



## staff report

Agenda Item No.

D-2

**To:** City of Imperial Planning Commission

**From:** Lisa Tylanda, Planner

**Date:** January 4, 2019

**Subject: Conditional Use Permit Request CUP (19-02)  
Humble Farmer Brewery  
116 South Imperial Ave; Imperial, CA 92251**

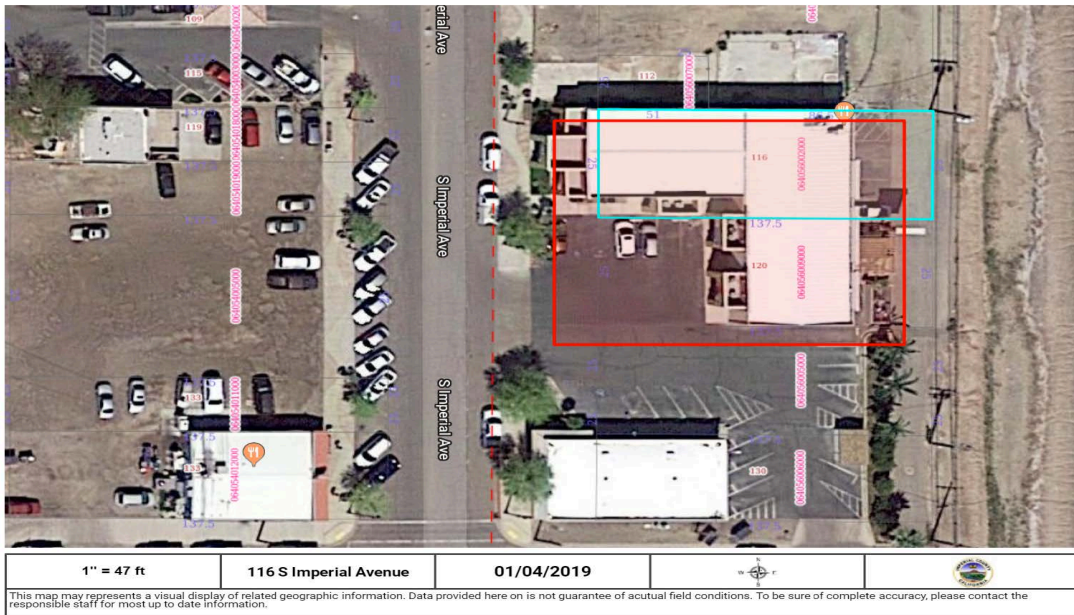
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### **Background:**

Humbler Farmer Brewing Company currently operates as a brewery and restaurant at 116 South Imperial Avenue; Imperial, CA 92251. Humble Farmer Brewing is interested in expanding their establishments Suites “C & D” to include to Suites “E & F” of the building and having “Live Onsite Entertainment” inside and outside there facility. This location is zoned Village Commercial. The Village Commercial zoning district requires a Conditional Use Permit for establishments that serve “alcoholic beverages” and have “live entertainment”.

Humble Farmer Brewery is requesting approval for a Conditional Use Permit (CUP) to allow the operation brewery and live onsite entertainment in current and future Suites C, D, E & F located at 116 South Imperial Avenue; Imperial, CA 92251. When hosting events outdoors in the parking lot and/or closing down the parking lot at any time of the day, the applicant will have to obtain a “Special Events” permit from the Community Service Department two weeks prior to the event/closing off of the parking lot.

Humble Farmer Brewery CUP (19-02)



**Evaluation:**

The Zoning Ordinance provides flexibility in the regulation of uses to ensure that unusual characteristics of certain uses are properly addressed in furtherance of the Imperial Zoning Ordinance. Section 24.19.340 of the City of Imperial Zoning Ordinance requires that the Commission make specific findings be made when reviewing a CUP.

1. That the proposed location, size, design, and operating characteristics of the proposed use is in accord with the Title and Purpose of this Ordinance, the Purpose of the zone in which the site is located, the Imperial General Plan, and the development policies and standard of the City.

*The proposed project site is located within the V-C Village Commercial zone which, amongst other things, is intended as the social heart of the City. Land uses within this zone are intended to be less intensive than those in other commercial zones.*

2. That the proposed location, size, design, and operating characteristics of the proposed use and the conditions under which it would be operated or maintained will not be detrimental to the public health, safety, or welfare, or materially injurious to properties or improvements in the vicinity.

*The brewery has been operating in the Village Commercial zone for approximately 2 years. Through mitigation measures for the outdoor live entertainment special events, will not be detrimental to the surrounding parcels.*



3. That the proposed Conditional Use will comply with each of the applicable provisions of the Zoning Ordinance, except for any approved Variance.

*The proposed facility shall comply with all provisions of the Zoning Ordinance.*

**Environmental Compliance:**

The project is categorically exempt from the California Environmental Quality Act (CEQA) under Class 1, Section 15301 of the Guidelines.

**Recommendation:**

Staff recommends the Planning Commission conduct a public hearing to receive comments for and against the project. Unless sufficient evidence to the contrary is presented at the public hearing, Staff recommends approval of **Resolution PC2019-02** approving the conditional use permit CUP(19-02) for the sale of alcoholic beverages in “Suites C, D, E & F” and to allow for “Live onsite Entertainment” at Humble Farmer Brewery located at 116 S. Imperial Avenue; Imperial, CA 92251 subject to Conditions of Approval.

**Attachments:**

- Location Map
- Resolution PC 2019-02
- Conditions of Approval for CUP (19-02)

**CONDITIONAL USE PERMIT 19-02  
HUMBLE FARMER BREWING CO. INC.  
116 SOUTH IMPERIAL AVENUE-SUITES “C, D, E & F”**

**CONDITIONS OF APPROVAL**

1. This Conditional Use Permit is granted for the sale of alcoholic beverages and live onsite entertainment at 116 South Imperial Avenue- Suites “C, D, E & F”; Imperial, CA 92251. This Conditional Use Permit shall only be valid so long as a Type 41 ABC License is valid.
2. Hours of operation shall be limited to 10:00 AM to 12:00 AM Sundays through Thursdays and 10:00 AM to 2:00 AM on Fridays and Saturdays.
3. “Indoor” onsite live entertainment will mirror the hours of operation for the business outlined in condition of approval #2 within this document. The “indoor” onsite live entertainment must meet all the requirements outlined in the City of Imperial’s Noise Element. If complaints arise, the City of Imperial may impose mitigation measures on the business when it comes to noise concerns.
4. “Outdoor” live entertainment events will need to obtain a “Special Events” permit from the Community Services Department, two weeks prior to any type of outdoor entertainment event that will be held in the parking lot at 116 S. Imperial Avenue; Imperial, CA 92251.
5. “Outdoor” live entertainment events are also subject to meeting the requirements outlined in the Noise Element and conditions of approval imposed on the “Special Event” via the “Special Events” permit required for outdoor entertainment events of any nature.
6. No sales or service to intoxicated patrons.
7. No alcoholic beverages shall be consumed outside of the enclosed building or a designated patio. The City, at its sole discretion, may issue a Temporary Use Permit and/or Special Events Permit to allow for special events where alcoholic beverages may be consumed outdoors.
8. The provisions of this Conditional Use Permit are to run with the business (Humble Farmer Brewing Co. Inc.) and shall bind the current and future owner(s) successor(s) in interest, assignee(s) and/or transferor(s) of said project. This Conditional Use Permit is only valid for 116 South Imperial Avenue- Suites “C,D,E & F”.

9. A copy of these Conditions of Approval and the California Department of Alcoholic Beverage Control (ABC) license are required to be kept on the premises and presented to any law enforcement officer or authorized City official upon request.
10. The proprietor/owner shall be responsible for the removal of all graffiti from the walls, fences, pavement, or buildings within 72 hours of its appearance on the property.
11. The proprietor/owner shall be responsible for maintaining the parking lot and adjacent areas free of litter at all times.
12. Applicant shall comply with all local, State and Federal laws, regulations, rules, ordinances, and standards as they pertain to this project, whether specified herein or not. Where conflicts occur, the most stringent shall apply.
13. The conditional approval of the Conditional Use Permit shall not constitute the waiver of any requirement of the City's Ordinances or regulations, except where a condition set forth herein specifically provides for a waiver.
14. Applicant must implement sound maintenance and housekeeping procedures.
15. Dispose of process solid wastes as by-products for animal feed.
16. The Applicant shall pay all impact and capacity fees as required by the city.
17. All applicable Conditions of Approval shall be completed prior to opening for business.
18. If the Community Development Department finds and determines that the Permittee or successor-in-interest has not complied or cannot comply with the terms and conditions of the CUP, or the Planning/Building Department determines that the permitted activities constitute a nuisance, the City shall provide Permittee with notice and opportunity to comply with the enforcement or abatement order. If after receipt of the order (1) Permittee fails to comply, and/or (2) Permittee cannot comply with the conditions set forth in the CUP, then the matter shall be referred to the Planning Commission for permit modification, suspension, or termination, or to the appropriate enforcement authority.
19. As between the City and the Permittee, any violation of this permit may be a "nuisance per se". The City may enforce the terms and conditions of this permit in accordance with its Codified Ordinances and/or State law. The provisions of this paragraph shall not apply to any claim of nuisance per se brought by a third party.
20. Permittee shall not be permitted to maintain a "nuisance", which is anything which: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property, and/or (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon

individuals may be unequal, and/or (3) occurs during or as a result of the approved project.

The undersigned hereby declare and certify that under penalty of perjury that I accept all conditions imposed by the Planning Commission in their approval as outlined above. As the project applicant, I agree to comply with these conditions and all other applicable laws and regulations at all times.

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Signature

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Date

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Printed Name



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# verizon<sup>v</sup>

## ATEN

### PROPOSED SITE MODIFICATION PCS

463 WEST ATEN ROAD  
IMPERIAL, CA 92251

MTX: 54


BSC: 22

#### PROJECT APPROVAL

LANDLORD: \_\_\_\_\_  
 PROJECT MANAGER: \_\_\_\_\_  
 CONSTRUCTION MANAGER: \_\_\_\_\_  
 RF ENGINEER: \_\_\_\_\_  
 SITE ACQUISITION: \_\_\_\_\_  
 ZONING MANAGER: \_\_\_\_\_  
 UTILITY COORDINATOR: \_\_\_\_\_

PREPARED FOR:  
**verizon<sup>v</sup>**  
 15505 SAND CANYON AVENUE  
 BLDG. D, FIRST FLR.  
 IRVINE, CALIFORNIA 92618  
 949.286.7000

PREPARED BY:  
**JACOBS**<sup>®</sup>  
 Jacobs Engineering Group, Inc.  
 2600 MICHELSON DRIVE, SUITE 500  
 IRVINE, CALIFORNIA 92612  
 PHONE: 949-250-1816  
 FAX: 949-224-7501

ENGINEER SEAL:  


DESIGN REVISION:

