



APPLICATION ACCEPTED: July 30, 2015
DEFERRED DECISION ONLY: January 21, 2016
PLANNING COMMISSION: June 16, 2016
BOARD OF SUPERVISORS: July 12, 2016 @3:30pm

County of Fairfax, Virginia

June 1, 2016

STAFF REPORT ADDENDUM

WS

APPLICATION SE 2015-SP-023 &
2232-S15-5

SPRINGFIELD DISTRICT



APPLICANT: Cellco Partnership d/b/a Verizon Wireless;
Little League Inc. Fairfax

ZONING: R-C (Residential-Conservation District)
WS (Water Supply Protection Overlay District)

PARCEL: 66-2 ((3)) 2

SITE AREA: 4.86 acres

PLAN MAP: Residential, 0.1 – 0.2 dwelling units per
acre (du/ac)

SE CATEGORY: Mobile and Land Based Telecommunication
Facilities (Category 1; Sect. 9-104)

PROPOSAL: The applicants have filed for review by the
Planning Commission to determine whether
the proposed 164 foot telecommunications
facility and related ground structures satisfy the
criteria of location, character and extent
pursuant to Sect. 15.2-2232 of the Code of
Virginia, and requests Special Exception
approval to construct the proposed
telecommunication facility on the property.

Laura B. Arseneau

STAFF RECOMMENDATIONS:

Staff recommends that the Planning Commission find that the facility proposed under 2232-S-15-5 satisfies the criteria of location, character, and extent as specified in Section 15-2.2232 of the Code of Virginia, and therefore is substantially in accord with the provisions of the Comprehensive Plan.

Staff recommends approval of SE 2015-SP-023, subject to the proposed development conditions contained in Appendix 1.

Staff recommends approval of a modification of Sections 13-303 of the Zoning Ordinance for the transitional screening requirements to permit the landscaping as shown on the Special Exception Plat.

Staff recommends that the Board of Supervisors direct the Director of the Department of Public Works and Environmental Services to waive the dustless surface requirement of Sect. 11-102 (11) of the Zoning Ordinance for the gravel driveway to access the telecommunications compound as depicted on the Special Exception Plat.

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

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

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

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



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

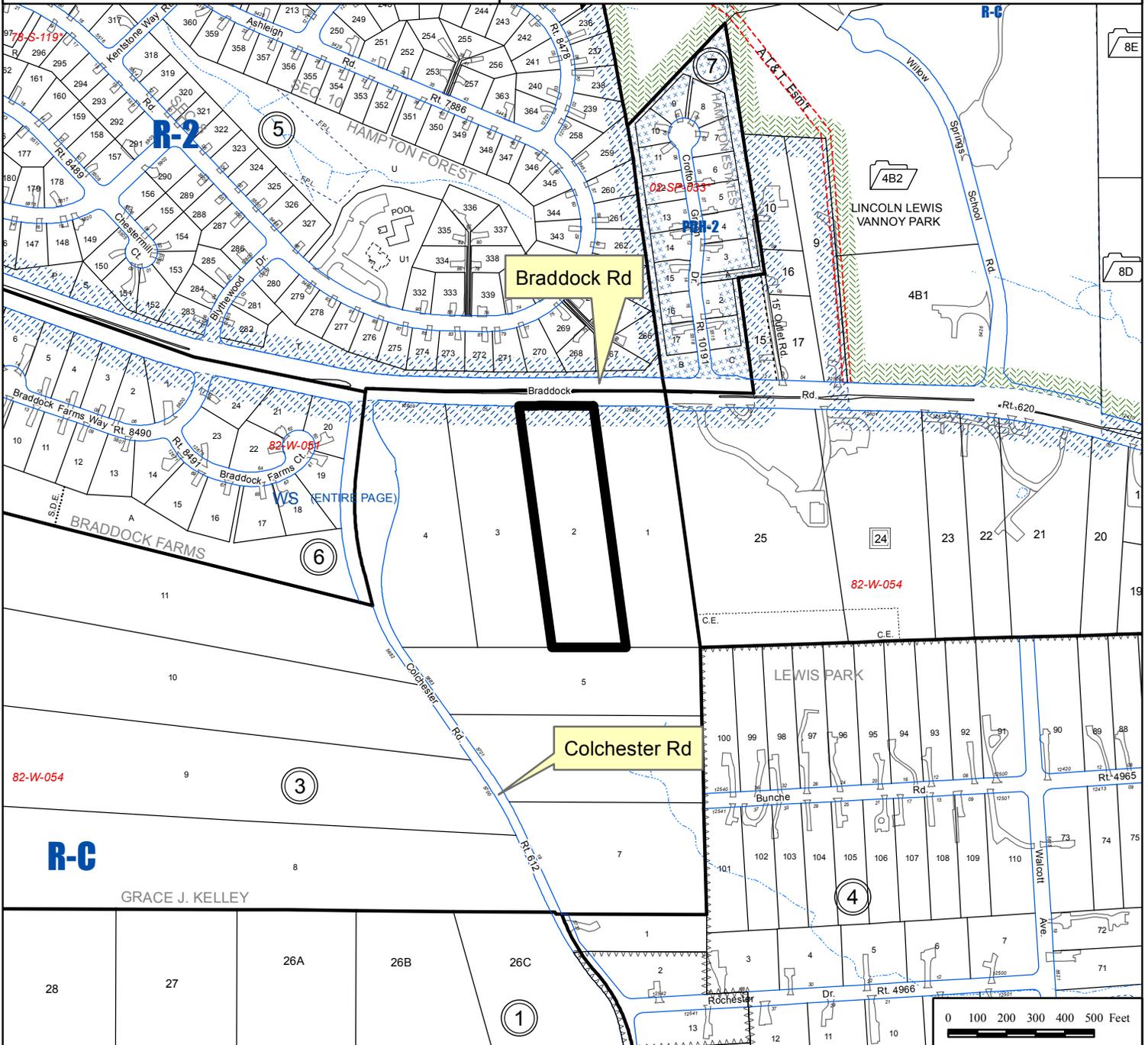
Special Exception

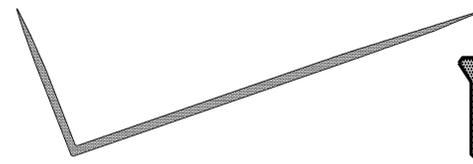
SE 2015-SP-023



Applicant: CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS; LITTLE LEAGUE INC. FAIRFAX
Accepted: 07/30/2015
Proposed: TELECOMMUNICATIONS FACILITY
Area: 4.86 AC OF LAND; DISTRICT - SPRINGFIELD

Zoning Dist Sect: 03-0C04
Located: 12601 BRADDOCK ROAD, FAIRFAX, VA 22030
Zoning: R- C
Plan Area: 3,
Overlay Dist: WS
Map Ref Num: 066-2- /03/ /0002



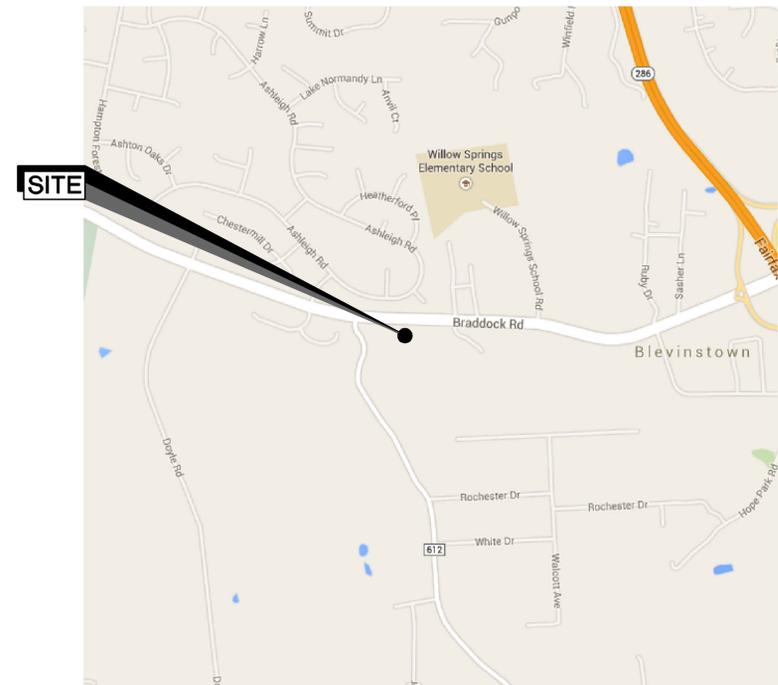


verizon wireless

COBBS CORNER SPECIAL EXCEPTION PLAT FAIRFAX COUNTY, VIRGINIA SPRINGFIELD MAGISTERIAL DISTRICT

| Sheet Index | |
|--------------|----------------------------|
| Sheet Number | Sheet Title |
| 1 | COVER SHEET |
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| 3 | TREE INVENTORY |
| 4 | SITE PLAN & LANDSCAPE PLAN |
| 5 | SITE DETAILS |
| 6 | STORMWATER MANAGEMENT PLAN |
| 7 | ADEQUATE OUTFALL PLAN |

| LEGEND | | | |
|--------|-------------------------|-----|----------------------------|
| --- | EX. R/W LINE | --- | EX. STREAM BUFFER |
| --- | EX. PROPERTY LINE | --- | EX. FLOODPLAIN |
| --- | EX. ADJ. PROPERTY LINE | --- | EX. CRITICAL AREA |
| --- | EX. 10' CONTOUR | --- | EX. FOREST BUFFER |
| --- | EX. 2' CONTOUR | --- | EX. RETAINING WALL |
| --- | EX. TREE LINE | --- | EX. FIRE HYDRANT |
| --- | EX. BUILDING | --- | EX. WATER VALVE |
| --- | EX. EASEMENT | --- | EX. SIGN |
| --- | EX. PAVEMENT | --- | EX. LIGHT POLE |
| --- | EX. CURB | --- | EX. UTILITY POLE |
| --- | EX. WALKWAY | --- | EX. SPOT ELEVATION |
| --- | EX. STORM DRAIN | --- | EX. STORM DRAIN MANHOLE |
| --- | EX. WATER LINE | --- | EX. SANITARY SEWER MANHOLE |
| --- | EX. SANITARY LINE | --- | EX. GUY WIRE |
| --- | EX. OVERHEAD LINE | | |
| --- | EX. UNDERGROUND CONDUIT | | |
| --- | EX. GAS LINE | | |
| --- | EX. FENCE LINE | | |
| --- | EX. STREAM | | |



VICINITY MAP
SCALE: 1" = 1000'

SITE NOTES:

- APPLICANT: VERIZON WIRELESS
9000 JUNCTION DRIVE
ANNAPOLIS JUNCTION, MD 20701
TEL. (301) 512-2000
FAX (301) 512-2186
- PROPERTY OWNER: LITTLE LEAGUE INC. FAIRFAX
PO BOX 543
FAIRFAX, VA 22038
- SITE DATA: TAX ASSESSMENT MAP# 0662 03 0002
TAX DISTRICT: 80000
DISTRICT NAME: SPRINGFIELD
DEED: 2014, 360
TRACT AREA: 211,702 SF (4.86 AC.)
ADDRESS: 12601 BRADDOCK ROAD
FAIRFAX, VA 22301
- ZONING: RC
- BOUNDARY, NORTH MERIDIAN, AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON EXISTING LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA AND FIELD SURVEY PERFORMED BY MORRIS & RITCHIE ASSOCIATES, INC. DATED OCTOBER 2014. HORIZONTAL DATUM IS BASED ON NAD 83 AND VERTICAL DATUM IF BASED ON NGVD 29:
TOWER LATITUDE: N 38° 44' 35.25" TOWER GROUND ELEVATION: 426.6' AMSL (AVG.)
TOWER LONGITUDE: W 77° 22' 56.08"
- TOTAL DISTURBED AREA = 9,800 SQ FT
- THE PROPERTY IS LOCATED WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOODPLAIN AS SHOWN ON FEMA FLOOD RATE INSURANCE MAP FOR FAIRFAX COUNTY, VIRGINIA, COMMUNITY-PANEL NUMBER 510540235E, EFFECTIVE DATE SEPTEMBER 17, 2010.
- THE PROPOSED FACILITIES WILL CONSIST OF ONE (1) 11' LONG x 12' WIDE UNOCCUPIED COMMUNICATION CONCRETE EQUIPMENT PAD WITHIN A 50' x 50' FENCED COMPOUND. SIX (6) ANTENNAS SHALL BE MOUNTED ON A PROPOSED 164' MONOPOLE WITH A RAD CENTER AT AN ELEVATION OF 160' ABOVE GRADE LEVEL FOR THE RECEPTION OF VERIZON WIRELESS TELECOMMUNICATIONS.
- THE PROPERTY IS NOT SERVED BY PUBLIC WATER AND SEWER. NO WATER OR SANITARY UTILITIES ARE REQUIRED FOR THE OPERATION OF THIS FACILITY.
- STORMWATER MANAGEMENT NOTE: NO WATER QUALITY IS REQUIRED FOR THE PROPOSED VERIZON WIRELESS INSTALLATION.
- THIS PLAN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. PLAN IS SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.
- ALL DETAILS SHOWN ARE "STANDARD" OR "TYPICAL" FOR REFERENCE ONLY. FOR ACTUAL DETAILS, SEE ARCHITECTURAL, STRUCTURAL, OR CONSTRUCTION PLANS BY OTHERS.
- STRUCTURAL ANALYSIS/DESIGN TO BE PERFORMED BY OTHERS AT CLIENT AND/OR OWNER'S DISCRETION PRIOR TO COMMENCEMENT OF ANY WORK.
- THERE ARE NO GRAVES, OBJECTS OR STRUCTURES MARKING A PLACE OF BURIAL ON THE PROPERTY.
- THE PROPERTY IS LOCATED ON A RMA. IT IS NOT LOCATED ON A RPA.
- NO UTILITY EASEMENTS HAVING A WIDTH OF 25' OR MORE EXIST ON THE PROPERTY.

SITE TABULATIONS

| | REQUIRED |
|-------|--|
| FRONT | 50° angle of bulk plane, but not less than 40 feet |
| SIDE | 45° angle of bulk plane, but not less than 20 feet |
| REAR | 45° angle of bulk plane, but not less than 25 feet |

COMPOUND DATA
TOWER HEIGHT= 164'-0"
CANOPY = 12' X 20'
CANOPY HEIGHT= 9'-3" MAX.
MESA CABINET HEIGHT=3'-11"

PARKING SCHEDULE
THE TELECOMMUNICATION FACILITY GENERATES APPROXIMATELY (1) ONE TRIP PER MONTH PER CARRIER; NO DEDICATED PARKING IS REQUIRED.

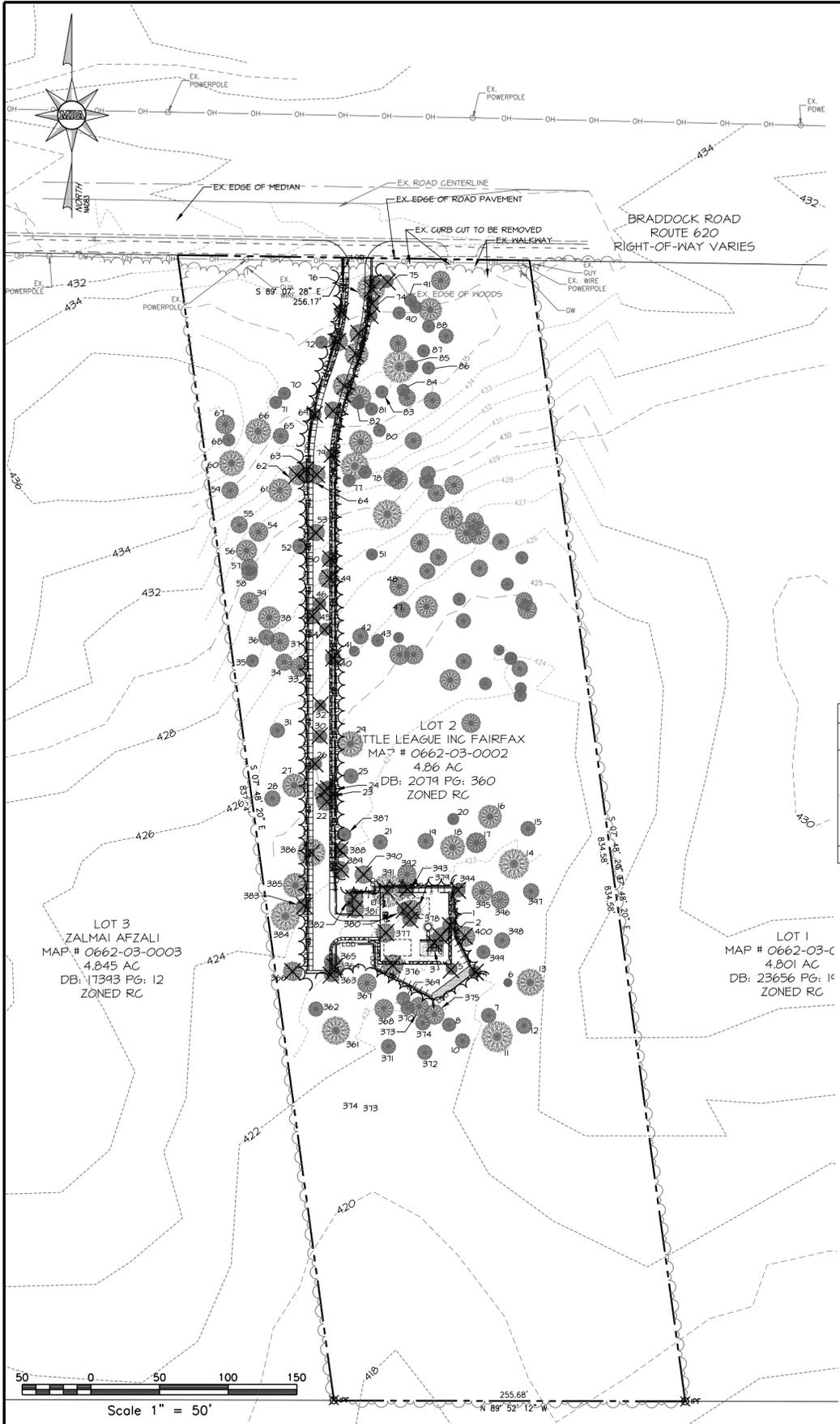
| DATE | REVISIONS |
|----------|-----------------|
| 5/20/15 | COUNTY COMMENTS |
| 7/20/15 | COUNTY COMMENTS |
| 10/27/15 | COUNTY COMMENTS |
| 12/02/15 | COUNTY COMMENTS |
| 04/25/16 | COUNTY COMMENTS |

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
43780 TRADE CENTER PLACE
STERLING, VA 20166
PHONE: (703) 674-0161
FAX: (703) 478-0137
MRA@MRA.COM
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COVER SHEET
SE-2015-0100
VERIZON WIRELESS- COBBS CORNER
SPECIAL EXCEPTION PLAT
SPRINGFIELD MAGISTERIAL DISTRICT
FAIRFAX COUNTY, VIRGINIA

| |
|---------------------|
| JOB NO.: 10427.1733 |
| SCALE: N/A |
| DATE: 3/5/15 |
| DRAWN BY: DLT |
| DESIGN BY: JKE |
| REVIEW BY: JKE |
| SHEET: 1 OF 7 |



EXISTING VEGETATION MAP
SCALE: 1" = 50'

- LEGEND**
- TREES TO BE REMOVED
 - TREES TO REMAIN
 - TREE PROTECTION
 - ROOT PRUNING

TREE PROTECTION SIGN
CAUTION
TREE PRESERVATION

CONTRACTOR MUST INSTALL AND MAINTAIN CONSTRUCTION FENCING
Do not trim or remove trees without a permit.
Do not clean equipment or place building materials in critical areas.
Do not clean equipment or dispose of liquids under trees.
Do not make grade changes, cut or fill in critical root zone.

Por favor no cortar árboles sin permiso.
Por favor no estacionar vehículos y materiales en zona crítica de raíz.
Por favor no limpiar equipo ni tirar líquidos debajo de los árboles.
Por favor no cambiar grades, cortar o llenar en zona crítica de raíz.

FAILURE TO COMPLY WILL RESULT IN FINES AND/OR TREE MITIGATION

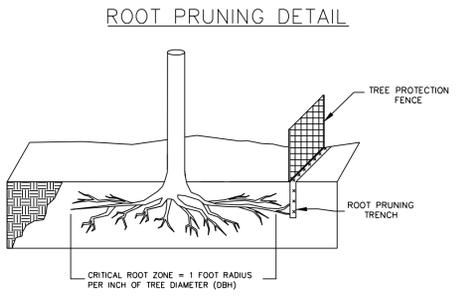
THE PERMITEE SHALL POST AND MAINTAIN BILINGUAL SIGNS AT THE LIMITS OF CLEARING AT A MINIMUM OF 50 FOOT (50.2-METTER) INTERVALS THAT CLEARLY STATES THAT TREES AND FORESTED AREAS MUST BE PROTECTED AND LEFT UNDISTURBED. FOR EXAMPLE, SUCH SIGNAGE COULD READ "TREE PROTECTION ZONE - KEEP OUT - OFF LIMITS TO CONSTRUCTION EQUIPMENT, MATERIALS AND WORKERS." SIGNS SHALL BE POSTED IN ENGLISH AND SPANISH, OR, SHALL BE POSTED IN ANY OTHER COMBINATION OF LANGUAGES THAT THE DIRECTOR DETERMINES NECESSARY TO PROTECT TREES AND FORESTED AREAS. SIGNS SHALL REMAIN POSTED THROUGHOUT ALL PHASES OF CONSTRUCTION; SHALL BE ATTACHED TO THE TREE PROTECTION FENCING; AND, SHALL NOT BE NAILED OR IN ANY MANNER ATTACHED TO TREES OR VEGETATION TO BE PRESERVED.

10 YEAR CANOPY EXHIBIT KEY

| | | |
|--|-----------------------------|----------------------|
| | TREE CANOPY TO BE PRESERVED | 181,677 SQ FT |
| | TREE CANOPY TO BE REMOVED | 30,025 SQ FT |
| | TOTAL | 211,702 SQ FT |

EXISTING VEGETATION EXHIBIT KEY

| KEY | NUMBER | PRIMARY SPECIES | SUCCESIONAL STAGE | CONDITION | AREA (SQ.FT) | COMMENTS | PFM CHAPTER 12 DESCRIPTION |
|-----|--------|---|-------------------|-----------|--------------|---|---|
| | (2) | TULIP POPLAR, HICKORY, RED OAK, BLACKGUM, WHITE OAK | SUB-CLIMAX | VERY GOOD | 211,702 | THIS STAND IS VERY NICE WITH A HIGH CANOPY AND VERY LITTLE UNDERSTORY EXCEPT ALONG THE EDGES. VERY FEW EXOTIC INVASIVES, LIKELY DUE TO THE SHADE. TREES RANGES FROM 12 TO 24 INCHES IN DIAMETER WITH AN OCCASIONAL LARGER TREE. | UPLAND HARDWOODS: OAK, HICKORY AND UPLAND SOFTWOOD: VIRGINIA PINE |
| | | | | | TOTAL | | |



- TRENCH SHALL BE A MAXIMUM OF 6 INCHES WIDE
- TRENCH SHALL BE BETWEEN 18-24 INCHES DEEP
- TRENCH SHALL BE EXCAVATED USING AN AIR SPADE, VIBRATORY PLOW OR TRENCHER.
- TRENCH EXCAVATION SHALL BE IMMEDIATELY BACKFILLED.

