Docket #8 BAR #2020-00060 Old and Historic Alexandria District March 18, 2020

ISSUE:	Certificate of Appropriateness for alterations (small cell antenna)
APPLICANT:	Cello Partnership dba Verizon Wireless
LOCATION:	Old and Historic Alexandria District Dominion Energy utility pole near 617 South Lee Street
ZONE:	RM/Residential Townhouse Zone

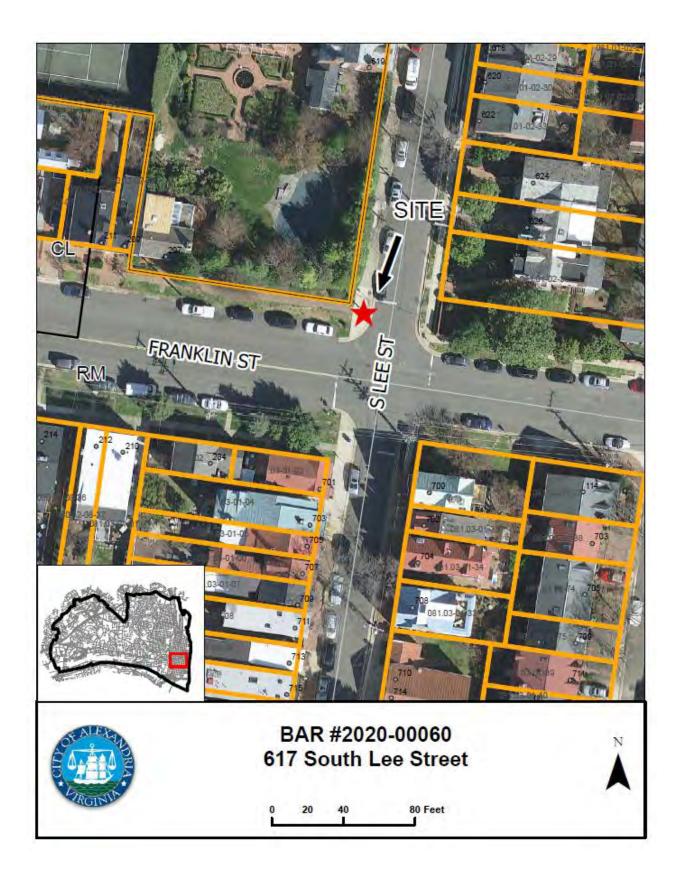
#### **STAFF RECOMMENDATION**

Staff recommends approval of the Certificate of Appropriateness, provided another nearby utility pole is used outside of the viewshed of the historic Justice Hugo Black property at 617 South Lee Street.

#### **GENERAL NOTES TO THE APPLICANT**

- 1. 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 for further information.
- 2. 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.
- 3. COMPLIANCE WITH BAR POLICIES: All materials must comply with the BAR's adopted policies unless otherwise specifically approved.
- 4. 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 (<u>including signs</u>). 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.
- EXPIRATION OF APPROVALS NOTE: In accordance with Sections 10-106(B) and 10-206(B) of the Zoning Ordinance, any official 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 12month period.
- 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 <u>Virginia</u> <u>Department of Historic Resources (VDHR)</u> prior to initiating any work to determine whether the proposed project may qualify for such credits.

Docket #8 BAR #2020-00060 Old and Historic Alexandria District March 18, 2020



#### I. <u>APPLICANT'S PROPOSAL</u>

The applicant is requesting a Certificate of Appropriateness to replace the existing wood utility pole in the right-of-way at the corner of South Lee and Franklin streets (near 617 South Lee Street).

- The existing utility pole will be replaced with a new pole of the same height (28'6").
- A Verizon equipment panel box and a meter box will be installed on the pole approximately five feet above grade.
- The 5G Nokia facility will have an array of three antennas pointing in different directions and measuring roughly 23" by 12" each.
- All features of the small cell facility will be painted brown to match the pole.
- The utility wires on the existing pole will be relocated to the replacement pole.

#### II. <u>HISTORY</u>

The proposed new antenna will be installed in front of the open space at 617 South Lee Street property. The two-and-a-half story, three-bay, side-gable brick residence which occupies the site has a slate roof and shed roofed rear ell was constructed around **1800** by Thomas Vowell, Jr., a prominent Alexandria merchant and, while by no means unique in its style or quality, is an excellent example of the Federal architectural style in Alexandria. The house was purchased by Edgar Snowden, editor and owner of the Alexandria Gazette, in 1842 and it remained in the Snowden family for 70 years. Justice Hugo Black, of the United States Supreme Court, purchased the property two years after his appointment to the court in 1939 and lived here until his death in 1971. His widow sold the property in 1973. The house has been owned by several families since then and changes were made to the house, carriage house and garden. There is an easement over the property and grounds held by the State of Virginia.

There are existing wood utility poles on the east side of South Lee Street and on both sides of Franklin Street adjacent to the subject property.

#### III. <u>ANALYSIS</u>

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.

In June 2019 the BAR approved the installation of three 4G small cell facilities and at the same meeting adopted a BAR administrative policy for approval of certain small cell facilities (4G) in the historic districts. Since that time staff has approved additional small cells within the historic districts; however, no antennas have been installed to date.

Two months prior to the BAR review of three antennas, in April 2019, the City 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 10-103 (A) and 203(A) of the zoning ordinance, which state that "No building or structure shall be erected, reconstructed, altered or restored within the *[the districts]* unless and until an application for a certificate of appropriateness shall have been approved..."

BAR staff has no objection to the proposed Verizon 5G small cell facility or the associated equipment as it complies with many of the requirements in the BAR administrative policy. While the antennas themselves will not be shrouded behind a canister, staff believes that that would only draw more attention to the 5G antennas because of the width of the antenna array.

In this case, given the importance and sensitivity of the Justice Hugo Black property, staff recommends that the applicant pursue installation on another nearby pole which is not directly in front of the historic house viewshed. Staff believes that there are three nearby poles which could still meet the needs of the carrier but protect the viewshed in front of one of Alexandria's important historic resources. Figure 1 below shows the location of the proposed small cell facility (yellow circle) as well as three nearby poles which would likely meet the goals of Verizon while limiting the impact on an important historic resource.

Docket #8 BAR #2020-00060 Old and Historic Alexandria District March 18, 2020



Figure 1: Potential alternative locations (red stars).

Staff recommends approval of the application, provided that another nearby utility pole is used.

#### **STAFF**

Stephanie Sample, Urban Planner, Planning & Zoning Tony LaColla, AICP, Land Use Services Division Chief, Planning & Zoning

#### IV. <u>CITY DEPARTMENT COMMENTS</u>

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**

No comments received.

#### **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

No archaeological oversight necessary.

#### V. <u>ATTACHMENTS</u>

*1* – Supplemental Materials

2 – Application for BAR 2020-00060: 617 South Lee Street

BAR	Case	#
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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:
<ul> <li>Yes</li> <li>No</li> <li>Is there an historic preservation easement on this property?</li> <li>Yes</li> <li>No</li> <li>If yes, has the easement holder agreed to the proposed alterations?</li> <li>Yes</li> <li>No</li> <li>Is there a homeowner's association for this property?</li> <li>Yes</li> <li>No</li> <li>If yes, has the homeowner's association approved the proposed alterations?</li> </ul>

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

BAR	Case	#
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#### NATURE OF PROPOSED WORK: Please check all that apply

	NEW CONSTRUCTIO	)N		
	EXTERIOR ALTERAT	ION: Please check all that app	oly.	
	🗌 awning	☐ fence, gate or garden wall	HVAC equipment	shutters
	🗌 doors	🗌 windows	🗌 siding	Shed shed
	🗌 lighting	pergola/trellis	painting unpainted masonry	
	🗌 other			
	ADDITION			
	DEMOLITION/ENCAPSU	JLATION		
	SIGNAGE			
DES	SCRIPTION OF PRO	POSED WORK: Please de	scribe the proposed work in deta	ail (Additional pages may

be attached).

#### 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/.

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.

#### BAR Case #

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.

	N/A	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.
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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.

N/A	
	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									
	fixtures ar	nd informa	ation d	etailing	how it v	will be	attached to	o the building	's facade.

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

	N/A	
$\Box$		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, wind	ows,
	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

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.

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 Nar	ne:

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 the12-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.

Date

Joshua Schakola Signature

	THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. 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 CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE
2.	THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK, THE
2	DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
	THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE VERIZON REPRESENTATIVE OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES, THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
1.	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.
	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.
	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.
	THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/ VENDOR'S SPECIFICATIONS UNLESS OTHERWISE NOTED OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
<i>.</i>	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.
i.	THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER
	THE CONTRACT. 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.
•	THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, 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.
2.	THE CONTRACTOR SHALL MAINTAIN THE GENERAL WORK AREA AS CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DEBRIS, TRASH, AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. DETAILS OF EQUIPMENT TO BE INCLUDED IN RFQ PACKAGE. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
	THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
	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.
	THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
	ALL UNISTRUT, HARDWARE, AND OUTDOOR JUNCTION BOXES SHALL BE GALVANIZED STEEL. FOR FIELD CUTS OF GALVANIZED ITEMS, FIRST COAT SHALL BE COLD GALVANIZED AND SECOND COAT SHALL BE MARINE GRADE GALVANIZED.
7.	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 PACKAGING REQUIREMENTS STIPULATED BY THE VZW CONSTRUCTION ENGINEER.
	CONTRACTOR IS RESPONSIBLE FOR STORAGE OF ALL MATERIALS PROVIDED BY VERIZON, AND IS LIABLE FOR THOSE MATERIALS ONCE PICKED UP FROM THE WAREHOUSE.
	CONTRACTOR SHALL PERFORM A PUNCH WALK WITH VZW CONSTRUCTION & OPERATION REPRESENTATIVE PRIOR TO DECLARING CONSTRUCTION COMPLETE.
0.	GENERAL CONTRACTOR SHALL PROVIDE A IOLBS. DRY-CHEMICAL FIRE EXTINGUISHER ON SITE DURING CONSTRUCTION. UPON COMPLETION OF ALL WORK, CONTRACTOR SHALL REMOVE FIRE EXTINGUISHER FROM SITE.

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## INDEX OF DRAWING

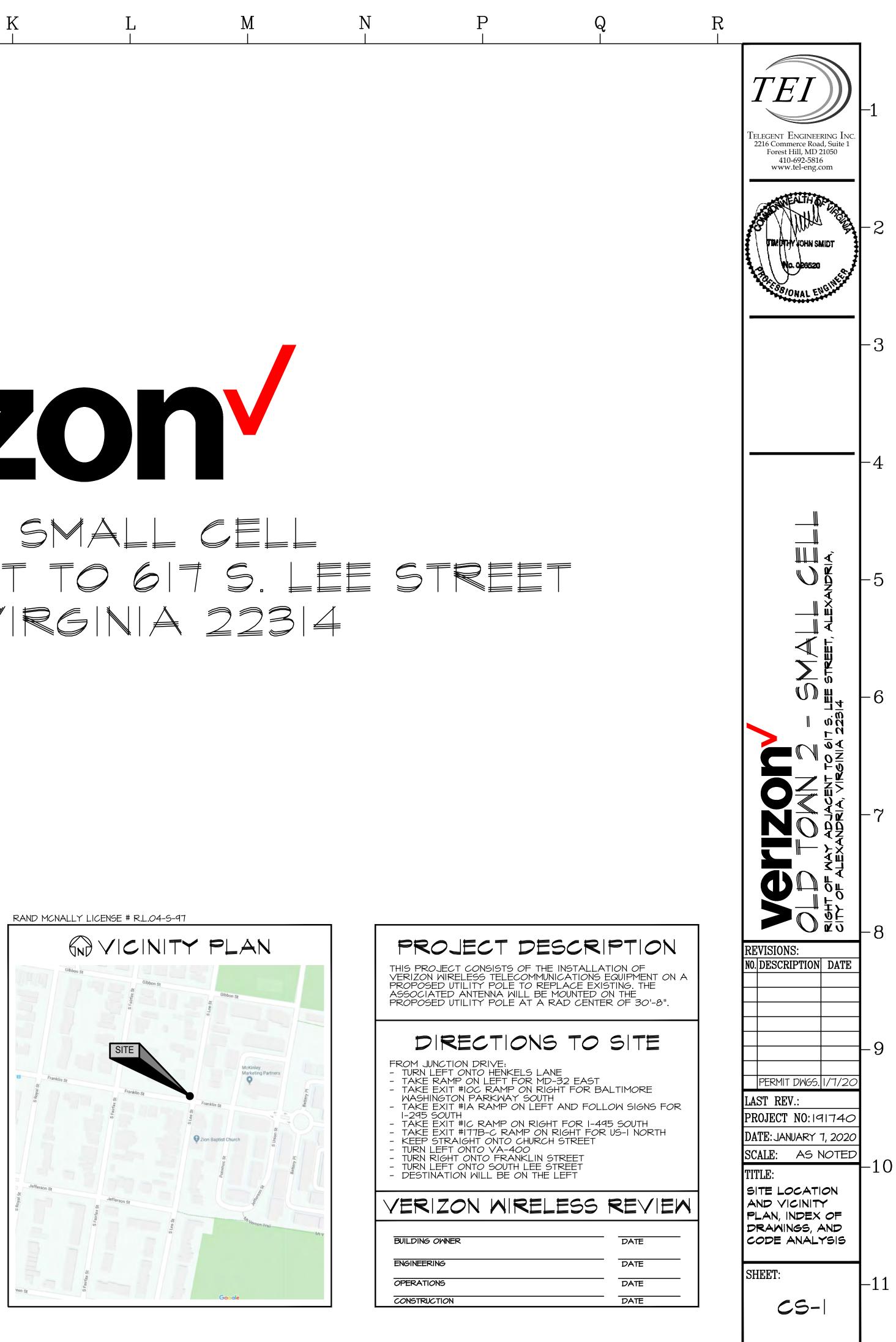
CS-1	SITE LOCATION AND VICINITY PLAN, INDEX DRAWINGS, AND CODE ANALYSIS
C-1	SITE PLAN
C-2	SITE DETAILS
C-3	TRANSPORTATION MANAGEMENT PLAN
S-I	STRUCTURAL SECTIONS AND DETAILS
5-2	GENERAL NOTES
E-I	SPECIFICATIONS, SYMBOLS LIST, PANEL SO AND DETAILS
E-2	POWER RISER DIAGRAM, EQUIPMENT PLAN NOTES
E-3	GROUNDING DIAGRAM, DETAILS, AND NOTE
E-4	DIAGRAMS

