GENERAL NOTES

- 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 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- IO. 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.
- 12. 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.
- 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.
- I6. 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.
- 17. GENERAL CONTRACTOR TO PROVIDE PORTABLE BATHROOM FACILITIES DURING CONSTRUCTION.
- 18. 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.
- 19. WITHIN 24 HOURS, CONTRACTOR SHALL OPEN A REMEDY TICKET WITH THE VZW NOCC AND PERFORM DAILY VISUAL MONITORING, OR PROVIDE A WIRELESS MONITORING DEVICE UNTIL THE SITE IS ON AIR.
- 20. FILL OUT THE PROVIDED ENVIRONMENTAL EVALUATION SUMMARY (EES) AND SUBMIT WITHIN 24 HOURS OF COMPLETION OF THE WORK OUTLINED IN ATTACHMENT 'A' OF THE FORM.
- 21. CONTRACTOR IS RESPONSIBLE FOR STORAGE OF ALL MATERIALS PROVIDED BY VERIZON, AND IS LIABLE FOR THOSE MATERIALS ONCE PICKED UP FROM THE MAREHOUSE.
- 22. CONTRACTOR SHALL PERFORM A PUNCH WALK WITH VZW CONSTRUCTION & OPERATION REPRESENTATIVE PRIOR TO DECLARING CONSTRUCTION COMPLETE.
- 23. REFER TO THE VZW SIGNAGE AND DEMARCATION POLICY DOCUMENT FOR ALL ROOFTOP SITES TO ENSURE THE PROPER SIGNAGE AND BARRIERS ARE IN PLACE.° FCC SIGNAGE MUST BE POSTED ON SITE FOR NEW TOWERS UPON BREAKING GROUND.° THE FCC REGISTRATION # MUST BE VISIBLE FROM THE ENTRANCE TO THE CELL SITE FROM THE ROAD, THEN AT THE BASE OF THE TOWER.° THE GC MUST COMMUNICATE WITH CONSTRUCTION & RF ENGINEERING TO VERIFY THEY ARE IN AGREEMENT WITH COMPLIANCE. COMPLIANCE
- 24. GENERAL CONTRACTOR SHALL PROVIDE A IOLBS. DRY-CHEMICAL FIRE EXTINGUISHER ON SITE DURING CONSTRUCTION. UPON COMPLETION OF ALL WORK, CONTRACTOR SHALL REMOVE FIRE EXTINGUISHER

Verizon^V

RAMOTH - POST 290 15 MOUNTAIN VIEW ROAD FREDERICKSBURG, VIRGINIA 22406

INDEX OF DRAWINGS

- CS-I SITE LOCATION AND VICINITY PLAN, INDEX OF DRAWINGS
- C-I SITE PLAN
- C-2 SITE DETAILS
- C-3 SITE DETAILS
- C-4 EROSION AND SEDIMENT CONTROL PLAN
- S-I STRUCTURAL DETAILS
- S-2 STRUCTURAL DETAILS
- S-3 STRUCTURAL DETAILS
- E-I ELECTRICAL SPECIFICATIONS, SYMBOLS LIST, AND SCHEDULES
- E-2 POWER SITE PLAN AND NOTES
- E-3 PART PLANS, POWER RISER, AND NOTES
- E-4 GROUNDING SITE PLAN AND NOTES
- E-5 ROUTING SITE PLAN AND NOTES E-6 DETAILS
- E-7 DETAILS
- E-8 DETAILS
- E-9 HYBRIFLEX DETAILS AND DIAGRAM
- E-10 DUCTBANK DETAILS
- E-II TOWER LIGHTING CONTROLLER PLAN, ONE-LINE
- DIAGRAM, AND DETAILS E-12 TELCO DETAILS

CODE ANALYSIS

UTILITY (U)

DOMINION

IIB

APPLICABLE BUILDING CODE: IBC 2015 USE GROUP:

CONSTRUCTION TYPE:

1,218 SQ. FT. PROPOSED COMPOUND AREA: EQUIPMENT AREA: 160 SQ. FT.

(VERIZON WIRELESS EQUIPMENT PLATFORM) UTILITY COMPANY:

RAND MCNALLY LICENSE # R.L.O4-S-97 (N) VICINITY PLAN Virginia Auto Repair 753 1 676

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A NEW CELLULAR COMPOUND AND MONOPOLE TOWER WITH VERIZON WIRELESS ELEVATED EQUIPMENT PLATFORM FOR MOUNTING OF VERIZON WIRELESS EQUIPMENT. THE ASSOCIATED SIX (6) ANTENNAS WILL BE MOUNTED ON THE PROPOSED 128'-O" MONOPOLE TOWER AT A RAD CENTER OF 127'-O".

DIRECTIONS TO SITE

- FROM JUNCTION DRIVE: - MERGE ONTO MD-32 EAST TAKE EXIT #100 FOR BALTIMORE WASHINGTON - TAKE EXIT #IOC FOR BALTIMORE WASHINGTON
 PARKWAY SOUTH
 - TAKE EXIT #IB-C FOR I-695 TOWARD DOWNTOWN
 - CONTINUE ONTO I-695 WEST
 - MERGE ONTO I-395 SOUTH
 - MERGE ONTO I-95 SOUTH
 - TAKE EXIT #I36 FOR CENTREPORT PARKWAY
 - KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR CO
 ROAD 627/STAFFORD REGIONAL AIRPORT AND MERGE
- ONTO CENTREPORT PARKWAY

