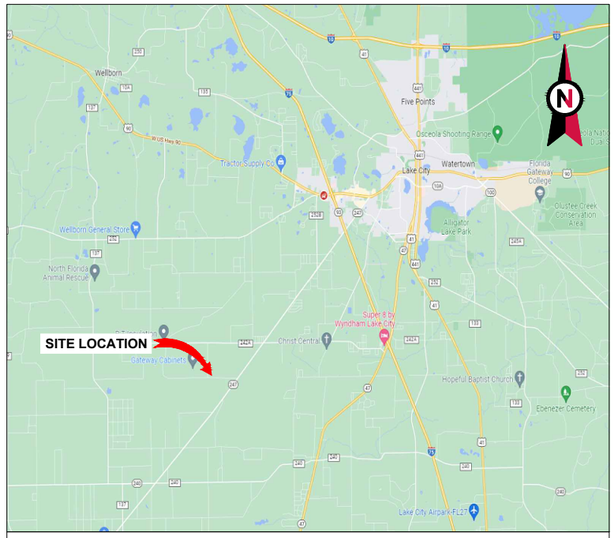

VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: COLUMBIA (CHARLES) FL
ATC SITE NUMBER: 417139
T-MOBILE SITE NAME: 9JK2817A (USA)
T-MOBILE SITE NUMBER: 9JK2817A
SITE ADDRESS: CHARLES TERRACE
LAKE CITY,FL 32024
SITE CLASS: SELF SUPPORT

LOCATION MAP

T-MOBILE COVERAGE STRATEGY COLLOCATION PLAN
4SEC-67E5D998E 6160 CONFIGURATION

COMPLIANCE CODE

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

1. 2020 FLORIDA BUILDING CODE, 7TH EDITION
2. ANSI/TIA-222-H
3. 7TH EDITION FLORIDA FIRE PREVENTION CODE (NFPA 70)
4. 2017 NATIONAL ELECTRICAL CODE
5. BASIC WIND SPEED: 118 MPH Vult (3-SECOND GUST)
   EXPOSURE CATEGORY: C
   RISK CATEGORY: II

CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: N/A
PHONE: N/A

TELEPHONE COMPANY: N/A
PHONE: N/A

Sunshine811

Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.

check positive response codes before you dig!

PROJECT SUMMARY

SITE ADDRESS:

CHARLES TERRACE
LAKE CITY,FL 32024
COUNTY: COLUMBIA

GEOGRAPHIC COORDINATES:

LATITUDE: 30.106319°
LONGITUDE: -82.760058°
GROUND ELEVATION: 104' AMSL

ZONING INFORMATION:

JURISDICTION: COLUMBIA COUNTY, FL
APN: 304S1603249000
ZONING CODE: N/A

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

T-MOBILE
5901 BENJAMIN CENTER
DRIVE, SUITE 110 A-B
TAMPA, FL 33634

PROFESSIONAL OF RECORD:

ROBERT J. LARA, AIA
2 S UNIVERSITY DR., UNIT 245
PLANTATION, FL 33324
(954) 577-4668
rlara@morrisonhershfield.com

PROPERTY OWNER:

CHARLES LUTHER DANIEL
1119 SW CYPRESS LAKE DR
LAKE CITY,FL 32024

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES INSTALLING EQUIPMENT CABINETS ON A PROPOSED CONCRETE PAD INSIDE A 10' X15' GROUND SPACE WITHIN THE EXISTING COMPOUND, AND INSTALLING NEW EQUIPMENT AND MOUNTS ON THE EXISTING TOWER.

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

PROJECT LOCATION DIRECTIONS

FROM I-75 TAKE EXIT 427 ONTO US-90.3 MILES TURN LEFT ONTO W US 90.6 MILES TURN LEFT ONTO SW CTY RD 252B2.2 MILES TURN RIGHT ONTO SW STATE RD 2474.2 MILES TURN RIGHT ONTO CYPRESS LAKE RD1 MILE TURN RIGHT ONTO SW CHARLES TER.4 MILES ACCESS ROAD ON RIGHT

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	02/06/23	MS
G-002	GENERAL NOTES	0	02/06/23	MS
C-101	DETAILED COMPOUND PLAN	0	02/06/23	MS
C-201	TOWER ELEVATION	0	02/06/23	MS
C-401	ANTENNA INFORMATION & SCHEDULE	0	02/06/23	MS
C-501	CONSTRUCTION DETAILS	0	02/06/23	MS
C-502	CONSTRUCTION DETAILS	0	02/06/23	MS
C-503	CONSTRUCTION DETAILS	0	02/06/23	MS
C-504	CONSTRUCTION DETAILS	0	02/06/23	MS
E-101	GROUNDING DETAILS & ELECTRICAL SCHEMATIC	0	02/06/23	MS
E-102	PANEL SCHEDULE & ONE-LINE DIAGRAM	0	02/06/23	MS
E-501	GROUNDING DETAILS	0	02/06/23	MS
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	SUPPLEMENTAL			
R-606	SUPPLEMENTAL			
R-607	SUPPLEMENTAL			
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R-611	SUPPLEMENTAL			
R-612	SUPPLEMENTAL			
R-613	SUPPLEMENTAL			
R-614	SUPPLEMENTAL			
R-615	SUPPLEMENTAL			

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Tel: 954.577.4655
FL C OF A #8508
FL Architect business #AA26002368
www.morrisonhershfield.com

REV.	DESCRIPTION	BY	DATE
A	PRELIM	NY	01/10/23
0	FINALS	MS	02/06/23

ATC SITE NUMBER:
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SITE ADDRESS:
CHARLES TERRACE
LAKE CITY,FL 32024

SEAL:

STATE OF FLORIDA
ROBERT J. LARA
AR 92824
REGISTERED ARCHITECT

Digitally signed by Robert Lara
Date: 2023.02.06 18:41:17-05'00'

T-Mobile

MH PROJ NO:	220329500
ATC PROJ. #:	14192636
CUST. ID:	9JK2817A (USA)
CUST. #:	9JK2817A

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. 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.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.
   - B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND T-MOBILE SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
   - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
   - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
   - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS).

CONCRETE AND REINFORCING STEEL NOTES:

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
2. MIX DESIGN SHALL BE APPROVED BY T-MOBILE REP PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-6" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI UNLESS OTHERWISE NOTED.
4. THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:	ASTM C150, TYPE 2
REINFORCEMENT:	ASTM A185, PLAIN STEEL WELDED WIRE FABRIC
REINFORCEMENT BARS:	ASTM A615, GRADE 60, DEFORMED
NORMAL WEIGHT AGGREGATE:	ASTM C33
WATER:	ASTM C 94/C 94M
WELDED WIRE FABRIC:	ASTM A185
ADMIXTURES:	
-WATER-REDUCING AGENT:	ASTM C 494/C 494M, TYPE A
-AIR-ENTERING AGENT:	ASTM C 260/C 260M
-SUPERPLASTICIZER:	ASTM C494, TYPE F OR TYPE G
-RETARDING:	ASTM C 494/C 494M, TYPE B

5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3".
6. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
7. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR APPROVAL FROM AN ATC ENGINEER WHEN DRILLING HOLES IN CONCRETE.
8. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN "METHOD 1" OF ACI 301.
9. DO NOT WELD OR TACK WELD REINFORCING STEEL.
10. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
11. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
12. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
13. FOR COLD-WEATHER (ACI 306) AND HOT-WEATHER (ACI 301M) CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
14. ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."
15. SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
16. DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
17. ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
18. LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.
19. SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".
20. BAR SUPPORTS SHALL BE ALL-GALVANIZED METAL WITH PLASTIC TIPS.
21. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.
22. SLAB ON GROUND: COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" GRAVEL BENEATH SLAB.

ELECTRICAL NOTES:

1. ELECTRICAL DESIGN SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. STRUCTURAL DESIGN SHALL BE PERFORMED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL AND STATE CODES AND NATIONAL ELECTRICAL CODE.
2. ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUITS SIZES ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY TO OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH LOCAL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS. IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL LOAD STUDY TO VERIFY THE CAPACITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF CONCORDIA. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3. CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUND LINES AND UTILITY LINES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUND LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION.