- TREE PRESERVATION NOTES**
- ALL WORK PERFORMED SHALL MEET OR EXCEED INDUSTRY STANDARDS AS MOST RECENTLY PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), OR THE TREE CARE INDUSTRY ASSOCIATION (TCIA). IN THE EVENT TREATMENTS PRESCRIBED ARE NOT COVERED BY AN EXISTING STANDARD, WORK SHALL MEET OR EXCEED STANDARDS APPROVED BY FAIRFAX URBAN FOREST MANAGEMENT (FFX-UFM).
 - A PROFESSIONAL ISA CERTIFIED ARBORIST SHALL BE OBTAINED TO ENSURE THE PROPER IMPLEMENTATION OF THE TREE PRESERVATION PLAN AS THE "PROJECT ARBORIST".
 - ALL TREE PRESERVATION RELATED WORK OCCURRING IN OR ADJACENT TO TREE PRESERVATION AREAS SUCH AS ROOT PRUNING, INSTALLATION OF TREE PROTECTION FENCING AND SILT CONTROL DEVICES, REMOVAL OF TRASH AND DEBRIS, OR EXTRACTION OF TREES DESIGNATED TO BE REMOVED TO ELIMINATE HAZARDOUS CONDITIONS SHALL BE PERFORMED IN A MANNER THAT MINIMIZES DAMAGE TO TREES, UNDERSTORY SHRUBS, HERBACEOUS PLANTS, LEAF LITTER, ROOT SYSTEMS AND SOIL CONDITIONS. REMOVAL OF ANY VEGETATION OR SOIL DISTURBANCE IN TREE PRESERVATION AREAS, INCLUDING THE REMOVAL OF PLANT SPECIES THAT MAY BE PERCEIVED AS NOXIOUS OR INVASIVE, SUCH AS POISON IVY, GREENBRIER, MULTI-FLOREAL ROSE, ETC. SHALL BE PROHIBITED SUBJECT TO THE REVIEW AND APPROVAL BY FFX-UFM. THE USE OF EQUIPMENT IN TREE PRESERVATION AREAS WILL BE LIMITED TO HAND-OPERATED EQUIPMENT SUCH AS CHAINSAW, WHEEL BARROWS, RAKE AND SHOVELS. ANY WORK THAT REQUIRES THE USE OF EQUIPMENT, SUCH AS SKID LOADERS, TRACTORS, TRUCKS, STUMP-GRINDERS, ETC., OR ANY ACCESSORY OR ATTACHMENT CONNECTED TO THIS TYPE OF EQUIPMENT SHALL BE PROHIBITED SUBJECT TO REVIEW AND APPROVAL BY FFX-UFM.
 - TREES DESIGNATED IN THE APPROVED TREE CONSERVATION PLAN FOR "HAND REMOVAL" ALONG THE LIMITS OF DISTURBANCE SHALL BE REMOVED USING A CHAINSAW AS TO AVOID DAMAGE TO SURROUNDING TREES AND UNDERSTORY VEGETATION TO BE PRESERVED. IF A STUMP MUST BE REMOVED, THIS SHALL BE DONE USING A STUMP-GRINDING MACHINE IN A MANNER THAT CAUSES AS LITTLE DISTURBANCE AS POSSIBLE TO ADJACENT TREES, VEGETATION AND SOIL CONDITIONS. PROJECT ARBORIST SHALL BE ON-SITE TO MONITOR ALL STUMP GRINDING OPERATIONS.
 - ROOT PRUNING SHALL BE PERFORMED AS NEEDED TO COMPLY WITH THE REQUIREMENTS OF THE APPROVED TREE CONSERVATION PLAN. ALL TREATMENTS SHALL BE CLEARLY IDENTIFIED, LABELED, AND DETAILED ON THE EROSION AND SEDIMENT CONTROL SHEETS OF THE RESPECTIVE PUBLIC IMPROVEMENT/SITE PLAN SUBMISSION. THE DETAILS FOR THESE TREATMENTS SHALL BE REVIEWED AND APPROVED BY FFX-UFM. ACCOMPLISHED IN A MANNER THAT PROTECTS AFFECTED AND ADJACENT VEGETATION TO BE PRESERVED, AND MAY INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 - ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 18 INCHES.
 - ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING.
 - PROJECT ARBORIST SHALL BE ON-SITE TO MONITOR ALL ROOT PRUNING OPERATIONS.
 - MULCHING - FOLLOWING PHASE II E&S ACTIVITIES, TREES INDICATED FOR MULCHING IN THE APPROVED TREE CONSERVATION PLAN SHALL BE MULCHED. HARDWOOD CHIPS OR SHREDDED MULCH SHALL BE APPLIED AT A MAXIMUM DEPTH OF 4 INCHES AND ONLY WITHIN 10 FEET OF THE LIMITS OF DISTURBANCE.
 - HEAVY EQUIPMENT IS PROHIBITED FROM ENTERING THE TREE PRESERVATION AREA(S) TO DISTRIBUTE MULCH.
 - HEAVY EQUIPMENT MAY BE USED TO DISTRIBUTE CHIPS OVER TREE PROTECTION FENCING AT "DISTRIBUTION LOCATIONS" DETERMINED BY "PROJECT ARBORIST".
 - DISTRIBUTION LOCATIONS SHALL BE FIELD LOCATED BY "PROJECT ARBORIST". LOCATIONS SHALL BE CHOSEN TO MINIMIZE DAMAGE TO EXISTING OVERSTORY AND UNDERSTORY VEGETATION TO BE PRESERVED.
 - DURING DISTRIBUTION OF MULCH "PROJECT ARBORIST" SHALL BE ON-SITE TO MONITOR OPERATIONS.
 - MULCH SHALL BE SPREAD BY HAND INSIDE TREE PRESERVATION AREAS.
 - HARDWOOD CHIPS OR SHREDDED MULCH FROM SITE CLEARING OPERATION SHOULD BE USED WHERE POSSIBLE.
 - ALL CONSTRUCTION ACTIVITY BEYOND THE LIMITS OF DISTURBANCE SHOWN ON THE TREE CONSERVATION PLAN SHALL BE PROHIBITED UNLESS PREVIOUSLY APPROVED. THE STORAGE OF EQUIPMENT, MATERIALS, CHEMICALS, AND DEBRIS AS WELL AS VEHICULAR TRAFFIC OR THE PARKING OF VEHICLES SHALL NOT BE PERMITTED WITHIN TREE PRESERVATION AREAS.
 - IF REQUIRED BY THE SITE INSPECTOR AT THE TIME OF PRE-CONSTRUCTION MEETING, THE SERVICES OF THE "PROJECT ARBORIST" OR LANDSCAPE ARCHITECT SHALL BE RETAINED TO HAVE THE LIMITS OF CLEARING AND GRADING IN THE AREAS OF TREE PRESERVATION MARKED WITH A CONTINUING LINE OF FLAGGING PRIOR TO THE PRE-CONSTRUCTION MEETING WITH THE FFX-UFM TO BE HELD PRIOR TO ANY CLEARING AND GRADING. DURING THE PRE-CONSTRUCTION MEETING, THE "PROJECT ARBORIST" OR LANDSCAPE ARCHITECT SHALL WALK SUCH LIMITS OF CLEARING AND GRADING WITH AN FFX-UFM REPRESENTATIVE TO DETERMINE WHERE ADJUSTMENTS TO THE CLEARING LIMITS CAN BE MADE TO INCREASE THE AREA OF TREE PRESERVATION AND/OR TO INCREASE THE SURVIVABILITY OF TREES AT THE EDGE OF THE LIMITS OF CLEARING AND GRADING, AND SUCH ADJUSTMENT SHALL BE IMPLEMENTED, PROVIDED, HOWEVER, THAT NO ADJUSTMENT SHALL BE REQUIRED THAT WOULD AFFECT THE LOCATION AND/OR DESIGN OF THE DEVELOPMENT.
 - TREES LOCATED OUTSIDE OF THE LIMITS OF CLEARING AND WITHIN AREAS DESIGNATED TO BE PRESERVED THAT HAVE BEEN PRE-IDENTIFIED ON APPROVED TREE PRESERVATION PLANS AS "DEAD", "POOR CONDITION" OR "POTENTIAL HAZARD" SHALL BE EVALUATED BY URBAN FOREST MANAGEMENT DIVISION STAFF (OR ALTERNATIVE STAFF AS DETERMINED BY THE DIRECTOR) DURING THE PRE-CONSTRUCTION WALK-THROUGH FOR REMOVAL. DURING THE DEVELOPMENT SITE'S INITIAL LAND CLEARING OPERATIONS, IF DURING THE PRE-CONSTRUCTION WALK-THROUGH OR DURING ANY OTHER INSPECTION OF THE SITE, THE DIRECTOR IDENTIFIES ADDITIONAL TREES THAT HAVE BECOME HAZARDOUS OR A MAINTENANCE NUISANCE DUE TO THE INTRODUCTION OF A TARGET SUCH AS A STRUCTURE, OPEN SPACE FREQUENTED BY PEOPLE, OR OTHER IMPROVEMENT, REMOVAL OF THESE TREES SHALL BE REQUIRED. TREES SHALL BE REMOVED BY HAND WITH A CHAIN SAW AND THE STUMP SHALL BE LEFT IN PLACE UNLESS IT TOO IS DEEMED A HAZARD OR A MAINTENANCE NUISANCE. REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT AVOIDS DAMAGE TO SURROUNDING TREES AND ASSOCIATED UNDERSTORY VEGETATION. THE REMOVAL OF THE TRUNK OR BRANCHES OF THE FELLEED TREES IS NOT REQUIRED WITHIN WOODED AREAS, UNLESS SPECIFICALLY REQUIRED BY THE DIRECTOR.
 - DURING ANY CLEARING OR TREE/VEGETATION REMOVAL IN THE AREAS ADJACENT TO THE TREE PRESERVATION AREAS, A REPRESENTATIVE OF THE DEVELOPER SHALL BE PRESENT TO MONITOR THE PROCESS AND ENSURE THAT THE ACTIVITIES ARE CONDUCTED AS CONTROLLED AND APPROVED BY UFM. THE "PROJECT ARBORIST" OR LANDSCAPE ARCHITECT SHALL BE RETAINED TO MONITOR ALL ON-SITE CONSTRUCTION AND DEMOLITION WORK AND TREE PRESERVATION EFFORTS IN ORDER TO ENSURE CONFORMANCE WITH ALL TREE PRESERVATION CONDITIONS, AND UFM APPROVALS. SEE ARBORIST MONITORING SCHEDULE FOR DETAIL.
 - ALL TREES SHOWN TO BE PRESERVED ON THE TREE PRESERVATION PLAN SHALL BE PROTECTED BY TREE PROTECTION FENCE. TREE PROTECTION FENCING IN THE FORM OF FOUR (4) FOOT HIGH, FOURTEEN (14) GAUGE WELDED WIRE ATTACHED TO SIX (6) FOOT STEEL POSTS DRIVEN EIGHT (8) INCHES INTO THE GROUND AND NO FURTHER THAN TEN (10) FEET APART OR, SUPER SILT FENCE TO THE EXTENT THAT REQUIRED TRENCHING FOR SUPER SILT FENCE DOES NOT SEVER OR WOUND COMPRESSION ROOTS WHICH CAN LEAD TO STRUCTURAL FAILURE AND/OR UPROOTING OF TREES, SHALL BE ERECTED AT THE LIMITS OF CLEARING AND GRADING ADJACENT TO THE TREE PRESERVATION AREAS AS SHOWN ON THE PHASE I & II EROSION AND SEDIMENT CONTROL SHEETS.
 - SIGNS STATING "TREE PRESERVATION AREA - KEEP OUT" SHALL BE AFFIXED TO THE TREE PROTECTION FENCE AT LEAST EVERY 50 FEET. SIGNS SHALL ALTERNATE BETWEEN ENGLISH AND SPANISH.
 - POOR CONDITION TREES, TREES DESIGNATED POOR CONDITION IN THE APPROVED TREE CONSERVATION PLAN ARE SUBJECT TO ADDITIONAL INSPECTION, REMOVAL, PRUNING OR OTHER ARBORICULTURAL PRACTICES AT TIME OF INITIAL LAND CLEARING PHASE.
- TREE CONSERVATION PLAN - PHASING**
- PRE-CONSTRUCTION**
- PRIOR TO THE PRE-CONSTRUCTION MEETING THE LIMITS OF CLEARING SHALL BE FLAGGED ON SITE.
 - AREAS SHOW ON THE APPROVED PLANS TO BE PRESERVED THAT DO NOT CONTAIN SIGNIFICANT VEGETATION SHALL BE REVIEWED ON SITE. IF WARRANTED, APPROVAL FROM THE DIRECTOR FOR AN EXEMPTION FROM PRESERVATION AND PROTECTION REQUIREMENTS SHALL BE DETERMINED AT THIS TIME.
 - TREES LOCATED OUTSIDE OF THE LIMITS OF CLEARING AND WITHIN AREAS DESIGNATED TO BE PRESERVED THAT HAVE BEEN PRE-IDENTIFIED ON APPROVED TREE PRESERVATION PLANS AS "DEAD", "POOR CONDITION" OR "POTENTIAL HAZARD" SHALL BE EVALUATED BY URBAN FOREST MANAGEMENT DIVISION STAFF (OR ALTERNATIVE STAFF AS DETERMINED BY THE DIRECTOR) DURING THE PRE-CONSTRUCTION WALK-THROUGH FOR REMOVAL DURING THE DEVELOPMENT SITE'S INITIAL LAND CLEARING OPERATIONS.
 - IF DURING THE PRE-CONSTRUCTION WALK-THROUGH, OR DURING ANY OTHER INSPECTION OF THE SITE, THE DIRECTOR IDENTIFIES ADDITIONAL TREES THAT HAVE BECOME HAZARDOUS OR A MAINTENANCE NUISANCE DUE TO THE INTRODUCTION OF A TARGET SUCH AS A STRUCTURE, OPEN SPACE FREQUENTED BY PEOPLE, OR OTHER IMPROVEMENT, REMOVAL OF THESE TREES SHALL BE REQUIRED. TREES SHALL BE REMOVED BY HAND WITH A CHAIN SAW AND THE STUMP SHALL BE LEFT IN PLACE UNLESS IT TOO IS DEEMED A HAZARD OR A MAINTENANCE NUISANCE. REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT AVOIDS DAMAGE TO SURROUNDING TREES AND ASSOCIATED UNDERSTORY VEGETATION. THE REMOVAL OF THE TRUNK OR BRANCHES OF THE FELLEED TREES IS NOT REQUIRED WITHIN WOODED AREAS, UNLESS SPECIFICALLY REQUIRED BY THE DIRECTOR.
 - IF DEMOLITION OF EXISTING SITE FEATURES IS TO OCCUR NEXT TO TREES TO BE PRESERVED, TREE PROTECTION MEASURES SHALL BE INSTALLED BEFORE A DEMOLITION PERMIT CAN BE ISSUED.
- INITIAL LAND CLEARING OPERATIONS**
- TREES AND FORESTED AREAS SHALL BE PROTECTED AND MANAGED DURING ALL PHASES OF CONSTRUCTION IN ACCORDANCE WITH THE PROVISIONS AND SITE SPECIFIC GUIDANCE PROVIDED WITHIN THE APPROVED TREE CONSERVATION PLAN NARRATIVE.
 - IN ADDITION TO PROTECTING TREES, THE PERMITEE SHALL PROTECT ALL UNDERSTORY PLANTS, LEAF LITTER AND SOIL CONDITIONS FOUND IN THE FORESTED AREAS DESIGNATED FOR PRESERVATION EXCEPT AS ALLOWED BY THE APPROVED TREE CONSERVATION PLAN AND NARRATIVE.
 - MONITORING: THE PERMITEE SHALL ACTIVELY MONITOR THE CONSTRUCTION SITE TO ENSURE THAT INAPPROPRIATE ACTIVITIES SUCH AS STORAGE OF CONSTRUCTION MATERIALS, DUMPING OF DEBRIS, AND TRAFFIC BY CONSTRUCTION EQUIPMENT AND PERSONNEL DO NOT OCCUR WITHIN AREAS SHOWN PRESERVED OUTSIDE THE LIMITS OF CLEARING.
 - TREE PROTECTION DEVICES SHALL BE MAINTAINED UNTIL ALL WORK IN THE VICINITY HAS BEEN COMPLETED AND SHALL NOT BE REMOVED OR RELOCATED WITHOUT THE CONSENT OF THE DIRECTOR. IF THE DIRECTOR DEEMS THAT THE PROTECTIVE DEVICES ARE INSUFFICIENT, INSTALLATION OF ADDITIONAL PROTECTIVE DEVICES MAY BE REQUIRED.
 - ANY DAMAGE INFLECTED TO THE ABOVE OR BELOW-GROUND PORTIONS OF THE TREES SHOWN TO BE PRESERVED SHALL BE REPAIRED IMMEDIATELY.
 - ANY PORTION OF THE TREE PRESERVATION AREA THAT IS DISTURBED WITHOUT PRIOR APPROVAL OF THE DIRECTOR SHALL BE MULCHED IMMEDIATELY WITH A MINIMUM OF 4-INCHES OF WOOD CHIPS OR OTHER SUITABLE MATERIAL AS APPROVED BY THE DIRECTOR OR TREE CONSERVATION PLAN NARRATIVE.

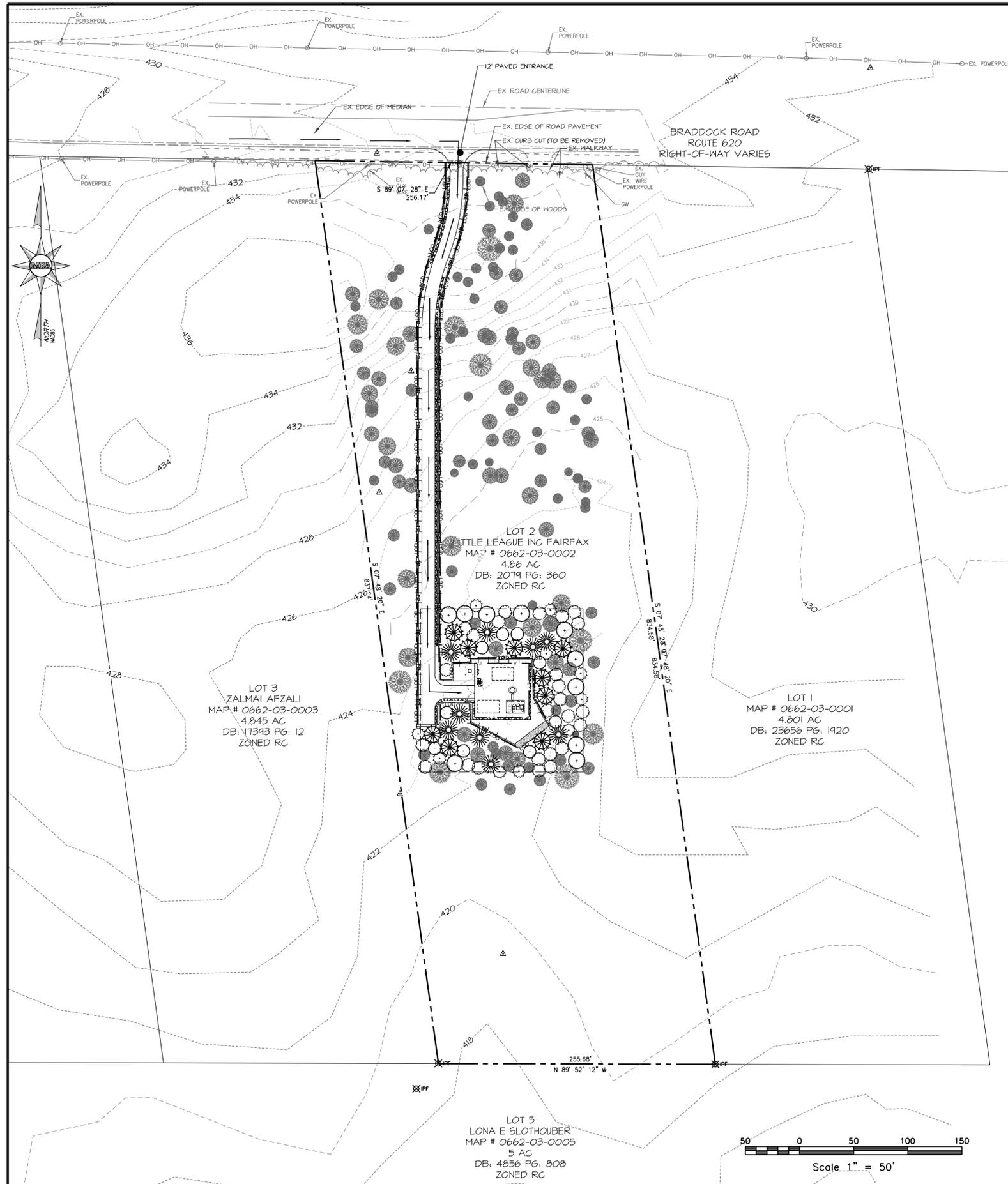
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STERLING, VA 20166
PHONE: (703) 674-0168
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MRA
COUNTY HEALTH DEPARTMENT
JAN K. ERICKSON
04/25/16
PROFESSIONAL ENGINEER

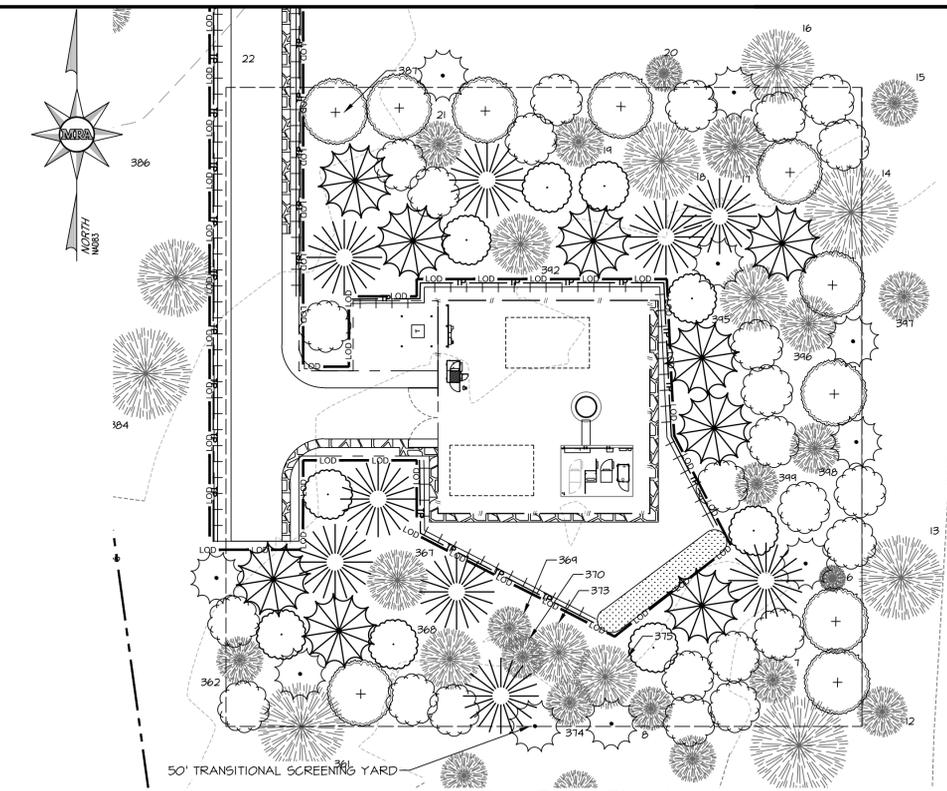
EXISTING VEGETATION MAP
VERIZON WIRELESS- COBBS CORNER
SPECIAL EXCEPTION PLAN
SPRINGFIELD MAGISTERIAL DISTRICT
FAIRFAX COUNTY, VIRGINIA

| DATE | REVISIONS | COUNTY COMMENTS |
|----------|-----------|-----------------|
| 5/20/15 | | COUNTY COMMENTS |
| 7/20/15 | | COUNTY COMMENTS |
| 10/27/15 | | COUNTY COMMENTS |
| 12/02/15 | | COUNTY COMMENTS |
| 04/25/16 | | COUNTY COMMENTS |

JOB NO.: 10427.1733
SCALE: 1"=50'
DATE: 3/5/15
DRAWN BY: DLT
DESIGN BY: JKE
REVIEW BY: JKE
SHEET: 2 OF 7



SITE PLAN
SCALE: 1" = 50'



LANDSCAPING PLAN
SCALE: 1" = 20'

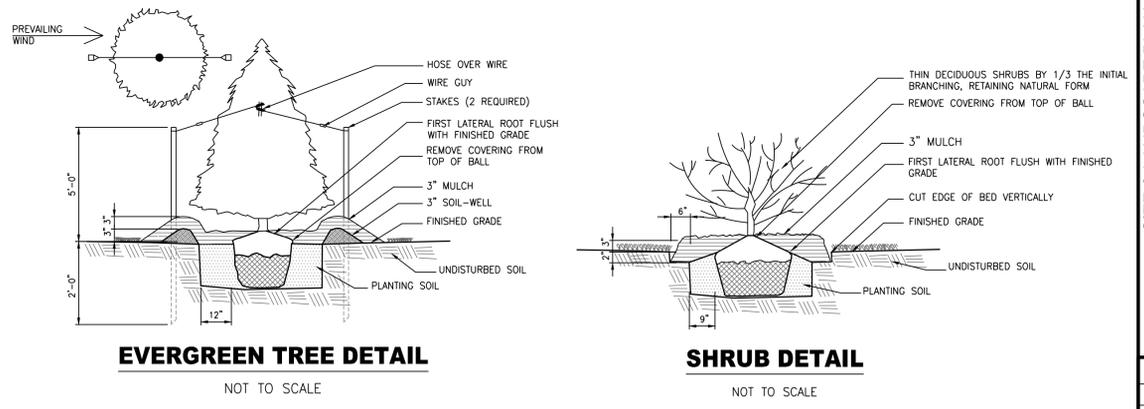
LEGEND

- AMERICAN HOLLY
- FOSTER'S HOLLY
- NELLIE STEVENS HOLLY
- MOUNTAIN LAUREL
- ARROWWOOD VIBURNUM OR BLACKHAW VIBURNUM
- SPICEBUSH
- EXISTING TREE

| Transitional Screening Requirement | | | |
|--|-------|--|--|
| Existing 10 Year Canopy Coverage (sq ft) | 2462 | | |
| Proposed 10 Year Canopy Coverage (sq ft) | 14775 | | |
| Total Canopy Coverage in 50' Buffer Area | 77% | | |

| Planting Schedule to Meet Transitional Screening requirements | | | | | | | | | |
|---|--|----------|----------|---------------|-------|-----------------------------------|----------------------|------------|-------------------------|
| Symbol | Species (Common name) | Category | Quantity | Planting Size | Type | 10 Year Canopy Coverage (sq. ft.) | 10 Year Credit total | Multiplier | Total Replanting Credit |
| IO | Ilex opaca (American holly) | ME | 9 | 6 ft. ht. | B&B | 100 | 900 | 1.5 | 1350 |
| IF | Ilex x attenuata (Foster's holly) | ME | 9 | 6 ft. ht. | B&B | 250 | 2250 | 1.5 | 3375 |
| IN | Ilex x Nellie Stevens (Nellie Stevens holly) | ME | 9 | 6 ft. ht. | B&B | 250 | 2250 | 1.5 | 3375 |
| Shrubs | | | | | | | | | |
| VD | vinumum dentatum (arrowwood viburnum) | shrub | 15 | 1 gal. | cont. | 125 | 1875 | 1 | 1875 |
| MV | viburnum prunifolium (blackhaw viburnum) | shrub | 15 | 1 gal. | cont. | 125 | 1875 | 1 | 1875 |
| KL | Kalmia latifolia (mountain laurel) | shrub | 15 | 1 gal. | cont. | 250 | 3750 | 1 | 3750 |
| LB | Lindera benzoin (spicebush) | shrub | 15 | 1 gal. | cont. | 125 | 1875 | 1 | 1875 |
| Totals | | | 87 | | | | 14775 | | 17475 |

- NOTE:
- TREES AND SHRUBS SIZE SHOWN AT 10 YEAR CANOPY.
 - SHRUBS TO BE PLANTED RANDOMLY THROUGHOUT AREA. EVERGREEN TREES TO BE SITED BASED ON FIELD LOCATIONS OF EXISTING TREES TO MINIMIZE IMPACT DURING PLANTING. ALL PLANTING TO BE DONE BY HAND WITHOUT MECHANIZED EQUIPMENT.



EVERGREEN TREE DETAIL
NOT TO SCALE

SHRUB DETAIL
NOT TO SCALE

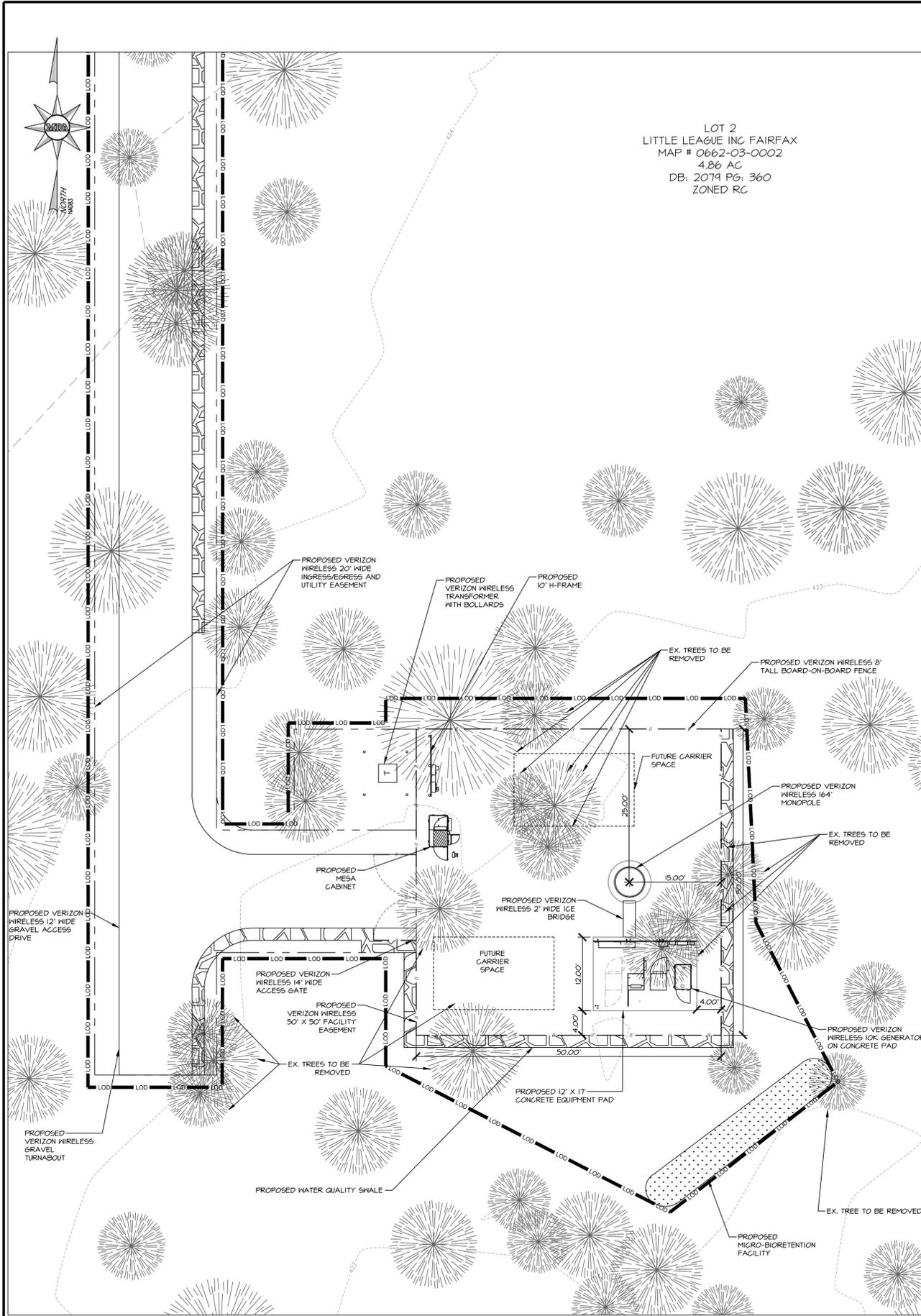
| DATE | REVISIONS |
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| 5/20/15 | COUNTY COMMENTS |
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COMMONWEALTH OF VIRGINIA
J. K. ERICKSON
Lic. No. 32353
PROFESSIONAL ENGINEER
04/25/16

SITE & LANDSCAPE PLAN
VERIZON WIRELESS- COBBS CORNER
SPECIAL EXCEPTION PLAT
SPRINGFIELD MAGISTERIAL DISTRICT
FAIRFAX COUNTY, VIRGINIA

JOB NO.: 10427.1733
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REVIEW BY: JKE
SHEET: 4 OF 7

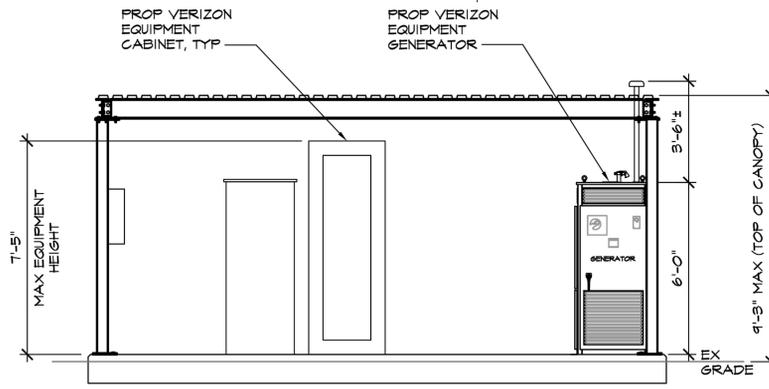
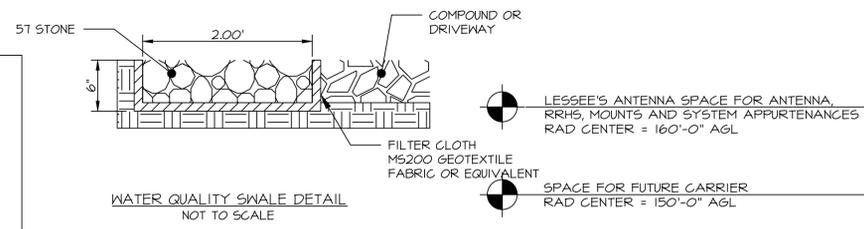


COMPOUND LAYOUT

SCALE: 1" = 10'

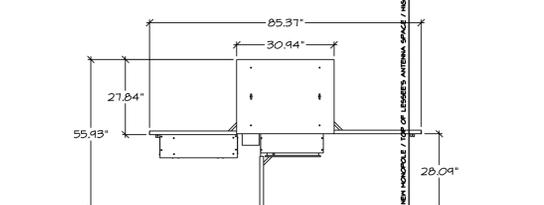


Scale 1" = 10'



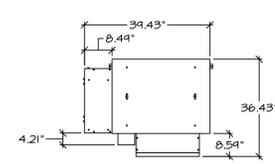
CONCRETE PAD ELEVATION

SCALE: 1" = 10'



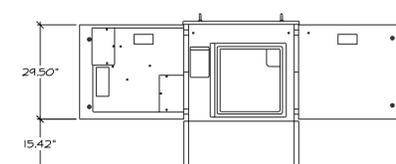
MESA CABINET DIMENSION TOP VIEW "A"

NOT TO SCALE



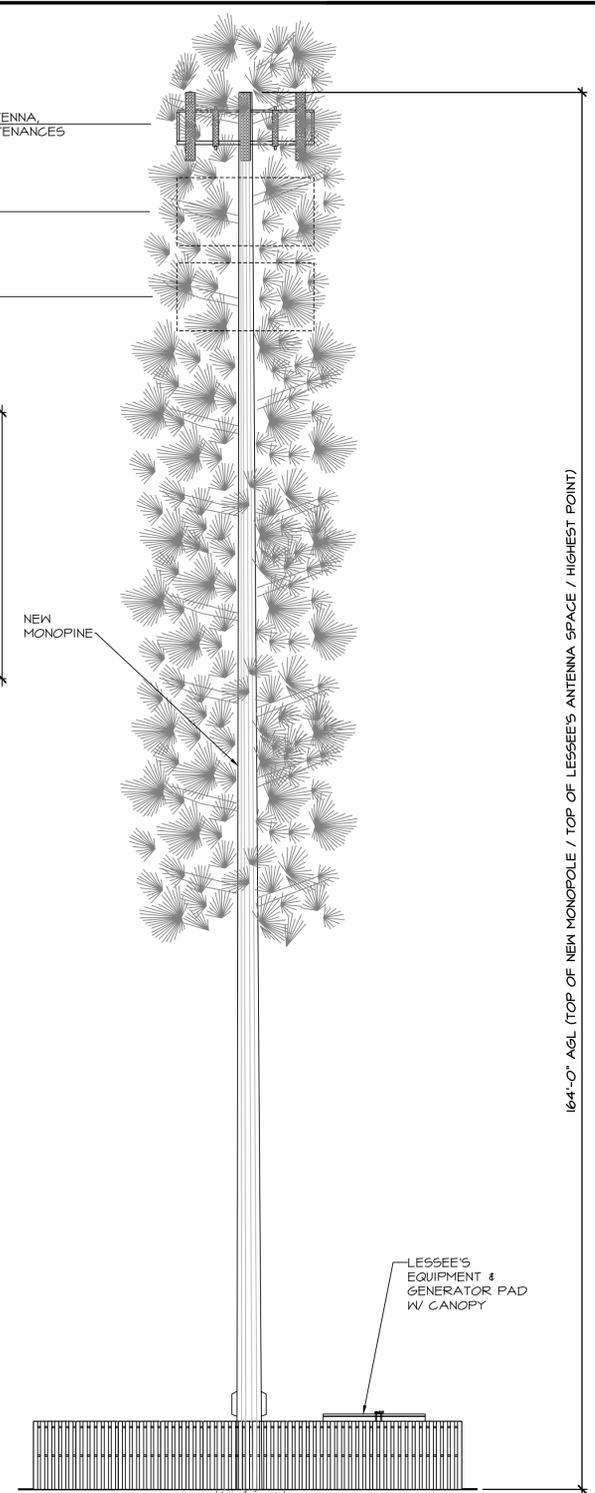
MESA CABINET DIMENSION TOP VIEW "B"

NOT TO SCALE



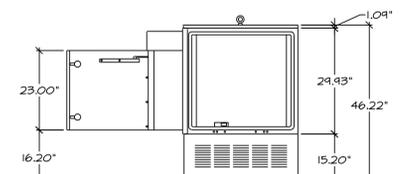
MESA CABINET DIMENSION SIDE VIEW "C"

NOT TO SCALE



TOWER ELEVATION

SCALE: 1" = 10'



MESA CABINET DIMENSION SIDE VIEW "D"

NOT TO SCALE

164'-0" AGL (TOP OF NEW MONOPOLE / TOP OF LESSEE'S ANTENNA SPACE / HIGHEST POINT)

| DATE | REVISIONS | COUNTY COMMENTS |
|----------|-----------|-----------------|
| 5/20/15 | | COUNTY COMMENTS |
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| 10/27/15 | | COUNTY COMMENTS |
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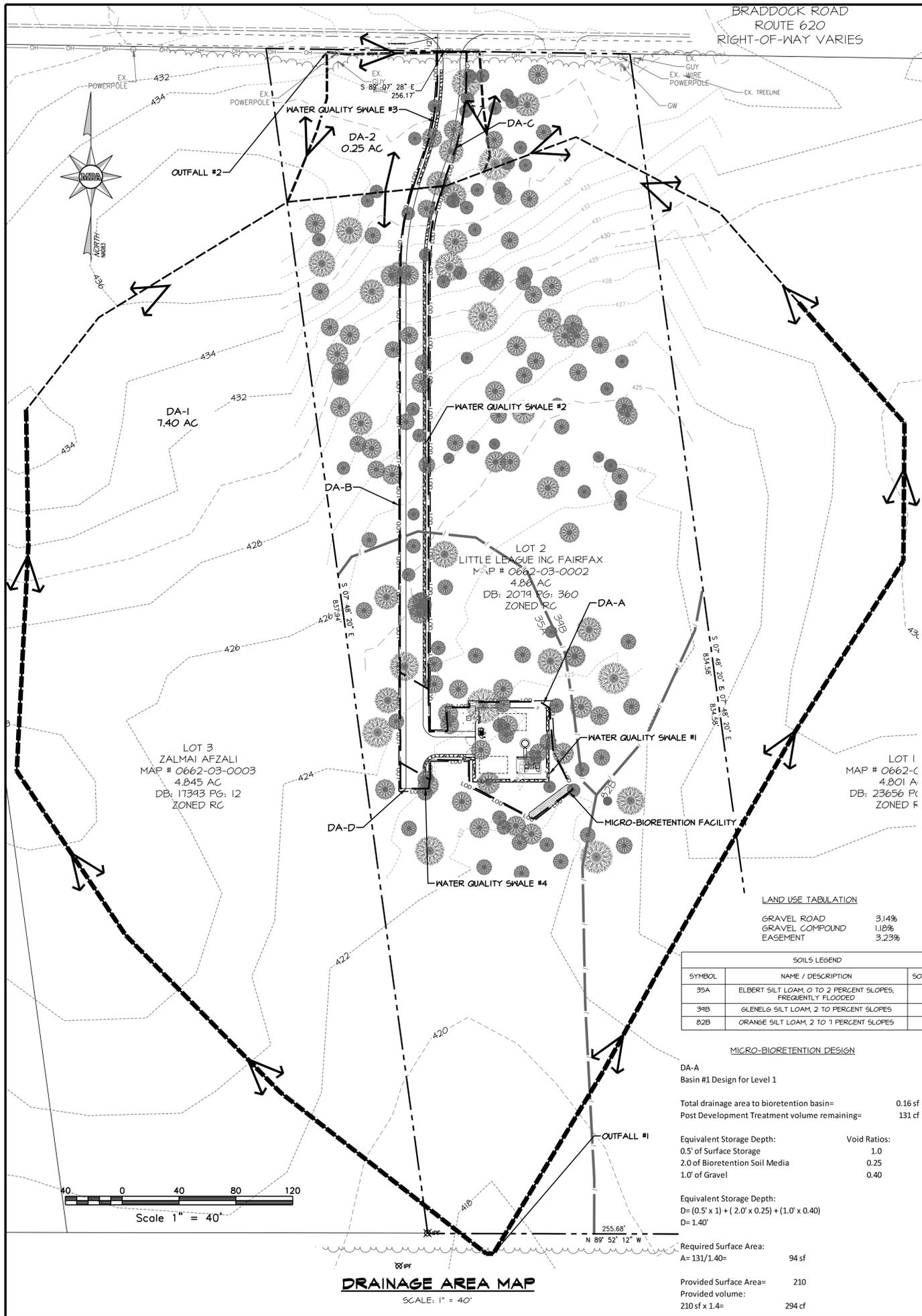
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SITE DETAILS

VERIZON WIRELESS- COBBS CORNER
SPECIAL EXCEPTION PLAT
SPRINGFIELD MAGISTERIAL DISTRICT
FAIRFAX COUNTY, VIRGINIA

| |
|---------------------|
| JOB NO.: 10427.1733 |
| SCALE: AS SHOWN |
| DATE: 3/5/15 |
| DRAWN BY: DLT |
| DESIGN BY: JKE |
| REVIEW BY: JKE |
| SHEET: 5 OF 7 |



STORMWATER MANAGEMENT NARRATIVE

THE PROPOSED SITE CONSISTS OF A NEW 160' TALL MONOPOLE WITH A GRAVEL COMPOUND AND GRAVEL ACCESS DRIVE. THE EXISTING SITE CONSISTS OF 4.86 ACRES OF WOODS CONTAINING HYDROLOGIC SOIL TYPES B, C, AND D. THE PROPOSED GRAVEL DRIVE AND COMPOUND INCREASE THE IMPERVIOUS AREA BY 0.21 AC OR 4.32%. THE LIMITS OF DISTURBANCE IS 16,900 SF OR 0.39 AC. THE MAJORITY OF THE SITE FLOWS SOUTH AND LEAVES THE PROPERTY AT OUTFALL #1. THE REST OF THE SITE FLOWS NORTH ALONG AN EXISTING DITCH ON THE SOUTH SIDE OF BRADDOCK ROAD AT OUTFALL #2.