NO.	DATE	REVISIONS	BY
3	5-31-18	REPLACED EQUIPMENT	RU
2	1-30-18	100%CD	DB
1	6-15-17	90% CD	RU

NOT VALID WITHOUT SIGNATURE AND DATE

VERIZON SITE ID:  
**ATEN**  
**463 WEST ATEN ROAD**  
**IMPERIAL, CA 92251**

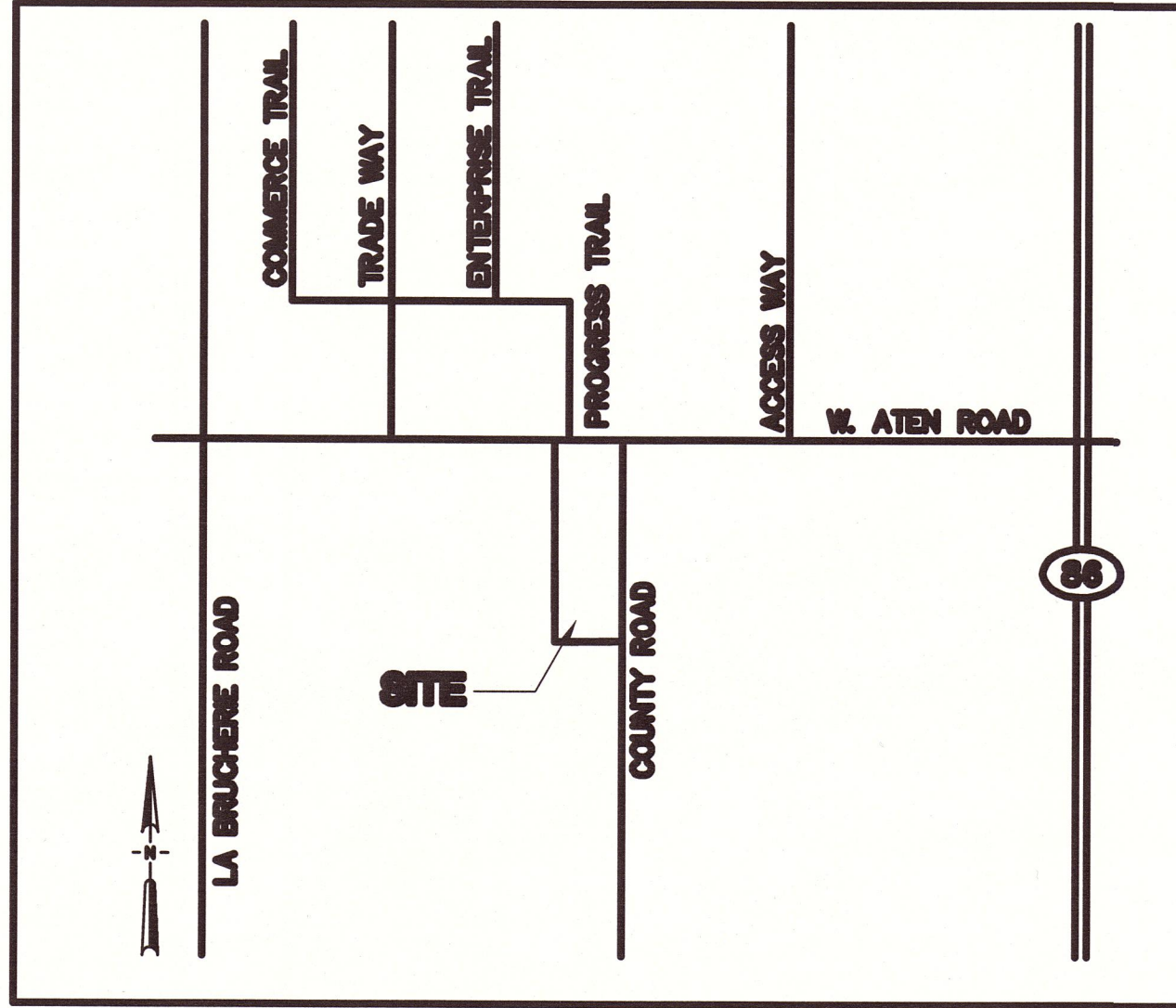
TOWER OWNER SITE ID:  
 TBD

PREPARED BY:  
 APPROVED BY: RK  
 DESIGNED BY: RU  
 PROJECT NO: EU608C09  
 DATE: 6-12-17

DRAWING NAME:  
 TITLE SHEET

DRAWING NUMBER:  
**T1**

#### VICINITY MAP



#### PROJECT DIRECTORY

PROPERTY OWNER: JERRY & SUSAN TUCKER  
 463 WEST ATEN ROAD  
 IMPERIAL, CA. 92251  
 PHONE: 760-604-4104

APPLICANT: VERIZON WIRELESS  
 15505 SAND CANYON DRIVE  
 BUILDING "D" 1st FLOOR  
 IRVINE, CALIFORNIA 92618

PREPARED BY: JACOBS ENGINEERING GROUP, INC.  
 2600 MICHELSON DRIVE, SUITE 500  
 IRVINE, CALIFORNIA 92612  
 CONTACT: ROBERT KITSTEINER  
 PHONE: (949) 224-7929

SITE ACQUISITION: JACOBS ENGINEERING GROUP, INC.  
 2600 MICHELSON DRIVE, SUITE 500  
 IRVINE, CALIFORNIA 92612  
 CONTACT: KIM ICE  
 PHONE: (760) 650-6268

#### SITE SUMMARY

ANTENNA TYPE: FAUX WATER TANK TOWER  
 TOP OF TOWER: 81'-10" A.G.L.  
 ANTENNA RAD CENTER: 75'-0" A.G.L.  
 LATITUDE / LONGITUDE: 32° 49' 25.961" N / 115° 34' 27.855" W  
 ZONING JURISDICTION: CITY OF IMPERIAL  
 ZONING CLASSIFICATION: C1 / COMMERCIAL  
 PARCEL ID: 064-351-032-000

#### PROJECT DESCRIPTION

VERIZON WIRELESS IS SUBMITTING AN APPLICATION FOR BUILDING PERMIT APPROVAL FOR THE FOLLOWING:

- REMOVE (6) EXISTING VERIZON PANEL ANTENNAS
- REMOVE (3) EXISTING REMOTE RADIO UNITS RRUS12 FROM TOWER
- REMOVE (3) EXISTING RRUS2212 & (12) EXISTING DIPLEXERS FROM SHELTER
- INSTALL (6) NEW 8 FT. PANEL ANTENNAS WITH DUAL MOUNTING BRACKETS
- INSTALL (6) NEW REMOTE RADIO UNITS "BLACK BOX"
- REPLACE (E) SURGE PROTECTOR IN TANK WITH (N) RAYCAP 6627
- ADD RACK-MOUNTED RAYCAP 6627 IN SHELTER

#### CODE COMPLIANCE

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

- 2016 CALIFORNIA ADMINISTRATIVE CODE • 2016 CALIFORNIA FIRE CODES (INCL. TITLES 24 & 25)
- 2016 CALIFORNIA BUILDING CODES • 2016 CALIFORNIA ENERGY CODES
- 2016 CALIFORNIA ELECTRICAL CODES • TIA-222-G CODES
- 2016 CALIFORNIA MECHANICAL CODES • LOCAL BUILDING CODES
- 2016 CALIFORNIA PLUMBING CODES • CITY/COUNTY ORDINANCES

FCC NOTE  
 THIS WIRELESS COMMUNICATION FACILITY COMPLIES WITH FEDERAL STANDARDS FOR RADIO FREQUENCY IN ACCORDANCE WITH THE TELECOMMUNICATION ACT OF 1996 AND SUBSEQUENT AMENDMENTS AND ANY OTHER REQUIREMENTS IMPOSED BY STATE OR FEDERAL REGULATORY AGENCIES.

#### DRIVING DIRECTIONS

FROM VERIZON OFFICE, DEPART SAND CANYON AVE TOWARD BARRANCA PKWY TAKE RAMP RIGHT FOR I-405 SOUTH TOWARD SAN DIEGO, BEAR RIGHT ONTO I-5 S, KEEP LEFT ONTO I-805 S, TAKE RAMP RIGHT AND FOLLOW SIGNS FOR CA-52 EAST, AT EXIT 18C, TAKE RAMP LEFT AND FOLLOW SIGNS FOR CA-67 NORTH, BEAR RIGHT ONTO MAPLEVIEW ST, ROAD NAME CHANGES TO LAKE JENNINGS PARK RD, TAKE RAMP RIGHT FOR I-8 EAST TOWARD EL CENTRO TAKE RAMP RIGHT, TURN LEFT ONTO FORRESTER RD / CR-530 TURN RIGHT ONTO W HIGHWAY 80 / W EVAN HEWES HWY / CR-S80 TURN LEFT ONTO AUSTIN RD, TURN RIGHT ONTO W ATEN RD ARRIVE AT 463 W ATEN RD, THE LAST INTERSECTION IS IMPERIAL BUSINESS PARK

#### GENERAL CONTRACTOR NOTES

CONTRACTOR SHALL VERIFY ALL PLANS WITH EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE SAME.

#### HANDICAP REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION HANDICAP ACCESS IS NOT REQUIRED.

#### PLUMBING REQUIREMENTS

FACILITY HAS NO SANITARY OR POTABLE WATER.

#### DIG ALERT



UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA  
 TOLL FREE 1-800-227-2600  
**TWO WORKING DAYS BEFORE YOU DIG**

DRAWINGS PLOTTED TO SCALE ON 24x36 SHEETS



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DRAWINGS PLOTTED TO SCALE ON 24x36 SHEETS

**PART 1 - GENERAL CONDITIONS:**

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
  - 1.1. GENERAL CONTRACTOR - TBD
  - 1.2. SUBCONTRACTOR - TBD
  - 1.3. OWNER - VERIZON WIRELESS
2. THE CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING ON THE WORK CONTAINED WITHIN THIS DESIGN PACKAGE. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.
3. IT IS THE INTENTION OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORM WORK, ETC., IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL ORDINANCES, TO SAFELY EXECUTE ALL WORK AND SHALL BE RESPONSIBLE FOR SAME. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.
4. REFERENCES:
  - 4.1. THE PUBLICATIONS LISTED BELOW ARE PART OF THIS SPECIFICATION. EACH PUBLICATION SHALL BE THE LATEST REVISION AND ADDENDUM IN EFFECT ON THE DATE. THIS SPECIFICATION IS ISSUED FOR CONSTRUCTION UNLESS OTHERWISE NOTED. EXCEPT AS MODIFIED BY THE REQUIREMENT SPECIFIED HEREIN OR THE DETAILS OF THE DRAWINGS, WORK INCLUDED IN THIS SPECIFICATION SHALL CONFORM TO THE APPLICABLE PROVISION OF THESE PUBLICATIONS.
  - 4.2. 1. ANSI/IEEE (AMERICAN NATIONAL STANDARDS INSTITUTE)
  - 4.3. 2. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS)
  - 4.4. 3. ICE (INSULATED CABLE ENGINEERS ASSOCIATION)
  - 4.5. 4. NEMA (NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION)
  - 4.6. 5. NFPA (NATIONAL FIRE PROTECTION ASSOCIATION)
  - 4.7. 6. OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION)
  - 4.8. 7. UL (UNDERWRITERS LABORATORIES, INC.)
5. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. THE CONTRACTOR SHALL USE ADEQUATE NUMBER OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK. ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
8. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD DESIGN ENGINEER / ARCHITECT HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.
9. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOWN DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
10. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
11. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER / ARCHITECT PRIOR TO PROCEEDING.
12. GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
13. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. SUBCONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
14. SITE GROUNDING SHALL COMPLY WITH VERIZON WIRELESS GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON WIRELESS GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT, THEY SHALL GOVERN. GROUNDING SHALL BE COMPLETED BEFORE ERECTION OF A NEW TOWER.
15. ALL WORK SHALL COMPLY WITH OSHA AND STATE SAFETY REQUIREMENTS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, PROPOSED CONSTRUCTION, AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION. IF TEMPORARY LIGHTING AND MARKING IS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION (FAA), IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE NECESSARY LIGHTS AND NOTIFY THE PROPER AUTHORITIES IN THE EVENT OF A PROBLEM.
16. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES OR ORDINANCES. THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.
17. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

18. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AMPLE NOTICE TO THE BUILDING INSPECTION DEPARTMENT TO SCHEDULE THE REQUIRED INSPECTIONS. A MINIMUM OF 24 HOURS OF NOTICE SHOULD BE GIVEN AND THE BUILDING INSPECTION DEPARTMENTS HAVE REQUESTED THAT GROUPS OF TWO OR THREE SITES BE SCHEDULED AT ONE TIME IF POSSIBLE.
19. THE COMPLETE BID PACKAGE INCLUDES THESE CONSTRUCTION DRAWINGS ALONG WITH THE SPECIFICATIONS AND TOWER DRAWINGS/ANALYSIS. CONTRACTOR IS RESPONSIBLE FOR REVIEW OF THE TOTAL BID PACKAGE PRIOR TO BID SUBMITTAL.
20. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL PROPOSED UTILITIES WITHIN THE CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
21. GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND SUBCONTRACTORS TO THE SITE AND/OR BUILDING.
22. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
23. RECORD DRAWINGS: MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS, ETC., BETWEEN THE WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DRAWINGS WHICH SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
24. PERMITS: THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS, LICENSES, FEES AND INSPECTIONS, ETC.
25. SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
26. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.
27. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
28. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
29. ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
30. SUBCONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
31. SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
32. THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).
33. NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
34. NO WHITE STROBIC LIGHTS ARE PERMITTED. LIGHTING IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.

**PART 2 - PRODUCTS**

1. GENERAL:
  - 1.1. ALL MATERIALS AND EQUIPMENT SHALL BE UL LISTED, NEW, AND FREE FROM DEFECTS.
  - 1.2. ALL ITEMS OF MATERIALS AND EQUIPMENT SHALL BE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE INTENDED.
  - 1.3. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
  - 1.4. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING EQUAL TO OR GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 10,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELEC
2. MATERIALS AND EQUIPMENT:
  1. CONDUIT:
    - 1.1. RIGID METAL CONDUIT (RMC) SHALL BE HOT-DIPPED GALVANIZED INSIDE AND OUTSIDE INCLUDING ENDS AND THREADS AND ENAMELED OR LACQUERED INSIDE IN ADDITION TO GALVANIZING.
  2. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL BE UL LISTED.
    - 2.1. CONDUIT CLAMPS, STRAPS AND SUPPORTS SHALL BE STEEL OR MALLEABLE IRON. ALL FITTINGS SHALL BE COMPRESSION AND CONCRETE TIGHT TYPE. GROUNDING BUSHINGS WITH INSULATED THROATS SHALL BE INSTALLED ON ALL CONDUIT TERMINATIONS.
    - 2.2. NONMETALLIC CONDUIT AND FITTINGS SHALL BE SCHEDULE 80 PVC. INSTALL USING SOLVENT-CEMENT-TYPE JOINTS AS RECOMMENDED BY THE MANUFACTURER.
3. CONDUCTORS AND CABLE:

- 3.1. CONDUCTORS AND CABLE SHALL BE FLAME-RETARDANT, MOISTURE AND HEAT RESISTANT THERMOPLASTIC, SINGLE CONDUCTOR, COPPER, TYPE THHN/THWN-2, 600 VOLT, SIZE AS INDICATED, 12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR USED.
- 3.2. 10 AWG AND SMALLER CONDUCTOR SHALL BE SOLID OR STRANDED AND 8 AWG AND LARGER CONDUCTORS SHALL BE STRANDED.
- 3.3. SOLDERLESS, COMPRESSION-TYPE CONNECTORS SHALL BE USED FOR TERMINATION OF ALL STRANDED CONDUCTORS.
- 3.4. STRAIN-RELIEF SUPPORTS GRIPS SHALL BE HUBBELL KELLEMS OR APPROVED EQUAL. CABLES SHALL BE SUPPORTED IN ACCORDANCE WITH THE NEC AND CABLE MANUFACTURER'S RECOMMENDATIONS.
- 3.5. ALL CONDUCTORS SHALL BE TAGGED AT BOTH ENDS OF THE CONDUCTOR, AT ALL PULL BOXES, J-BOXES, EQUIPMENT AND CABINETS AND SHALL BE IDENTIFIED WITH APPROVED PLASTIC TAGS (ACTION CRAFT, BRADY, OR APPROVED EQUAL).
4. DISCONNECT SWITCHES:
  - 4.1. 1. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, DEAD-FRONT, QUICK-MAKE, QUICK-BREAK, EXTERNALLY OPERABLE, HANDLE LOCKABLE AND INTERLOCK WITH COVER IN CLOSED POSITION, RATING AS INDICATED, UL LABELED FURNISHED IN NEMA 3R ENCLOSURE, SQUARE-D OR APPROVED EQUAL.
5. SYSTEM GROUNDING:
  - 5.1. ALL GROUNDING COMPONENTS SHALL BE TINNED AND GROUNDING CONDUCTOR SHALL BE 2 AWG BARE, SOLID, TINNED, COPPER. ABOVE GRADE GROUNDING CONDUCTORS SHALL BE INSULATED WHERE NOTED.
  - 5.2. GROUNDING BUSES SHALL BE BARE, TINNED, ANNEALED COPPER BARS OF RECTANGULAR CROSS SECTION. STANDARD BUS BARS MGB, SHALL BE FURNISHED AND INSTALLED BY THE SUBCONTRACTOR. THEY SHALL NOT BE FABRICATED OR MODIFIED IN THE FIELD. ALL GROUNDING BUSES SHALL BE IDENTIFIED WITH MINIMUM 3/4" LETTERS BY WAY OF STENCILING OR DESIGNATION PLATE.
  - 5.3. CONNECTORS SHALL BE HIGH-CONDUCTIVITY, HEAVY DUTY, LISTED AND LABELED AS GROUNDING CONNECTORS FOR THE MATERIALS USED. USE TWO-HOLE COMPRESSION LUGS WITH HEAT SHRINK FOR MECHANICAL CONNECTIONS.
  - 5.4. EXOTHERMIC WELDED CONNECTIONS SHALL BE PROVIDED IN KIT FORM AND SELECTED FOR THE SPECIFIC TYPES, SIZES, AND COMBINATIONS OF CONDUCTORS AND OTHER ITEMS TO BE CONNECTED.
  - 5.5. GROUND RODS SHALL BE COPPER-CLAD STEEL WITH HIGH-STRENGTH STEEL CORE AND ELECTROLYTIC-GRADE COPPER OUTER SHEATH, MOLTEN WELDED TO CORE, 5/8"x10'-0". ALL GROUNDING RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES.
  - 5.6. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS IN COMPLIANCE WITH THE SPECIFICATIONS AND NEC. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULLBOXES, DISCONNECT SWITCHES, STARTERS, AND EQUIPMENT CABINETS.
6. OTHER MATERIALS:
  - 6.1. THE SUBCONTRACTOR SHALL PROVIDE OTHER MATERIALS, THOUGH NOT SPECIFICALLY DESCRIBED, WHICH ARE REQUIRED FOR A COMPLETELY OPERATIONAL SYSTEM AND PROPER INSTALLATION OF THE WORK.
  - 6.1. PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC.
7. PANELS AND LOAD CENTERS:
  - 7.1. ALL PANEL DIRECTORIES SHALL BE TYPED.

PREPARED FOR:



15505 SAND CANYON AVENUE  
BLDG. D, FIRST FLR.  
IRVINE, CALIFORNIA 92618  
949.286.7000

PREPARED BY:



Jacobs Engineering Group, Inc.  
2600 MICHELSON DRIVE, SUITE 500  
IRVINE, CALIFORNIA 92612  
PHONE: 949-250-1816  
FAX: 949-224-7501

ENGINEER SEAL:



DESIGN REVISION:

NO.	DATE	REVISIONS	BY
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VERIZON SITE ID:

**A TEN**  
463 WEST ATEN ROAD  
IMPERIAL, CA 92251

TOWER OWNER SITE ID:

TBD

PREPARED BY:

APPROVED BY: RK  
DESIGNED BY: RU  
PROJECT NO: EU608C09  
DATE: 6-12-17

DRAWING NAME:

GENERAL NOTES

DRAWING NUMBER:

**SP1**



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**PART 3 - EXECUTION**

1. GENERAL:
  - 1.1. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
  - 1.1. EQUIPMENT SHALL BE TIGHTLY COVERED AND PROTECTED AGAINST DIRT OR WATER, AND AGAINST CHEMICAL OR MECHANICAL INJURY DURING INSTALLATION AND CONSTRUCTION PERIODS.
2. LABOR AND WORKMANSHIP:
  - 2.1. ALL LABOR FOR THE INSTALLATION OF MATERIALS AND EQUIPMENT FURNISHED FOR THE ELECTRICAL SYSTEM SHALL BE INSTALLED BY EXPERIENCED WIREMEN, IN A NEAT AND WORKMAN-LIKE MANNER.
  - 2.2. ALL ELECTRICAL EQUIPMENT SHALL BE ADJUSTED, ALIGNED AND TESTED BY THE SUBCONTRACTOR AS REQUIRED TO PRODUCE THE INTENDED PERFORMANCE.
  - 2.3. UPON COMPLETION OF WORK, THE SUBCONTRACTOR SHALL THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, REMOVE ALL LABELS AND ANY DEBRIS, CRATING OR CARTONS AND LEAVE THE INSTALLATION FINISHED AND READY FOR OPERATION.
3. COORDINATION:
  - 3.1. THE SUBCONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRICAL ITEMS WITH THE OWNER-FURNISHED EQUIPMENT DELIVERY SCHEDULE TO PREVENT UNNECESSARY DELAYS IN THE TOTAL WORK.
4. INSTALLATION:
  - 4.1. CONDUIT:
    - 4.1.1. ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT AS SPECIFIED. NO CONDUIT OR TUBING OF LESS THAN 3/4 INCH TRADE SIZE.
    - 4.1.2. PROVIDE RIGID PVC SCHEDULE 80 CONDUITS FOR ALL RISERS, RMC OTHERWISE NOTED. EMT MAY BE INSTALLED FOR EXTERIOR CONDUITS WHERE NOT SUBJECT TO PHYSICAL DAMAGE.
    - 4.1.3. THE INSTALLATION OF SCHEDULE 80 PVC AND RMC CONDUITS SHALL BE 24 INCHES MINIMUM DEPTH. ALL 90 DEGREE BENDS SHALL BE RMC. EXPANSION JOINTS ARE REQUIRED ON ALL CONDUIT RISERS.
    - 4.1.4. USE GALVANIZED FLEXIBLE STEEL CONDUIT WHERE DIRECT CONNECTION TO EQUIPMENT WITH MOVEMENT, VIBRATION, OR FOR EASE OF MAINTENANCE. USE LIQUID TIGHT, FLEXIBLE METAL CONDUIT FOR OUTDOOR APPLICATIONS. INSTALL GALVANIZED FLEXIBLE STEEL CONDUIT AT ALL POINTS OF CONNECTION TO EQUIPMENT MOUNTED ON SUPPORT TO ALLOW FOR EXPANSION AND CONTRACTION.
    - 4.1.5. A RUN OF CONDUIT BETWEEN BOXES OR EQUIPMENT SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF THREE QUARTER-BENDS. CONDUIT BEND SHALL BE MADE WITH THE UL LISTED BENDER OR FACTORY 90 DEGREE ELBOWS MAY BE USED.
    - 4.1.6. FIELD FABRICATED CONDUITS SHALL BE CUT SQUARE WITH A CONDUIT CUTTING TOOL AND REAMED TO PROVIDE A SMOOTH INSIDE SURFACE.
    - 4.1.7. PROVIDE INSULATED GROUNDING BUSHING FOR ALL CONDUITS.
    - 4.1.8. SUBCONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL CONDUITS DURING CONSTRUCTION. TEMPORARY OPENINGS IN THE CONDUIT SYSTEM SHALL BE PLUGGED OR CAPPED TO PREVENT ENTRANCE OF MOISTURE OR FOREIGN MATTER. SUBCONTRACTOR SHALL REPLACE ANY CONDUITS CONTAINING FOREIGN MATERIALS THAT CANNOT BE REMOVED.
    - 4.1.9. ALL CONDUITS SHALL BE SWABBED CLEAN BY PULLING AN APPROPRIATE SIZE MANDREL THROUGH THE CONDUIT BEFORE INSTALLATION OF CONDUCTORS OR CABLES. CONDUIT SHALL BE FREE OF DIRT AND DEBRIS.
    - 4.1.10. INSTALL PULL STRINGS IN ALL CLEAN EMPTY CONDUITS. IDENTIFY PULL STRINGS AT EACH END.
    - 4.1.11. INSTALL 2" HIGHLY VISIBLE AND DETECTABLE TAPE 12" ABOVE ALL UNDERGROUND CONDUITS AND CONDUCTORS.
    - 4.1.12. CONDUITS SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE AGAINST COLLECTION OF TRAPPED CONDENSATION.
    - 4.1.13. PROVIDE CORE DRILLING AS NECESSARY FOR PENETRATIONS TO ALLOW FOR RACEWAYS AND CABLES TO BE ROUTED THROUGH THE BUILDING. DO NOT PENETRATE STRUCTURAL MEMBERS, SLEEVES AND/OR PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE EFFECTIVELY SEALED WITH FIRE RATED MATERIAL WHICH SHALL MAINTAIN THE FIRE RATING OF THE WALL OR STRUCTURE. FIRE STOPS AT FLOOR PENETRATIONS SHALL PREVENT PASSAGE OF WATER, SMOKE, FIRE, AND FUMES. ALL MATERIAL SHALL BE UL APPROVED FOR THIS PURPOSE.
5. CONDUCTORS AND CABLE:
  - 5.1. ALL POWER WIRING SHALL BE COLOR CODED AS FOLLOWS:
 

DESCRIPTION	208/240/120 VOLT SYSTEMS
PHASE A	BLACK
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
GROUNDING	GREEN
  - 5.2. SPLICES SHALL BE MADE ONLY AT OUTLETS, JUNCTION BOXES, OR ACCESSIBLE RACEWAY CONDULETS APPROVED FOR THIS PURPOSE.
  - 5.3. PULLING LUBRICANTS SHALL BE UL APPROVED. SUBCONTRACTOR SHALL USE NYLON OR HEMP ROPE FOR PULLING CONDUCTOR OR CABLES INTO THE CONDUIT.
  - 5.4. CABLES SHALL BE NEATLY TRAINED, WITHOUT INTERLACING, AND BE OF SUFFICIENT LENGTH IN ALL BOXES & EQUIPMENT TO PERMIT MAKING A NEAT ARRANGEMENT. CABLES SHALL BE SECURED IN A MANNER TO AVOID TENSION ON CONDUCTORS OR TERMINALS. CONDUCTORS SHALL BE PROTECTED FROM MECHANICAL INJURY AND MOISTURE. SHARP BENDS OVER CONDUIT BUSHINGS ARE PROHIBITED. DAMAGED CABLES SHALL BE REMOVED AND REPLACED AT THE SUBCONTRACTOR'S