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

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2 S UNIVERSITY DR., UNIT 245
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FL Architect business #AA26002368
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ROBERT J. LARA
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Digitally signed by Robert Lara
Date: 2023.02.06 18:41:29-05'00'

T-Mobile

MH PROJ NO:	220329500
ATC PROJ. #:	14192636
CUST. ID:	9JK2817A (USA)
CUST. #:	9JK2817A

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

COMPOUND PLAN NOTES:

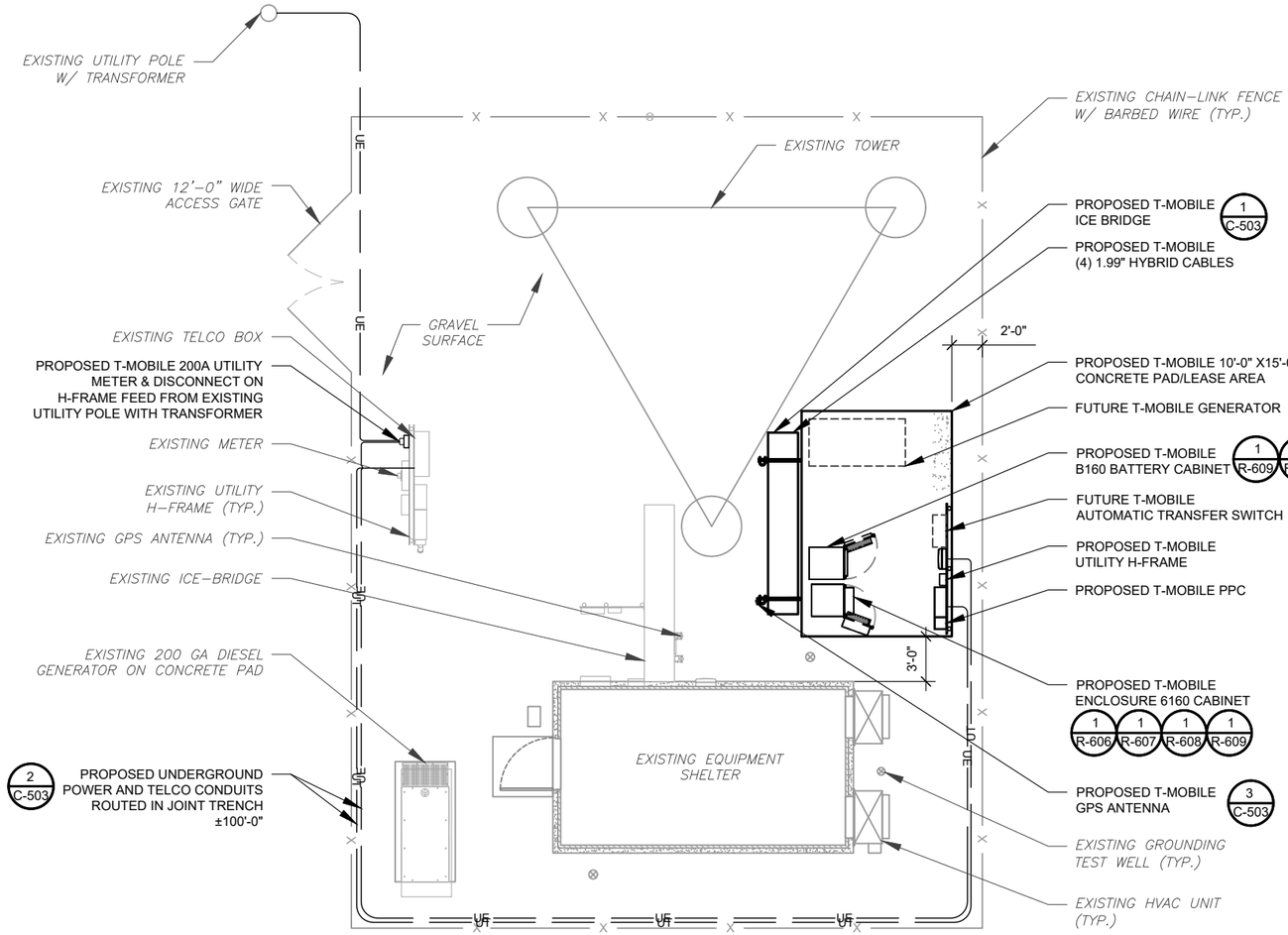
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
———	CHAINLINK FENCE



PROPOSED CABLE NOTES:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **±302'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).

1 DETAILED COMPOUND PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

N

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REV.	DESCRIPTION	BY	DATE
A	PRELIM	NY	01/10/23
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417139
ATC SITE NAME:
COLUMBIA (CHARLES) FL

T-MOBILE SITE NAME:
9JK2817A (USA)

SITE ADDRESS:
CHARLES TERRACE
LAKE CITY,FL 32024

SEAL:

STATE OF FLORIDA
ROBERT J. LARA
AR 92824
REGISTERED ARCHITECT

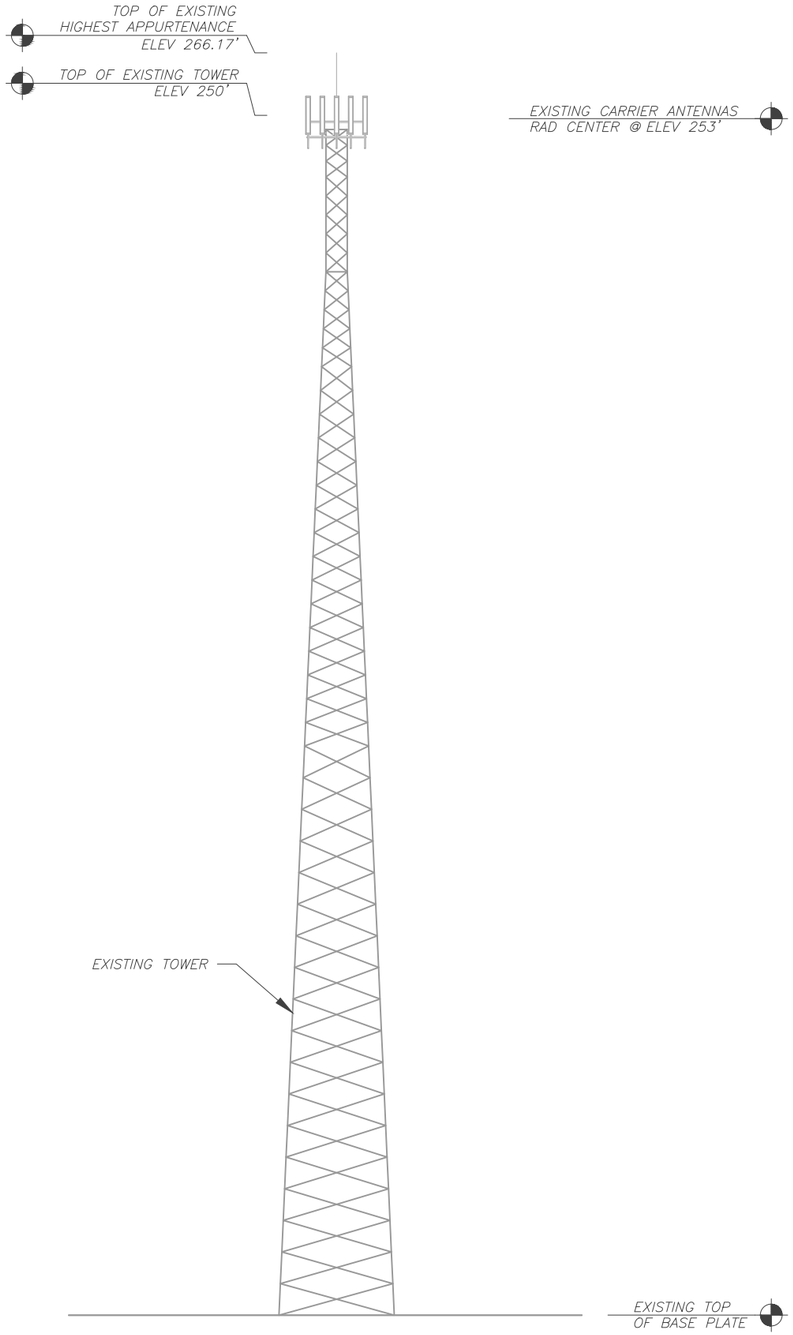
Digitally signed by Robert Lara
Date: 2023.02.06 18:42:20-05'00'

