

**ISSUE:** Certificate of Appropriateness for alterations (small cell facility)

**APPLICANT:** Cello Partnership dba Verizon Wireless

**LOCATION:** Old and Historic Alexandria District  
Dominion Energy utility pole near 421 South Union Street

**ZONE:** WPR/Waterfront Park and Recreation Zone

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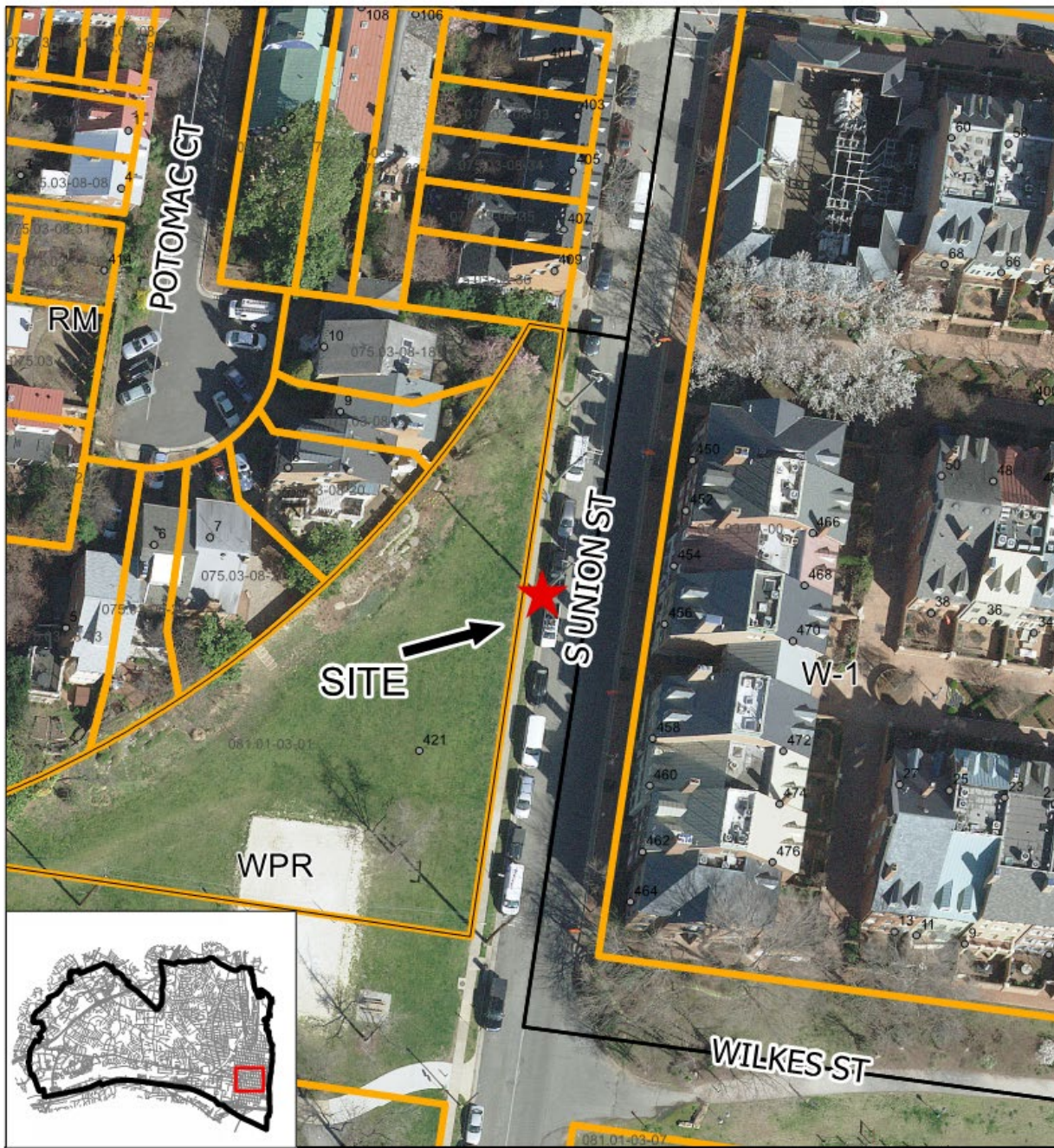
**STAFF RECOMMENDATION**

Staff recommends approval of the Certificate of Appropriateness, as submitted.

**GENERAL NOTES TO THE APPLICANT**

1. **APPEAL OF DECISION:** In accordance with the Zoning Ordinance, if the Board of Architectural Review denies or approves an application in whole or in part, the applicant or opponent may appeal the Board's decision to City Council on or before 14 days after the decision of the Board.
2. **COMPLIANCE WITH BAR POLICIES:** All materials must comply with the BAR's adopted policies unless otherwise specifically approved.
3. **BUILDING PERMITS:** Most projects approved by the Board of Architectural Review require the issuance of one or more construction permits by Department of Code Administration (including signs). The applicant is responsible for obtaining all necessary construction permits after receiving Board of Architectural Review approval. Contact Code Administration, Room 4200, City Hall, 703-746-4200 for further information.
4. **ISSUANCE OF CERTIFICATES OF APPROPRIATENESS AND PERMITS TO DEMOLISH:** Applicants must obtain a copy of the Certificate of Appropriateness or Permit to Demolish PRIOR to applying for a building permit. Contact BAR Staff, Room 2100, City Hall, 703-746-3833, or [preservation@alexandriava.gov](mailto:preservation@alexandriava.gov) for further information.
5. **EXPIRATION OF APPROVALS NOTE:** In accordance with Sections 10-106(B), 10-206(B) and 10-307 of the Zoning Ordinance, any Board of Architectural Review approval will expire 12 months from the date of issuance if the work is not commenced and diligently and substantially pursued by the end of that 12-month period.
6. **HISTORIC PROPERTY TAX CREDITS:** Applicants performing extensive, certified rehabilitations of historic properties may separately be eligible for state and/or federal tax credits. Consult with the Virginia Department of Historic Resources (VDHR) prior to initiating any work to determine whether the proposed project may qualify for such credits.





**BAR #2020-00062**  
**421 South Union Street**



A horizontal number line with tick marks at 0, 25, 50, and 100. The word "Feet" is written at the end of the line.



## **I. APPLICANT'S PROPOSAL**

The applicant is requesting a Certificate of Appropriateness to replace the existing wood utility pole in the right-of-way in front of Windmill Hill Park (near 421 South Union Street) with taller wood pole on top of which a triple band 5G small cell facility and a 4G antenna will be installed along with the associated equipment which will be mounted to the pole. The new pole will be installed adjacent to the existing pole that will be removed once the existing utilities been moved to the new one.

### **Certificate of Appropriateness**

- Replace the existing 46'-6" tall wood utility pole with a new 50'-7" wood utility pole
- Install a triple band Nokia AirScale MAA 5G small cell antenna facility on top of the new utility pole, the overall height of the equipment is 3'-8". The antennas will be shrouded in color to match the pole
- Install a JMA CXI60MI236 -1C 4G antenna on top of the 5G facility, the 1'-2" diameter antenna is 3'-5" tall
- Install a prop Verizon wireless Charles SHRD60 cabinet 10'-0" above grade and required cabling to be bracket mounted to the pole
- Install a prop Verizon wireless lockable load center panel on the pole at 6'-2" from grade and required cabling
- Install a prop Verizon wireless meter box on the pole at 5'-0" from grade and required cabling
- Relocate the existing overhead lines and existing riser for underground services and cross arm from the old pole to the new pole
- Remove the existing pole

### **Site context**

The parcel addressed 421 South Union Street is a City park also known as Windmill Hill Park. There are existing wood utility poles on the west side of South Union Street in front of the park and the utilities are undergrounded across the street in front of the Harborside development. There is a row of nine, three-and-a-half story brick townhouses across the subject pole on the east side of South Union Street.

## **II. HISTORY**

According to Alextimes.com article by Cody Mello-Klein from January 3, 2019, the Windmill Hill Park was "originally called Miller's Cliff, the park was renamed after inventor John R. Remington built the eponymous windmill in 1843." The park was neglected until the late 90s when two townhouse complexes were built near and the park and its shoreline became a problem. In 2002



the City developed a revitalization plan for the park, but due to budget issues the project did not start until 2015.<sup>1</sup>

### III. ANALYSIS

To address the growing demand for wireless services across the United States, telecommunication providers are increasing the capacity of their networks by deploying small cell antennas within the public right-of-way to reduce the data traffic load on roof-mounted equipment and larger cell towers. Small cell facilities are low-powered antennas that provide wireless service coverage to a limited geographic area (often with ranges of a few hundred feet) and are used to supplement and expand the coverage provided by the traditional, larger-scale network.

In the past three years, Federal and State legislation has been enacted to further streamline the local approval process for cellular facilities, shortening the approval time and limiting jurisdictions' authority. The laws can be contradictory between federal and state in some instances but do recognize that additional guidelines may be necessary in historic districts.

The City has adopted Interim Wireless Facility Aesthetic Guidelines for wireless infrastructure throughout the City which outline specific guidelines related to the replacement of existing utility poles, including:

- pole height may not increase more than 10 feet and may not exceed 50 feet without a special use permit
- replacement poles must be in the same general location as the existing pole
- replacement poles may not cause the removal of an existing tree or cause damaging impacts to trees located in the right-of-way
- wireless facilities must be shrouded, enclosing wires and equipment, and no separate ground mounted equipment is permitted
- wireless facilities must be painted to match the infrastructure

Many of the wireless carriers are working with Dominion Energy to deploy their facilities on replacement utility poles in the City right-of-way. Dominion's safety guidelines require that the existing poles be replaced with taller poles so that there is adequate separation between the utilities and the new cellular equipment. The wood poles come in 10-foot increments but must be buried deeper in the ground, so the net increase in height will be less.

A Certificate of Appropriateness is required in the historic districts under Section 10-203(A) and 203 (A) of the zoning ordinance, which state that "No building or structure shall be erected, reconstructed, altered or restored within [*the districts*] unless and until an application for a certificate of appropriateness shall have been approved..."

The overall height of the new pole including the small cell facility is 58'-3" and the volume of the equipment, 14.90 CUFT. BAR staff has no objection to the taller wood pole or the installation of

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<sup>1</sup> Mello-Klein, Cody. "The evolution of Windmill Hill Park" January 3, 2019. [Alextimes.com/2019/windmill-hill-park/](http://Alextimes.com/2019/windmill-hill-park/) last accessed 3/13/2020.



the small cell facility in this location and finds that painting the equipment the same color as the pole will make them less obvious. The existence of utility poles and overhead wires, street signs, and light poles are part of the urban streetscape, and staff does not believe that the installation of the taller pole with the small cell equipment will adversely impact existing viewsheds.

Therefore, staff recommends approval of the Certificate of Appropriateness as submitted.

**STAFF**

Marina Novaes, Historic Preservation Planner, Planning & Zoning

Tony LaColla, AICP, Land Use Services Division Chief, Planning & Zoning

**IV. CITY DEPARTMENT COMMENTS**

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

**Zoning**

F-1 Pole must be in the same general location as existing pole.

**In Compliance**

F-2 The replacement pole is not located in a manner that requires the removal of an existing tree or impacts of root zone.

**No trees or tree roots will be impacted.**

F-3 Replacement people shall be located that meets ADA requirements that do not impede or hinder pedestrian or vehicular travel.

**In Compliance**

F-4 Wireless facility shall be painted to match similar infrastructure on the block or earth tone color.

**Plans indicate facility to be painted brown.**

**Code Administration**

F-1 No Code comment for public utility work described in application material.

**Transportation and Environmental Services**

R-1 The building permit must be approved and issued prior to the issuance of any permit for demolition, if a separate demolition permit is required. (T&ES)

R-2 Applicant shall be responsible for repairs to the adjacent city right-of-way if damaged during construction activity. (T&ES)

R-3 No permanent structure may be constructed over any existing private and/or public utility easements. It is the responsibility of the applicant to identify any and all existing easements on the plan. (T&ES)



- F-1 After review of the information provided, an approved grading plan is not required at this time. Please note that if any changes are made to the plan it is suggested that T&ES be included in the review. (T&ES)
- C-1 The applicant shall comply with the City of Alexandria's Solid Waste Control, Title 5, Chapter 1, which sets forth the requirements for the recycling of materials (Sec. 5-1-99). (T&ES)
- C-2 The applicant shall comply with the City of Alexandria's Noise Control Code, Title 11, Chapter 5, which sets the maximum permissible noise level as measured at the property line. (T&ES)
- C-3 All secondary utilities serving this site shall be placed underground. (Sec. 5-3-3) (T&ES)
- C-4 Any work within the right-of-way requires a separate permit from T&ES. (Sec. 5-2) (T&ES)
- C-5 All improvements to the city right-of-way such as curbing, sidewalk, driveway aprons, etc. must be city standard design. (Sec. 5-2-1) (T&ES)
- C-6 An encroachment request will be required for projections into the public right of way. (T&ES)
- C-7 The owner shall obtain and maintain a policy of general liability insurance in the amount of \$1,000,000 which will indemnify the owner (and all successors in interest); and the City as an Additional Insured, against claims, demands, suits and related costs, including attorneys' fees, arising from any bodily injury or property damage which may occur as a result of the encroachment. (Sec. 5-29 (h)(1)) (T&ES)

**Please submit Insurance Certificate:**

**City of Alexandria**

**T&ES**

**Attn: Development Services**

**301 King Street, Room 4130**

**Alexandria, VA 22314**

**Alexandria Archaeology**

- F-1 No archaeological oversight necessary.

**V. ATTACHMENTS**

*1 – Supplemental Materials*

*2 – Application for BAR 2019-00062: 421 South Union Street*



ADDRESS OF PROJECT: \_\_\_\_\_

DISTRICT: ☐ Old & Historic Alexandria ☐ Parker – Gray ☐ 100 Year Old Building

TAX MAP AND PARCEL: \_\_\_\_\_ ZONING: \_\_\_\_\_

APPLICATION FOR: *(Please check all that apply)*

☐ CERTIFICATE OF APPROPRIATENESS

☐ PERMIT TO MOVE, REMOVE, ENCAPSULATE OR DEMOLISH  
*(Required if more than 25 square feet of a structure is to be demolished/impacted)*

☐ WAIVER OF VISION CLEARANCE REQUIREMENT and/or YARD REQUIREMENTS IN A VISION  
CLEARANCE AREA *(Section 7-802, Alexandria 1992 Zoning Ordinance)*

☐ WAIVER OF ROOFTOP HVAC SCREENING REQUIREMENT  
*(Section 6-403(B)(3), Alexandria 1992 Zoning Ordinance)*

Applicant: ☐ Property Owner ☐ Business *(Please provide business name & contact person)*

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail : \_\_\_\_\_

Authorized Agent *(if applicable)*: ☐ Attorney ☐ Architect ☐ \_\_\_\_\_

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Legal Property Owner:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

- ☐ Yes ☐ No Is there an historic preservation easement on this property?  
☐ Yes ☐ No If yes, has the easement holder agreed to the proposed alterations?  
☐ Yes ☐ No Is there a homeowner's association for this property?  
☐ Yes ☐ No If yes, has the homeowner's association approved the proposed alterations?

If you answered yes to any of the above, please attach a copy of the letter approving the project.



**NATURE OF PROPOSED WORK:** *Please check all that apply*

- ☐ NEW CONSTRUCTION  
☐ EXTERIOR ALTERATION: *Please check all that apply.*  

☐ awning  
☐ doors  
☐ lighting  
☐ other \_\_\_\_\_

☐ fence, gate or garden wall  
☐ windows  
☐ pergola/trellis

☐ HVAC equipment  
☐ siding  
☐ painting unpainted masonry

☐ shutters  
☐ shed

☐ ADDITION  
☐ DEMOLITION/ENCAPSULATION  
☐ SIGNAGE

**DESCRIPTION OF PROPOSED WORK:** *Please describe the proposed work in detail (Additional pages may be attached).*


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**SUBMITTAL REQUIREMENTS:**

Items listed below comprise the **minimum supporting materials** for BAR applications. Staff may request additional information during application review. Please refer to the relevant section of the *Design Guidelines* for further information on appropriate treatments.

Applicants must use the checklist below to ensure the application is complete. Include all information and material that are necessary to thoroughly describe the project. Incomplete applications will delay the docketing of the application for review. Pre-application meetings are required for all proposed additions. All applicants are encouraged to meet with staff prior to submission of a completed application.

**Demolition/Encapsulation :** *All applicants requesting 25 square feet or more of demolition/encapsulation must complete this section. Check N/A if an item in this section does not apply to your project.*

- N/A
- ☐ ☐ Survey plat showing the extent of the proposed demolition/encapsulation.  
☐ ☐ Existing elevation drawings clearly showing all elements proposed for demolition/encapsulation.  
☐ ☐ Clear and labeled photographs of all elevations of the building if the entire structure is proposed to be demolished.

☐ ☐ Description of the reason for demolition/encapsulation.  
☐ ☐ Description of the alternatives to demolition/encapsulation and why such alternatives are not considered feasible.



**Additions & New Construction:** *Drawings must be to scale and should not exceed 11" x 17" unless approved by staff. Check N/A if an item in this section does not apply to your project.*

- ☐ ☐ <sup>N/A</sup> Scaled survey plat showing dimensions of lot and location of existing building and other structures on the lot, location of proposed structure or addition, dimensions of existing structure(s), proposed addition or new construction, and all exterior, ground and roof mounted equipment.
- ☐ ☐ FAR & Open Space calculation form.
- ☐ ☐ Clear and labeled photographs of the site, surrounding properties and existing structures, if applicable.
- ☐ ☐ Existing elevations must be scaled and include dimensions.
- ☐ ☐ Proposed elevations must be scaled and include dimensions. Include the relationship to adjacent structures in plan and elevations.
- ☐ ☐ Materials and colors to be used must be specified and delineated on the drawings. Actual samples may be provided or required.
- ☐ ☐ Manufacturer's specifications for materials to include, but not limited to: roofing, siding, windows, doors, lighting, fencing, HVAC equipment and walls.
- ☐ ☐ For development site plan projects, a model showing mass relationships to adjacent properties and structures.

**Signs & Awnings:** *One sign per building under one square foot does not require BAR approval unless illuminated. All other signs including window signs require BAR approval. Check N/A if an item in this section does not apply to your project.*

- ☐ ☐ <sup>N/A</sup> Linear feet of building: Front: \_\_\_\_\_ Secondary front (if corner lot): \_\_\_\_\_.
- ☐ ☐ Square feet of existing signs to remain: \_\_\_\_\_.
- ☐ ☐ Photograph of building showing existing conditions.
- ☐ ☐ Dimensioned drawings of proposed sign identifying materials, color, lettering style and text.
- ☐ ☐ Location of sign (show exact location on building including the height above sidewalk).
- ☐ ☐ Means of attachment (drawing or manufacturer's cut sheet of bracket if applicable).
- ☐ ☐ Description of lighting (if applicable). Include manufacturer's cut sheet for any new lighting fixtures and information detailing how it will be attached to the building's facade.

**Alterations:** *Check N/A if an item in this section does not apply to your project.*

- ☐ ☐ <sup>N/A</sup> Clear and labeled photographs of the site, especially the area being impacted by the alterations, all sides of the building and any pertinent details.
- ☐ ☐ Manufacturer's specifications for materials to include, but not limited to: roofing, siding, windows, doors, lighting, fencing, HVAC equipment and walls.
- ☐ ☐ Drawings accurately representing the changes to the proposed structure, including materials and overall dimensions. Drawings must be to scale.
- ☐ ☐ An official survey plat showing the proposed locations of HVAC units, fences, and sheds.
- ☐ ☐ Historic elevations or photographs should accompany any request to return a structure to an earlier appearance.



**ALL APPLICATIONS:** *Please read and check that you have read and understand the following items:*

- ☐ I have submitted a filing fee with this application. (Checks should be made payable to the City of Alexandria. Please contact staff for assistance in determining the appropriate fee.)
- ☐ I understand the notice requirements and will return a copy of the three respective notice forms to BAR staff at least five days prior to the hearing. If I am unsure to whom I should send notice I will contact Planning and Zoning staff for assistance in identifying adjacent parcels.
- ☐ I, the applicant, or an authorized representative will be present at the public hearing.
- ☐ I understand that any revisions to this initial application submission (including applications deferred for restudy) must be accompanied by the BAR Supplemental form and revised materials.

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The undersigned hereby attests that all of the information herein provided including the site plan, building elevations, prospective drawings of the project, and written descriptive information are true, correct and accurate. The undersigned further understands that, should such information be found incorrect, any action taken by the Board based on such information may be invalidated. The undersigned also hereby grants the City of Alexandria permission to post placard notice as required by Article XI, Division A, Section 11-301(B) of the 1992 Alexandria City Zoning Ordinance, on the property which is the subject of this application. The undersigned also hereby authorizes the City staff and members of the BAR to inspect this site as necessary in the course of research and evaluating the application. The applicant, if other than the property owner, also attests that he/she has obtained permission from the property owner to make this application.