6. DISCONNECT SWITCHES:
  - 6.1. INSTALL DISCONNECT SWITCHES LEVEL AND PLUMB. CONNECT TO WIRING SYSTEM AND GROUNDING SYSTEM AS INDICATED.
7. GROUNDING:
  - 7.1. ALL METALLIC PARTS OF ELECTRICAL EQUIPMENT WHICH DO NOT CARRY CURRENT SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING MANUFACTURER, VERIZON WIRELESS MOBILITY GROUNDING STANDARD ND-00071, ND-00135, AND THE NATIONAL ELECTRICAL CODE.
  - 7.2. PROVIDE ELECTRICAL GROUNDING AND BONDING SYSTEM INDICATED WITH ASSEMBLY OF MATERIALS, INCLUDING GROUNDING ELECTRODES, BONDING JUMPERS AND ADDITIONAL ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.
  - 7.3. ALL GROUNDING CONDUCTORS SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUND WITH GRADUAL BEND AS REQUIRED. GROUNDING CONDUCTORS SHALL NOT BE LOOPED OR SHARPLY BENT. ROUTE GROUNDING CONNECTIONS AND CONDUCTORS TO GROUND IN THE SHORTEST AND STRAIGHTEST PATHS POSSIBLE TO MINIMIZE TRANSIENT VOLTAGE RISES.
  - 7.4. BUILDINGS AND/OR NEW TOWERS GREATER THAN 75 FEET IN HEIGHT AND WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE SUBCONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 AWG COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).
  - 7.5. TIGHTEN GROUNDING AND BONDING CONNECTORS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR CONNECTORS AND BOLTS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT AVAILABLE, TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUE VALUES SPECIFIED IN UL TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
  - 7.6. SUBCONTRACTOR SHALL VERIFY THE LOCATIONS OF GROUNDING TIE-IN-POINTS TO THE EXISTING GROUNDING SYSTEM. ALL UNDERGROUND GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELD PROCESS AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
  - 7.7. ALL GROUNDING CONNECTIONS SHALL BE INSPECTED FOR TIGHTNESS. EXOTHERMIC WELDED CONNECTIONS SHALL BE APPROVED BY THE INSPECTOR HAVING JURISDICTION BEFORE BEING PERMANENTLY CONCEALED.
  - 7.8. APPLY CORROSION-RESISTANCE FINISH TO FIELD CONNECTIONS AND PLACES WHERE FACTORY APPLIED PROTECTIVE COATINGS HAVE BEEN DESTROYED. USE KOPR-SHIELD ANTI-OXIDATION COMPOUND ON ALL COMPRESSION GROUNDING CONNECTIONS.
  - 7.9. A SEPARATE, CONTINUOUS, INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUITS.
  - 7.10. BOND ALL INSULATED GROUNDING BUSHINGS WITH A BARE #6 AWG GROUNDING CONDUCTOR TO A GROUND BUS.
  - 7.11. DIRECT BURIED GROUNDING CONDUCTORS SHALL BE INSTALLED AT A NOMINAL DEPTH OF 36" MINIMUM BELOW GRADE, OR 6" BELOW THE FROST LINE, USE THE GREATER OF THE TWO DISTANCES.
  - 7.12. ALL GROUNDING CONDUCTORS EMBEDDED IN OR PENETRATING CONCRETE SHALL BE INSTALLED IN SCHEDULE 80 PVC CONDUIT.
  - 7.13. SUBCONTRACTOR SHALL REPAIR, AND/OR REPLACE, EXISTING GROUNDING SYSTEM COMPONENTS DAMAGED DURING CONSTRUCTION AT THE SUBCONTRACTOR'S EXPENSE.
8. ACCEPTANCE TESTING:
  - 8.1. CERTIFIED PERSONNEL USING CERTIFIED EQUIPMENT SHALL PREFORM REQUIRED TESTS AND SUBMIT WRITTEN TEST REPORTS UPON COMPLETION.
  - 8.2. WHEN MATERIAL AND/OR WORKMANSHIP IS FOUND NOT TO COMPLY WITH THE SPECIFIED REQUIREMENTS, THE NONCOMPLYING ITEMS SHALL BE REMOVED FROM THE PROJECT SITE AND REPLACED WITH ITEMS COMPLYING WITH THE SPECIFIED REQUIREMENTS PROMPTLY AFTER RECEIPT OF NOTICE FOR NON-COMPLIANCE.
9. TEST PROCEDURES:
  - 9.1. ALL FEEDERS SHALL HAVE INSULATION TESTED AFTER INSTALLATION, BEFORE CONNECTION TO DEVICES. THE CONDUCTORS SHALL TEST FREE FROM SHORT CIRCUITS AND GROUNDS. TESTING SHALL BE FOR ONE MINUTE USING 1000V DC. PROVIDE WRITTEN DOCUMENTATION FOR ALL TEST LISTED TO SUBCONTRACTOR.
  - 9.2. PRIOR TO ENERGIZING CIRCUITRY, TEST WIRING DEVICES FOR ELECTRICAL CONTINUITY AND PROPER POLARITY CONNECTIONS.
  - 9.3. MEASURE AND RECORD VOLTAGES BETWEEN PHASES AND BETWEEN PHASE CONDUCTORS AND NEUTRALS. SUBMIT A REPORT OF MAXIMUM AND MINIMUM VOLTAGES
  - 9.4. PERFORM GROUNDING TEST TO MEASURE GROUNDING RESISTANCE OF GROUNDING SYSTEM USING THE IEEE STANDARD 3-POINT "FALL-OF-POTENTIAL" METHOD. PROVIDE PLOTTED TEST VALUES AND LOCATION SKETCH. NOTIFY THE ENGINEER IMMEDIATELY IF MEASURED VALUE IS OVER 5 OHMS.

**METALS**

**PART 1 - GENERAL**

1. SECTION INCLUDES:
  - 1.1. STRUCTURAL STEEL FRAMING MEMBERS, BASE PLATES, PLATES, BARS, THREADED STRUCTURAL FASTENERS, ANTENNA SUPPORT ASSEMBLIES, GRATING, STEEL PLATFORMS AND PEDESTAL SUPPORTS, AND GROUTING UNDER BASE PLATES.
2. QUALITY ASSURANCE
  - 2.1. FABRICATE STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
  - 2.2. PERFORM DESIGN UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE.

**PART 2 - PRODUCTS**

1. MATERIALS:
  - A. STRUCTURAL STEEL MEMBERS: ASTM A572, GRADE 50
  - B. STRUCTURAL TUBING: ASTM A500, GRADE B
  - C. PIPE: ASTM A53, TYPE E OR S, GRADE B
  - D. BOLTS, NUTS, AND WASHERS: ASTM A325
  - E. ANCHOR BOLTS: ASTM A307
  - F. WELDING MATERIALS: AWS D1.1, TYPE REQUIRED FOR MATERIALS BEING WELDED
- G. GROUT: NON-SHRINK TYPE, PREMIXED COMPOUND CONSISTING OF NONMETALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTIZIER ADDITIVES, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 7000 psi AT 28 DAYS.
- H. SHOP AND TOUCH-UP PRIMER: SSPC 15 TYPE 1, RED OXIDE

2. TOUCH-UP PRIMER FOR GALV. SURFACES:
  - 2.1. ZINC RICH TYPE
3. FABRICATION:
  - 3.1. CONTINUOUSLY SEAL JOINTED MEMBERS BY CONTINUOUS WELDS.
4. FINISH:
  - 4.1. GRIND EXPOSED WELDS SMOOTH.
  - 4.2. PREPARE STRUCTURAL COMPONENT SURFACES IN ACCORDANCE WITH SSPC SP-1 TO SP-10 PROCEDURES.
  - 4.3. STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED.

**PART 3 - EXECUTION**

1. EXAMINATION AND PREPARATION:
  - 1.1. VERIFY THAT THE FIELD CONDITIONS ARE ACCEPTABLE TO PERFORM THE WORK.
2. ERECTION:
  - 2.1. ALLOW FOR ERECTION LOADS. PROVIDE TEMPORARY BRACING TO MAINTAIN FRAMING IN ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT BRIDGING AND BRACING.
  - 2.2. NO UNAUTHORIZED WELDING SHALL BE PERFORMED ON CROWN CASTLE USA, INC TOWERS. ALL OTHER WELDING SHALL BE IN ACCORDANCE WITH AMERICAN WELDING SOCIETY AWS 01.1 STRUCTURAL STEEL WELDING CODE-STEEL WELD ELECTRODES SHALL BE E70XX.
  - 2.3. DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER.
  - 2.4. AFTER ERECTION, TOUCH-UP WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED OR GALVANIZED WITH ZINC RICH PAINT (ALL EXISTING AND NEW AREAS).
3. FIELD QUALITY CONTROL:
  - 3.1. FIELD INSPECTION OF MEMBERS, CONNECTIONS, WELDS AND BOLT / NUT TORQUE.

PREPARED FOR:

**verizon**  
 15505 SAND CANYON AVENUE  
 BLDG. D, FIRST FLR.  
 IRVINE, CALIFORNIA 92618  
 949.286.7000

PREPARED BY:

**JACOBS**  
 Jacobs Engineering Group, Inc.  
 2600 MICHELSON DRIVE, SUITE 500  
 IRVINE, CALIFORNIA 92612  
 PHONE: 949-250-1816  
 FAX: 949-224-7501

ENGINEER SEAL:



DESIGN REVISION:

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**ATEN**  
**463 WEST ATEN ROAD**  
**IMPERIAL, CA 92251**

TOWER OWNER SITE ID:

TBD

PREPARED BY:

APPROVED BY: RK  
 DESIGNED BY: RU  
 PROJECT NO: EUB08C09  
 DATE: 6-12-17

DRAWING NAME:

GENERAL NOTES

DRAWING NUMBER:

**SP2**



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DRAWINGS PLOTTED TO SCALE ON 24x36 SHEETS

**GENERAL ELECTRICAL NOTES:**

- ALL ELECTRICAL MATERIALS, EQUIPMENT AND INSTALLATION PROCEDURES TO CONFORM WITH VERIZON WIRELESS SPECIFICATIONS.
- CONTRACTOR SHALL PERFORM ALL VERIFICATION TESTS AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ENGINEER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
- ALL MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, NFPA, AND 'UL' LISTED.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED PER THE NEC, AND ALL APPLICABLE LOCAL CODES.
- ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE A MINIMUM INTERRUPTING RATING OF 42,000 AIC.
- FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO VENDOR PRINTS PROVIDED BY VERIZON WIRELESS FOR BTS CABINET.
- PATCH, REPAIR, AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
- PROVIDE VERIZON WIRELESS WITH ONE SET OF COMPLETE ELECTRICAL 'AS-BUILT' DRAWINGS AT THE COMPLETION OF THE JOB SHOWING ACTUAL ROUTINGS AND WIRING CONNECTIONS.
- ALL EQUIPMENT PUNCH OUTS AND CONDUITS (USED AND SPARE) TO BE RODENT PROOFED WITH CAPS, STEEL MESH, AND/OR FOAM FILL BY CONTRACTOR AS NEEDED.
- ALL CONTRACTOR FURNISHED MATERIALS AND EQUIPMENT SPECIFIED ON THE PROJECT SHALL BE NEW AND UNUSED, OF CURRENT MANUFACTURE AND OF THE HIGHEST GRADE.
- ALL EQUIPMENT, MATERIAL AND THE INSTALLATION METHODS SPECIFIED ON THE PROJECT DRAWINGS SHALL BE DESIGNED AND FABRICATED IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS, AND APPROPRIATE INDUSTRIAL CONSENSUS STANDARDS AND CODES INCLUDING ANSI, IEEE, NEMA, NFPA AND UL, ALL AS REVISED AS OF THE DATE OF THIS WORK PACKAGE.
- ALL ELECTRICAL ITEMS BOTH CONTRACTOR AND OWNER FURNISHED SHALL BE CHECKED FOR AGREEMENT WITH THE PROJECT DRAWINGS AND SPECIFICATIONS AND SHALL BE VISUALLY INSPECTED TO ENSURE THAT EQUIPMENT IS UNDAMAGED AND IS IN PROPER ALIGNMENT, INSTALLED PER MANUFACTURER'S INSTRUCTIONS, ELECTRICAL CONNECTIONS ARE TIGHT AND PROPERLY INSULATED WHERE REQUIRED, FUSES ARE OF THE PROPER TYPE AND SIZE, AND ELECTRICAL ENCLOSURES ARE OF THE PROPER NEMA TYPE.
- THE EQUIPMENT AND MATERIALS SHALL BE FURNISHED AND INSTALLED TO OPERATE SAFELY AND CONTINUOUSLY WITH NO PROTECTION FROM THE WEATHER.
- ELECTRICAL WORK REPRESENTED ON THE PROJECT DRAWINGS IS SHOWN DIAGRAMMATICALLY. EXACT LOCATIONS AND ELEVATIONS OF ELECTRICAL EQUIPMENT SHALL BE DETERMINED IN THE FIELD AND VERIFIED WITH THE OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY SUPPORTS FOR EQUIPMENT INSTALLED AS PART OF THIS PROJECT. SUPPORTS SHALL CONSIST OF GALVANIZED STEEL FRAMES, PLATES, BRACKETS, RACKS AND OTHER SHAPES OF ADEQUATE SIZE AND FASTENED WITH BOLTS, SCREWS OR BY WELDING TO PROVIDE RIGID SUPPORT.

**GENERAL RACEWAY NOTES:**

- CONDUIT AND CONDUIT FITTINGS SHALL MEET ANSI AND NEC STANDARDS FOR MATERIAL AND WORKMANSHIP AND SHALL BE UL LISTED.
- EMT CONDUIT ELECTRIC METALLIC TUBING SHALL CONFORM TO ANSI C803 AND THE REQUIREMENTS OF NEC, PARAGRAPH 348 AND BE PROTECTED ON EXTERIOR WITH A ZINC COATING AND ON INTERIOR SURFACES WITH EITHER A ZINC COATING OR LACQUER ENAMEL. FITTINGS SHALL BE ZINC COATED STEEL.
- MINIMUM CONDUIT SIZE SHALL BE 3/4", SIZES NOT SHOWN ON DRAWINGS SHALL BE PER NEC.
- ALL SPARE CONDUITS SHALL HAVE A METALLIC PULL WIRE.
- CONDUIT SUPPORTS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND IN ACCORDANCE WITH THE NEC.