 TURN LEFT ONTO MOUNTAIN VIEW ROAD

 DESTINATION WILL BE ON THE LEFT

VERIZON WIRELESS REVIEW

DATE BUILDING OWNER DATE ENGINEERING DATE **OPERATIONS** DATE CONSTRUCTION

DANIEL TODD FUHRMAN Lic. No. 0402047768

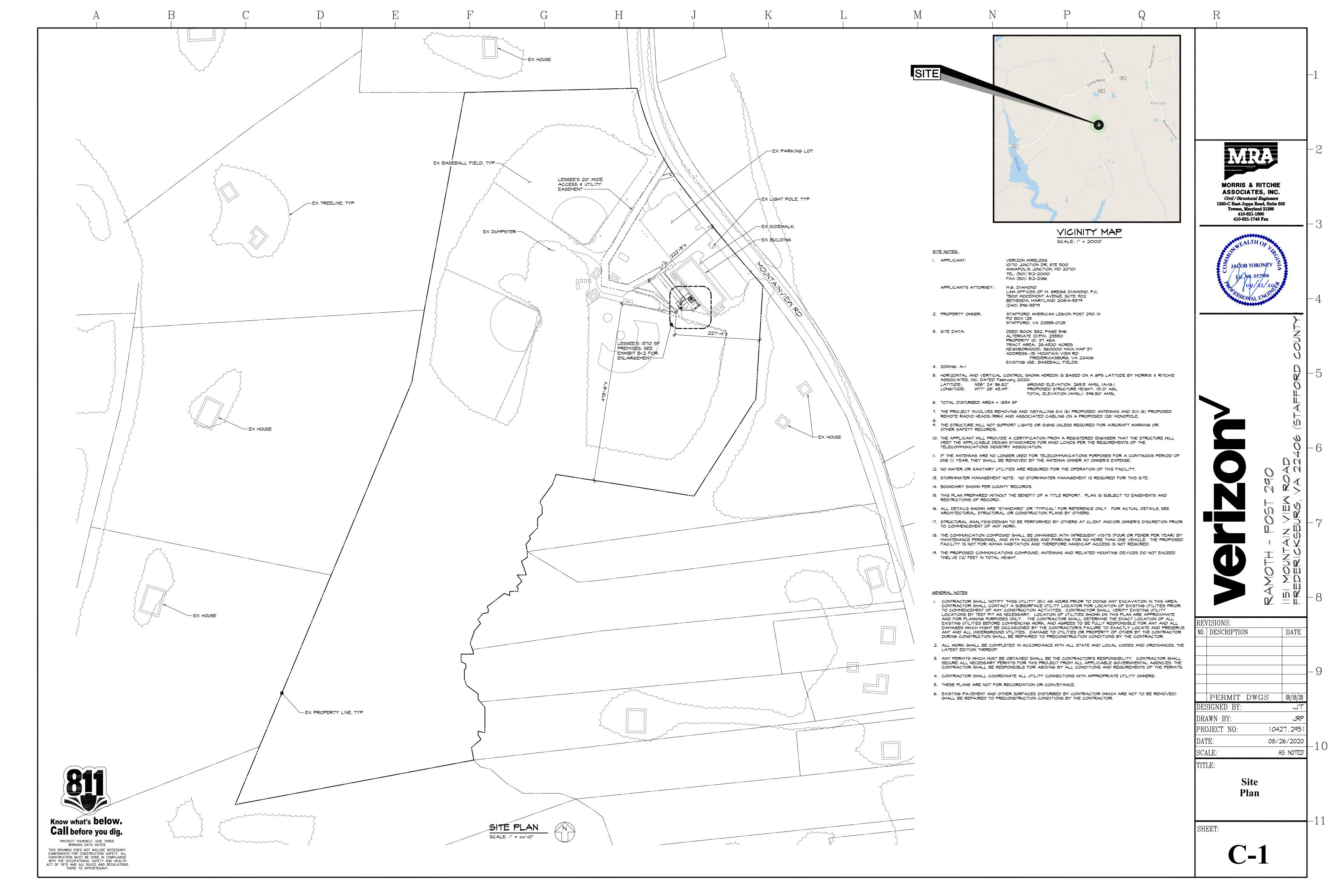
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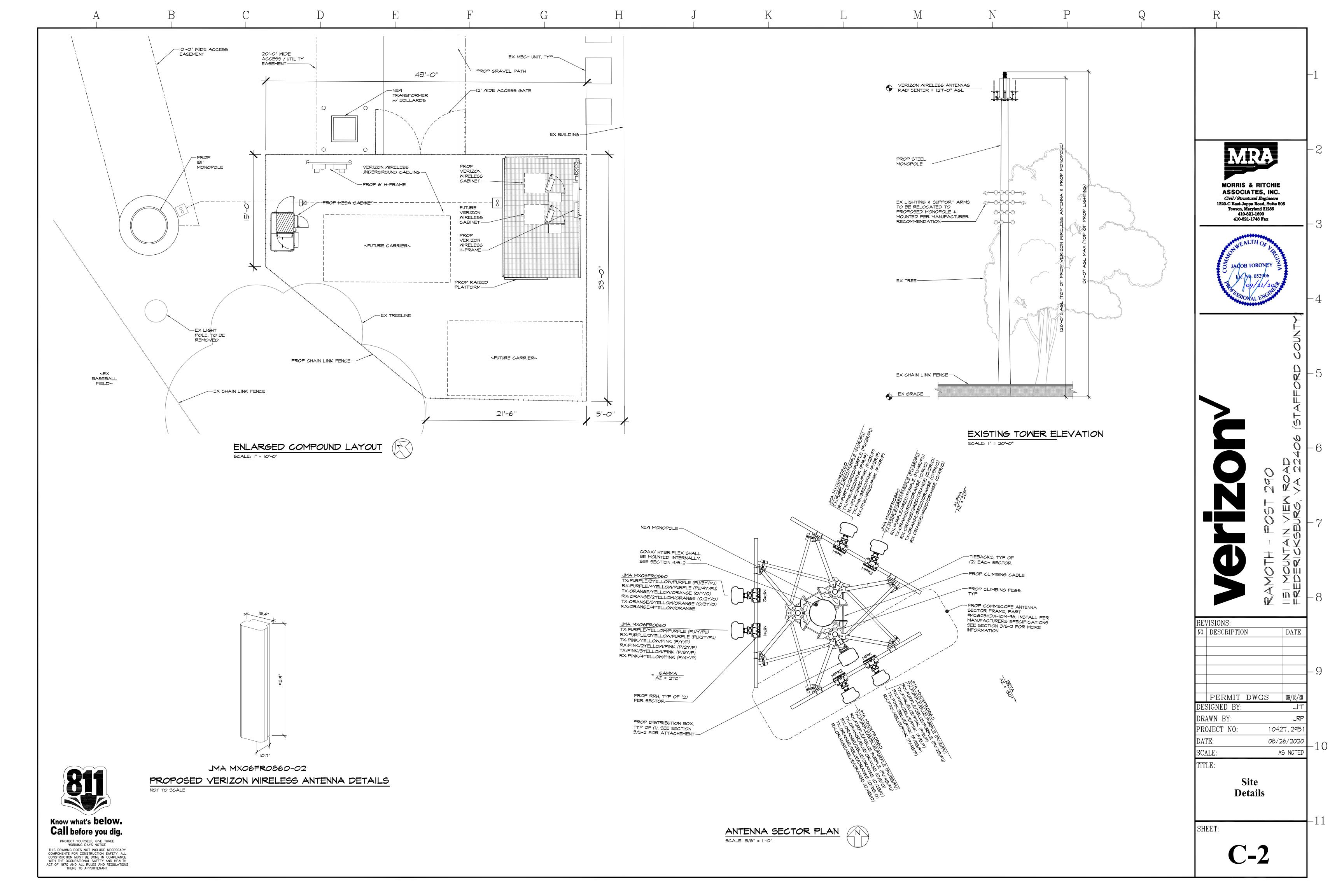
2216 Commerce Road, Suite 1 Forest Hill, MD 21050 410-692-5816 www.tel-eng.com

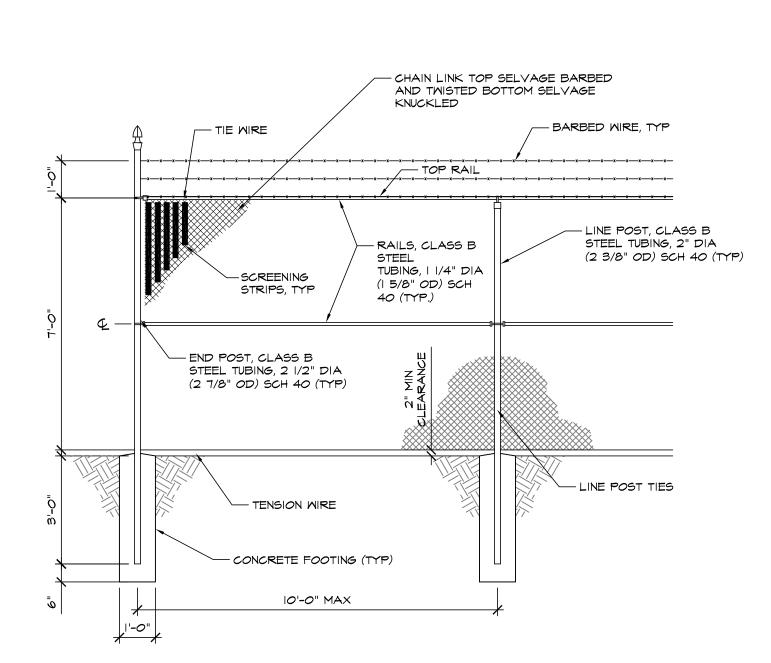
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F	PERMIT DWGS.	9/18/20	
LAS'	T REV.:		
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DAT	E: SEPTEMBER 18,	2020	
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CHAIN LINK FENCE DETAIL

TYPICAL MOVEN WIRE FENCE NOTES

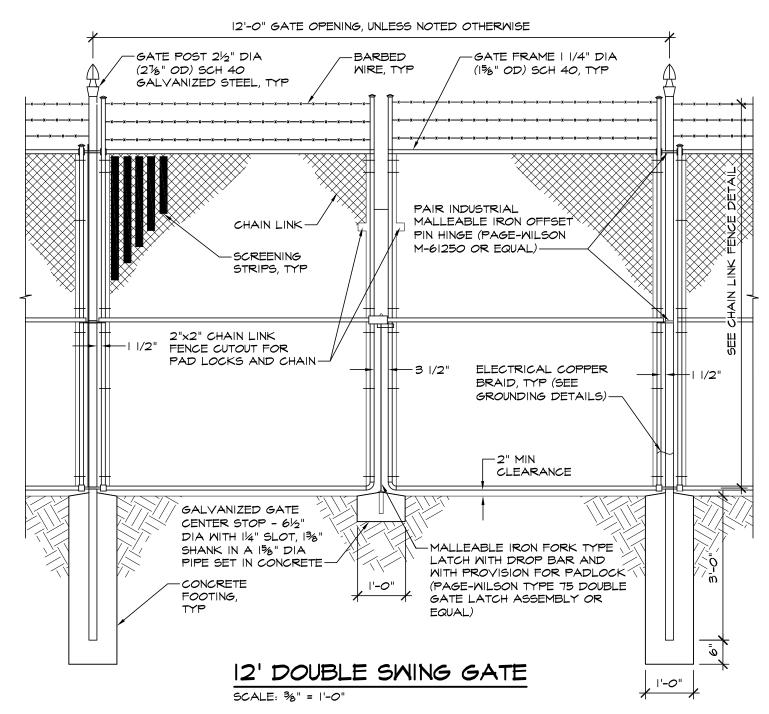
GREEN OR BLACK)