**APPLICANT OR AUTHORIZED AGENT:**

Signature: Joshua Schakola

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_



## OWNERSHIP AND DISCLOSURE STATEMENT

Use additional sheets if necessary

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

Name	Address	Percent of Ownership
1.		
2.		
3.		

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

Name	Address	Percent of Ownership
1.		
2.		
3.		

3. Business or Financial Relationships. Each person or entity listed above (1 and 2), with an ownership interest in the applicant or in the subject property is required to disclose **any** business or financial relationship, as defined by Section 11-350 of the Zoning Ordinance, existing at the time of this application, or within the 12-month period prior to the submission of this application with any member of the Alexandria City Council, Planning Commission, Board of Zoning Appeals or either Boards of Architectural Review.

Name of person or entity	Relationship as defined by Section 11-350 of the Zoning Ordinance	Member of the Approving Body (i.e. City Council, Planning Commission, etc.)
1.		
2.		
3.		

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

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

_____	_____	_____ <i>Joshua Schakola</i> _____
Date	Printed Name	Signature



1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AUTHORITY, COMPANY SPECIFICATIONS AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THIS PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS RESPONSIBLE FOR ANY OMISSIONS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF OMISSIONS OR ERRORS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF ANY TYPE (IN WRITING) THE VERIZON REPRESENTATIVE OF ANY CONFLICT, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF OMISSIONS OR ERRORS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/ VENDOR'S SPECIFICATIONS UNLESS OTHERWISE NOTED OR REFERRED TO LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF METHODS, MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY, OR LOCAL GOVERNMENT AUTHORITY.
11. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT AND IMPROVE THE EXISTING PAVEMENTS, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
12. THE CONTRACTOR SHALL MAINTAIN THE GENERAL WORK AREA AS CLEAN AND HAZARD FREE DURING CONSTRUCTION AND REMOVAL OF TRASH, AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. DETAILS OF EQUIPMENT TO BE INCLUDED IN REMOVAL AND PRIOR TO BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
13. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
14. THE CONTRACTOR SHALL NOTIFY THE VERIZON REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE VERIZON REPRESENTATIVE.
15. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
16. ALL UNISTRUT, HARDWARE, AND OUTDOOR JUNCTION BOXES SHALL BE GALVANIZED STEEL FOR FIELD CUTS OF GALVANIZED STEEL. SECOND COAT SHALL BE MARINE GRADE GALVANIZED.
17. RETURN ANY UNUSED MATERIALS WITH REQUIRED DOCUMENTATION TO THE VERIZON WAREHOUSE WITHIN 14 DAYS OF PROJECT COMPLETION. RETURNED MATERIAL NEEDS TO BE ACCOMPANIED WITH AN RMA FORM AND PROPERLY LABELLED. REQUIREMENTS STIPULATED BY THE VZN CONSTRUCTION ENGINEER.
18. CONTRACTOR IS RESPONSIBLE FOR STORAGE OF ALL MATERIALS PROVIDED BY VERIZON, AND IS LIABLE FOR THOSE MATERIALS ONCE PICKED UP FROM THE WAREHOUSE.
19. CONTRACTOR SHALL PERFORM A PUNCH WALK WITH VZN CONSTRUCTION & OPERATION REPRESENTATIVE PRIOR TO DECLARING CONSTRUCTION COMPLETE.
20. GENERAL CONTRACTOR SHALL PROVIDE A 10LBS. DRY-CHEMICAL FIRE EXTINGUISHER ON SITE DURING CONSTRUCTION. UPON COMPLETION OF ALL WORK, CONTRACTOR SHALL REMOVE FIRE EXTINGUISHER FROM SITE.

C5-1	SITE LOCATION AND VICINITY PLAN, INDEX OF DRAWINGS, AND CODE ANALYSIS
C-1	SITE PLAN
C-2	SITE DETAILS
C-3	TRANSPORTATION MANAGEMENT PLAN
S-1	STRUCTURAL SECTIONS AND DETAILS
S-2	GENERAL NOTES
E-1	SPECIFICATIONS, SYMBOLS LIST, PANEL SCHEDULE AND DETAILS
E-2	POWER RISER DIAGRAM, EQUIPMENT PLAN, AND NOTES
E-3	GROUNDING DIAGRAM, DETAILS, AND NOTES
E-4	DIAGRAMS

APPLICABLE BUILDING CODE:	IBC 2015
USE GROUP:	UTILITY (U)
CONSTRUCTION TYPE:	IIB
UTILITY COMPANY:	DOMINION

The map shows a residential and park area. A black dot labeled 'SITE' is located on South Union Street, just north of its intersection with Wilkes Street. A red pin marks '421 South Union Street' at the intersection of Wilkes Street and South Union Street. Other landmarks include the Old Presbyterian Meeting House, School for Swans, Bar Ninja, Windmill Hill Park, Shipyard Park, and Roberdeau Park. Streets shown include Saint Mary, Wolfe St, Wilkes St, Gibson St, and South Union St.

THIS PROJECT CONSISTS OF THE INSTALLATION OF VERIZON WIRELESS TELECOMMUNICATIONS EQUIPMENT ON A PROPOSED UTILITY POLE TO REPLACE EXISTING. THE ASSOCIATED ANTENNA WILL BE MOUNTED ON THE PROPOSED UTILITY POLE AT A RAD CENTER OF 56'-8" AND 53'-0".

FROM JUNCTION DRIVE:  
- TURN LEFT ONTO DORSEY LANE  
- TAKE RAMP ON LEFT FOR MD-32 EAST  
- TAKE EXIT #10C RAMP ON RIGHT FOR BALTIMORE  
WASHINGTON PARKWAY SOUTH  
- TAKE EXIT ONTO I-45/I-77 TOWARDS RICHMOND VA  
- TAKE EXIT #177C MERGE ONTO US-1 N/S PATRICK  
STREET TOWARD ALEXANDRIA  
MERGE ONTO US-1 N/S PATRICK STREET  
- TURN LEFT ONTO SOUTH UNION STREET  
- DESTINATION WILL BE ON THE LEFT

BUILDING OWNER	DATE
ENGINEERING	DATE
OPERATIONS	DATE
CONSTRUCTION	DATE

## CS-1



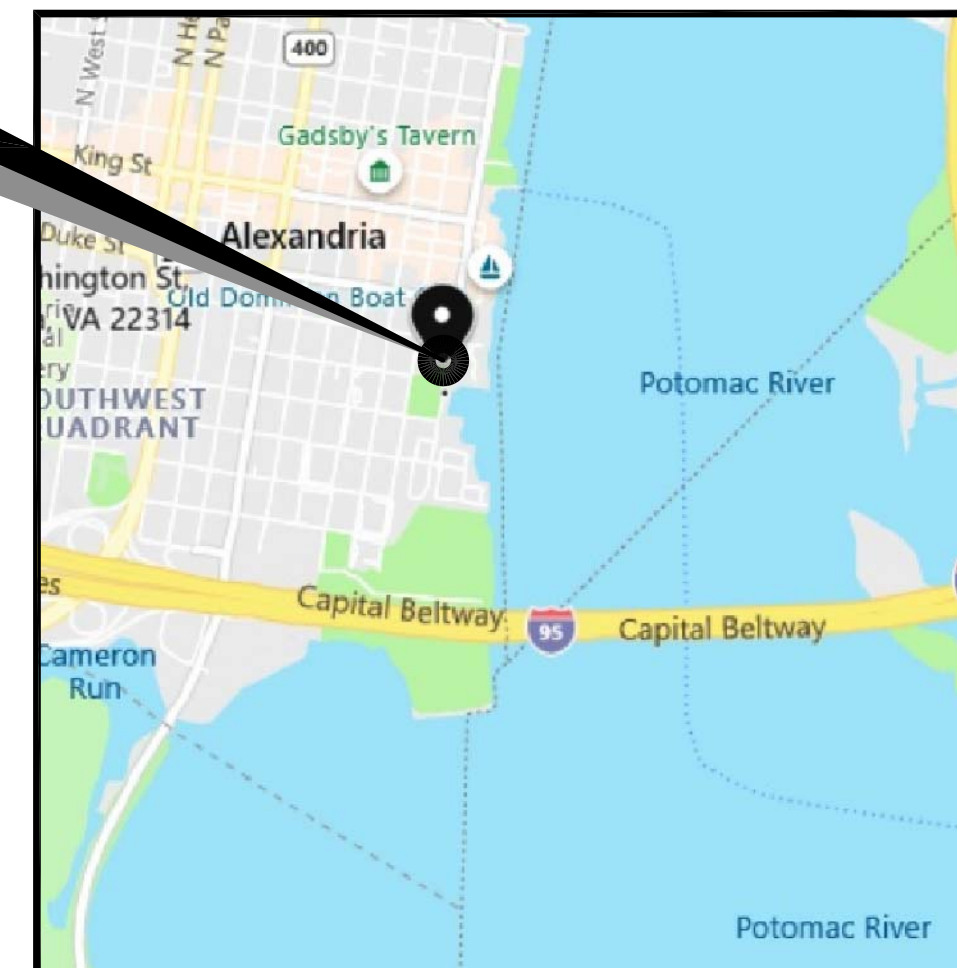


Know what's **below**.  
**Call** before you dig.

PROTECT YOURSELF, GIVE THREE  
WORKING DAYS NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY  
COMPONENTS FOR CONSTRUCTION SAFETY. ALL  
CONSTRUCTION MUST BE DONE IN COMPLIANCE  
WITH THE OCCUPATIONAL SAFETY AND HEALTH  
ACT OF 1970 AND ALL RULES AND REGULATIONS  
THERE TO APPURTENANT.

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



VICINITY MAP  
SCALE: 1" = 1000'

SITE NOTES:

- APPLICANT: VERIZON WIRELESS, LLC  
10110 JUNCTION DRIVE, STE 800  
ANNAPOLIS, JUNCTION, MD 20701  
TEL: (301) 512-2000  
FAX: (301) 512-2166
- APPLICANT'S ATTORNEY: FRANK N. STEARNS, ESQ.  
DONOHUE & STEARNS, PLLC  
701 LIBERTY STREET  
LEESBURG, VIRGINIA 20175  
(703) 544-1129
2. ADJACENT PROPERTY OWNER: CITY OF ALEXANDRIA  
100 BOX 170  
ALEXANDRIA VA 22313/ISCO
3. ADJACENT PROPERTY SITE DATA: MAP-BLOCK-LOT NUMBER: 08/01-03-01  
CONTRACT NUMBER: 12548000  
TRACT AREA: 29.922 SF  
ADDRESS: 421 S UNION ST  
ALEXANDRIA, VA 22304  
EXISTS USE: CITY PKGS/BOARDWGS (TBI)
4. ZONING: MPR
5. HORIZONTAL AND VERTICAL CONTROL SHOWN HEREON IS BASED ON SATELLITE IMAGERY PROGRAMS AND INFORMATION PROVIDED BY VERIZON WIRELESS:  
LATITUDE: N38° 48' 0.54" (38.80015°) GROUND ELEVATION: 41'-0" AMSL (AVG)  
LONGITUDE: W77° 02' 58.32" (-77.0412°)
6. TOTAL DISTURBED AREA = 8.52'
7. THE PROPOSED FACILITIES WILL CONSIST OF FOUR (4) ANTENNAS, WITH ASSOCIATED EQUIPMENT, MOUNTED ON A NEW UTILITY POLE, TO REPLACE EXISTING, WITH RAD CENTERS AT ELEVATIONS OF 58'-0" ABOVE GRADE LEVEL AND 58'-0" ABOVE GRADE LEVEL FOR THE REMAINDER OF VERIZON WIRELESS TELECOMMUNICATIONS.
8. THE APPLICANT WILL PROVIDE A CERTIFICATION FROM A REGISTERED ENGINEER THAT THE STRUCTURE WILL MEET THE APPLICABLE DESIGN STANDARDS FOR WIND LOADS PER THE REQUIREMENTS OF THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION.
9. IF THE ANTENNAS ARE NO LONGER USED FOR TELECOMMUNICATIONS PURPOSES FOR A CONTINUOUS PERIOD OF ONE (1) YEAR, THEY SHALL BE REMOVED BY THE ANTENNA OWNER AT OWNER'S EXPENSE.
10. NO WATER OR SANITARY UTILITIES ARE REQUIRED FOR THE OPERATION OF THIS FACILITY.
11. STORM-WATER MANAGEMENT NOTE: NO STORM-WATER MANAGEMENT IS REQUIRED FOR THIS SITE.
12. BOUNDARY SHOWN PER COUNTY RECORDS.
13. THIS PLAN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. PLAN IS SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.
14. ALL DETAILS SHOWN ARE "STANDARD" OR "TYPICAL" FOR REFERENCE ONLY. FOR ACTUAL DETAILS, SEE ARCHITECTURAL, STRUCTURAL, OR CONSTRUCTION PLANS BY OTHERS.
15. STRUCTURAL ANALYSIS/DESIGN TO BE PERFORMED BY OTHERS AT CLIENT AND/OR OWNER'S DISCRETION PRIOR TO COMMENCEMENT OF ANY WORK.
16. THE COMMUNICATION EQUIPMENT SHALL BE UNMANNED, WITH INFREQUENT VISITS (FOUR OR FEWER PER YEAR) BY MAINTENANCE PERSONNEL. ACCESS AND PARKING FOR NO MORE THAN ONE VEHICLE. THE PROPOSED FACILITY IS NOT FOR HUMAN HABITATION AND THEREFORE HAD/CAN/CAP ACCESS IS NOT REQUIRED.

GENERAL NOTES

- CONTRACTOR SHALL NOTIFY "MISS UTILITY" (811) 48 HOURS PRIOR TO DOING ANY EXCAVATION IN THIS AREA. CONTRACTOR SHALL CONTACT A SUBSURFACE UTILITY LOCATOR FOR LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATIONS BY TEST PITS. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING UTILITIES SHOWN ON THIS PLAN AS APPROXIMATE AND FOR PLANNING PURPOSES ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO ANY HIGH VOLTAGE OR LOW VOLTAGE UTILITIES, OR TO ANY ADJACENT PROPERTY OR TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES. DAMAGE TO UTILITIES OR PROPERTY OF OTHER BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO PRECONSTRUCTION CONDITIONS BY THE CONTRACTOR.
2. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES, THE LATEST EDITION THEREOF.
  3. ANY PERMITS WHICH MUST BE OBTAINED SHALL BE THE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS FOR THIS PROJECT FROM ALL APPLICABLE GOVERNMENTAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
  4. CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS WITH APPROPRIATE UTILITY OWNERS.
  5. THESE PLANS ARE NOT FOR RECORDED OR CONVEYANCE.
  6. EXISTING PAVEMENT AND OTHER SURFACES DISTURBED BY CONTRACTOR (WHICH ARE NOT TO BE REMOVED) SHALL BE REPAIRED TO PRECONSTRUCTION CONDITIONS BY THE CONTRACTOR.



**MORRIS & RITCHIE  
ASSOCIATES, INC.**  
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Towson, Maryland 21286  
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410-821-1748 Fax



**verizon**  
ALEXOLDT 008 - SMALL CELL  
ROW ADJACENT TO 421 SOUTH UNION STREET  
ALEXANDRIA VIRGINIA 22314 (CITY OF ALEXANDRIA)

REVISONS:		
NO.	DESCRIPTION	DATE
	PERMIT DWGS	01/17/20
DESIGNED BY:		RJD
DRAWN BY:		FJ
PROJECT NO: 10421.2422		
DATE:		1/3/2020
SCALE:		AS NOTED

TITLE:

**Site  
Plan**

**SHEET:**

**C-1**







TRANSPORTATION MANAGEMENT PLAN
TEMPORARY TRAFFIC CONTROL PLAN NOTES &
WORK AREA PROTECTION MANUAL TTC'S

PROJECT INFORMATION

- 1. THE PROJECT'S TMP PLAN HAS BEEN DESIGNED IN CONFORMANCE WITH TMP TYPE A.
- 2. WORK ZONE AREAS SHALL BE SETUP AS SHOWN ON TTC'S ON THIS PLAN SHEET. THE WORK ZONE LENGTHS AND WIDTHS MAY VARY BY LOCATION IN ACCORDANCE WITH APPLICABLE TTC.
- 3. CONSTRUCTION HOURS: 9AM-3:30PM MONDAY-THURSDAY, 9AM-2PM FRIDAY, NO WORK ON NIGHTS, WEEKENDS OR HOLIDAYS. NO LANE CLOSURES WILL BE ALLOWED FROM NOON ON THE DAY BEFORE A HOLIDAY UNTIL NOON ON THE WORKDAY FOLLOWING THE HOLIDAY. HOLIDAYS INCLUDE ALL STATE AND FEDERAL HOLIDAYS.
- 4. EXISTING INTERSECTIONS: THE NEAREST INTERSECTION IS S UNION ST AND WOLFE ST.
- 5. EXISTING PEDESTRIAN ACCESS POINTS: THERE IS EXISTING SIDEWALK LOCATED WITHIN THE PROJECT LIMITS.
- EXISTING BUS STOPS: THERE ARE NO BUS STOPS NEAR THE PROJECT LIMITS.
- EXISTING ENTRANCES: THERE ARE NO EXISTING ENTRANCES WITHIN THE CONSTRUCTION LIMITS.
- 6. THE TRAFFIC ON THE ROADWAY CONSIST PRIMARILY OF PASSENGER VEHICLES AND PEDESTRIANS. THE SURROUNDING AREA IS RESIDENTIAL.
- 7. THE CONTRACTOR SHALL:

DESIGNATE A PERSON ASSIGNED TO THE PROJECT WHO WILL HAVE THE PRIMARY RESPONSIBILITY, WITH SUFFICIENT AUTHORITY, FOR IMPLEMENTING THE TMP/SOC AND OTHER SAFETY AND MOBILITY ASPECTS OF THE PERMITTED WORK. THIS PERSON SHALL COORDINATE WITH THE INSPECTOR FOR THE DURATION OF CONSTRUCTION.

ENSURE THAT PERSONNEL IMPLEMENTING THE MOT ARE TRAINED IN TRAFFIC CONTROL TO A LEVEL COMMENSURATE WITH THEIR RESPONSIBILITY IN ACCORDANCE WITH VIRGINIA WORK ZONE TRAFFIC CONTROL TRAINING GUIDELINES.

INFORM COUNTY OF ANY WORK REQUIRING LANE SHIFTS, LANE CLOSURES, AND/OR PHASE CHANGES A MINIMUM OF TWO WORKING DAYS PRIOR TO IMPLEMENTING THIS ACTIVITY

PERFORM REVIEWS OF THE CONSTRUCTION AREA TO ENSURE COMPLIANCE WITH CONTRACT DOCUMENTS AT REGULARLY SCHEDULED INTERVALS AT THE DIRECTION OF COUNTY ENGINEERS. CONTRACTOR SHALL MAINTAIN A COPY OF THE TEMPORARY TRAFFIC CONTROL PLAN AT THE WORK SITE AT ALL TIMES.

COORDINATE WITH CITY OF ALEXANDRIA POLICE DEPARTMENT AND CITY OF ALEXANDRIA FIRE/RESCUE DEPARTMENT FOR ANY LANE CLOSURES AND ANY DETOURS OF ANY NATURE, AT NO ADDITIONAL COST TO THE PROJECT.

SCHEDULE ALL PHASES OF CONSTRUCTION IN SUCH A MANNER THAT WATER, SANITARY SEWER, CABLE, FIBER CABLE/OPTIC CABLE, ANY OVERHANGING UTILITIES, AND ANY UNDERGROUND UTILITIES SERVICES WILL NOT BE INTERRUPTED.