**GENERAL CONDUCTOR NOTES:**

- ALL POWER, CONTROL AND COMMUNICATION WIRING SHALL MEET NEMA-WC, ASTM, UL, AND NEC STANDARDS FOR MATERIAL AND WORKMANSHIP UNLESS OTHERWISE SPECIFIED.
- ALL CONDUCTOR ACCESSORIES INCLUDING CONNECTORS, TERMINATIONS, INSULATING MATERIALS, SUPPORT GRIPS, MARKER AND CABLE TIES SHALL BE FURNISHED AND INSTALLED SUPPLIER'S INSTALLATION INSTRUCTIONS SHALL BE OBTAINED FOR CABLE ACCESSORIES. THESE INSTRUCTIONS SHALL BE IN THE POSSESSION OF THE CRAFTSMAN WHILE INSTALLING THE ACCESSORIES AND SHALL BE AVAILABLE TO THE COMPANY FOR REFERENCE.
- WHERE POSSIBLE, NO. 6 AWG AND SMALLER WIRE SHALL BE COLORED CODED BY THE COLOR OF THE INSULATION COVERING. COLOR CODING OF WIRE LARGER THAN NO. 6 AWG MAY BE BY MEANS OF SELF-ADHESIVE WRAP AROUND TYPE MARKERS, PER NEC.
- TERMINAL CONNECTOR FOR CONDUCTORS 8 AWG AND LARGER SHALL BE PRESSURE OR BOLTED CLAMP TYPE BURNDY QUICKLUG, VARILUG OR ACCEPTABLE EQUAL: OR COMPRESSION TYPE, BURNDY TYPE YAV OR YA (LONG BARREL), PANDUIT TYPE LCA OR LCC, OR ACCEPTABLE EQUAL. ACCEPTABLE CONNECTORS INCLUDED WITH COMPANY-FURNISHED EQUIPMENT MAY BE USED.
- TERMINATION PROVISIONS OF EQUIPMENT FOR CIRCUITS RATED 100 AMPERES OR LESS OR MARKED FOR NOS. 14 THROUGH 1 CONDUCTORS, SHALL BE USED ONLY FOR CONDUCTORS RATED 66°C (140°F). CONDUCTORS WITH HIGHER TEMPERATURE RATINGS SHALL BE PERMITTED, PROVIDED THE AMPACITY OR THE CONDUCTOR SIZE USED.
- TERMINAL CONNECTORS FOR CONDUCTORS SMALLER THAN 8 AWG SHALL BE COMPRESSION TYPE CONNECTORS SIZED FOR THE CONDUCTOR AND THE TERMINAL. THE CONNECTORS SHALL BE CONSTRUCTED OF FINE GRADE HIGH CONDUCTIVITY COPPER IN ACCORDANCE WITH QQ-C-516 AND SHALL BE TIN-PLATED IN ACCORDANCE WITH MIL-T-10727. THE INTERIOR SURFACE OF THE CONNECTOR WIRE BARREL SHALL BE SERRATED AND THE EXTERIOR SURFACE OF THE CONNECTOR WIRE BARREL SHALL BE PROVIDED WITH CRIMP GUIDES.

**GENERAL GROUNDING NOTES:**

- ALL WORK SHALL COMPLY WITH THE LATEST VERIZON WIRELESS GROUNDING SPECIFICATIONS AND REQUIREMENTS.
- ALL METALLIC COMPONENTS ON THE SITE MUST BE GROUNDED TO THE GROUND RING. THIS INCLUDES STEEL CONDUITS USED TO DELIVER THE TELCO AND POWER UTILITY LINES TO THE SITE OR USED TO PROVIDE ACCESS BY UTILITIES OR CONTRACTORS TO THE VARIOUS CABINETS.
- THE CONTRACTOR MUST VERIFY THAT NEW GROUNDING SYSTEM RESISTANCE IS EQUAL TO OR LESS THAN FIVE (5) OHMS PER VERIZON WIRELESS SPECIFICATIONS.
- RUN ALL GROUND WIRES IN AN ORGANIZED MANNER, AVOID CROSSING OF WIRES WHEREVER POSSIBLE. DO NOT RUN WIRES OVER CONCRETE SLAB.
- INSTALL ALL GROUND WIRES IN A DOWNWARD SLOPE FOR MAXIMUM LIGHTNING PROTECTION.
- MAINTAIN ALL MINIMUM BENDING RADII OF THE GROUNDING WIRES.
- DO NOT REMOVE MORE INSULATION FROM THE GROUND WIRES THAN NECESSARY WHEN CADWELDING OR CRIMPING IF EXCESS INSULATION IS REMOVED, THE CONNECTION WILL BE CONSIDERED UNACCEPTABLE AND WILL BE CORRECTED PER THE VERIZON WIRELESS REPRESENTATIVES'S DIRECTION.
- DOWN LEAD FOR ANTENNA SECTORS MUST BE CONNECTED DIRECTLY TO THE GROUND RING.
- ALL BASE TRANSCEIVER SITE EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE INTERNATIONAL ELECTRICAL CODE (NEC), AND THE LATEST EDITION OF LIGHTNING PROTECTION CODE NFPA 780 AND VERIZON WIRELESS STANDARDS.
- ALL GROUNDING CONNECTIONS, INTERIOR AND EXTERIOR, MADE THROUGHOUT THIS DOCUMENT SHALL BE MADE USING AN ANTI-OXIDATION COMPOUND, THE ANTI-OXIDATION COMPOUND SHALL BE 'THOMAS AND BETTS' KOPR-SHIELD (TM OF JET LUBE, INC.) THERE IS NO EQUIVALENT FOR THIS PRODUCT: NO OTHER COMPOUND WILL BE ACCEPTED. COAT ALL WIRES BEFORE LUGGING. COAT ALL SURFACES BEFORE CONNECTING.
- ALL CONNECTIONS SHALL BE MADE TO BARE METAL. ALL PAINTED SURFACES SHALL BE FIELD INSPECTED AND MODIFIED TO ENSURE PROPER CONTACT PRIOR TO CADWELD. GALVANIZING SHALL BE REMOVED BY GRINDING SURFACE TO BARE METAL 'SLAG' FROM CADWELD MUST BE REMOVED AND WELD SHALL BE SPRAYED WITH COLD GALVANIZE AFTER COMPLETION.
- FERROUS METAL CLIPS WHICH COMPLETELY SURROUND THE GROUNDING CONDUCTOR SHALL NOT BE USED. CLIPS OF THE FOLLOWING MATERIALS AND TYPES MAY BE USED TO SUPPORT GROUNDING CONDUCTORS.
  - PLASTIC CLIPS
  - STAINLESS STEEL CLIPS WHICH DO NOT COMPLETELY SURROUND THE GROUNDING CONDUCTOR.
  - FERROUS METAL CLIPS WHICH DO NOT COMPLETELY SURROUND THE GROUNDING CONDUCTOR.
- ALL HARDWARE, BOLTS, NUTS, WASHERS, AND LOCK WASHERS SHALL BE 18-8 STAINLESS STEEL. EVERY CONNECTION SHALL BE (BOLT-FLATWASHER-BUSS-LUG-FLATWASHER-LOCKWASHER-NUT), IN THAT EXACT ORDER WITH NUT FACING OUTWARD, BACK TO BACK LUGGING SHALL BE (BOLT-FLATWASHER-LUG-FLATWASHER-LUG- BUSS-LUG-FLATWASHER-LOCK WASHER-NUT), IN THAT EXACT ORDER IS ACCEPTED WHERE NECESSARY TO CONNECT MANY LUGS TO A BUSS BAR. STACKING OF LUGS, BUS-LUG-LUG, IS NOT ACCEPTABLE.
- THE COMPRESSION GROUND LUG FOR #2 AWG BARE SOLID GROUNDING CONDUCTORS SHALL BE BURNDY TYPE YA3C-2TC.
- THE ANTENNA CABLES SHALL BE GROUNDED AT THE TOP AND BOTTOM OF THE VERTICAL RUN. THE ANTENNA CABLE SHIELD SHALL BE BONDED TO A COPPER GROUND BUS AT THE LOWEST POINT OF THE VERTICAL RUN. THE ANTENNA CABLE SHIELD SHALL BE GROUNDED JUST BEFORE ENTERING THE BTS. GROUNDING KITS ON COAX CABLE SHALL HAVE A MINIMUM BEND OF 6" AND SHALL BE KEPT AS CLOSE TO VERTICAL AS POSSIBLE. FLAT WASHER SUPPLIED WITH GROUND KITS MUST BE REPLACED WITH SMALLER STAINLESS STEEL FLAT WASHERS, WASHERS MUST REMAIN FLAT AGAINST GROUND BAR, ALL FASTENERS MUST BE STAINLESS STEEL AND KOPR-SHIELD MUST BE USED ON BOTH SIDES OF THE GROUND BAR.

PREPARED FOR:



PREPARED BY:



ENGINEER SEAL:



DESIGN REVISION:

NO.	DATE	REVISIONS	BY
3	5-31-18	REPLACED EQUIPMENT	RU
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1	6-15-17	90% CD	RU

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VERIZON SITE ID:

**A TEN**  
463 WEST ATEN ROAD  
IMPERIAL, CA 92251

TOWER OWNER SITE ID:

TBD

PREPARED BY:

APPROVED BY: RK  
DESIGNED BY: RU  
PROJECT NO: EU608C09  
DATE: 6-12-17

DRAWING NAME:

GENERAL NOTES

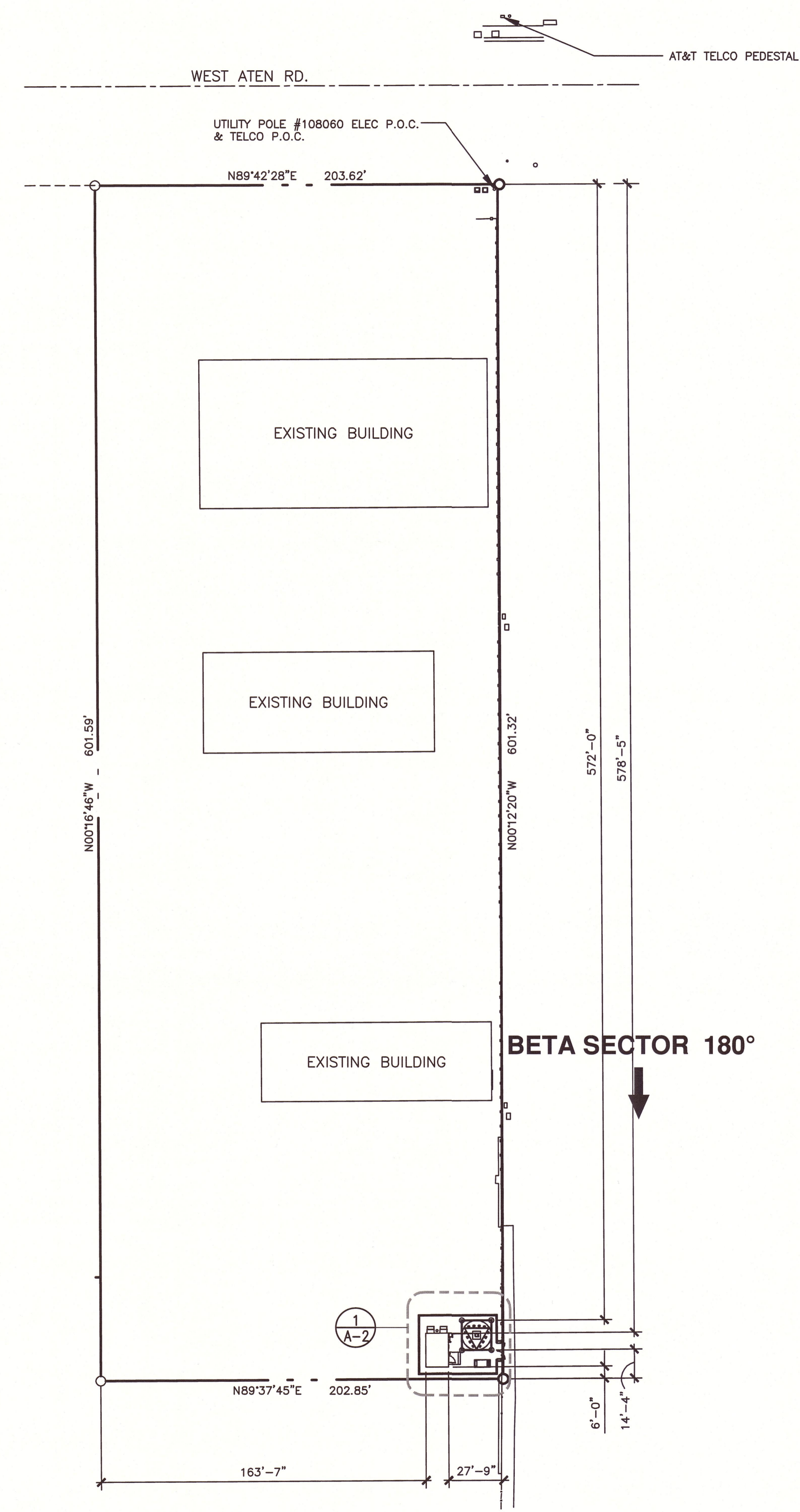
DRAWING NUMBER:

**SP3**



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DRAWINGS PLOTTED TO SCALE ON 24x36 SHEETS