- I. GATE POST, CORNER, TERMINAL OR PULL POST 2 1/2" DIA (2 7/8" OD) SCHEDULE 40 FOR GATE WIDTHS UP THRU 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
- 2. LINE POST: 2" DIA (2 3/8" OD) SCHEDULE 40 PIPE PER ASTM-FI083. 3. GATE FRAME: 1 1/4" DIA (1 5/8" OD) SCHEDULE 40 PIPE PER ASTM-F1083.
- 4. TOP RAIL & BRACE RAIL: 1 1/4" DIA (1 5/8" OD) SCHEDULE 40 PIPE PER ASTM-F1083.

 5. FABRIC: 9 GA CORE WIRE SIZE, 2" MESH, CONFORMING TO ASTM-A392.

 6. TIE WIRE: MINIMUM II GA GALVANIZED STEEL AT POSTS AND RAILS, A SINGLE WRAP OF
- FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX 24" INTERVALS.
- 7. TENSION WIRE: 7 GA GALVANIZED STEEL. 8. BARBED WIRE: DOUBLE STRAND 12-2 1/2" OD TWISTED WIRE TO MATCH WITH FABRIC,
- 14 GA. 4 PT BARBS SPACED ON APPROXIMATELY 4" CENTERS.

 9. GATE LATCH: 1-3/8" OD PLUNGER ROD WITH MUSHROOM TYPE CATCH AND LOCK, KEYED ALIKE FOR ALL SITES IN A GIVEN MTA.
- IO. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED WITH, IF
- II. CHAINLINK FENCE SHALL INCLUDE VERITCAL PVC SCREENING SLATS, ALL SIDED. (COLOR: DARK



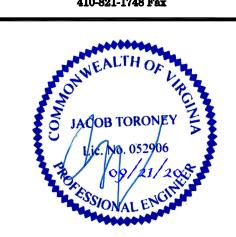
TYPICAL MOVEN WIRE FENCE NOTES

- GATE POST, CORNER, TERMINAL OR PULL POST 2 1/2" DIA (2 7/8" OD) SCHEDULE 40 FOR GATE WIDTHS UP THRU 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
- 2. LINE POST: 2" DIA (2 3/8" OD) SCHEDULE 40 PIPE PER ASTM-FI083.
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- 4. TOP RAIL & BRACE RAIL: | |/4" DIA (| 5/8" OD) SCHEDULE 40 PIPE PER ASTM-FI083. 5. FABRIC: 9 GA. CORE WIRE SIZE, 2" MESH, CONFORMING TO ASTM-A392.
- 6. TIE WIRE: MINIMUM II GA. GALVANIZED STEEL AT POSTS AND RAILS, A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX. 24" INTERVALS.

 7. TENSION WIRE: 7 GA. GALVANIZED STEEL.

 8. BARBED WIRE: DOUBLE STRAND 12-2 1/2" OD TWISTED WIRE TO MATCH WITH FABRIC, 14 GA. 4 PT.
- BARBS SPACED ON APPROXIMATELY 4" CENTERS.
- 9. GATE LATCH: 1-3/8" OD PLUNGER ROD WITH MUSHROOM TYPE CATCH AND LOCK, KEYED ALIKE FOR
- ALL SITES IN A GIVEN MTA. 10. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED WITH, IF REQUIRED.

ASSOCIATES, INC. Civil / Structural Engineers
1220-C East Joppa Road, Suite 505
Towson, Maryland 21286
410-821-1690
410-821-1748 Fax

