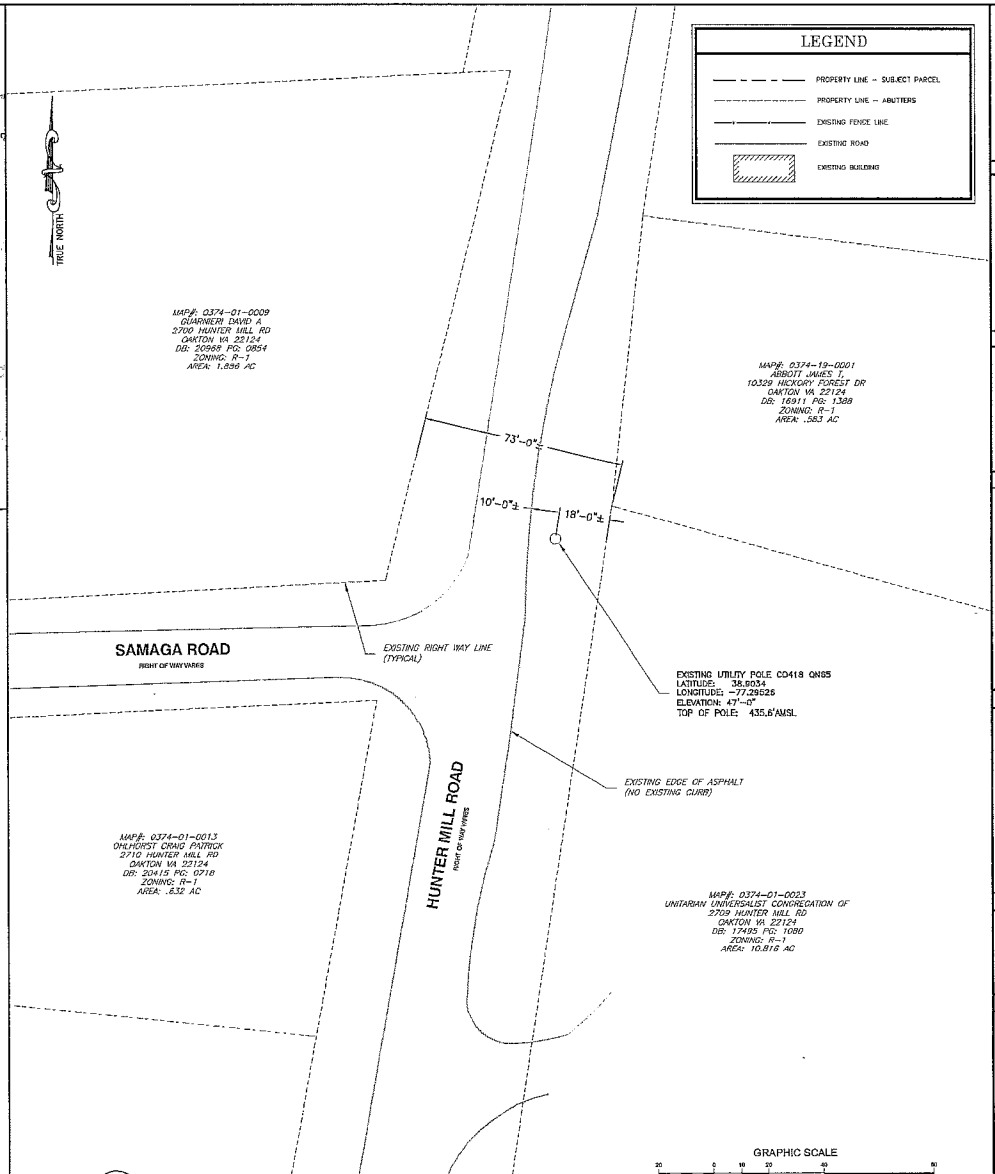
PROJECT MAP
SCALE: 1" = 1000'-0"