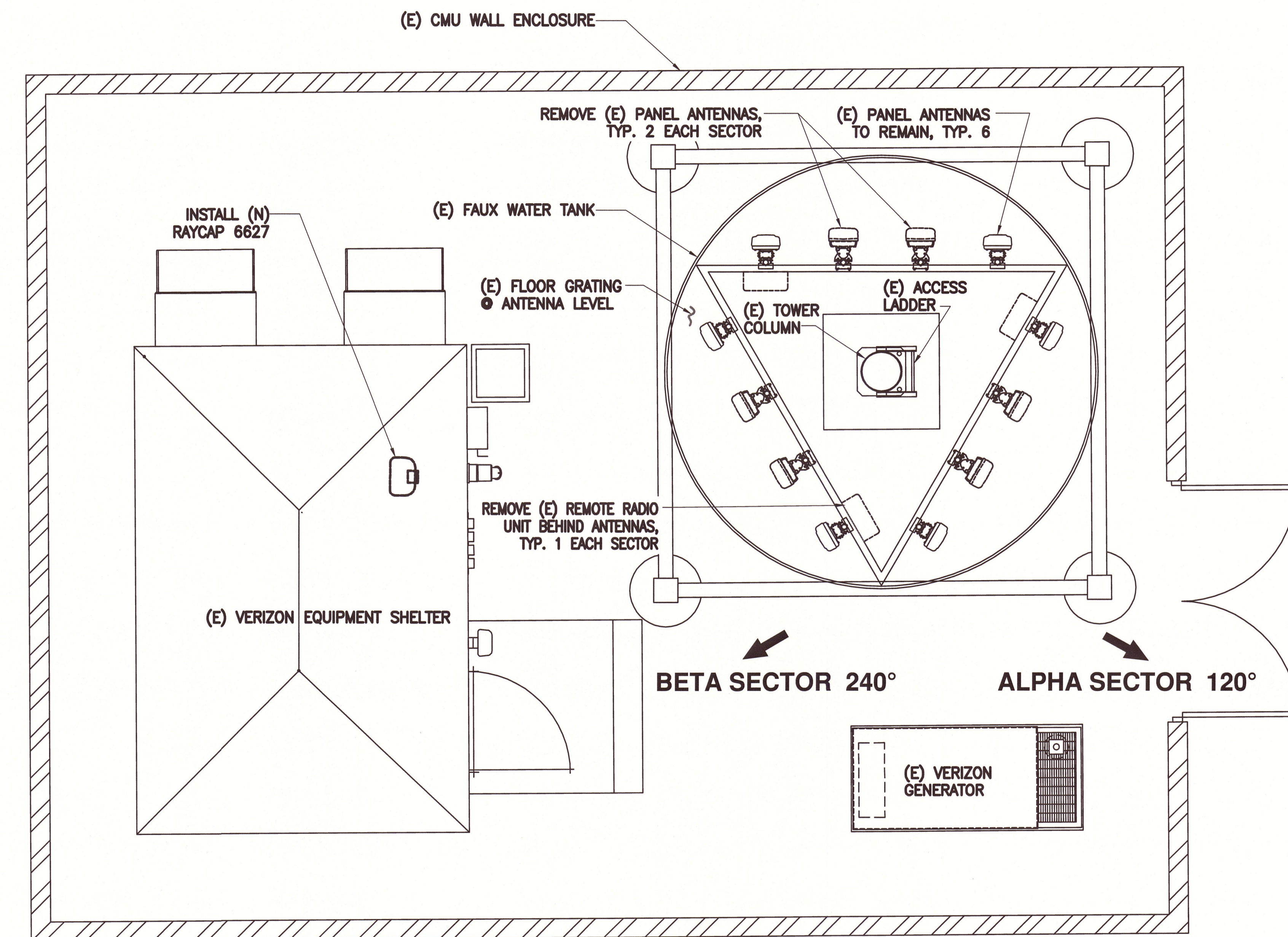


SITE PLAN

SCALE  
NORTH 3/16"=1'

0' 1' 3' 7'

1



EXISTING SHELTER AND TOWER / ANTENNA PLAN

SCALE  
NORTH 3/16"=1'

0' 1' 3' 7'

2

PREPARED FOR:  
**verizon**  
15505 SAND CANYON AVENUE  
BLDG. D, FIRST FLR.  
IRVINE, CALIFORNIA 92618  
949.286.7000

PREPARED BY:  
**JACOBS**  
Jacobs Engineering Group, Inc.  
2600 MICHELSON DRIVE, SUITE 500  
IRVINE, CALIFORNIA 92612  
PHONE: 949-250-1816  
FAX: 949-224-7501

ENGINEER SEAL:  
  
REGISTERED PROFESSIONAL ENGINEER  
ROBERT A. KITSTEYNER  
C86713  
CIVIL  
STATE OF CALIFORNIA

DESIGN REVISION:

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**ATEN**  
**463 WEST ATEN ROAD**  
**IMPERIAL, CA 92251**

TOWER OWNER SITE ID:  
TBD

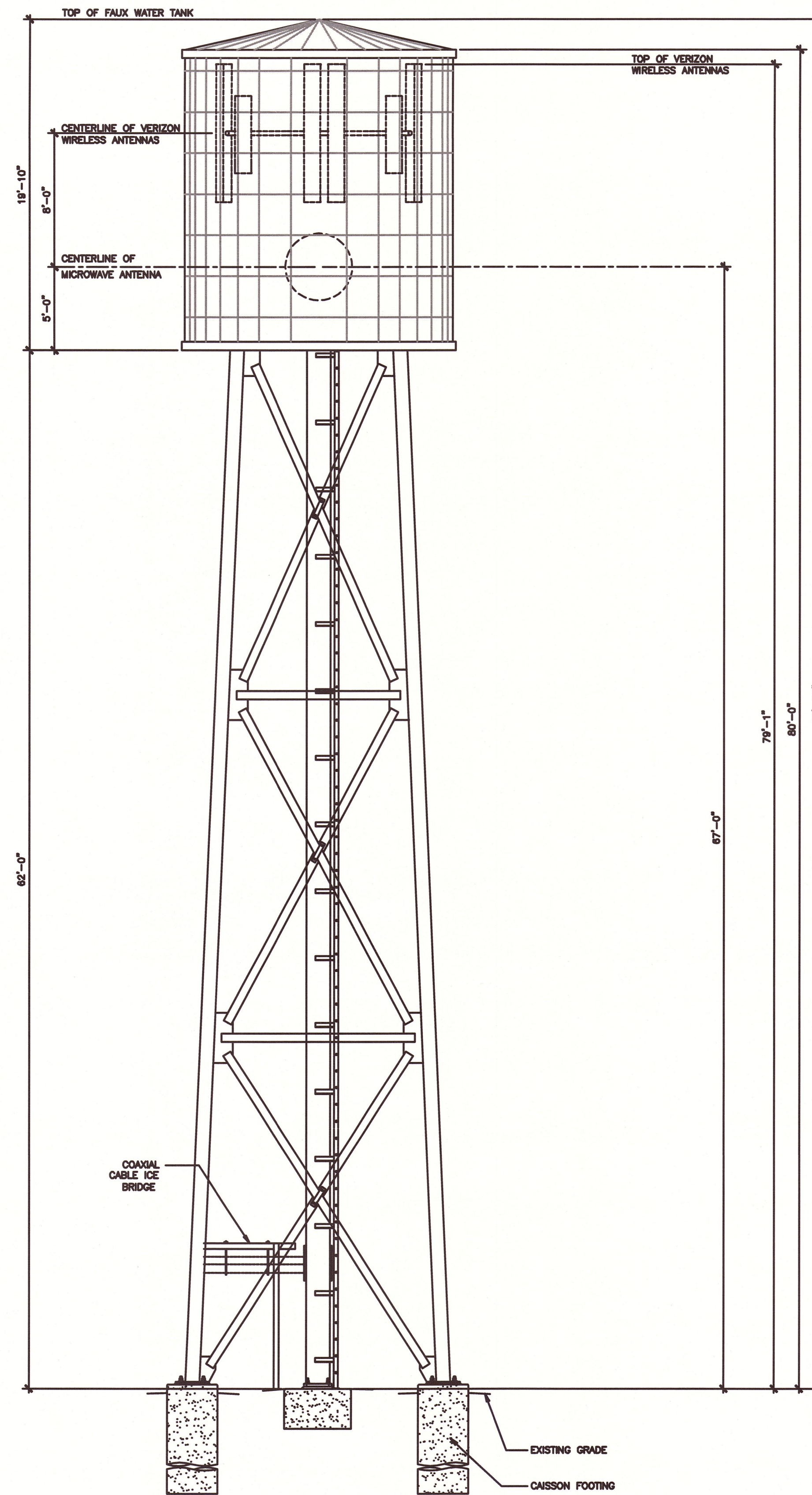
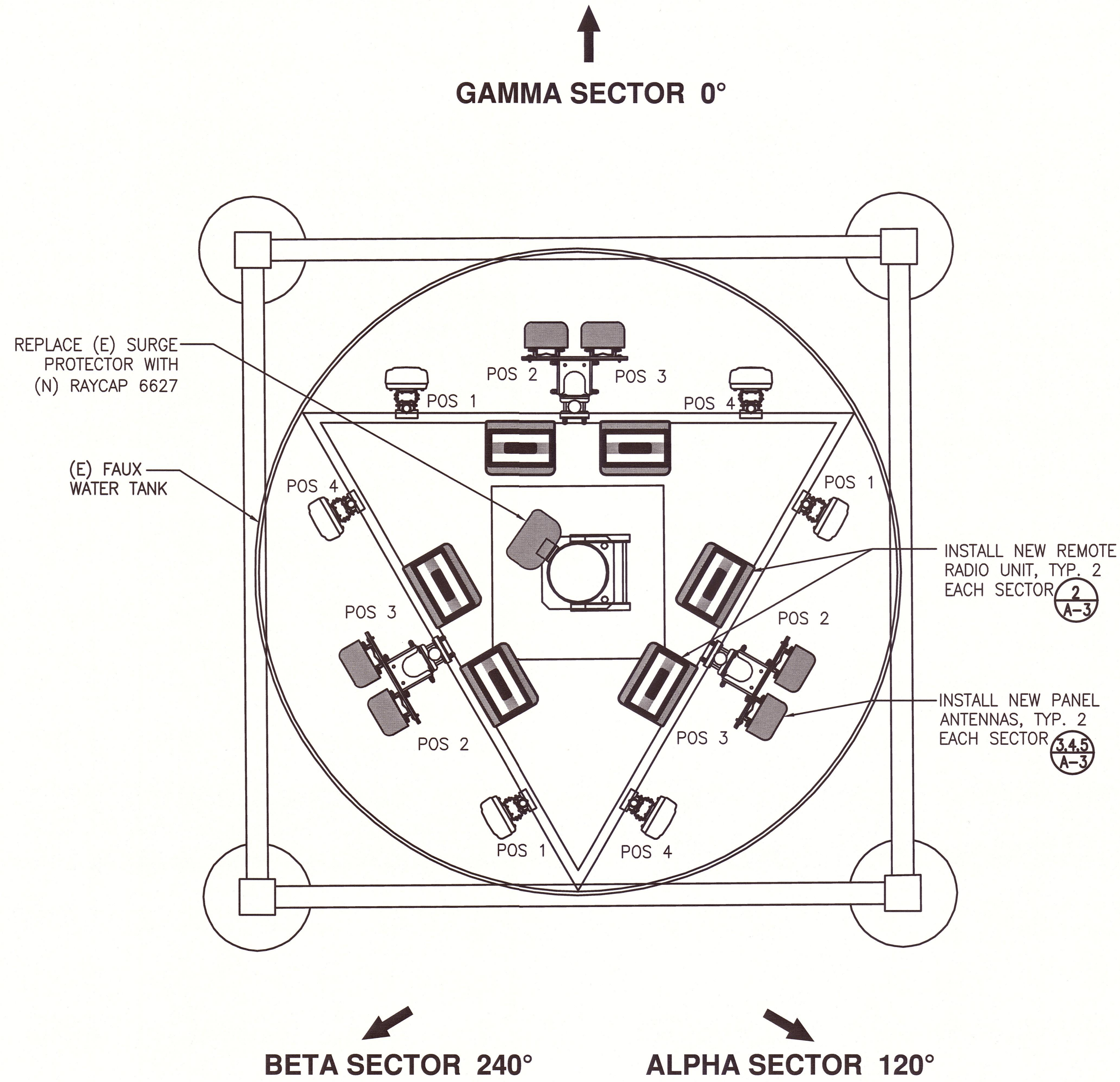
PREPARED BY:  
APPROVED BY: RK  
DESIGNED BY: RU  
PROJECT NO: EU608C09  
DATE: 6-12-17

DRAWING NAME:  
SITE PLAN, (E) SHELTER & TOWER/ ANTENNA PLAN

DRAWING NUMBER:  
**A1**



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**verizon**  
 15505 SAND CANYON AVENUE  
 BLDG. D, FIRST FLR.  
 IRVINE, CALIFORNIA 92618  
 949.286.7000

PREPARED BY:  
**JACOBS**  
 Jacobs Engineering Group, Inc.  
 2600 MICHELSON DRIVE, SUITE 500  
 IRVINE, CALIFORNIA 92612  
 PHONE: 949-250-1816  
 FAX: 949-224-7501

ENGINEER SEAL:  
  
*Robert A. Kitzhaber*

DESIGN REVISION:

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**463 WEST ATEN ROAD**  
**IMPERIAL, CA 92251**