verizon OLD TOWN 2 - SMALL CELL RIGHT OF MAY ADJACENT TO 617 S. LEE STREET ALEXANDRIA, VIRGINIA 22314

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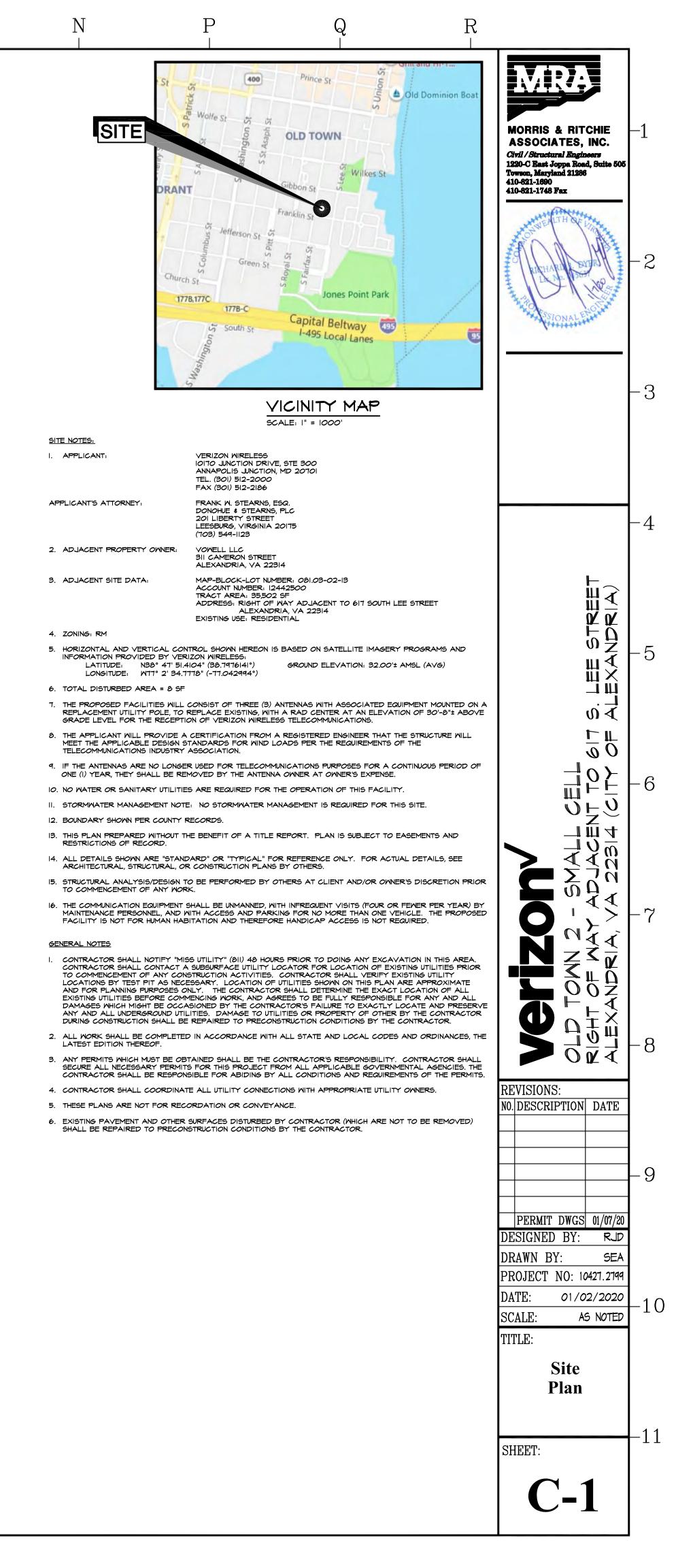


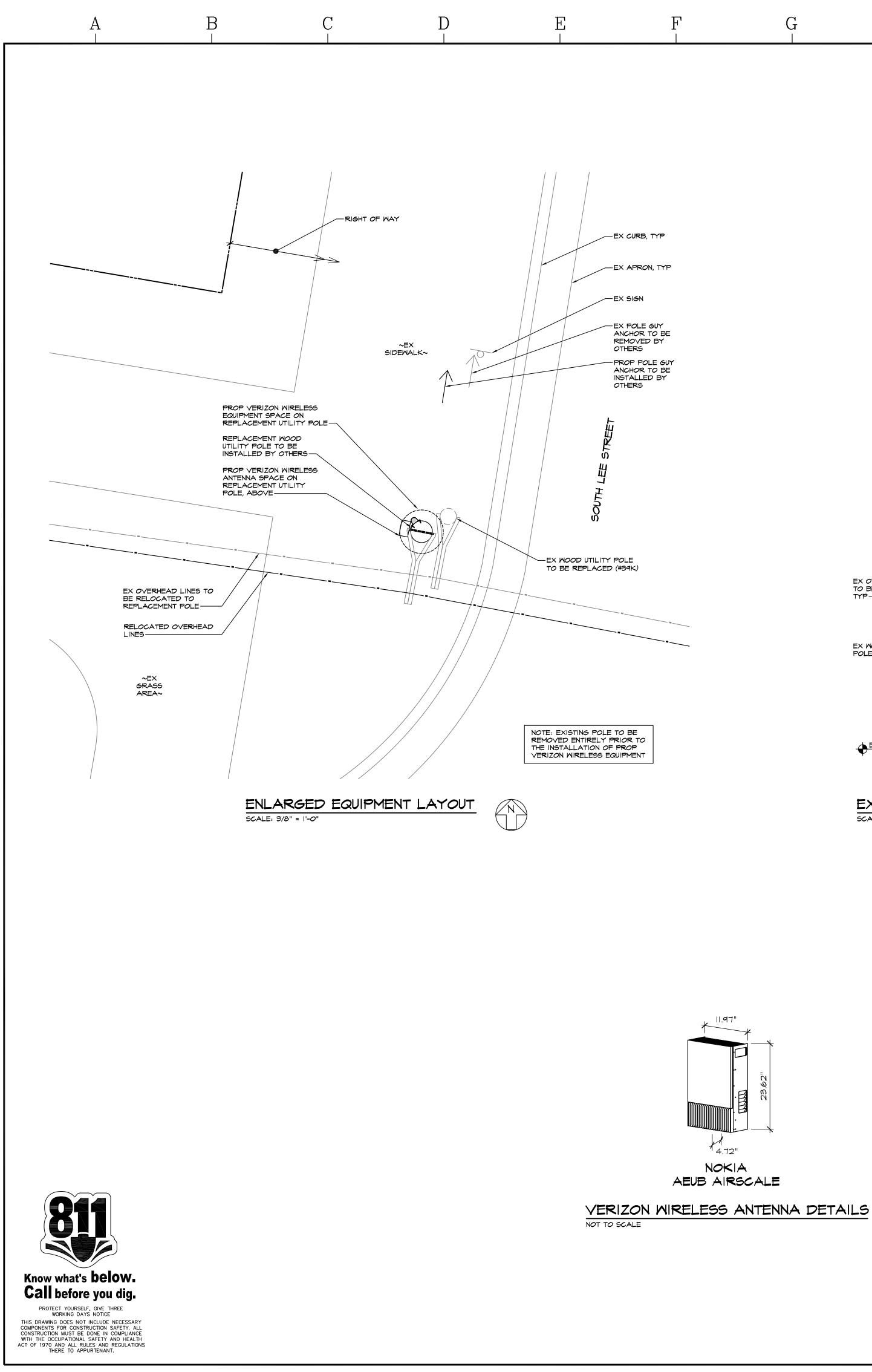
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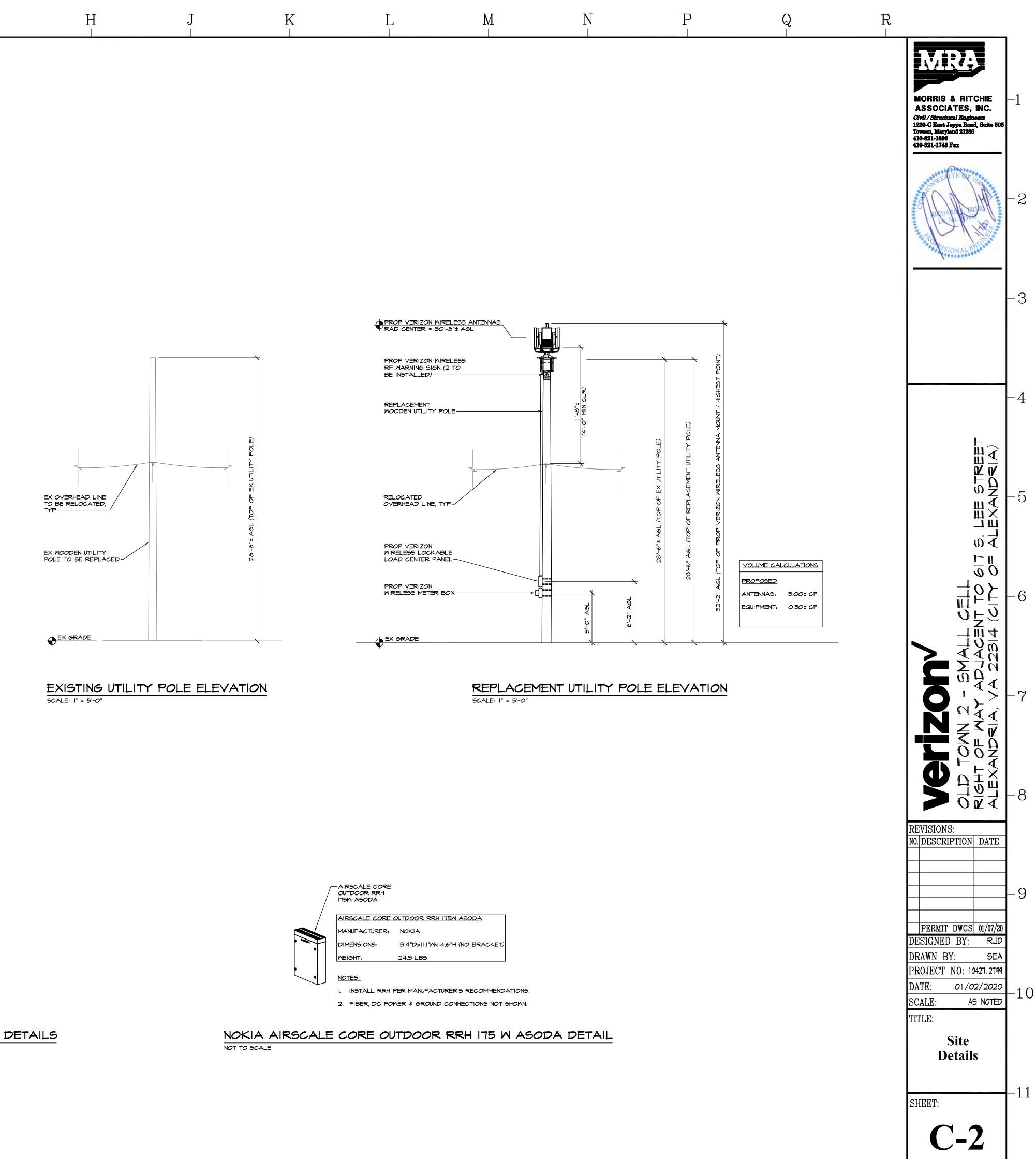