2 C-7 EXISTING POLE ELEVATION
SCALE: 3/16" = 1'-0"



3 C-7 PROPOSED POLE ELEVATION
SCALE: 3/16" = 1'-0"



1 C-7 SITE PLAN
SCALE: 1" = 20'-0"

ENGINEER

NB&C ENGINEERING SERVICES, LLC.
7300 COCA COLA DRIVE, SUITE 106
HANOVER, MD 21076
(410) 712-7002

APPLICANT

CROWN CASTLE INTERNATIONAL
2000 CORPORATE DRIVE
CANONSBURG, PA 15317
WWW.CROWNCASTLE.COM

SITE INFORMATION

NODES HME 1-6 & HMV 5
HUNTER MILL EXPANSION
FAIRFAX, VA
2232 REVIEW

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
F	09/11/13	CLIENT COMMENTS	MKJ
E	09/06/13	REVISED EQUIPMENT CABINET	MG
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C	07/23/13	REVISED TO (6) ANTENNAS	MG
B	07/15/13	CLIENT COMMENTS	MKJ
A	07/11/13	PRELIMINARY	MKJ

PROFESSIONAL STAMP

ENGINEER

PHILIP BURTNER, P.E.
VA PROFESSIONAL ENGINEER LIC. #022023

TITLE

HMV5
POLE QN65 - SITE PLAN & ELEVATIONS
2709 HUNTER MILL ROAD
OAKTON, VA

SHEET NUMBER

C-7

ATTACHMENT B
Zoning Analysis

Lambert, Richard

From: Hushour, Andrew
Sent: Wednesday, November 06, 2013 3:45 PM
To: Lambert, Richard
Subject: 2232-H13-11; NewPath Networks, LCC; Lawyers and Hunter Mill Roads

2232-H13-11
NewPath Networks, LCC – Replacement Standards in R.O.W.
Lawyers and Hunter Mill Roads
Tax Map Ref.: 37-2 ((18)) 1; 38-1 ((33)) 56; 38-1 ((18)) 161; 37-2 ((22)) 4; 37-4 ((1)) 23; 38-1 ((22)) 109; 38-1 ((19)) 74A
Zoning District: VDOT Rights-of-Way
Comments: The proposal meets the requirements of Par. 2 of Sect. 2-514 of the Zoning Ordinance. However, please note that the diameter of any replacement standard cannot exceed 42 inches.
Prepared by Andrew Hushour 11/6/2013

ATTACHMENT C
Historic Preservation Analysis

County of Fairfax, Virginia

MEMORANDUM

DATE: 30 October 2013

TO: Richard Lambert, Planner, Facilities Planning Branch

FROM: Linda Cornish Blank, Historic Preservation Planner

SUBJECT: 2232-H13-11; NewPath Networks applicant to replace 5 existing light or utility poles, install 2 new utility poles and locate 6 antennas on each pole for use in DAS within VDOT R-O-W for Lawyers and Hunter Mill Roads, Tax Maps 37-2, 37-4 and 38-1.

Planning Location: Fairfax County Comprehensive Plan, 2013 Edition, Area II, Amended through 4-9-2013 Fairfax Planning District, Overview, Heritage Resources, p.12 and Vienna Planning District, Overview, Heritage Resources, p. 8:

". . . Hunter Mill Road has been determined to be eligible for listing in the Virginia Landmarks Register and the National Register of Historic Places. The determination of eligibility is the first step in the process for being listed on the Virginia Landmarks and/or the National Register of Historic Places. Hunter Mill Road has also been designated as a Virginia Byway."

V4-Piney Branch Community Planning Sector, p. 82

Heritage Resources

"Several known and potentially significant heritage resources have been identified in this sector. Large open space areas and older neighborhoods exist in this sector. . . . "

Policy Plan: Fairfax County Comprehensive Plan, 2013 Edition, Policy Plan, Amended through 4-30-2013, Public Facilities, page 39:

"Policy m. Locate telecommunication facilities to ensure the protection of historically significant landscapes. The views of and vistas from architecturally and/or historically significant structures should not be impaired or diminished by the placement of telecommunication facilities."

Background: On April 27, 2007, June 27, 2008, September 28, 2010, December 7, 2010 and March 19, 2012 Staff provided the following recommendation on Newpath applications for DAS antenna nodes for other sites; applications 2232-MD06-23, 2232 FS-MD08-34, 2232-P10-10, 2232-MD10-14 and 2232-P12-1:

> The applicant comply with Section 106 of the National Historic Preservation Act of 1966, as amended, as may be necessary and provide to the Department of Planning and Zoning, Planning Division a copy of the documentation as to

Department of Planning and Zoning
Planning Division
12055 Government Center Parkway, Suite730
Fairfax, Virginia 22035-5509
Phone 703-324-1380
Fax 703-324-3056
www.fairfaxcounty.gov/dpz/

whether or not Section 106 review is required in order to be reviewed and included in the staff report for the 2232 application.