0.39 LB/YR PHOSPHORUS REMOVAL IS REQUIRED. THE IMPERVIOUS AREA WILL BE TREATED WITH WATER QUALITY SWALES AND A MICRO-BIORETENTION FACILITY. 0.40 LB/YR OF PHOSPHORUS REMOVAL IS ACHIEVED AND 0.73 CF BMP VOLUME WILL BE PROVIDED.

STORMWATER MANAGEMENT WILL BE PROVIDED FOR OUTFALL #1 AND #2 THROUGH STORAGE IN THE DRY SWALES AND BY DRY FACILITIES LOCATED AT THE OUTFALL OF THE DRY SWALES. BASED ON THE ENERGY BALANCE EQUATION, STORAGE REQUIRED FOR DA-1 IS APPROXIMATELY 1900 C.F. AND STORAGE REQUIRED FOR DA-2 IS APPROXIMATELY 82 C.F.

Virginia Runoff Reduction Method New Development Worksheet - v2.8 - June 2014

Site Data Summary

| Total Rainfall = 43 inches | | | | | | |
|----------------------------|---------|---------|---------|---------|-------|------------|
| Site Land Cover Summary | | | | | | |
| | A Soils | B Soils | C Soils | D Soils | Total | % of Total |
| Forest (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turf (acres) | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 | 46.15 |
| Impervious (acres) | 0.00 | 0.00 | 0.00 | 0.12 | 0.12 | 53.85 |
| | | | | | 0.39 | 100.00 |

| | |
|--|------|
| Site No. | 0.02 |
| Post Development Treatment Volume (ft ³) | 873 |
| Post Development TP Load (lb/yr) | 0.55 |
| Post Development TN Load (lb/yr) | 3.92 |
| Total TP Load Reduction Required (lb/yr) | 0.39 |

| | |
|--|------|
| Total Runoff Volume Reduction (%) | 523 |
| Total TP Load Reduction Achieved (lb/yr) | 0 |
| Total TN Load Reduction Achieved (lb/yr) | 3.56 |
| Adjusted Post Development TP Load (lb/yr) | 0.15 |
| Remaining Phosphorus Load Reduction (lb/yr) Required | 0.24 |

| Drainage Area Summary | | | | | | |
|-----------------------|--------|--------|--------|--------|--------|-------|
| | D.A. A | D.A. B | D.A. C | D.A. D | D.A. E | Total |
| Forest (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turf (acres) | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.17 |
| Impervious (acres) | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 |
| | | | | | | 0.38 |

| Drainage Area Compliance Summary | | | | | | |
|----------------------------------|--------|--------|--------|--------|--------|-------|
| | D.A. A | D.A. B | D.A. C | D.A. D | D.A. E | Total |
| TP Load Red. (lb/yr) | 0.20 | 0.17 | 0.03 | 0.01 | 0.00 | 0.40 |
| TN Load Red. (lb/yr) | 1.64 | 1.57 | 0.31 | 0.09 | 0.00 | 3.56 |

| Drainage Area A Summary | | | | | | |
|-------------------------|---------|---------|---------|---------|-------|------------|
| Land Cover Summary | | | | | | |
| | A Soils | B Soils | C Soils | D Soils | Total | % of Total |
| Forest (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turf (acres) | 0.00 | 0.00 | 0.00 | 0.06 | 0.06 | 40.00 |
| Impervious (acres) | 0.00 | 0.00 | 0.00 | 0.09 | 0.09 | 60.00 |
| | | | | | 0.15 | |

| BMP Selections | | |
|--|---------------------|---------------------|
| Practice | Credit Area (acres) | Downstream Practice |
| Total Impervious Cover Treated (acres) | 0.09 | |
| Total Turf Area Treated (acres) | 0.06 | |
| Total TP Load Reduction Achieved in D.A. A (lb/yr) | 0.20 | |
| Total TN Load Reduction Achieved in D.A. A (lb/yr) | 1.64 | |

| Drainage Area B Summary | | | | | | |
|-------------------------|---------|---------|---------|---------|-------|------------|
| Land Cover Summary | | | | | | |
| | A Soils | B Soils | C Soils | D Soils | Total | % of Total |
| Forest (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turf (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 50.00 |
| Impervious (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 50.00 |
| | | | | | 0.18 | |

| BMP Selections | | |
|--|---------------------|---------------------|
| Practice | Credit Area (acres) | Downstream Practice |
| Total Impervious Cover Treated (acres) | 0.00 | |
| Total Turf Area Treated (acres) | 0.00 | |
| Total TP Load Reduction Achieved in D.A. B (lb/yr) | 0.17 | |
| Total TN Load Reduction Achieved in D.A. B (lb/yr) | 1.57 | |

| Drainage Area C Summary | | | | | | |
|-------------------------|---------|---------|---------|---------|-------|------------|
| Land Cover Summary | | | | | | |
| | A Soils | B Soils | C Soils | D Soils | Total | % of Total |
| Forest (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turf (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 57.14 |
| Impervious (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 42.86 |
| | | | | | 0.01 | |

| BMP Selections | | |
|--|---------------------|---------------------|
| Practice | Credit Area (acres) | Downstream Practice |
| Total Impervious Cover Treated (acres) | 0.00 | |
| Total Turf Area Treated (acres) | 0.00 | |
| Total TP Load Reduction Achieved in D.A. C (lb/yr) | 0.03 | |
| Total TN Load Reduction Achieved in D.A. C (lb/yr) | 0.31 | |

| Drainage Area D Summary | | | | | | |
|-------------------------|---------|---------|---------|---------|-------|------------|
| Land Cover Summary | | | | | | |
| | A Soils | B Soils | C Soils | D Soils | Total | % of Total |
| Forest (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turf (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 57.14 |
| Impervious (acres) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 42.86 |
| | | | | | 0.01 | |

| BMP Selections | | |
|--|---------------------|---------------------|
| Practice | Credit Area (acres) | Downstream Practice |
| Total Impervious Cover Treated (acres) | 0.00 | |
| Total Turf Area Treated (acres) | 0.00 | |
| Total TP Load Reduction Achieved in D.A. D (lb/yr) | 0.01 | |
| Total TN Load Reduction Achieved in D.A. D (lb/yr) | 0.05 | |

| Site Results | | | | | | |
|--|--------|--------|--------|--------|--------|------------|
| | D.A. A | D.A. B | D.A. C | D.A. D | D.A. E | AREA CHECK |
| IMPERVIOUS COVER | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | OK |
| IMPERVIOUS COVER TREATED | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | OK |
| TURF AREA TREATED | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | OK |
| ADJUSTED POST DEVELOPMENT PHOSPHORUS LOAD (LB/YR) | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | OK |
| ADJUSTED POST DEVELOPMENT NITROGEN LOAD (LB/YR) | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | OK |
| COMPARISON: YOU EXCEEDED THE TARGET REDUCTION BY 1 LITRE/HAIR! | | | | | | |
| Phosphorus | | | | | | |
| TOTAL PHOSPHORUS LOAD (LB/YR) | 0.09 | | | | | |
| TOTAL PHOSPHORUS LOAD REDUCTION REQUIRED (LB/YR) | 0.09 | | | | | |
| ADJUSTED POST DEVELOPMENT PHOSPHORUS LOAD (LB/YR) | 0.09 | | | | | |
| ADJUSTED POST DEVELOPMENT NITROGEN LOAD (LB/YR) | 0.09 | | | | | |
| Nitrogen (for information purposes) | | | | | | |
| TOTAL NITROGEN LOAD (LB/YR) | 0.09 | | | | | |
| TOTAL NITROGEN LOAD REDUCTION REQUIRED (LB/YR) | 0.09 | | | | | |
| ADJUSTED POST DEVELOPMENT NITROGEN LOAD (LB/YR) | 0.09 | | | | | |

| Channel and Flood Protection | | | | |
|------------------------------|-------------|--------------------------|--------------------------|---------------------------|
| | Weighted CN | 1-year storm Adjusted CN | 2-year storm Adjusted CN | 10-year storm Adjusted CN |
| Target Rainfall Event (in) | | 2.70 | 3.20 | 5.20 |
| D.A. A CN | 91 | 84 | 85 | 86 |
| D.A. B CN | 82 | 76 | 77 | 79 |
| D.A. C CN | 80 | 74 | 75 | 77 |
| D.A. D CN | 88 | 82 | 83 | 85 |
| D.A. E CN | 0 | IN/A | IN/A | IN/A |

LAND USE TABULATION

| | |
|-----------------|-------|
| GRAVEL ROAD | 3.14% |
| GRAVEL COMPOUND | 1.18% |
| EASEMENT | 3.23% |

SOILS LEGEND

| SYMBOL | NAME / DESCRIPTION | SOIL TYPE |
|--------|---|-----------|
| 35A | ELBERT SILT LOAM, 0 TO 2 PERCENT SLOPES, FREQUENTLY FLOODED | D |
| 34B | GLENELG SILT LOAM, 2 TO PERCENT SLOPES | B |
| 02B | ORANGE SILT LOAM, 2 TO 7 PERCENT SLOPES | D |

MICRO-BIORETENTION DESIGN

DA-A
Basin #1 Design for Level 1

Total drainage area to bioretention basin= 0.16 sf
Post Development Treatment volume remaining= 131 cf

Equivalent Storage Depth: Void Ratios:
0.5' of Surface Storage 1.0
2.0' of Bioretention Soil Media 0.25
1.0' of Gravel 0.40

Equivalent Storage Depth:
D= (0.5' x 1) + (2.0' x 0.25) + (1.0' x 0.40)
D= 1.40'

Required Surface Area: 94 sf
A= 131/1.40=

Provided Surface Area= 210
Provided volume: 210 sf x 1.4= 294 cf

WATER QUALITY SWALE DESIGN

| | | | |
|---|-----------|---|-----------|
| Drainage Area DA-A to Swale #1 | 0.12 | Drainage Area DA-B to Swale #2 | 0.18 |
| Total Impervious Area | 0.09 | Total Impervious Area | 0.09 |
| Runoff Coefficient (Rv) | 0.75 | Runoff Coefficient | 0.64 |
| Sizing: $T_{vmp} = \frac{1.1(Rv)(A)}{12}$ | | Sizing: $T_{vmp} = \frac{1.1(Rv)(A)}{12}$ | |
| $T_{vmp} = 359$ cu ft | | $T_{vmp} = 460$ cu ft | |
| Surface Area = $T_{vmp} / \text{storage depth}$ | | Surface Area = $T_{vmp} / \text{storage depth}$ | |
| Media Depth | 24 inches | Media Depth | 24 inches |
| Required Surface Area= | 180 sf | Required Surface Area= | 230 sf |
| Provided Surface Area= | 332 sf | Provided Surface Area= | 678 sf |
| Provided Volume= | 664 cf | Provided Volume= | 1356 cf |
| DA-C to Swale #3 | | DA-D to Swale #4 | |
| Drainage Area to Swale #3 | 0.04 | Drainage Area to Swale #3 | 0.0068 |
| Total Impervious Area | 0.02 | Total Impervious Area | 0.0034 |
| Runoff Coefficient | 0.64 | Runoff Coefficient | 0.64 |
| Sizing: $T_{vmp} = \frac{1.1(Rv)(A)}{12}$ | | Sizing: $T_{vmp} = \frac{1.1(Rv)(A)}{12}$ | |
| $T_{vmp} = 102$ cu ft | | $T_{vmp} = 17$ cu ft | |
| Surface Area = $T_{vmp} / \text{storage depth}$ | | Surface Area = $T_{vmp} / \text{storage depth}$ | |
| Media Depth | 24 inches | Media Depth | 24 inches |
| Required Surface Area= | 51 sf | Required Surface Area= | 9 sf |
| Provided Surface Area= | 165 sf | Provided Surface Area= | 17 sf |
| Provided Volume= | 330 cf | Provided Volume= | 34 cf |

STORMWATER MANAGEMENT CALCULATIONS

| | | | |
|-------------------------------------|---------------|----------------------|------------------------|
| DA-1 = 7.40 site area | | | |
| | Pre-Developed | Post-Developed no RR | Post-Developed with RR |
| RUNOFF CURVE NUMBER | 65 | 66 | 65 |
| POTENTIAL MAX RETENTION (S) | 5.3846 | 5.1515 | 5.3846 |
| INITIAL ABSTRACTION Ia | 1.077 | 1.03 | 1.077 |
| Ia/P | 0.3989 | 0.3815 | 0.3989 |
| RUNOFF VOLUME, RV (INCHES) | 0.3759 | 0.4087 | 0.3759 |
| RUNOFF VOLUME, RV (AC-FT) | 0.2284 | 0.2483 | 0.2284 |
| PEAK DISCHARGE (Q1) (CFS) | 1.16 | 1.29 | 1.16 |
| POST DEVELOPED EB ALLOWED, Qo (cfs) | | 0.960262385 | 1.044 |

Energy Balance Equation to Calculate Allowable Q1-yrDev

$Q1\text{-yrdev} \times RV \leq I.F. \times (Q1\text{-yrPredev} \times RV \text{ 1yrpredev})$

Without RR
 $Q1\text{-yrdevs} = 0.9 * 1.16 (0.3759/0.4087)$
 $Q1\text{-yrdevs} = 0.960262385$

With RR
 $Q1\text{-yrdevs} = 0.9 * 1.16 (0.3759/0.3759)$
 $Q1\text{-yrdevs} = 1.044$

Storage Volume Required:
 Without RR
 $Qo/Qi = 0.96026 \text{ cfs} / 1.29 \text{ cfs}$
 With RR
 $Qo/Qi = 1.044 \text{ cfs} / 1.16 \text{ cfs}$

Without RR
 $Rvs/Rvr = Rvs/0.2483 = 0.18$
 $Rvs = 0.044694 \text{ ac-ft}$ or 1947c.f.

With RR
 $Rvs/Rvr = Rvs/0.2284 = 0.18$
 $Rvs = 0.041094 \text{ ac-ft}$ or 1790 c.f.

DA-2 = 0.25 site area

| | | | |
|-------------------------------------|---------------|----------------------|------------------------|
| | Pre-Developed | Post-Developed no RR | Post-Developed with RR |
| RUNOFF CURVE NUMBER | 55 | 58 | 56 |
| POTENTIAL MAX RETENTION (S) | 8.18 | 7.24 | 7.86 |
| INITIAL ABSTRACTION Ia | 1.636 | 1.448 | 1.571 |
| Ia/P | 0.606 | 0.536 | 0.582 |
| RUNOFF VOLUME, RV (INCHES) | 0.1225 | 0.1845 | 0.1417 |
| RUNOFF VOLUME, RV (AC-FT) | 0.0030 | 0.0045 | 0.0034 |
| PEAK DISCHARGE (Q1) (CFS) | 0.05 | 0.11 | 0.1 |
| POST DEVELOPED EB ALLOWED, Qo (cfs) | | 0.0299 | 0.0389 |

Energy Balance Equation to Calculate Allowable Q1-yrDev

$Q1\text{-yrdev} \times RV \leq I.F. \times (Q1\text{-yrPredev} \times RV \text{ 1yrpredev})$

Without RR
 $Q1\text{-yrdevs} = 0.9 * 0.05 (0.1225/0.1845)$
 $Q1\text{-yrdevs} = 0.029873423$

With RR
 $Q1\text{-yrdevs} = 0.9 * 0.05 (0.1225/0.1417)$
 $Q1\text{-yrdevs} = 0.038880365$

Storage Volume Required:
 Without RR
 $Qo/Qi = 0.0299 \text{ cfs} / 0.11 \text{ cfs}$
 With RR
 $Qo/Qi = 0.0389 \text{ cfs} / 0.1 \text{ cfs}$

Without RR
 $Rvs/Rvr = Rvs/0.0045 = 0.55$
 $Rvs = 0.002475 \text{ ac-ft}$

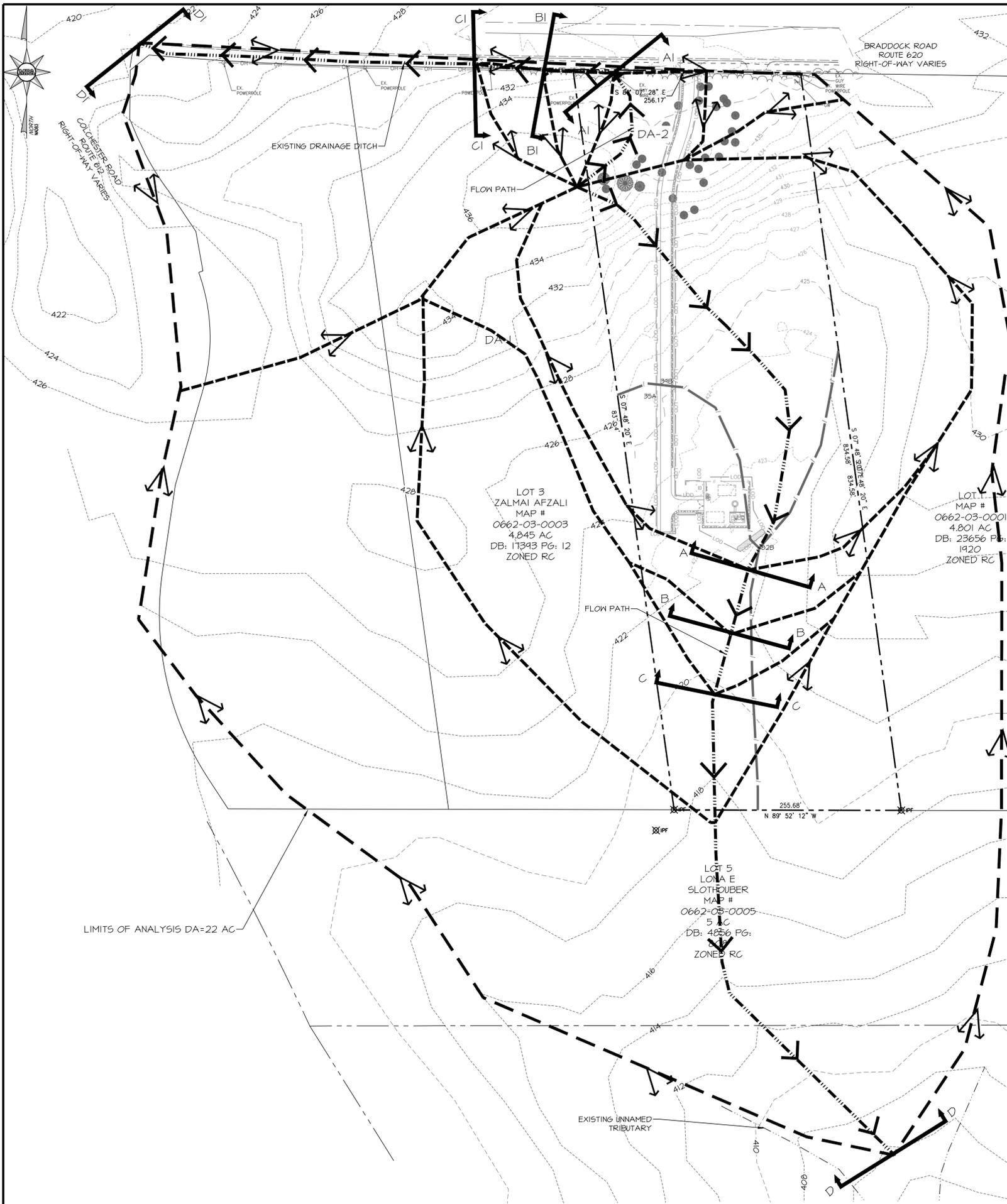
With RR
 $Rvs/Rvr = Rvs/0.0034 = 0.55$
 $Rvs = 0.00187 \text{ ac-ft}$ or 82 c.f.

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 PROFESSIONAL ENGINEER
 JOHN K. ERICKSON
 Lic. No. 32353
 04/25/16

STORMWATER MANAGEMENT PLAN & DETAILS
 VERIZON WIRELESS- COBBS CORNER
 SPECIAL EXCEPTION PLAN
 SPRINGFIELD MAGISTERIAL DISTRICT
 FAIRFAX COUNTY, VIRGINIA

JOB NO.: 10427.1733
 SCALE: 1"=40'
 DATE: 3/5/15
 DRAWN BY: DLT
 DESIGN BY: JKE
 REVIEW BY: JKE
 SHEET: 6 OF 7



ADEQUATE OUTFALL ANALYSIS

THE PROPOSED SITE CONSISTS OF A NEW 160' TALL MONOPOLE WITH A GRAVEL COMPOUND AND GRAVEL ACCESS DRIVE. THE EXISTING SITE CONSISTS OF 4.86 ACRES OF WOODS CONTAINING HYDROLOGIC SOIL TYPES B AND D. THE PROPOSED IMPERVIOUS AREA IS 0.21 AC INCREASING THE IMPERVIOUS COVER TO 4.32%. PRE-DEVELOPMENT AND POST-DEVELOPMENT DRAINAGE AREAS REMAIN THE SAME. DA#1 DRAINS EASTWARD OF THE PROPOSED COMPOUND AND OUTFALLS SOUTH OF THE PROPERTY TO AN UNNAMED TRIBUTARY. DA#2 DRAINS TO AN EXISTING DITCH ON THE SOUTH SIDE OF THE EASTBOUND LANE OF ROUTE 620. THE HYDROLOGIC UNIT FOR THIS SITE IS LOWER BULL RUN.

CROSS SECTION A-A IS TAKEN APPROXIMATELY 22' DOWNSTREAM OF THE PROPOSED MICRO-BIORETENTION FACILITY AND HAS A PRE-DEVELOPMENT AND POST-DEVELOPMENT DRAINAGE OF 4.00 ACRES. PRE-DEVELOPMENT HAS A 2 YEAR FLOW OF 4.20 CFS AND 10 YEAR FLOW OF 6.00 CFS. POST-DEVELOPMENT HAS A 2 YEAR FLOW OF 4.54 CFS AND 10 YEAR FLOW OF 6.48 CFS. THE ANALYSIS RESULTED IN A 2 YEAR VELOCITY OF 1.51 FPS AND A 10 YEAR NORMAL DEPTH OF 0.22 FT. THE 2 YEAR VELOCITY IS FOUND TO BE NON-EROSIVE AND THE 10 YEAR STORM IS CONTAINED WITHIN THE CHANNEL. THE CHANNEL AT CROSS-SECTION A-A IS FOUND TO BE ADEQUATE.

CROSS SECTION B-B IS TAKEN APPROXIMATELY 75' DOWNSTREAM OF THE CROSS SECTION A-A AND HAS A PRE-DEVELOPMENT AND POST-DEVELOPMENT DRAINAGE OF 4.78 ACRES. PRE-DEVELOPMENT HAS A 2 YEAR FLOW OF 4.88 CFS AND 10 YEAR FLOW OF 6.60 CFS. POST-DEVELOPMENT HAS A 2 YEAR FLOW OF 5.21 CFS AND 10 YEAR FLOW OF 7.05 CFS. THE ANALYSIS RESULTED IN A 2 YEAR VELOCITY OF 1.54 FPS AND A 10 YEAR NORMAL DEPTH OF 0.30 FT. THE 2 YEAR VELOCITY IS FOUND TO BE NON-EROSIVE AND THE 10 YEAR STORM IS CONTAINED WITHIN THE CHANNEL. THE CHANNEL AT CROSS-SECTION B-B IS FOUND TO BE ADEQUATE.

CROSS SECTION C-C IS TAKEN APPROXIMATELY 75' DOWNSTREAM OF CROSS SECTION B-B AND HAS A PRE-DEVELOPMENT AND POST-DEVELOPMENT DRAINAGE OF 5.05 ACRES. PRE-DEVELOPMENT HAS A 2 YEAR FLOW OF 5.00 CFS AND 10 YEAR FLOW OF 6.31 CFS. POST-DEVELOPMENT HAS A 2 YEAR FLOW OF 5.21 CFS AND 10 YEAR FLOW OF 6.77 CFS. THE ANALYSIS RESULTED IN A 2 YEAR VELOCITY OF 1.54 FPS AND A 10 YEAR NORMAL DEPTH OF 0.30 FT. THE 2 YEAR VELOCITY IS FOUND TO BE NON-EROSIVE AND THE 10 YEAR STORM IS CONTAINED WITHIN THE CHANNEL. THE CHANNEL AT CROSS-SECTION C-C IS FOUND TO BE ADEQUATE.

CROSS SECTION AI-AI IS TAKEN APPROXIMATELY AT THE END OF DA-B AND HAS A PRE-DEVELOPMENT AND POST-DEVELOPMENT DRAINAGE OF 0.25 ACRES. PRE-DEVELOPMENT HAS A 2 YEAR FLOW OF 0.26 CFS AND 10 YEAR FLOW OF 0.34 CFS. POST-DEVELOPMENT HAS A 2 YEAR FLOW OF 0.30 CFS AND 10 YEAR FLOW OF 0.39 CFS. THE ANALYSIS RESULTED IN A 2 YEAR VELOCITY OF 0.55 FPS AND A 10 YEAR NORMAL DEPTH OF 0.04 FT. THE 2 YEAR VELOCITY IS FOUND TO BE NON-EROSIVE AND THE 10 YEAR STORM IS CONTAINED WITHIN THE CHANNEL. THE CHANNEL AT CROSS-SECTION AI-AI IS FOUND TO BE ADEQUATE.

CROSS SECTION BI-BI IS TAKEN APPROXIMATELY 75' DOWNSTREAM OF CROSS SECTION BI-BI AND HAS A PRE-DEVELOPMENT AND POST-DEVELOPMENT DRAINAGE OF 0.34 ACRES. PRE-DEVELOPMENT HAS A 2 YEAR FLOW OF 0.39 CFS AND 10 YEAR FLOW OF 0.51 CFS. POST-DEVELOPMENT HAS A 2 YEAR FLOW OF 0.43 CFS AND 10 YEAR FLOW OF 0.57 CFS. THE ANALYSIS RESULTED IN A 2 YEAR VELOCITY OF 0.86 FPS AND A 10 YEAR NORMAL DEPTH OF 0.14 FT. THE 2 YEAR VELOCITY IS FOUND TO BE NON-EROSIVE AND THE 10 YEAR STORM IS CONTAINED WITHIN THE CHANNEL. THE CHANNEL AT CROSS-SECTION BI-BI IS FOUND TO BE ADEQUATE.

CROSS SECTION CI-CI IS TAKEN APPROXIMATELY 75' DOWNSTREAM OF CROSS SECTION CI-CI AND HAS A PRE-DEVELOPMENT AND POST-DEVELOPMENT DRAINAGE OF 0.56 ACRES. PRE-DEVELOPMENT HAS A 2 YEAR FLOW OF 0.54 CFS AND 10 YEAR FLOW OF 0.72 CFS. POST-DEVELOPMENT HAS A 2 YEAR FLOW OF 0.58 CFS AND 10 YEAR FLOW OF 0.77 CFS. THE ANALYSIS RESULTED IN A 2 YEAR VELOCITY OF 0.60 FPS AND A 10 YEAR NORMAL DEPTH OF 0.10 FT. THE 2 YEAR VELOCITY IS FOUND TO BE NON-EROSIVE AND THE 10 YEAR STORM IS CONTAINED WITHIN THE CHANNEL. THE CHANNEL AT CROSS-SECTION CI-CI IS FOUND TO BE ADEQUATE.