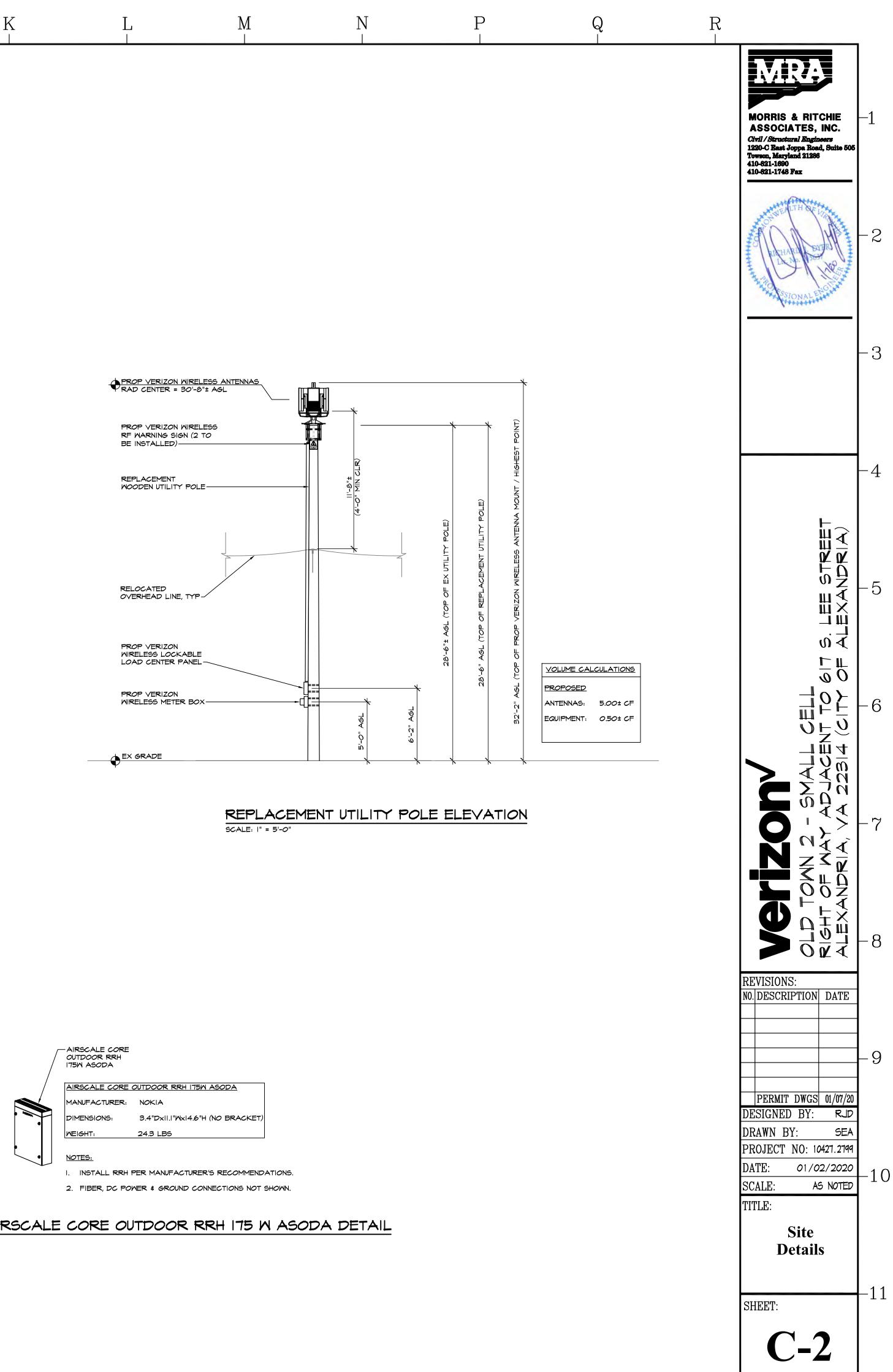
М J PROP VERIZON WIRELESS VOWELL LLC 24/ ACCESS TO SITE ACCT: 12497000 ZONING: RM RIGHT OF WAY PROP VERIZON WIRELESS FACILITY ON REPLACEMENT UTILITY POLE, SEE EXHIBIT C-2 FOR ENLARGEMENT -LOCATION OF EX PROPERTY LINE, TYP-\_\_\_\_\_\_ EX HOUSE, TYP-S Щ J ()SITE PLAN SCALE: |" = 30'-0"  $\langle N \rangle$ 

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# **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 FRANKLIN ST AND S LEE 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 ENTRANCES LOCATED 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 VWAPM 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

CITY INSPECTOR: EMERGENCY CALL:	TBD 911	
NON-EMERGENCY NUMBERS:		

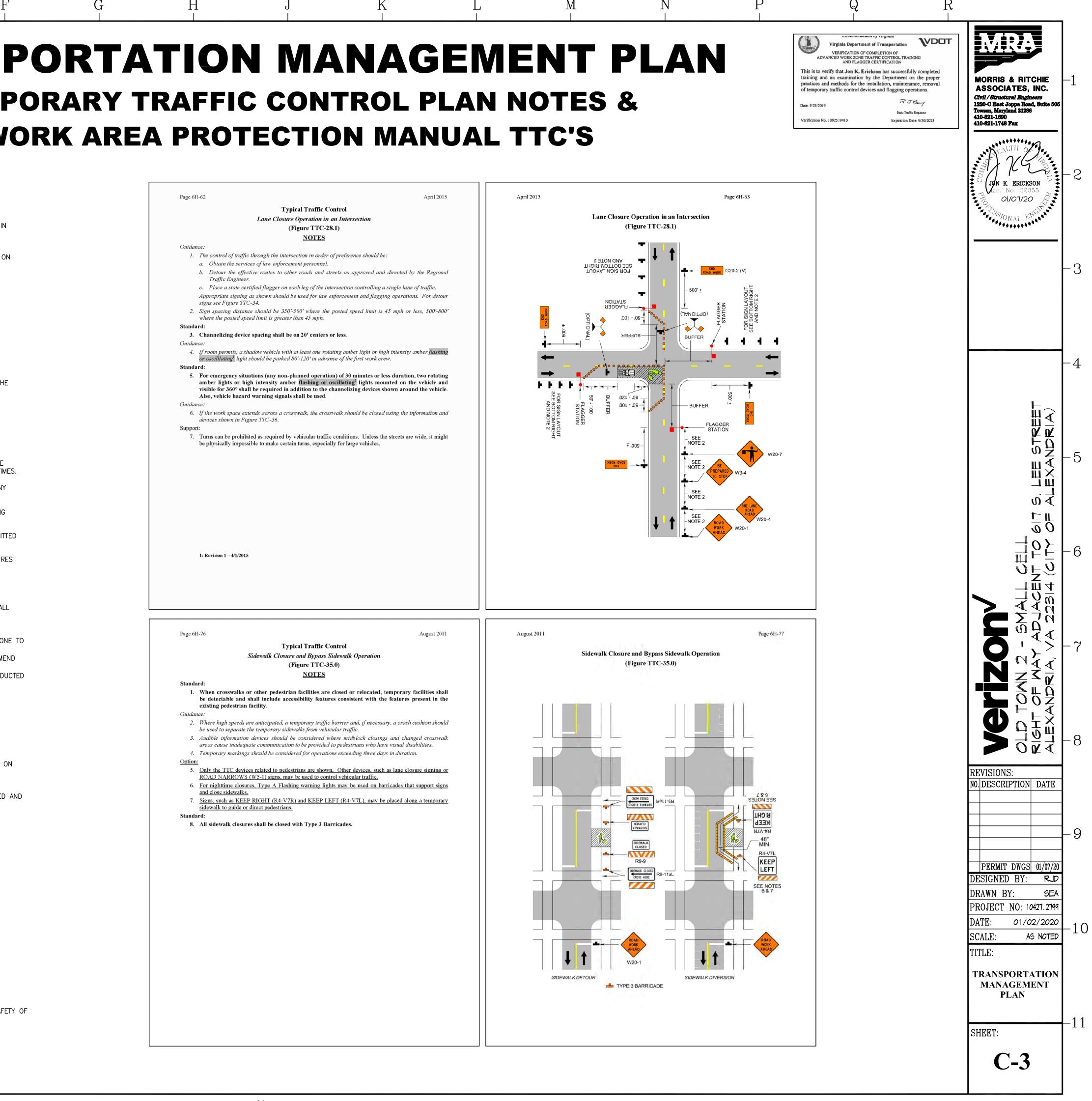
CITY OF ALEXANDRIA POLICE: CITY OF ALEXANDRIA FIRE & RESCUE:

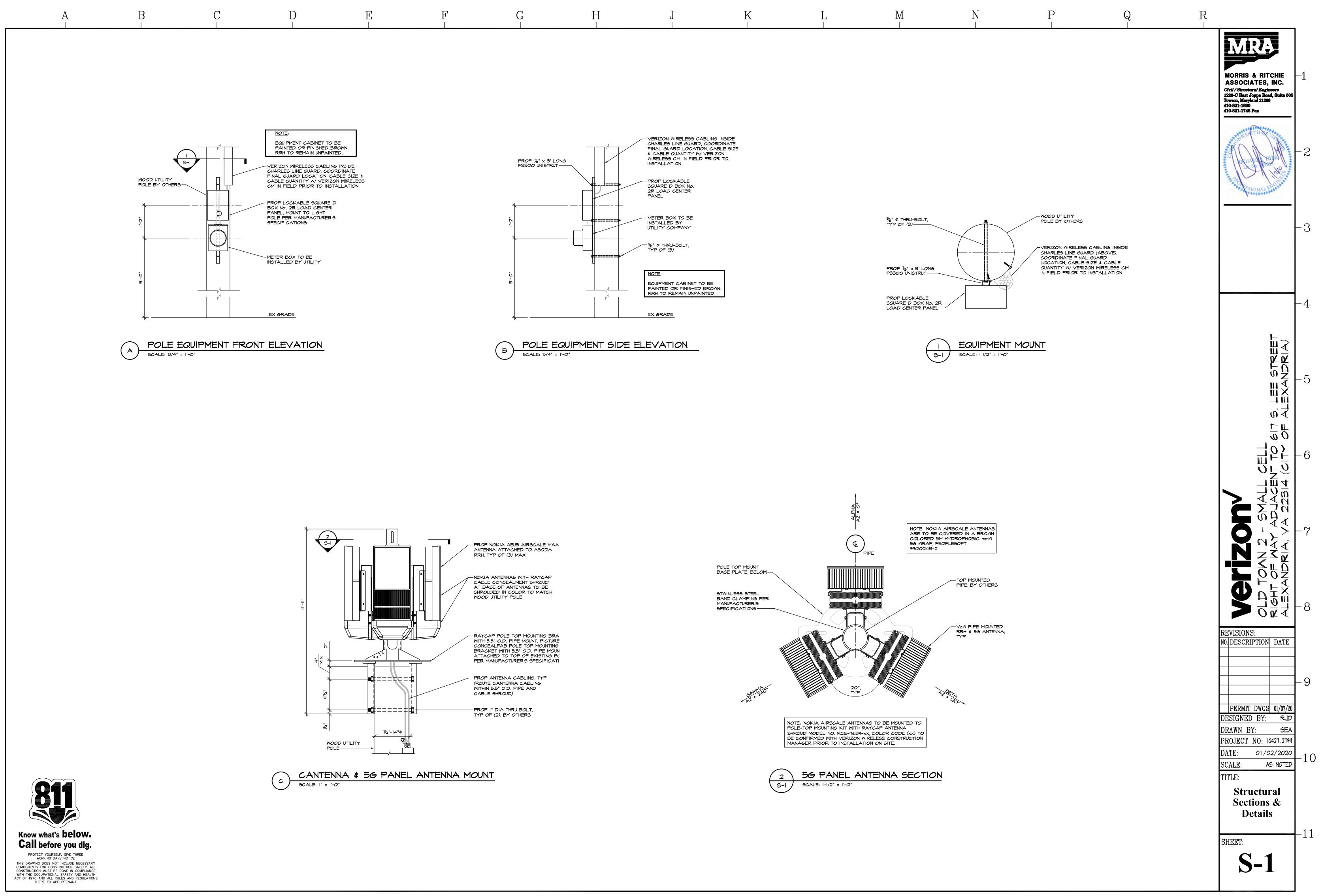
703-746-4444 703-746-4357

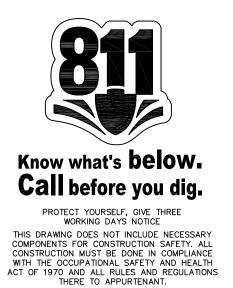
#### GENERAL CONSTRUCTION NOTES

NOTE: VWAPM 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.







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		-	

GENERAL S	STRUCTURAL	NOTES

BUILDING CODES

- A. ALL CONSTRUCTION SHALL CONFORM WITH THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE 2015 CONSTRUCTION CODE, THE TIA STANDARD (TIA-222-G) AND ALL SUBSEQUENT SUPPLEMENTS, THE INTERNATIONAL
- BUILDING CODE (IBC 2015) AND ALL SUBSEQUENT SUPPLEMENTS & DOCUMENTS.
- B. IN ADDITION, ALL CONSTRUCTION SHALL CONFORM WITH ANY LOCAL CODES AND REQUIREMENTS.

DESIGN LOADS

A. THE DESIGN DEAD LOADING FOR ALL FRAMING IS BASED ON THE CONSTRUCTION MATERIALS SHOWN ON THE DRAWINGS. ALL FRAMING IS DESIGNED FOR THE WEIGHT OF THE EQUIPMENT INDICATED ON THE DRAWINGS.

В.	WIND LOAD DESIGN DATA	
	BASIC WIND SPEED (ULTIMATE 3-SECOND GUST): BASIC WIND SPEED (NOMINAL 3-SECOND GUST): RISK CATEGORY: WIND EXPOSURE CATEGORY:	II6 MPH 90 MPH II C
C.	SEISMIC LOAD DESIGN DATA	
	NOT APPLICABLE:	5s < 1.0

MISCELLANEOUS

DRAWINGS.

- A. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE CONTRACTOR OR OWNER FOR REVIEW BY THE ENGINEER. IF THE CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. THE SHOP DRAWINGS SHALL INDICATE ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION AND MAKE ALL CORRECTIONS DEEMED NECESSARY.
- B. SEE CIVIL AND MEP CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION RELATING TO THE COORDINATION OF STRUCTURAL COMPONENTS.
- C. THE CONTRACTOR SHALL NOT SUBMIT REPRODUCTIONS OF THE STRUCTURAL CONTRACT DOCUMENTS AS SHOP
- D. SCALES SHOWN ON THE STRUCTURAL CONTRACT DRAWINGS ARE FOR GENERAL INFORMATION ONLY.