- 8. THIS TMP PLAN IS INTENDED AS A GUIDE. IF THE CONTRACTOR IS TO DEViate FROM THE APPROVED TMP, A NEW OR REVISED TMP MUST BE SUBMITTED TO COUNTY FOR REVIEW AND APPROVAL.
- 9. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADD ANY ADDITIONAL TEMPORARY MEASURES NECESSARY TO FACILITATE PROPER, POSITIVE DRAINAGE FOR THE DURATION OF CONSTRUCTION.
- 10. WHERE GROUP 2 CHANNELIZING DEVICES ARE USED TO SEPARATE THE CONSTRUCTION AREA AND TRAFFIC, A MINIMUM CLEAR ZONE AREA SUCH AS DEFINED IN THE VWPM IS TO BE MAINTAINED.
- 11. CONTRACTOR IS TO COORDINATE WITH CITY FOR LOCATION(S) OF THE CONSTRUCTION STAGING AREA. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND/OR EASEMENTS AS NECESSARY.
- 12. IMPLEMENTING THE TRANSPORTATION MANAGEMENT PLAN
DURING THE FIRST DAY OF THE NEW WORK ZONE TRAFFIC PATTERN, THE PROJECT'S MANAGER AND CITY'S INSPECTOR SHALL INSPECT THE WORK ZONE TO ENSURE COMPLIANCE WITH THE TMP. ON THE THIRD TO FIFTH DAY OF IMPLEMENTATION OF THE TMP'S NEW WORK ZONE TRAFFIC PATTERN THE CONSTRUCTION INSPECTOR SHALL CONDUCT AN ON-SITE REVIEW OF THE WORK ZONE'S PERFORMANCE IN COORDINATION WITH COUNTY AND RECOMMEND TO THE CONTRACTOR ANY REQUIRED CHANGES TO THE TMP TO ENHANCE THE WORK ZONE'S SAFETY AND MOBILITY. ALL SUCH CHANGES SHALL BE DOCUMENTED. AN ON-SITE REVIEW OF THE PROJECT'S WORK ZONE TRAFFIC CONTROL BY THE PROJECT MANAGER AND CONTRACTOR SHALL BE CONDUCTED (WITH COORDINATION FROM COUNTY) WITHIN 48 HOURS OF ANY FATAL INCIDENT/CRASH WITHIN THE WORK ZONE.
- 13. PUBLIC COMMUNICATIONS PLAN
THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
A. NOTIFYING THE PROJECT MANAGER AND CITY INSPECTOR TWO WEEKS IN ADVANCE OF ANY SCHEDULED WORK PLANS AND TRAFFIC DELAYS.
B. NOTIFYING THE PROJECT MANAGER, CITY INSPECTOR, AND CORRESPONDING COUNTY ENGINEER OF ANY UNSCHEDULED TRAFFIC DELAYS.
- 16. TRANSPORTATION OPERATIONS
THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND PROVIDING THE FOLLOWING:
A. NOTIFY THE REGIONAL TRANSPORTATION OPERATIONS CENTER (TOC) 1 WEEK IN ADVANCE IN ORDER TO PLAN LANE CLOSURE INFORMATION ON THE 511 SYSTEM AND VA-TRAFFIC.
B. IMMEDIATELY REPORT ANY TRAFFIC INCIDENTS THAT MAY OCCUR IN THE WORK ZONE.
C. NOTIFY THE PROJECT'S CONSTRUCTION INSPECTOR AND COUNTY ENGINEER OF ANY INCIDENTS AND EXPECTED TRAFFIC DELAYS.
D. WITHIN 24 HOURS OF ANY INCIDENTS WITHIN THE CONSTRUCTION WORK ZONE, A REVIEW OF THE TRAFFIC CONTROLS SHALL BE COMPLETED AND NECESSARY ADJUSTMENT MADE TO REDUCE THE FREQUENCY AND SEVERITY OF ANY FUTURE INCIDENTS.

17. CONTACT NUMBERS

PROJECT MANAGER: TBD
CITY INSPECTOR: TBD
EMERGENCY CALL: 911
NON-EMERGENCY NUMBERS:
CITY OF ALEXANDRIA POLICE: 703-746-4444
CITY OF ALEXANDRIA FIRE & RESCUE: 703-746-4357

GENERAL CONSTRUCTION NOTES

NOTE: VWPM VIRGINIA WORK AREA PROTECTION MANUAL (2011) INCLUDING REVISION 1 DATED 2015.

- 1. THE CONTRACTOR SHALL MAKE ANY NECESSARY ADJUSTMENTS DURING BOTH WORK AND NON-WORK HOURS TO ENSURE THE PROTECTION AND SAFETY OF PEDESTRIANS, VEHICULAR TRAFFIC, AND THE GENERAL PUBLIC FROM ANY CONSTRUCTION RELATED ACTIVITY, CONSTRUCTION EQUIPMENT, AND THE CONSTRUCTION SITE ITSELF.

Page 6H-14

April 2015

Typical Traffic Control
Stationary Operation on a Shoulder
(Figure TTC-4.1)
NOTES

Standard

- 1. For long-term stationary work (more than 3 days) on divided highways having a median wider than 8', sign assemblies on both sides of the roadway shall be required as shown (ROAD WORK AHEAD (W20-1), RIGHT SHOULDER CLOSED AHEAD (W21-5bR), RIGHT SHOULDER CLOSED (W21-5aR)), even though only one shoulder is being closed. For operations less than 3 days in duration, sign assemblies will only be required on the side where the shoulder is being closed and a RIGHT SHOULDER CLOSED (W21-5aR) sign shall be added to that side.

Guidance

- 2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.

Option:

- 3. The SHOULDER WORK (W21-5) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.
- 4. For short duration operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity amber rotating, flashing, or oscillating lights is used.

Standard:

- 5. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating lights.
- 6. Taper length (L) and channelizing device spacing shall be at the following:

Taper Length (L)				
Speed Limit (mph)	8	10	11	12
25	95	105	115	125
30	138	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	495	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840
Minimum taper lengths for Limited Access highways shall be 1000 feet.				
Shoulder Taper = 1/2 L Minimum				

Channelizing Device Spacing		
Location	0 - 35	36 +
Transition Spacing	20'	40'
Travelway Spacing	40'	60'
Construction Access*	80'	120'

\* Spacing may be increased to this distance, but shall not exceed one access per 1/2 mile. On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

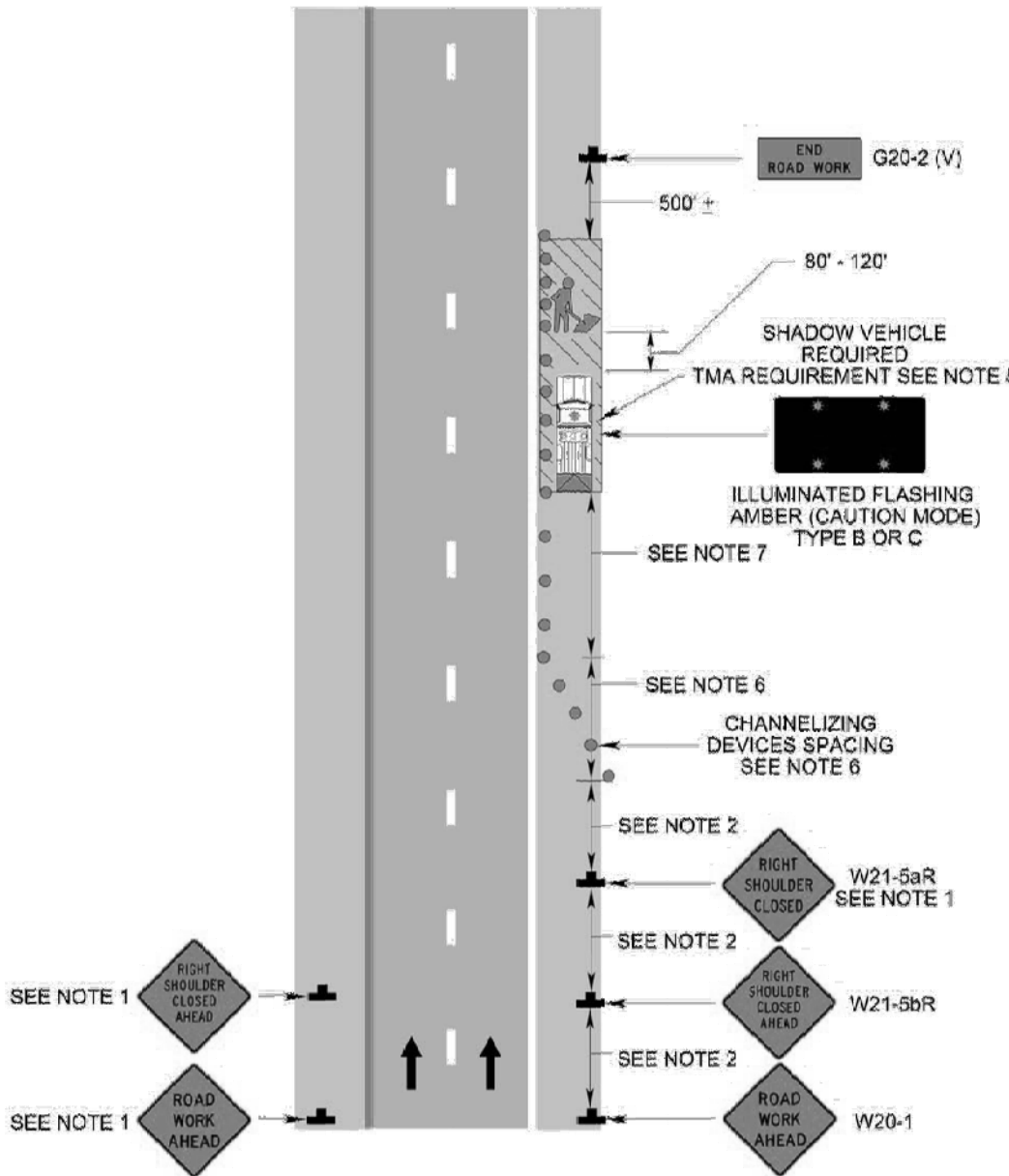
- 7. The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
- 8. A truck-mounted attenuator (TMA) shall be used on the shadow vehicle on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph for operations with a duration greater than 60 minutes.
- 9. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.

1: Revision 1 - 4/1/2015

April 2015

Page 6H-15

Stationary Operation on a Shoulder
(Figure TTC-4.1)



Page 6H-76

August 2011

Typical Traffic Control
Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.0)
NOTES

Standard:

- 1. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.

Guidance:

- 2. Where high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalks from vehicular traffic.
- 3. Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.
- 4. Temporary markings should be considered for operations exceeding three days in duration.

Option:

- 5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W4-1) signs, may be used to control vehicular traffic.
- 6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
- 7. Signs, such as KEEP RIGHT (R4-VTR) and KEEP LEFT (R4-VTL), may be placed along a temporary sidewalk to guide or direct pedestrians.

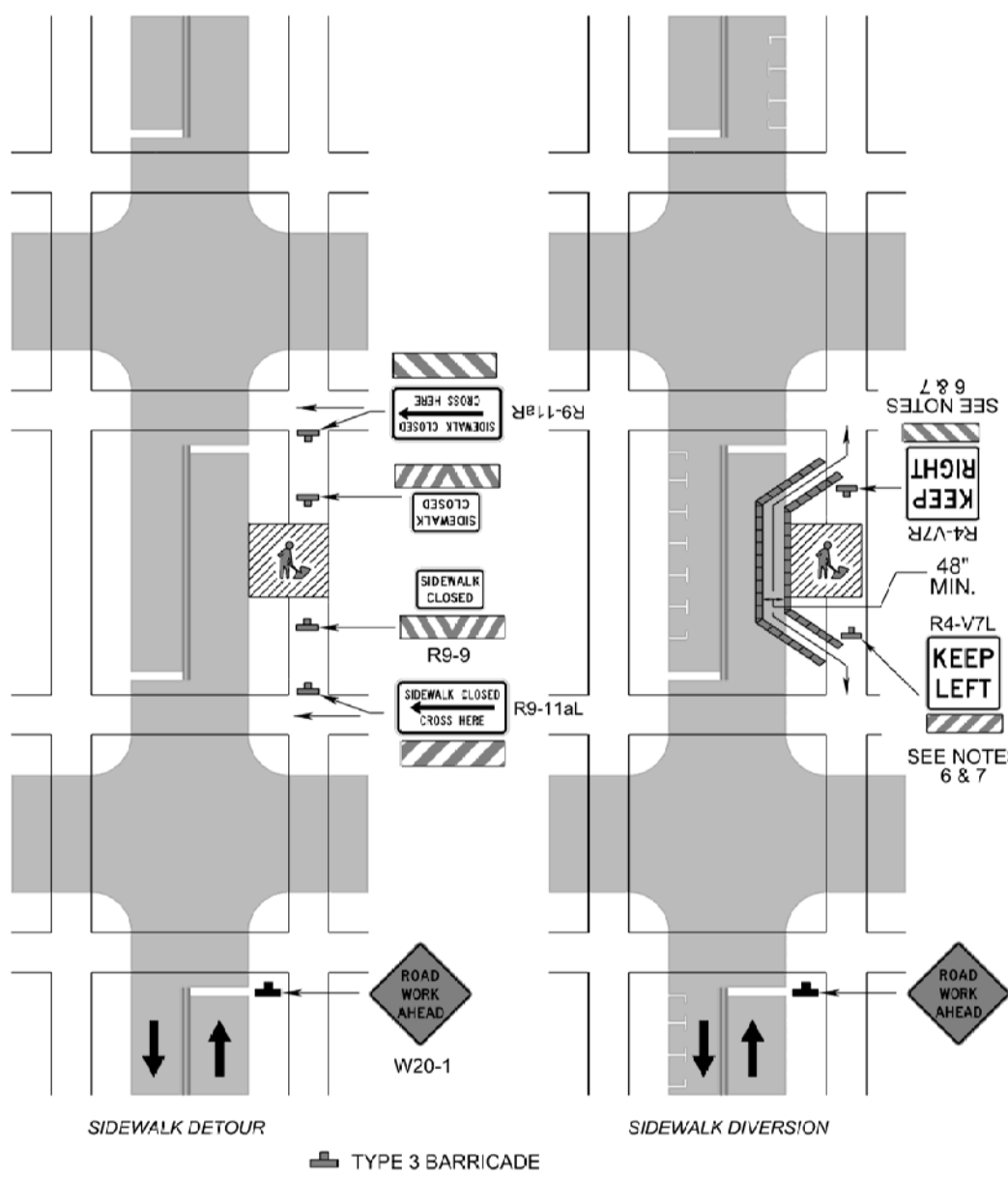
Standard:

- 8. All sidewalk closures shall be closed with Type 3 Barricade.

August 2011

Page 6H-77

Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.0)



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verizon
ALEXOLDT 003 - SMALL CELL
ROW ADJACENT TO 421 SOUTH UNION STREET
ALEXANDRIA, VIRGINIA 22314 (CITY OF ALEXANDRIA)

REVISIONS:

NO.	DESCRIPTION	DATE

PERMIT DWGS 01/17/20

DESIGNED BY: RJD

DRAWN BY: FL

PROJECT NO: 10427.2422

DATE: 1/3/2020

SCALE: AS NOTED

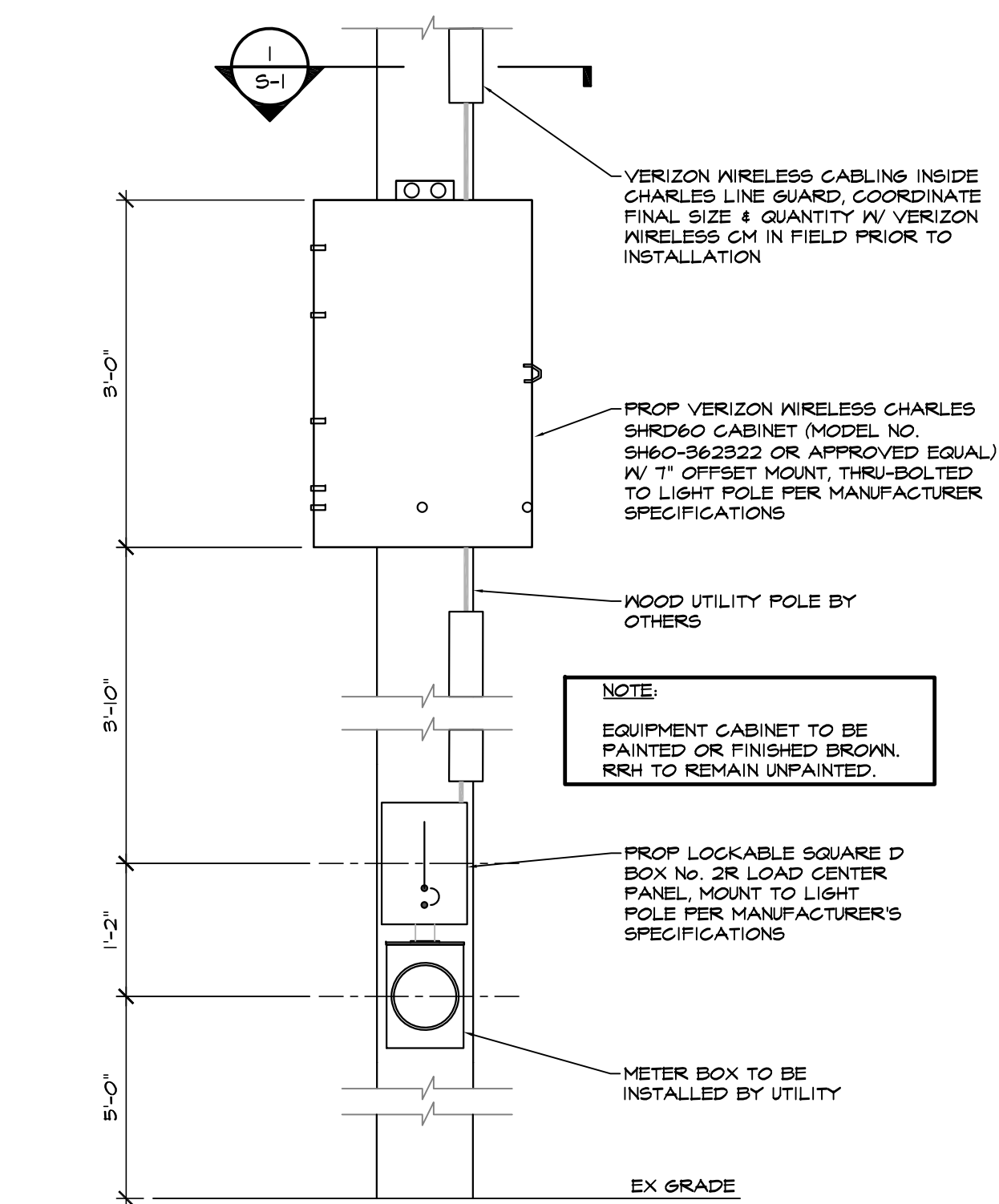
TITLE:

TRANSPORTATION MANAGEMENT PLAN

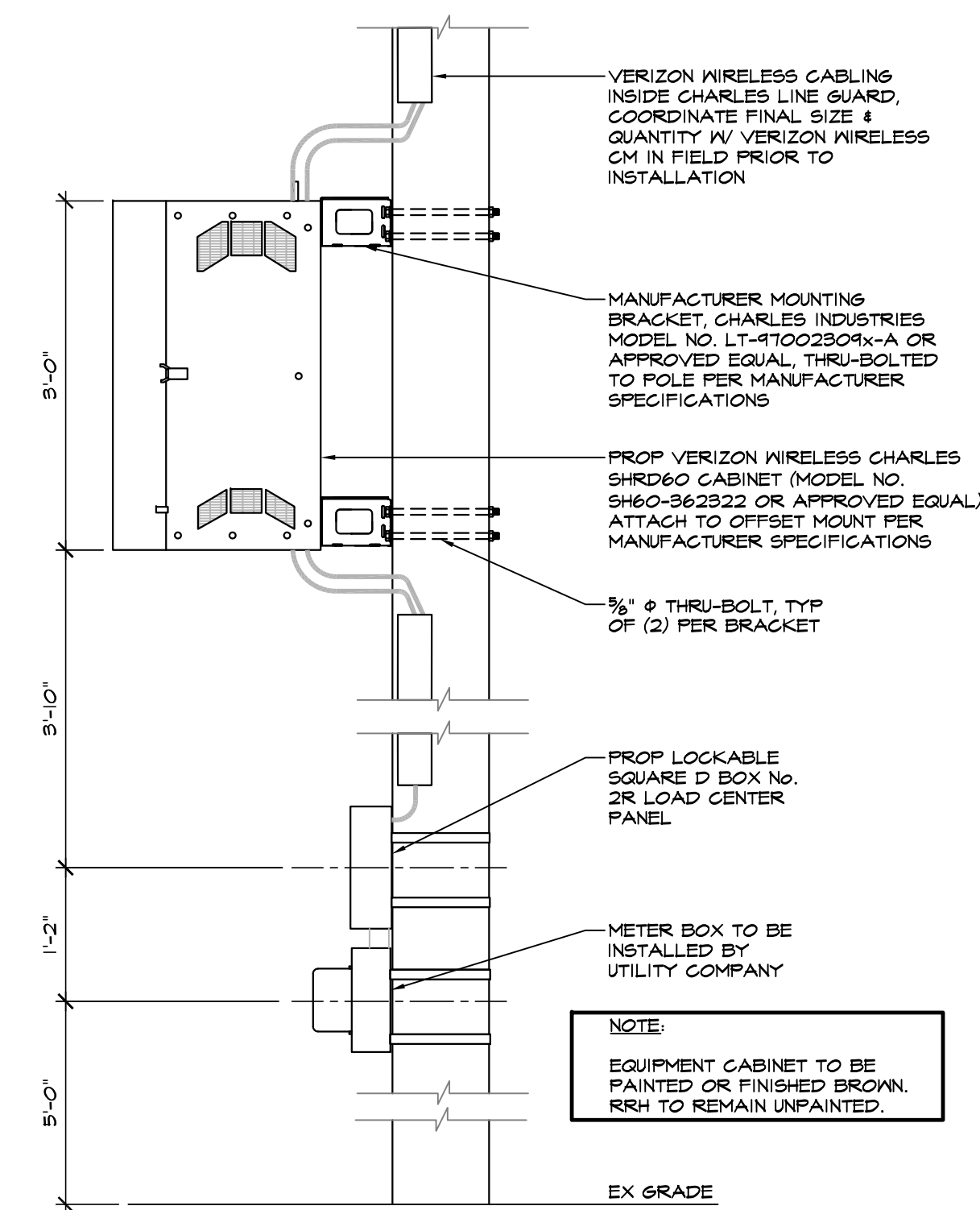
SHEET:

C-3

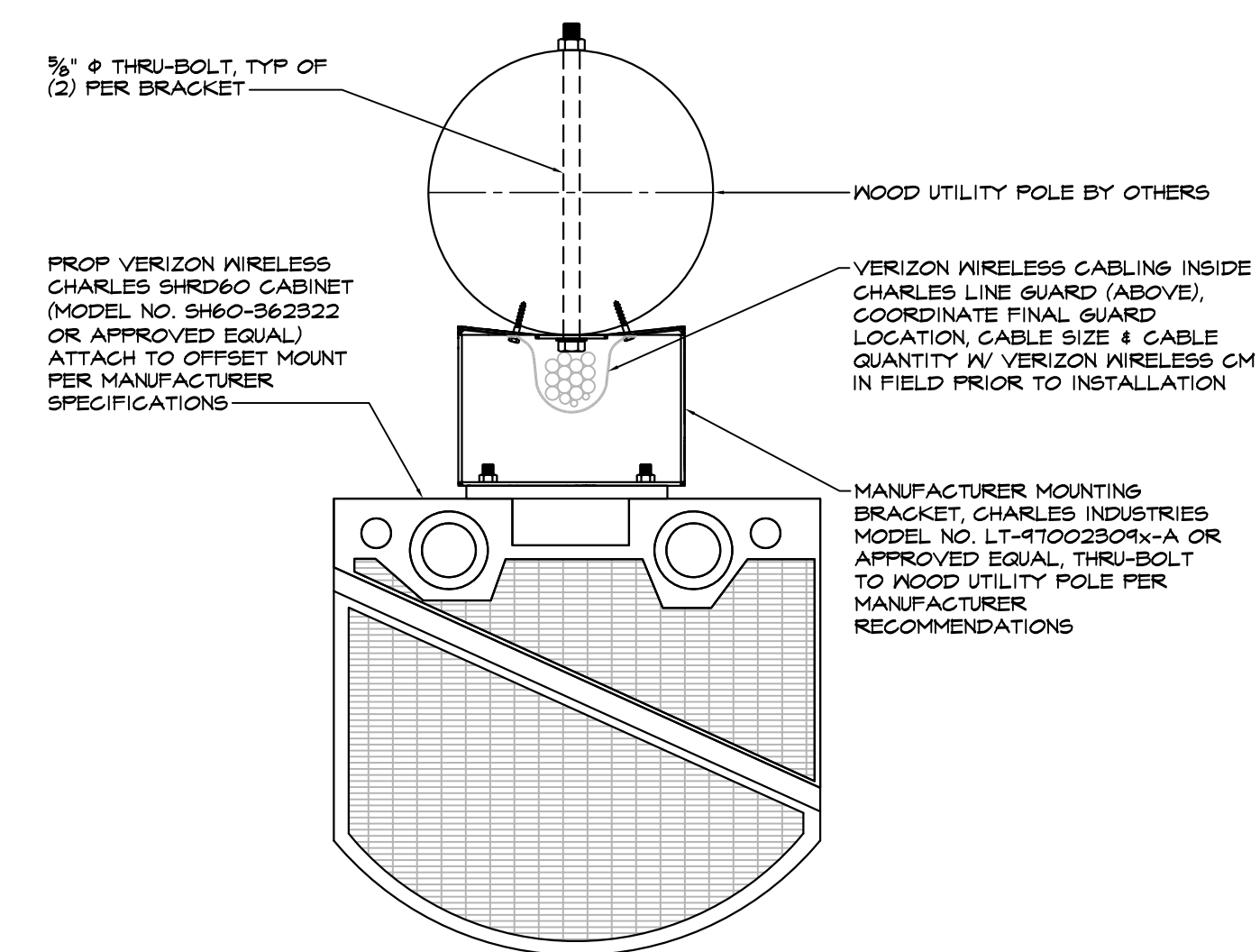





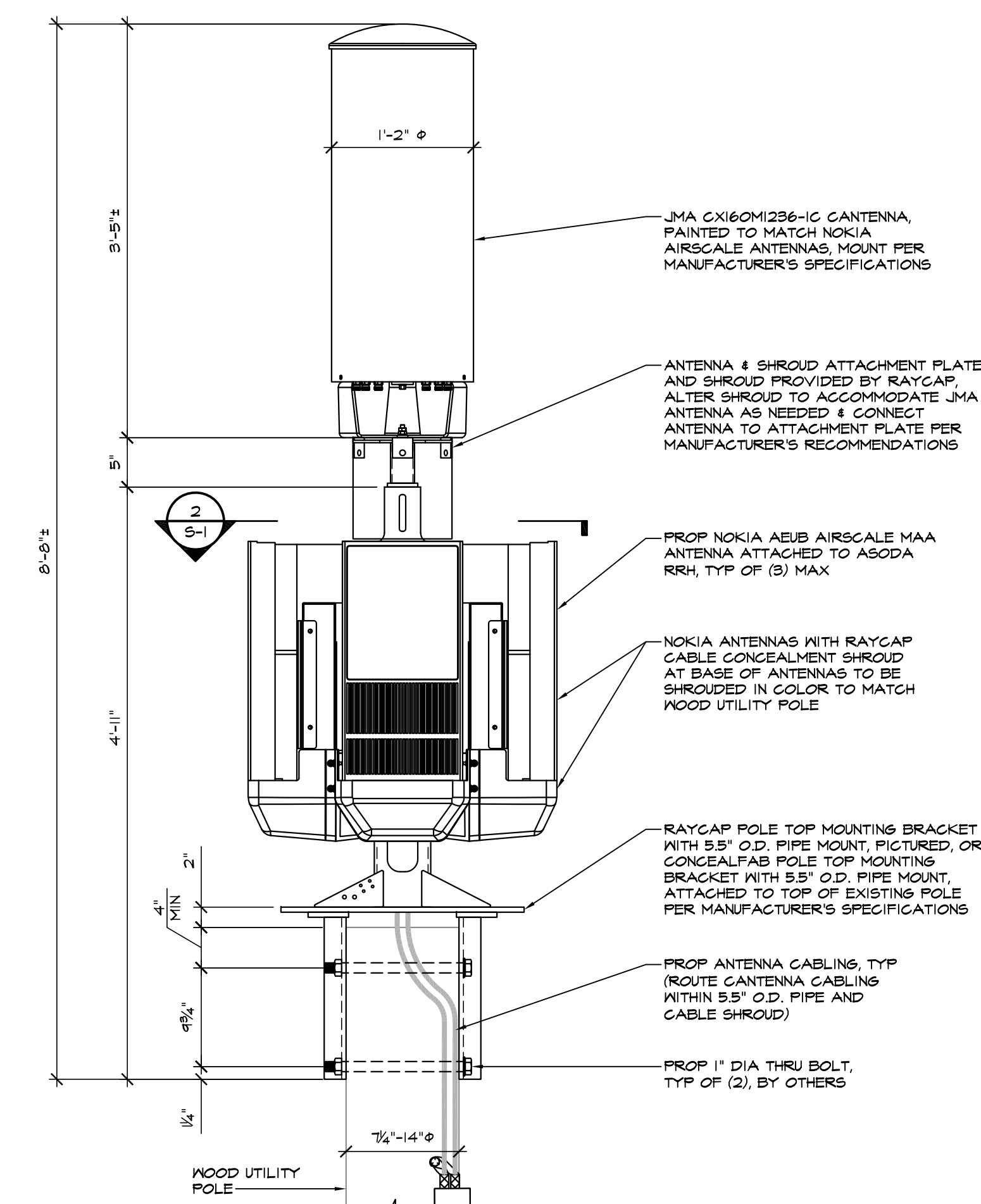
**POLE EQUIPMENT FRONT ELEVATION**  
SCALE: 3/4" = 1'-0"



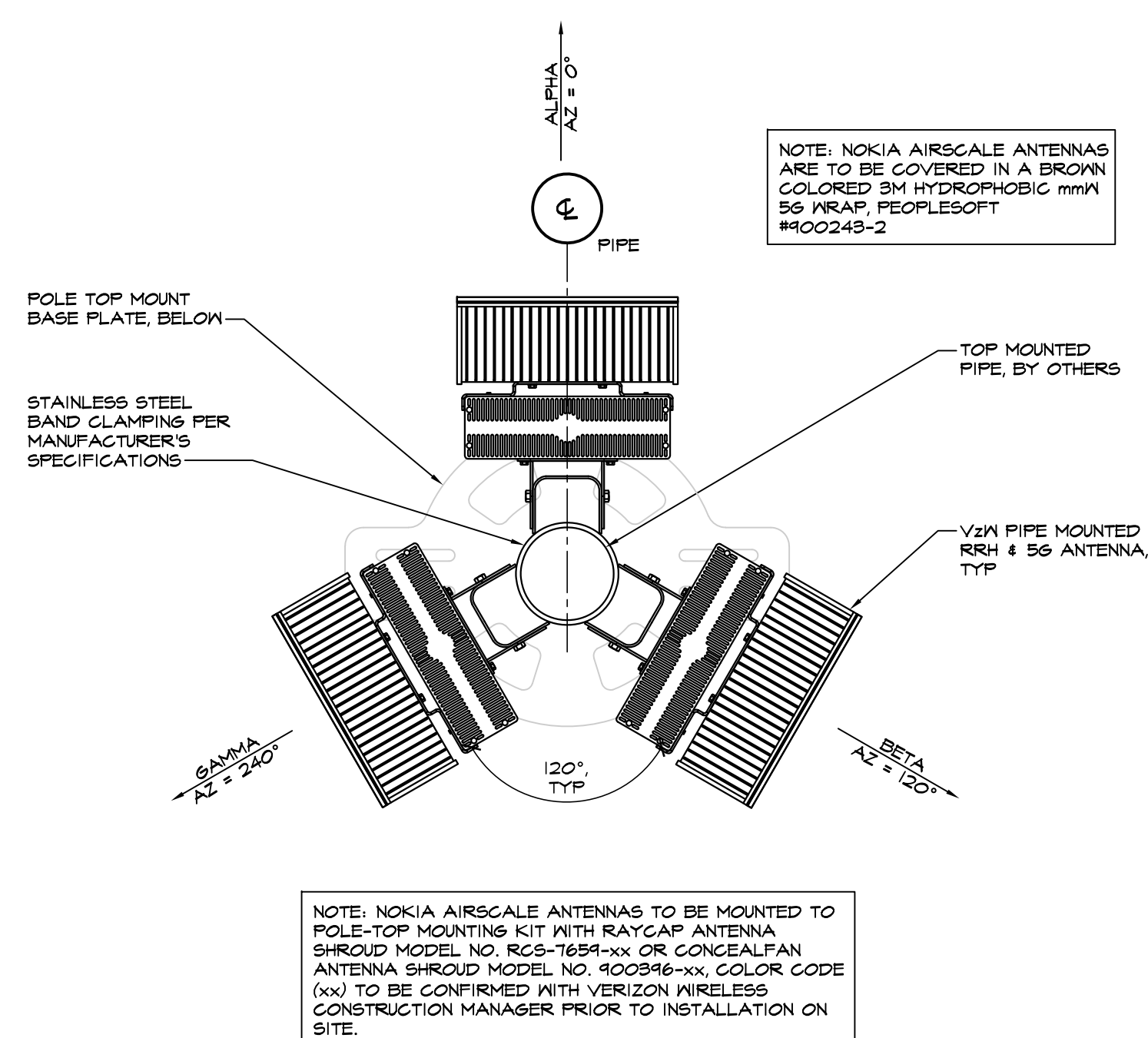
**B POLE EQUIPMENT SIDE ELEVATION**  
SCALE: 3/4" = 1'-0"



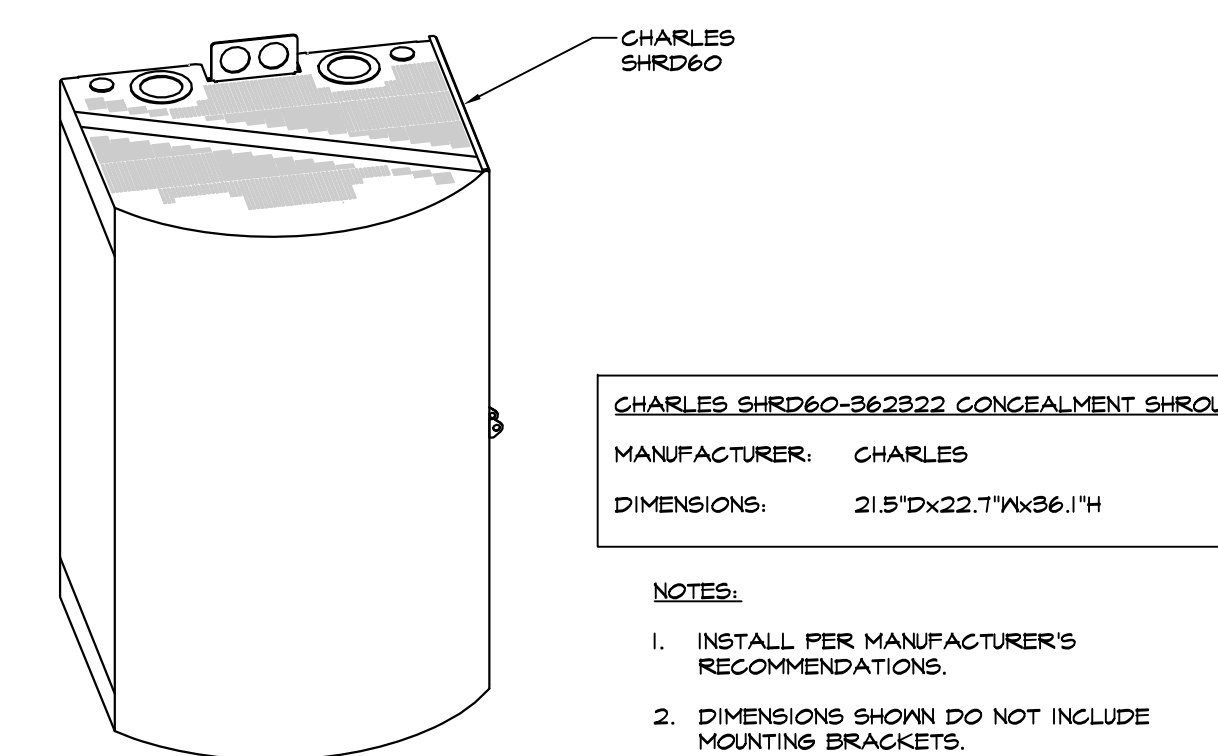
 EQUIPMENT CABINET  
SCALE: 1 1/2" = 1'-0"



C ANTENNA & 5G PANEL ANTENNA MOUNT  
SCALE: 1" = 1'-0"

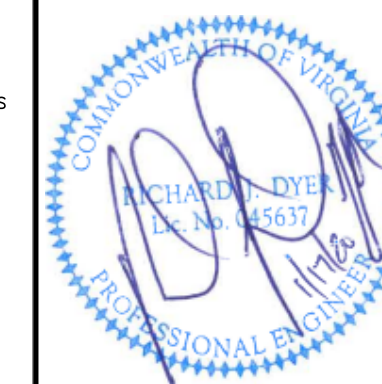


**5G PANEL ANTENNA SECTION**



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

PROTECT YOURSELF, GIVE THREE  
WORKING DAYS NOTICE  
THIS DRAWING DOES NOT INCLUDE NECESSARY  
COMPONENTS FOR CONSTRUCTION SAFETY. ALL  
CONSTRUCTION MUST BE DONE IN COMPLIANCE  
WITH THE OCCUPATIONAL SAFETY AND HEALTH  
ACT OF 1970 AND ALL RULES AND REGULATIONS  
THERE TO APPURTENANT.



**verizon**<sup>✓</sup>  
ALEXOLDT 003 - SMALL CELL  
ROW ADJACENT TO 421 SOUTH UNION STREET  
ALEXANDRIA VIRGINIA 22314 (CITY OF ALEXANDRIA)

REVISIONS:		
NO.	DESCRIPTION	DATE

	PERMIT DWGS	01/17/2
--	-------------	---------

DESIGNED BY: R

DRAWN BY: E.

PROJECT NO: 10427 29

PROJECT NO. 10421.21
DATE 1/13/2000

DATE:	1/3/2024
-------	----------

SCALE: AS NOTED

**TITLE:**

**Structural  
Sections &  
Details**

SHEET:

**S-1**







A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
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## 2. SECTION 16050 - BASIC ELECTRICAL MATERIALS & METHODS

- A. CONDUIT & BOXES:
  1. ALL CONDUIT BELOW GRADE SHALL BE SCHEDULE 40 PVC. ALL CONDUIT ABOVE GRADE SHALL BE NON METALLIC ELECTRIC GRADE.
  2. JUNCTION AND PULL BOXES SHALL BE FURNISHED AND INSTALLED AS SHOWN OR WHERE REQUIRED TO FACILITATE PULLING OF WIRES OR CABLES. SUCH BOXES SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS. GASKETED COVER PLATES SHALL BE FURNISHED FOR OUTDOOR INSTALLATIONS.
  3. ALL BOXES, WHETHER OUTLET, JUNCTION, PULL, OR EQUIPMENT SHALL BE FURNISHED WITH APPROPRIATE COVERS.
  4. NO SECTIONALIZED BOXES SHALL BE USED.
  5. ALL EMT CONDUIT FITTINGS SHALL BE COMPRESSION TYPE.
  6. ALL FIELD CUTS OF GALVANIZED ITEMS SHALL BE BRUSHED WITH MARINE GRADE GALVANIZING.
  7. ALL METALLIC OBJECTS EXPOSED TO WEATHER SHALL BE GALVANIZED.
- B. WIRES & CABLE:
  1. BUILDING WIRE, UNLESS OTHERWISE INDICATED, SHALL BE 600 VOLT, TYPE THWN INSULATION FOR INTERIOR AND EXTERIOR USE. CONDUCTORS SHALL BE SOFT DRAIN COPPER OF NOT LESS THAN 98% CONDUCTIVITY. NO ROMEX OR AC (BX) CABLE WILL BE ALLOWED ON THE PROJECT.
  2. NO WIRE SMALLER THAN NO. TWELVE (12) AWG SHALL BE USED UNLESS OTHERWISE INDICATED. CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND FROM TERMINAL BOARD TO POINT OF FINAL CONNECTION, AND NO SPLICE SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES. ALL CONDUCTORS SHALL BE OF THE SIZES AS INDICATED. ALL WIRES NO. EIGHT (8) AWG AND LARGER SHALL BE STRANDED. THE CONTRACTOR SHALL MAKE WIRING CONNECTIONS OF ALL ELECTRICAL EQUIPMENT REQUIRING ELECTRICAL SERVICE. WIRES AND CABLES SHALL BE AS MANUFACTURED BY PIRELLI, ROYAL AND TRIANGLE OR EQUIVALENT.
  3. ALL WIRING SHALL BE COLOR CODED. MATCH EXISTING SYSTEM COLOR CODING WHERE APPLICABLE.
- C. DISCONNECTS:
  1. FURNISH AND INSTALL SAFETY SWITCHES WHERE INDICATED AND AS REQUIRED FOR MOTOR OUTLETS OR OTHER EQUIPMENT. SWITCHES SHALL BE OF SIZE, NUMBER OF POLES AND FUSED OR NON-FUSED, AS REQUIRED FOR JOB CONDITIONS AND THE NATIONAL ELECTRICAL CODE.
- D. GROUNDING:
  1. PROVIDE GROUND FOR ALL RACEWAYS, DEVICES, AND UTILIZATION EQUIPMENT PERMANENTLY AND CLOSELY TO THE POINT OF ENTRANCE WITH THE NATIONAL ELECTRICAL CODE, AS HERINAFTER SPECIFIED. ALL GROUNDING AND BONDING CONNECTIONS SHALL BE SOLDERLESS.
  2. PROVIDE INSULATED GROUNDING CONDUCTORS FOR FEEDER, AND BRANCH CIRCUIT WIRE, AND ALL EQUIPMENT, PROVIDE GROUNDING BLOCKS, TERMINALS, ETC., FOR CONNECTION OF GROUND WIRE IN ALL DISTRIBUTION EQUIPMENT.