In three of the previous applications listed above, Newpath indicated that "prior to any construction occurring that a full engineering study will be completed demonstrating compliance with NEPA, including Section 106, as applicable to this installation".

Heritage Resource comment: Staff is not aware if the applicant has ever contacted the Virginia Department of Historic Resources for guidance in determining if review under Section 106 of the National Historic Preservation Act of 1966, as amended, is necessary. If federal licensing for the installation of the antenna is required, this may be considered an undertaking that requires Section 106 review. The applicant did not indicate in the current application compliance with NEPA, including Section 106, as may be applicable to this installation.

It is unclear to staff as to whether the applicant has ever complied with its own statement made in three previous applications that "prior to any construction occurring that a full engineering study will be completed demonstrating compliance with NEPA, including Section 106, as applicable to this installation".

Findings:

1. Staff finds the proposal in-keeping with the Policy Plan text cited above and finds that the National Register-eligible property, Hunter Mill Road, will be affected by the project, but will not be adversely affected.
2. Staff finds the proposal in-keeping with the Policy Plan text cited above and finds that the property known as The Gard, listed in The Fairfax County Inventory of Historic Sites in September 1977, and located in close proximity to proposed DAS Node HME 2, will not be affected by the project due to extensive and dense tree cover along the north side of Lawyers Road.

Recommendations:

1. The applicant provide documentation to the Department of Planning and Zoning (DPZ), Planning Division that it has honored its own statement in good faith made in three previous applications, **"prior to any construction occurring that a full engineering study will be completed demonstrating compliance with NEPA, including Section 106, as applicable to this installation"**
2. The applicant comply with Section 106 of the National Historic Preservation Act of 1966, as amended, as may be necessary. If federal licensing for the installation of the telecommunications DAS is required, this may be considered an undertaking that requires Section 106 review. Applicant should contact the VDHR for guidance.
3. The applicant provide to the DPZ, Planning Division documentation as to whether or not Section 106 review is required in order to be reviewed and included in the staff report for the application. If Section 106 review is required, or has been previously completed, the applicant provide a copy of the completed Section 106 to DPZ, Planning Division in order to be reviewed and included in the staff report for the application.

ATTACHMENT D
Fairfax County Department of Transportation Analysis

County of Fairfax, Virginia

MEMORANDUM

DATE: November 1, 2013

TO: Chris Caperton, Chief
Facilities Planning Branch, DPZ

FROM: Leonard Wolfenstein, Chief
Transportation Planning Section
Department of Transportation

FILE: 10-5

SUBJECT: Application for 15.2-2232 determination – 2232-H13-11 to replace 5 existing light or utility poles and install 2 new utility poles, all with new cabinets, along Hunter Mill Road and Lawyers Road.

The Fairfax County Department of Transportation (FCDOT) has reviewed the above 2232 application and has the following comments:

- There are no road improvements shown on the Fairfax County Transportation Plan Map that will be impacted by the replaced and new utility poles. However, the Northern Virginia Regional Commission (NVTC) completed the Hunter Mill Road Traffic Calming Study in 2006. This study provides recommendations for roundabouts, trail crossings and other treatments to calm vehicle traffic and provide a safer environment for pedestrians, bicyclists and equestrians. The applicant should review this study to ensure the replaced and new utility poles do not impede the implementation of any transportation improvement recommendations from this study. More information on this study, including final recommendations, can be found here: http://www.novaregion.org/index.aspx?NID=615.

- There are no trail improvements shown on the Fairfax County Countywide Trails Plan that will be impacted by the replaced and new utility poles.

- No Fairfax Connector or Metrobus routes will be affected by the replaced and new utility poles; therefore, there should be no effect on existing transit service.

Fairfax County Department of Transportation
4050 Legato Road, Suite 400
Fairfax, VA 22033-2895
Phone: (703) 877-5600 TTY: 711
Fax: (703) 877 5723
www.fairfaxcounty.gov/fcdot

FCDOT
Serving Fairfax County for 25 Years and More

ATTACHMENT E
Forest Conservations Branch Analysis

County of Fairfax, Virginia

MEMORANDUM

DATE: October 29, 2013

TO: Richard Lambert, Planner
Planning Division, DPZ

FROM: Hugh Whitehead, Urban Forester II
Forest Conservation Branch, DPWES

SUBJECT: New Path Networks, LLC, 2232-H13-11

SUBJECT: Forest Conservation Branch staff comments

I have reviewed the above referenced 2232 application for installation of utility poles, antennas, and equipment cabinets for use in a distribution antenna system (DAS). Review of the locations by photographs provided and site visits conduct on October 29, 2013, where conflicts seemed possible determined that there are no significant tree conflicts regarding the proposed antennae installations.