DIMENSIONAL INFORMATION SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.

E. APPLY DETAILS, SECTIONS AND NOTES ON THE DRAWINGS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL, DETAIL TITLE OR NOTE.

#### STRUCTURAL AND MISCELLANEOUS STEEL

- A. ALL STEEL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE AISC STEEL CONSTRUCTION MANUAL "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (ANSI/AISC 360) AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
- B. ALL MISCELLANEOUS STEEL (CHANNELS AND PLATES) SHALL CONFORM TO ASTM A36 (Fy = 36 KSI).
- C. ALL HSS SQUARE OR RECTANGULAR SHAPES SHALL CONFORM TO ASTM A500, GRADE B (FY = 46 KSI).
- D. ALL PIPES SHALL CONFORM TO ASTM A53, GRADE B (Fy = 35KSI)
- E. ALL THRU BOLTS SHALL CONFORM TO ASTM A307 (Fu = 60 KSI).
- F. ALL NUTS SHALL CONFORM TO ASTM A563. ALL WASHERS SHALL CONFORM TO ASTM F436.
- G. ALL SHOP WELDS SHALL BE PERFORMED BY CERTIFIED WELDERS AND CONFORM TO THE AMERICAN WELDING SOCIETY CODE FOR BUILDINGS AWS DI.I. WELDS SHALL DEVELOP THE FULL STRENGTH OF MATERIALS BEING WELDED UNLESS OTHERWISE INDICATED.
- H. AN INDEPENDENT INSPECTION AGENCY SHALL INSPECT ALL STRUCTURAL STEEL AND VERIFY THAT IT CONFORMS TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. FIELD INSPECTION REPORTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN 5 DAYS OF THE INSPECTION. THE CONTRACTOR SHALL NOTIFY THE INSPECTION AGENCY OF ALL PHASES OF STEEL CONSTRUCTION AND WELDING.
- I. STEEL MEMBERS, FABRICATIONS AND ASSEMBLIES EXPOSED TO WEATHER OR INDICATED TO BE GALVANIZED SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM AI23 AFTER FABRICATION. ALL BOLTS, SCREWS, WASHERS & NUTS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM F2329.
- J. PROVIDE HOLES IN STEEL AS REQUIRED TO PREVENT ANY ACCUMULATION OF WATER. ALL PENETRATIONS THROUGH MAIN MEMBERS SHALL NOT EXCEED 1-1/6" DIA. AND SHALL BE GROUND SMOOTH. THESE DRAINS MUST BE KEPT CLEAN AND OPEN.
- K. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INDICATING THE SIZES, EXTENT, AND LOCATION OF ALL STRUCTURAL AND MISCELLANEOUS STEEL FRAMING INCLUDING ALL CONNECTIONS, FASTENERS, AND BEARINGS.
- L. SHOW ALL COPES, HOLES, OPENINGS AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES ON THE SHOP DRAWINGS FOR APPROVAL BY THE STRUCTURAL ENGINEER.

#### DOMINION NOTES:

- A. A 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 UNCONTROLLED GENERAL POPULATION EXPOSURE. WORKING ABOVE THIS POINT REQUIRES DE-ENERGIZING THE ANTENNA. THIS SIGN MUST INCLUDE 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 C95.2 STANDARDS.
- B. 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 ENCLOSURE AND IS SUBJECT TO COMPANY APPROVAL. THE DISCONNECT SHALL BE CLEARLY LABELED AS THE ANTENNA POWER DISCONNECT.
- C. 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 C95.2 STANDARDS.
- D. THE ANTENNA SHALL BE MOUNTED THE GREATER VALUE OF NESC MINIMUM CLEARANCE OR THE MINIMUM CLEARANCE REQUIRED TO MEET OET UNCONTROLLED EXPOSURE GUIDELINES AT A POINT I' ABOVE THE ELECTRIC FACILITIES. THE ANTENNA INCLUDING ATTACHING HARDWARE SHALL BE MOUNTED A MINIMUM OF 45" ABOVE PRIMARY INSTALLATIONS AND 40" ABOVE SECONDARY INSTALLATIONS. (NESC TABLE 238-I)
- E. ANTENNA EQUIPMENT IS PERMISSIBLE ON WOOD POLES ONLY.
- F. 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 239B, AND NESC 239H4).
- G. THE INSTALLATION MUST MEET ALL NESC REQUIREMENTS.
- H. 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 RECLOSERS, THREE PHASE TRANSFORMER BANKS, THREE PHASE TERMINALS, CAPACITORS, SWITCHES, ETC.
- I. INSTALLERS WORKING IN THE AREA OF THE POLE ABOVE THE NORMAL COMMUNICATIONS SPACE MUST MEET OSHA 1910.269 REQUIREMENTS.
- J. AN ANTENNA GROUND WIRE AND GROUNDING ELECTRODE IS REQUIRED. THIS GROUND SHALL BE BONDED TO THE COMPANY GROUND WIRE.
- K. VERIZON TO LEAVE MINIMUM 3' LEADS COILED AND SECURED TO PREVENT ACCIDENTAL CONTACT WITH SECONDARY CONDUCTORS.

M. LINE ARRESTER INSTALLATIONS ARE REQUIRED ON POLES WITH PRIMARY CONDUCTORS.

N. 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.

O. 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 DIFFERENCES BETWEEN DEVICES ON THE POLES. BOND TO THE POWER SUPPLY/SWITCH SHALL BE EXTERNAL AND 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.

P. THE METER BASE, EQUIPMENT BRACKET, AND DISCONNECT SHOULD BE MOUNTED PROVIDING EIGHT FEET MINIMUM GROUND CLEARANCE. THEY MAY BE MOUNTED AT OPERATIONAL HEIGHT THAT:
I. THE EQUIPMENT BRACKET DOES NOT OBSTRUCT A WALKWAY OR IS SUBJECT TO VEHICULAR TRAFFIC.
2. THE EQUIPMENT BRACKET CAN NOT BE USED ALONE OR IN CONJUNCTION WITH A FENCE, PEDESTAL, ETC. AS A CLIMBING AID.

Q. FOR SAFETY PURPOSES DEVICES WITH LEAD ACID BATTERIES SHALL NOT BE USED.

R. 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.

S. 60 WATT REMOTE RADIO HEAD (RRH) CAN BE SUBSTITUTED FOR THE 90 WATT RRH AS NEEDED.
 T. THE WEATHERHEAD WILL BE INSTALLED 4" ABOVE THE NEUTRAL.

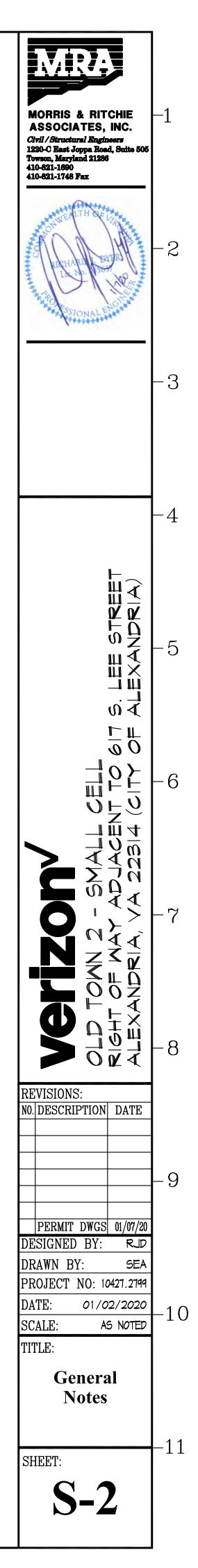
POST-INSTALLATION INSPECTION

A. A POST-INSTALLATION INSPECTION REPORT IS REQUIRED AND SHALL BE INCLUDED IN THE CONTRACTOR'S BID. A POST-INSTALLATION INSPECTION IS A VISUAL INSPECTION OF TOWER INSTALLATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE INSTALLATION DRAWINGS.

B. THE POST-INSTALLATION INSPECTION REPORT SHALL BE COMPLETED BY A PROFESSIONAL ENGINEER LICENSED IN THE JURISDICTION IN WHICH THE PROJECT IS LOCATED.

C. THE INTENT OF THE POST-INSTALLATION INSPECTION REPORT IS TO CONFIRM INSTALLATION AND CONFIGURATION AND WORKMANSHIP ONLY AND IS <u>NOT</u> A REVIEW OF THE INSTALLATION DESIGN ITSELF.

D. TO ENSURE THAT THE REQUIREMENTS OF THE POST-INSTALLATION INSPECTION REPORT ARE MET, IT IS VITAL THAT THE CONTRACTOR AND POST-INSTALLATION INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED.



# ELECTRICAL SPECIFICATIONS

- SECTION 16010 BASIC ELECTRICAL REQUIREMENTS
- A. THE WORK INCLUDES FURNISHING AND INSTALLING THE MATERIAL, EQUIPMENT AND SYSTEMS COMPLETE AS SPECIFIED AND/OR INDICATED ON THE DRAWINGS. THE ELECTRICAL INSTALLATIONS, WHEN FINISHED, SHALL BE COMPLETE AND COORDINATED AND READY FOR SATISFACTORY SERVICE.
- B. ALL WORK UNDER THIS CONTRACT SHALL BE DONE IN STRICT ACCORDANCE WITH ALL APPLICABLE MUNICIPAL, STATE, BOCA, AND LOCAL ELECTRICAL CODES THAT GOVERN EACH PARTICULAR TRADE AND THE 2014 NATIONAL ELECTRICAL CODE.
- C. THE CONTRACTOR SHALL COORDINATE THE ELECTRICAL EQUIPMENT INSTALLATION WITH ALL TRADES.
- D. THE CONTRACTOR SHALL MAKE APPLICATION AND PAY ALL CHARGES FOR ALL NECESSARY PERMITS, LICENSES, AND INSPECTIONS AS REQUIRED UNDER THE ABOVE CODES. UPON COMPLETION OF THE WORK, THE CUSTOMARY CERTIFICATIONS OF APPROVAL SHALL BE FURNISHED.
- E. NO MATERIALS OR EQUIPMENT SHALL BE USED IN THE WORK UNTIL APPROVED. ALL MATERIALS SHALL BE U.L. LISTED.
- F. THE CONTRACTOR SHALL EXAMINE ALL DRAWINGS AND SHALL INSPECT THE EXISTING CONDITIONS OF THE SITE. FAILURE TO COMPLY WITH THIS REQUIREMENT WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE CONTRACT DOCUMENTS.
- G. THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL INSTALLATIONS. DETAILS OF PROPOSED DEPARTURES DUE TO ACTUAL FIELD CONDITIONS OR OTHER CAUSES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION. REWORK OF COMPLETED ITEMS DUE TO IMPROPER FIELD COORDINATION SHALL BE AT THE CONTRACTOR'S EXPENSE.
- H. PROVIDE SUFFICIENT ACCESS AND CLEARANCE FOR ALL ITEMS OF EQUIPMENT REQUIRING SERVICING AND MAINTENANCE.
- I. THE CONTRACTOR SHALL PERFORM ALL NECESSARY CUTTING AND PATCHING AS REQUIRED TO COMPLETE THE INSTALLATIONS. PATCHING OF WALLS, FLOORS, CEILINGS, ETC. SHALL MATCH THE ADJACENT SURFACES.
- J. UPON COMPLETION OF THE ELECTRICAL INSTALLATION, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS OF THE ELECTRICAL CONTRACT DRAWINGS WHICH SHALL BE LEGIBLY MARKED IN RED TO SHOW ALL CHANGES AND DEPARTURES OF THE INSTALLATIONS COMPARED WITH THE ORIGINAL DESIGN. THEY SHALL BE SUITABLE FOR USE IN PREPARATION OF RECORD DRAWINGS.
- K. GUARANTEE: ALL NEW ELECTRICAL INSTALLATIONS SHALL BE GUARANTEED FOR A PERIOD OF ONE (I) YEAR BEGINNING THE DAY OF THE FINAL ACCEPTANCE OF THE WORK OR BENEFICIAL OCCUPANCY OF THE OWNER, WHICHEVER OCCURS FIRST. THE ABOVE SHALL NOT IN ANY WAY VOID OR ABBROGATE EQUIPMENT MANUFACTURER'S GUARANTEE OR WARRANTY. CERTIFICATES OF GUARANTEE SHALL BE DELIVERED TO THE OWNER. UPON RECEIPT OF NOTICE FROM THE OWNER OF FAILURE OF ANY PART OF THE ELECTRICAL INSTALLATION DURING THE GUARANTEE PERIOD, NEW REPLACEMENT PARTS SHALL BE FURNISHED AND INSTALLED PROMPTLY AND AT NO COST TO VERIZON.
- L. ANY ELECTRICAL WORK WHICH WILL INTERFERE WITH THE NORMAL OPERATION OF THE STREET LIGHT SHALL BE DONE AT SUCH TIME OR TIMES AS SHALL BE MUTUALLY AGREED UPON BETWEEN THE CONTRACTOR AND THE BGE/BALTIMORE CITY REPRESENTATIVE.
- M. SUPPORTS, HANGERS, AND FOUNDATIONS: PROVIDE ALL SUPPORTS, HANGERS BRACES, ATTACHMENTS, AND FOUNDATIONS REQUIRED FOR THE WORK. SUPPORT AND SET THE WORK IN A THOROUGHLY SUBSTANTIAL AND WORKMANLIKE MANNER WITHOUT PLACING STRAINS ON THE MATERIALS, EQUIPMENT, OR THE BUILDING STRUCTURE. SUPPORTS, HANGERS, BRACES AND ATTACHMENTS SHALL BE STANDARD MANUFACTÚRED ITEMS OR FABRICATED STRUCTURAL STEEL SHAPES.
- N. THERE SHALL BE NO INTERRUPTION OF POWER TO EXISTING ELECTRICAL SYSTEMS WITHOUT PRIOR CONSENT FROM VERIZON. SUCH INTERRUPTIONS SHALL BE KEPT TO A MINIMUM AND SHALL BE SCHEDULED WITH THE OWNER AT LEAST THREE BUSINESS DAYS IN ADVANCE OF THE OUTAGE. ANY COST FOR WORK THAT MUST BE DONE ON AN OVERTIME BASIS SHALL BE INCLUDED IN THE BID.
- O. MOUNTING AND SUPPORTING OF ALL EQUIPMENT PROVIDED BY THIS CONTRACTOR SHALL BE COORDINATED WITH VERIZON IN THE FIELD
- P. PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR THE INSTALLATION OF THE ELECTRICAL WORK. ANY DAMAGE DONE TO THE WORK ALREADY IN PLACE BY REASON OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE BY A QUALIFIED MECHANIC EXPERIENCED IN SUCH WORK. PATCHING SHALL BE UNIFORM IN APPEARANCE AND SHALL MATCH THE SURROUNDING SURFACE. ALL PENETRATIONS THROUGH WALLS OF NEW ROOM SHALL BE SEALED WEATHERTIGHT.