A. ELECTRICAL SERVICE:

1. ELECTRICAL POWER TO THE NEW EQUIPMENT SHALL BE EXTENDED FROM THE PROPOSED SERVICE ENTRANCE RATED LOWER VOLTAGE EQUIPMENT PANEL MOUNTED ON NEW POLE. LABEL METER WITH PHENOLIC NAMEPLATE READING "VERIZON WIRELESS". LABEL PANEL WITH PHENOLIC NAMEPLATE READING "VERIZON WIRELESS SERVICE DISCONNECT".

B. COMMUNICATIONS SERVICE:

1. TELEPHONE SERVICE SHALL BE EXTENDED BY THE TELEPHONE COMPANY. PROVIDE SERVICE ENTRANCE RATED LOWER VOLTAGE EQUIPMENT SHOWN ON THE DRAWINGS FOR USE BY THE TELEPHONE COMPANY. ALL CHARGES BY THE UTILITY COMPANY SHALL BE PAID BY THE OWNER.
2. ALL ELBOWS IN CONDUIT RUNS SHALL BE WIDE SWEEP FIELD BENDS. INSTALL PULL BOXES AS REQUIRED AND WHERE DIRECTED BY THE TELEPHONE COMPANY AND/OR AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

9 "XII" RF NOTICE SIGN MUST BE INSTALLED ON BOTH SIDES OF THE POLE A MINIMUM OF ONE FOOT ABOVE THE UPPERMOST ELECTRIC SUPPLY FACILITIES. THIS SIGN MARKS THE POINT WHERE RF EXPOSURE LEVELS MAY EXCEED "FCC OET-65 APPENDIX A" LIMITS FOR CONTROLLING THE GENERAL POPULATION EXPOSURE. WORKING ABOVE THIS POINT REQUIRES DE-ENERGIZING THE ANTENNA. THIS SIGN MUST OBTAIN THE STANDARD RF SYMBOL AND STATE "NON RF WORKERS MUST POWER DOWN DEVICE WHEN WORKING ABOVE THIS POINT." THE SIGN SHALL BE 60 MIL LEXAN WITH U.V. INHIBITORS AND SIGNS SHALL ADHERE TO IEEE C45.2 STANDARDS.

A POWER DISCONNECT MUST BE INSTALLED. THIS DEVICE MUST PROVIDE DISCONNECTING MEANS FOR DE-ENERGIZING AC AND DC (BATTERY BACK UP) POWER TO THE ANTENNA. THE DISCONNECT SHOULD BE A STANDARD NEMA TYPE HINGED DISCONNECT AND BE SUBJECT TO COMPARISON AFTER INSTALLATION. THE DISCONNECT SHALL BE CLEARLY LABELED AS THE ANTENNA POWER DISCONNECT.

AN ADDITIONAL RF LABEL ON THE EQUIPMENT MUST INCLUDE COMMUNICATION COMPANY NAME, AND A 24-HR CONTACT PHONE NUMBER. THE LABEL SHALL ADHERE TO IEEE C45.2 STANDARDS.

THE ANTENNA SHALL BE MOUNTED THE GREATER VALUE OF NESC MINIMUM CLEARANCE OR THE MINIMUM CLEARANCE REQUIRED TO MEET OET UNCONTROLLED EXPOSURE LIMITS. THE ANTENNA SHALL BE MOUNTED AT LEAST 10 FEET ABOVE THE ANTENNA. INCLUDING ATTACHING HARDWARE SHALL BE MOUNTED A MINIMUM OF 45" ABOVE PRIMARY INSTALLATIONS AND 40" ABOVE SECONDARY INSTALLATIONS. (NESC TABLE 238-I)

ANTENNA EQUIPMENT IS PERMISSIBLE ON WOOD POLES ONLY.

ONLY NON METALLIC ELECTRIC GRADE CONDUIT OR RISERS CAN BE USED FOR ROUTING THE COMMUNICATION CABLES THROUGH THE SUPPLY SPACE. THE CONDUIT INSTALLATION SHALL NOT OBSTRUCT THE CLIMBING SPACE OR WORKING SPACE ON THE POLE AND SHALL NOT OBSTRUCT SUPPLY EQUIPMENT. (NESC 234B, AND NESC 234H4).

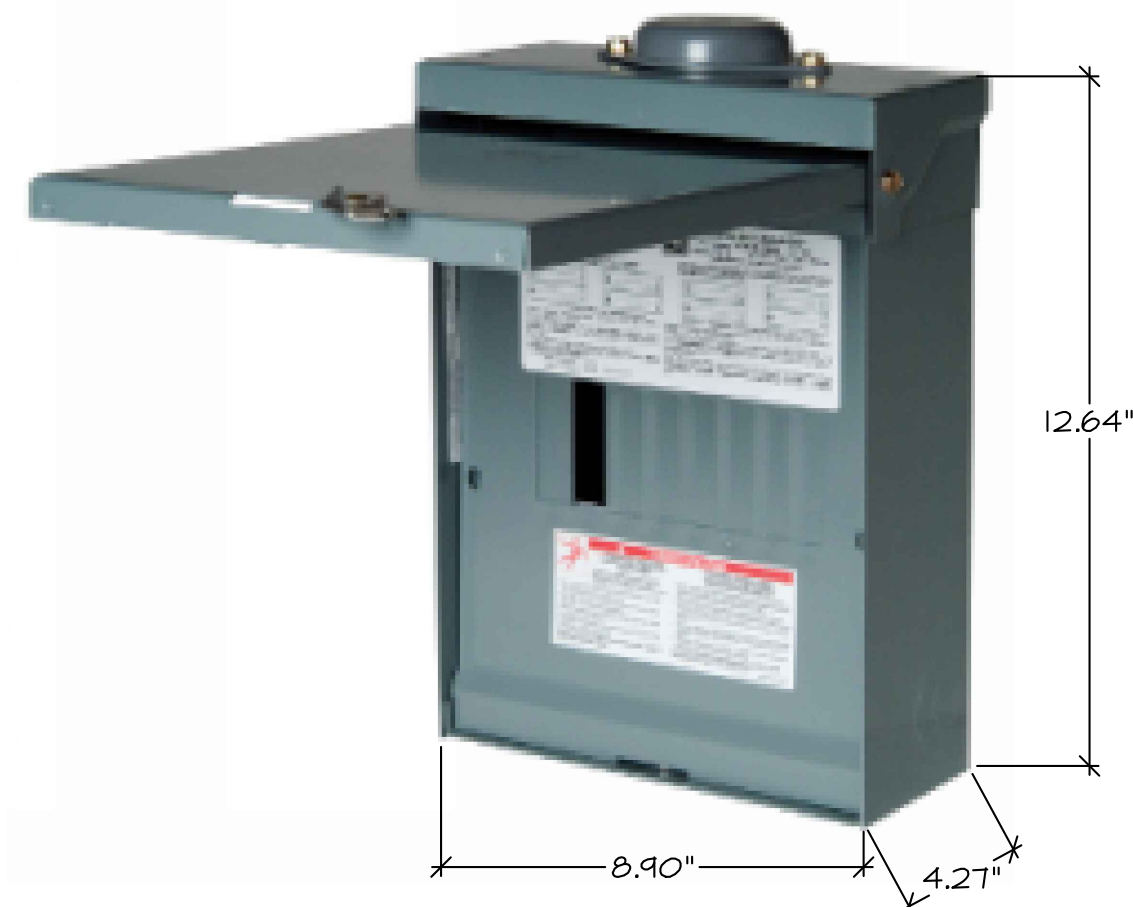
THE INSTALLATION MUST MEET ALL NESC REQUIREMENTS.

A DOMINION DISTRIBUTION REPRESENTATIVE MUST APPROVE ALL ANTENNA ATTACHMENT POLES. ANTENNAS ARE NOT ALLOWED ON POLES FREQUENTLY VISITED BY OPERATIONS PERSONNEL. THESE INCLUDE EQUIPMENT POLES SUCH AS REGLOSERS, THREE PHASE TRANSFORMER BANKS, THREE PHASE TERMINALS, CAPACITORS, SWITCHES, ETC.

INSTALLERS WORKING IN THE AREA OF THE POLE ABOVE THE NORMAL COMMUNICATIONS SPACE MUST OSHA 1910.264 REQUIREMENTS.

1. AN ANTENNA GROUND WIRE AND GROUNDING ELECTRODE IS REQUIRED. THIS GROUND SHALL BE BONDED TO THE COMPANY GROUND WIRE.
- II. VERIZON TO LEAVE MINIMUM 3' LEADS COILED AND SECURED TO PREVENT ACCIDENTAL CONTACT WITH SECONDARY CONDUCTORS.
12. SERVICE WILL BE CONNECTED BY VERIZON IN COMPLIANCE WITH FILED RATE PLAN.
13. LINE ARRESTER INSTALLATIONS ARE REQUIRED ON POLES WITH PRIMARY CONDUCTORS.
14. VERIZON'S GROUND MAY NOT BE USED TO SATISFY NEC REQUIREMENTS FOR THE EQUIPMENT BRACKET AC SERVICE GROUND. THE EQUIPMENT AND ITS AC SERVICE GROUND ARE REQUIRED TO BE BONDED TO THE COMPANY GROUND CONDUCTOR ON THE POLE AT LEAST 6" ABOVE GROUND LEVEL USING A No. 6 Cu CONDUCTOR. CONNECTION TO THE COMPANY'S GROUND ROD OR CONNECTOR IS NOT APPROVED.
15. BONDS SHALL BE MADE BETWEEN THE GROUND WIRE AND THE EQUIPMENT CABINET (NOT NEUTRAL BUS) OF THE POWER SUPPLY/SWITCH. THESE CONNECTIONS ARE TO AVOID POTENTIAL DIFFERENTIAL BETWEEN DEVICES ON THE POLES. BONDS TO THE POWER SUPPLY/SWITCH SHALL BE PERMANENTLY VISIBLE FROM THE GROUND. WHEN A COMPANY DRIVEN GROUND EXISTS ON THE POLE, THE EQUIPMENT CASE BONDING WIRE NEED EXTEND ONLY FROM THE SWITCH TO THE COMPANY GROUND WIRE.
16. THE METER BASE, EQUIPMENT BRACKET, AND DISCONNECT SHOULD BE MOUNTED PROVIDING EIGHT FEET MINIMUM GROUND CLEARANCE. THEY MAY BE MOUNTED AT OPERATIONAL HEIGHT THAT:
  - A. THE EQUIPMENT BRACKET DOES NOT OBSTRUCT A WALKWAY OR IS SUBJECT TO VEHICULAR TRAFFIC.
  - B. THE EQUIPMENT BRACKET CAN NOT BE USED ALONE OR IN CONJUNCTION WITH A FENCE, PEDESTAL, ETC. AS A CLIMBING AID.
17. FOR SAFETY PURPOSES DEVICES WITH LEAD ACID BATTERIES SHALL NOT BE USED.
18. DUE TO OPERATIONAL CONCERNS, SECONDARY POLES OR GUY STUB POLES ARE PREFERRED FOR ANTENNA ATTACHMENTS. PRIMARY POLES SHOULD ONLY BE CONSIDERED WHEN THERE IS NO OTHER SUITABLE POLE IN THE AREA.
19. ONE RADIO CABINET, A SERVICE DISCONNECT AND THE METER BASE MAY BE POLE MOUNTED. ADDITIONAL EQUIPMENT, OR LARGE CABINETS SHALL BE PAD MOUNTED. PAD MOUNTED EQUIPMENT MUST BE LOCATED A MINIMUM OF 10' FROM THE BASE OF THE POLE.

NOTE: ALL MOUNTING HEIGHTS ARE TO CENTER LINE OF THE OUTLET BOX UNLESS OTHERWISE INDICATED.



PROPOSED COAX CABLES

INCOMING FIBER FROM OMNI-TAP

PROPOSED POWER SUPPLY UNIT

PROPOSED REMOTE RADIO HEAD

T11 OUTDOOR 12 FIBER SPLICER BOX PART #FET26-06-RLCN

PROPOSED POWER CONDUIT FOR PSU

VERIZON WIRELESS  
SERVICE DISCONNECT

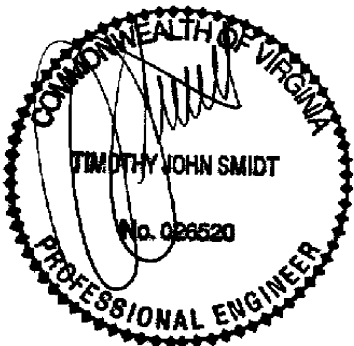
\* PHENOLIC NAMEPLATE SHALL HAVE A BLACK BACKGROUND WITH WHITE LETTERING AND BE PERMANENTLY INSTALLED ON FRONT OF LOAD CENTER PANEL.

(PROPOSED) NEMA 3R

PANEL "VERIZON WIRELESS"									
120/240 VOLTS 1Ø 3 WIRE 100 AMP MAIN L.O.									
WYE	1	2	3	4	5	6	7	8	9
Ø Ø Ø Ø Ø									
	40		15	15	15	15	15	-	-
DESCRIPTION	MAIN		NOKIA PSU	NOKIA RADIO UNIT #1	ASOD# 1	NOKIA RADIO UNIT #2	ASODA #2	NOKIA RADIO UNIT #3	ASODA #3
							SPACE	SPACE	

POWER LOAD: 3.31 KVA x 125% = 4.14 KVA  
 17.25 AMPS @ 120/240V, 1Ø, 3P3

- \* PANEL SHALL BE LOCKABLE.
- \*\* PANEL SHALL BE SERVICE ENTRANCE RATED.
- \*\*\* PANELBOARD SHALL BE EQUIPPED WITH A TYPEWRITTEN DIRECTORY, INDICATING PLAINLY WHAT EACH CIRCUIT OF THE PANEL CONTROLS. THIS SCHEDULE SHALL BE PLACED ON FRONT COVER OF PANEL.



**verizon**  
ALEXOLDT 003 - SMALL CELL

REVISIONS:		
NO.	DESCRIPTION	DATE
PERMIT DWGS.		1/16/20

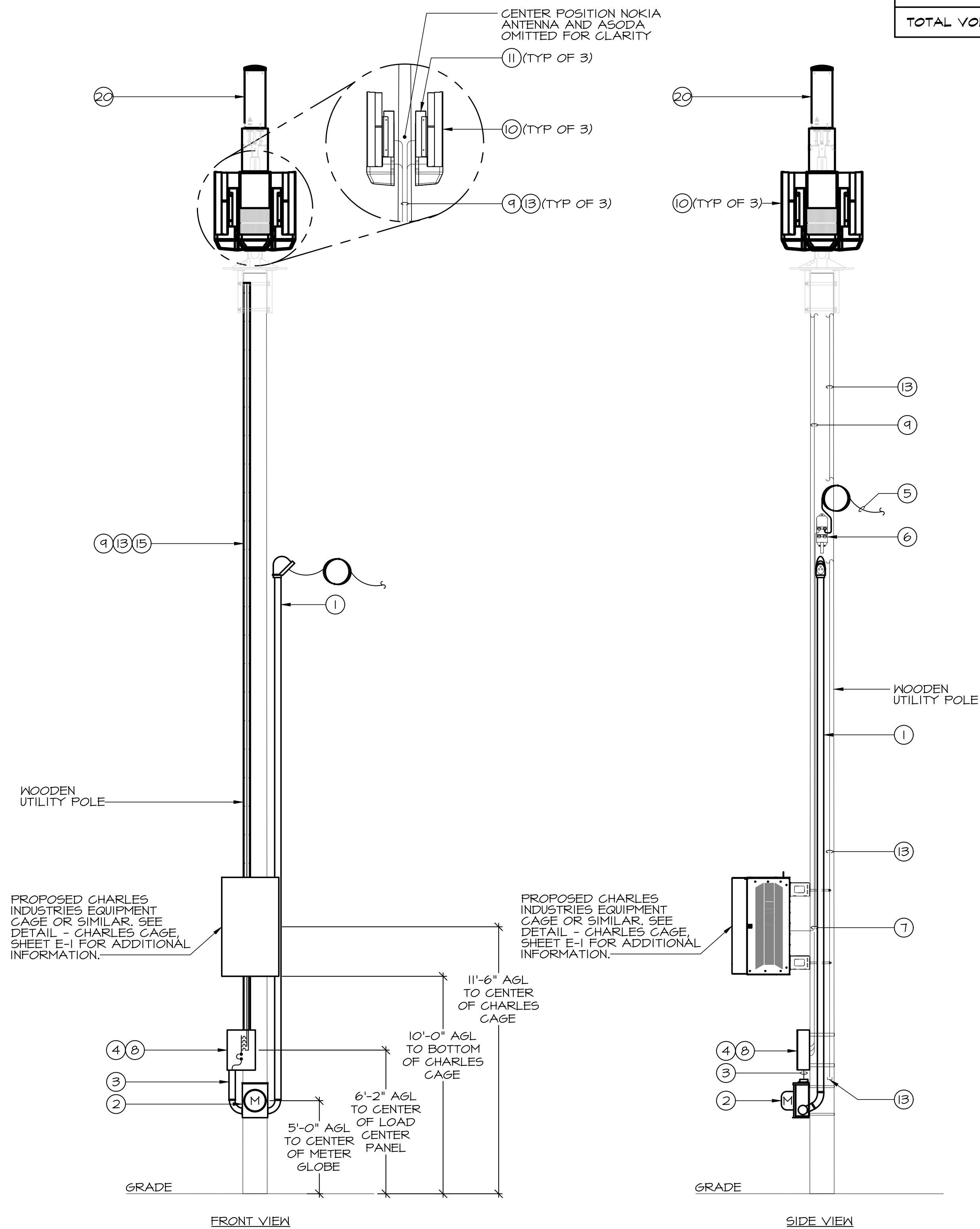
LAST REV.:  
PROJECT NO: 19165E  
DATE: JANUARY 16, 2020  
SCALE: AS NOTED  
TITLE:  
SPECIFICATIONS,  
SYMBOLS LIST,  
PANEL SCHEDULE  
AND DETAILS

SHEET:

1



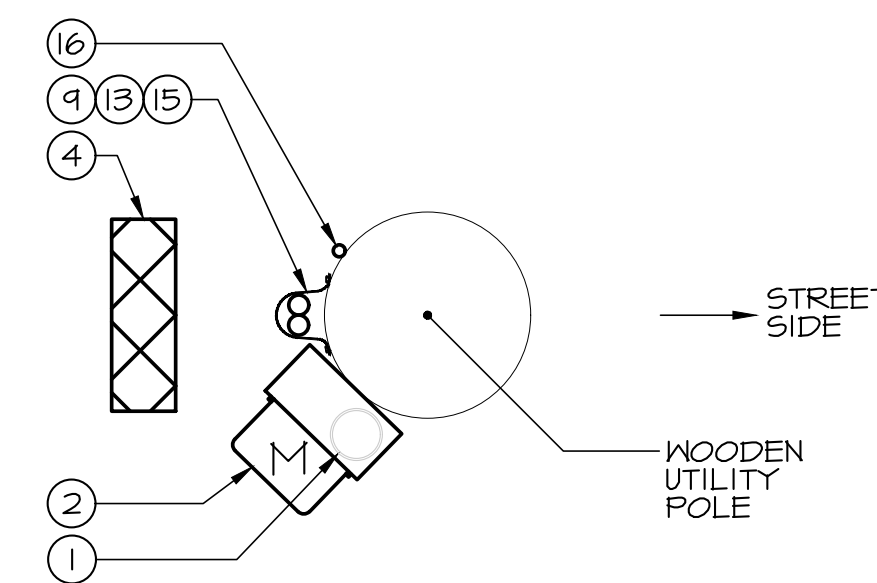
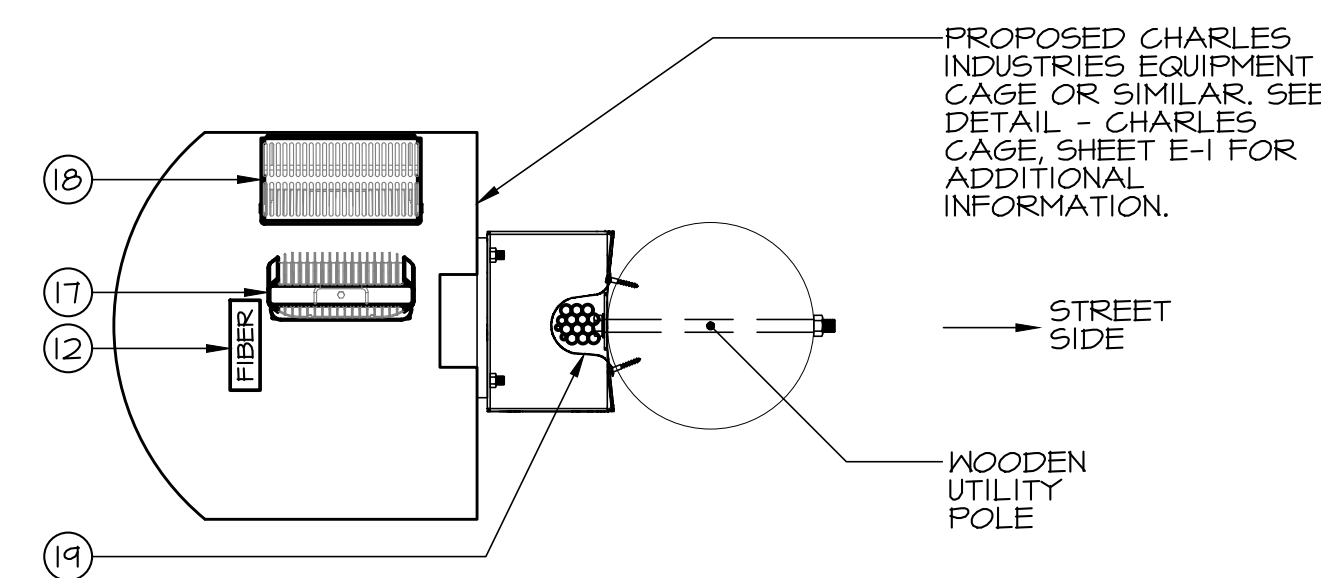
EQUIPMENT SCHEDULE					
MANUFACTURER	PART #	COMPONENT TYPE	QUANTITY	DIMENSIONS (HxWxD)	WEIGHT
JMA	CX160M1236-1C	ANTENNA	1	33.5"x14.0"x0	30.6 LBS.
NOKIA	AIRSCALE AEUB & ASODA RRH	ANTENNA/ REMOTE RADIO HEAD	3	23.62"x11.97"x8.11"	60.2 LBS.
SQUARE-D	G0816L100RB	LOAD CENTER PANEL	1	12.64"x8.90"x4.27"	9.68 LBS.
MILBANK MFG. CO.	U7487-0	ELECTRIC METER	1	11.5"x8.0"x3.3"	3.98 LBS.
CHARLES	SH60-362322	EQUIPMENT CAGE	1	36.1"x22.7"x21.5"	220.0 LBS.
		CONDUIT CABLING	3±	VARIES	20.0 LBS.
				<b>TOTAL WEIGHT:</b>	360.46 LBS.
				<b>TOTAL VOLUME:</b>	14.90 CU.FT.



⑭ **POWER RISER DIAGRAMS**  
NO SCALE

## DRAWING NOTES

- (1) EXTEND 3#12 AWG + #6 GND IN ONE (1) - 2" PVC CONDUIT VERTICALLY UP UTILITY POLE FROM LINE SIDE OF METER CAN. FOR EXTENSION OF OVERHEAD ELECTRIC SERVICE CABLES. COORDINATE FINAL CONDUIT TERMINATION POINT WITH UTILITY REPRESENTATIVE IN THE FIELD. PROVIDE WEATHER HEAD AT TOP END OF CONDUIT AS NECESSARY. CONTRACTOR SHALL TRANSITION TO FLEX PRIOR TO FINAL CONNECTION TO METER CAN. ELECTRICIAN SHALL ALLOW 3'-0" OF SLACK AT WEATHERHEAD. METER FOR FINAL TERMINATIONS BY UTILITY COMPANY. CONTRACTOR MUST REFER TO DOMINION BLUE BOOK 2011, OVERHEAD SERVICE REQUIREMENTS FOR ADDITIONAL INFORMATION.
- (2) PROVIDE WEATHERPROOF UTILITY COMPANY LIGHT DUTY METER CAN MOUNTED ON UTILITY POLE. METER GLOBE PROVIDED AND INSTALLED BY UTILITY COMPANY. PROVIDE PHENOLIC NAMEPLATE READING "VERIZON WIRELESS".
- (3) EXTEND 3#6 AWG + #8 GRD - 1" CONDUIT. CONTRACTOR SHALL TRANSITION TO FLEX FOR FINAL CONNECTION TO SIDE OF METER CAN.
- (4) PROVIDE AND INSTALL WEATHERPROOF SERVICE ENTRANCE RATED, 120/240 VOLT, 1Ø, 3W, 100 AMP M.L.O. EIGHT (8) POSITION QO LOAD CENTER PANEL (MODEL #QO0616100RB) OR APPROVED EQUAL WITH FIELD INSTALLED 2P40A MAIN CIRCUIT BREAKER MOUNTED ABOVE METER CAN ON UTILITY POLE. PROVIDE PHENOLIC NAMEPLATE READING, "VERIZON WIRELESS SERVICE DISCONNECT". REFER TO PANEL SCHEDULE, SHEET E-1 FOR ADDITIONAL INFORMATION.
- (5) PROPOSED ROUTE OF INCOMING OVERHEAD FIBER CABLE BY UTILITY COMPANY. EXCESS FIBER SHALL BE COILED AND SECURED TO UTILITY POLE ABOVE ALL EQUIPMENT. COORDINATE FINAL INCOMING FIBER ROUTE WITH UTILITY COMPANY.
- (6) UTILITY COMPANY PROVIDED AND INSTALLED OPTISHEATH MULTIPOINT TERMINAL MOUNTED ON UTILITY POLE. EXACT MOUNTING LOCATION SHALL BE COORDINATED WITH VERIZON TELEPHONE IN FIELD.
- (7) EXTEND NECESSARY FIBER STRANDS FROM OPTISHEATH MULTIPOINT TERMINAL TO TII FIBER BOX MOUNTED WITHIN CHARLES CAGE.
- (8) VERIZON CONTRACTOR SHALL COORDINATE FINAL AVAILABLE SERVICE CHARACTERISTICS (VOLTAGE, PHASE, ETC.) WITH UTILITY COMPANY PRIOR TO START OF WORK. PREFERRED VOLTAGE IS: 120/240V, 1Ø, ACCEPTABLE VOLTAGE IS: 120/208V, 1Ø.
- (9) EXTEND 4#12 AWG + #12 GRD FROM EACH 15 AMP TANDEM BREAKER (TYPE OF 3) IN 1" CONDUIT VERTICALLY UP UTILITY POLE TO EACH NOKIA ANTENNA/ASODA RADIO UNIT MOUNTED ON UTILITY POLE. REFER TO PANEL SCHEDULE, SHEET E-1, FOR ADDITIONAL INFORMATION.
- (10) VERIZON WIRELESS PROVIDED, CONTRACTOR INSTALLED NOKIA ANTENNA MOUNTED ON UTILITY POLE.
- (11) VERIZON WIRELESS PROVIDED, CONTRACTOR INSTALLED NOKIA ASODA MOUNTED BEHIND NOKIA ANTENNA ON UTILITY POLE.
- (12) PROVIDE AND INSTALL TII OUTDOOR FIBER BOX PART #FET26-12-RLCN 12 FIBER SPLICER BOX WITHIN CHARLES CAGE FOR FIBER DISTRIBUTION.
- (13) EXTEND ONE (1) WEATHERPROOF RATED CAT 5E CABLE FROM EACH ASODA AND COIL UP AT BASE OF LOAD CENTER. PROVIDE AND INSTALL RJ45 PLUG KIT WITH CAP TO KEEP CONNECTION WEATHERPROOF (TYPE OF 3).
- (14) CONTRACTOR SHALL REFER TO LATEST EDITION OF VZW FIBER DESIGN STANDARDS FOR FIBER QUANTITIES, ETC.
- (15) CONTRACTOR SHALL PROVIDE AND INSTALL SCHEDULE 40 PV MOLD (POLE RISER) FOR EXTENSION OF POWER AND FIBER CONDUITS TO NOKIA ANTENNAS. REFER TO STRUCTURAL SHEETS FOR ADDITIONAL INFORMATION.
- (16) CONTRACTOR SHALL PROVIDE AND INSTALL 1/2" CONDUIT WIRE MOLDING. SECURE GROUND WIRE MOLDING TO UTILITY POLE VIA GALVANIZED 2"X5/8" STAPLES. REFER TO SHEET E-3 FOR ADDITIONAL INFORMATION.
- (17) VERIZON WIRELESS PROVIDED AND CONTRACTOR INSTALLED NOKIA AIRSCALE POWER SUPPLY UNIT FOR EXTENSION OF DC WIRING TO IRISH. CONTRACTOR SHALL EXTEND #12 AWG + #12 GRD 3/4" CONDUIT FROM POWER SUPPLY UNIT TO IP5A CIRCUIT BREAKER IN VERIZON WIRELESS LOAD CENTER PANEL. VERIFY FINAL LENGTH WITH EXISTING CONDITIONS IN THE FIELD. REFER TO PANEL SCHEDULE, SHEET E-1, FOR ADDITIONAL INFORMATION.
- (18) PROPOSED LOCATION OF REMOTE RADIO HEAD MOUNTED IN CHARLES CAGE ON UTILITY POLE.
- (19) EXTEND FOUR (4) COAX AND ONE (1) RET CABLE INSIDE SCHEDULE 40 PV MOLD FROM REMOTE RADIO HEAD MOUNTED IN CHARLES CAGE AND TURN VERTICALLY UP TO ANTENNA MOUNTED ON TOP OF UTILITY POLE. UTILIZE PV MOLD FOR EXTENSION OF INCOMING FIBER BY VERIZON LAND LINE TO OPTISHEATH MULTIPOINT TERMINAL.
- (20) VERIZON WIRELESS PROVIDED AND CONTRACTOR INSTALLED ANTENNA MOUNTED ON TOP OF UTILITY POLE.

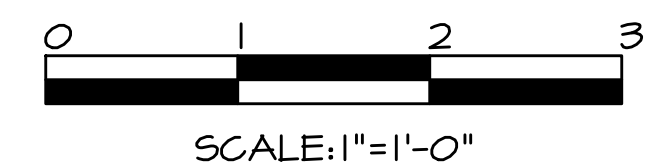


\* COORDINATE FINAL MOUNTING LOCATION OF METER WITH UTILITY COMPANY REPRESENTATIVE PRIOR TO START OF WORK.

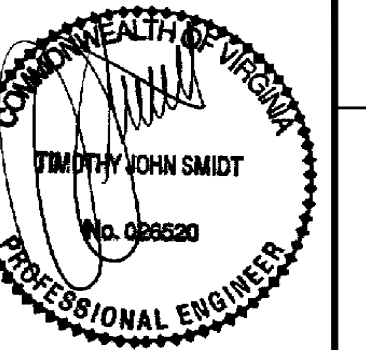
## CONTRACTOR TO COORDINATE THE FINAL PLACEMENT OF THE CABLE SHROUD AS INDICATED ON SHEET S-1.

## EQUIPMENT PLAN

**SCALE: 1" = 1'-0"**



**TELETECH ENGINEERING INC.**  
216 Commerce Road, Suite 1  
Forest Hill, MD 21050  
410-692-5816  
[www.tel-eng.com](http://www.tel-eng.com)



**verizon**  
ALEXOLDT 003 - SMALL CELL  
ROW ADJACENT TO 421 SOUTH UNION STREET  
CITY OF ALEXANDRIA, VIRGINIA 22314

**VISIONS:**

DESCRIPTION	DATE

PERMIT DWGS.	1/16/20
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ST REV.:

PROJECT NO:19165E

TE: JANUARY 16, 2020

SALE: AS NOTED

NAME: _____	DATE: _____
UNIT: _____	_____

POWER RIGER

DIAGRAM,

EQUIPMENT PLAN

## END NOTES

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FEET.

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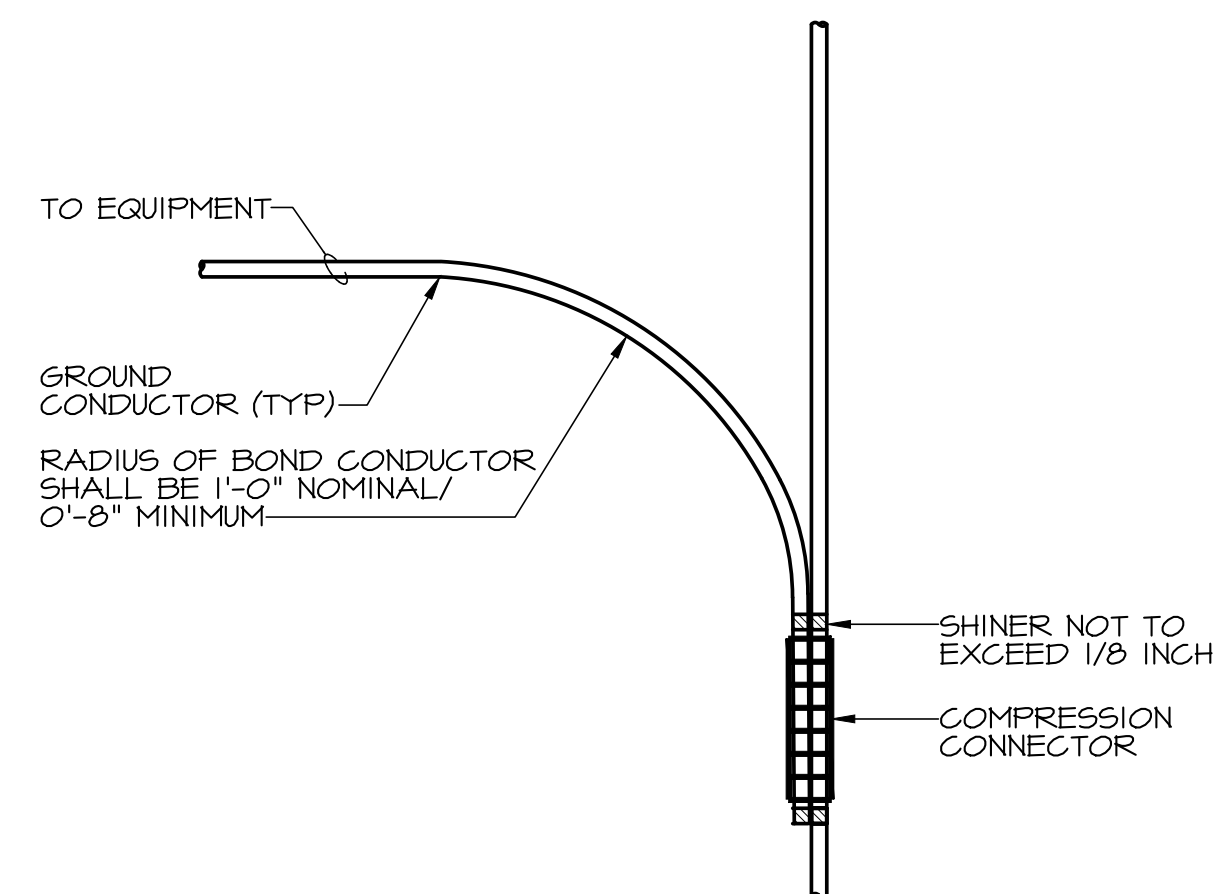
11-2

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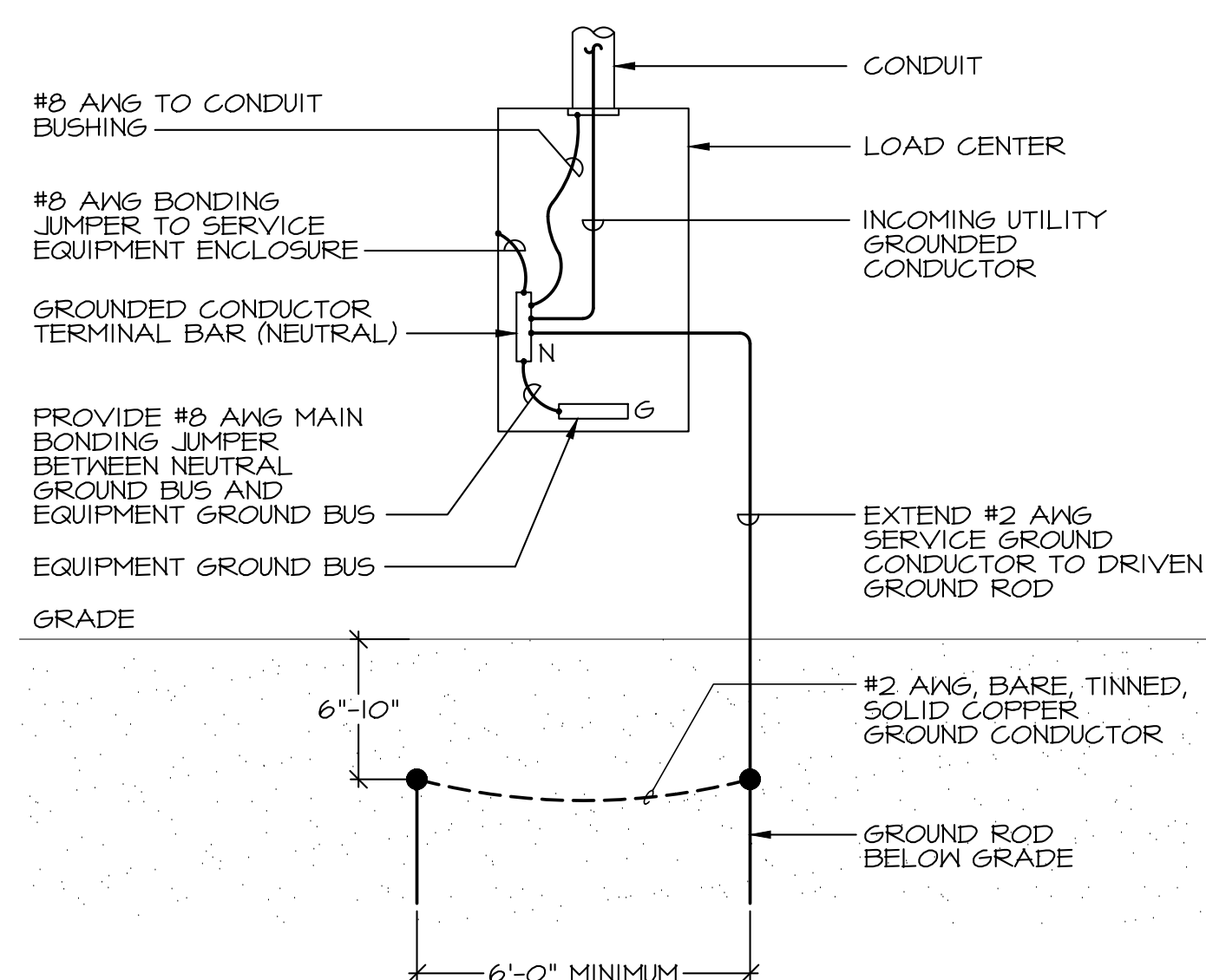
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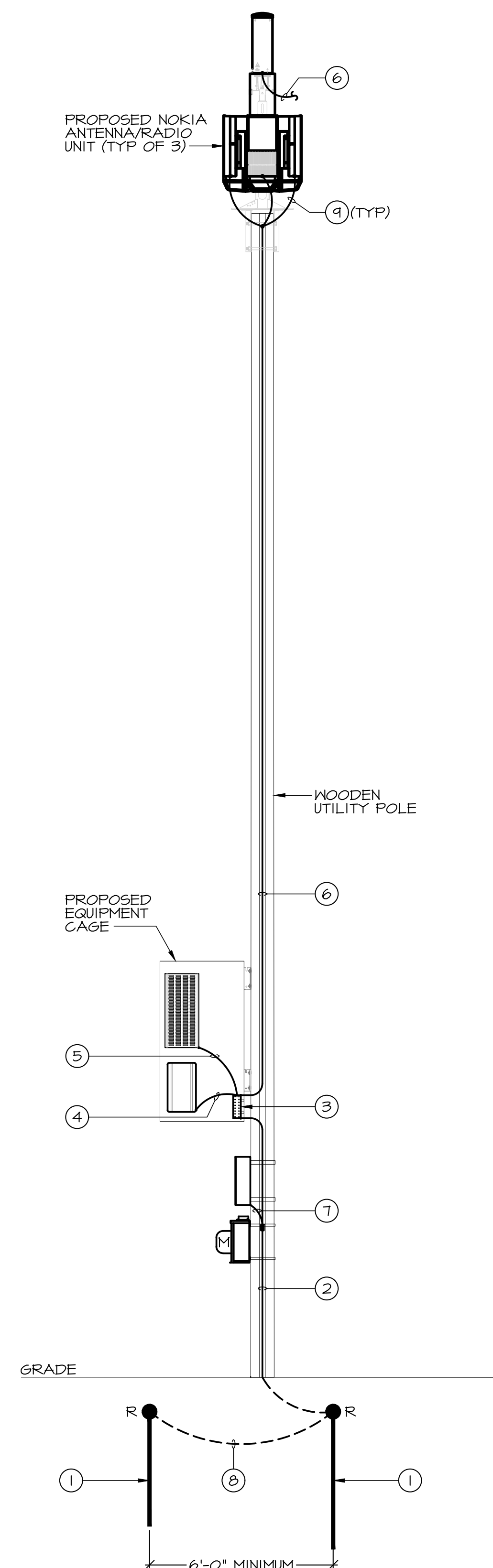