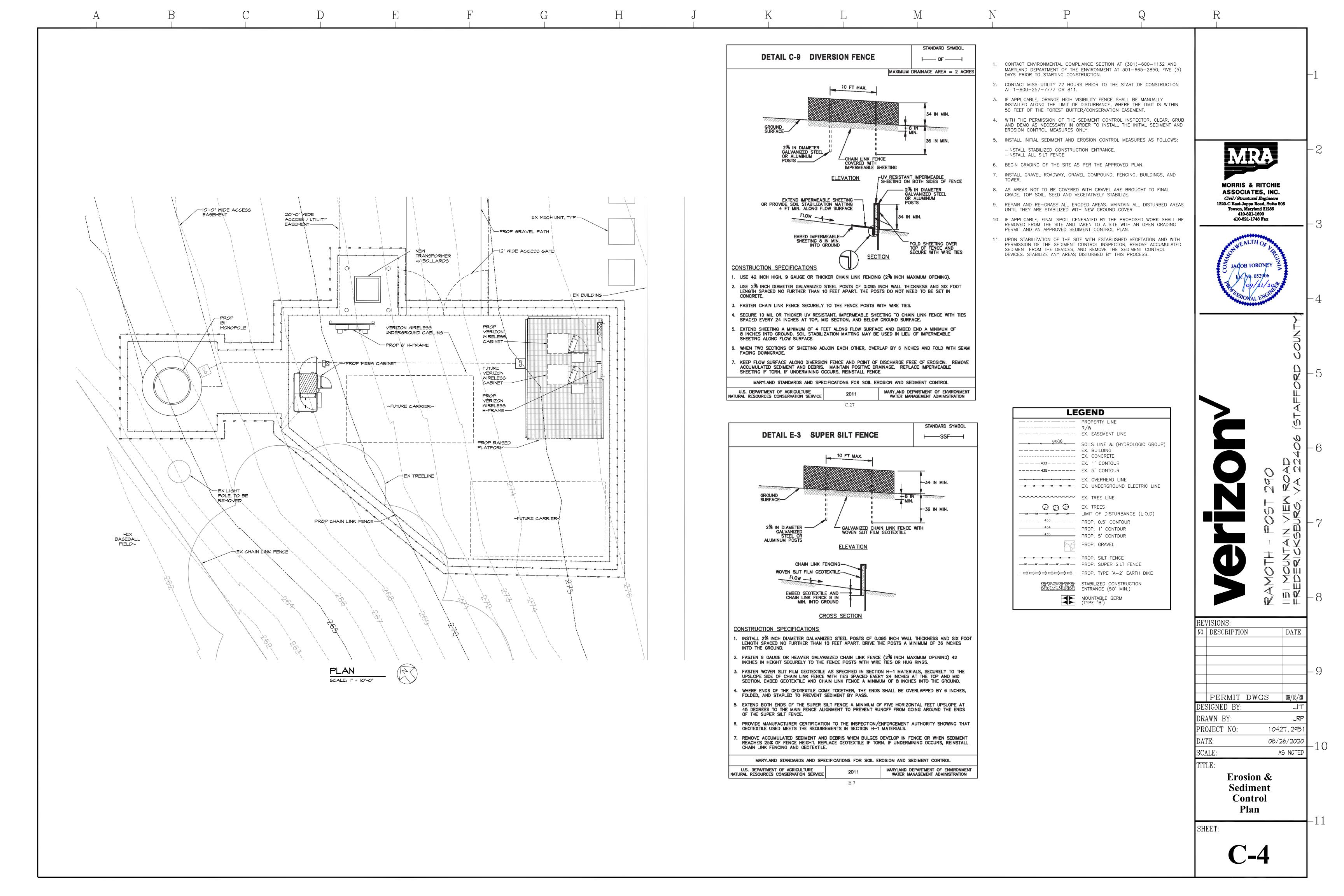


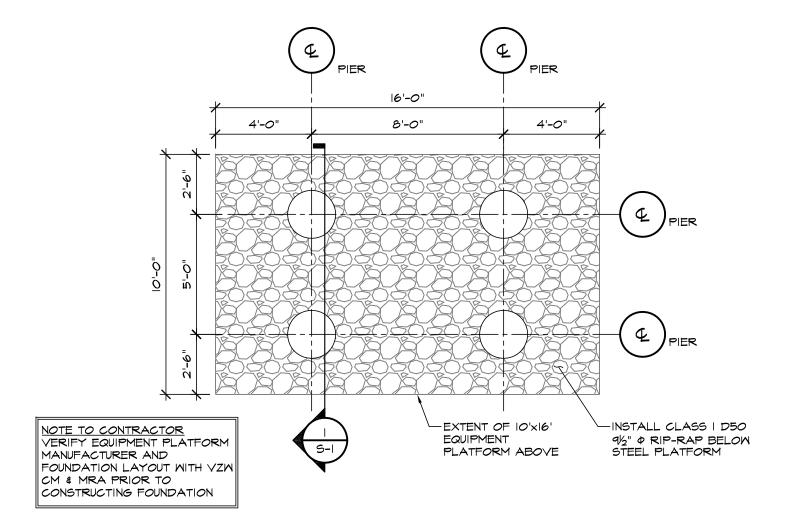
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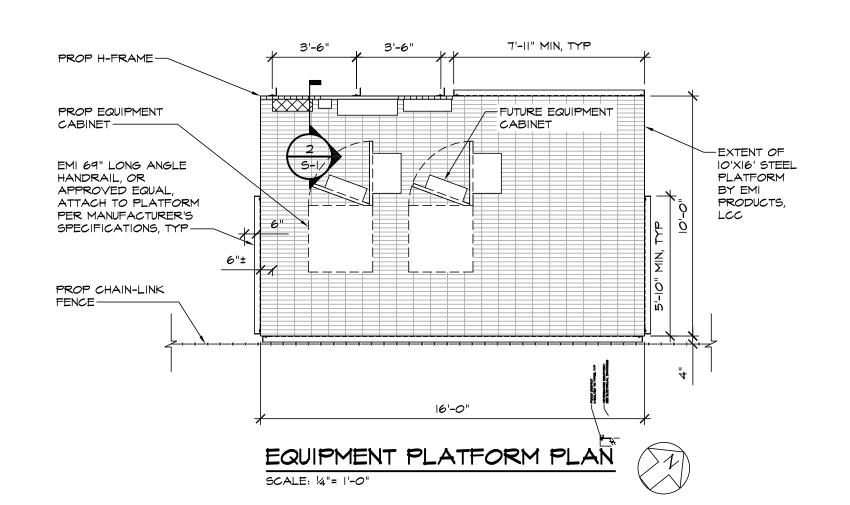


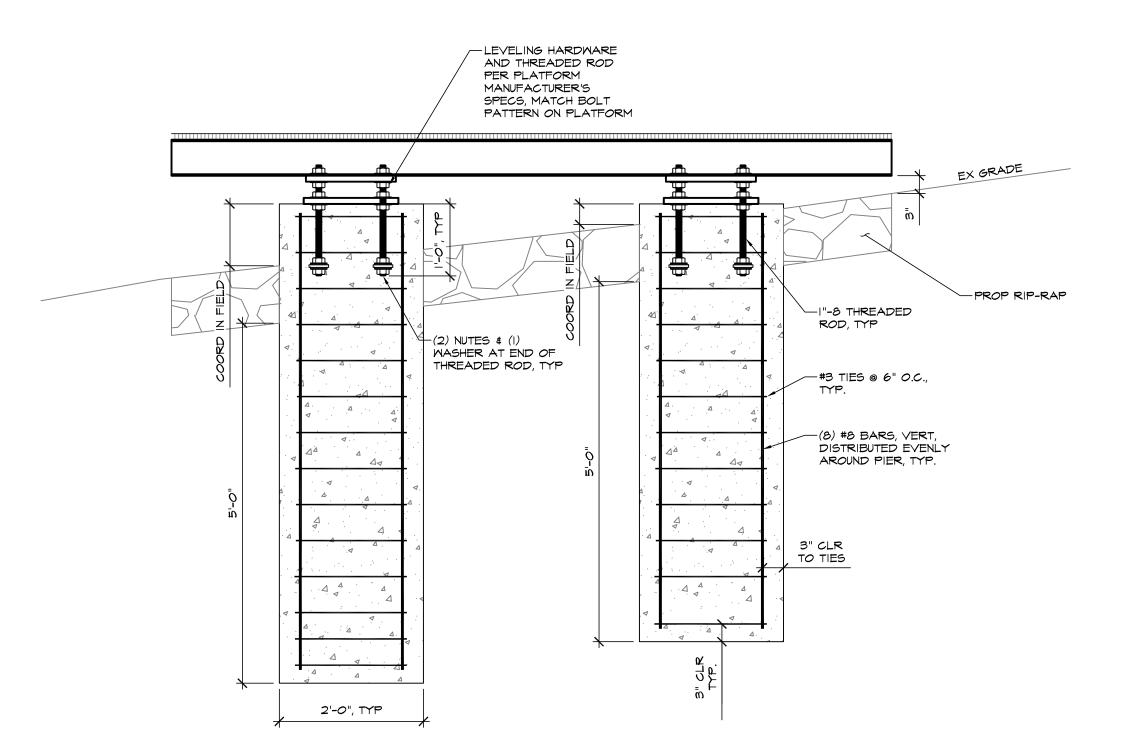


EQUIPMENT PLATFORM FOUNDATION PLAN SCALE: 1/4"= 1'-0"

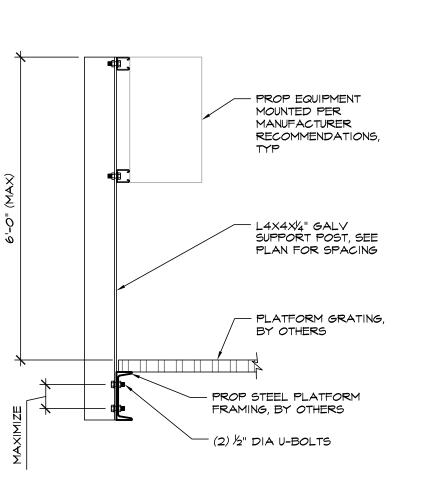
DRILLED PIER FOUNDATIONS (CAISSONS) NOTES:

- A. DRILLED PIER FOUNDATIONS (CAISSONS) SHALL BEAR ON UNDISTURBED SOIL WITH AN ASSUMED ALLOWABLE NET BEARING CAPACITY OF 1.5 KSF. THE ALLOWABLE SOIL BEARING PRESSURE SHALL BE FIELD VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER AND APPROVED PRIOR TO PLACING FOUNDATIONS. SHOULD THE ACTUAL SOIL BEARING PRESSURE BE LESS THAN 1.5 KSF, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
- B. BEARING ELEVATION OF DRILLED PIER FOUNDATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED IN FIELD.
- C. DRILLED PIER FOUNDATIONS SHALL BE DRILLED WITHOUT DISTURBING THE SURROUNDING SOIL AND SHALL BE KEPT FREE OF WATER INFILTRATION UNTIL CONCRETE CAN BE PLACED.
- D. DRILLED PIERS TO HAVE A MINIMUM GROUND PENETRATION OF 5'-O" BELOW RIP-RAP

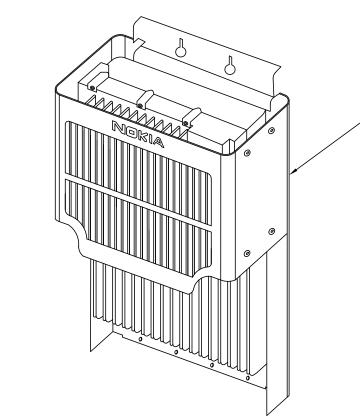








2 TYP METERBOARD SUPPORT S-I SCALE: I" = I'-0"



— AIR SCALE DUAL RRH 4T4R B2/66a 320M AHFIC

AIRSCALE DUAL RRH 4T4R B2/66a 320M AHFIC

MANUFACTURER: NOKIA

ANTENNA TECH: 1900/2100 MHz

ANTENNA TECH: 1900/2100 MHz

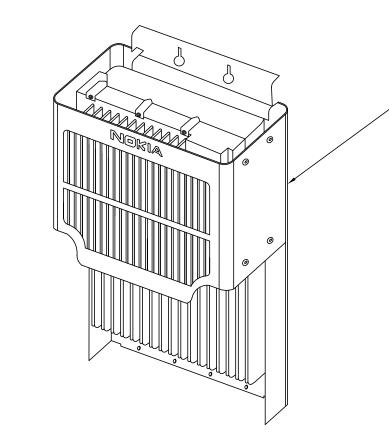
DIMENSIONS: 7.25"Dx12"Mx22"H (NO BRACKET)
7.6"Dx12.9"Mx26.6"H (W/ BRACKET)

WEIGHT: 79 LBS

NOTES:

- I. INSTALL RRH PER MANUFACTURER'S
- 2. FIBER, DC POWER & GROUND CONNECTIONS NOT SHOWN.