T-Mobile

MH PROJ NO:	220329500
ATC PROJ. #:	14192636
CUST. ID:	9JK2817A (USA)
CUST. #:	9JK2817A

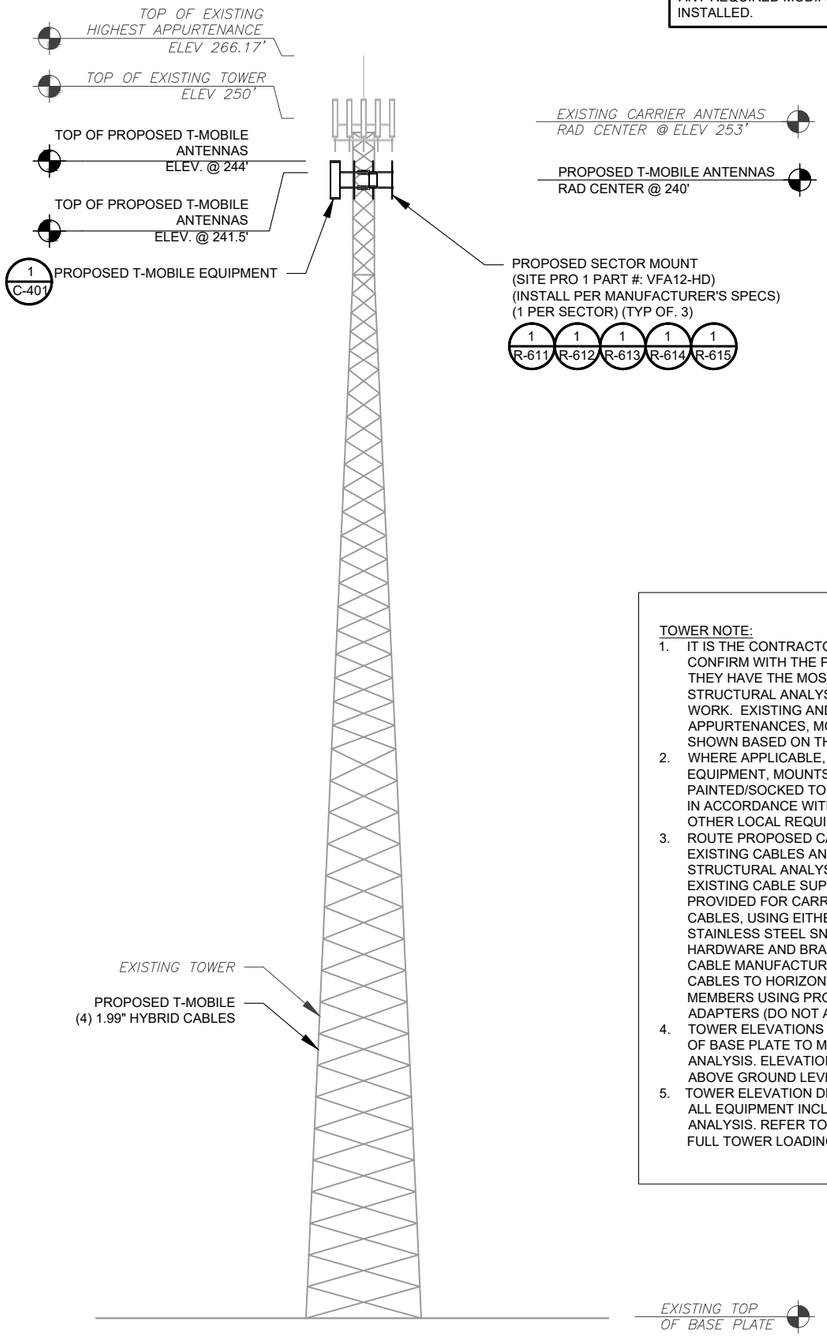
DETAILED COMPOUND PLAN

SHEET NUMBER:	REVISION:
C-101	0



1 EXISTING TOWER ELEVATION

SCALE: N.T.S.



2 PORPOSED TOWER ELEVATION

SCALE: N.T.S.

MOUNT ANALYSIS FOR THIS PROJECT IS BEING COMPLETED IN A SEPARATE PROJECT. CONSTRUCTION IS NOT TO PROCEED UNTIL A PASSING MOUNT ANALYSIS IS COMPLETE AND ANY REQUIRED MODIFICATIONS HAVE BEEN INSTALLED.

TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
4. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)
5. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

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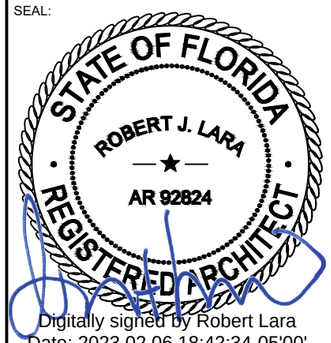

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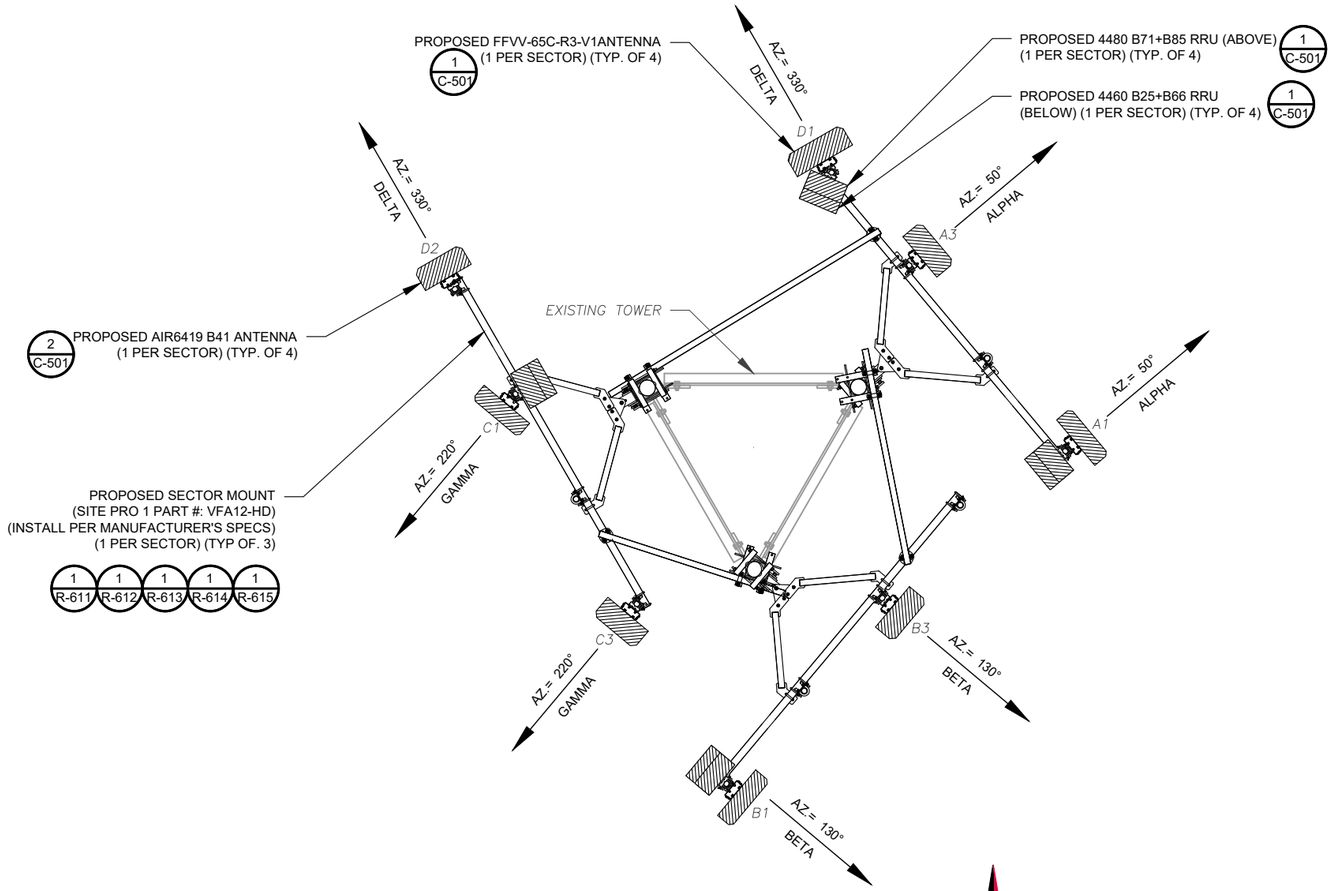
DETAILED COMPOUND PLAN

SHEET NUMBER:	REVISION:
C-201	0



1 FINAL ANTENNA PLAN

SCALE: N.T.S.