THE LIMITS OF ANALYSIS HAS BEEN ANALYZED BASED ON THE SITE'S CONTRIBUTING DRAINAGE IS LESS THAN OR EQUAL TO 10% OF THE TOTAL WATERSHED AREA, BASED ON THE CONTRIBUTING 0.22 ACRES OF DRAINAGE AREA. THE TOTAL WATERSHED AREA ANALYZED IS 22 ACRES AT CROSS SECTIONS D-D AND D1-D1. CROSS SECTION D-D IS TAKEN APPROXIMATELY 880' DOWNSTREAM OF CROSS SECTION C-C AND HAS A PRE-DEVELOPMENT AND POST-DEVELOPMENT DRAINAGE AREA OF 11.17 ACRES. PRE-DEVELOPMENT HAS A 2 YEAR FLOW OF 14.42 CFS AND A 10 YEAR FLOW OF 19.57 CFS. POST-DEVELOPMENT HAS A 2 YEAR FLOW OF 14.54 CFS AND A 10 YEAR FLOW OF 19.80 CFS. THE ANALYSIS RESULTED IN A 2 YEAR VELOCITY FLOW OF 1.54 FPS AND A 10 YEAR NORMAL DEPTH OF 0.40 FT. CROSS SECTION D1-D1 IS TAKEN APPROXIMATELY 380' DOWNSTREAM OF CROSS SECTION C-C AND HAS A PRE-DEVELOPMENT AND POST-DEVELOPMENT AREA OF 4.83 ACRES. PRE-DEVELOPMENT HAS A 2 YEAR FLOW OF 4.64 CFS AND A 10 YEAR FLOW OF 6.23 CFS. POST-DEVELOPMENT HAS A 2 YEAR FLOW OF 4.66 CFS AND A 10 YEAR FLOW OF 6.26 CFS. THE ANALYSIS RESULTED IN A 2 YEAR VELOCITY OF 1.35 FPS AND A 10 YEAR DEPTH OF 0.25 FT. THE VELOCITIES FOR BOTH CROSS SECTIONS ARE FOUND TO BE NON-EROSIVE AND THE 10 YEAR STORM IS CONTAINED WITHIN THE CHANNEL. THE CHANNELS AT THESE CROSS SECTIONS ARE FOUND TO BE ADEQUATE.

THE CHANNEL HAS BEEN ANALYZED 150' DOWNSTREAM AND ANALYZED AT THE LIMITS OF ANALYSIS. THE VELOCITIES IN THE CHANNEL HAVE BEEN SHOWN TO BE NON-EROSIVE AND THE 10 YEAR NOMINAL DEPTH IS CONTAINED WITHIN THE CHANNEL. BASED ON BOTH THESE ITEMS, IT IS THE ENGINEER'S OPINION THAT BOTH ADEQUATE OUTFALLS HAVE BEEN MET.

| CHANNEL REPORT SUMMARY | | | | | | |
|------------------------|------------------------|-------------------------|-------------------------|--------------------------|-----------------|------------|
| CROSS SECTION | PRE-DEVELOPED Q2 (CFS) | POST-DEVELOPED Q2 (CFS) | PRE-DEVELOPED Q10 (CFS) | POST-DEVELOPED Q10 (CFS) | VELOCITY (FT/S) | DEPTH (FT) |
| A-A | 4.20 | 4.54 | 6.00 | 6.48 | 1.51 | 0.22 |
| B-B | 4.88 | 5.21 | 6.60 | 7.05 | 1.54 | 0.30 |
| C-C | 5.00 | 5.21 | 6.37 | 6.77 | 0.99 | 0.20 |
| D-D | 14.42 | 14.59 | 19.57 | 19.80 | 1.59 | 0.40 |
| A1-A1 | 0.26 | 0.30 | 0.34 | 0.39 | 0.55 | 0.09 |
| B1-B1 | 0.39 | 0.43 | 0.51 | 0.57 | 0.86 | 0.14 |
| C1-C1 | 0.54 | 0.58 | 0.72 | 0.77 | 0.60 | 0.10 |
| D1-D1 | 4.64 | 4.66 | 6.23 | 6.26 | 1.35 | 0.25 |

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

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

This information is required under the following Zoning Ordinance Sections:

| | |
|--|--|
| Special Permits (Sect. 8-011 2J & 2L) | Special Exceptions (Sect. 9-011 2J & 2L) |
| Cluster Subdivision (Sect. 9-615 1G & 1N) | Commercial Revitalization Districts (Sect. 9-622 2A (12) & (14)) |
| Development Plans PRC District (Sect. 16-302 3 & 4L) | PRC Plan (Sect. 16-302 1E & 1O) |
| FDP P Districts (Sect. 16-502 1A (6) & (17)) | Amendments (Sect. 18-202 10F & 10I) |

1. Plat is at a minimum scale of 1"=50' (Unless it is depicted on one sheet with a minimum scale of 1"=100')

2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheet(s) 4 & 6.
If infiltration is proposed the soils should be tested for suitability prior to submission of the development plan and results of the infiltration test provided as part of the description of the facility.

3. Provide:

| Facility Name/ Type & No. (E.g. dry pond, infiltration trench, underground vault, etc.) | On-site area served (acres) | Off-site area served (acres) | Drainage area (acres) | Footprint area (sf) | Storage volume (cf) | If pond, dam height (ft.) |
|---|-----------------------------|------------------------------|-----------------------|---------------------|---------------------|---------------------------|
| WATER QUALITY SHALE #10 | 0.23 | 0 | 0.23 | 1142 | 2384 | |
| MICRO-BIORETENTION #1 | 0.15 | 0 | 0.15 | 210 | 294 | |
| Totals: | 0.38 | 0 | 0.38 | 1402 | 2678 | |

4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet(s) 6. Pond inlet and outlet pipe systems are shown on Sheet(s) N/A.

5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet(s) 6. Type of maintenance access road surface noted on the plat is GRAVEL (asphalt, geoblock, gravel, etc.)

6. Landscaping and tree preservation in and near the stormwater management facility is shown on Sheet(s) 2 & 3

7. Stormwater management and BMP narratives including Virginia Runoff Reduction Spreadsheet and descriptions of how detention and best management practices requirements will be met are provided on Sheet(s) 5.

8. A description of existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet(s) 6. If the outfall is proposed to be improved off-site it should be specifically noted.

9. A detailed description and analysis of how the channel protection requirements and flood protection requirements of each numbered outfall will be satisfied per Stormwater Management Ordinance and Public Facilities Manual are provided on Sheet(s) 6.

10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheet(s) 1-6.

11. A submission waiver is required for N/A.

12. Stormwater management is not required because N/A.

ADEQUATE OUTFALL MAP
SCALE: 1" = 60'

NOTE: TOPOGRAPHY TAKEN FROM FAIRFAX COUNTY GIS MAPS

| DATE | REVISIONS | COUNTY COMMENTS |
|----------|-----------|-----------------|
| 5/20/15 | | |
| 7/20/15 | | |
| 10/27/15 | | |
| 12/02/15 | | |
| 04/25/16 | | |

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JOHN K. ERICKSON
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04/25/16

ADEQUATE OUTFALL PLAN
VERIZON WIRELESS- COBBS CORNER
SPECIAL EXCEPTION PLAT
SPRINGFIELD MAGISTERIAL DISTRICT
FAIRFAX COUNTY, VIRGINIA

JOB NO.: 10427.1733
SCALE: 1"=60'
DATE: 3/5/15
DRAWN BY: DLT
DESIGN BY: JKE
REVIEW BY: JKE
SHEET: 7 OF 7

REASON FOR THE ADDENDUM

On January 21, 2016, the Planning Commission held a public hearing on this case. The Planning Commission directed applicants to address community concerns related to visibility. The applicants have updated the Special Exception (SE) Plat with the following changes: (as shown in Figures 1 and 2):

- Provision of a new curb cut and addition of a dog leg design in the access drive layout to reduce the visual impact of the telecommunications compound from Braddock Road
- Increased the setback of the tower location from Braddock Road from 240 feet to be approximately 480 feet
- Changed the design of telecommunications facility from a monopole to a stealth tree pole (aka monopine)
- Revision of the Tree Preservation Plan to reflect the changes to the revised design
- Revision of the Stormwater Management Plan to reflect the changes in the revised design

The SE Plat, titled “Verizon Wireless, Cobbs Corner, Special Exception Plat” was submitted by Morris & Ritchie Associates, Inc., and consists of seven sheets dated March 5, 2015, revised through April 25, 2016 and is located in the front of the staff report. Excerpts of this plan are depicted in Figures 1 and 2.

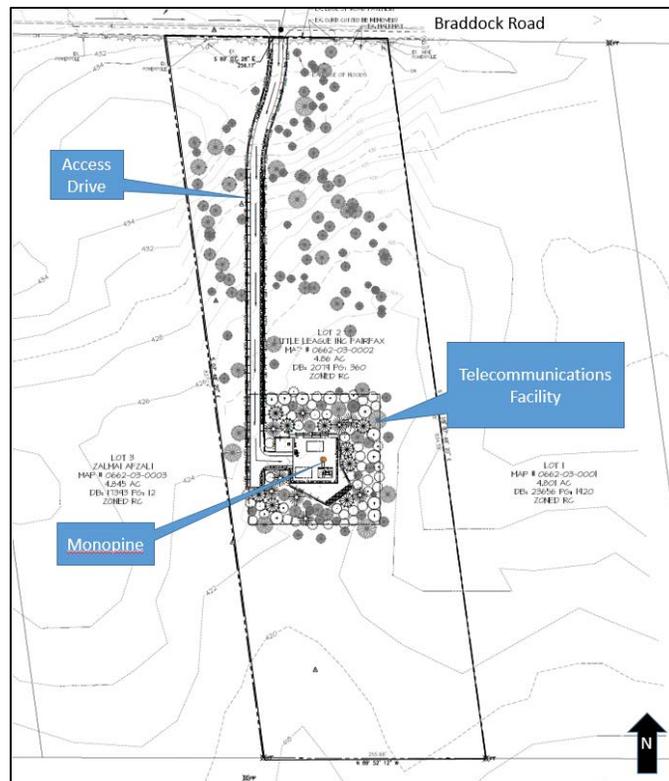


Figure 1- Revised SE Plan

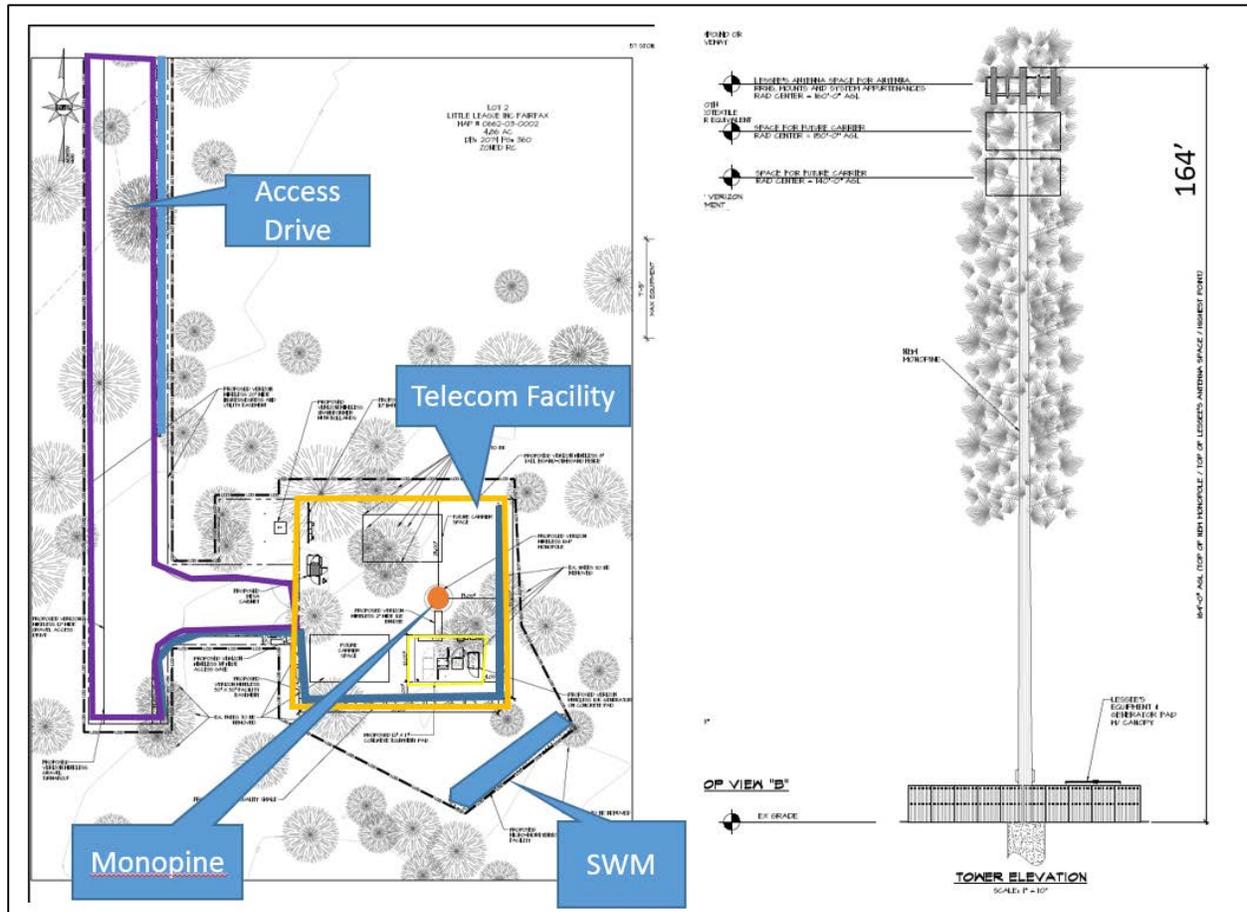


Figure 2- Telecommunication Facility and Monopine Elevation

MODIFICATIONS AND WAIVERS

The applicants request a waiver of Par. 11 of Sect. 11-102 of the Zoning Ordinance for a dustless surface to permit a gravel driveway.

The applicants request a modification of the transitional screening requirements pursuant in favor of the landscaping as shown on the SE Plat.

These modification requests were previously discussed in the staff report dated January 13, 2016. The changes proposed to the SE Plat do not change staff’s analysis of the waivers and modifications and staff does not object to the requests.

REVISED SPECIAL EXCEPTION (SE) PLANS ANALYSIS

Land Use

There is no change to the uses on the property. The proposal remains a request for a telecommunications facility.

Staff's analysis of the SE Plat, including the SE standards in Sect. 9-006, 9-104 and 9-105 of the Zoning Ordinance remains unchanged and was previously described in the staff report dated January 7, 2016. Staff believes that the proposed changes, including the increased setback from Braddock Road, the change in design to a monopine and the new layout of the access road to further reduce the visibility of the proposed monopine and related facility from neighboring properties.

2232 Review (Appendix 2)

Section 15.2-2232 of the Code of Virginia, as amended, charges the Planning Commission with determining whether the general location or approximate location, character and extent of the proposed facility are substantially in accord with the adopted Comprehensive Plan. The applicants have filed a concurrent 2232 application with this Special Exception.

Location, Character and Extent

In the following analysis staff reviewed the 2232 criteria of Location, Character and Extent in response to the applicants' revised plan.

After the Planning Commission meeting on January 21, 2016, and subsequent community meetings the applicants decided to propose a location further to the rear on the lot and decided to conduct another balloon fly test. The purpose of the second balloon fly on March 19, 2016 was conducted to demonstrate the visibility of the monopine at the revised location on the subject property (approximately 480 feet back from Braddock Road). Results showed the visibility of the monopine significantly reduced for the homes in the Hampton Forest Homeowner's Association (HFHOA) located to the north of Braddock Road, compared to the location of the first balloon fly in September 2015. The first balloon fly revealed the proposed monopine to be above tree line. The second balloon fly demonstrated the proposed monopine was better camouflaged and generally below tree line. Reasons for this include the proposed cell tower being moved back on the property, the 80' tall deciduous trees covering the subject property, and the approximate 10' reduction in elevation at the revised location due to slightly sloping terrain. The proposed monopine is expected to blend in well among the deciduous tree cover, even without leaves. In particular, the balloon was only barely visible generally below tree line from a berm behind a couple of backyard properties on Ashleigh Road in the HFHOA community (Figure 3). These properties also have reverse frontage to Braddock Road.



Figure 3- View of Proposed Monopine from 5479 Ashleigh Road, looking south

The only other views of the balloon were from two sites outside the HFHOA community. The balloon was only barely visible generally below tree line from Bunche Road, which is south of the subject site (as shown in Figure 4); it was visible above tree line at the intersection of Braddock Road and Blue Topaz Lane, however, this location is over one mile east of the HFHOA community (Figure 5).



Figure 4- View of Proposed Monopine from 12536 Bunche Road, looking northwest



Figure 5- View of Proposed Monopine Blue Topaz Lane, looking west

The letter from Millennium Engineering dated March 29, 2016, (contained in Appendix 2 as part of the revised 2232 submission) explains in detail why none of the proposed alternative locations offer a feasible solution, including nearby Braddock Park, Twin Lakes Golf Course, Virginia Golf Center and Academy, Kings Chapel Church, and also along Doyle Road and Shirley Gate Road. Millennium states that the purpose of the monopine at the designated site is to enhance in-building coverage to homes, schools, places of worship, etc. along Braddock Road, Colchester Road, Clifton Road and numerous adjoining residential roads in the area, and to provide capacity relief (offloading of traffic) from other overburdened Verizon facilities adjacent to the area. As a result, the target area must be based as close as possible to the intersection of Braddock and Colchester Roads. The suggested alternative sites reveal that these sites are either too close to existing adjacent facilities, or too far west to fill the desired coverage gap in the target area, as confirmed by the propagation maps included with Millennium's letter. Therefore, the subject property continues to offer the best solution for improved cellular coverage in the designated area.

Urban Forestry (Appendix 3)

Staff has reviewed the revised application and has no additional comments. The proposed development conditions have been carried over to this addendum including tree preservation, construction monitoring, root pruning, and tree protection that are typically recommended by the Department of Public Works and Environmental Services (DPWES) Urban Forest Management Division (UFMD).

CONCLUSIONS AND RECOMMENDATIONS

Staff Conclusions

The applicants revised their SE Plat to reflect concerns from neighborhood residents about the proposed visibility of the facility. The applicant has increased the setback from Braddock Road, changed the design from a monopole to a tree pole (monopine) and reoriented the access road. As a result the applicant updated their tree preservation plan and the storm water management plan, which has also been reviewed by appropriate county staff. The remainder of the SE application remains unchanged.

Recommendations

Staff recommends that the Planning Commission find that the telecommunications facility proposed under 2232 S-15-5 satisfies the criteria of location, character, and extent as specified in Section 15-2.2232 of the Code of Virginia, and therefore is substantially in accord with the provisions of the Comprehensive Plan.

Staff recommends approval of SE 2015-SP-023, subject to the proposed development conditions contained in Appendix 1.

Staff recommends approval of a modification of Sections 13-303 of the Zoning Ordinance for the transitional screening requirements to permit the landscaping as shown on the Special Exception Plat.

Staff recommends that the Board of Supervisors direct the Director of the Department of Public Works and Environmental Services to waive the dustless surface requirement of Sect. 11-102 (11) of the Zoning Ordinance for the gravel driveway to access the telecommunications compound as depicted on the Special Exception Plat.

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

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

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

APPENDICES

1. Revised Blacklined Development Conditions
2. Revised 2232 submission
3. 2232 Revised Analysis
4. Urban Forestry Revised Analysis

PROPOSED DEVELOPMENT CONDITIONS

SE 2015-SP-023

~~January 7, 2016~~

June 1, 2016

If it is the intent of the Board of Supervisors to approve Special Exception SE 2015-SP-023, located at 12601 Braddock Road, Tax Map 66-2 ((3)) 2, to permit a telecommunications facility pursuant to Sects. 3-C04 and 9-104 of the Zoning Ordinance, staff recommends that the Board condition the approval by requiring conformance with the following development conditions.

1. This Special Exception is granted for and runs with the land indicated in the application and is not transferable to other land.
2. This Special Exception is granted only for the purpose(s), structure(s), and/or use(s) indicated on the Special Exception Plat approved with this application, as qualified by these development conditions.
3. This Special Exception is subject to the provisions of Article 17 of the Zoning Ordinance, Site Plans, as may be determined by the Director, Department of Public Works and Environmental Services (DPWES). Any site plan submitted pursuant to this special exception shall be in substantial conformance with the approved Special Exception Plat entitled, "Verizon Wireless, Cobbs Corner, Special Exception Plat," submitted by Morris & Ritchie Associates, Inc., containing ~~five seven~~ sheets dated March 5, 2015, and revised through ~~December 2, 2015~~ April 25, 2016, and these conditions. Minor modifications to the approved special exception may be permitted pursuant to Par. 4 of Sect. 9-004 of the Zoning Ordinance.
4. A copy of the Special Exception conditions shall be posted in a conspicuous place along with the Non-Residential Use Permit of the use(s) and shall be made available to all Departments of the County of Fairfax during hours of operation of the permitted use(s).
5. The telecommunications tower shall be designed as a monopole monopine in substantial conformance with the approved SE Plat. The maximum height of the tower shall not exceed 164 feet inclusive of all antennas and other appurtenances. The maximum width of each antenna platform shall be 15 feet measured from one end of the platform to the other end of the same face of the platform.
6. The equipment compound for the telecommunications facility shall be enclosed with a locked, 8-foot tall solid board-on-board wooden fence as shown on the SE

Plat. The area of the compound shall not exceed 2,500 square feet as shown on the SE Plat.

7. A Dustless Surface Waiver shall be obtained from DPWES through the established procedures prior to any site plan approval. The site entrance and the first 12 feet of the driveway shall be paved.
8. ~~The existing entrance to the site shall be removed prior to the issuance of the Non-RUP.~~
8. All antennas and supporting hardware mounted on the telecommunications ~~monopole monopine~~ shall be ~~painted grey that matches and blends with the monopole structure~~ camouflaged to match the monopine structure.
9. No signals, lights or illumination of the tower shall be permitted unless required by the FAA, Federal Communications Commission or the County.
10. All antennas and related equipment cabinets or structures shall be removed within 120 days after such antennas or related equipment cabinets or structures are no longer in use.
11. Any proposed additions, changes or modifications to the tower shall require proof, through the submission of engineering and structural data to the Director of DPWES, that the addition, change, or modifications conforms to structural wind load and all other requirements of the Virginia Uniform Statewide Building Code.
12. There shall be no outdoor storage of materials, equipment, or vehicles.
13. A site plan addressing water quality controls and stormwater detention for the telecommunications facility shall be submitted to DPWES and approved prior to issuance of a Non-Residential Use Permit (Non-RUP).
14. A Phase I archaeological study shall be conducted at least 30 days prior to any land disturbing activities on the subject property for the areas of the property that are to undergo ground disturbing activities and previously were unsurveyed. If significant sites are found, a Phase II study shall be undertaken to determine eligibility for inclusion into the National Register of Historic Places. If sites are found eligible, avoidance of that area or a Phase III data recovery shall be undertaken. The Applicants are requested to provide a hard copy and a digital copy of any cultural resource studies completed to the Park Authority's Cultural Resource Management and Protection Branch for review and approval, con concurrence within 30 days of the completion of the study.
15. Clearing, grading and construction shall conform to the limits of clearing and grading as shown on the SE Plat.

16. Supplemental evergreen plantings shall be provided adjacent to the telecommunication compound to further screen the facility from adjacent residential lots in the location and number as determined by the Urban Forest Management Division (UFMD).
17. The Applicants shall contract with a certified arborist or registered consulting arborist (the "Project Arborist") to prepare a tree preservation plan to be submitted as part of the first and all subsequent site plan submissions. The tree preservation plan shall be reviewed and approved by the Urban Forest Management Division. The tree preservation plan shall provide a tree inventory which includes the location, species, size, crown spread and condition rating percent of all trees 8 inches or greater in diameter, measured 4.5 feet from the ground and located within twenty-five feet of the proposed limits of clearing and grading. The condition analysis shall be prepared using methods outlined in the latest edition of the Guide for Plant Appraisal. Specific tree preservation activities designed to maximize the survivability of trees designated for preservation shall be incorporated into the tree preservation plan. Activities should include, but are not limited to, crown pruning, root pruning, mulching and fertilization.
18. The Applicants shall have the limits of clearing and grading marked with a continuous line of flagging prior to the walk-through meeting. During the tree preservation walk-through meeting, the Project Arborist shall walk the limits of clearing and grading with a UFMD representative to determine where adjustments to the clearing limits can be made to increase the area of tree preservation and/or to increase the survivability of trees at the edge of the limits of clearing and grading, and such adjustment shall be implemented. Trees that are identified as dead or dying may be removed as part of the clearing operation. Any tree that is so designated shall be removed using a chain saw, and such removal shall be accomplished in a manner that avoids damage to surrounding trees and associated understory vegetation. If a stump must be removed, this shall be done using a stump-grinding machine in a manner causing as little disturbance as possible to adjacent trees and associated understory vegetation and soil conditions.
19. All trees shown to be preserved on the tree preservation plan shall be protected by tree protection fencing. Tree protection fencing, consisting of four foot high, 14 gauge welded wire attached to six foot steel posts driven 18 inches into the ground and placed no farther than ten feet apart or super silt fence, to the extent that required trenching for super silt fence does not sever or wound compression roots which can lead to structural failure and/or uprooting of trees, shall be placed at the limits of clearing and grading as shown on the erosion and sediment control sheets in all areas. The tree protection fencing shall be installed after the tree preservation walk-through meeting but prior to the performance of any clearing and grading activities on the site. The installation of all tree protection fencing shall be performed under the supervision of a certified

arborist, and accomplished in a manner that does not harm existing vegetation that is to be preserved. Three days prior to the commencement of any clearing or grading activities, but subsequent to the installation of the tree protection devices, the UFMD shall be notified and given the opportunity to inspect the site to ensure that all devices have been correctly installed. If it is determined that the fencing has not been correctly installed, no grading or construction activities shall occur until the fencing is installed correctly, as determined by the UFMD.

20. The Applicants shall root prune as needed to comply with the tree preservation requirements of these conditions. Areas that will be root pruned shall be clearly identified on the Tree Preservation Plan. All treatments for such trees and vegetation shall be clearly specified, labeled, and detailed on the erosion and sediment control sheets of the grading plan submission. The details for these treatments shall be included in the Tree Preservation Plan and shall be subject to the review and approval of UFMD.

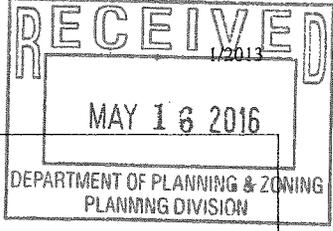
All root pruning shall be performed in a manner that protects adjacent trees and vegetation that are required to be preserved and may include, but not be limited to, the following:

- Root pruning shall be done with a trencher or vibratory plow to a depth of 18 inches, or as specified by UFMD at the pre-construction meeting.
 - Root pruning shall take place prior to any clearing and grading.
 - Root pruning shall not sever or significantly damage structural or compression roots in a manner that may compromise the structural integrity of trees or the ability of the root system to provide anchorage for the above ground portions of the trees.
 - Root pruning shall be conducted with the on-site supervision of the Project Arborist.
 - Tree protection fencing shall be installed immediately after root pruning.
 - UFMD shall be informed in writing (email is acceptable) when all root pruning and tree protection fence installation is complete.
21. During the installation of tree protection fencing, performance of root pruning and during any clearing or removal of trees, vegetation, or structures, the Project Arborist shall be present to effectively monitor the process and ensure that the activities are conducted in accordance with these conditions and as approved by the UFMD. The Project Arborist shall be a certified arborist or landscape architect retained by the applicant and shall monitor all construction, demolition, landscape installation and tree preservation efforts to ensure conformance with the conditions and UFMD approvals. The monitoring schedule shall be described and detailed in the Landscaping and Tree Preservation Plan and shall be reviewed and approved in writing by UFMD.

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

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

Pursuant to Sect. 9-015 of the Zoning Ordinance, this special exception shall automatically expire, without notice, 30 months after the date of approval unless the uses have been established by obtaining the required Non-Residential Use Permits noted above.



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

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

APPLICATION NUMBER 2232-515-5

Date application received 3/30/15 by DPZ

Date(s) Revised 8/9/15 then 5/17/16

Date application accepted 8/9/15 by DWH

(Please Type or Clearly Print)

PART I: APPLICATION SUMMARY

LOCATION OF PROPOSED USE

Address 12601 Braddock Rd

City/Town Centreville, VA Zip Code 22030

Place Name (example: Dale High School) Little League Inc Fairfax

Tax Map I.D. Number(s) 0662-03-0002

Fairfax County Supervisor District Springfield

APPLICANT(S)

Name (Company or Agency) Verizon Wireless

Agent Name Benjamin Pelletier

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

Agent's Mailing Address 6095 Marhsalee Dr, Ste 300

City/Town Elkridge State MD Zip Code 21075

Telephone Number (757) 784-3671 Fax (410) 712-4056

E-mail bpelletier@nbcllc.com

Secondary Contact Stephanie Petway

Telephone Number (240) 401-0907 E-mail spetway@nbcllc.com

BRIEF DESCRIPTION OF PROPOSED USE

Verizon Wireless is proposing to erect a new 164' tree pole (monopine) with a 2500 Sq Ft compound located at the base of the pole to allow for collocation of (2) future carriers. Fifteen (15) panel antennas will be installed at a RAD center of 160'. All antennas, support equipment, and monopine structure will be painted brown. Verizon Wireless will also install a 12' x 17' concrete pad to house (2) proposed cabinets, (1) future cabinet, and (1) generator. The aforementioned compound will be secured by 8' board-on-board fencing.



Total Area of Subject Parcel(s) 4.86 acres

Zoning District RC

Previous Zoning Approvals for all uses on site (proffered conditions, special permits, special exceptions, variances, development plans)

None

PROPERTY OWNER(S) OF RECORD

Owner Little League Inc Fairfax

Street Address PO Box 543

City/Town Fairfax

State VA

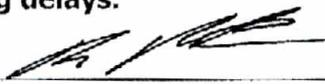
Zip Code 22038

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 5.13.16

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 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 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Collocation on existing monopole or tower | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Collocation on building facade or rooftop | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Collocation on replacement light pole or utility pole | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Located in utility or transportation easement and/or right-of-way | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Modification to approved telecommunications facility | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Collocation on other structure _____ | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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

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

1. Prior application number(s) (456-, 2232-, FS-, FSA-) for all telecommunications uses on site:

2. Calculate in square inches the surface area (height x width **or** height x diameter) of the antennas organized in the following categories:

- a. approved N/A
- b. existing N/A
- c. proposed N/A

3. Calculate in cubic inches the volume (height x width x depth) of the equipment cabinets or shelter organized in the following categories:

- a. approved N/A
- b. existing N/A
- c. proposed N/A

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

Provider Verizon Wireless

| Model # or name | Type Panel, Dish, Omni | Quantity | Height | Width | Diameter | Location height on the structure |
|-----------------|------------------------------|----------|--------|-------|----------|--|
| WBX045T19x000 | Panel | 2 | 51.4" | 16.0" | | 160' |
| X7C-FRO-840 | Panel | 3 | 98.5" | 18.8" | | 160' |
| WWx063x19 | Panel | 4 | 75.0" | 12.1" | | 160' |
| X7C-FRO-860 | Panel | 6 | 96.0" | 14.6" | | 160' |
| | | | | | | |

Antenna color: brown Painted to match existing structure? Yes No

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

Antennas will be disguised in a tree pole structure painted brown with evergreen branches.

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

Additional information:

D. EQUIPMENT

| Model # or name | Type cabinet or shelter | Quantity | Height | Width | Depth | Location |
|----------------------------|-------------------------------|----------|--------|--------|--------|----------|
| Charles Cabinet (proposed) | Cabinet | 1 | 89.1" | 32" | 32.3" | Pad |
| EZBF0 Battery cabinet | Cabinet | 1 | 78" | 32" | 32" | Pad |
| Generator 10kW | Cabinet | 1 | 72" | 32" | 50" | Pad |
| Mesa Cabinet | Cabinet | 1 | 46.22" | 39.39" | 36.39" | Compound |
| Charles Cabinet (future) | Cabinet | 1 | 89.1" | 32" | 32.3" | Pad |

How will the equipment cabinet or shelter be screened? 8' Board on Board Fencing

Material: Wood Color: Brown

Additional information:

Site located in an area with mature and dense vegetation.