RECOMMENDATIONS.



MANUFACTURER: NOKIA

ANTENNA TECH: 700/850 MHz

DIMENSIONS: 7.5"DxI2"Mx22"H (NO BRACKET)
8.1"DxI2.9"Mx26.6"H (W/ BRACKET)

MEIGHT: 84 LBS

NOTES:

— AIR SCALE DUAL RRH

4T4R B5/13 320W AHBCC

 INSTALL RRH PER MANUFACTURER'S RECOMMENDATIONS.

AIRSCALE DUAL RRH 4T4R B5/13 320W AHBCC

2. FIBER, DC POMER & GROUND CONNECTIONS NOT SHOWN.

NOKIA AIRSCALE DUAL RRH 4T4R B2/66a 320 W AHFIC - DETAIL

NOKIA AIRSCALE DUAL RRH 4T4R B5/13 320 M AHBCC - DETAIL



NO. DESCRIPTION

PERMIT DWGS

DESIGNED BY:

DRAWN BY:

PROJECT NO:

10427.2951

DATE:

08/26/2020

SCALE:

AS NOTED

TITLE:

Structural

Details

MORRIS & RITCHIE

ASSOCIATES, INC.

Civil / Structural Engineers 1220-C East Joppa Road, Suite 505 Towson, Maryland 21286 410-821-1690

410-821-1748 Fax

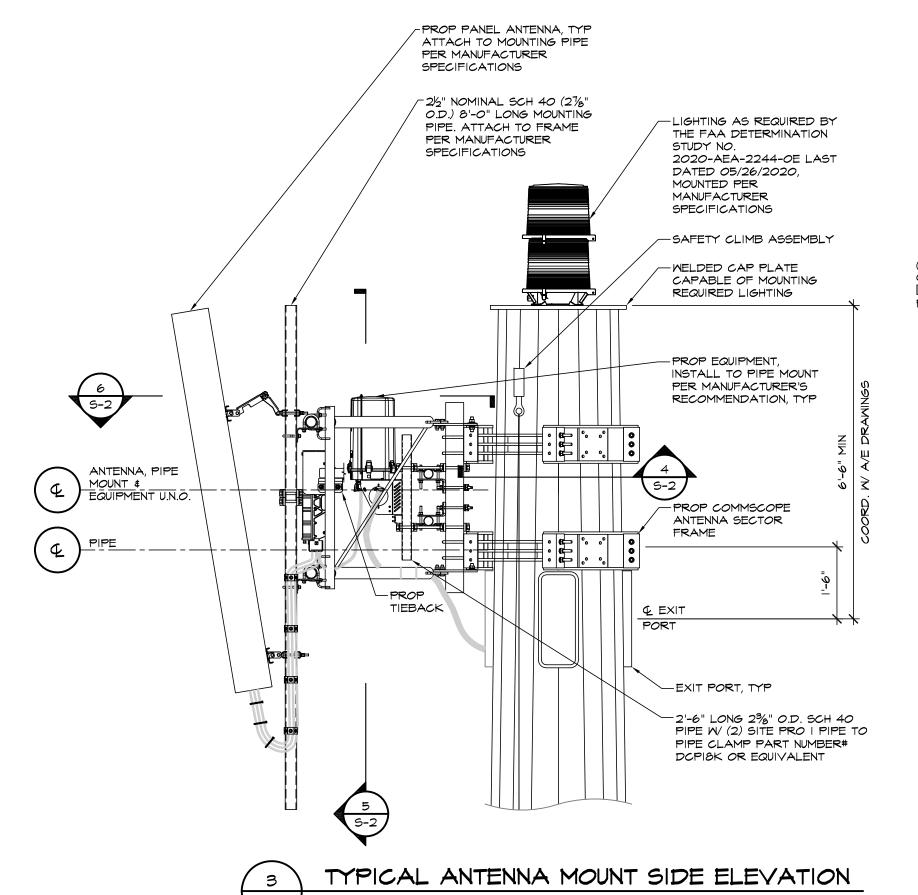
JACOB TORONEY

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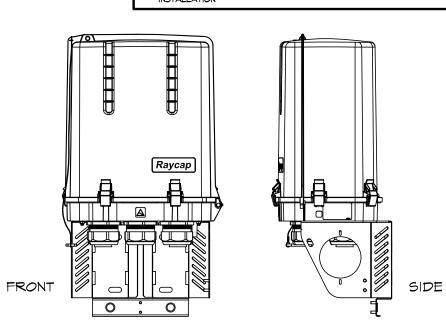
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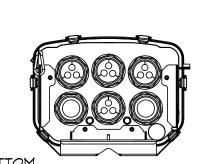


SCALE: 1/2" = 1'-0"

NOTES: I. CABLING SHOWN FOR ILLUSTRATION PURPOSES ONLY

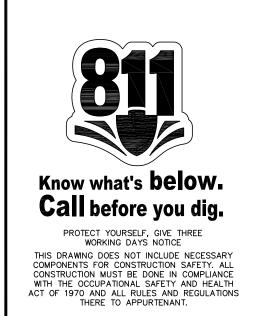
ALL EXISTING & PROPOSED ANTENNAS & ANCILLARY EQUIPMENT (RRH'S DISTRIBUTION BOXES, ETC.) MUST BE INSTALLED AS SHOWN. 2. ALL APPURTENANCES MUST BE MOUNTED TO A DESIGNATED MOUNTING POSITION (MOUNTING PIPE). APPURTENANCES SHALL NOT BE DIRECTLY MOUNTED TO RAILS, STANDOFFS OR OTHER PORTIONS OF THE MOUNT UNLESS IT IS A DESIGNATED MOUNTING POSITION. ALL NEW STRUCTURAL STEEL, FASTENERS, AND EQUIPMENT MOUNTING HARDWARE TO RECEIVE A HOT-DIPPED GALVANIZED FINISH PRIOR TO INSTALLATION

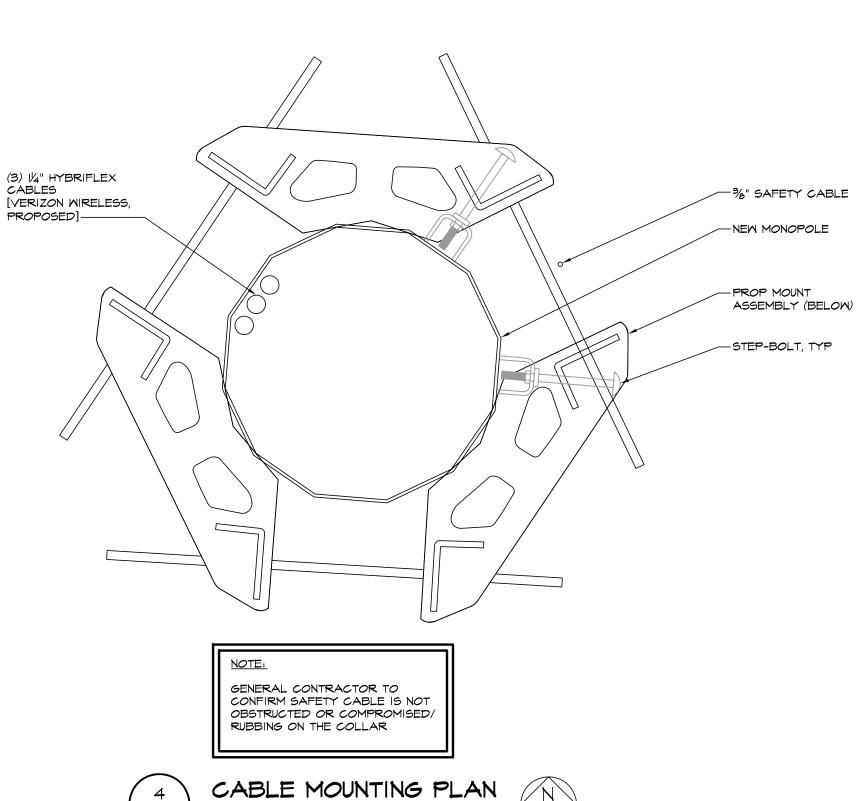




MANUFACTURER: RAYCAP MODEL #: RVZDC-6627-PF-48 (12 OVP) DIMENSIONS: 12.6"D X 16.5"W X 29.5"H WEIGHT: 32 LBS (SYSTEM)