FINAL ANTENNA/ COAX SCHEDULE								
SECTOR	RAD	AZ	POS.	ANTENNA	BAND	MECH/ELEC D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT	CABLE DESCRIPTION
ALPHA	240'	50°	A1	FFVV-65C-R3-V1	L700/L600/N600/L2100/L1900/N1900	0°/-	(1) 4480 B71+B85 RRU (1) 4460 B25+B66 RRU	(4) 1.99" HYBRID CABLES
			A3	AIR 6419 B41	N2500	0°/-	-	
BETA	240'	130°	B1	FFVV-65C-R3-V1	L700/L600/N600/L2100/L1900/N1900	0°/-	(1) 4480 B71+B85 RRU (1) 4460 B25+B66 RRU	
			B3	AIR 6419 B41	N2500	0°/-	-	
GAMMA	240'	220°	C1	FFVV-65C-R3-V1	L700/L600/N600/L2100/L1900/N1900	0°/-	(1) 4480 B71+B85 RRU (1) 4460 B25+B66 RRU	
			C3	AIR 6419 B41	N2500	0°/-	-	
DELTA	240'	330°	D1	FFVV-65C-R3-V1	L700/L600/N600/L2100/L1900/N1900	0°/-	(1) 4480 B71+B85 RRU (1) 4460 B25+B66 RRU	
			D2	AIR 6419 B41	N2500	0°/-	-	

1. CONFIRM WITH CARRIER REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS.
2. ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH THE ATC CM.
3. SPACING OF PROPOSED EQUIPMENT SHALL BE CONFIRMED FOR TOWER CONFLICTS AND PROPOSED MOUNTS SHALL NOT IMPEDE TOWER CLIMBING PEGS.
4. INSTALL [TOWER JUNCTION BOX MODEL AND QUANTITY].

2 ANTENNA SCHEDULE

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AR 92824
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CUST. #:	9JK2817A

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0

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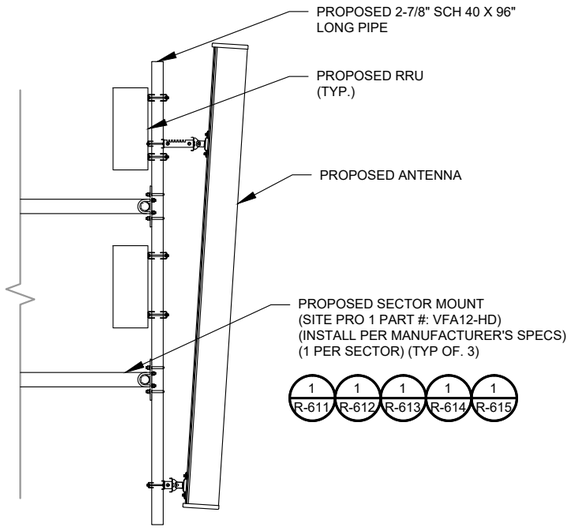
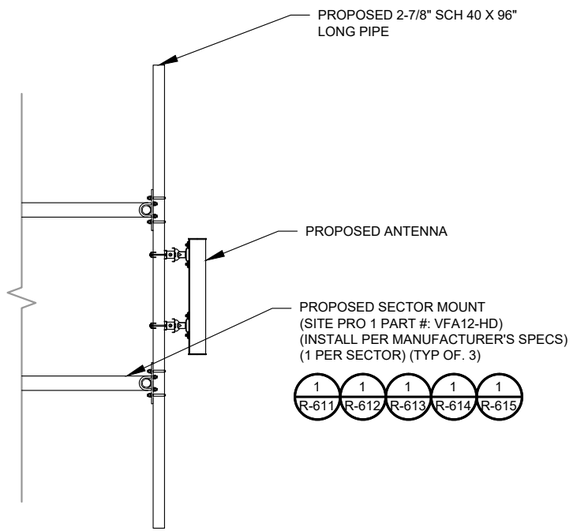


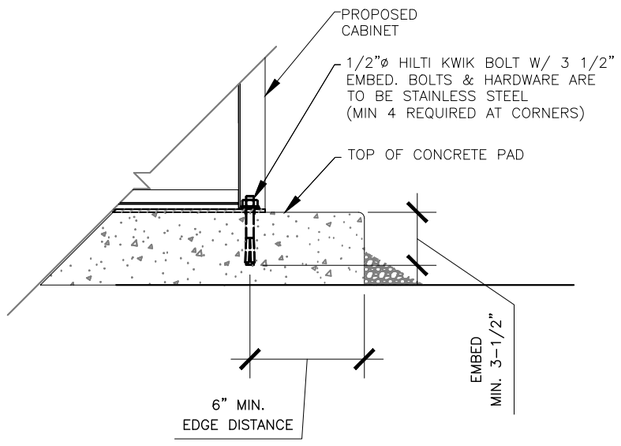
1 PROPOSED ANTENNA AND RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



3 CABINET ANCHORING DETAIL

SCALE: N.T.S.

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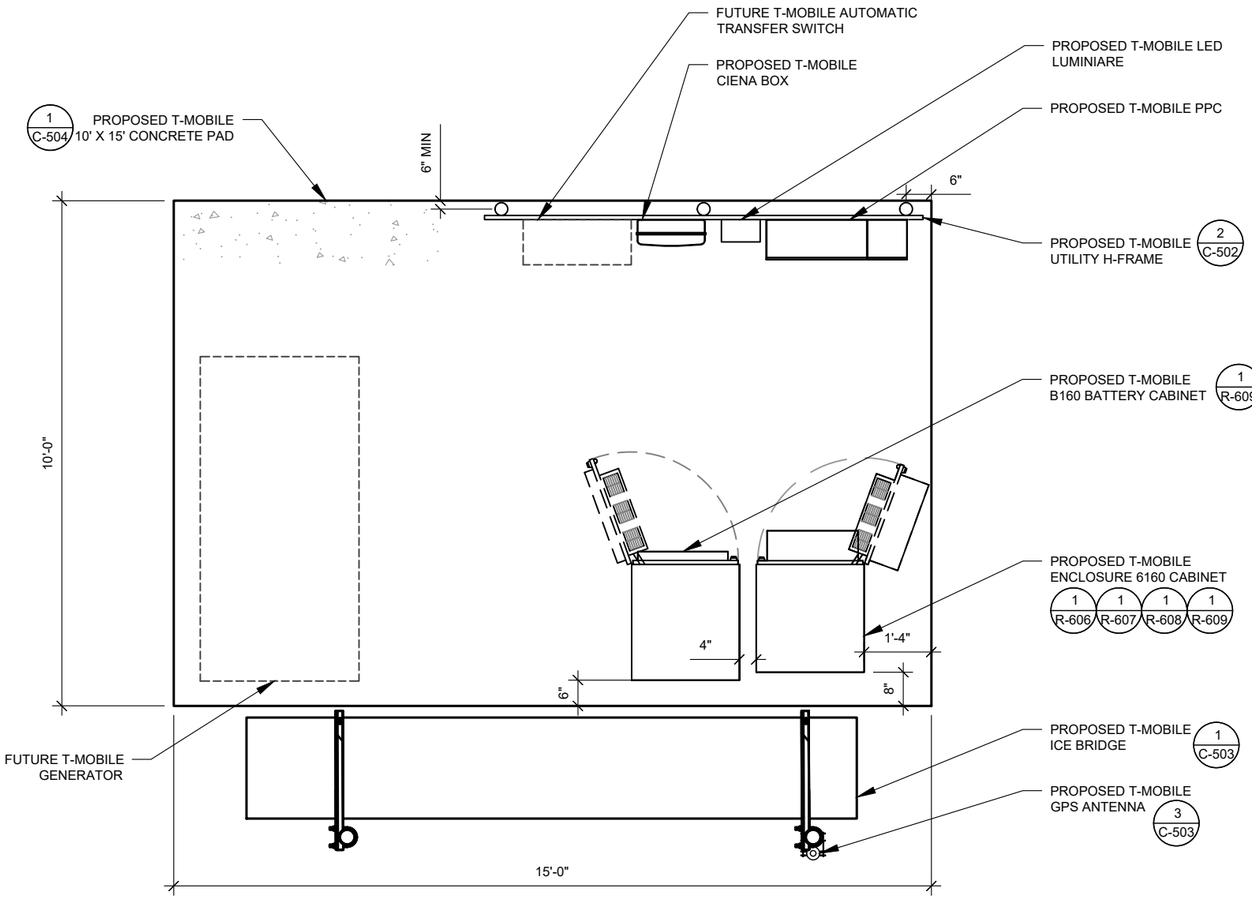
MOUNT DETAILS