- A. <u>CONDUIT & BOXES</u>:
- SHALL

- GRADE GALVANIZING.
- B. <u>MIRES & CABLE:</u>
- WHERE APPLICABLE.
- C. <u>DISCONNECTS:</u>
- D. GROUNDING:
- EQUIPMENT
- A. ELECTRICAL SERVICE:
- B. COMMUNICATIONS SERVICE:

# DOMINION SPECIFCATIONS

- I. A 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 UNCONTROLLED GENERAL POPULATION EXPOSURE. WORKING ABOVE THIS POINT REQUIRES DE-ENERGIZING THE ANTENNA. THIS SIGN MUST INCLUDE 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 C95.2 STANDARDS.
- 2. 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 ENCLOSURE AND IS SUBJECT TO COMPANY APPROVAL. THE DISCONNECT SHALL BE CLEARLY LABELED AS THE ANTENNA POWER DISCONNECT.
- 3. 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 C95.2 STANDARDS.
- 4. THE ANTENNA SHALL BE MOUNTED THE GREATER VALUE OF NESC MINIMUM CLEARANCE OR THE MINIMUM CLEARANCE REQUIRED TO MEET OET UNCONTROLLED EXPOSURE GUIDELINES AT A POINT I' ABOVE THE ELECTRIC FACILITIES. THE ANTENNA INCLUDING ATTACHING HARDWARE SHALL BE MOUNTED A MINIMUM OF 45" ABOVE PRIMARY INSTALLATIONS AND 40" ABOVE SECONDARY INSTALLATIONS. (NESC TABLE 238-1)
- 5. ANTENNA EQUIPMENT IS PERMISSIBLE ON WOOD POLES ONLY.
- 6. 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 239B, AND NESC 239H4)
- 7. THE INSTALLATION MUST MEET ALL NESC REQUIREMENTS.
- 8. 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 RECLOSERS, THREE PHASE TRANSFORMER BANKS, THREE PHASE TERMINALS, CAPACITORS, SWITCHES, ETC.
- 9. INSTALLERS WORKING IN THE AREA OF THE POLE ABOVE THE NORMAL COMMUNICATIONS SPACE MUST MEET OSHA 1910.269 REQUIREMENTS.

- 12. SERVICE WILL BE CONNECTED BY VERIZON IN COMPLIANCE WITH FILED RATE PLAN.

- OPERATIONAL HEIGHT THAT: VEHICULAR TRAFFIC

2. <u>SECTION 16050 - BASIC ELECTRICAL MATERIALS & METHODS</u>

G

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 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

7. ALL METALLIC OBJECTS EXPOSED TO WEATHER SHALL BE GALVANIZED.

BUILDING WIRE, UNLESS OTHERWISE INDICATED, SHALL BE 600 VOLT, TYPE THWN INSULATION FOR INTERIOR AND EXTERIOR USE. CONDUCTORS SHALL BE SOFT DRAWN 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

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.

PROVIDE GROUND FOR ALL RACEWAYS, DEVICES, AND UTILIZATION EQUIPMENT PERMANENTLY AND EFFECTIVELY IN ACCORDANCE 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 WIRING AS CALLED FOR ON THE PLANS. PROVIDE GROUNDING BLOCKS, FERMINALS, ETC., FOR CONNECTION OF GROUND WIRE IN ALL DISTRIBUTION

3. <u>SECTION 16400 - SERVICE & DISTRIBUTION</u>

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

TELEPHONE SERVICE SHALL BE EXTENDED BY THE TELEPHONE COMPANY. PROVIDE SERVICE CONDUITS, BACKBOARDS, SLEEVES, AND OTHER 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.

IO. 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.

13. LINE ARRESTER INSTALLATIONS ARE REQUIRED ON POLES WITH PRIMARY CONDUCTORS.

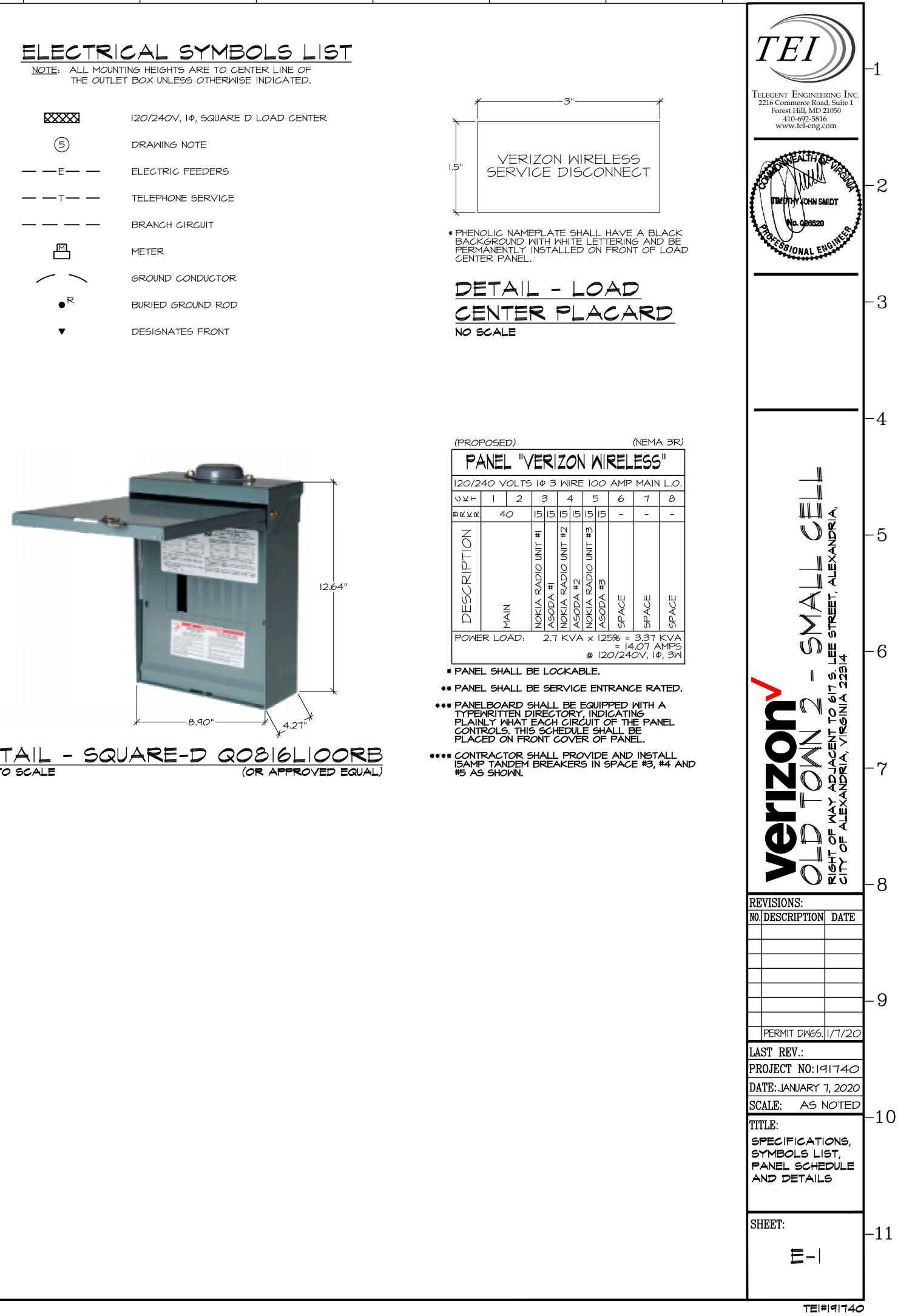
14. VERIZON'S GROUND MAY NOT BE USED TO SATISFY NEC REQUIREMENTS FOR THE EQUIPMENT BRACKET AC SERVICE GROUND. THE EQUIPMENT AND ITS AC SERVICE GROUND ARE REQUIRED TO BE BONDED TO THE COMPANY GROUND CONDUCTOR ON THE POLE AT LEAST 6" ABOVE GROUND LEVEL USING A No. 6 CU CONDUCTOR. CONNECTION TO THE COMPANY'S 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 DIFFERENCES BETWEEN DEVICES ON THE POLES. BOND TO THE POWER SUPPLY/SWITCH SHALL BE EXTERNAL AND 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 A. THE EQUIPMENT BRACKET DOES NOT OBSTRUCT A WALKWAY OR IS SUBJECT TO B. THE EQUIPMENT BRACKET CAN NOT BE USED ALONE OR IN CONJUNCTION WITH A FENCE, PEDESTAL, ETC. AS A CLIMBING AID.

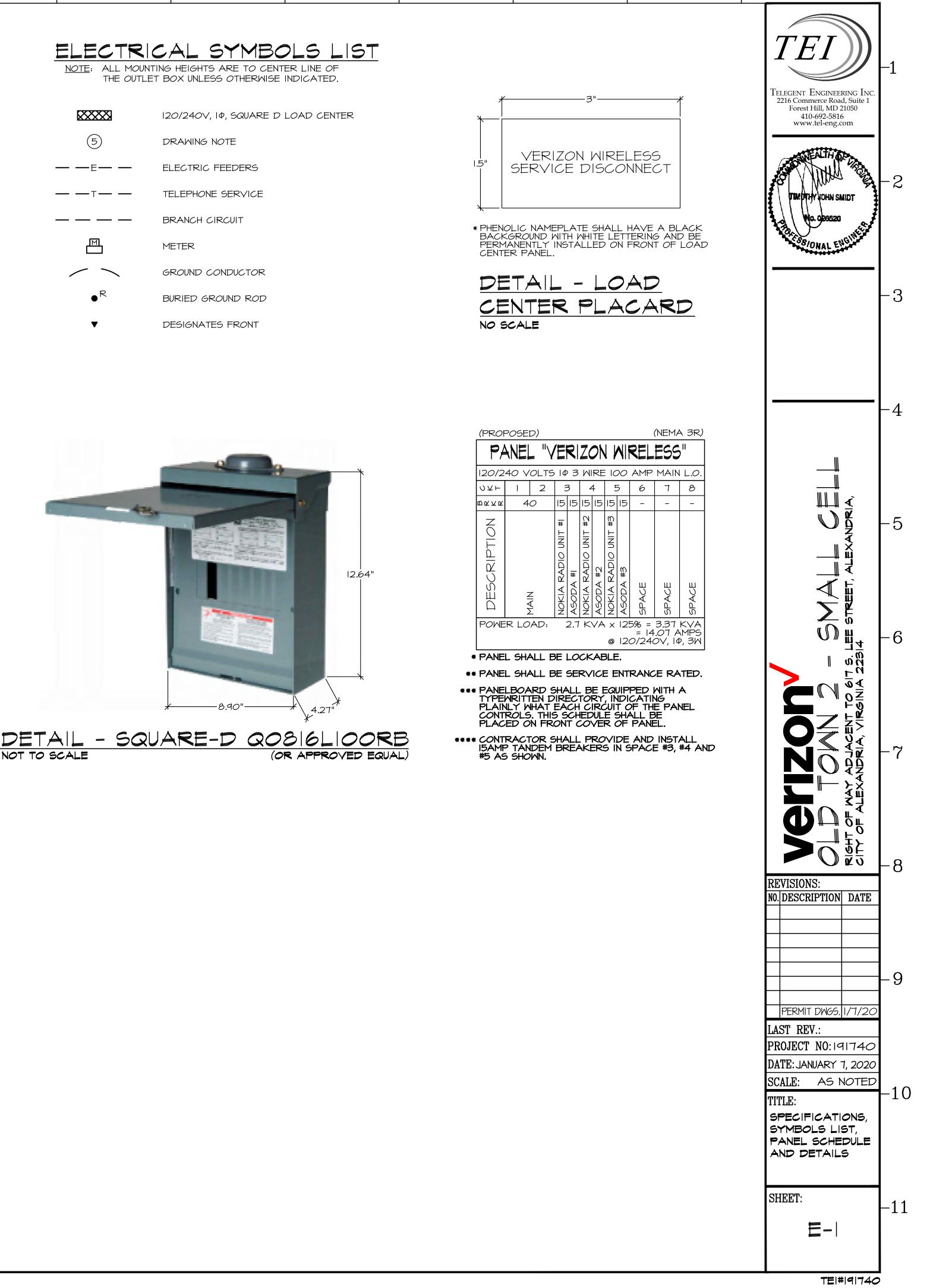
17. FOR SAFETY PURPOSES DEVICES WITH LEAD ACID BATTERIES SHALL NOT BE USED. 18. DUE TO OPERATIONAL CONCERNS, SECONDARY POLES OR GUY STUB POLES ARE PREFERRED FOR ANTENNA ATTACHMENTS. PRIMARY POLES SHOULD ONLY BE CONSIDERED WHEN THERE IS NO OTHER SUITABLE POLE IN THE AREA.