Please make the attached detail for proper branch removal available to the Applicant for use to guide pruning operations should it be decided that removal of any branches is necessary to complete the installations.

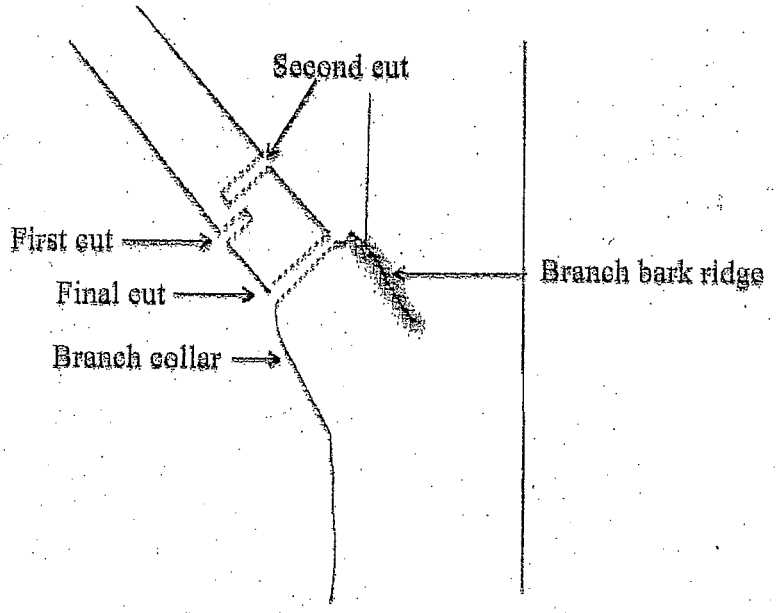
If there are any questions or further assistance is desired, please contact me at (703)324-1770.

HCW/
UFMDID #: 185700

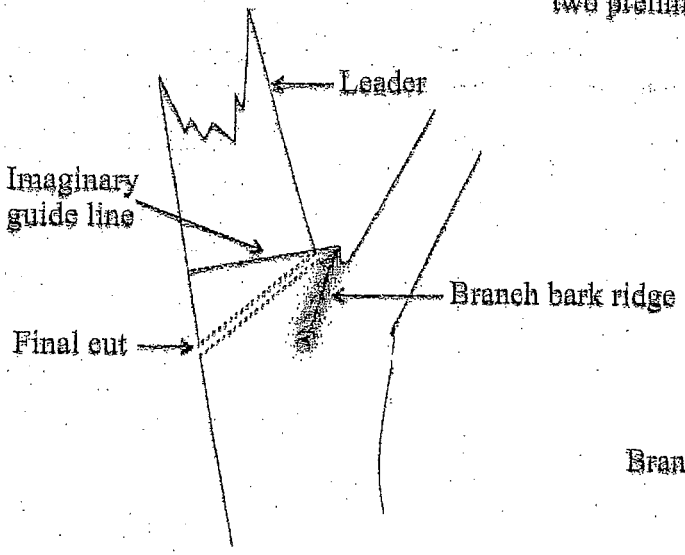
Attachment (as stated)

cc: DPZ File

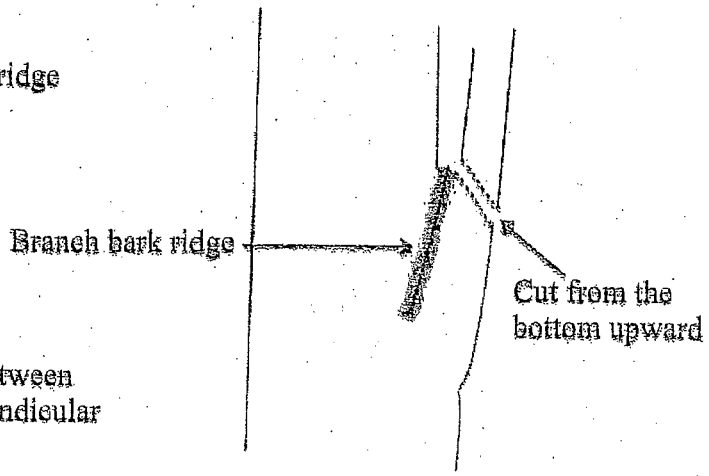
Department of Public Works and Environmental Services
Urban Forest Management Division
12055 Government Center Parkway, Suite 518
Fairfax, Virginia 22035-5503
Phone 703-324-1770, TTY: 703-324-1877, Fax: 703-803-7769
www.fairfaxcounty.gov/dpwes