SHEET NUMBER:	REVISION:
C-501	0

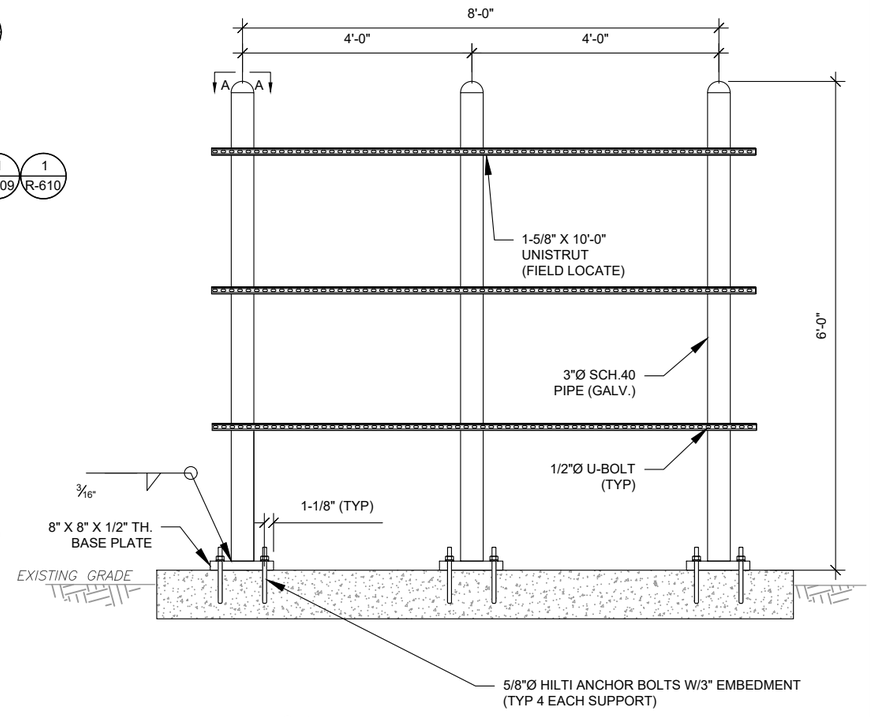


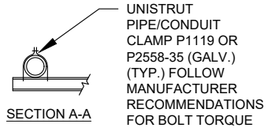
NOTE:
1. CABINETS SHALL BE ORIENTED AND INSTALLED EXACTLY AS SHOWN
2. WEIGHT OF BTS UNIT IS 1,060 LBS (WEIGHT IS WITHOUT EQUIPMENT)

1 DETAILED EQUIPMENT LAYOUT
SCALE: N.T.S.

H-FRAME NOTES:

1. IF IT IS NECESSARY TO EXTEND THE H-FRAME, AN ADDITIONAL POST WILL ALWAYS BE REQUIRED.
2. PROPOSED UNISTRUTS TO BE FIELD CUT AND SHOULD NOT EXTEND MORE THAN 6 INCHES BEYOND THE LAST POST.
3. SPRAY ENDS OF UNISTRUT WITH COLD GALVANIZING SPRAY PAINT, ALLOW TO DRY, THEN COVER WITH RUBBER PROTECTIVE CAPS FOR SAFETY.
4. UNISTRUT TO BE CUT FLUSH WITH NO SHARP OR JAGGED EDGES.
5. ALL PROPOSED HARDWARE TO BE MOUNTED PER MANUFACTURERS SPECS.





SECTION A-A

2 TYPICAL H-FRAME DETAIL
SCALE: NOT TO SCALE

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MH PROJ NO:	220329500
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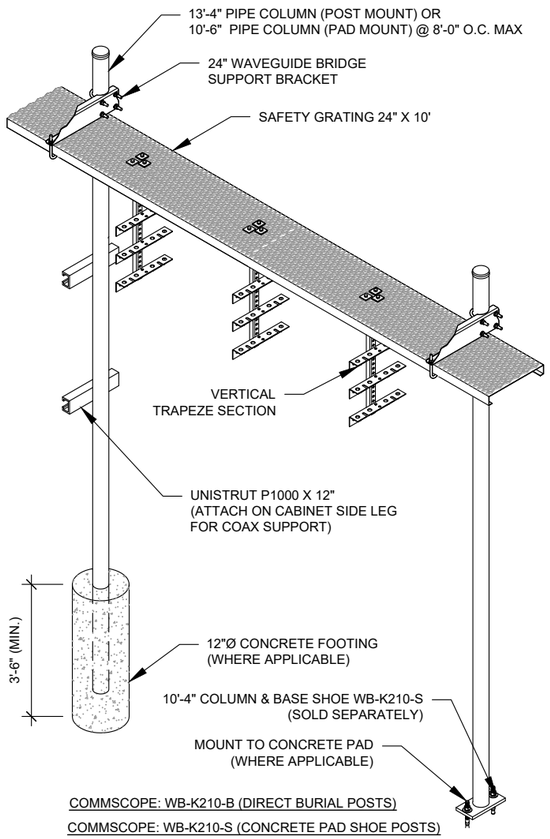
CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-502	0



COMMSCOPE: WB-K210-B (DIRECT BURIAL POSTS)

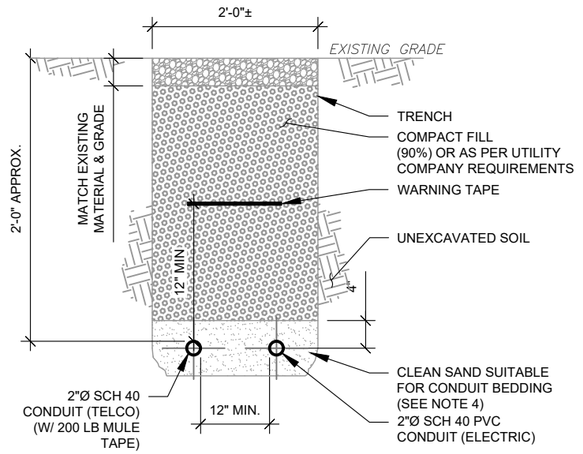
COMMSCOPE: WB-K210-S (CONCRETE PAD SHOE POSTS)

CONSTRUCTION NOTE:

1. INSTALL ICE BRIDGE TO ALLOW 7 FEET CLEARANCE ABOVE GRADE TO LOWEST APPURTENANCE.
2. INSTALL PER MANUFACTURES SPECIFICATION.

1 WAVEGUIDE BRIDGE KIT

SCALE: N.T.S.

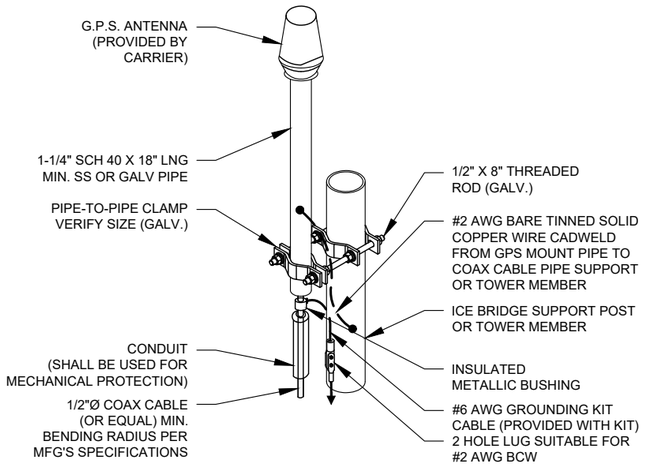


TRENCH NOTES:

1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
2. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
3. IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
4. CONCRETE ENCASE CONDUIT WHEN TRENCHING UNDER SITE ACCESS ROAD.

2 TELCO AND POWER CONDUIT JOINT TRENCH

SCALE: N.T.S.



NOTE:
1. GPS SHALL BE PLACED WITH CLEAR SIGHT LINE TO THE SOUTHERN SKY.
2. CONTRACTOR TO SUPPLY COAX FOR GPS UNIT.

3 GPS ANTENNA ATTACHMENT DETAIL

SCALE: N.T.S.

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CONSTRUCTION DETAILS

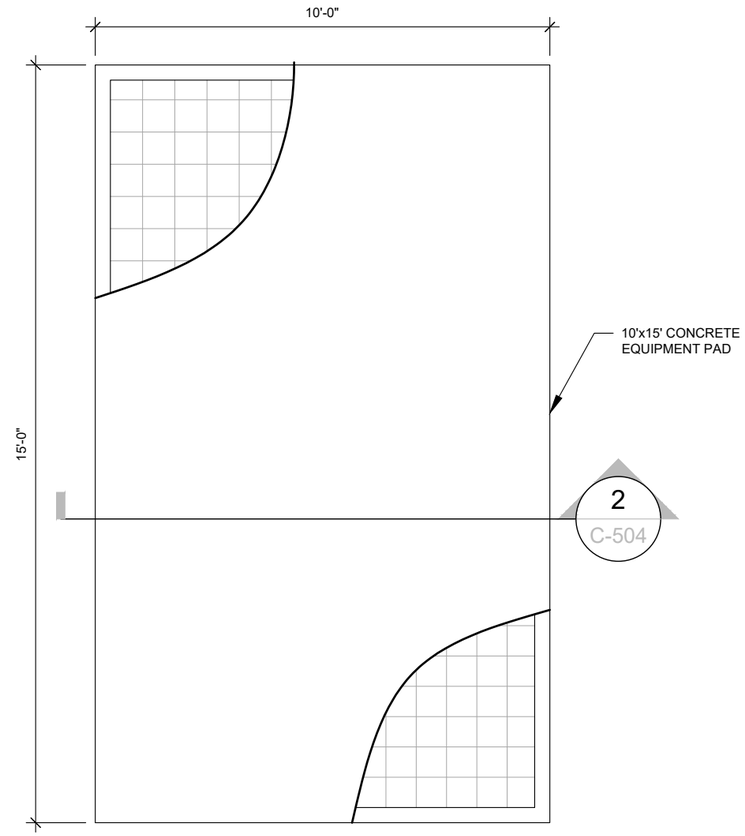
SHEET NUMBER:	REVISION:
C-503	0

CONTRACTOR NOTES:

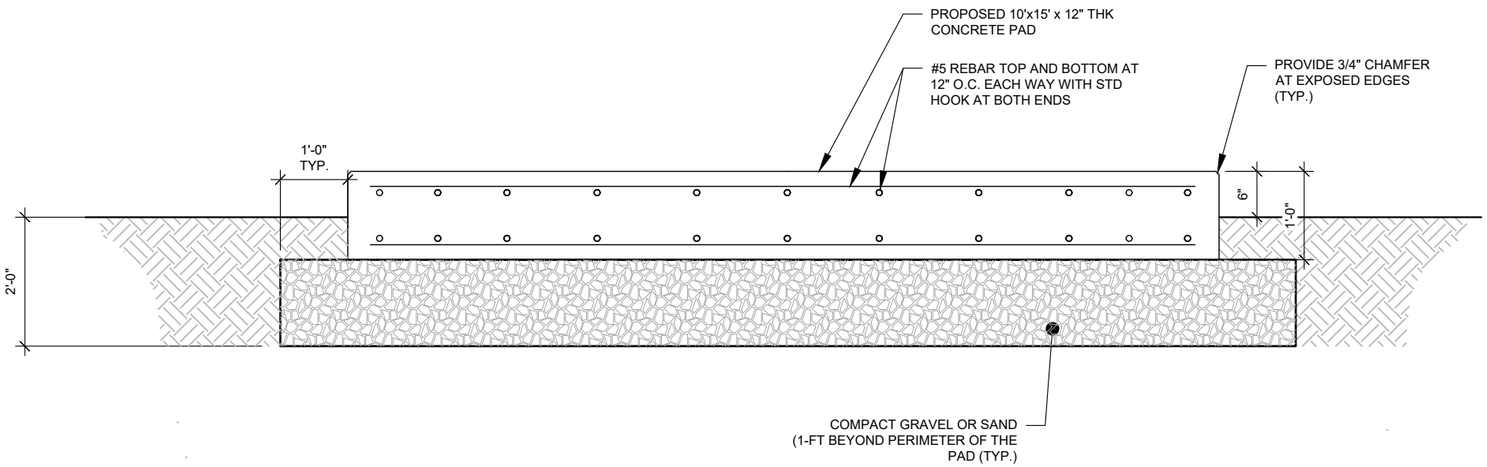
1. ALL CONCRETE FOR SLAB FOUNDATION SHALL BE 3000 P.S.I. (MIN.)
2. IF BUILDER SET DATE WILL BE WITHIN 24 HRS OF SLAB POUR THEN SITE CONTRACTOR SHALL USE 5000 P.S.I. CONCRETE (MIN.) TO OBTAIN MIN. 1800 P.S.I. CONCRETE WITHIN THE ALLOTED 48 HOURS. (NO EXCEPTIONS)
3. ELECTRICAL CONTRACTOR SHALL COORDINATE STUB-UP LOCATIONS WITH PROPOSED EQUIPMENT. (FIELD VERIFY AT STAGING YARD.)
4. CONTRACTOR SHALL ANCHOR EQUIPMENT PER MANUFACTURES RECOMMENDATIONS.
5. ALL FOUNDATIONS SHALL BE POURED WITHIN A $\frac{1}{4}$" OF LEVEL IN ALL DIRECTIONS AND SMOOTH FINISHED.

FOUNDATION NOTES:

1. COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 3000-PSI AT 28-DAY CURE, AND SHALL MEET SPECIFICATION FOR READY-MIXED CONCRETE (ASTM C94). CONCRETE SHALL BE PLACED AND CURED AS PER ACI-318 " BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".'
2. CONCRETE SLUMP SHALL RANGE BETWEEN 4 INCHES TO 8 INCHES.
3. ALL CONCRETE WORK SHALL CONFORM TO ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
4. THE SURFACE. OVER WHICH THE CONCRETE WILL BE POURED, SHALL BE CLEAN OF LOOSE MATERIAL AND LEVELED PRIOR TO CONCRETE PLACEMENT.
5. CONCRETE SHALL BE PLACED IN A MANNER THAT WILL PREVENT SEGREGATION OF CONCRETE MATERIALS AND OTHER OCCURRENCES THAT MAY DECREASE THE STRENGTH OR DURABILITY OF THE FOUNDATION.
6. MECHANICALLY VIBRATE CONCRETE, PARTICULARLY WHEN POURED IN DIFFERENT LIFTS, TO ENSURE CONSOLIDATION AND TO AVOID JOINTS.
7. ALL REINFORCING STEEL BARS SHALL BE DOMESTIC, NEW BILLET STEEL, ASTM A-615, GRADE 60. REINFORCING SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH ACI 315-LATEST EDITION - "MANUAL OF STANDARD FOR DETAILING REINFORCED CONCRETE".
8. ALL LOAD BEARING FOOTING SHALL BEAR ON TOP OF COMPACTED SOIL.
9. WELDING OF REINFORCING BARS AND DOWEL BARS IS PROHIBITED UNLESS OTHERWISE APPROVED BY ENGINEER.
10. PRIOR TO THE EXCAVATION, CHECK AREA FOR LOCATION OF UNDERGROUND PIPES, CABLES, ETC.



1 CONCRETE PAD LAYOUT
SCALE: NOT TO SCALE



2 CONCRETE PAD SECTION
SCALE: NOT TO SCALE

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CIVIL DETAILS

SHEET NUMBER:	REVISION:
C-504	0

GROUNDING NOTES:

1. ALL EQUIPMENT ENCLOSURES, DEVICES AND CONDUITS SHALL BE GROUNDED TO CONFORM WITH THE LATEST REQUIREMENTS OF THE NEC BY THE INSTALLATION OF A SEPARATE, GREEN, INSULATED GROUND CONDUCTOR FOR ALL FEEDER AND BRANCH CIRCUITS. GROUND CONDUCTORS SHALL BE OF THE SIZE INDICATED ON THE DRAWINGS. GROUND CONDUCTORS SHALL BE CONTINUOUS IN LENGTH AND SHALL BE BONDED TO EACH ENCLOSURE THEY PASS THROUGH. CONDUIT SHALL NOT BE USED AS A GROUNDING CONDUCTOR.

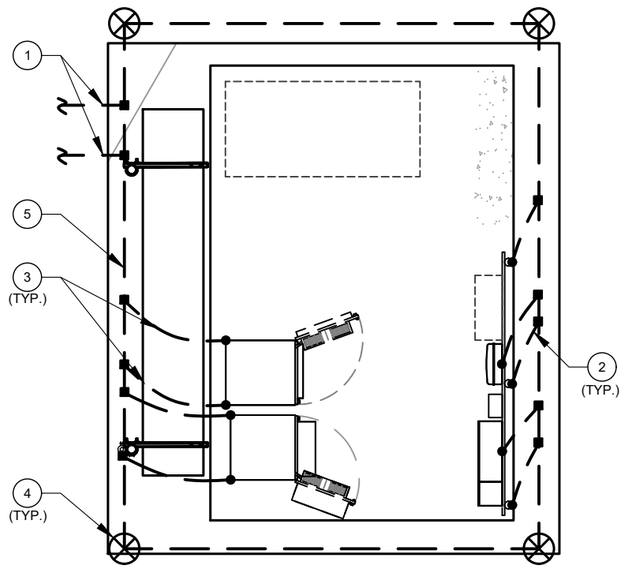
2. GROUNDING CONDUCTORS SHALL:
   - A. BE #2 AWG SOLID BARE TINNED COPPER (SBTC) FOR ALL GROUNDING SYSTEM WIRE UNLESS OTHERWISE NOTED, OR OTHERWISE REQUIRED BY CODE.
   - B. BE MINIMUM 12" BEND RADIUS. KEEP NUMBER OF BENDS TO A MINIMUM.
   - C. AVOID LONG BONDING CONNECTION RUNS. MAKE DIRECT AS POSSIBLE.
   - D. NOT HAVE ANY U-SHAPED RUNS.
   - E. BE IN NON-METALLIC CONDUIT ONLY, IF IN CONDUIT.
   - F. BE PLACED THROUGH NON-METALLIC SLEEVES IN FLOORS, WALLS, CEILINGS, ETC.
   - G. PROTECTED IN NON-METALLIC CONDUIT WHERE EXPOSED ABOVE GRADE.