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.



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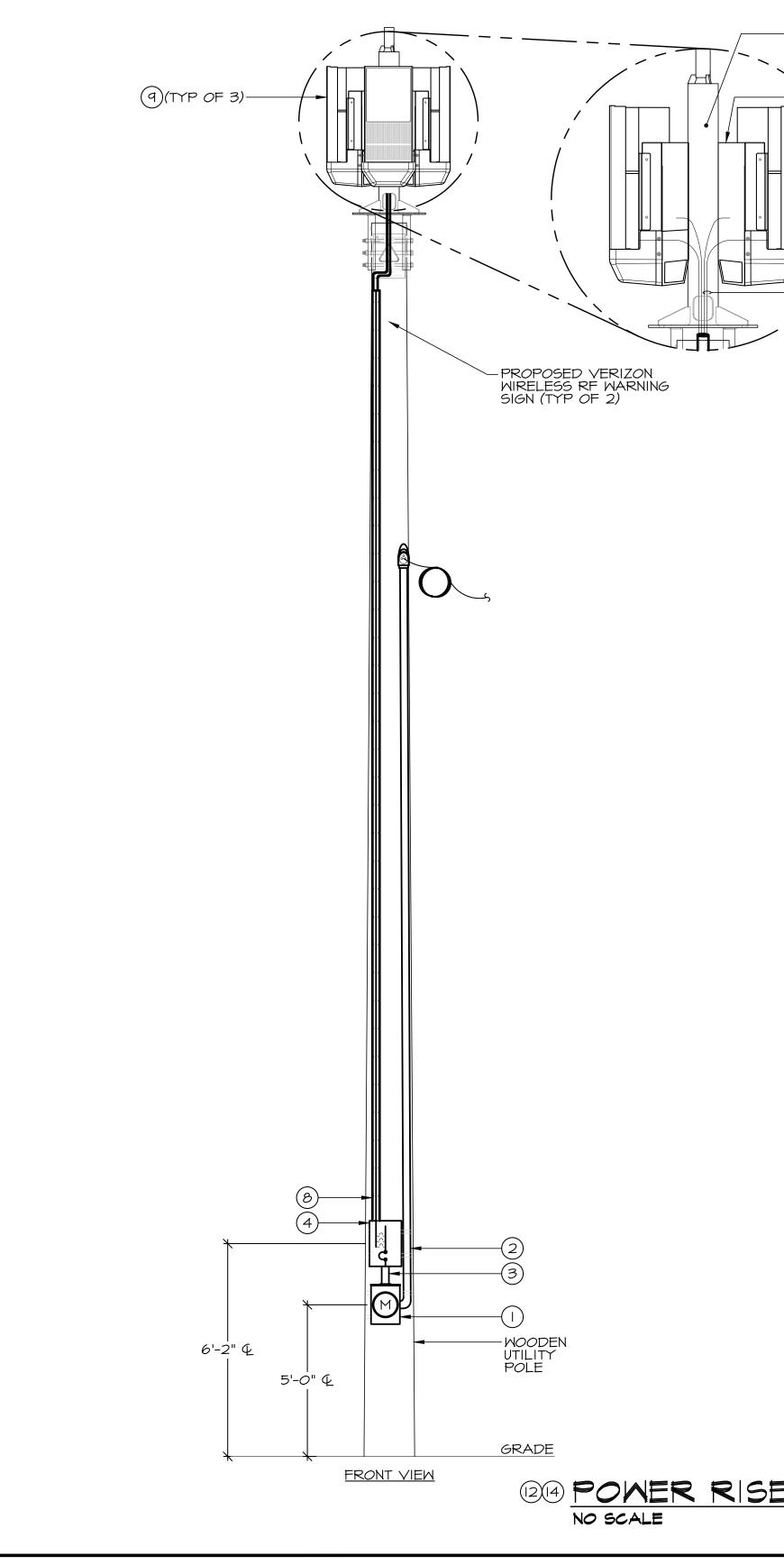


MANUFACTURER	PART #	COMPONENT TYPE	QUANTITY	DIMENSIONS (H×M×D)	WEIGHT	
NOKIA	AIRSCALE AEUB & ASODA RRH	ANTENNA/ REMOTE RADIO HEAD	3	23.62"x11.97"x8.11"	68.2 LBS.	DRAM
SQUARE-D	QOBI6LIOORB	LOAD CENTER PANEL	- I	2.64"x8.90"x4.27"	9.68 LBS.	PROPOSED     PROVIDED     "VERIZON M
MILBANK MFG. CO.	U7487-0	ELECTRIC METER	I	11.5"x8.0"x3.3"	3.98 LBS.	
		CONDUIT CABLING	3±	VARIES Total Meight:	20.0 LBS.	2 EXTEND 3#I FROM LINE COORDINAT FIELD. PRO TO FLEX PT
				TOTAL VOLUME:	1.78 CU.FT.	SLACK AT
						(3) EXTEND 3#6 (4) PROVIDE A 100 AMP M FIELD INST
				Π		FIELD INST POLE. PRO DISCONNEC
		NOKIA ANTENNA/RADIO AND ASODA OMITTED FOR CLARITY				5 PROPOSED FIBER SHAL COORDINA
					9)(TYP OF 3)	•
						6 UTILITY COU ON UTILITY TELEPHONE
		(TYP OF 3)				(7) EXTEND SIX MOUNTED C
						(B) EXTEND DA TANDEM BR TO EACH NO PANEL SCH
						(9) VERIZON W MOUNTED C
		78				(O) VERIZON W OUTDOOR I 3). REFER
						_
	- PROPOSED VERIZON WIRELESS RF WARNING SIGN (TYP OF 2)					II) EXTEND ON AT BASE C CONNECTIO
						(12) CONTRACT STANDARD (13) REFER TO
					)	(14) VERIZON C (VOLTAGE, VOLTAGES
				6	)	VOLTAGES
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	— <u>3</u>			3 M-		
	(1) WOODEN		=		DODEN LITY DLE	
5'- <i>O</i> " &	WOODEN UTILITY POLE			PC	Ŭ.E	* COORDINAT UTILITY CON OF WORK.

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# NOTES

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COMPANY METER CAN MOUNTED ON UTILITY POLE. NEW METER GLOBE TALLED BY UTILITY COMPANY. PROVIDE PHENOLIC NAMEPLATE READING

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+ #6 GRD IN ONE (I) - 2" PVC CONDUIT VERTICALLY UP UTILITY POLE = METER CAN FOR EXTENSION OF OVERHEAD ELECTRIC SERVICE CABLES. L CONDUIT TERMINATION POINT WITH UTILITY REPRESENTATIVE IN THE EATHER HEAD AT TOP END OF CONDUIT. CONTRACTOR SHALL TRANSITION OF FINAL CONNECTION TO METER CAN. ELECTRICIAN SHALL ALLOW 3'-O" OF RHEAD AND METER FOR FINAL TERMINATIONS BY UTILITY COMPANY. #8 GRD - I" CONDUIT FROM METER UP TO PANEL.

TALL WEATHERPROOF SERVICE ENTRANCE RATED, 120/240 VOLT, 14, 3W, HT (8) POSITION QO LOAD CENTER PANEL (MODEL #QOBI6LIOORB) WITH 2P40A MAIN CIRCUIT BREAKER MOUNTED ABOVE METER CAN ON UTILITY ENOLIC NAMEPLATE READING, "VERIZON WIRELESS SERVICE ER TO PANEL SCHEDULE, SHEET E-I FOR ADDITIONAL INFORMATION.

OF INCOMING OVERHEAD FIBER CABLE BY UTILITY COMPANY. EXCESS OILED AND SECURED TO UTILITY POLE ABOVE ALL EQUIPMENT. L INCOMING FIBER ROUTE WITH UTILITY COMPANY.

PROVIDED AND INSTALLED OPTISHEATH MULITPORT TERMINAL MOUNTED XACT MOUNTING LOCATION SHALL BE COORDINATED WITH VERIZON

IR FIBER FROM PROPOSED OMNI-TAP TO SERVE ASODA RADIO UNITS IY POLE.

ATION RATED MC CABLE (4#12 AWG + #12 GRD) FROM EACH 15 AMP (TYP OF 3) VERTICALLY UP EXTERIOR OF UTILITY POLE IN RISER GUARD TENNA/ASODA UNIT MOUNTED ON UTILITY POLE (TYP OF 3). REFER TO HEET E-I, FOR ADDITIONAL INFORMATION.

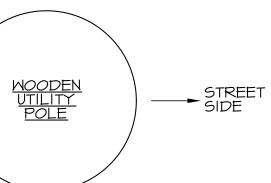
PROVIDED, CONTRACTOR INSTALLED NOKIA ANTENNA/RADIO UNIT r P*o*le.

PROVIDED AND CONTRACTOR INSTALLED NOKIA AIRSCALE CORE ODA REMOTE RADIO HEAD MOUNTED BEHIND NOKIA ANTENNAS (TYP OF CTURAL DRAWINGS FOR ADDITIONAL MOUNTING INFORMATION.

ATHERPROOF RAIDED CAT 5E CABLE FROM EACH ASODA AND COIL UP CENTER. PROVIDE AND INSTALL RJ45 PLUG KIT WITH CAP TO KEEP ERPROOF.

REFER TO THE LATEST EDITION OF VERIZON WIRELESS FIBER DESIGN IBER QUANTITIES/ INTERCONNECTS. PREPARED BY MRA FOR SITE PLAN.

TOR SHALL COORDINATE FINAL AVAILABLE SERVICE CHARACTERISTICS ETC.) WITH UTILITY COMPANY PRIOR TO START OF WORK. ACCEPTABLE 20/208V, 10 OR 120/240V, 10.



PER EQUIPMENT

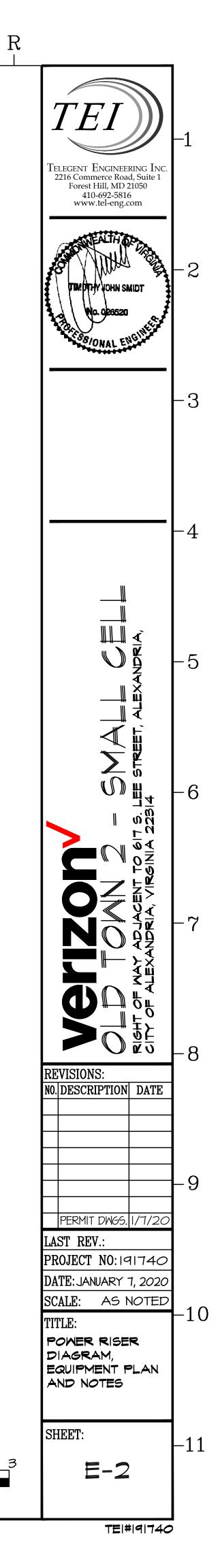


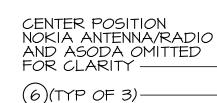
SCALE:|"=|'-0"

WER EQUIPMENT MOUNTING LOCATION OF METER WITH

COORDINATE THE FINAL PLACEMENT COUD AS INDICATED ON SHEET S-1.