May 13, 2016

Department of Planning and Zoning
Planning Division
12055 Government Center Parkway, Suite 730
Fairfax, Virginia 22035-5507



RE: Proposed Monopole
"Cobbs Corner"
12601 Braddock Rd
Centreville, VA 22030

To Whom It May Concern:

Cellco Partnership (known hereafter as "Verizon Wireless") is an FCC licensed provider of wireless services that proposes to erect a new 164' tree pole (monopine). All antennas, support equipment, and monopine structure will be painted brown. Included in the design is a 2500 Square Foot compound at the base of the monopole to house equipment for Verizon Wireless and two (2) future carriers. The proposed tree pole (monopine) is located in an RC zoning district, and Verizon Wireless is therefore required to apply for the following Special Exception.

APPLICANT:
Verizon Wireless
9000 Junction Drive
Annapolis Junction, MD 20701

APPLICANT'S AGENT:
Benjamin Pelletier
6095 Marshalle Dr, Ste 300
Elkridge, MD 21075
757-784-3671
bpelletier@nbcllc.com

SITE LOCATION:
Tax Map: 0662-03-0002
Address: 12601 Braddock Rd
Zoning District: RC
Use: Undeveloped
Supervisor District: Springfield

6095 Marshalee Drive, Suite 300
Elkridge, MD 21075

DESCRIPTION OF PROPOSAL:

The proposed installation will consist erecting a new tree pole (monopine) at a total height of 164' and Verizon Wireless will install fifteen (15) panel antennas at the 160' RAD center. All antennas, support equipment, and pole will be painted brown. All ground equipment will be situated within a 2500 Square Foot compound, designed to allow for future collocation of (2) additional carriers. Verizon Wireless will be installing a 12' by 17' concrete pad to house (2) proposed cabinets, (1) future cabinet, and one (1) stand by diesel generator. The aforementioned compound shall be screened by 8' board-on-board fencing.

The facility will operate automatically and will not require personnel or hours of attendance. It will operate twenty-four (24) hours a day, 365 days a year. It is anticipated that a technician will need to perform routine maintenance on the facility at a rate of once or twice per month or on an "as needed" basis for cases of emergency repair. The installation will not generate noise with the exception of the testing of emergency operation of the proposed diesel generator.

REQUIREMENT FOR PROPOSED USE:

The proposed facility is part of Verizon Wireless' network as a provider of a wireless service for its customers. The proposed installation at 12601 Braddock Rd will serve its customers for in building and in vehicle service. Verizon Wireless is licensed by the FCC to provide coverage for its customer base, and this site will ensure dependable coverage for personal, business, and emergency communications for customers in this area.

ANTICIPATED IMPACTS ON ADJOINING PROPERTIES:

The proposed monopine and facility has been sited on a parcel that is vacant/undeveloped, and is adjacent to similar properties which are vacant/undeveloped. The immediate area is dense with mature vegetation, providing optimal screening for the pole itself. A height of 164' was determined based on the need to crest the canopy of the aforementioned vegetation, and still allow for future collocation by other carriers.

RELATIONSHIP OF THE PROPOSAL TO THE COMPREHENSIVE PLAN:

The location, character and extent of the application should be found to be in substantial accord with the Comprehensive Plan.

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 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 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.

Verizon Wireless took the necessary steps to avoid construction of a new tower. These candidates were ruled out for the reasons included on separate appendices.

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.

Co-location was originally considered, but all candidates were ruled out for various reasons (Please see "Candidate Rule Outs" attached). The proposed telecommunication facility is sited in an area of dense vegetation, screening a majority of the tree pole (monopine). Additionally, the proposed structure will be designed as a monopine structure painted brown with evergreen branches. Proposal is consistent

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.

Proposed telecommunication facility will allow for the future co-location of (2) additional carriers. Proposal is consistent.

6095 Marshalee Drive, Suite 300
Elkridge, MD 21075

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.

Proposed height of 164' is just enough to crest the existing canopy, and allow for future co-location. Proposal is consistent.

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.

Proposed height of 164' is just enough to crest the existing canopy, and allow for future co-location. Additionally, the proposed facility is designed as a monopine structure with the antennas, support equipment, and pole painted brown, and sited in an area of dense mature vegetation serving to screen a majority of the pole. Proposal is consistent.

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.

Proposed telecommunication facility is designed as a monopine structure with the antennas, support equipment, and pole painted brown, and sited in an area of dense mature vegetation which serves to screen a majority of the pole and the compound as well. The proposed tree pole (monopine) is sited at the minimum height needed to meet Verizon Wireless' objective, and the structure is brown in color to better blend in with the surrounding tree cover. Proposal is consistent.

Policy k. 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.

Proposed telecommunication facility is being designed as a monopine with the antennas, support equipment, and pole painted brown, and sited in an area of dense vegetation. This serves to screen a bulk of the tree pole (monopine), along with the compound, from the residences to the north, south, east and west of the subject parcel.

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.**

Proposed facility is designed as a monopine with the antennas, support equipment, and pole painted brown, and sited amidst mature vegetation and the proposed compound will be secured and screened by 8' board-on-board fencing. Proposal is consistent.

- **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;**

Proposed facility, as previously mentioned, has been sited on a parcel wholly covered by mature vegetation. Proposal is consistent.

- **Obscure or block the views of proposed telecommunication facilities with other existing structures, vegetation, tree cover, or topographic features to the maximum extent feasible;**

Dense vegetation surround the proposed facility in all cardinal directions, which serves to screen a majority of the pole and the compound as well.

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

Proposed site is not found within or near a historically significant property or landscape, but all ground equipment will be screened to mitigate any visual impact. Proposal is consistent.

Policy n. Site proposed telecommunication facilities to avoid areas of environmental sensitivity, such as steep slopes, floodplains, wetlands, environmental quality corridors, and resource protection areas.

Proposed site is not found within or near an environmentally sensitive are or landscape, nor is it located within or adjacent to any Resource Protection Area. Proposal is consistent.

Policy o. Site proposed telecommunication facilities to allow for future expansion and with corresponding levels of screening to accommodate expansion.

Proposed facility has been designed to accommodate the future col-location of (2) additional carriers. Proposal is consistent.



ALTERNATIVE SITES CONSIDERED FOR THIS PROPOSAL

The proposed facility is a result of continuous due diligence on the part of Verizon Wireless and its agents. Possible co-locations were taken into consideration, along with additional sites considered at community request. These alternate sites were ruled out per the attached list and report furnished by Millennium Engineering dated April 27, 2016.

The applicant submits to the Planning Commission that the proposal is consistent with the Comprehensive Plan as to character, location and extent. If you have any questions, or need further information, please feel free to contact me at 757-784-3671 or

bpelletier@nbcllc.com

Sincerely,

Benjamin Pelletier

Benjamin Pelletier
Zoning Manager

6095 Marshalee Drive, Suite 300
Elkridge, MD 21075



Candidate Rule Outs

The following locations/addresses were taken into consideration when sighting the proposed monopole. However, they were ruled out for the reasons provided.

Hamlet Hill Way (VEPCO Transmission Pole) – This transmission pole, and subsequent string of poles, cut through a dense residential community on the North side of Braddock Rd. The local HOA owns the land running from Rockpointe Dr to Willow Springs Elementary School. In the midst of lease negotiations, it was brought to light by the HOA that the property could not be leased for any type of monetary compensation. Therefore, the candidate could no longer be considered.

5455 Willow Springs School Rd - Sports fields, associated with the Willow Springs Elementary School, were taken into consideration due to the nature of existing light standards. Unfortunately, the RF Engineer for this project cited that the location was in too close a proximity to an existing Verizon Wireless facility located at Patriot Park. The two sites would cause interference with one another, essentially rendering either site useless. For this reason, the candidate was no longer considered.

The aforementioned was provided to the staff of Planning and Zoning at the Pre-Application Meeting held on 2/13/15.

12925 Braddock Rd (Kings Chapel) – Per the community meeting held 2/22/16, it was recommended that Verizon Wireless consider placing a tower at The Kings Chapel off of Braddock Road. This location is more than half a mile outside of Verizon Wireless' target objective. Further research also shows that the lot contains poor soils, is currently subject to significant storm water management plans, and sits at an elevation 20-30' lower than the proposed 12601 Braddock Rd property. For these reasons, this candidate cannot be considered for a proposed facility.

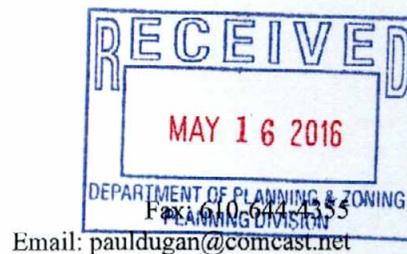
Most Respectfully,

Benjamin Pelletier

Benjamin Pelletier
Zoning Manager
Consultant for Verizon Wireless

MILLENNIUM ENGINEERING, P.C.
132 Jaffrey Road
Malvern, PA 19355

Cell: 610-220-3820
www.millenniumengineering.net



April 27, 2016

Attn: Benjamin Pelletier, Zoning Manager
Network Building + Consulting
6095 Marshalee Drive, Suite 300
Elkridge, MD 21075

Re: Supplemental RF Design Considerations for Proposed Verizon Wireless "Cobbs Corner" Communications Facility

Site Name: Cobbs Corner, Proposed 164' Monopole

Site Address: 12601 Braddock Road, Centerville, VA 22030 (Fairfax County)

Dear Mr. Pelletier,

The following information is supplemental to the information and Candidate Rule Outs furnished with the application package and reviewed by staff. Specifically, the applicant considered DVP transmission poles (which cannot be used) and Willow Springs ES and ballfields. Staff concurred with this assessment.

The objectives of the proposed communications facility are first to provide new reliable 4G coverage to an area known as Cobbs Corner in a northwestern area of the Springfield District of Fairfax County. More specifically, the proposed facility will provide reliable coverage to an area that spans approximately 0.5 – 1 mile in all directions from the proposed facility location. This area includes sections of Braddock Road (Route 620), Clifton Road (Route 645), Colchester Road, and numerous adjoining roads in the community. This improved signal level will enhance in-building coverage to homes, schools, churches, etc. in the area in which the site will serve. Secondly, the site will offload traffic (capacity relief) from adjacent facilities more specifically those identified on the propagation exhibits as *Shirley Gate, Springstone, Clifton, and Willow Springs*. Therefore, the proposed facility will provide both coverage and capacity improvements to the area in which the facility will serve.

Verizon Wireless RF engineers strive to achieve a minimum of -95 dBm target design threshold to the areas these facilities serve. The threshold of -95 dBm is depicted in green. The better the signal (above -95 dBm) the better in-building coverage and 4G throughput speeds. It is clear from the propagation exhibits that there is a significant gap in coverage in the Cobbs Corner community. The center of the target search area for this facility is the junction of Braddock Road (Route 620) and Colchester Road. The areas in white contain insufficient signal levels to serve subscribers reliably in this area. This does not imply the total lack of any kind of service in the white areas from the propagation exhibits, but weak signal levels in the area equates to little in-building coverage and slow data throughput speeds. The white areas do not reflect a total lack of any service, but varying levels of unreliable service.

It was brought to my attention that the county will request an evaluation of whether the Willow Springs Elementary School property could be a viable alternative to the proposed facility. I reviewed this property and given some careful consideration, and I do not find it a viable candidate for various reasons as follows:

- 1) The distance from the proposed facility to the existing site to the East, identified on the propagation exhibits is 1 mile. The school property, in the vicinity of the ball field, is only 0.6 miles from the existing Shirley Gate site. The result of a site at the school is that there would be too much overlapping coverage to the east and limiting the reach of the site to the west. More specifically, the coverage from a hypothetical site from the school would not reach Clifton Road to the west and would substantially limit the effectiveness of the site.
- 2) The ground elevation of the Little League Inc. Property is 426', while the ground elevation of the school property in the vicinity of the ball fields ranges from 410-428 feet. Therefore, there appears to be a small ground elevation disadvantage of the school property.
- 3) The hypothetical school property, due to the closer proximity to the Shirley Gate site to the east, would offer too much overlapping coverage with this existing site, while limiting the coverage reach to the west.

Other Locations Considered

Following the community meeting on 2/22/2016, we were requested to consider a number of other locations as follows:

Braddock Park at 13241 Braddock Road – this location is entirely within ½ mile from Verizon's existing site at the Centreville High School, and over a mile from the target search area for the proposed facility.

Twin Lakes Golf Course at 6201 Union Mill Road - this location is also entirely within ½ mile from Verizon's existing site at the Centreville High School, and over a mile from the target search area for the proposed facility.

Virginia Golf Center & Academy – this location is 1 mile west of the target search area and would completely fail to meet objectives for coverage to the target area.

Doyle Road – this road is over a half mile from the proposed facility location; therefore, this location is also too far west.

Kings Chapel Church at 12925 Braddock Road – this location is just west of the Doyle Road/Braddock Road junction and also too far west since it is over half a mile from our target search area.

Shirley Gate – this Verizon Wireless site is at Mott Community Center, one of the proposed alternate sites we were requested to consider. This is not an alternate as Verizon Wireless is already there.

Existing tree type structure at the Popeshead Substation at 12700 Popes Head Road. This is also not an alternate as Verizon Wireless is already there.

The question was raised about how far west the site could potentially be placed and still meet objectives. From the Colchester Road/Braddock Road junction, I would not recommend placing the site more than 0.1 miles from this junction in order to meet objectives.

There was also some discussion on upgrading existing sites to maximize coverage and capacity to serve the area. As discussed, Verizon Wireless continually modifies sites to best serve their licensed areas, but no further modifications to any of the adjacent sites would alleviate the need for the proposed facility to serve the objectives as outlined in this letter.

Specific questions were also raised pertaining to the viability of using a small cell or micro-cell solution. Verizon Wireless does deploy these alternative technologies where feasible and appropriate, but neither of these solutions would fulfill the objectives as outlined above due to the larger area the proposed facility is designed to serve. Small cells are being deployed in small areas where there are smaller pockets of unserved area or small

areas requiring capacity relief due to substantial high user traffic to existing facilities currently in service. With this particular application, only a macro cell is feasible to serve the 3-4 square miles of the community. Furthermore, even with small cells, antenna support structures would need to be sufficiently taller than the tree canopy in order to provide the necessary service to the area, which is why placement of small cell antennas on wooden utility poles is not feasible in this area.

Verizon Wireless has recently moved to provide Wi-Fi Calling on its network. Wi-Fi Calling does provide an additional resource to Verizon Wireless in the ongoing effort to provide the best coverage and user experience for its subscribers; however, there are limitations to this technology and it cannot be solely relied upon for voice coverage as an alternative to the traditional cellular network for the following reasons:

- It requires a strong and reliable Wi-Fi network signal. If signal strength is insufficient, calls over Wi-Fi cannot be executed.
- During power outages, Wi-Fi networks are usually “dark” (in the absence of backup power) and Wi-Fi Calling is therefore not possible, whereas Verizon Wireless maintains backup batteries/generators at its sites to provide continuous coverage via its cellular network during power outages.
- Wi-Fi can handoff to VoLTE and vice versa, so a call initiated as a Wi-Fi call can handoff to the 4G LTE network (and vice versa); however, the same is not true with the 2G/3G CDMA network. If a call is initiated on Wi-Fi and the caller leaves that Wi-Fi network area and enters an area that lacks sufficient 4G LTE coverage, the call will drop.
- Some public Wi-Fi networks may block Wi-Fi calling completely.
- Verizon Wireless subscribers cannot rely on Wi-Fi to be present in all areas, particularly outdoors.
- There are limitations with Public-Safety Answering Points (PSAPs) as they may not be able to capture, retain or determine the phone number or location of a caller making a 911 call over Wi-Fi. A physical address (location) must be input into a handset when Wi-Fi Calling is enabled so that an emergency service operator can determine your location if Wi-Fi Calling is used to dial 911. In some instances, the caller may have to provide this information to the emergency service operator during the call, potentially causing response delays in the event of an emergency or the operator being unable to contact the caller in the event the call is cutoff unexpectedly.

Additionally, Verizon Wireless cannot solely rely on its older 2G/3G CDMA voice network to provide ongoing voice coverage to its subscribers. This is an outdated technology that is no longer being implemented at new sites as both voice and data traffic for subscribers with newer handsets can now be handled by the 4G LTE network. In order to remain competitive in today’s market, Verizon Wireless must utilize all available licensed spectrum to make its 4G LTE network as robust as possible, so existing 1900 MHz 3G equipment is actually being removed from existing sites in order to repurpose this licensed frequency spectrum for use on the 4G LTE network. Parts of the older 2G/3G CDMA network will remain operational for the next few years until all subscribers have migrated over to 4G LTE handsets (similar to the legacy analog network remaining operational until all subscribers had migrated to digital handsets); however, moving forward, more and more voice traffic will be shifted from the old 2G/3G CDMA network to the current 4G LTE network (i.e. VoLTE) as more subscribers upgrade to newer, VoLTE-capable handsets.

All new communications facilities have unique objectives specific to the area the proposed site is designed to serve. Verizon Wireless is one of the original cellular network service providers. The antenna configuration which Verizon Wireless will deploy will accommodate 4 separate frequency bands which Verizon Wireless is licensed in Fairfax County, namely 700, 850, 1900, and 2100 MHz. Each of these licensed frequency bands are necessary to serve Verizon Wireless’ vast subscriber base and the wide variety of voice and data services. These licensed frequency bands all work together to serve subscribers using the latest 4G LTE smartphone devices, while maintaining service for subscribers using the older 2G and 3G technologies. Maintaining existing wireless services while expanding in Verizon Wireless’ uncovered licensed areas is a necessary requirement as a holder of these FCC licenses. It is for this reason that most existing and proposed antenna configurations contain 12 antennas, or 4 per sector (one for each frequency band).

Proper placement of new facilities is critical to maintaining and expanding service where it is needed, and minimizing signal propagation (RF interference) where it is not needed. New facilities must be properly placed within the existing cellular network grid to provide proper handoff to other existing adjacent facilities. Verizon Wireless takes steps to only build new facilities where absolutely necessary, and considerable planning goes into the development of a new facility to minimize visual impact.

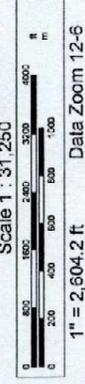
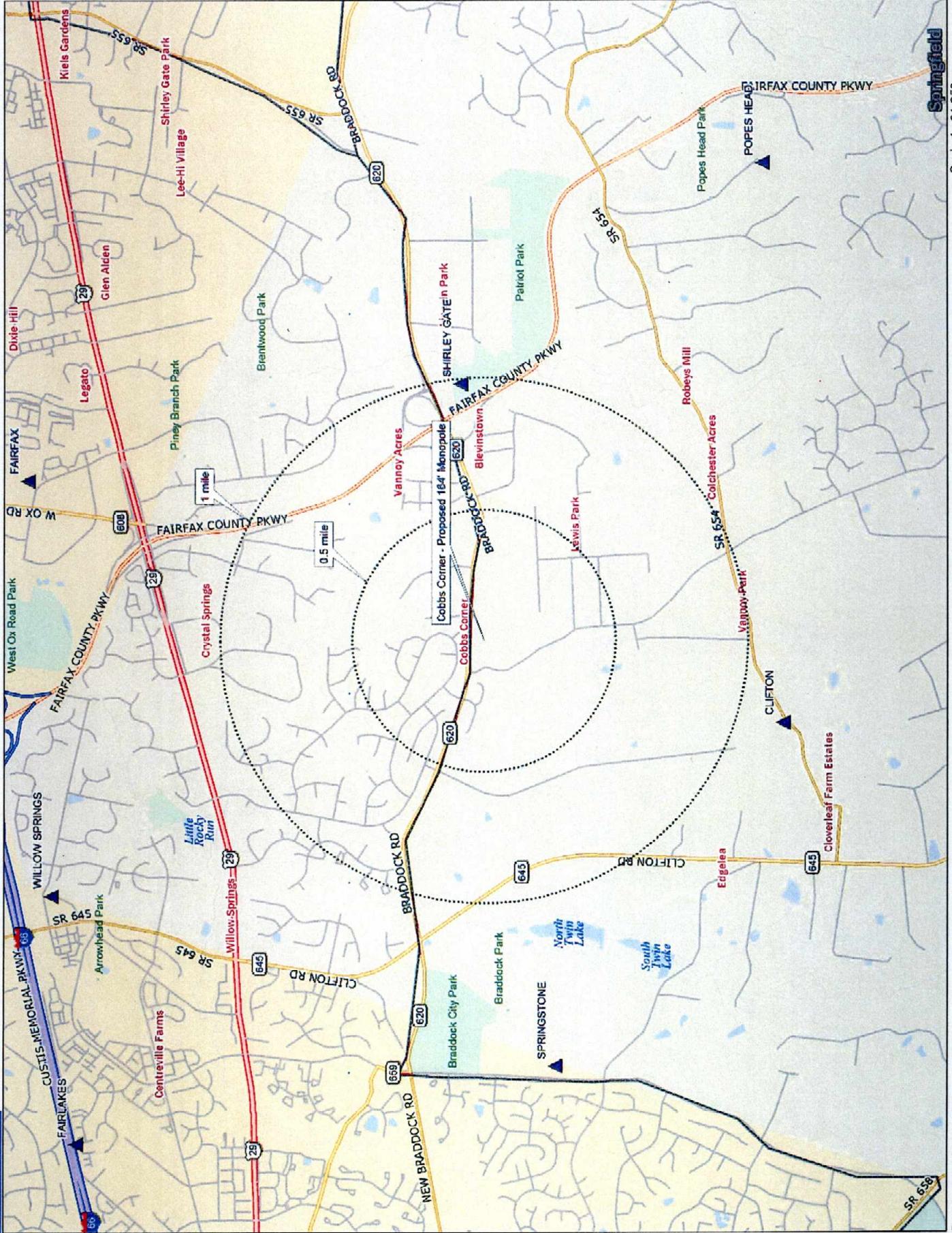
Please let me know if I can provide any further assistance.

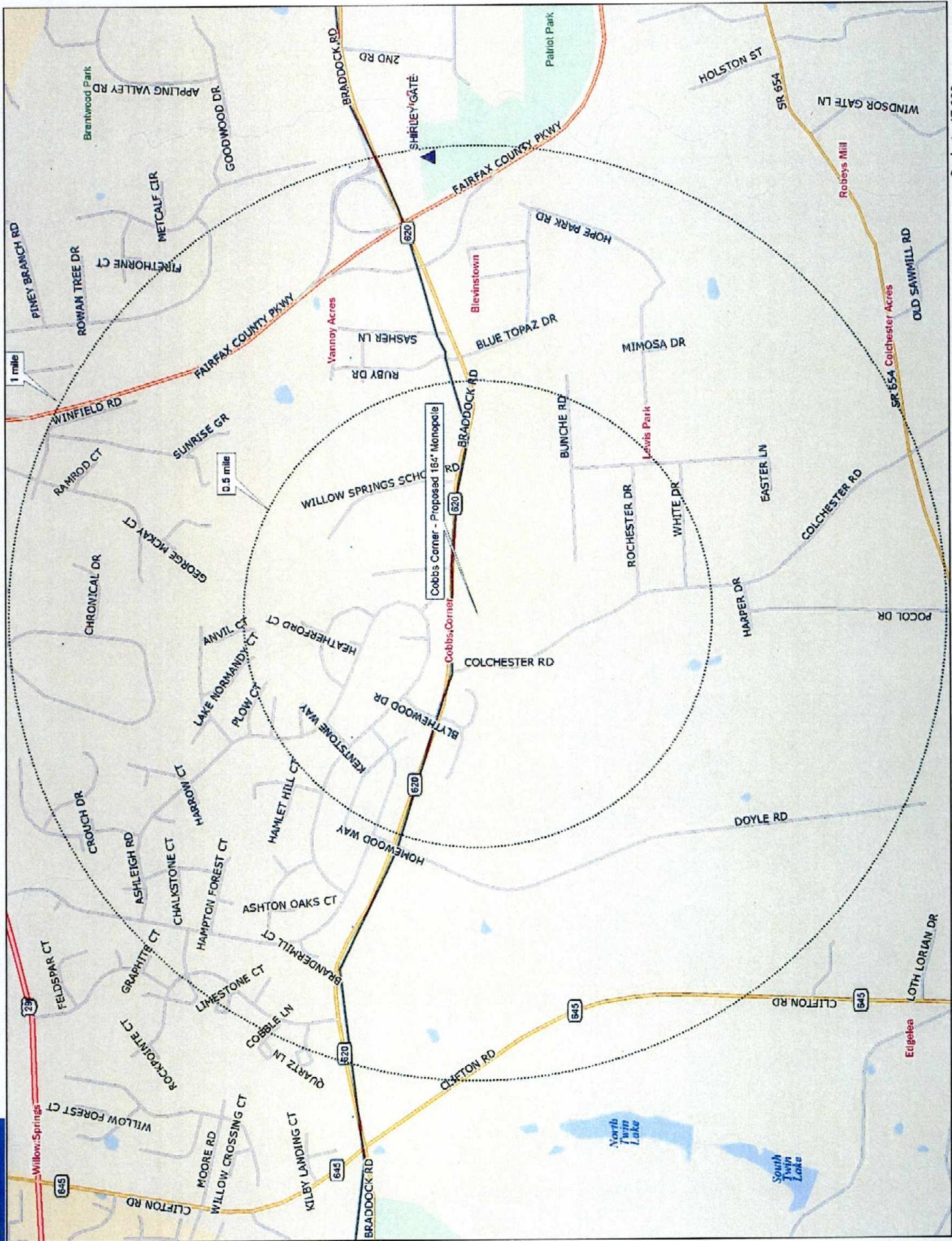
Respectfully,



Paul Dugan, P.E.
Registered Professional Engineer
Virginia License Number 036239





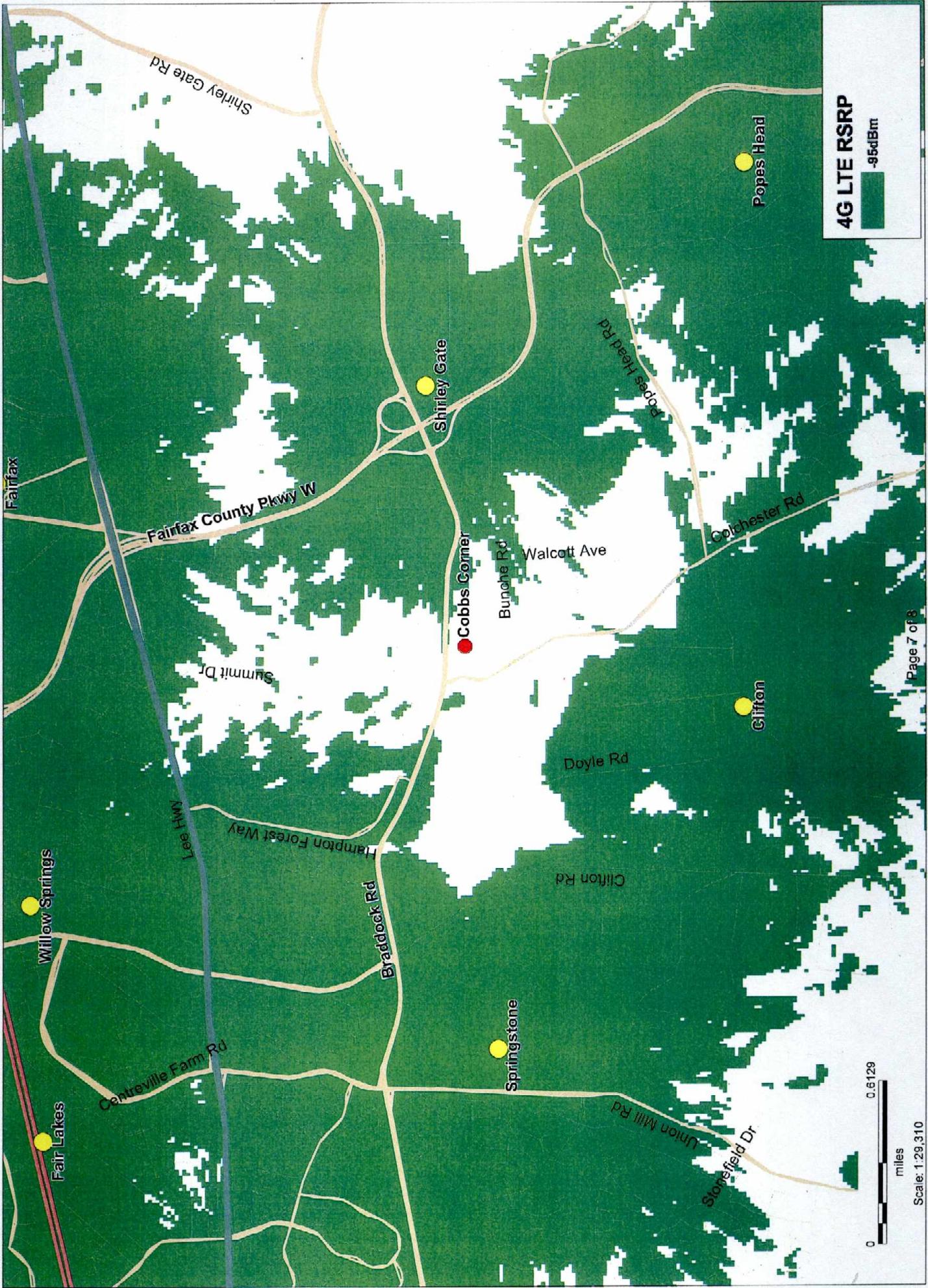


Scale 1 : 17,600

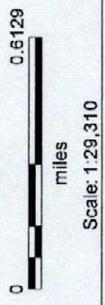


1" = 1,466.7 ft Data Zoom 13-5

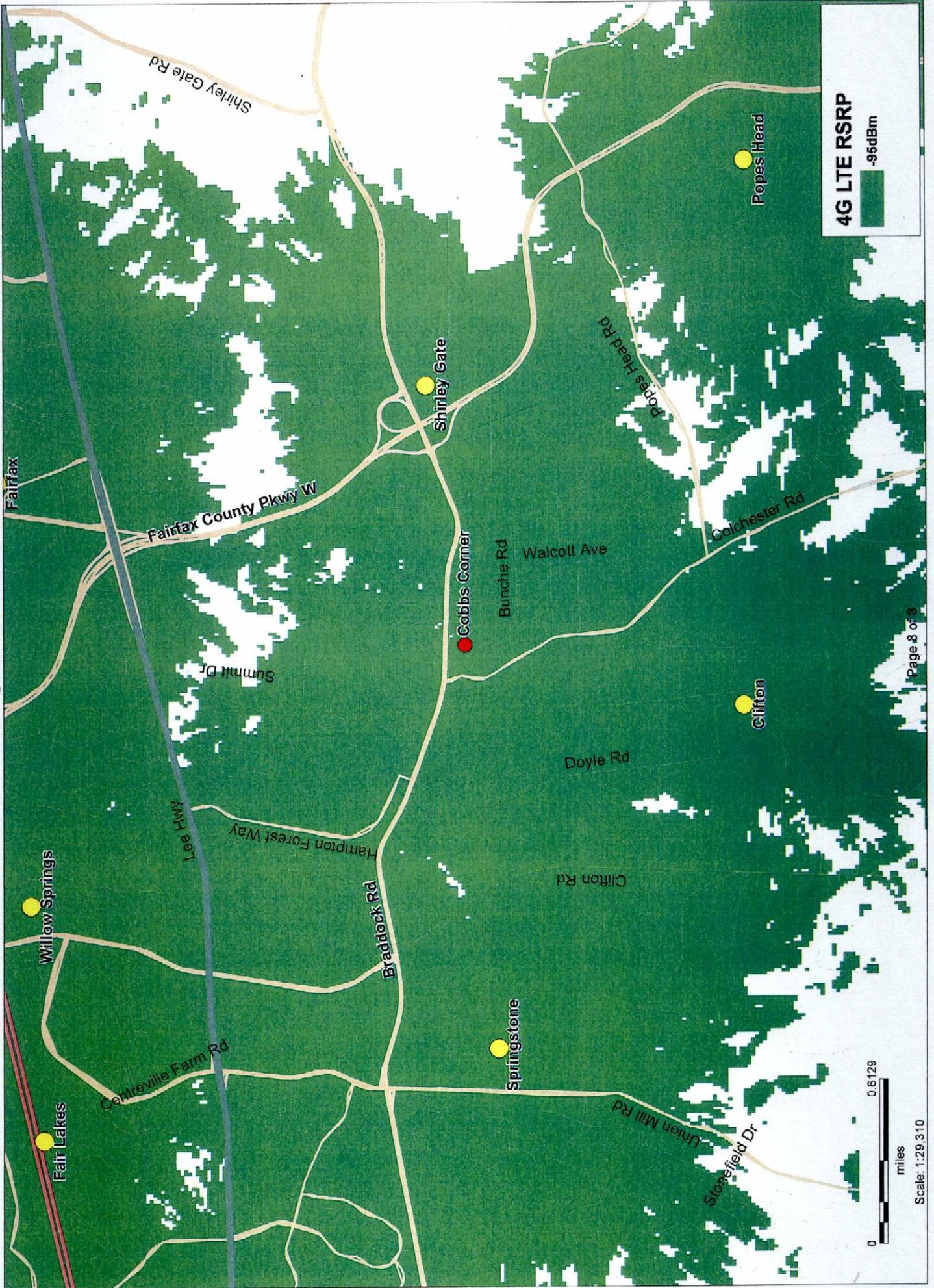
VZW - 4G LTE Coverage - Without Site Cobbs Corner