2. INSTALL ALL GROUNDING RINGS AND RADIALS WITH CONDUCTIVE CEMENT, SANKOSHA AS DISTRIBUTED BY ELECTRIC MOTION COMPANY, INC., WINSTED, CT 06098, OR AS SPECIFICALLY INDICATED. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

3. GROUND RINGS SHALL BE:
   - A. MINIMUM 30" BELOW GRADE, OR BELOW FROST LINE WHICHEVER IS DEEPER.
   - B. MINIMUM 2' FROM FOUNDATIONS, FOOTINGS, OTHER GROUNDING SYSTEMS AND ALL CONDUCTIVE OBJECTS.
   - C. WITH MINIMUM 12" BEND RADII.
   - D. WITH ALL CONNECTIONS IN CONTACT WITH EARTH, BONDED BY EXOTHERMIC WELDING.
   - E. BONDED TO A SINGLE POINT GROUND (SPG) WITH A SINGLE WIRE AS INDICATED ON DRAWINGS.

4. GROUND RODS SHALL BE:
   - A. MINIMUM 5/8" DIAMETER.
   - B. MINIMUM 10' LONG.
   - C. COPPER-CLAD GALVANIZED STEEL OR STAINLESS STEEL.
   - D. PLACED IN UNDISTURBED SOIL AND BELOW THE FROST LINE.
   - E. INSTALLED WITH MINIMUM SEPARATION DISTANCE OF TWICE THE DEPTH OF THE ROD(S), OR AS INDICATED ON DRAWINGS.
   - F. MINIMUM TWO (2) RODS ON THE TOWER RING OR ONE (1) PER LEG WHICHEVER IS LARGER, MINIMUM FOUR (4) RODS ON EVERY EQUIPMENT BUILDING RING WITH ONE AT EACH CORNER OR AS INDICATED, MINIMUM ONE (1) ROD FOR POWER SERVICE GROUNDING ELECTRODE, AND MINIMUM ONE (1) ROD AT END OF EACH RADIAL.

5. CONDUCTIVE OBJECTS, SUCH AS FENCES, SHALL BE BONDED TO THE GROUNDING SYSTEM IF WITHIN 20' OF THE TOWER GROUNDING SYSTEM, OR 5' OF ANY OTHER GROUNDED COMPONENT.



1 DETAILED GROUNDING PLAN

SCALE: N.T.S

GROUNDING PLAN LEGEND:

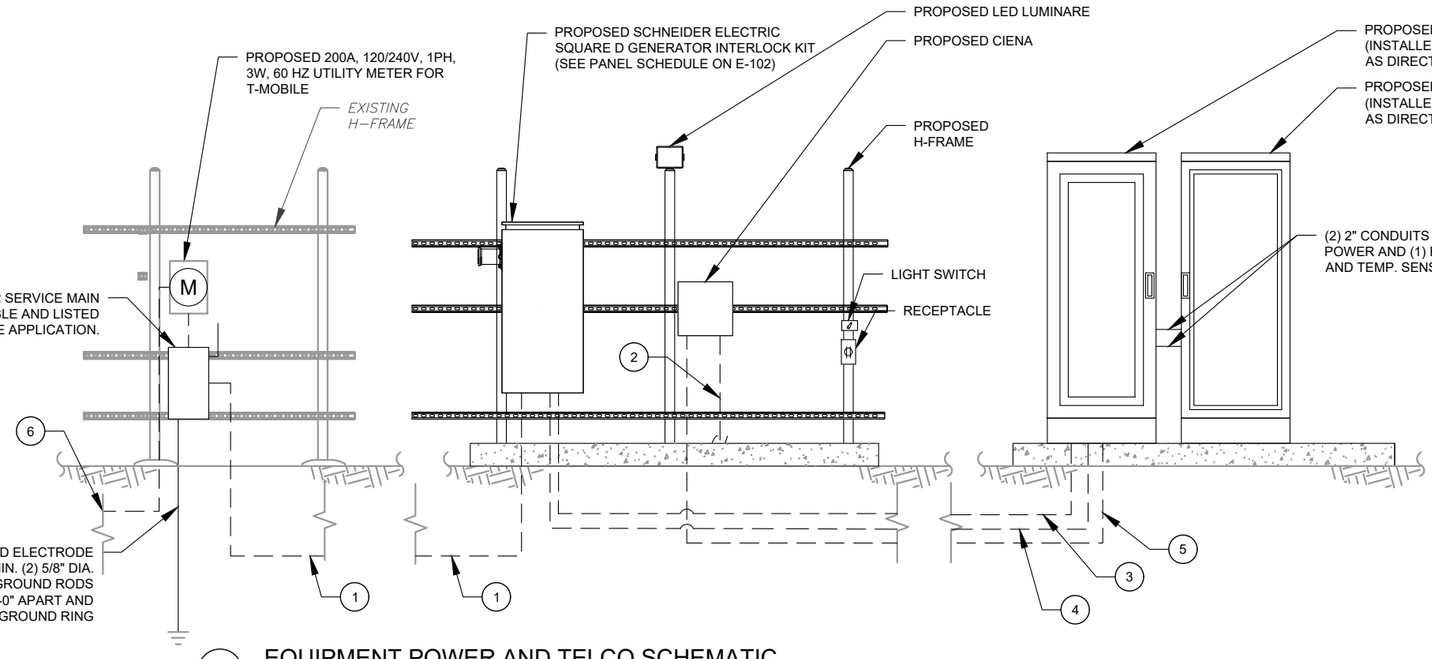
- EXISTING GROUND WIRE
- GROUND WIRE
- EXOTHERMIC WELD
- MECHANICAL WELD
- 5/8"Ø X 10' COPPER GROUND ROD
- TEST WELL

GROUNDING KEYED NOTES:

1. BOND TO TOWER GROUND RING W/ (2) #2 AWG SBTC CONDUCTORS.
2. #2 AWG BOND FROM VERTICAL H-FRAME AND ICE BRIDGE POST TO EXTERNAL GROUND RING (TYP. EVERY POST).
3. #2 AWG SBTC EQUIPMENT BOND TO GROUND RING (TYP.)
4. 5/8Ø" X 10 FT GROUND ROD.
5. #2 AWG SBTC GROUND RING.

EQUIPMENT POWER NOTES:

1. 2" CONDUIT W/ 3-#3/0 CU, (1) #6 AWG G, PPC POWER
2. 2" CONDUIT W/ MULE TAPE FOR TELCO FEEDER SERVICE TO TELCO SOURCE PER UTILITY
3. 2-#12, 1 #12G IN 1" CONDUIT FROM PPC TO 6160
4. 2-#3/0, 1-#6 IN 2" CONDUIT
5. 2" CONDUIT, FOR FIBER FROM AAV TO 6160
6. 2" CONDUIT W/ 3-#3/0 CU UTILITY SUPPLY



2 EQUIPMENT POWER AND TELCO SCHEMATIC

SCALE: N.T.S.

AMERICAN TOWER®

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PLANTATION, FL 33324
Tel: 954.577.4655
FL C OF A #8508
FL Architect business #AA26002368
www.morrisonhershfield.com

REV.	DESCRIPTION	BY	DATE
A	PRELIM	NY	01/10/23
0	FINALS	MS	02/06/23

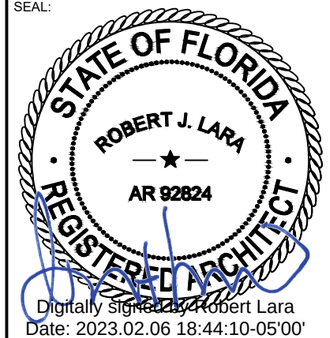
ATC SITE NUMBER:
417139

ATC SITE NAME:
COLUMBIA (CHARLES) FL

T-MOBILE SITE NAME:
9JK2817A (USA)

SITE ADDRESS:
CHARLES TERRACE
LAKE CITY,FL 32024

SEAL:



T-Mobile

MH PROJ NO:	220329500
ATC PROJ. #:	14192636
CUST. ID:	9JK2817A (USA)
CUST. #:	9JK2817A

GROUNDING DETAILS & ELECTRICAL SCHEMATIC

SHEET NUMBER:	REVISION:
E-101	0

PROPOSED T-MOBILE PANEL "PP1" — (65k SERIES AIC RATED) 200A, 120/240-1Ø-3W, 200A M.C.B.