RAYCAP RYZDC-6627-PF-48 DISTRIBUTION BOX DETAIL NOT TO SCALE





MOUNT MODIFICATION BILL OF MATERIALS								
ITEM # DESCRIPTION PART MODEL QUANTITY MATERIAL COMMENTS								
ı	PROPOSED MOUNT	-	-	-	-	PLAN/C-2		
la	COMMSCOPE MCG23HDX-IOM-I2-96	COMMSCOPE	MCG23HDX	I	GALV.	SECTIONS 3/5-2, 5/5-2, \$ 6/5-2		
lb	23/6" OD X 30" SCH 40 PIPE	-	-	ı	GALV. ASTM A53 GRADE B	SECTIONS 3/5-2 \$ 6/5-2		
Ic	PIPE-TO-PIPE CLAMPS	SITEPROI	DCPI8K	2	GALV.	SECTION 3/S-2		

BILL OF MATERIALS

	TYPICAL BOLT ASSEMBLIES									
TYPE	GRADE	DIA.	FINISH	WASHER ⁴	NUT	TIGHTENING TORQUE (FT-LB) ^{1,2,3}				
STRUCTURAL	ASTM F3125 GR A325	1/2"	GALV.	ASTM F436	ASTM A563	94				
STRUCTURAL	ASTM F3125 GR A325	5/8"	GALV.	ASTM F436	ASTM A563	188				
U-BOLT	SAE J429 GRADE 2	1/2"	GALV.	ASTM F436/F844	SAE J995	61				
U-BOLT	SAE J429 GRADE 2	5/8"	GALV.	ASTM F436/F844	SAE J995	121				

NOTES:

I. TIGHTENING TORQUES CORRESPOND TO AISC SNUG-TIGHTENED JOINTS.

SCALE: |-|/2" = |'-0"

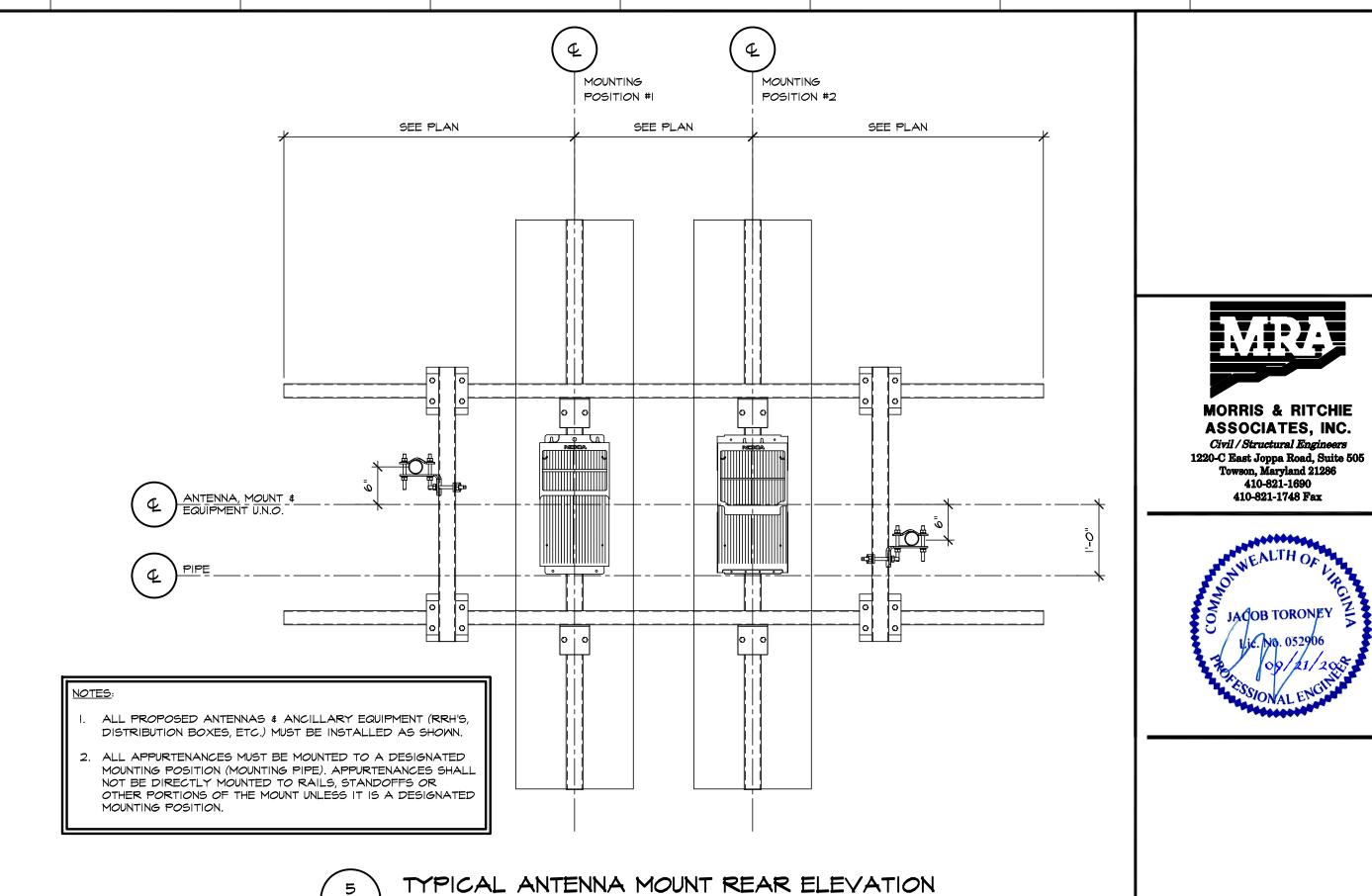
- 2. CONTRACTOR SHALL VERIFY THAT ALL EXISTING BOLTS ARE TIGHTENED ACCORDING TO THIS TABLE. THREADED PARTS AND BOLTS MUST BE CORRECTLY IDENTIFIED PRIOR TO RE-TIGHTENING AND THE THREADED COMPONENTS SHALL NOT BE OVERTIGHTENED, OTHERWISE THEY NEED TO BE SAFELY REMOVED AND REPLACED. EXCEPTION: TIGHTENING TORQUES DO NOT APPLY TO THREADED COMPONENTS OF COLLAR MOUNTS AND/OR TOWER LEG ATTACHMENT POINTS (IF APPLICABLE).
- 3. TIGHTENING SHALL STOP WHEN THE SPECIFIED INSTALLATION TORQUE IS REACHED OR AT THE FIRST SIGN OF DEFORMATION.
- 4. WASHER SHALL BE PROVIDED UNDER ELEMENT THAT IS TURNED (NUT OR HEAD).