4G LTE RSRP
-95dBm



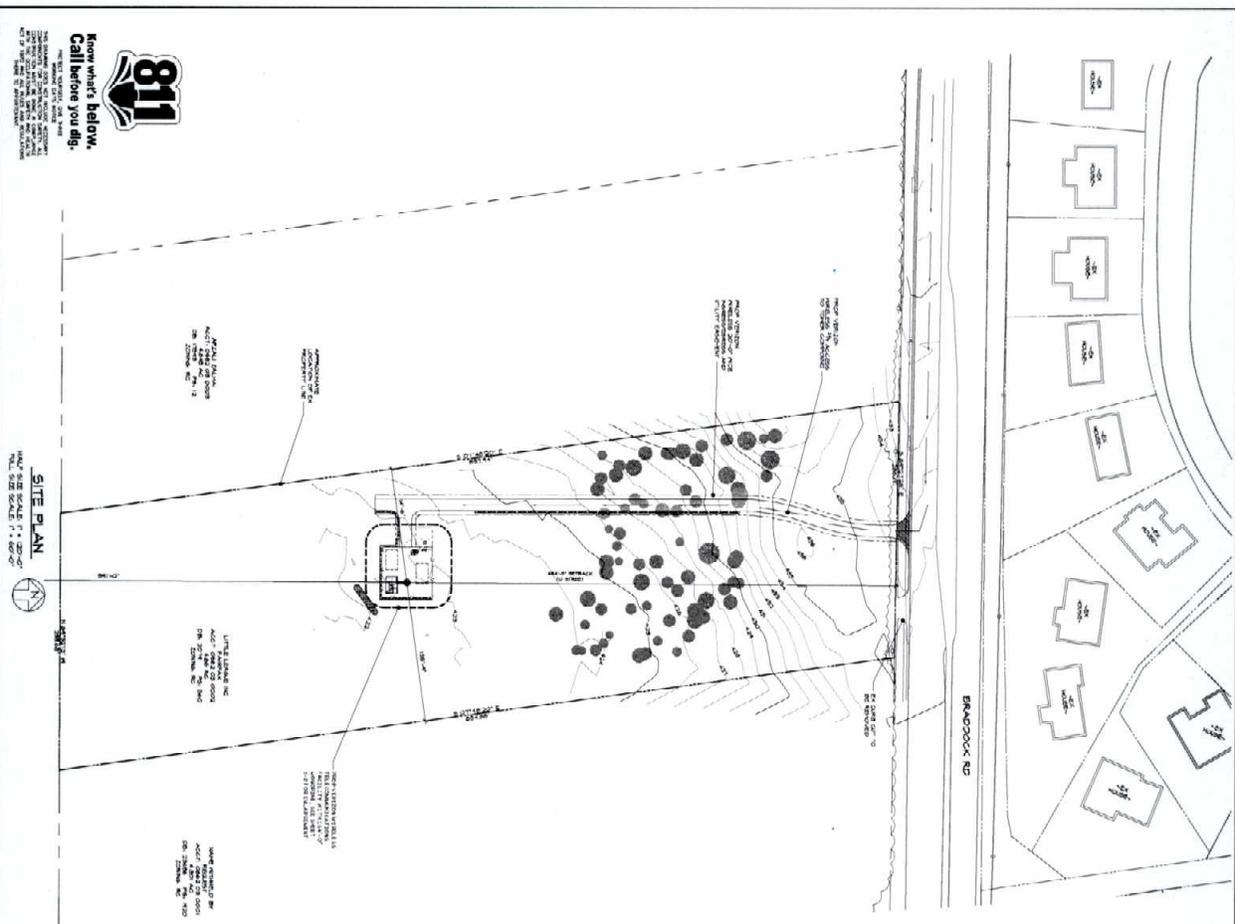
VZW - 4G LTE Coverage - With Site Cobbs Corner



4G LTE RSRP
-95dBm

0 0.6129
miles
Scale: 1:29,310

A B C D E F G H J K L M

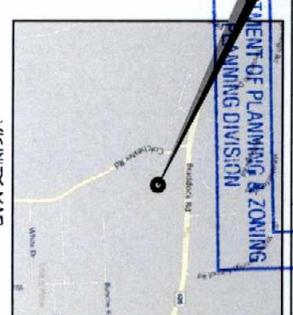


EASEMENT DESCRIPTION

DESCRIPTION OF THE EASEMENT: A 10' wide easement for utility lines (water, sewer, gas, electric) is granted over the land shown on the attached site plan. The easement is to be used for the installation, maintenance, and repair of utility lines. The easement is to be used for the installation, maintenance, and repair of utility lines. The easement is to be used for the installation, maintenance, and repair of utility lines.

STIPULATIONS OF PLANNING & ZONING

1. THE EASEMENT SHALL BE GRANTED FOR THE TERM AND UNDER THE TERMS AND CONDITIONS SET FORTH IN THIS INSTRUMENT. THE EASEMENT SHALL BE GRANTED FOR THE TERM AND UNDER THE TERMS AND CONDITIONS SET FORTH IN THIS INSTRUMENT. THE EASEMENT SHALL BE GRANTED FOR THE TERM AND UNDER THE TERMS AND CONDITIONS SET FORTH IN THIS INSTRUMENT.



MRP
MOORE & MITCHELL ASSOCIATES, INC.
 10000 WOODBURN AVENUE
 SUITE 100
 FAIRFAX COUNTY, VA 22030

verizon
 COBBLE CORNER
 SITE ADDRESS
 CENTREVILLE, VA 22030 (FAIRFAX COUNTY)

DISPERSED BY: JCT
DESIGNED BY: JCT
DATE: 02/27/2015
SCALE: AS SHOWN

TITLE: Site Plan
PROJECT NO.: 091715
DATE: 02/27/2015
SCALE: AS SHOWN

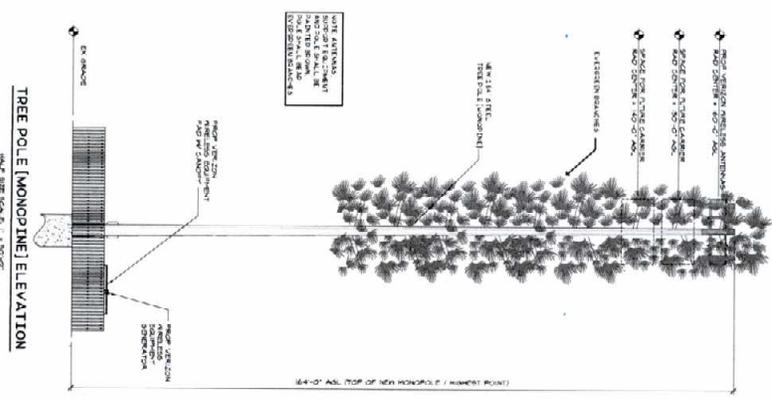
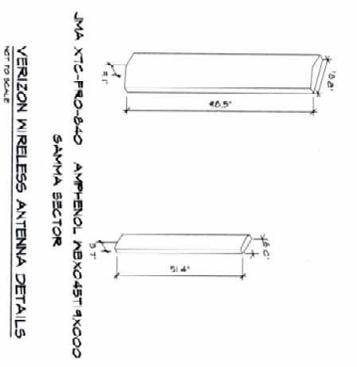
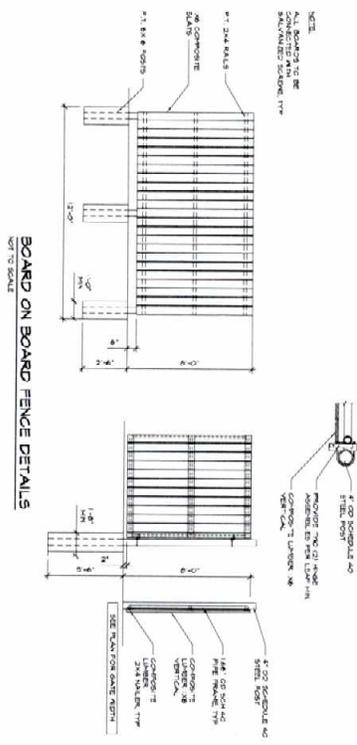
REVISIONS:

| NO. | DESCRIPTION | DATE |
|-----|-------------------|------------|
| 1 | ISSUED FOR PERMIT | 02/27/2015 |

PROJECT NO.: 091715
DATE: 02/27/2015
SCALE: AS SHOWN

SHEET: C-1
11

A B C D E F G H J K L M N P Q R



BOARD ON BOARD FENCE DETAILS
1/8\"/>

VERIZON WIRELESS ANTENNA DETAILS
1/8\"/>

TREE POLE (MONOPOLIE) ELEVATION
1/8\"/>

MRP
MORNING & NICHOLSON
ASSOCIATES, INC.
1000 N. GARDEN ST., SUITE 200
FAIRFAX, VA 22031
TEL: 703-261-1100
WWW.MORNINGANDNICHOLSON.COM

verizon
COBBES CORNER
SITE ADDRESS
CENTREVILLE, VA 22030 (FAIRFAX COUNTY)

REVISED: _____
BY: _____
DATE: _____
DRAWN: _____
DATE: _____
SCALE: _____

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C-3

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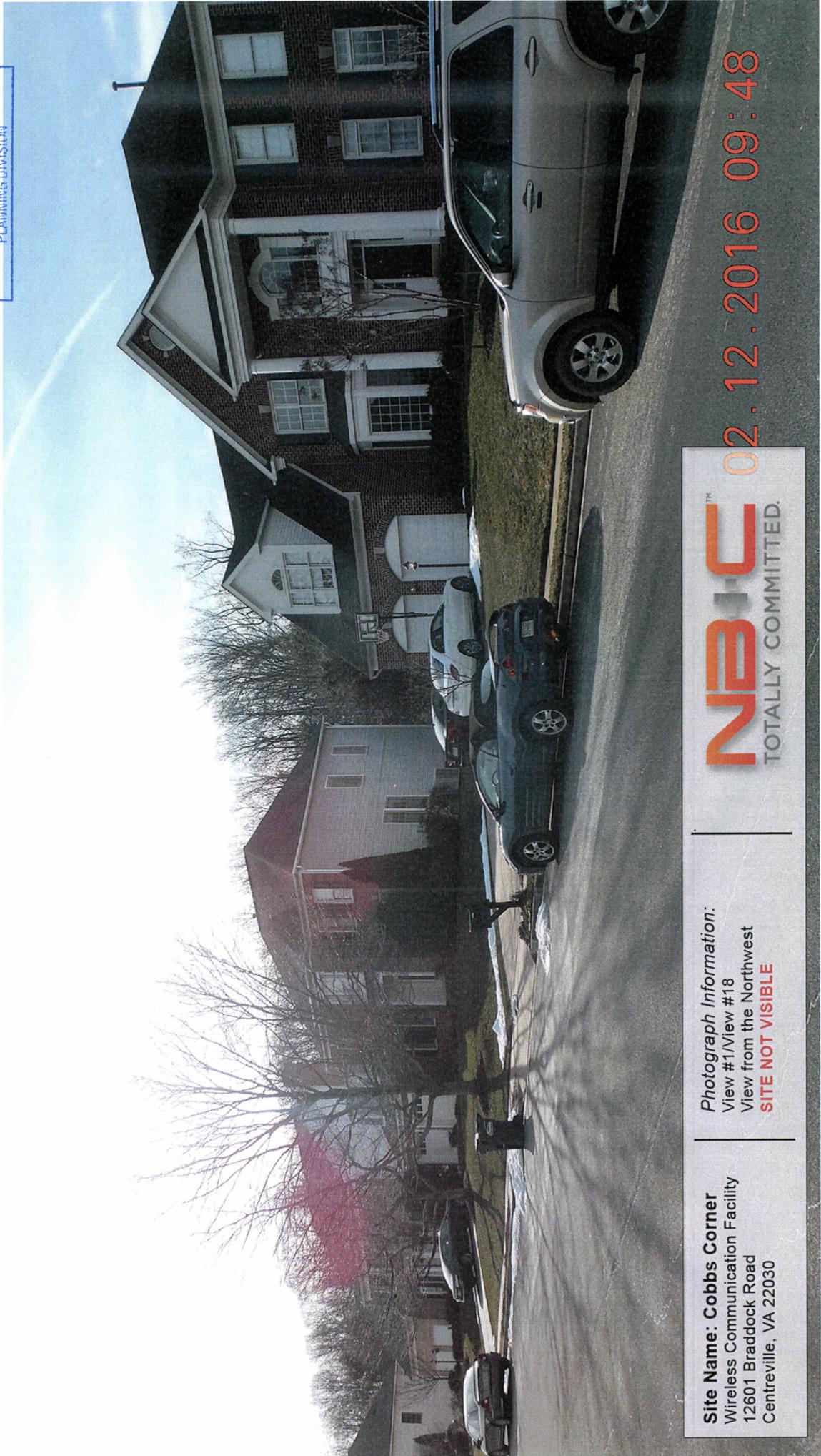
2/12/2016



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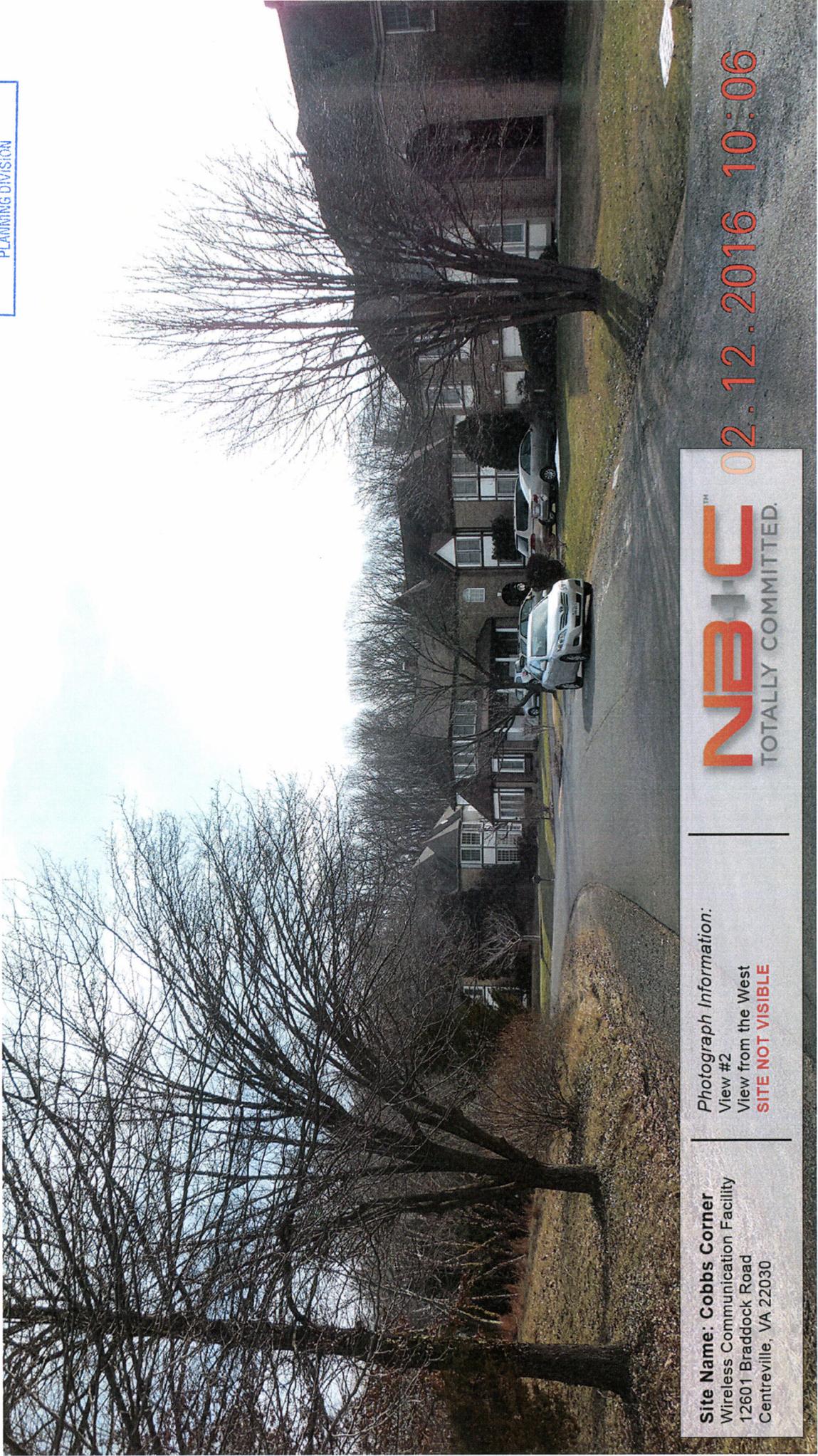
Photograph Information:
View #1/View #18
View from the Northwest
SITE NOT VISIBLE

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
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Photograph Information:
View #2
View from the West
SITE NOT VISIBLE

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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
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Photograph Information:
View #3
View from the West
SITE NOT VISIBLE

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 Wireless Communication Facility
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Photograph Information:
 View # 4
 View from the South
SITE NOT VISIBLE

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Site Name: Cobbs Corner
 Wireless Communication Facility
 12601 Braddock Road
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Photograph Information:
 View #5
 View from the South
SITE NOT VISIBLE

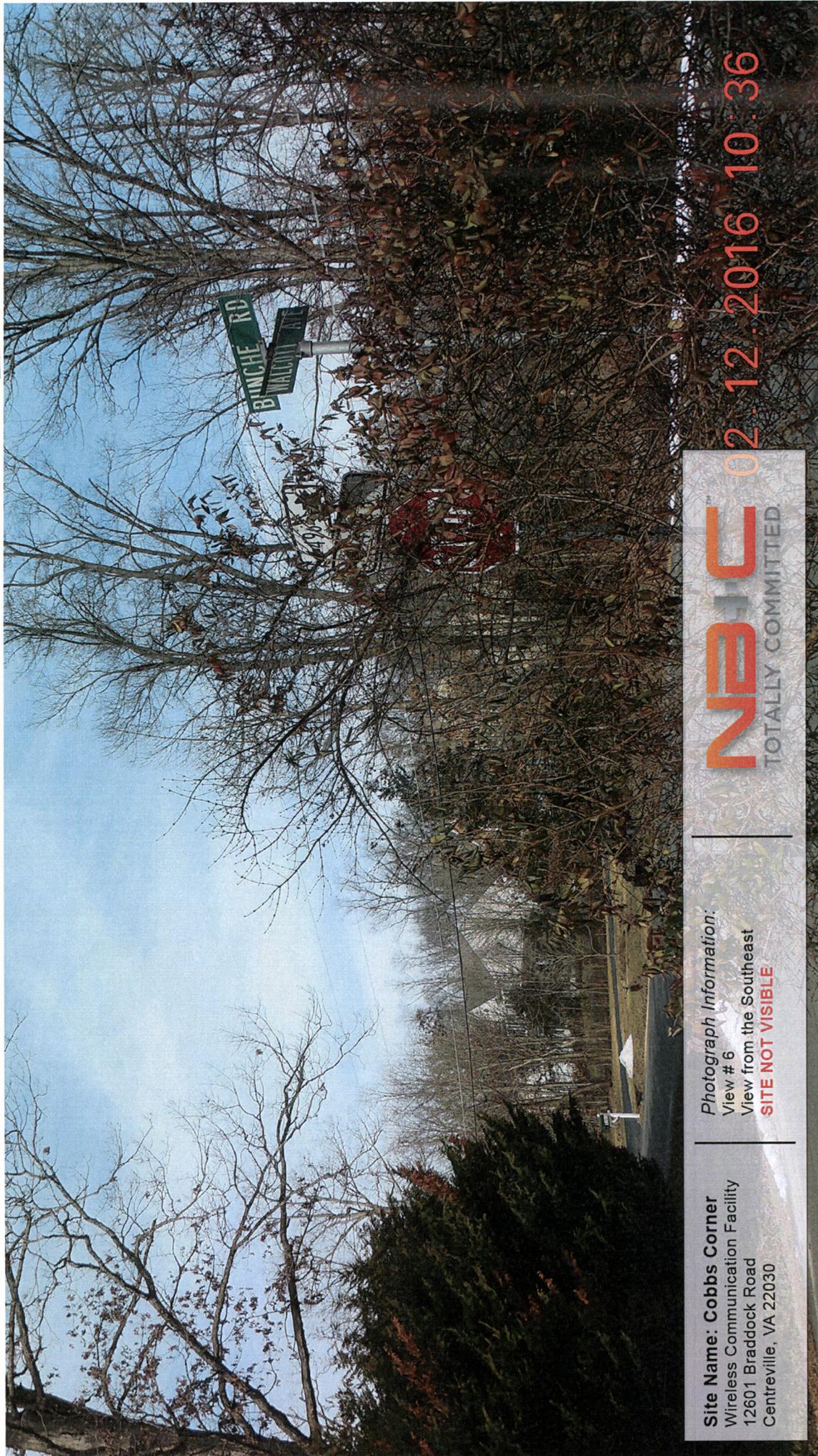
NBC
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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
View # 6
View from the Southeast
SITE NOT VISIBLE

NBC
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02 12 2016 10:36



02.12.2016 10:00

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
View #7
View from the Southeast
Showing the Existing Site



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Site Name: Cobbs Corner
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Photograph Information:
View #7
View from the Southeast
Showing the Proposed Site

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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
View #8
View from the North
SITE NOT VISIBLE

NBC
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Photograph Information:
View #9
View from the Northeast
Showing the Existing Site

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

NBC
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02:12:2016 09:42

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Photograph Information:
View #9
View from the Northeast
Showing the Proposed Site

Site Name: Cobbs Corner
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12601 Braddock Road
Centreville, VA 22030

NEBC
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Photograph Information:
View #10
View from the Northeast
SITE NOT VISIBLE

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

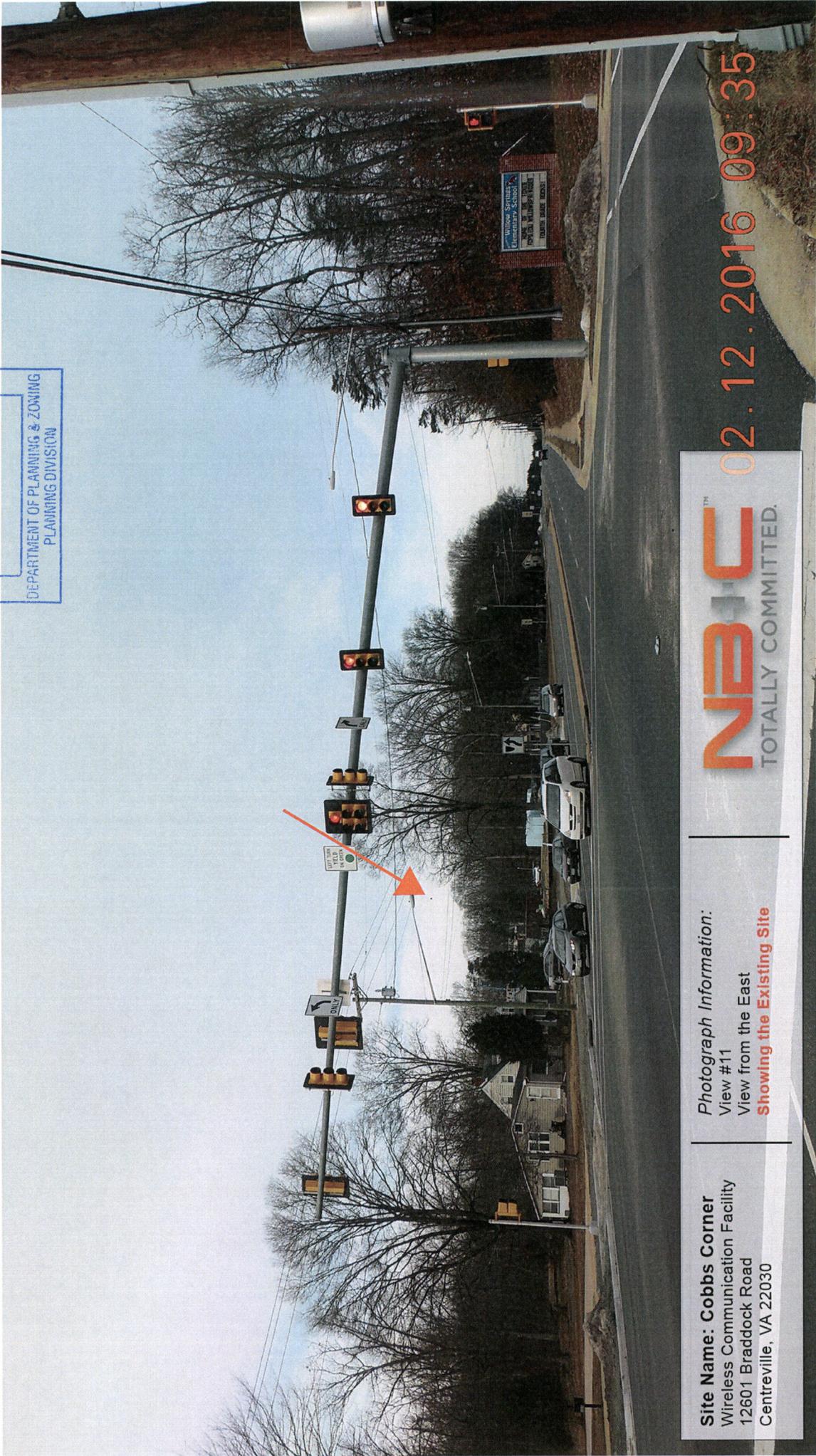
NBCTM
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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
View #11
View from the East
Showing the Existing Site

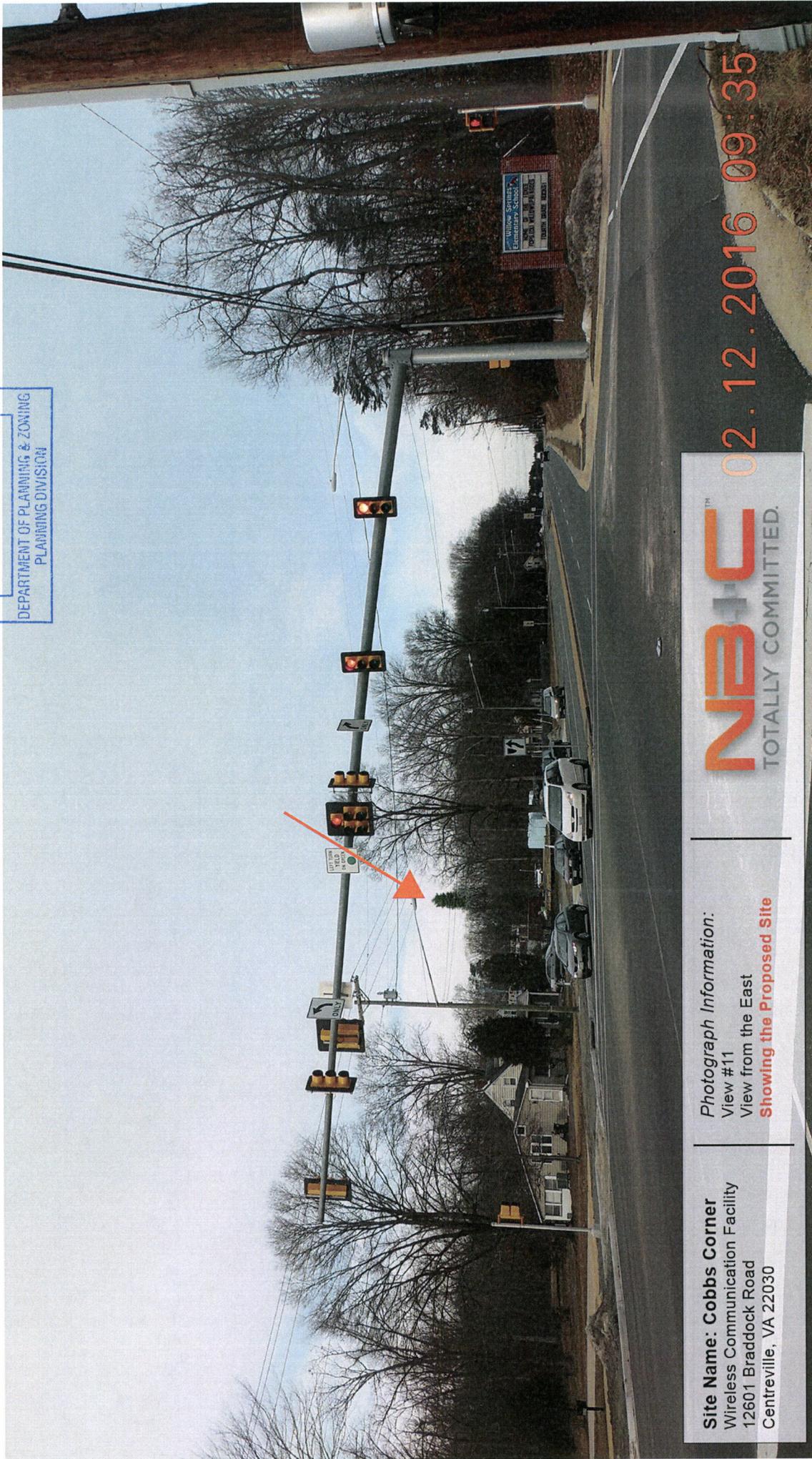
NBC
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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
View #11
View from the East
Showing the Proposed Site