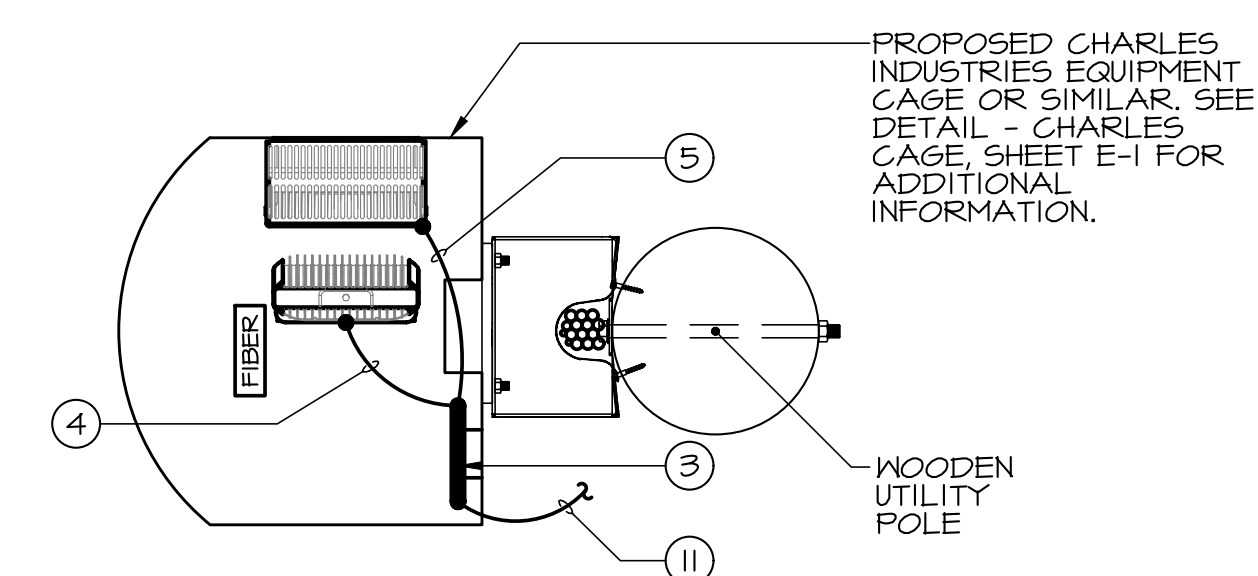
**DETAIL - DIRECTIONAL SPLICE**  
**NO SCALE**



DETAIL - ELECTRIC SERVICE  
GROUNDING ELECTRODE  
NO SCALE



⑩ UTILITY POLE GROUNDING DIAGRAM  
NO SCALE



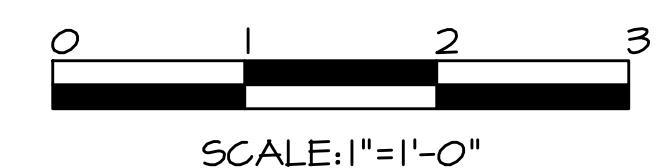
## GROUNDING PLAN

SCALE: 1" = 1'-0"

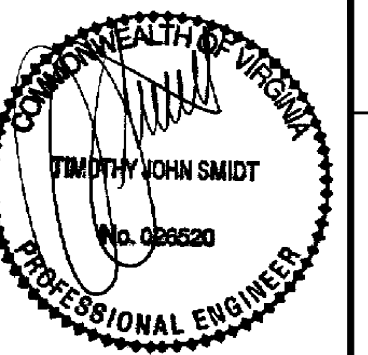
1. ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD) TO NEAREST REINFORCING BAR USING ERICO CADWELD "ONE-SHOT" CONNECTIONS.
2. ALL EXTERIOR GROUND CONDUCTORS SHALL BE #2 AWG BARE, TINNED SOLID COPPER, UNLESS NOTED OTHERWISE.
3. ALL GROUND CONNECTIONS ABOVE GRADE SHALL BE TWO-HOLE COPPER COMPRESSION TYPE WITH STANDARD LENGTH BARREL (BURNDY # YA2CL- 2TIC4EI). SINGLE HOLE LUGS ARE NOT ACCEPTABLE.
4. ALL MOUNTING HARDWARE FOR EXTERIOR LOCATIONS SHALL BE GALVANIZED INCLUDING NUTS, BOLTS, FLAT AND LOCK WASHERS.
5. ALL EXTERIOR MECHANICAL CONNECTIONS SHALL BE MADE USING OXIDE-INHIBITING JOINT COMPOUND. THIS COMPOUND SHALL BE APPLIED TO ALL SURFACES OF BOLTS, WASHERS, NUTS AND CONNECTING SURFACES OF GROUND BAR PLATES. ALL BARE COPPER SURFACES OF CONDUCTORS SHALL BE COATED PRIOR TO LUGGING. JOINT COMPOUND SHALL BE NO-OX.
6. TYPICAL BI-DIRECTIONAL BONDING CONNECTIONS TO THE INTERIOR GROUND RING SHALL BE MADE USING DOUBLE CRIMP TYPE "C" TAP CONNECTORS.
7. ALL EXOTHERMIC WELD CONNECTIONS AND FIELD CUTS OF METALLIC OBJECTS EXPOSED TO WEATHER SHALL BE FIRST SPRAYED WITH COLD GALVANIZING (AFTER COOL DOWN) THEN BE TOPPED WITH BRUSH ON MARINE GRADE GALVANIZING.
8. ALL CONDUIT USED AS SLEEVES FOR GROUNDING OR BONDING CONDUCTORS SHALL BE PVC.
9. ALL GROUND RODS SHALL BE DRIVEN VERTICALLY USING A GROUND ROD SHIELD TO PREVENT THE ENDS FROM "MUSHROOMING".
10. PROVIDE ANDREW 36" GROUNDING CABLE REQUIRING FIELD ATTACHABLE CRIMP-ON LUG. DO NOT USE THE LUGS PROVIDED WITH THE GROUNDING KIT; PROVIDE TWO HOLE LUGS. GROUNDING CABLE SHALL BE CUT TO SHORTEST LENGTH POSSIBLE; ALL BONDING CONNECTIONS TO THE EXTERIOR GROUND BAR PLATE SHALL BE MADE USING STAINLESS STEEL NUTS AND BOLTS. CORROSION INHIBITOR SHALL BE APPLIED BETWEEN NUTS AND BOLTS AND GROUND BAR PLATE.
11. JOINT COMPOUND FOR GROUNDING SHALL BE NO-OX.

- ## DRAWING NOTES

- (1) PROVIDE 8'-0" (MINIMUM) X 5/8" COPPER CLAD STEEL GROUND ROD.
- (2) EXTEND #2 AWG, GREEN INSULATED, STRANDED COPPER GROUND CONDUCTOR FROM BURIED GROUND ROD AND BOND TO EXISTING GROUND BAR PROVIDED WITH EQUIPMENT GAGE. GROUND CONDUCTOR SHALL BE HOUSED WITHIN 1/2" GROUND WIRE MOLDING. SECURE GROUND WIRE MOLDING TO UTILITY POLE VIA GALVANIZED 2"X5/8" STAPLES.
- (3) EXISTING 14X2 POSITION GROUND BAR PROVIDED WITH ENCLOSURE FOR GROUNDING OF TELECOMMUNICATIONS EQUIPMENT.
- (4) EXTEND #16 AWG, INSULATED, STRANDED, COPPER GROUND CONDUCTOR FROM POWER SUPPLY UNIT (PSU) AND BOND TO EQUIPMENT GROUND BAR.
- (5) EXTEND #16 AWG, INSULATED, STRANDED COPPER GROUND CONDUCTOR FROM REMOTE RADIO HEAD AND BOND TO EQUIPMENT GROUND BAR.
- (6) EXTEND #12 AWG, GREEN INSULATED, STRANDED COPPER GROUND CONDUCTOR FROM GROUND BAR VERTICALLY UP EXTERIOR OF POLE TO PROPOSED ANTENNA/ NOKIA ANTENNAS/ ASDA RADIO UNITS. GROUND CONDUCTOR SHALL BE HOUSED WITHIN SCHEDULE 40 PV MOLD. SECURE POLE RISER TO UTILITY POLE VIA GALVANIZED LAG BOLTS.
- (7) EXTEND #12 AWG, GREEN INSULATED, STRANDED COPPER GROUND CONDUCTOR FROM ENCLOSURE OF PROPOSED LOAD CENTER PANEL AND BOND TO GROUND CONDUCTOR EXTENDING TO BURIED GROUND ROD. REFER TO SERVICE GROUNDING DETAIL, THIS SHEET.
- (8) BURIED GROUND RING SHALL BE #2 AWG, BARE, TINNED, SOLID COPPER.
- (9) EXTEND #16 AWG, GREEN INSULATED, STRANDED COPPER GROUND CONDUCTOR FROM EACH NOKIA ANTENNA/ ASDA RADIO UNIT AND BOND TO GROUND CONDUCTOR EXTENDING DOWN UTILITY POLE TO GROUND BAR. REFER TO DIRECTIONAL SPLICE DETAIL, THIS SHEET.
- (10) REFER TO DOMINION SPECIFICATIONS FOR ADDITIONAL GROUNDING REQUIREMENTS.
- (11) EXTEND #12 AWG, GREEN INSULATED, STRANDED COPPER GROUND CONDUCTOR FROM GROUND WIRE ON UTILITY POLE AND BOND TO PROPOSED EQUIPMENT GAGE GROUND BAR.



ELEGANT ENGINEERING INC.  
2216 Commerce Road, Suite 1  
Forest Hill, MD 21050  
410-692-5816  
www.tel-eng.com



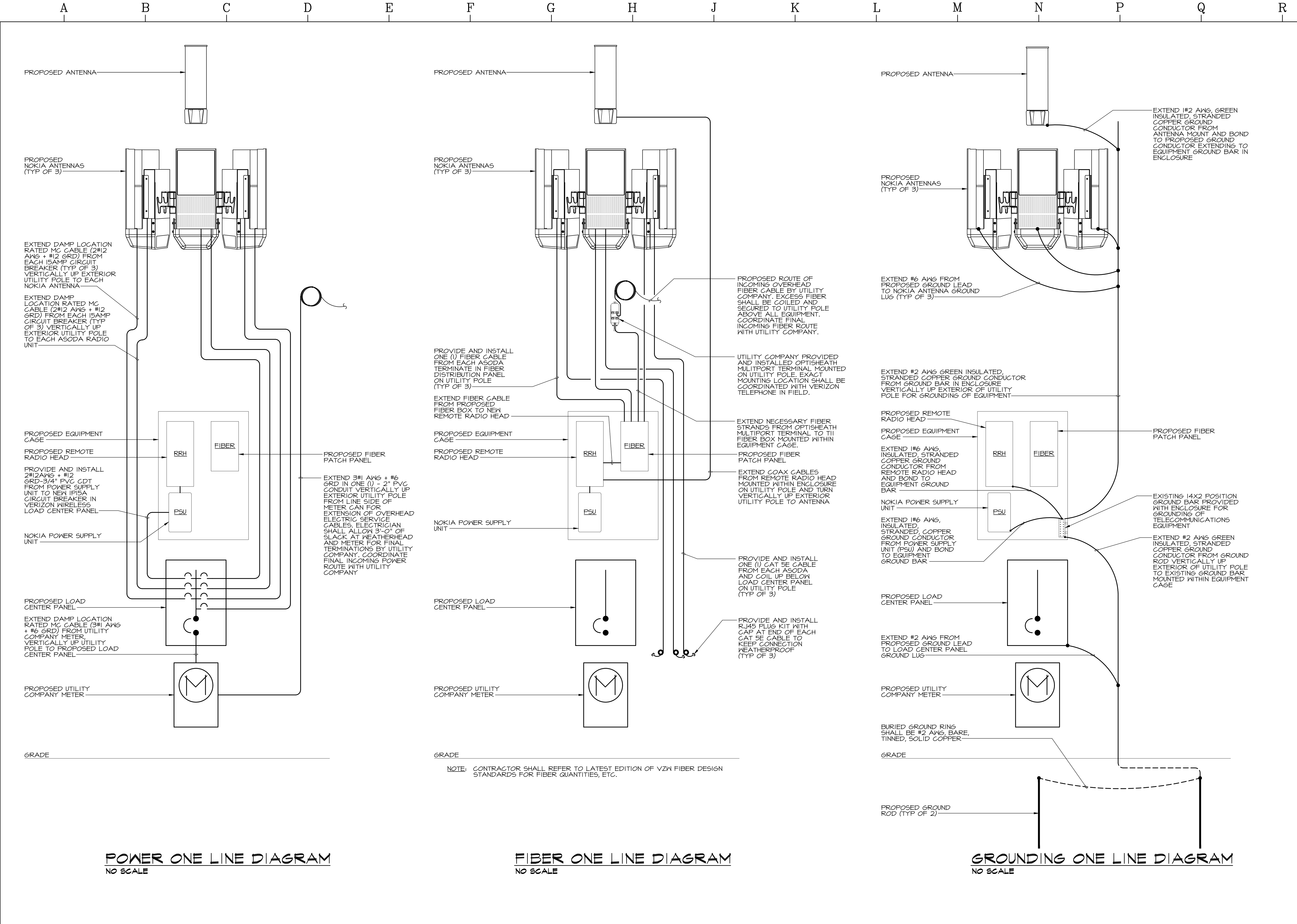
**verizon**  
ALEXOLDT 003 - SMALL CELL


REVISIONS:	
DESCRIPTION	DATE
PERMIT DWGS.	1/16/20

LAST REV.:	
PROJECT NO:	19165E
DATE:	JANUARY 16, 2020
SCALE:	AS NOTED
TITLE:	
GROUNDING DIAGRAM, DETAILS AND NOTES	

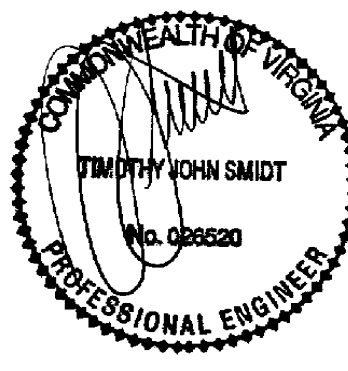
HEET:  
E-3







TEI  
TELECENT ENGINEERING INC.  
2216 Commerce Road, Suite 1  
Forest Hill, MD 21050  
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**verizon**  
ALEXOLDT 003 - SMALL CELL  
ROW ADJACENT TO 421 SOUTH UNION STREET  
CITY OF ALEXANDRIA, VIRGINIA 22314

REVISIONS:

NO.	DESCRIPTION	DATE

PERMIT DWGS: 1/16/20

LAST REV.:  
PROJECT NO: 19165E  
DATE: JANUARY 16, 2020  
SCALE: AS NOTED  
TITLE: DIAGRAMS

SHEET:  
**E-4**





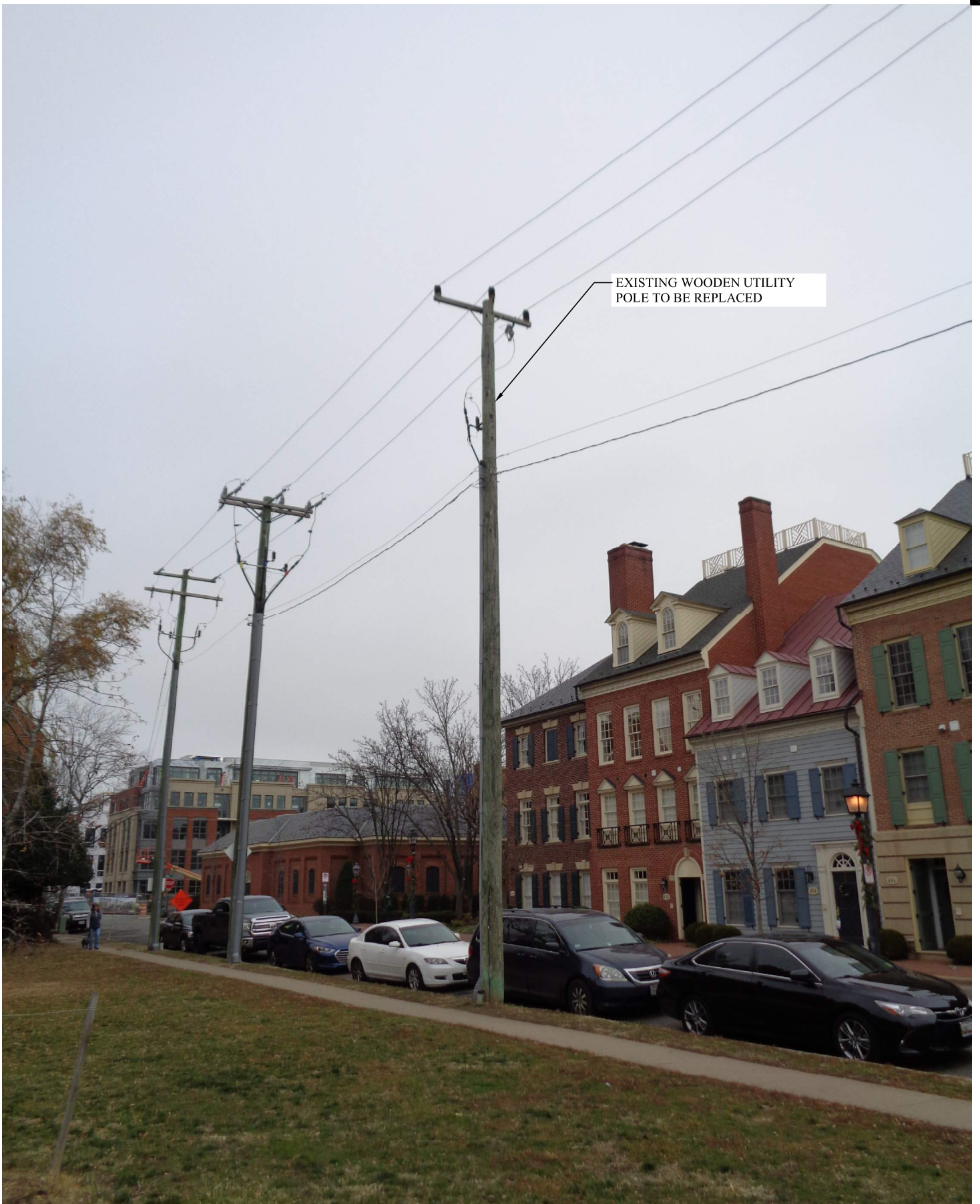
**MORRIS & RITCHIE  
ASSOCIATES, INC.**  
1220-C East Joppa Road, Suite 505  
Towson, Maryland 21286  
410-821-1690  
410-821-1748 Fax