PMENT PLAN SCALE: |" =|'-0"





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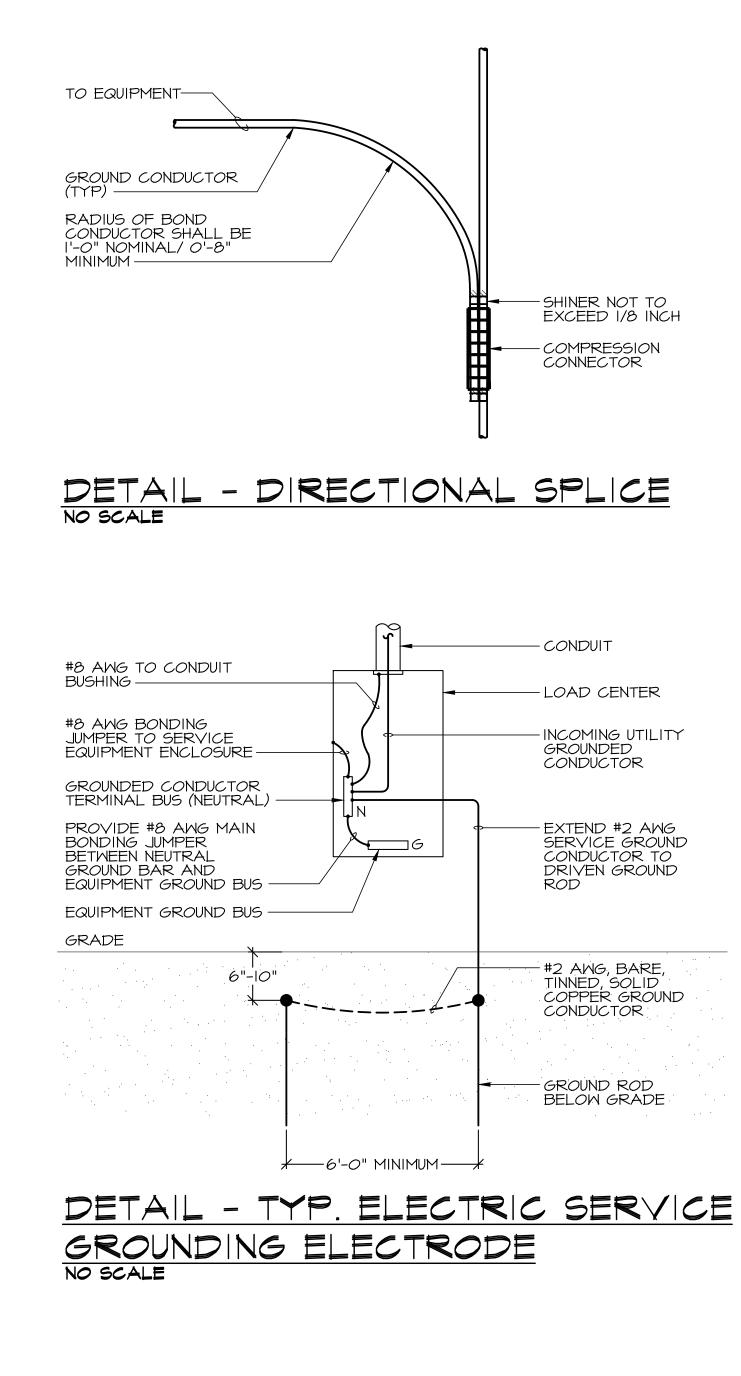
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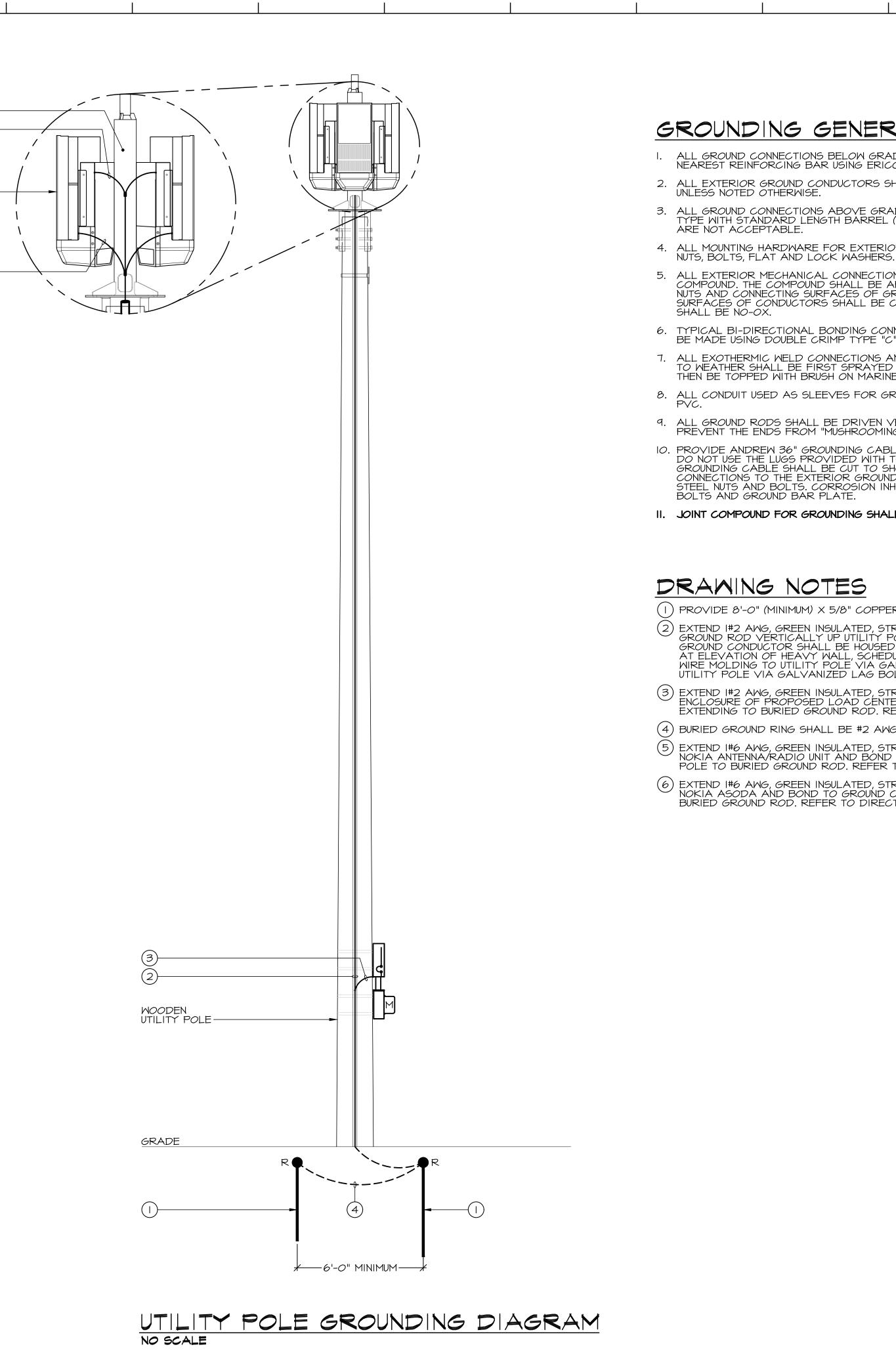
PROPOSED NOKIA

ANTENNA/RADIO UNIT (TYP OF 3)

(5)(TYP OF 3)-



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## GROUNDING GENERAL NOTES

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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.

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3. ALL GROUND CONNECTIONS ABOVE GRADE SHALL BE TWO-HOLE COPPER COMPRESSION TYPE WITH STANDARD LENGTH BARREL (BURNDY # YA2CL- 2TCI4EI). SINGLE HOLE LUGS

4. ALL MOUNTING HARDWARE FOR EXTERIOR LOCATIONS SHALL BE GALVANIZED INCLUDING

5. ALL EXTERIOR MECHANICAL CONNECTIONS SHALL BE MADE USING OXIDE-INHIBITING JOINT COMPOUND. THE 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

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

9. ALL GROUND RODS SHALL BE DRIVEN VERTICALLY USING A GROUND ROD SHIELD TO PREVENT THE ENDS FROM "MUSHROOMING".

IO. 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.

II. JOINT COMPOUND FOR GROUNDING SHALL BE NO-OX.

(I) PROVIDE 8'-0" (MINIMUM) X 5/8" COPPER CLAD STEEL GROUND ROD.

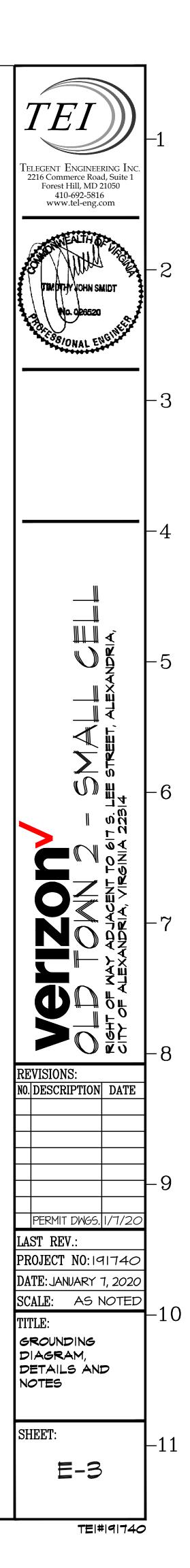
2 EXTEND I#2 AWG, GREEN INSULATED, STRANDED COPPER GROUND CONDUCTOR FROM BURIED GROUND ROD VERTICALLY UP UTILITY POLE FOR GROUNDING OF EQUIPMENT/ANTENNAS. GROUND CONDUCTOR SHALL BE HOUSED WITHIN I/2" GROUND WIRE MOLDING THEN TRANSITION AT ELEVATION OF HEAVY WALL, SCHEDULE 40 PV MOLDING (POLE RISER). SECURE GROUND WIRE MOLDING TO UTILITY POLE VIA GALVANIZED 2"x5/8" STAPLES. SECURE POLE RISER TO UTILITY POLE VIA GALVANIZED LAG BOLTS, REFER TO STRUCTURAL FOR DETAILS.

3 EXTEND 1#2 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.

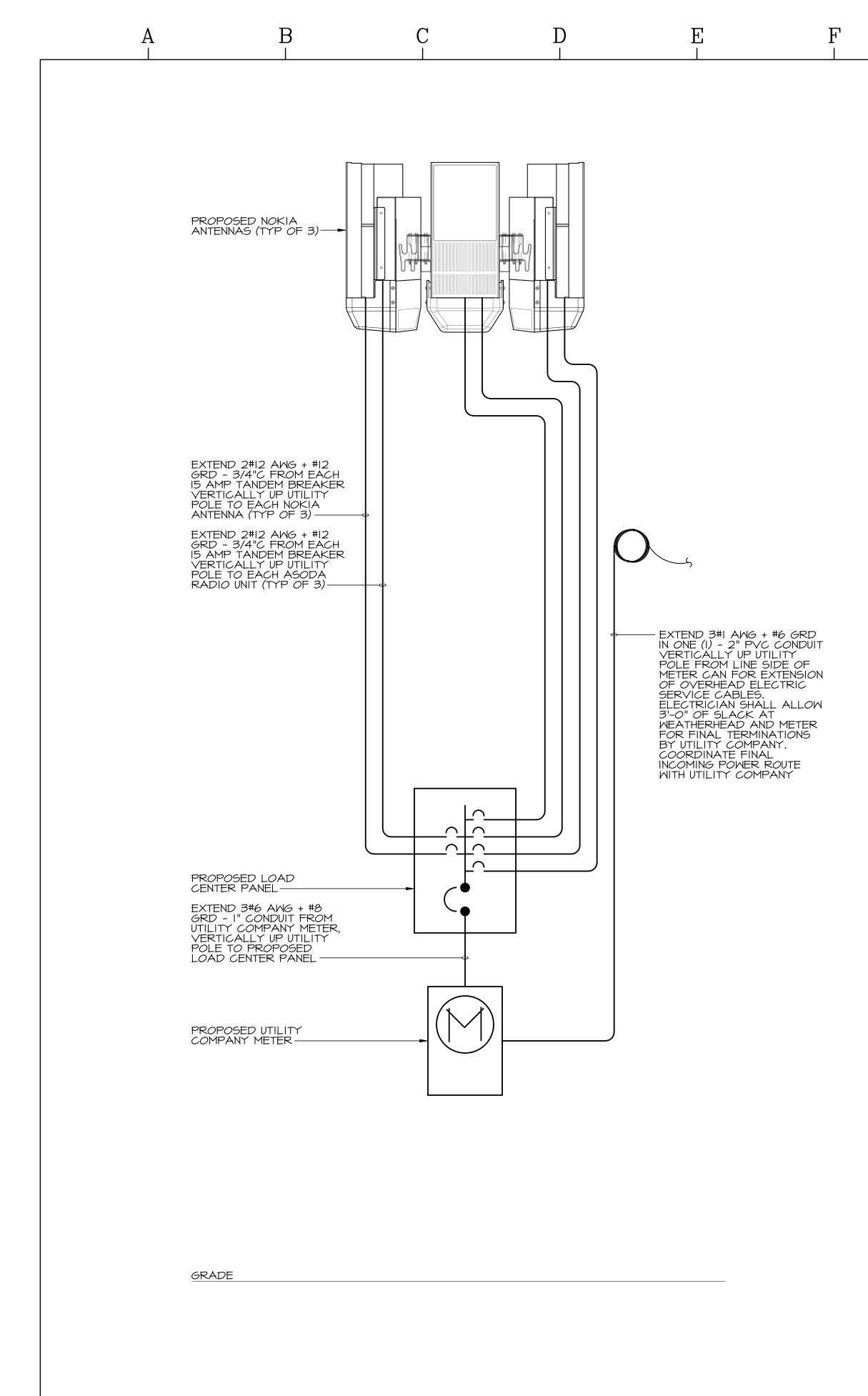
(4) BURIED GROUND RING SHALL BE #2 AWG, BARE, TINNED, SOLID COPPER.

5 EXTEND 1#6 AWG, GREEN INSULATED, STRANDED COPPER GROUND CONDUCTOR FROM EACH NOKIA ANTENNA/RADIO UNIT AND BOND TO GROUND CONDUCTOR EXTENDING DOWN UTILITY POLE TO BURIED GROUND ROD. REFER TO DIRECTIONAL SPLICE DETAIL, THIS SHEET.