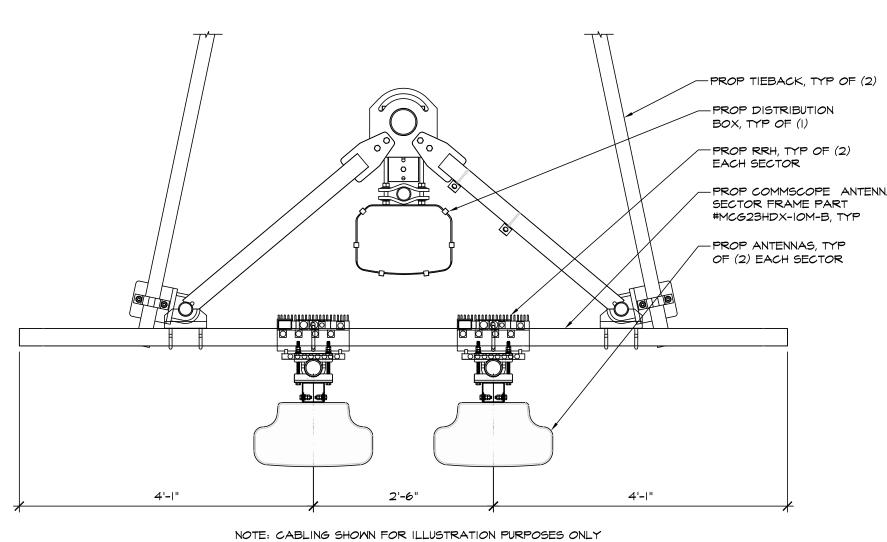
P	TYPICAL BOLT ASSEMBLIES

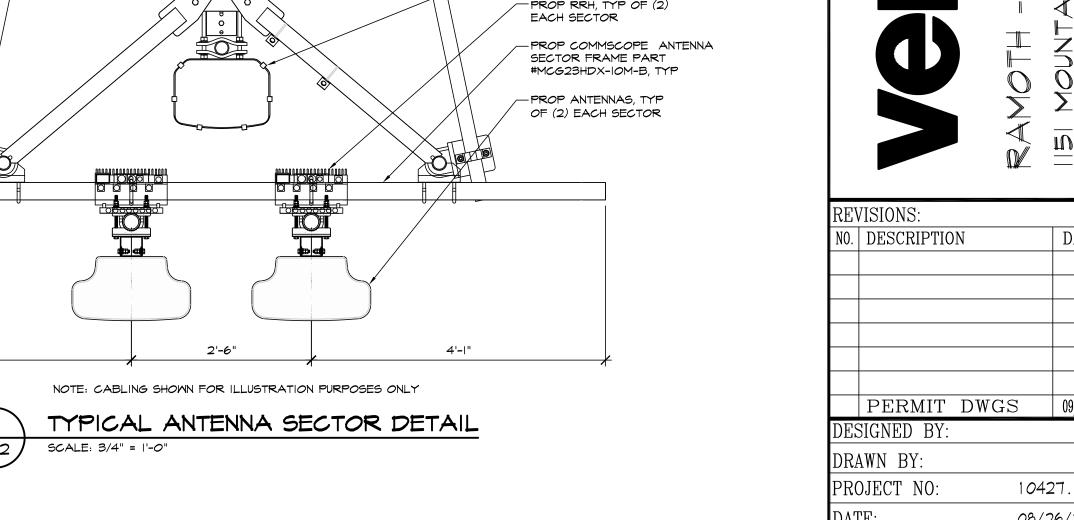
PIPE MOUNT SCHEDULE								
MOUNTING POSITION	PIPE O.D.	PIPE LENGTH	THICKNESS	CKNESS		EXISTING/ PROPOSED		
MP#2	27/8"	96"	SCH 40	XAUOI**	XAUOI**	PROPOSED		
MP#3	2%"	96"	SCH 40	XAUOI**	XAUOI**	PROPOSED		

NOTE:
*COORDINATE PIPE MOUNT SCHEDULE W/ PLANS, SECTIONS, DETAILS, \$ NOTES. **ALL RAIL CONNECTION HARDWARE WILL BE INCLUDED WITH THE PROPOSED COMMSCOPE MOUNT

PIPE MOUNT SCHEDULE







DATE 10427.2951 08/26/2020 AS NOTED Structural

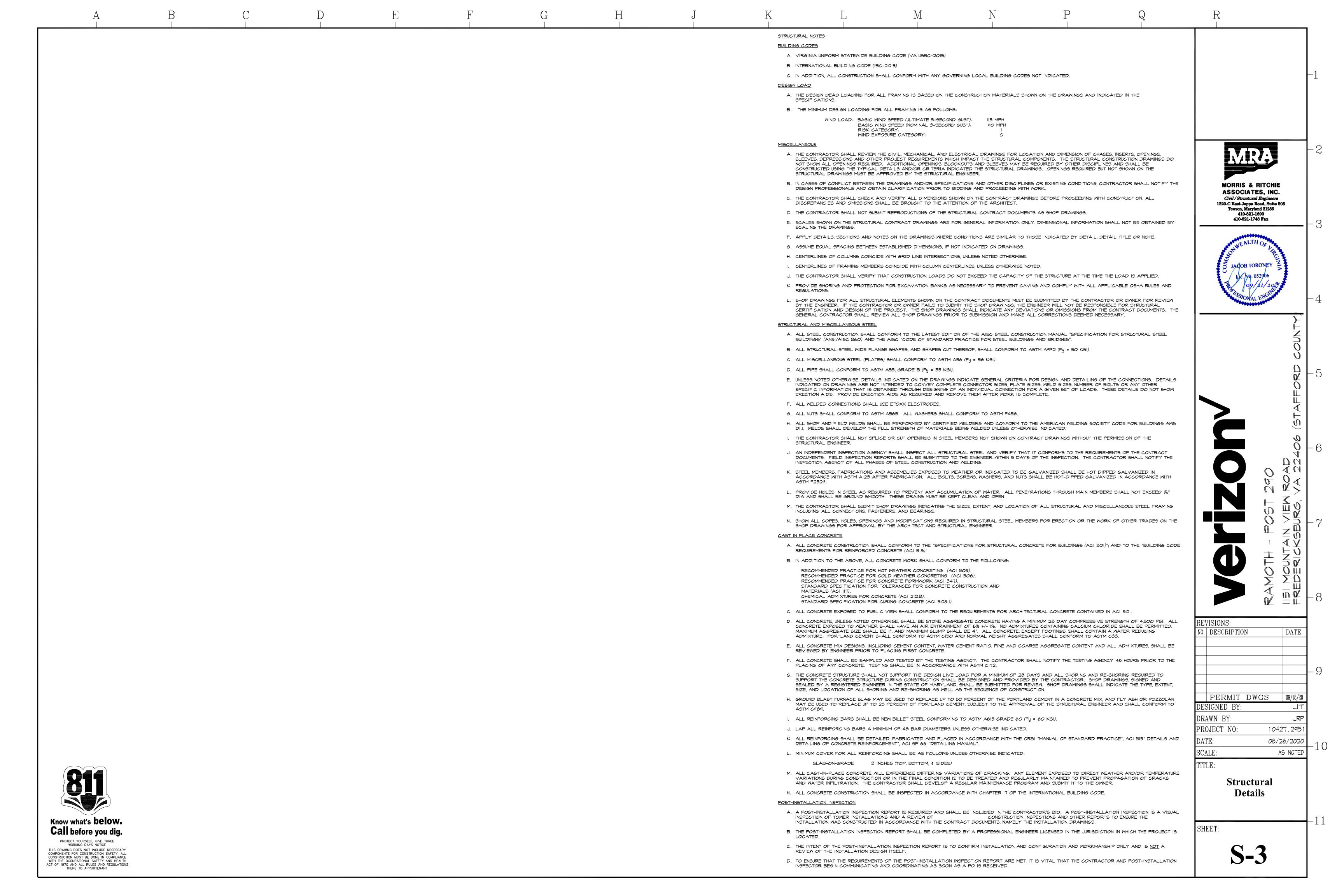
410-821-1748 Fax

JACOB TORONEY

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Details

SHEET:



ELECTRICAL SPECIFICATION

I. <u>SECTION 16010 - BASIC ELECTRICAL REQUIREMENTS</u>

- 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. THE CONTRACTOR SHALL PREPARE THREE (3) COPIES OF A RECORD AND INFORMATION BOOKLET. THE BOOKLET SHALL BE BOUND IN A THREE RING LOOSE-LEAF BINDER AND INCLUDE ALL ITEMS OF ELECTRICAL EQUIPMENT.
- K. 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.
- L. 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.
- M. ANY ELECTRICAL WORK WHICH WILL INTERFERE WITH THE NORMAL USE OF THE BUILDING IN ANY MANNER SHALL BE DONE AT SUCH TIME OR TIMES AS SHALL BE MUTUALLY AGREED UPON BETWEEN THE CONTRACTOR AND THE VERIZON REPRESENTATIVE.
- N. 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 MANUFACTURED ITEMS OR FABRICATED STRUCTURAL STEEL SHAPES.
- O. 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.
- P. MOUNTING AND SUPPORTING OF ALL EQUIPMENT PROVIDED BY THIS CONTRACTOR SHALL BE COORDINATED WITH VERIZON IN THE FIELD.
- Q. 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.