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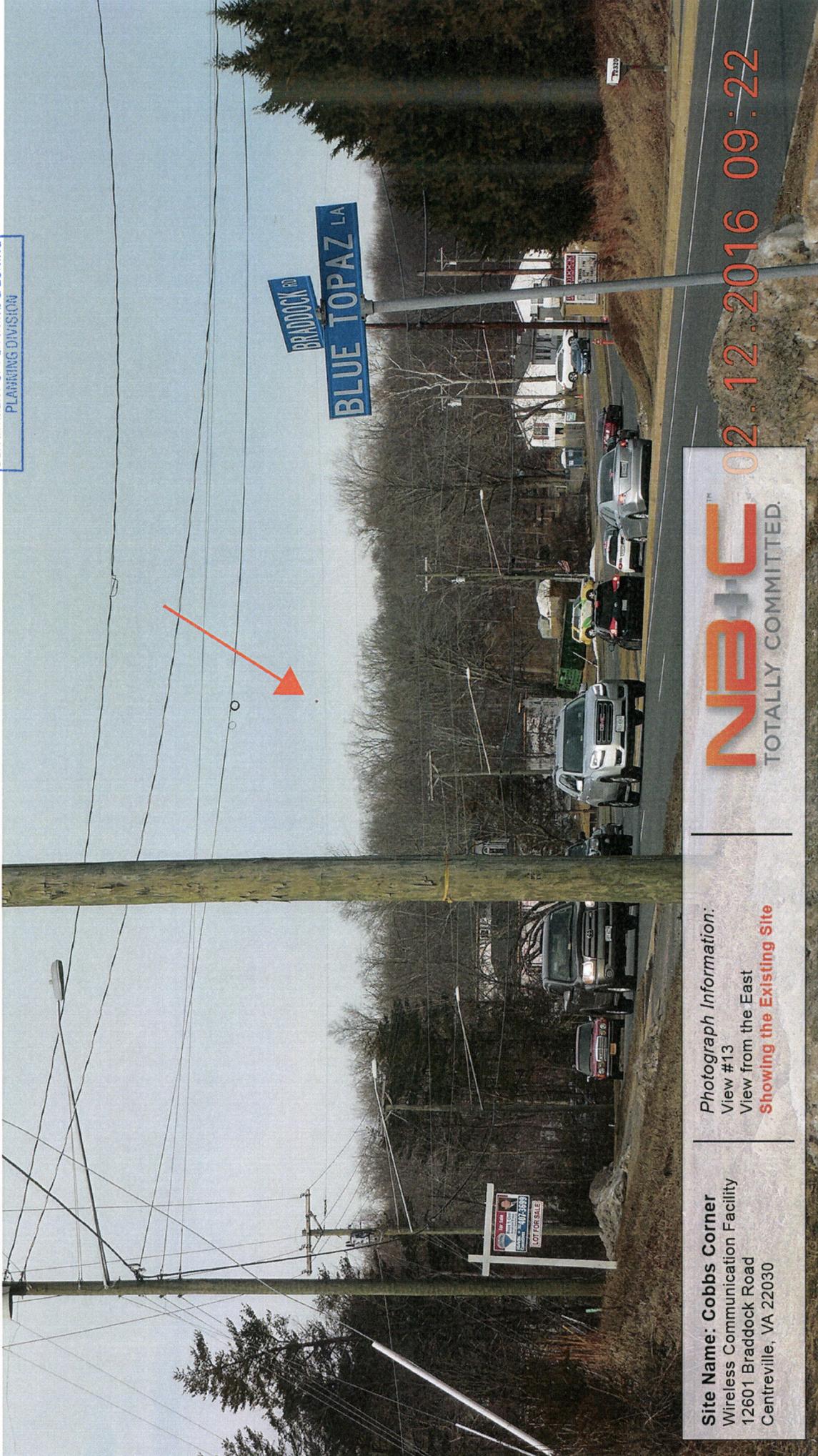
Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
View #12
View from the East
SITE NOT VISIBLE

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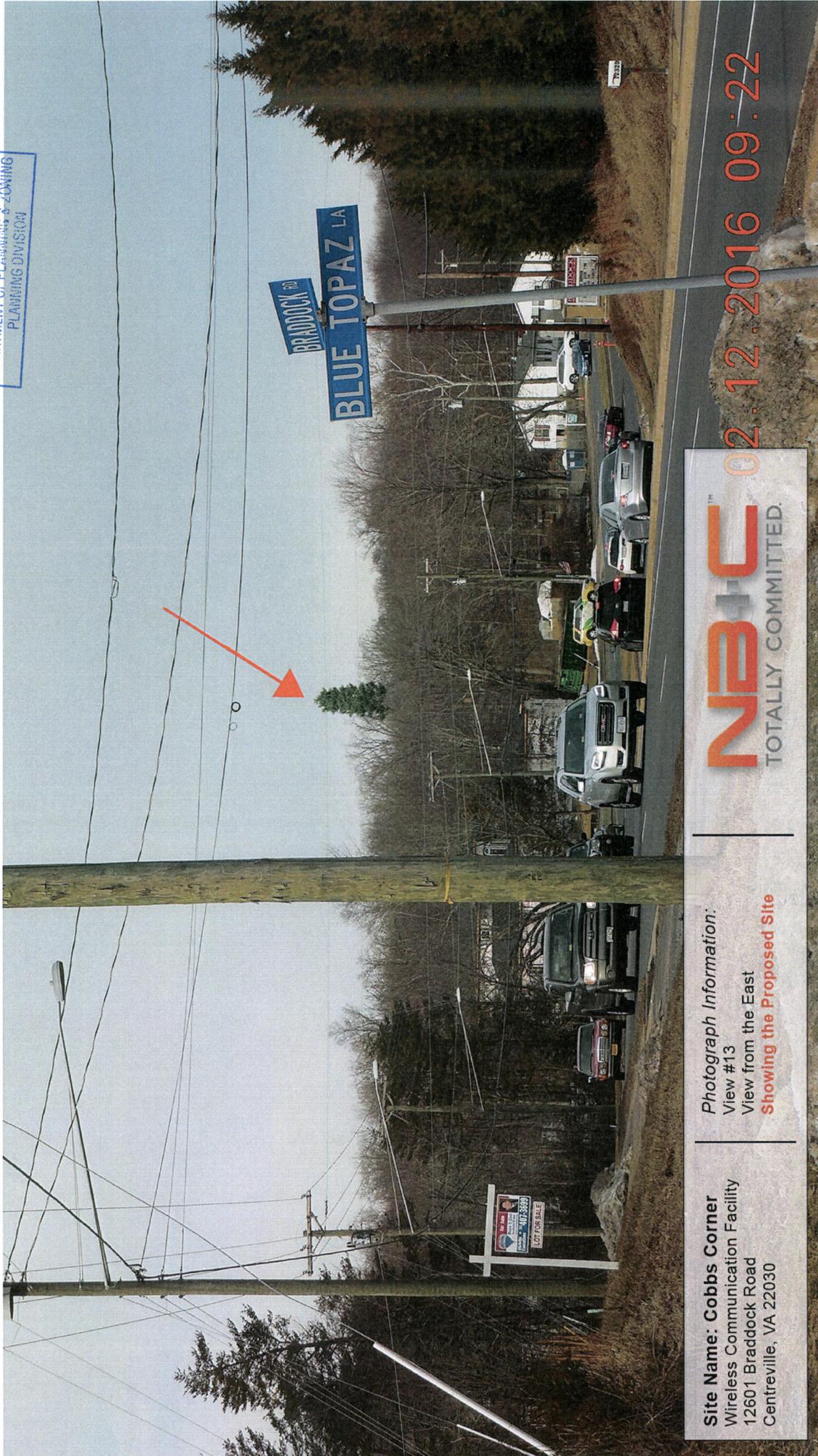
Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
View #13
View from the East
Showing the Existing Site

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Site Name: Cobbs Corner
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Centreville, VA 22030

Photograph Information:
View #13
View from the East
Showing the Proposed Site

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Photograph Information:
View #14
View from the East
Showing the Existing Site

Site Name: Cobbs Corner
Wireless Communication Facility
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Centreville, VA 22030

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Photograph Information:
View #20
View from the Southeast
SITE NOT VISIBLE

Site Name: Cobbs Corner
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12601 Braddock Road
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Photograph Information:
View #21
View from the North
SITE NOT VISIBLE

Site Name: Cobbs Corner
Wireless Communication Facility
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Centreville, VA 22030

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Photograph Information:
View #14
View from the East
Showing the Proposed Site

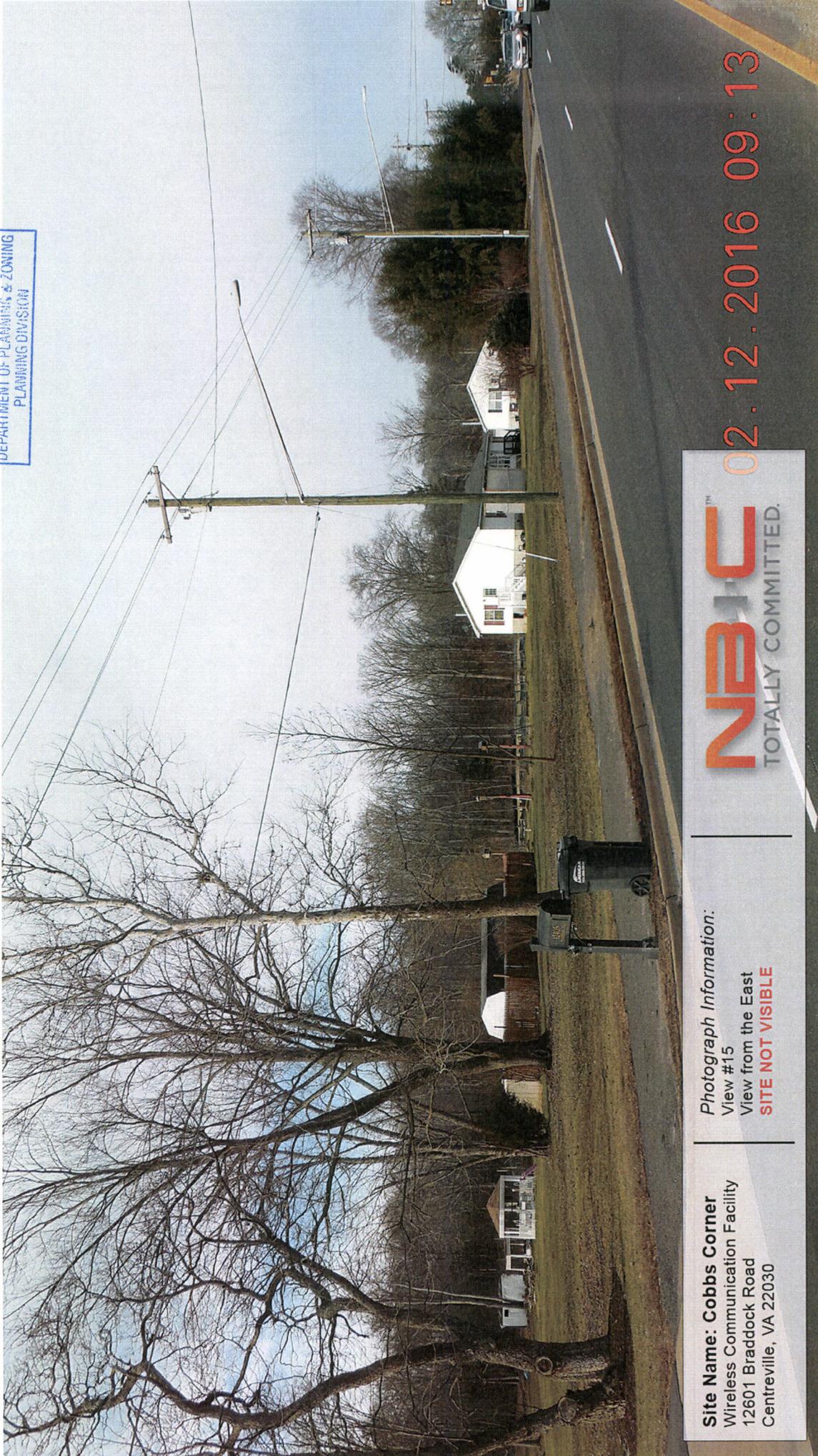
Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

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02-12-2016 09:28

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Site Name: Cobbs Corner
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12601 Braddock Road
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Photograph Information:
View #15
View from the East
SITE NOT VISIBLE

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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
View #16
View from the Northwest
Showing the Existing Site

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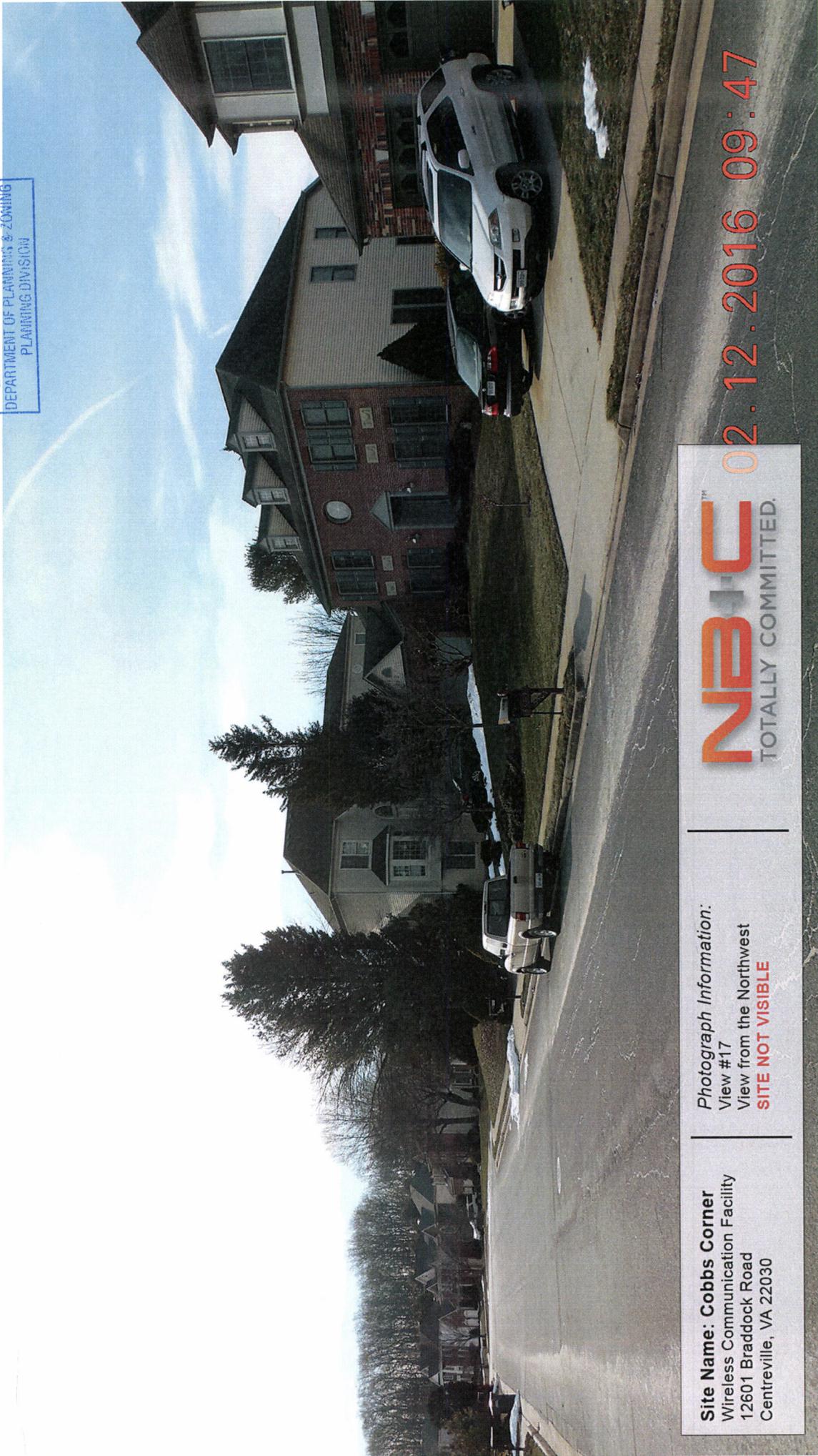
Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
View #16
View from the Northwest
Showing the Proposed Site

NBCTM
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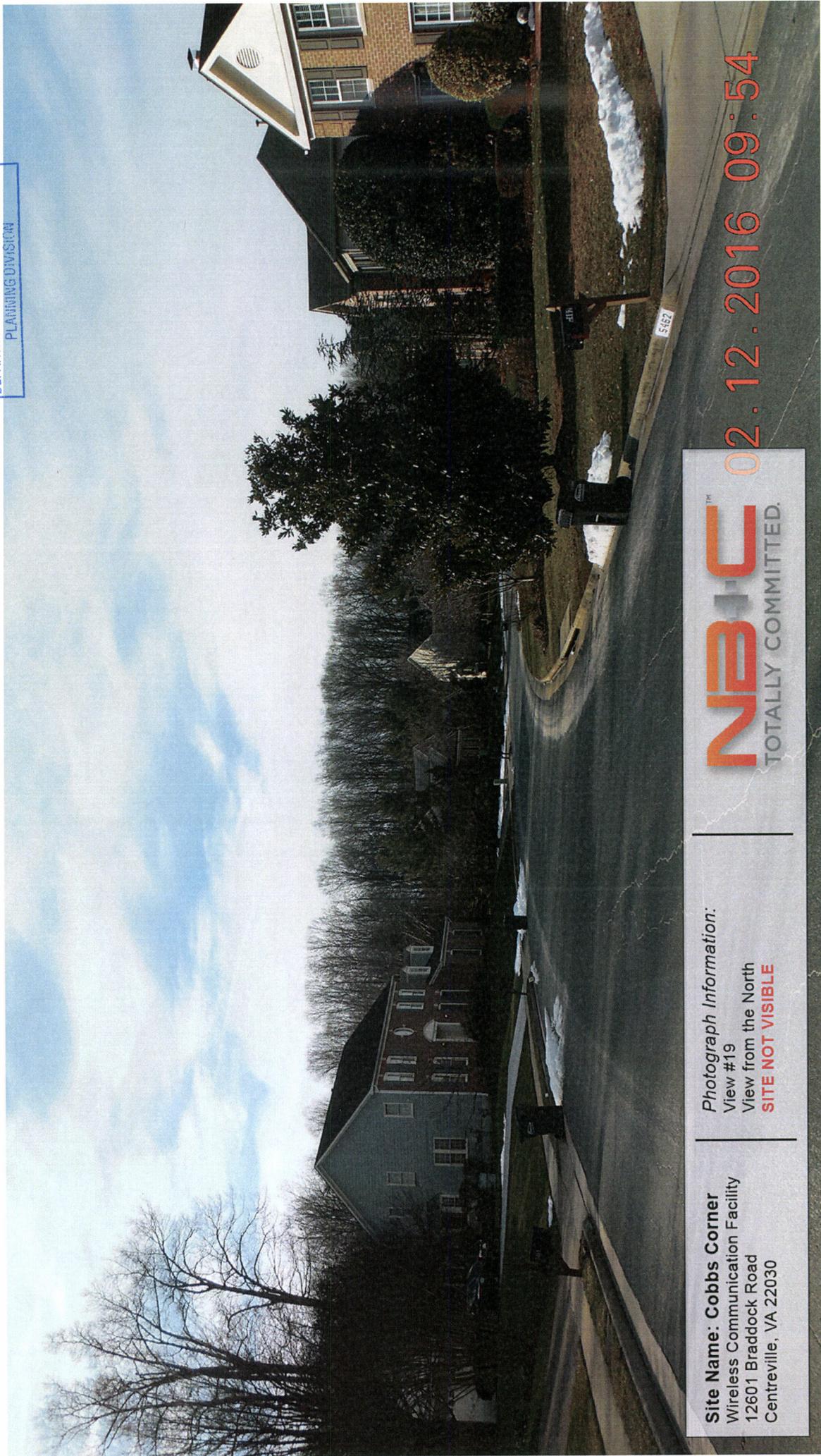
Photograph Information:
View #17
View from the Northwest
SITE NOT VISIBLE

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

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Site Name: Cobbs Corner
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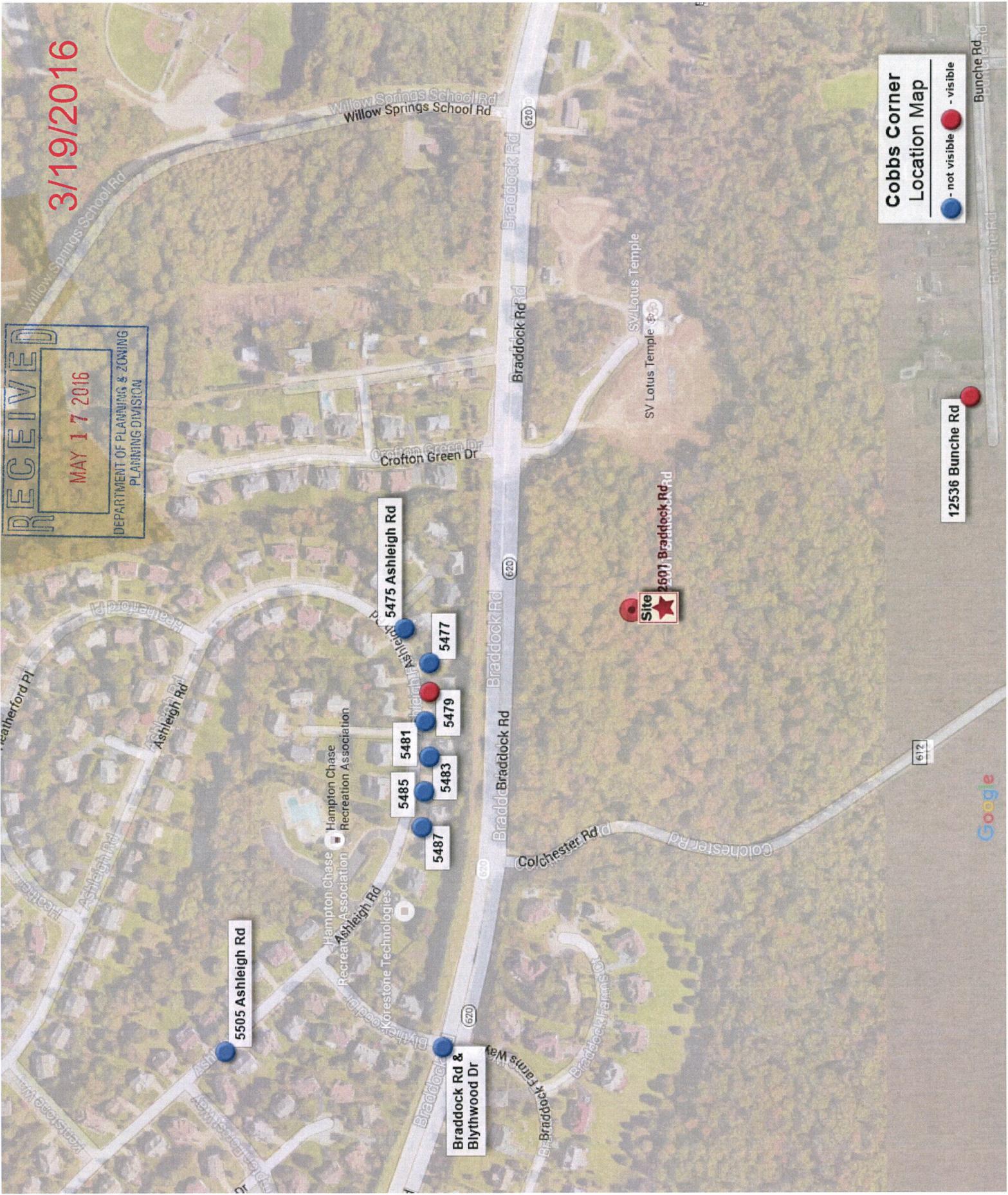
Photograph Information:
View #19
View from the North
SITE NOT VISIBLE

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Cobbs Corner
Location Map

● - not visible
● - visible

12536 Bunche Rd

Site
2601 Braddock Rd

5505 Ashleigh Rd

5475 Ashleigh Rd

5485
5481
5483
5479
5477

Braddock Rd &
Blythwood Dr

Willow Springs School Rd

Braddock Rd

Braddock Rd

Braddock Rd

Braddock Rd

Braddock Rd

Braddock Rd

Crofton Green Dr

SV Lotus Temple

2601 Braddock Rd

Colchester Rd

Colchester Rd

612

Google

Bunche Rd

Bunche Rd

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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
5419 Ashleigh Rd
View from the Northwest
SITE NOT VISIBLE

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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
5475 Ashleigh Rd
View from the North
SITE NOT VISIBLE

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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
5477 Ashleigh Rd
View from the North
SITE NOT VISIBLE

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Photograph Information:
5479 Ashleigh Rd
View from the North
Showing the Existing Site

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030



3/19/2016

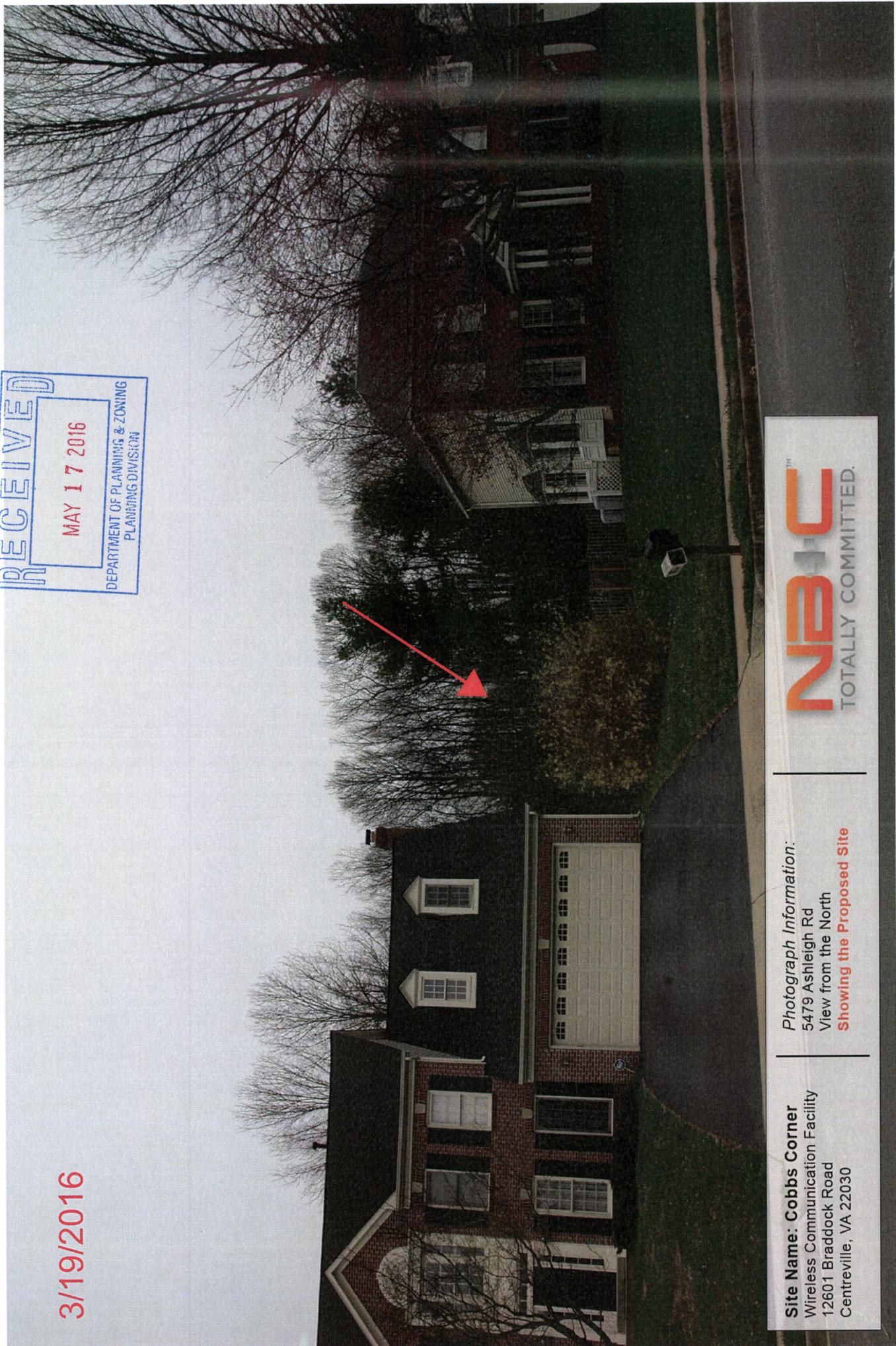
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DEPARTMENT OF PLANNING & ZONING
PLANNING DIVISION



Photograph Information:
5479 Ashleigh Rd
View from the North
Showing the Proposed Site

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

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Photograph Information:
5481 Ashleigh Rd
View from the North
SITE NOT VISIBLE

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

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3/19/2016



Photograph Information:
5483 Ashleigh Rd
View from the North
SITE NOT VISIBLE

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
5485 Ashleigh Rd
View from the Northwest
SITE NOT VISIBLE

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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
5487 Ashleigh Rd
View from the Northwest
SITE NOT VISIBLE

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Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

Photograph Information:
5505 Ashleigh Rd / View #17
View from the Northwest
SITE NOT VISIBLE

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Photograph Information:
12536 Bunche Rd
View from the South
Showing the Existing Site

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

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Photograph Information:
12536 Bunche Rd
View from the South
Showing the Proposed Site

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

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Photograph Information:
Braddock Rd & Blythewood Dr
View from the Northwest
SITE NOT VISIBLE

Site Name: Cobbs Corner
Wireless Communication Facility
12601 Braddock Road
Centreville, VA 22030

NBCTM
TOTALLY COMMITTED.



County of Fairfax, Virginia

MEMORANDUM

DATE: April 15, 2016

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

FROM: Chris Caperton, Chief
Facilities Planning Branch, DPZ

SUBJECT: ADDENDUM
Section 15.2-2232 Review
Application 2232-S15-5 (Concurrent with SE 2015-SP-023)
Verizon Wireless
Proposed Telecommunications Facility
12601 Braddock Road, Centreville, VA 22030
Tax Map 66-2 ((3)) 2

Pursuant to Va. Code Sec. 15.2-2232, the Facilities Planning Branch offers the following additional comments to our original memorandum dated December 14, 2015 (Attachment A) for the proposed telecommunications facility at 12601 Braddock Road.

BACKGROUND

The applicant Verizon Wireless (Verizon), proposes to construct a 164' tall monopole with an associated equipment compound designed to hold telecommunications antennas for Verizon and up to 2 future carriers. The proposal is also subject to review and approval of SE 2015-SP-023. The applicant states the monopole is needed to fill existing coverage gaps and provide enhanced service to residences and commuters in this geographical area.

Location: The proposed telecommunications facility will be located at 12601 Braddock Road, Fairfax, VA 22030. The property is located on the south side of Braddock Road and approximately 600' east of Colchester Road.

Site: The 4.86 acre site is currently undeveloped with mature deciduous 80' tall tree cover. The lot is 835' long and 254' wide.

On January 21, 2016, a public hearing was held by the Planning Commission on the proposed facility. Due to extensive community feedback, a majority being from the Hampton Forest Homeowner's Association (HFHOA), a decision on the application was deferred and is now scheduled for June 16, 2016.

In the interim, the Planning Commission directed staff to hold a community meeting with the HFHOA to discuss their concerns, and a meeting was held February 22, 2016. The HFHOA concerns centered on visibility of the proposed monopole from their community, and they requested consideration of alternative locations for the monopole. In response to these primary concerns and some other issues raised at the meeting, the community requested Verizon Wireless and staff to consider additional actions, as follows:

- Relocating the proposed 164' tall monopole to approximately 500' back from the Braddock Road entrance, instead of 240' back. This would help reduce visibility of the monopole for the HFHOA, especially for residences along the southernmost portion of Ashleigh Road, which have reverse frontage lots on Braddock Road across from the subject site.
- Reconfiguring the driveway at the proposed site from a "straight in" driveway to a "dog leg" design to better camouflage the facility from the Braddock Road entrance.
- Revising the design of the monopole to a tree pole (monopine).
- Resolving the issue of whether a red marker light is required on top of the monopole.
- Conducting another balloon fly at the relocated point on the subject property.
- Considering relocating the proposed facility to one of approximately 8 other sites to the east or west, along or adjacent to Braddock Road.
- Meeting with Supervisor Pat Herrity and Planning Commission Chairman Pete Murphy to discuss all concerns.

Results of the requested actions are as follows:

- Verizon proposed relocating the facility further back on the subject property so that it is now approximately 500' from the Braddock Road entrance.
- Verizon proposed a reconfigured driveway to reflect the "dog leg" design.
- Verizon revised the design of the monopole to a monopine.
- The Zoning Administration Division received confirmation from the Helicopter Division of the Fairfax County Police Department that no red marker light is required on top of the structure. This determination was shared with the HFHOA.
- Verizon conducted another balloon fly on Saturday, March 19, 2016 from 8 a.m. to 12 noon. Sufficient notice was given to the community of this event by the President of the HFHOA. In addition, Supervisor Herrity, Chairman Murphy, and staff viewed the balloon fly.
- Verizon's contracted engineer, Millennium Engineering, studied the requested alternative locations and provided a detailed summary in a letter dated March 29, 2016 (Attachment B).