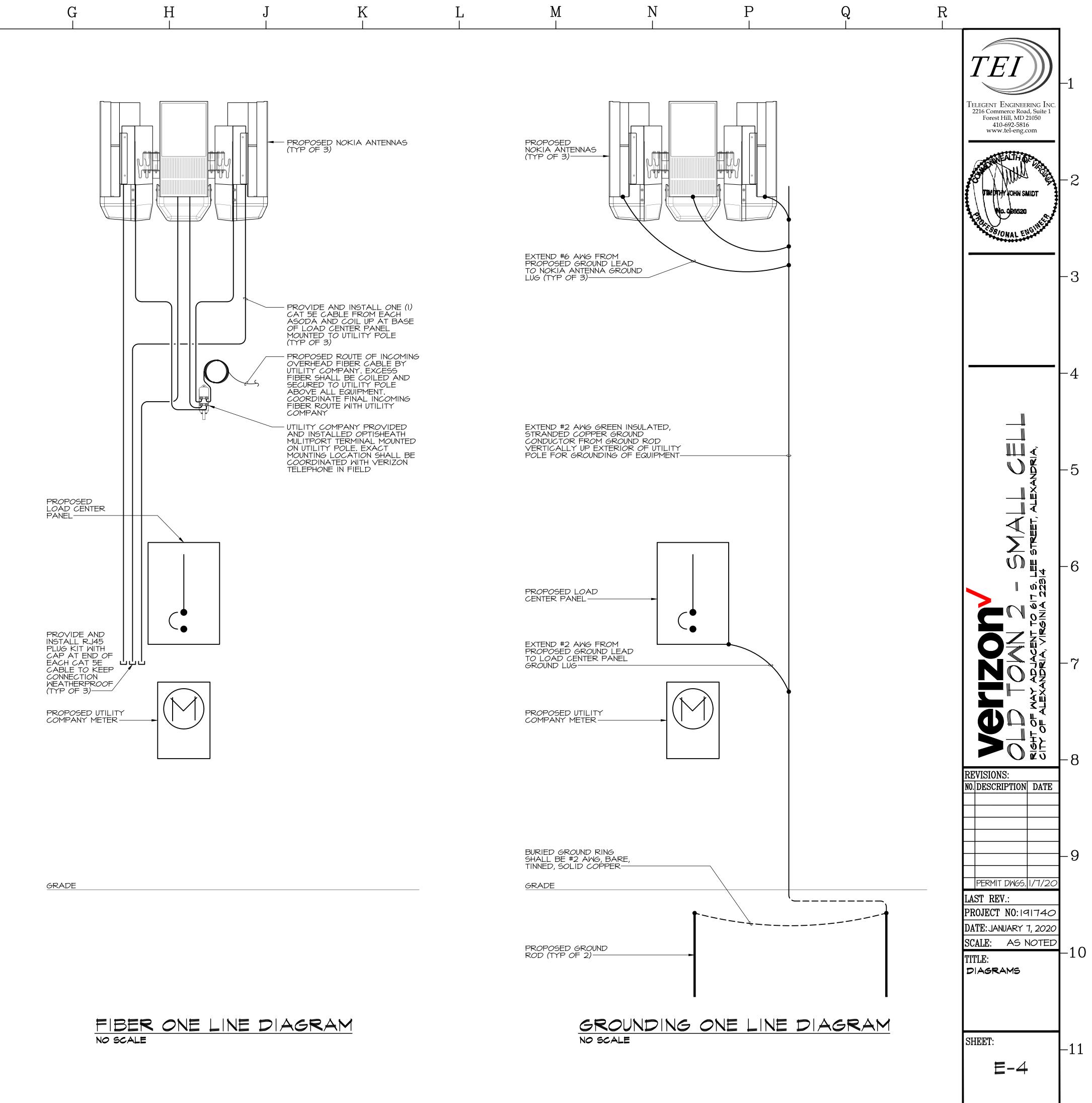
6 EXTEND 1#6 AWG, GREEN INSULATED, STRANDED COPPER GROUND CONDUCTOR FROM EACH NOKIA ASODA AND BOND TO GROUND CONDUCTOR EXTENDING DOWN UTILITY POLE TO BURIED GROUND ROD. REFER TO DIRECTIONAL SPLICE DETAIL, THIS SHEET.



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### Old Town 2 Overall Site Layout







Old Town 2 Existing View 1







Old Town 2 Proposed View 1







### Old Town 2 Existing View 2

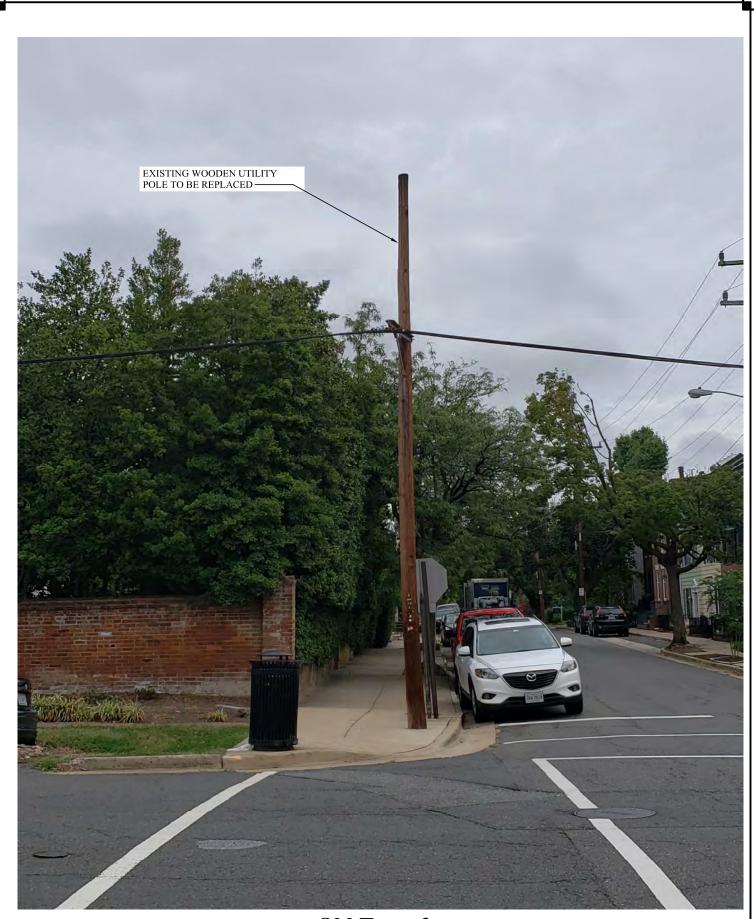






#### Old Town 2 Proposed View 2

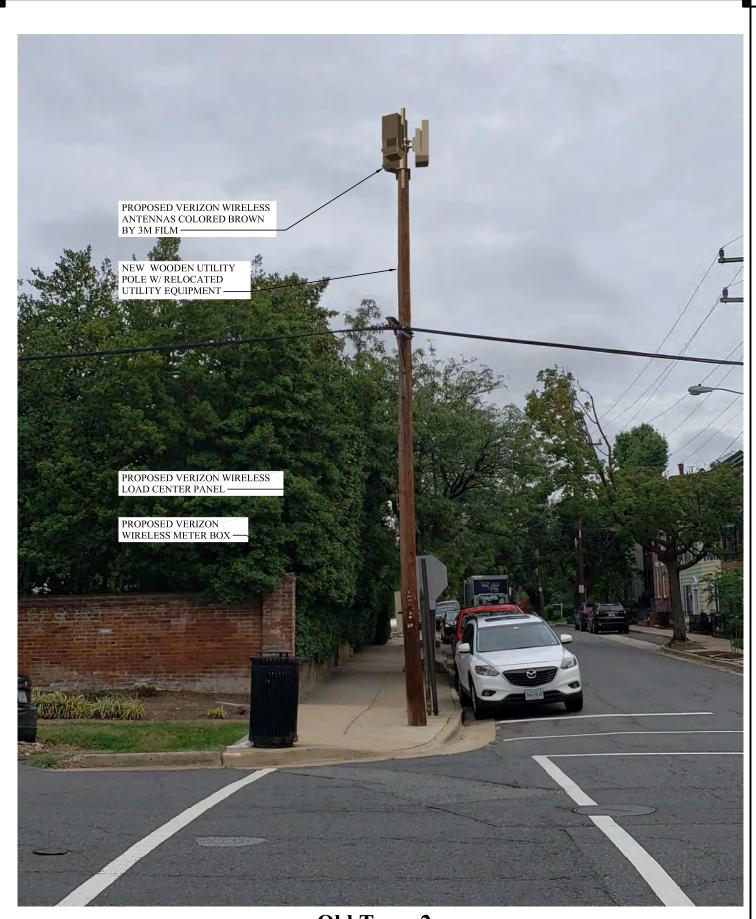






### Old Town 2 Existing View 3

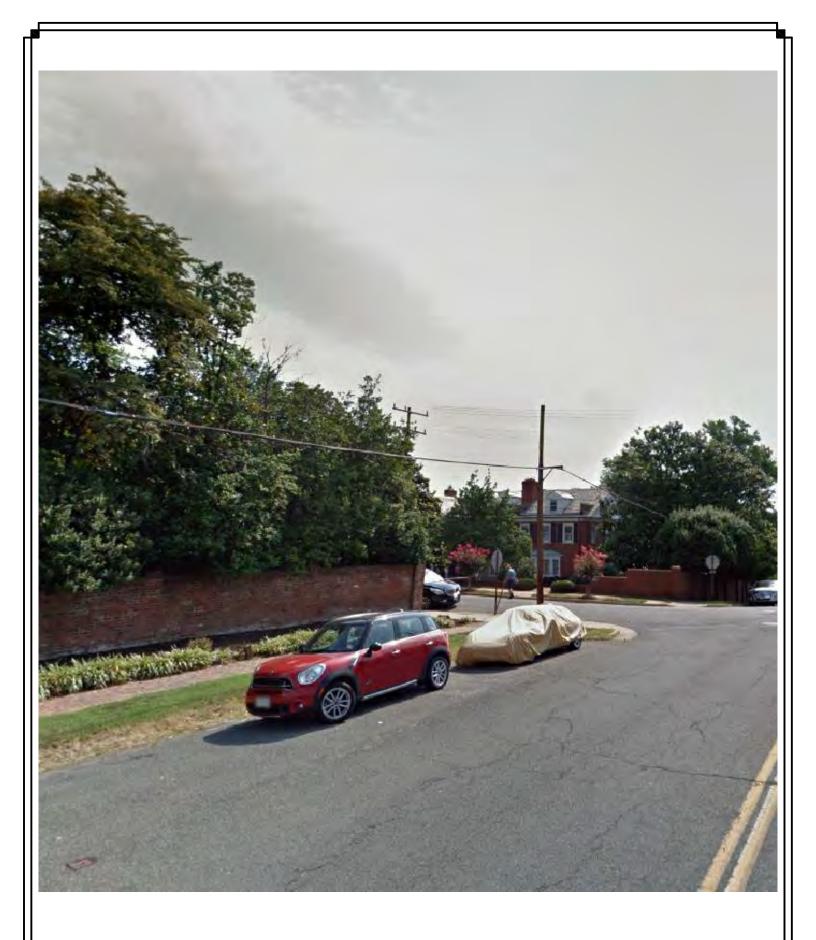






#### Old Town 2 Proposed View 3

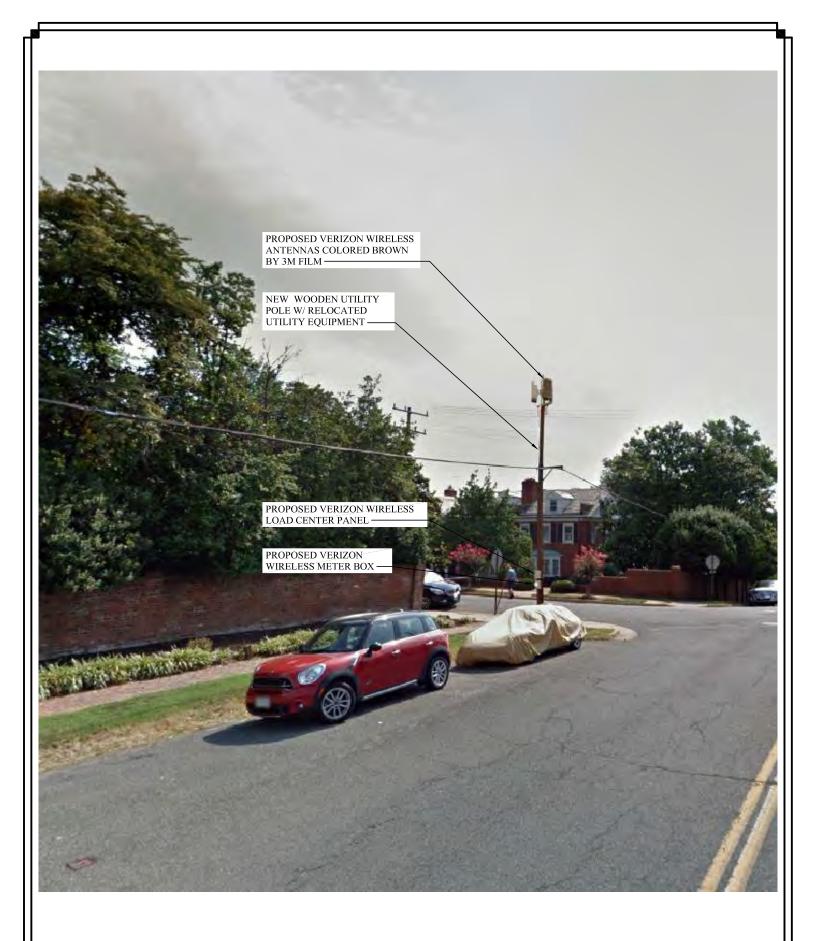






## Old Town 2 Existing View 4







#### Old Town 2 Proposed View 4