Removing a large lateral branch requires two preliminary cuts before the final cut



When cutting back to a lateral, bisect the angle between the branch bark ridge and an imaginary line perpendicular to the leader or branch being removed



When removing a branch with a narrow branch attachment, cut from the bottom upward

Adapted from: ***Tree, Shrub and Other Woody Plant Maintenance - Standard Practices - American National Standard for Tree Care Operations***, American National Standards Institute

Ref. Sec. 12-0706.5A Rev. 2-02, 2011 Reprint	PRUNING CUTS	PLATE NO.	STD. NO.
		9-12	

ATTACHMENT G
Legal Status of Plan

§ 15.2-2232. Legal status of plan.

A. Whenever a local planning commission recommends a comprehensive plan or part thereof for the locality and such plan has been approved and adopted by the governing body, it shall control the general or approximate location, character and extent of each feature shown on the plan. Thereafter, unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than railroad facility, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof. In connection with any such determination, the commission may, and at the direction of the governing body shall, hold a public hearing, after notice as required by § 15.2-2204.

B. The commission shall communicate its findings to the governing body, indicating its approval or disapproval with written reasons therefor. The governing body may overrule the action of the commission by a vote of a majority of its membership. Failure of the commission to act within sixty days of a submission, unless the time is extended by the governing body, shall be deemed approval. The owner or owners or their agents may appeal the decision of the commission to the governing body within ten days after the decision of the commission. The appeal shall be by written petition to the governing body setting forth the reasons for the appeal. The appeal shall be heard and determined within sixty days from its filing. A majority vote of the governing body shall overrule the commission.

C. Widening, narrowing, extension, enlargement, vacation or change of use of streets or public areas shall likewise be submitted for approval, but paving, repair, reconstruction, improvement, drainage or similar work and normal service extensions of public utilities or public service corporations shall not require approval unless involving a change in location or extent of a street or public area.

D. Any public area, facility or use as set forth in subsection A which is identified within, but not the entire subject of, a submission under either § 15.2-2258 for subdivision or provision 8 of § 15.2-2286 for development or both may be deemed a feature already shown on the adopted master plan, and, therefore, excepted from the requirement for submittal to and approval by the commission or the governing body; provided, that the governing body has by ordinance or resolution defined standards governing the construction, establishment or authorization of such public area, facility or use or has approved it through acceptance of a proffer made pursuant to § 15.2-2303.

E. Approval and funding of a public telecommunications facility by the Virginia Public Broadcasting Board pursuant to Article 12 (§ 2.2-2426 et seq.) of Chapter 24 of Title 2.2 shall be deemed to satisfy the requirements of this section and local zoning ordinances with respect to such facility with the exception of television and radio towers and structures not necessary to house electronic apparatus. The exemption provided for in this subsection shall not apply to facilities existing or approved by the Virginia Public Telecommunications Board prior to July 1, 1990. The Virginia Public Broadcasting Board shall notify the governing body of the locality in advance of any meeting where approval of any such facility shall be acted upon.

F. On any application for a telecommunications facility, the commission's decision shall comply with the requirements of the Federal Telecommunications Act of 1996. Failure of the commission to act on any such application for a telecommunications facility under subsection A submitted on or after July 1, 1998, within ninety days of such submission shall be deemed approval of the application by the commission unless the governing body has authorized an extension of time for consideration or the applicant has agreed to an extension of time. The governing body may extend the time required for action by the local commission by no more than sixty additional days. If the commission has not acted on the application by the end of the extension, or by the end of such longer period as may be agreed to by the applicant, the application is deemed approved by the commission.

(Code 1950, §§ 15-909, 15-923, 15-964.10; 1958, c. 389; 1960, c. 567; 1962, c. 407, § 15.1-456; 1964, c. 528; 1966, c. 596; 1968, c. 290; 1975, c. 641; 1976, c. 291; 1978, c. 584; 1982, c. 39; 1987, c. 312; 1989, c. 532; 1990, c. 633; 1997, cc. 587, 858; 1998, c. 683.)