- Supervisor Herrity, Chairman Murphy, and staff held a meeting with the HFHOA and other interested parties on April 13, 2016. Verizon personnel explained the relocation and resultant change to the visibility of the monopole (now generally below tree line), clarified how the balloon fly was conducted, and illustrated why the alternative locations are not feasible. Further, Verizon personnel and staff addressed additional feedback from the community on these primary and other related issues.

LOCATION, CHARACTER, AND EXTENT

The purpose of the 2nd balloon fly on March 19, 2016 was to demonstrate the visibility of the monopole at the revised location on the subject property (500' back from Braddock Road). Results showed the visibility of the monopole (or monopine) drastically reduced for the HFHOA compared to the original balloon fly in September 2015. The 1st balloon fly revealed the proposed monopole to be above tree line. The 2nd balloon fly demonstrated the proposed monopole better camouflaged and generally below tree line. Reasons for this include the proposed cell tower being moved back 250', the 80' tall deciduous trees covering the subject property, and the approximate 10' reduction in elevation at the revised location due to slightly sloping terrain. The proposed monopine is expected to blend in well among the deciduous tree cover, even without leaves. In particular, the balloon was only barely visible generally below tree line from a berm behind a couple backyard properties on Ashleigh Road in the HFHOA community. These properties also have reverse frontage to Braddock Road. The only other views of the balloon were from 2 sites outside the HFHOA community. First, the balloon was only barely visible generally below tree line from Bunche Road, which is south of the subject site. Second, the balloon was visible above tree line at the intersection of Braddock Road and Blue Topaz Lane; however this location is over ½ mile east of the HFHOA community.

The letter from Millennium Engineering dated March 29, 2016 explains in detail why none of the proposed alternative locations offer a feasible solution. Millennium states that the purpose of the monopole at the designated site is to enhance in-building coverage to homes, schools, places of worship, etc. along Braddock Road, Colchester Road, Clifton Road and numerous adjoining residential roads in the area, and to provide capacity relief (offloading of traffic) from other overburdened Verizon facilities adjacent to the area. As a result, the target area must be based as close as possible to the intersection of Braddock and Colchester Roads. The suggested alternative sites reveal that these sites are either too close to existing adjacent facilities, or too far west to fill the desired coverage gap in the target area, as confirmed by the propagation maps included with Millennium's letter. Therefore, the subject property continues to offer the best solution for improved cellular coverage in the designated area.

Barbara Berlin
2232-S15-5 (Concurrent with SE 2015-SP-023)
April 15, 2015
Page 4

CONCLUSION AND RECOMMENDATIONS

Staff again concludes that the subject proposal, as amended, by Verizon Wireless, to install a telecommunications facility at 12601 Braddock Road, Fairfax, VA 22030, 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-S15-5, as amended, substantially in accord with provisions of the adopted Comprehensive Plan.

CBC: DWH



County of Fairfax, Virginia

MEMORANDUM

DATE: December 14, 2015

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

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

SUBJECT: Section 15.2-2232 Review
Application 2232-S15-5 (Concurrent with **SE 2015-SP-023**)
Verizon Wireless
Proposed Telecommunications Facility
12601 Braddock Road, Centreville, VA 22030
Tax Map 66-2 ((3)) 2

FILE COPY

Pursuant to Va. Code Sec. 15.2-2232, the Facilities Planning Branch of the Planning Division offers the following comments and recommendation on the proposed telecommunications facility at 12601 Braddock Road.

PROJECT DESCRIPTION

The applicant Verizon Wireless (Verizon), proposes to construct a 164' tall monopole with an associated equipment compound designed to hold telecommunications antennas for Verizon and up to 2 future carriers. The proposal is also subject to review and approval of SE 2015-SP-023. The applicant states the monopole is needed to fill existing coverage gaps and provide enhanced service to residences and commuters in this geographical area.

The proposed facility is summarized below (the 2232 Review Application is attached and includes by reference the plans included with the SE 2015-SP-023 staff report).

Location: The proposed telecommunications facility will be located at 12601 Braddock Road, Centreville, VA 22030. The property is located on the south side of Braddock Road and approximately 600' east of Colchester Road.

Site: The 4.86 acre site is currently undeveloped with mature deciduous tree cover. The lot is 835' long and 254' wide.

Proposed Facility: The proposed 164' monopole and equipment compound will be constructed 200' south of the front property line (Braddock Road), 85' from the west property line, 115' from the east property line, and 570' from the south property line. Verizon is the initial carrier, installing 15 panel antennas (5 per sector) located at a 160' RAD center. Future providers will be located at 150' and 140' RAD centers. The equipment compound is 2500 square feet. It contains the monopole, 4 equipment cabinets (2 future), 1 telco cabinet and 1 diesel generator, and equipment space for the 2 future carriers.

Screening: Proposed screening includes an 8' tall board-on-board fence surrounding the equipment compound. Mature deciduous trees populate the lot; however additional landscaping plantings will be placed to meet transitional screening requirements.

Access: Access is provided by a new 12' long asphalt driveway off Braddock Road, which thereafter continues as a gravel driveway through the center of the property to access the equipment cabinet compound. A new curb cut is required for the driveway, and an existing curb cut to the east will be removed.

Operations: The telecommunications facility will operate 24 hours per day, 7 days per week. It is an unmanned facility, and will be visited approximately once or twice per month by Verizon personnel for site inspection purposes, and for any needed repairs or alterations.

Service Area: The proposed use will improve coverage for the residential communities located in Hampton Forest, Lewis Park, Braddock Farms, and Braddock Woods subdivisions. Coverage will also be improved for residents and commuters on Braddock Road, Colchester Road, and Doyle Road.

COMPREHENSIVE PLAN GUIDANCE

The subject property is located in the Area III, Pohick Planning District, P1-Twin Lakes Community Planning Sector. The Comprehensive Plan Map identifies the property as planned for residential use at .1-.2 du/ac.

Area Plan

FAIRFAX COUNTY COMPREHENSIVE PLAN, 2013 Edition
Pohick Planning District, Amended through 10-20-2015
Overview, Pages 1, 3

AREA III

“POHICK PLANNING DISTRICT OVERVIEW

The Pohick Planning District is located in the southwest portion of Fairfax County. This planning district is generally bounded by Braddock Road, Rolling Road, Hooes Road, the Occoquan River, Union Mill Road and Compton Road...

Major road access is via Braddock Road, Rolling Road, Old Keene Mill Road, Ox Road (Route 123), Fairfax County Parkway (Route 286), and Clifton Road.

.....

CONCEPT FOR FUTURE DEVELOPMENT

As envisioned in the Concept for Future Development, the Pohick Planning District includes both Suburban Neighborhoods and Low Density Residential Areas. Existing development in this district is generally consistent with the Concept.

The Low Density Residential portion of this Planning District generally includes the area west of Ox Road...”

FAIRFAX COUNTY COMPREHENSIVE PLAN, 2013 Edition
Pohick Planning District, Amended through 10-20-2015
P1-Twin Lakes Community Planning Sector, Pages 21, 22, 26

AREA III

“P1 TWIN LAKES COMMUNITY PLANNING SECTOR

.....

RECOMMENDATIONS

Land Use

.....

2. Nonresidential uses requiring special exception or special permit approval should be rigorously reviewed. In general, these uses should be located at the boundary of Low Density Residential Areas and Suburban Neighborhoods or where their impact on existing residences is minimal. These uses should be granted only if the following conditions are met:
 - Access for the use is oriented to an arterial;

- The use is of a size and scale that will not adversely impact the character of the area in which it is located;
- The use is designed to mitigate impacts on the water quality of the Occoquan Reservoir. ...

.....

Heritage Resources

.....

Any development or ground disturbance in this sector, both on private and public land, should be preceded by heritage resource studies, and alternatives should be explored for the avoidance, preservation or recovery of significant heritage resources that are found. In those areas where significant heritage resources have been recorded, an effort should be made to preserve them. If preservation is not feasible, then, in accordance with countywide objectives and policies as cited in the Heritage Resources section of the Policy Plan, the threatened resource should be thoroughly recorded and in the case of archaeological resources, the artifacts recovered.”

Policy Plan

FAIRFAX COUNTY COMPREHENSIVE PLAN, 2013 Edition
Public Facilities, Amended through 3-4-2014, Pages 37-40

POLICY PLAN

“GENERAL GUIDELINES

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 monopoles, 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 e. Locate mobile and land-based telecommunication facilities on public property only after a lease agreement between the county, or related board or authority, and the service provider has been established.
- 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;
 - Obscure or block the views of proposed telecommunication facilities with other existing structures, vegetation, tree cover, or topographic features to the maximum extent feasible; and
 - 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. The views of and vistas from architecturally and/or historically significant structures should not be impaired or diminished by the placement of telecommunication facilities.
- Policy n. Site proposed telecommunication facilities to avoid areas of environmental sensitivity, such as steep slopes, floodplains, wetlands, environmental quality corridors, and resource protection areas.
- Policy o. Site proposed telecommunication facilities to allow for future expansion and with corresponding levels of screening to accommodate expansion.

- Policy p. Design and site proposed telecommunication facilities to preserve areas necessary for future right-of-way dedication and ancillary easements for construction of road improvements.
- Policy q. Locate and construct antennas used for purposes other than mobile and land-based telecommunication services in accordance with the same guidelines established in this "Mobile and Land-Based Telecommunications Services" section.
- 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. (See Figures 11 and 12.)**
- Policy a. Disguise or camouflage the appearance of proposed telecommunication facilities to resemble other man-made structures and natural features (such as flagpoles, bell monopoles, and trees) that are typically found in a similar context and belong to the setting where placed.
- Policy b. Design proposed telecommunication facilities that are disguised and camouflaged to be of a bulk, mass and height typical of and similar to the feature selected.
- 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."

STAFF ANALYSIS

Conformance with the Comprehensive Plan

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

Location

The subject property is in a low-density residential area designated at .1-.2 dwelling units/acre. The north side of the property fronts a 4-lane major thoroughfare, Braddock Road. This meets Comprehensive Plan objectives that when a Special Exception is required, a proposed public facility should be in a low density residential area and oriented toward a major thoroughfare. Providing room for up to 2 additional service providers also aligns with Plan guidelines to co-locate mobile and land-based telecommunication facilities operated by different service providers on single sites and/or structures wherever possible.

Character

The proposed monopole is 164' tall and will be constructed on a lot that is undeveloped featuring total deciduous tree cover, approximately 80' tall. In addition, total tree cover exists on 2 undeveloped lots to the west, and to the south of the subject property. This meets Comprehensive Plan objectives to provide the greatest opportunity to locate new facilities that provide the greatest opportunity to conceal the facility and minimize its visual impact on surrounding areas, and to the greatest extent possible, camouflage its appearance. It is also consistent with Plan guidelines that a Special Exception use is of a size and scale that will not adversely impact the character of the area in which it is located.

The equipment cabinet compound at the base of the proposed monopole will be screened by an 8' tall board-on-board fence. This complements the surrounding existing tree cover. Also, substantial buffering is provided in the applicant's proposal by adding additional shrubs and evergreen trees in a 50' perimeter around the equipment compound to help fill in understory, and meet transitional screening as required by the Urban Forest Management Division. Therefore, this meets Plan objectives to design, site and/or landscape the proposed facility to minimize impacts on the character of the area, and another plan requirement to obscure or block the views of proposed telecommunication facilities with other existing structures, vegetation, tree cover, or topographic features to the maximum extent feasible.

Extent

The closest residence is 200' north in the Hampton Forest subdivision across the 4-lane Braddock Road thoroughfare. The other closest residential properties are 700' west across Colchester Road; 920' south, 490' southeast, and 645' east over undeveloped tree-covered properties, which also provide a natural buffer. The proposed expansion is consistent with Comprehensive Plan guidance to ensure that when new structures are necessary to meet the service area requirements for residential neighborhoods, the surrounding tree cover helps to mitigate the visual impact of the facility on the surrounding residential area.

Many months after the initial application was filed, it came to the Department of Planning and Zoning's attention that a single family home may be built on the neighboring lot east of the subject property. However, no site plan has been formally submitted to the County and it is difficult to make a judgment on the visual impact based on lack of a definitive site plan. The upper portion of the monopole may likely be visible from this homeowner's property, based on its likely visibility to certain other residences, especially across Braddock Road as demonstrated in a balloon fly in September 2015. To accommodate the potential impacts to the adjacent property, the applicant will add additional landscaping as mentioned above, and the proposed backup generator has been moved from the east to west side of the equipment compound. (The generator is only used for emergency back-up power and for occasional testing of its system.) Finally, the proposed facility will remain an unmanned facility with minimal traffic impact.

Barbara Berlin
2232-S15-5 (Concurrent with SE 2015-SP-023)
December 14, 2015
Page 9

CONCLUSION AND RECOMMENDATIONS

Staff concludes that the subject proposal, as amended, by Verizon Wireless, to install a telecommunications facility at 12601 Braddock Road, Centreville, VA 22030, 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-S15-5, as amended, substantially in accord with provisions of the adopted Comprehensive Plan.

CBC: DWH

MILLENNIUM ENGINEERING, P.C.

132 Jaffrey Road
Malvern, PA 19355

Cell: 610-220-3820
www.millenniumengineering.net

Fax: 610-644-4355
Email: pauldugan@comcast.net

March 29, 2016

Attn: Benjamin Pelletier, Zoning Manager
Network Building + Consulting
6095 Marshalee Drive, Suite 300
Elkridge, MD 21075

**Re: Supplemental RF Design Considerations for Proposed Verizon Wireless "Cobbs Corner"
Communications Facility**

Site Name: Cobbs Corner, Proposed 164' Monopole

Site Address: 12601 Braddock Road, Centerville, VA 22030 (Fairfax County)

Dear Mr. Pelletier,

The following information is supplemental to the information and Candidate Rule Outs furnished with the application package and reviewed by staff. Specifically, the applicant considered DVP transmission poles (which cannot be used) and Willow Springs ES and ballfields. Staff concurred with this assessment.

The objectives of the proposed communications facility are first to provide new reliable 4G coverage to an area known as Cobbs Corner in a northwestern area of the Springfield District of Fairfax County. More specifically, the proposed facility will provide reliable coverage to an area that spans approximately 0.5 – 1 mile in all directions from the proposed facility location. This area includes sections of Braddock Road (Route 620), Clifton Road (Route 645), Colchester Road, and numerous adjoining roads in the community. This improved signal level will enhance in-building coverage to homes, schools, churches, etc. in the area in which the site will serve. Secondly, the site will offload traffic (capacity relief) from adjacent facilities more specifically those identified on the propagation exhibits as *Shirley Gate, Springstone, Clifton, and Willow Springs*. Therefore, the proposed facility will provide both coverage and capacity improvements to the area in which the facility will serve.

Verizon Wireless RF engineers strive to achieve a minimum of -95 dBm target design threshold to the areas these facilities serve. The threshold of -95 dBm is depicted in green. The better the signal (above -95 dBm) the better in-building coverage and 4G throughput speeds. It is clear from the propagation exhibits that there is a significant gap in coverage in the Cobbs Corner community. The center of the target search area for this facility is the junction of Braddock Road (Route 620) and Colchester Road. The areas in white contain insufficient signal levels to serve subscribers reliably in this area. This does not imply the total lack of any kind of service in the white areas from the propagation exhibits, but weak signal levels in the area equates to little in-building coverage and slow data throughput speeds. The white areas do not reflect a total lack of any service, but varying levels of unreliable service.

It was brought to my attention that the county will request an evaluation of whether the Willow Springs Elementary School property could be a viable alternative to the proposed facility. I reviewed this property and given some careful consideration, and I do not find it a viable candidate for various reasons as follows:

- 1) The distance from the proposed facility to the existing site to the East, identified on the propagation exhibits is 1 mile. The school property, in the vicinity of the ball field, is only 0.6 miles from the existing Shirley Gate site. The result of a site at the school is that there would be too much overlapping coverage to the east and limiting the reach of the site to the west. More specifically, the coverage from a hypothetical site from the school would not reach Clifton Road to the west and would substantially limit the effectiveness of the site.
- 2) The ground elevation of the Little League Inc. Property is 426', while the ground elevation of the school property in the vicinity of the ball fields ranges from 410-428 feet. Therefore, there appears to be a small ground elevation disadvantage of the school property.
- 3) The hypothetical school property, due to the closer proximity to the Shirley Gate site to the east, would offer too much overlapping coverage with this existing site, while limiting the coverage reach to the west.

Other Locations Considered

Following the community meeting on 2/22/2016, we were requested to consider a number of other locations as follows:

Braddock Park at 13241 Braddock Road – this location is entirely within ½ mile from Verizon's existing site at the Centreville High School, and over a mile from the target search area for the proposed facility.

Twin Lakes Golf Course at 6201 Union Mill Road - this location is also entirely within ½ mile from Verizon's existing site at the Centreville High School, and over a mile from the target search area for the proposed facility.

Virginia Golf Center & Academy – this location is 1 mile west of the target search area and would completely fail to meet objectives for coverage to the target area.

Doyle Road – this road is over a half mile from the proposed facility location; therefore, this location is also too far west.

Kings Chapel Church at 12925 Braddock Road – this location is just west of the Doyle Road/Braddock Road junction and also too far west since it is over half a mile from our target search area.

Shirley Gate – this Verizon Wireless site is at Mott Community Center, one of the proposed alternate sites we were requested to consider. This is not an alternate as Verizon Wireless is already there.

Existing tree type structure at the Popeshead Substation at 12700 Popes Head Road. This is also not an alternate as Verizon Wireless is already there.

The question was raised about how far west the site could potentially be placed and still meet objectives. From the Colchester Road/Braddock Road junction, I would not recommend placing the site more than 0.1 miles from this junction in order to meet objectives.

There was also some discussion on upgrading existing sites to maximize coverage and capacity to serve the area. As discussed, Verizon Wireless continually modifies sites to best serve their licensed areas, but no further modifications to any of the adjacent sites would alleviate the need for the proposed facility to serve the objectives as outlined in this letter.

Specific questions were also raised pertaining to the viability of using a small cell or micro-cell solution. Verizon Wireless does deploy these alternative technologies where feasible and appropriate, but neither of these solutions would fulfill the objectives as outlined above due to the larger area the proposed facility is designed to serve. Small cells are being deployed in small areas where there are smaller pockets of unserved area or small

areas requiring capacity relief due to substantial high user traffic to existing facilities currently in service. With this particular application, only a macro cell is feasible to serve the 3-4 square miles of the community. Furthermore, even with small cells, antenna support structures would need to be sufficiently taller than the tree canopy in order to provide the necessary service to the area, which is why placement of small cell antennas on wooden utility poles is not feasible in this area.

All new communications facilities have unique objectives specific to the area the proposed site is designed to serve. Verizon Wireless is one of the original cellular network service providers. The antenna configuration which Verizon Wireless will deploy will accommodate 4 separate frequency bands which Verizon Wireless is licensed in Fairfax County, namely 700, 850, 1900, and 2100 MHz. Each of these licensed frequency bands are necessary to serve Verizon Wireless' vast subscriber base and the wide variety of voice and data services. These licensed frequency bands all work together to serve subscribers using the latest 4G LTE smartphone devices, while maintaining service for subscribers using the older 2G and 3G technologies. Maintaining existing wireless services while expanding in Verizon Wireless' uncovered licensed areas is a necessary requirement as a holder of these FCC licenses. It is for this reason that most existing and proposed antenna configurations contain 12 antennas, or 4 per sector (one for each frequency band).

Proper placement of new facilities is critical to maintaining and expanding service where it is needed, and minimizing signal propagation (RF interference) where it is not needed. New facilities must be properly placed within the existing cellular network grid to provide proper handoff to other existing adjacent facilities. Verizon Wireless takes steps to only build new facilities where absolutely necessary, and considerable planning goes into the development of a new facility to minimize visual impact.

Please let me know if I can provide any further assistance.

Respectfully,



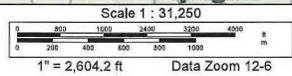
Paul Dugan, P.E.
Registered Professional Engineer
Virginia License Number 036239

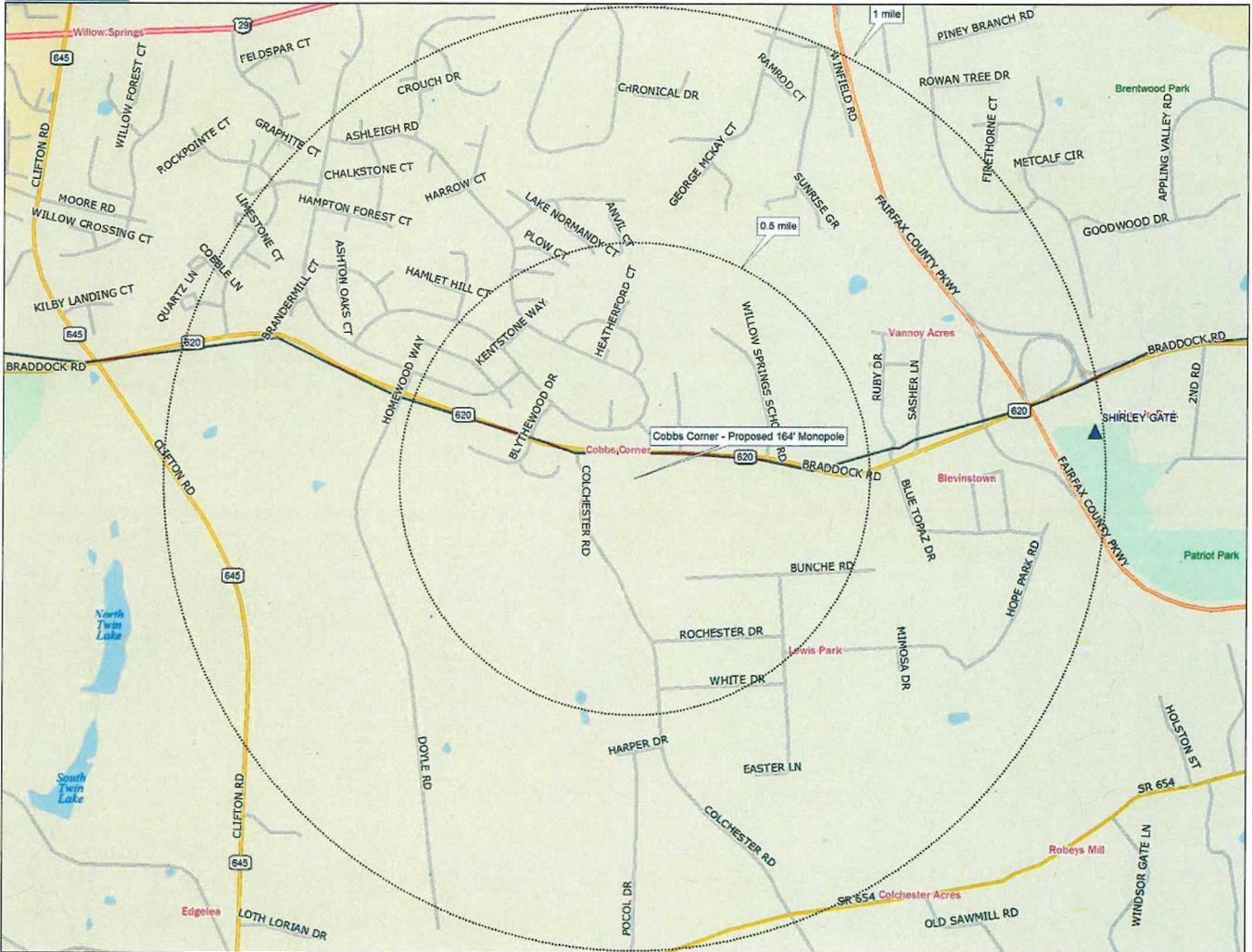




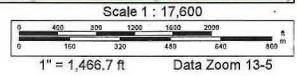
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Page 4 of 7

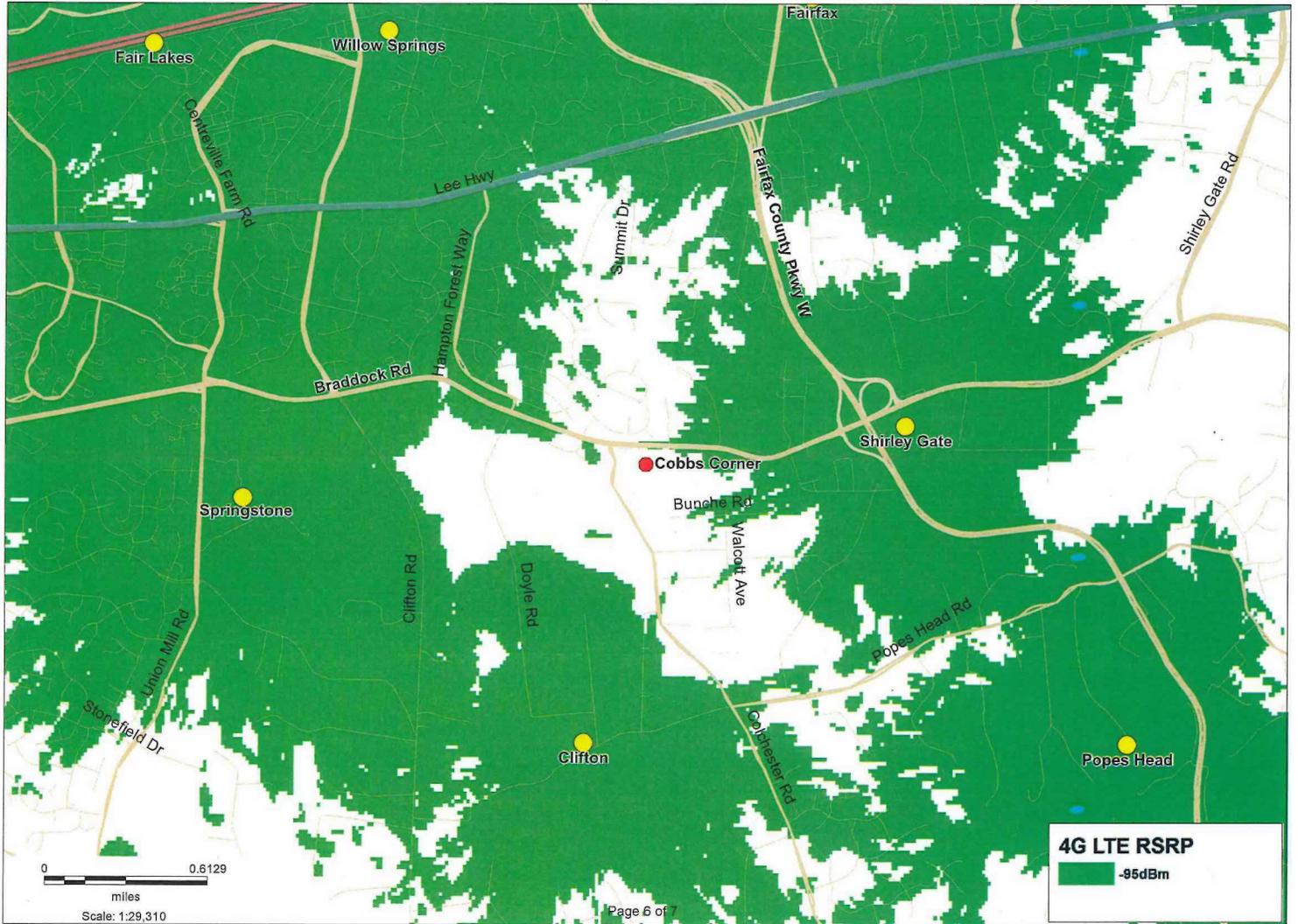




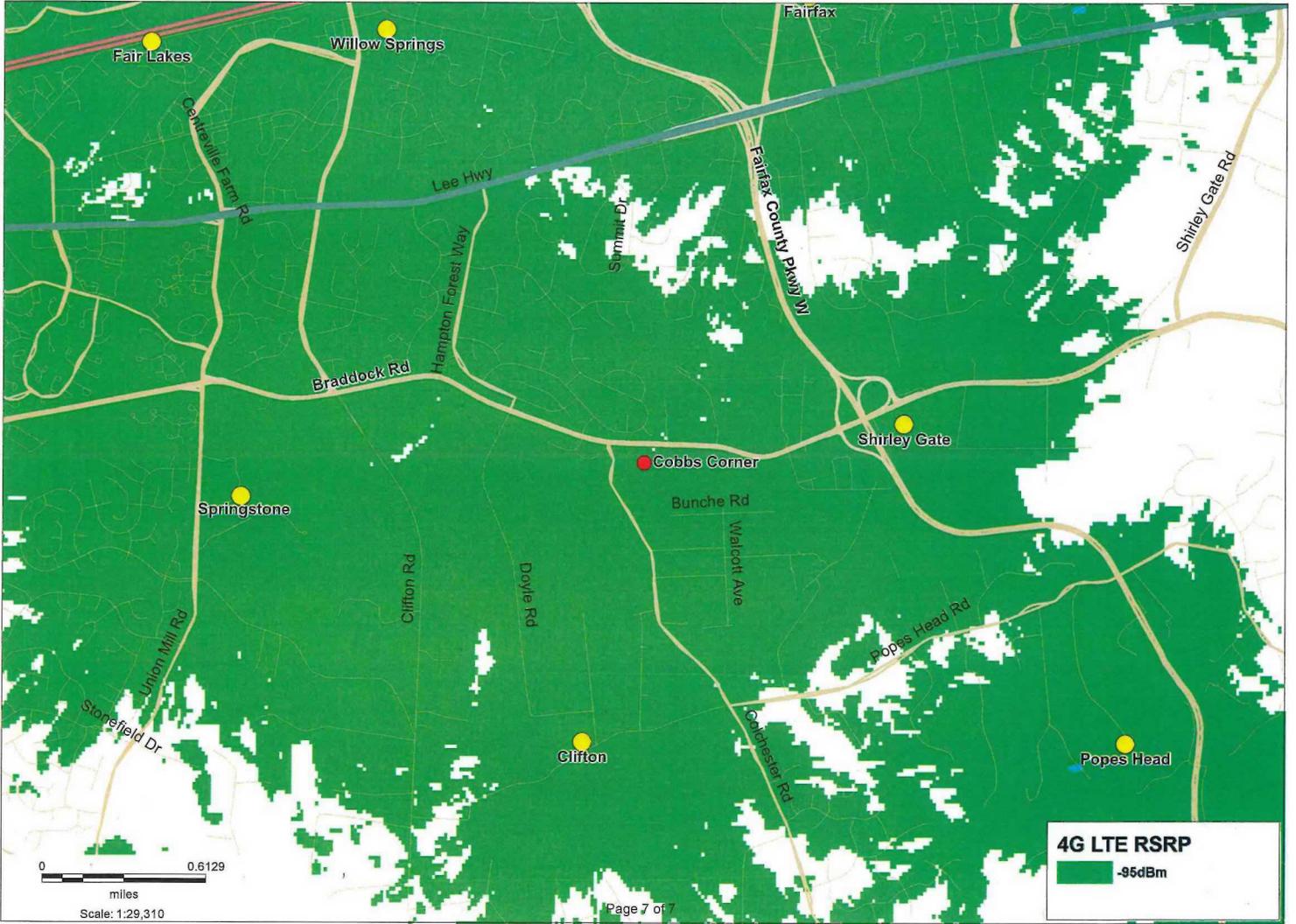
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VZW - 4G LTE Coverage - Without Site Cobbs Corner



VZW - 4G LTE Coverage - With Site Cobbs Corner





County of Fairfax, Virginia

MEMORANDUM

DATE: May 4, 2016

TO: Laura Arseneau, Staff Coordinator
Zoning Evaluations Division, DPZ

FROM: Ian Fuze, Urban Forester II
Forest Conservation Branch, DPWES

SUBJECT: Grace J. Kelley- Cellco Partnership SE 2015-SP-023

I have reviewed the above referenced Special Exception application including a Statement of Justification and a Special Exception plat of the subject property, stamped as received by the Zoning Evaluation Division on April 26, 2016. The following comments and recommendations are based on this review.

All Urban Forestry issues have been addressed with the resubmission. UFMD has no additional comments at this time.

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

if/

UFMDID #: 202814

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: 711, Fax: 703-653-9550
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