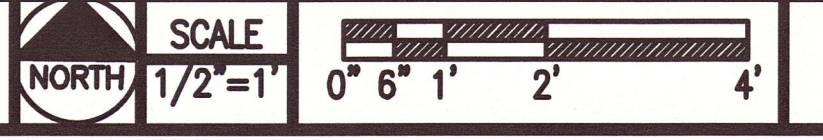
TOWER OWNER SITE ID:  
 TBD

PREPARED BY: RK  
 APPROVED BY: RU  
 DESIGNED BY: RU  
 PROJECT NO: EU608C09  
 DATE: 6-12-17

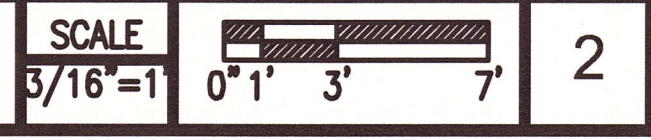
DRAWING NAME:  
**NEW ANTENNA PLAN & ELEVATION**

DRAWING NUMBER:  
**A2**

NEW ANTENNA PLAN



EXISTING TOWER ELEVATION



DRAWINGS PLOTTED TO SCALE ON 24x36 SHEETS



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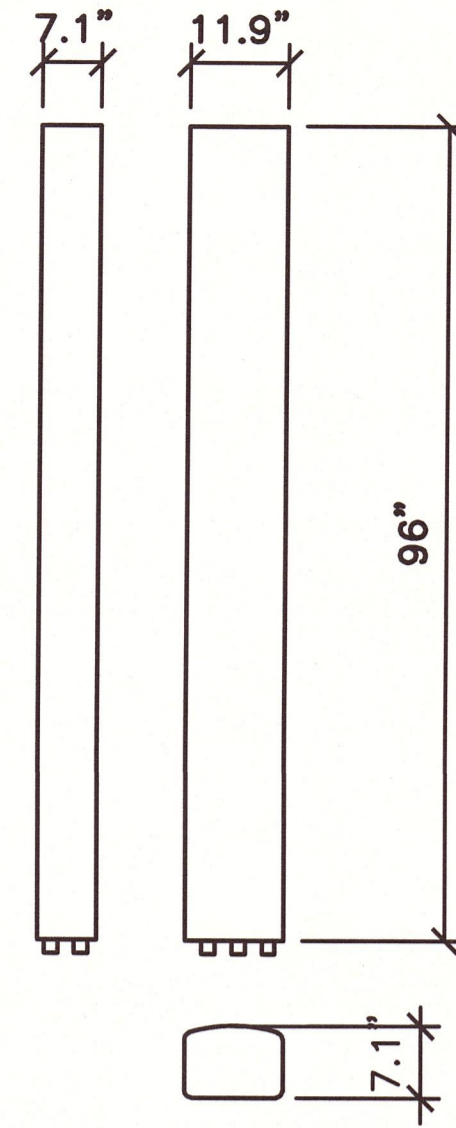
DRAWINGS PLOTTED TO SCALE ON 24x36 SHEETS