## Alexoldt 003 Overall Site Layout

27 January 2020







EXISTING WOODEN UTILITY  
POLE TO BE REPLACED



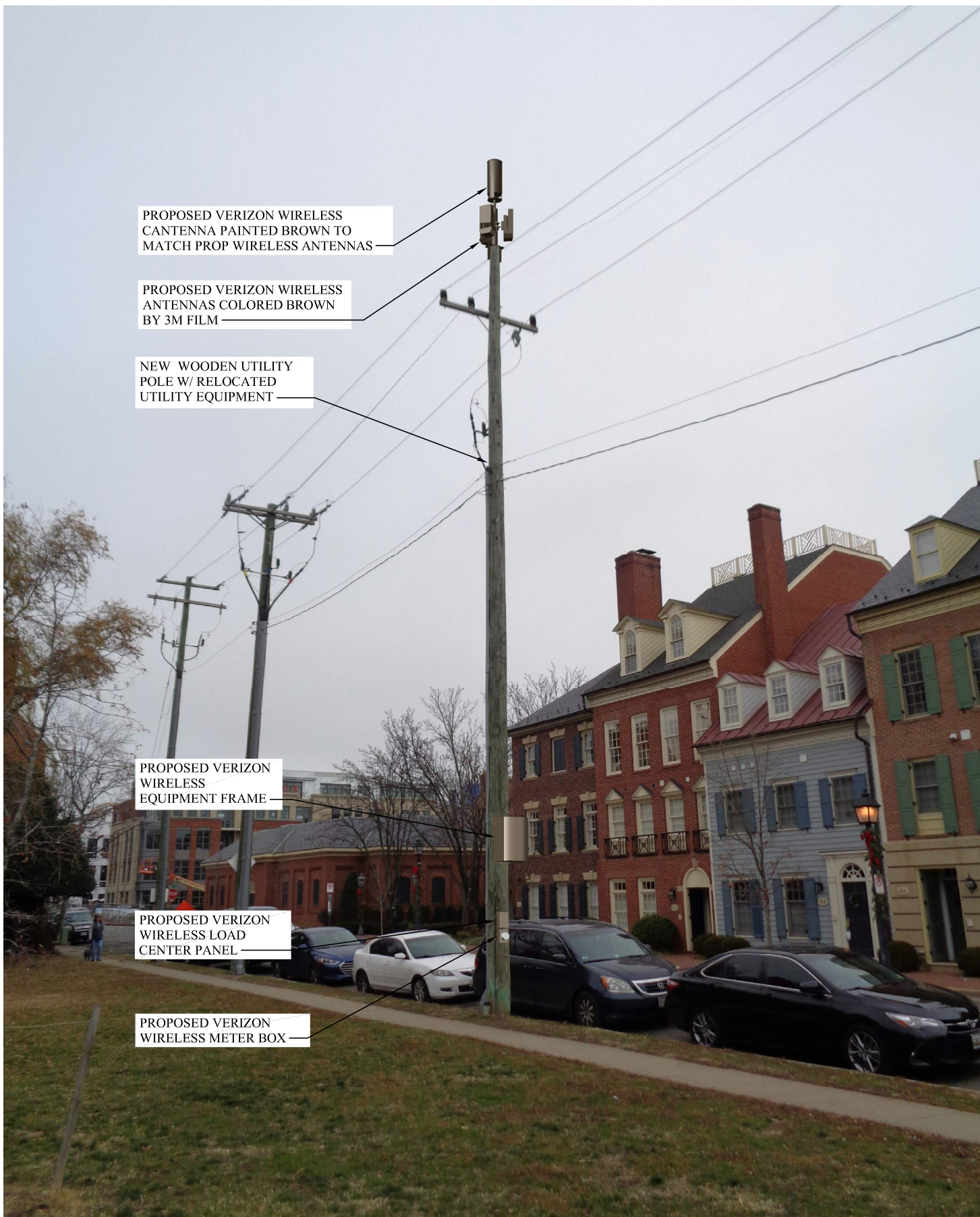
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410-821-1748 Fax

**Alexoldt 003**  
Existing View 1

27 January 2020







PROPOSED VERIZON WIRELESS  
CANTENNA PAINTED BROWN TO  
MATCH PROP WIRELESS ANTENNAS

PROPOSED VERIZON WIRELESS  
ANTENNAS COLORED BROWN  
BY 3M FILM

NEW WOODEN UTILITY  
POLE W/ RELOCATED  
UTILITY EQUIPMENT

PROPOSED VERIZON  
WIRELESS  
EQUIPMENT FRAME

PROPOSED VERIZON  
WIRELESS LOAD  
CENTER PANEL

PROPOSED VERIZON  
WIRELESS METER BOX



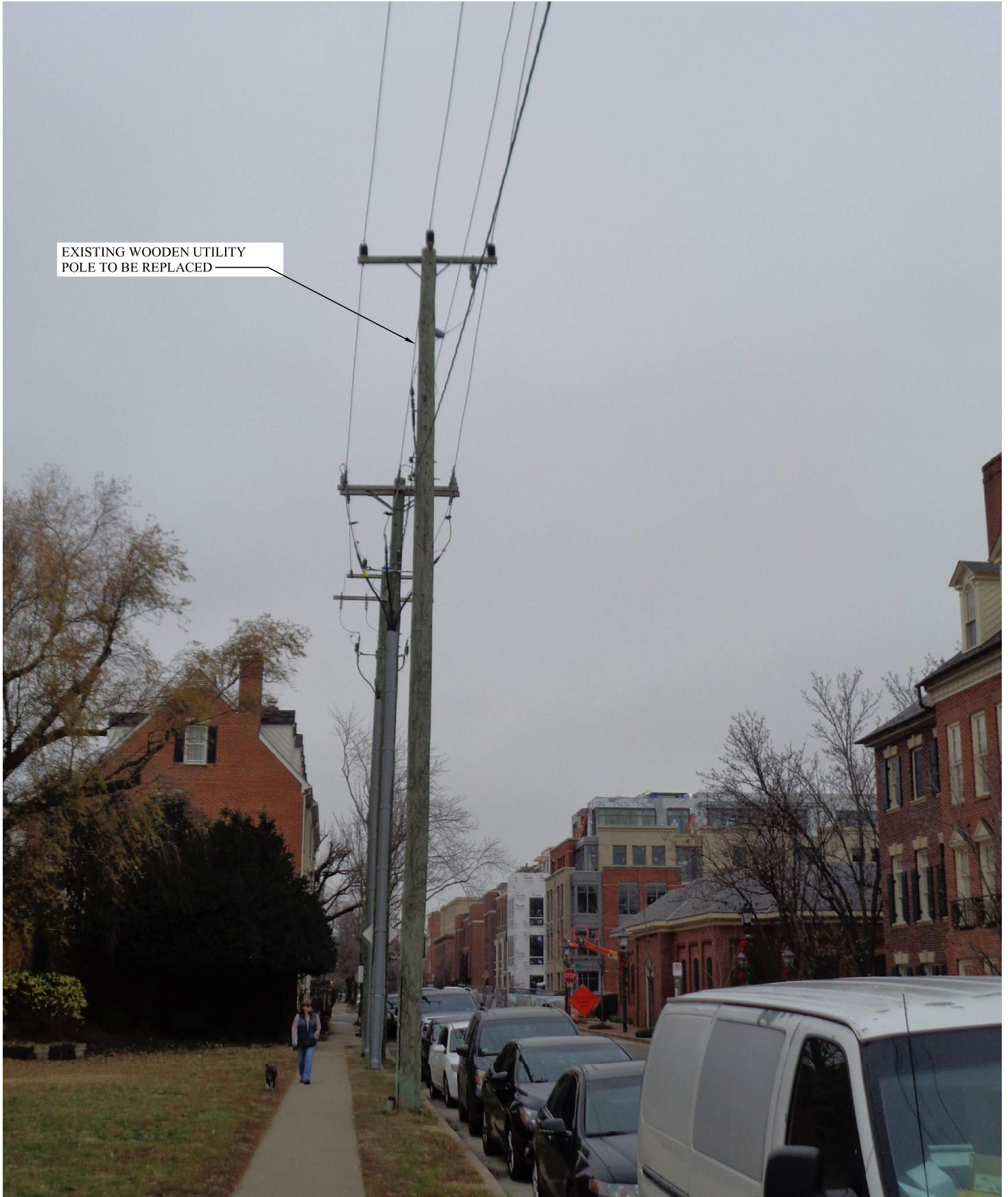
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410-821-1690  
410-821-1748 Fax

Alexoldt 003  
Proposed View 1

27 January 2020







EXISTING WOODEN UTILITY  
POLE TO BE REPLACED



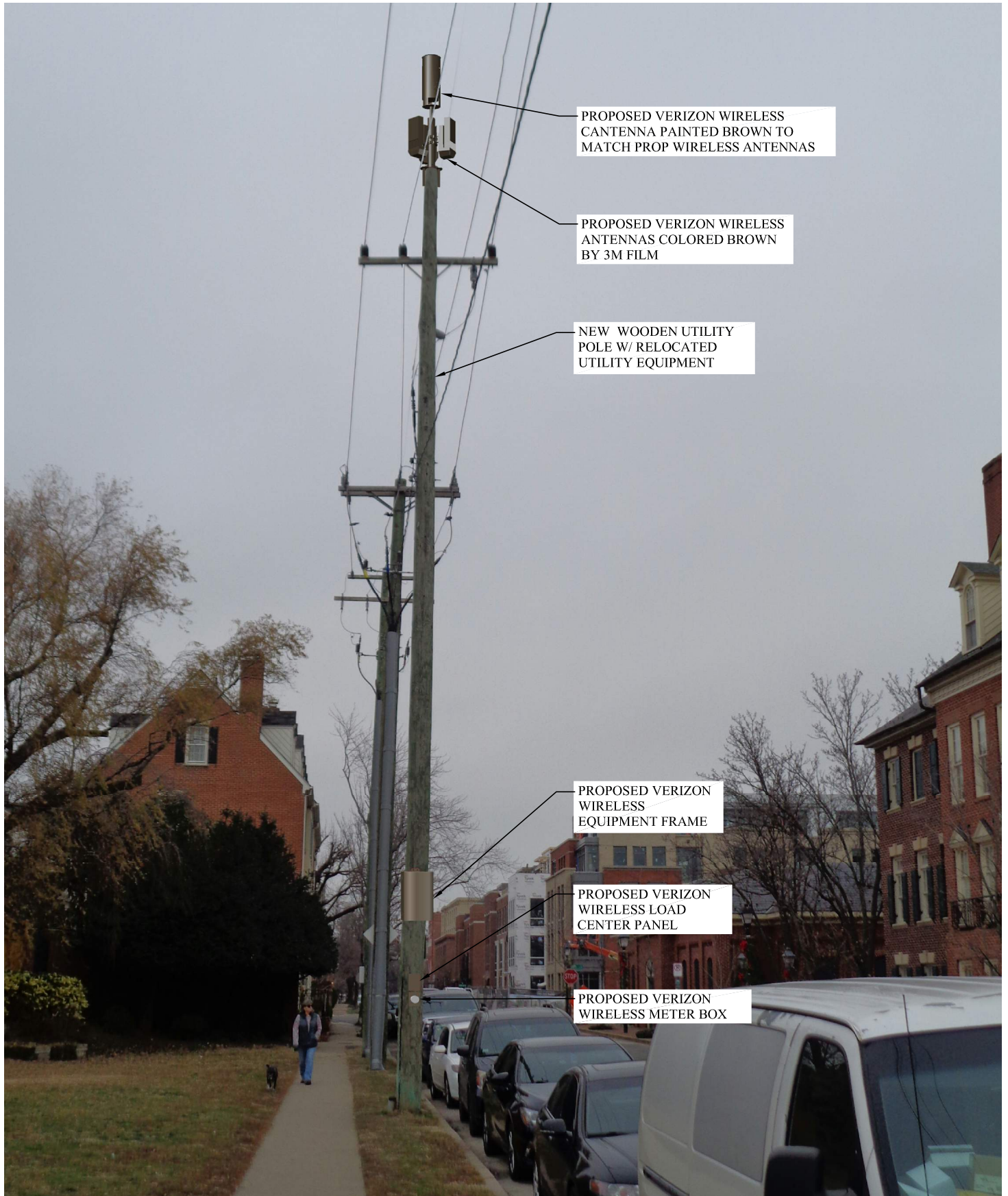
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Towson, Maryland 21286  
410-821-1690  
410-821-1748 Fax

**Alexoldt 003**  
Existing View 2

27 January 2020







PROPOSED VERIZON WIRELESS  
CANTENNA PAINTED BROWN TO  
MATCH PROP WIRELESS ANTENNAS

PROPOSED VERIZON WIRELESS  
ANTENNAS COLORED BROWN  
BY 3M FILM

NEW WOODEN UTILITY  
POLE W/ RELOCATED  
UTILITY EQUIPMENT

PROPOSED VERIZON  
WIRELESS  
EQUIPMENT FRAME

PROPOSED VERIZON  
WIRELESS LOAD  
CENTER PANEL

PROPOSED VERIZON  
WIRELESS METER BOX



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**Alexoldt 003**  
Proposed View 2

27 January 2020







EXISTING WOODEN UTILITY  
POLE TO BE REPLACED



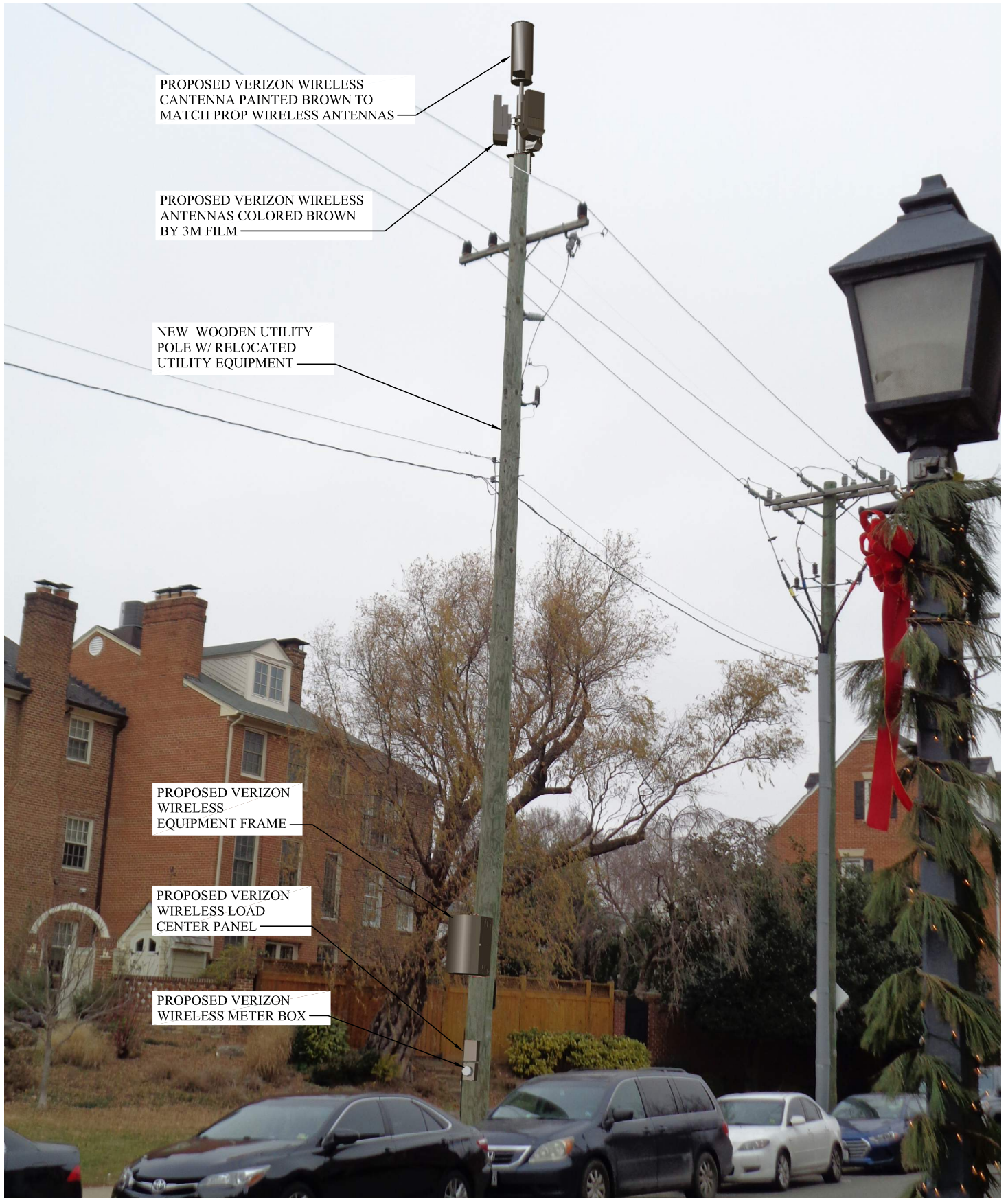
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ASSOCIATES, INC.**  
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**Alexoldt 003**  
Existing View 3

27 January 2020







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**Alexoldt 003**  
Proposed View 3

27 January 2020







EXISTING WOODEN UTILITY  
POLE TO BE REPLACED



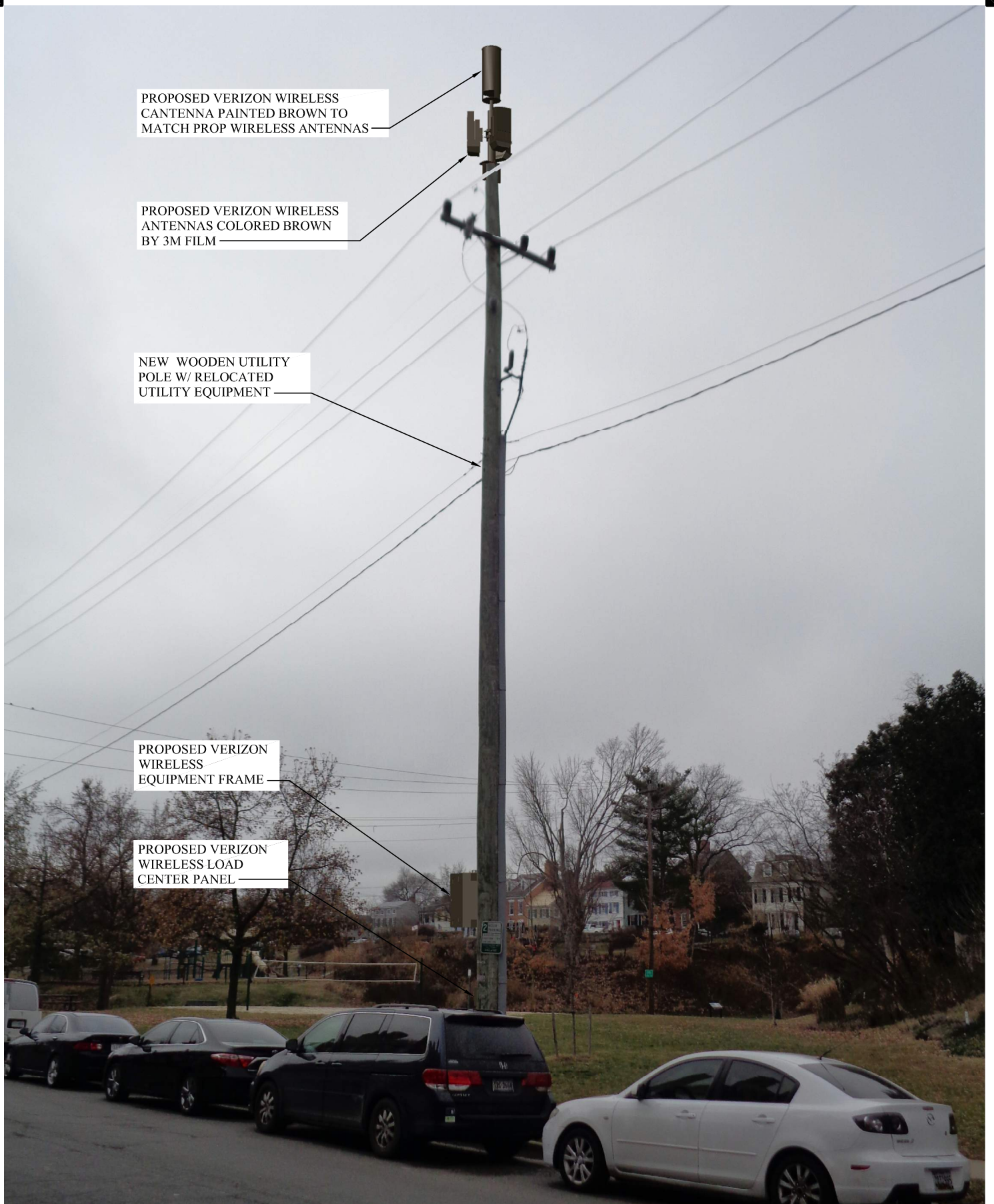
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Alexoldt 003  
Existing View 4

27 January 2020







PROPOSED VERIZON WIRELESS  
CANTENNA PAINTED BROWN TO  
MATCH PROP WIRELESS ANTENNAS

PROPOSED VERIZON WIRELESS  
ANTENNAS COLORED BROWN  
BY 3M FILM

NEW WOODEN UTILITY  
POLE W/ RELOCATED  
UTILITY EQUIPMENT

PROPOSED VERIZON  
WIRELESS  
EQUIPMENT FRAME

PROPOSED VERIZON  
WIRELESS LOAD  
CENTER PANEL



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Alexoldt 003  
Proposed View 4

27 January 2020