2. SECTION 16050 - BASIC ELECTRICAL MATERIALS & METHODS

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

- I. ALL CONDUIT BELOW GRADE SHALL BE SCHEDULE 40 PVC. ALL CONDUIT ABOVE GRADE AND EXPOSED TO WEATHER SHALL BE SEALTIGHT. ALL SEALTIGHT CONNECTORS SHALL BE METALLIC.
- 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 STEEL.

 B. WIRES & CABLE:
- I. 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 WHERE APPLICABLE.

C. <u>DISCONNECTS:</u>

I. 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. PANELBOARDS:

- I. THE CONTRACTOR SHALL BALANCE THE LOADS ON ALL PANELBOARDS AS CLOSELY AS POSSIBLE AND TO THE SATISFACTION OF THE ENGINEER.
- 2. FURNISH AND INSTALL, WHERE INDICATED ON THE DRAWINGS, AUTOMATIC CIRCUIT BREAKER PANELBOARDS COMPLETE WITH ENCLOSING CABINETS. ENCLOSURES SHALL BE NEMA 3R WHERE EXPOSED TO WEATHER AS INDICATED. PANELBOARDS AND ENCLOSING CABINETS SHALL CONFORM TO STANDARDS ESTABLISHED BY UNDERWRITERS' LABORATORIES, INC. AND REQUIREMENTS OF THE NATIONAL ELECTRIC CODE.
- 3. ALL PANELBOARD INTERIORS SHALL BE FACTORY ASSEMBLED, COMPLETE WITH CIRCUIT BREAKERS AS SCHEDULED ON THE DRAWINGS. INTERIORS SHALL BE DESIGNED AND ASSEMBLED SO THAT ANY INDIVIDUAL BREAKER CAN BE REPLACED WITHOUT DISTURBING ADJACENT UNITS, WITHOUT REMOVING MAIN BUS, AND SHALL EMPLOY SEQUENCE BUSSING. MAIN BUSSES AND BACK PANS OF DISTRIBUTION AND POWER PANELBOARDS SHALL BE OF SUCH DESIGN THAT BRANCH CIRCUITS MAY BE CHANGED WITHOUT ADDITIONAL DRILLING, MACHINING, OR TAPPING. ALL CIRCUIT BREAKERS SHALL BE QUICK-MAKE AND SHALL BE TRIP INDICATING.
- 4. PANELBOARDS SHALL EMPLOY BOLT-ON BREAKERS OF NOT LESS THAN 22,000 SYMMETRICAL A.I.C. AT I20 VOLTS OR 240 VOLTS AS REQUIRED. PANELBOARDS SHALL BE EQUIPPED WITH COPPER BUS BARS. FURNISH SQUARE D, GENERAL ELECTRIC, OR WESTINGHOUSE AS INDICATED ON THE PANELBOARD SCHEDULE AND AS FOLLOWS:

MANUFACTURERDESIGNATIONSQUARE D"PPI"

- 5. PANELBOARDS SHALL BE EQUIPPED WITH A TYPEWRITTEN DIRECTORY, INDICATING PLAINLY WHAT EACH CIRCUIT OF THE PANEL CONTROLS.
- 6. PANELBOARD SHALL BE EQUIPPED WITH A COVER THAT HAS A CLASP THAT ALLOWS FOR THE INSTALLATION OF A PAD LOCK. PANELBOARD SHALL NOT BE EQUIPPED WITH KEY LOCK COVER.

E. GROUNDING:

- I. 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, TERMINALS, ETC., FOR CONNECTION OF GROUND WIRE IN ALL DISTRIBUTION FOURTH

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

A. ELECTRICAL SERVICE:

I. ELECTRICAL POWER TO THE NEW EQUIPMENT PLATFORM SHALL BE EXTENDED FROM THE PROPOSED SIX (6) POSITION METERSTACK MOUNTED ON BACKBOARD. LABEL METER AND CIRCUIT BREAKER WITH PHENOLIC NAMEPLATES READING "VERIZON WIRELESS".

B. COMMUNICATIONS SERVICE:

- I. 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.
- 3. PROVIDE I/4" POLYPROPYLENE PULL ROPE IN ALL CONDUITS LEFT EMPTY. ALL CONDUITS SHALL BE TERMINATED WITH NYLON INSULATING BUSHINGS.
- 4. PROVIDE ONE (I) CONDUIT AS SHOWN ON DRAWINGS BETWEEN TELEPHONE COMPANY DEMARC AND DEMARC LOCATED ON EQUIPMENT BACKBOARD.
- 5. FIBER SPLICES, IF NECESSARY, SHALL BE FUSION SPLICES. MECHANICAL CONNECTIONS ARE NOT PERMITTED.

ELECTRICAL SYMBOLS LIST

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

ENCLOSED CIRCUIT BREAKER DISCONNECT SWITCH - FUSED/NON FUSED XXXXX 120/240V, IP, SQUARE D PANEL EQUIPMENT MOUNTING BACKBOARD DRAWING NOTE — — F— — BURIED ELECTRIC FEEDERS BURIED TELEPHONE SERVICE BURIED BRANCH CIRCUIT GROUND CONDUCTOR BELOW GRADE BURIED GROUND ROD DESIGNATES FRONT DRY TYPE TRANSFORMER LIGHT FIXTURE - SURFACE MOUNT SWITCH - 120V, SINGLE POLE, 20A - TIMER

	(NEMA 3R) P/						99 D AMP MAIN C.B.
	DESCRIPTION	BRKR	С К Т	C	<u>, </u>	BRKR	DESCRIPTION
ľ	EQUIPMENT LIGHTING	20	ı	2	2		
ľ	CHARLES CABINET RECPT.	20	3	4	-	30	SURGE PROTECTION DEVICE
	CHARLES CABINET RECTIFIER I	30	5 7	8	-1	30	CHARLES CABINET RECTIFIER 7
	CHARLES CABINET RECTIFIER 2	30	9	10	-1	30	CHARLES CABINET RECTIFIER 8
	CHARLES CABINET RECTIFIER 3	30	13 15	- -	-1	30	CHARLES CABINET RECTIFIER 9
	CHARLES CABINET RECTIFIER 4	30	17 19	18 20	4	30	CHARLES CABINET RECTIFIER IO
	CHARLES CABINET RECTIFIER 5	30	2I 23	2	┥.	30	CHARLES CABINET RECTIFIER II
	CHARLES CABINET RECTIFIER 6	30	25 27	2	┥.	30	CHARLES CABINET RECTIFIER 12
ľ	TOWER LIGHTING CONTROLLER	20	29	30	7	_	SPACE
ľ	SPACE	-	31	3.	2	_	SPACE
ľ	SPACE	_	33	3.	4	-	SPACE
	SPACE	-	35	3	6	-	SPACE
	SPACE	_	37	3	9	-	SPACE
	SPACE	_	39	4	2	_	SPACE
Ĺ	SPACE	_	41	4	2	-	SPACE
	LIGHTING LOAD: RECEPTACLE LOAD: CHARLES CABINET LO TOTAL LOAD:	AD:		O.2	0	K	/A x 125% = 0.25 KVA 0.18 KVA <u>11.52 KVA</u> 11.95 KVA = 49.79 A @ 120/240V, 1¢, 3M

* CONTRACTOR SHALL FIELD COORDINATE OVERCURRENT PROTECTION WITH MANUFACTURER'S RECOMMENDATIONS.

** PANEL SCHEDULE SHALL NOT BE HAND-WRITTEN.

	LIGHTING FIXTURE SCHEDULE										
	PE Y	LAMPS	MOUNTING	DESCRIPTION/VOLTAGE	CATALOG NO.						
*	A	1096 LUMENS 19.87 WATT LED 5199K	POST	UL LISTED WET LOCATION LED SURFACE MOUNT WITH RUGGED CAST-ALUMINUM, CORROSION-RESISTANT HOUSING IN BRONZE OR WHITE FINISH AND CLEAR ACRYLIC LENSES, FULLY GASKETED TO PROTECT LEDS WITH TWO (2) ADJUSTABLE HEADS (120V)	LITHONIA LED FLOODLIGHT						

^{*} NO PHOTOCELL OR MOTION DETECTOR. FIXTURE SHALL BE CONNECTED TO SWITCHED PORTION OF LIGHTING CIRCUIT AND BE CONTROLLED BY SPRING-WOUND TIMER SWITCH.

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