**MANUFACTURER:**  
COMMSCOPE

**MODEL:**  
NHH-65C-R2B

**DIMENSION (HxWxD):**  
96"x11.9"x7.1"

**WEIGHT:**  
51.6 LBS



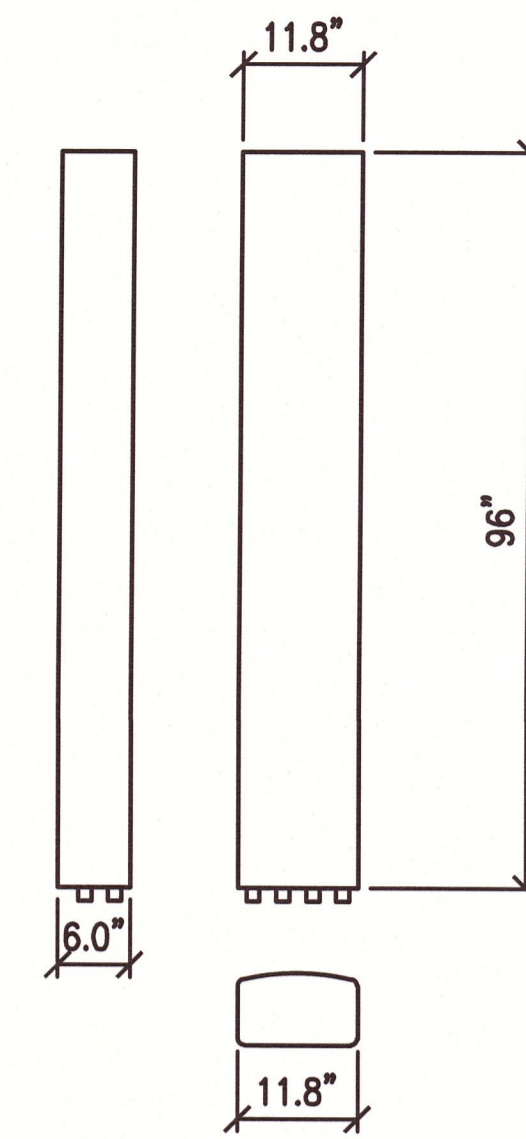
**4** PANEL ANTENNA DETAIL  
N.T.S

**MANUFACTURER:**  
KATHREIN

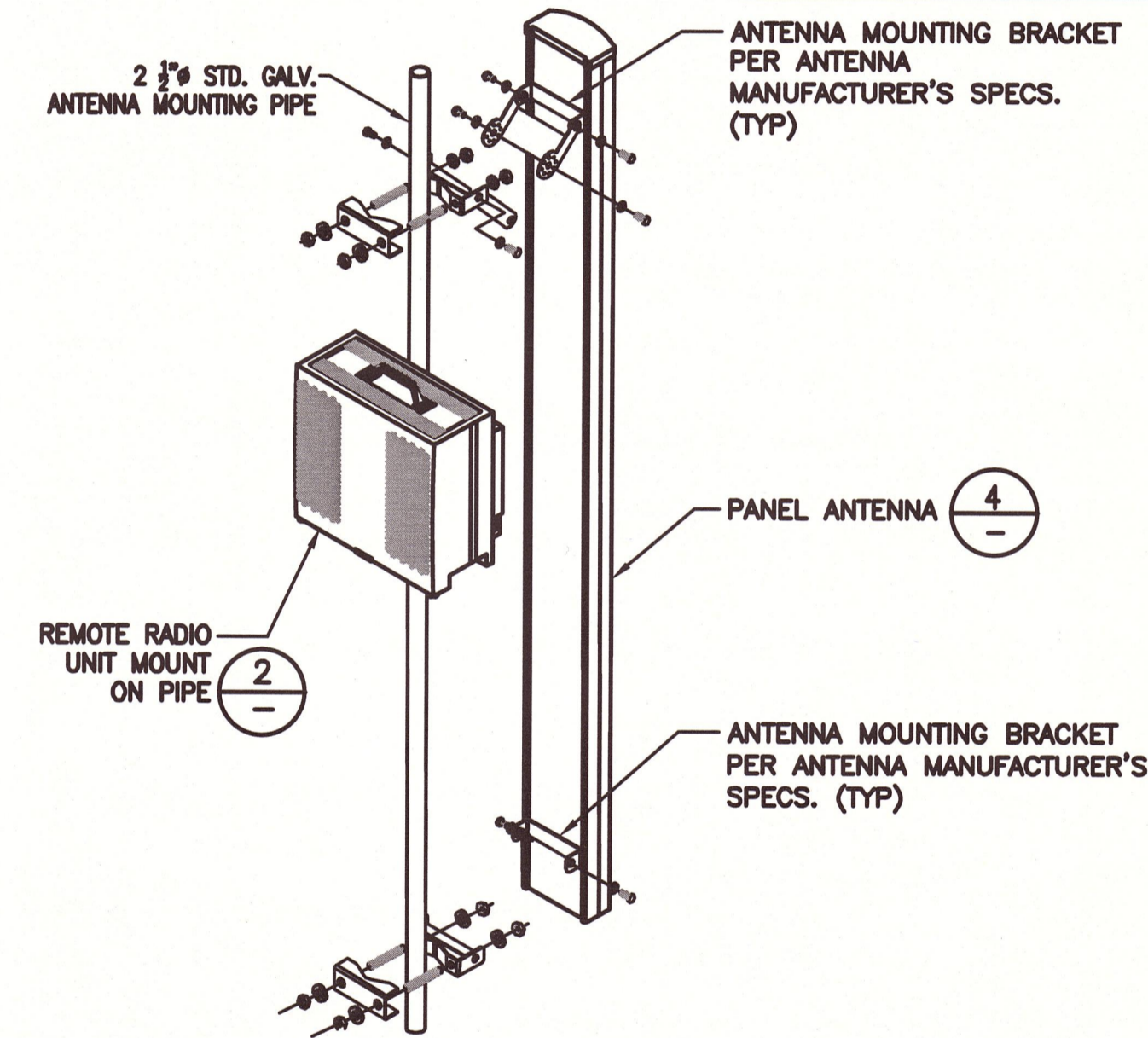
**MODEL:**  
80010766V01

**DIMENSION (HxWxD):**  
96" x 11.8" x 6"

**WEIGHT:**  
62.7 LBS WITH CLAMPS



**1** PANEL ANTENNA DETAIL  
N.T.S



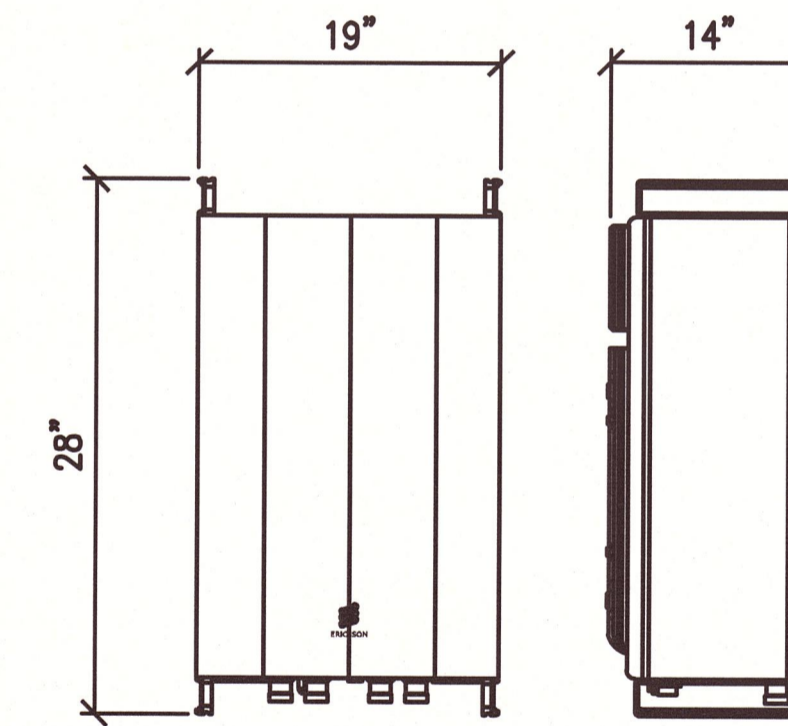
**5** PANEL ANTENNA MOUNT DETAIL

**MANUFACTURER:**  
ERICSSON

**MODEL:**  
BLACK BOX

**DIMENSION (HxWxD):**  
28"x19"x14"

**WEIGHT:**  
82 LBS



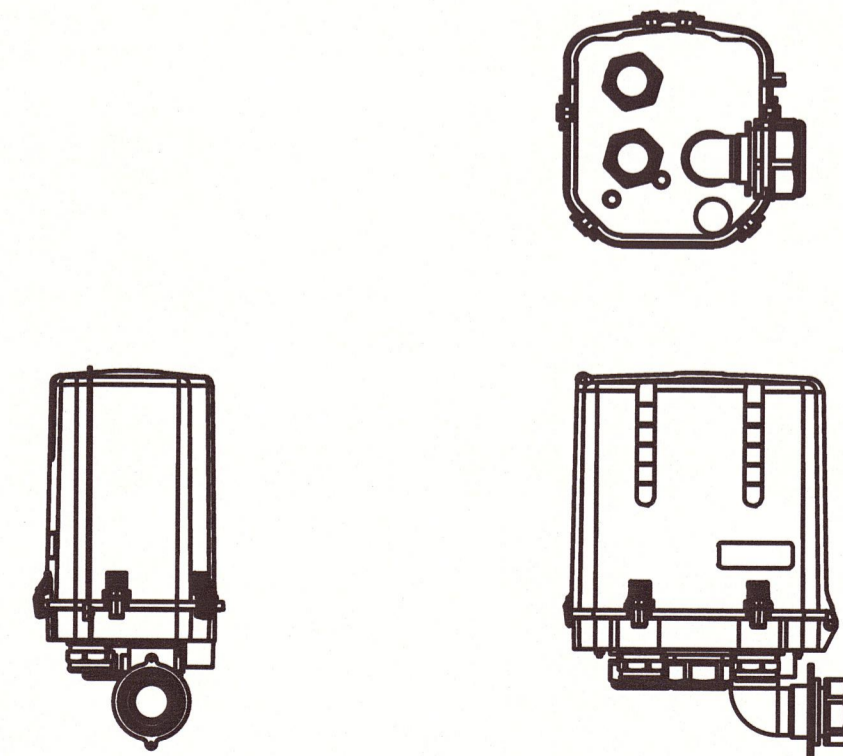
**2** REMOTE RADIO UNIT DETAIL

**MANUFACTURER:**  
RAYCAP

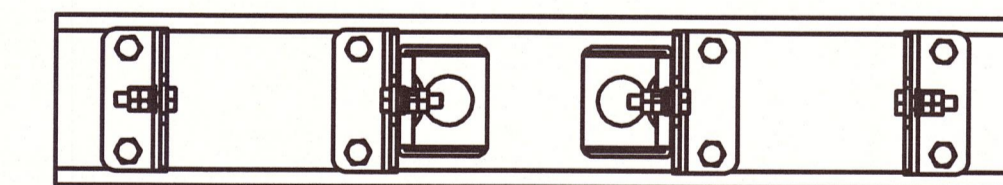
**MODEL:**  
RCMDC-6627-PF-48 OVP

**DIMENSIONS:**  
35" LONG x 21" WIDE x 18" HIGH

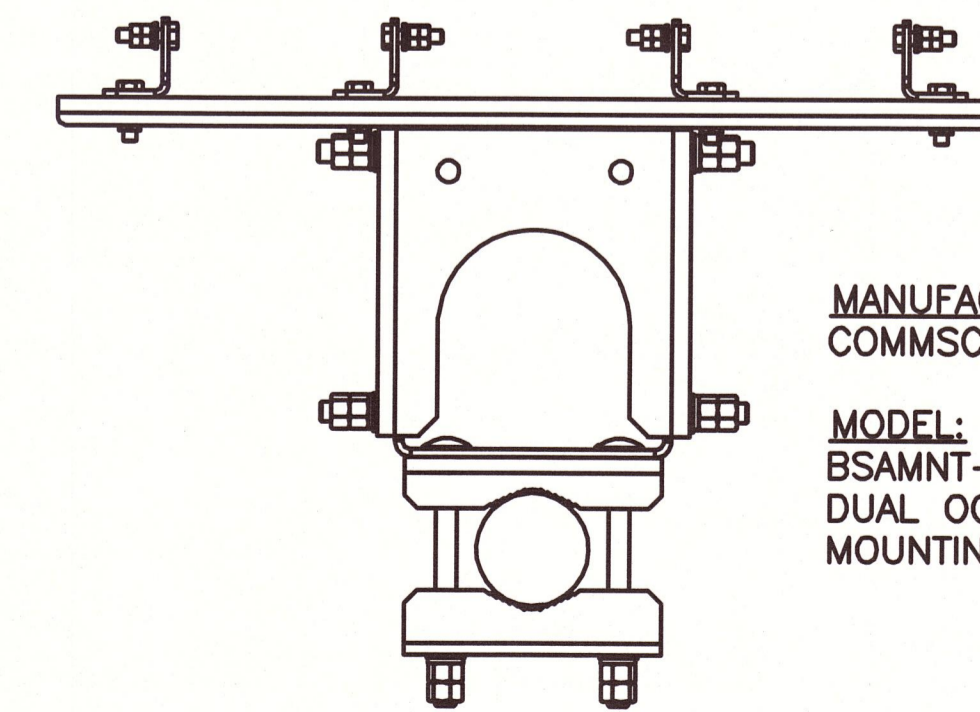
**WEIGHT:**  
43 LBS



**6** SURGE PROTECTOR UNIT DETAIL



REAR



PLAN

**MANUFACTURER:**  
COMMSCOPE

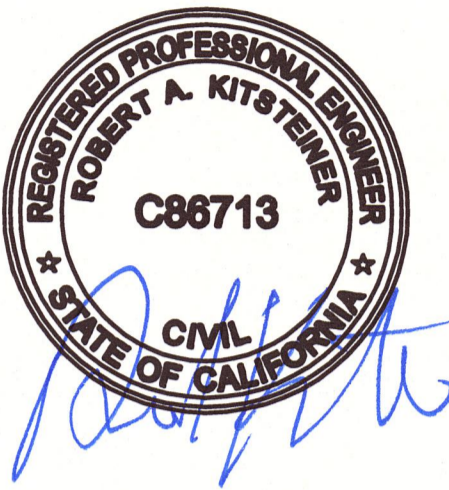
**MODEL:**  
BSAMNT-SBS-2-2-L  
DUAL OCTOPORT  
MOUNTING BRACKET

**3** ANTENNA MOUNTING BRACKET DETAIL

PREPARED FOR:  
**verizon**  
15505 SAND CANYON AVENUE  
BLDG. D, FIRST FLR.  
IRVINE, CALIFORNIA 92618  
949.286.7000

PREPARED BY:  
**JACOBS**  
Jacobs Engineering Group, Inc.  
2600 MICHELSON DRIVE, SUITE 500  
IRVINE, CALIFORNIA 92612  
PHONE: 949-250-1816  
FAX: 949-224-7501

ENGINEER SEAL:



DESIGN REVISION:

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1	6-15-17	90% CD	RU

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VERIZON SITE ID:

**ATEN**  
463 WEST ATEN ROAD  
IMPERIAL, CA 92251

TOWER OWNER SITE ID:

TBD

PREPARED BY:

APPROVED BY: RIK  
DESIGNED BY: RU  
PROJECT NO: EU608C09  
DATE: 6-12-17

DRAWING NAME:

DETAILS

DRAWING NUMBER:

**A3**

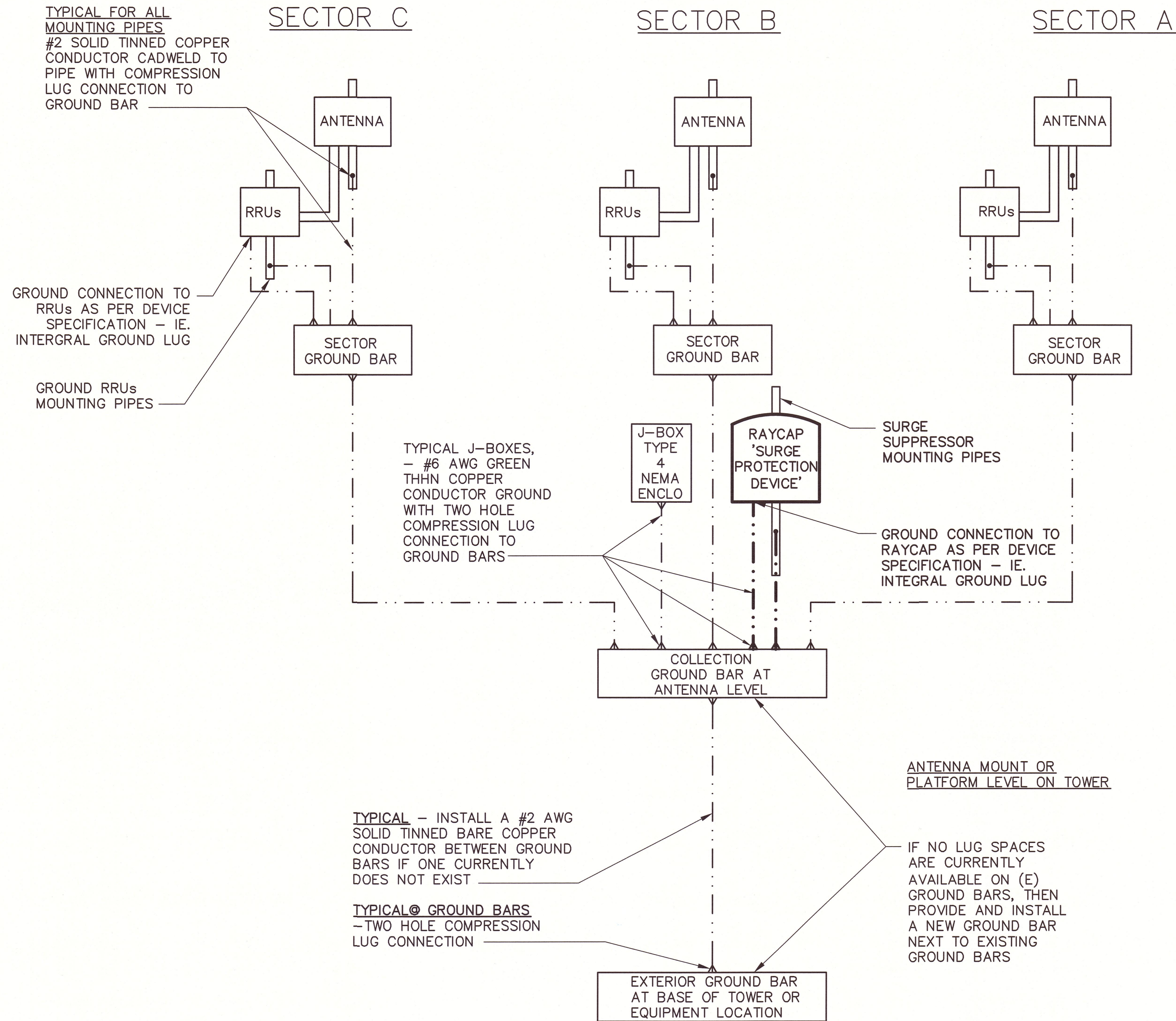


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**SCHEMATIC GROUNDING DIAGRAM**

GROUND ANY EXISTING OR NEW ITEMS INDICATED ON THIS DIAGRAM NOT CURRENTLY GROUNDED - GROUND ITEMS AS PER THIS DIAGRAM AND DRAWING SPECIFICATIONS SP1-SP3

THIS DIAGRAM IS SCHEMATIC IN NATURE WHEREAS EXISTING ITEMS ARE CURRENTLY GROUNDED IT IS NOT REQUIRED TO RE-GROUND THESE ITEMS

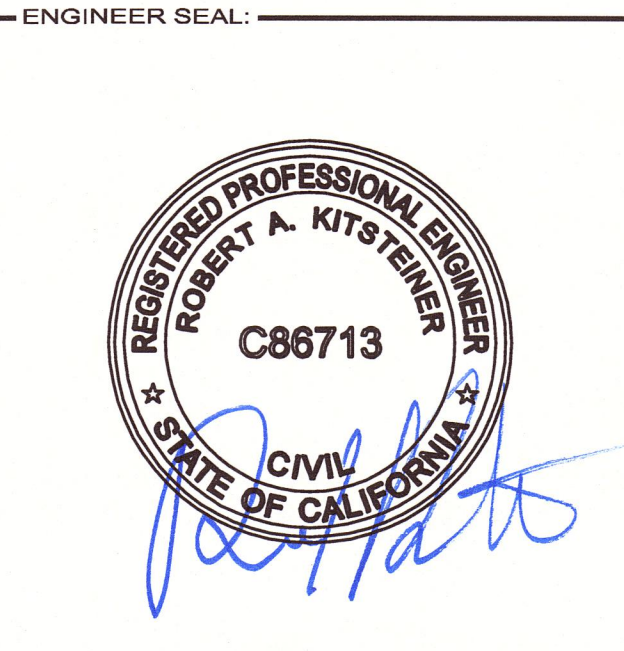


**GROUNDING NOTES:**

- IF A NEW GROUND BAR IS REQUIRED AT THE BASE OF THE TOWER OR EQUIPMENT EXOTHERMICALLY WELD (2) TWO #2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUNDING BAR. ROUTE CONDUCTORS TO BURIED GROUNDING RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
- ALL GROUNDING BARS SHALL BE STAMPED IN TO THE METAL "IF STOLEN DO NOT RECYCLE." THE CONTRACTOR SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION WITH 1" HIGH LETTERS.
- ALL HARDWARE SHALL BE STAINLESS STEEL 3/8" DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING
- FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING
- NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUNDING BAR AND BOLTED ON THE BACK SIDE. INSTALL BLACK HEAT-SHRINKING TUBE, 600 VOLT INSULATION, ON ALL GROUNDING TERMINATIONS. THE INTENT IS TO WEATHERPROOF THE COMPRESSION CONNECTION.
- ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL.
- IF THERE IS NO EXISTING GROUND BAR AS INDICATED IN THE SCHEMATIC DIAGRAM OR IF NO LUG SPACES ARE CURRENTLY AVAILABLE ON AN EXISTING GROUND BAR, THEN PROVIDE AND INSTALL A NEW GROUND BAR NEXT TO THE EXISTING GROUND BAR IN SAME MANNER AS EXISTING. RUN THE NEW DOWNLEAD PARALLEL TO THE EXISTING GROUND BAR DOWNLEAD AND TO ITS CURRENT GROUND AND SECURE THE SAME.

PREPARED FOR:  
**verizon**  
15505 SAND CANYON AVENUE  
BLDG. D, FIRST FLR.  
IRVINE, CALIFORNIA 92618  
949.286.7000

PREPARED BY:  
**JACOBS**  
Jacobs Engineering Group, Inc.  
2600 MICHELSON DRIVE, SUITE 500  
IRVINE, CALIFORNIA 92612  
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VERIZON SITE ID:  
**A TEN**  
**463 WEST ATEN ROAD**  
**IMPERIAL, CA 92251**

TOWER OWNER SITE ID:  
TBD

PREPARED BY:  
APPROVED BY: RK  
DESIGNED BY: RU  
PROJECT NO: EU608C09  
DATE: 6-12-17

DRAWING NAME:  
**GROUNDING DIAGRAM**

DRAWING NUMBER:  
**A4**