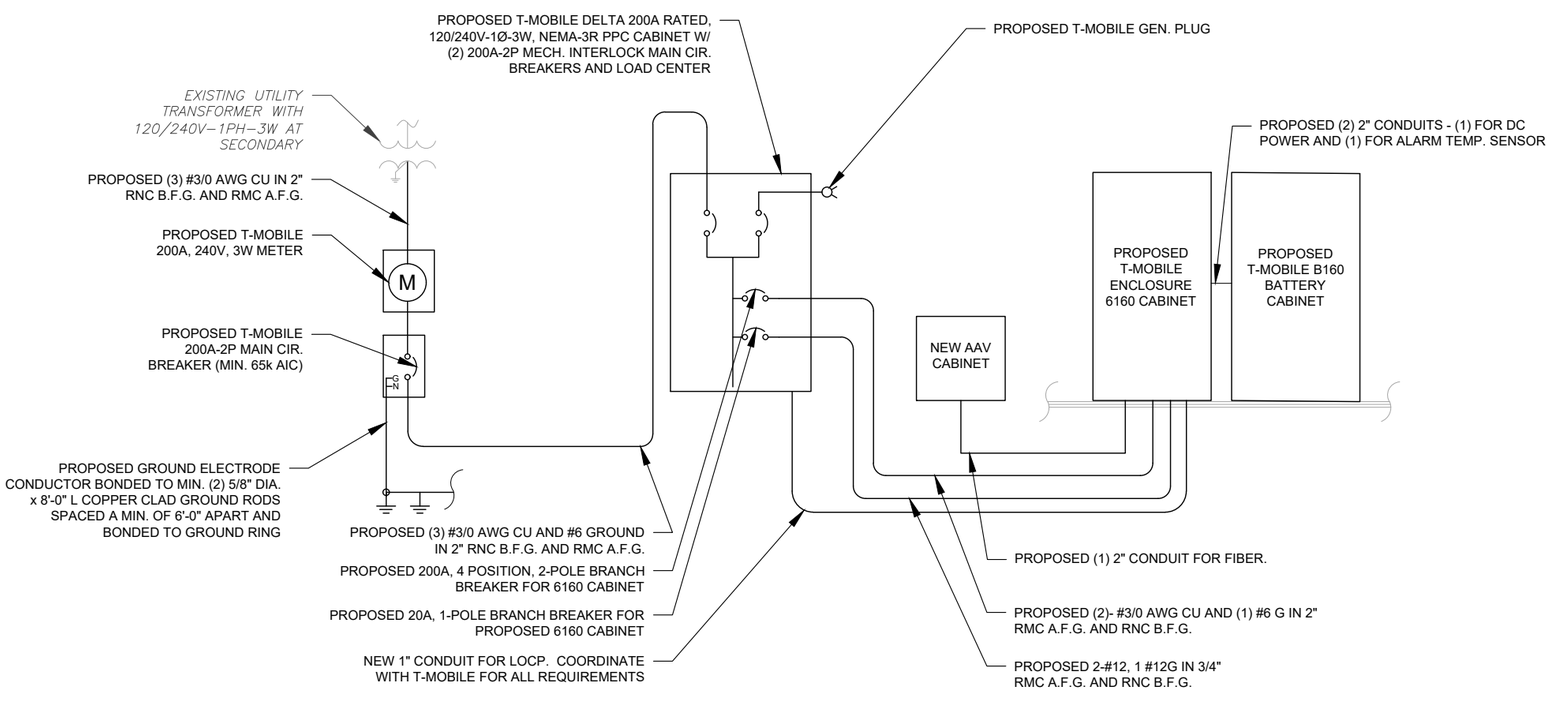
BUS kVA A	BUS kVA B	LOAD	WIRE	GND	COND	AMPS	BUS A B	AMPS	COND	GND	WIRE	LOAD	BUS kVA A	BUS kVA B
0.00		PROPOSED SURGE SUPPRESSOR	#6	#10	1"	60	1 — 2	20	3/4"	#12	#12	PROPOSED GFI RECEPTACLE	0.18	
	0.00						3 — 4	200	2"	#6	2-#3/0	NEW 6160 SSC **		7.00
0.40		PROPOSED SERVICE LIGHT	#12	#12	3/4"	20	5 — 6						7.00	
	0.18	PROPOSED NEW GFI RECEPT. INTO 6160 **	#12	#12	3/4"	20	7 — 8							7.00
-		SPACE	-	-	-	-	9 — 10						7.00	
	-	SPACE	-	-	-	-	11 — 12	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	13 — 14	-	-	-	-	SPACE	-	
	-	SPACE	-	-	-	-	15 — 16	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	17 — 18	-	-	-	-	SPACE	-	
	-	SPACE	-	-	-	-	19 — 20	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	21 — 22	-	-	-	-	SPACE	-	
	-	SPACE	-	-	-	-	23 — 24	-	-	-	-	SPACE		-
0.40	0.18												14.18	14.00

A	B	TOTAL	
14.6	14.2	28.8	CONNECTED LOAD (kVA)
14.7	14.2	28.9	DEMAND LOAD (kVA)

DEMAND LOAD AMPS: 120 AMPS

** = CONTRACTOR TO CONFIRM ALL REQUIREMENTS WITH MANUF. INSTALLATION SPECS PRIOR INSTALLATION
ALL LOADS SHOWN ARE NON-CONTINUOUS LOADS WITH THE EXCEPTION OF LIGHTING

1 PANEL SCHEDULE



2 ONE-LINE DIAGRAM

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PLANTATION, FL 33324
Tel: 954.577.4655
FL C OF A #8508
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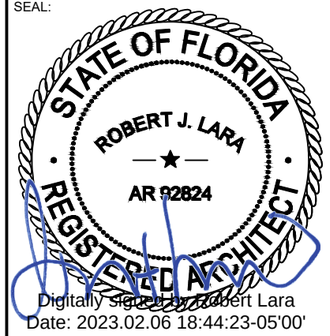
REV.	DESCRIPTION	BY	DATE
A	PRELIM	NY	01/10/23
0	FINALS	MS	02/06/23

ATC SITE NUMBER:
417139
ATC SITE NAME:
COLUMBIA (CHARLES) FL
T-MOBILE SITE NAME:
9JK2817A (USA)
SITE ADDRESS:
CHARLES TERRACE
LAKE CITY,FL 32024

SEAL:

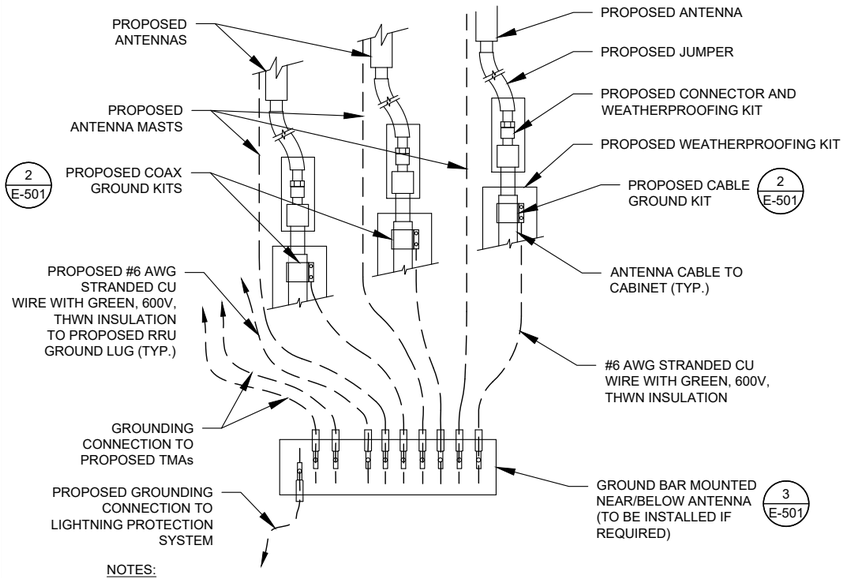


T-Mobile

MH PROJ NO:	220329500
ATC PROJ. #:	14192636
CUST. ID:	9JK2817A (USA)
CUST. #:	9JK2817A

PANEL SCHEDULE & ONE-LINE DIAGRAM

SHEET NUMBER:	REVISION:
E-102	0

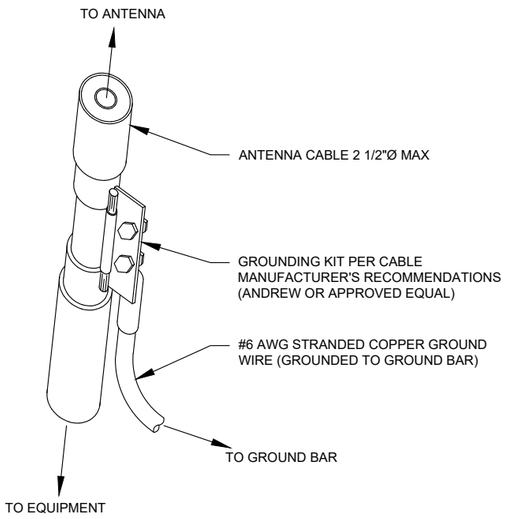


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

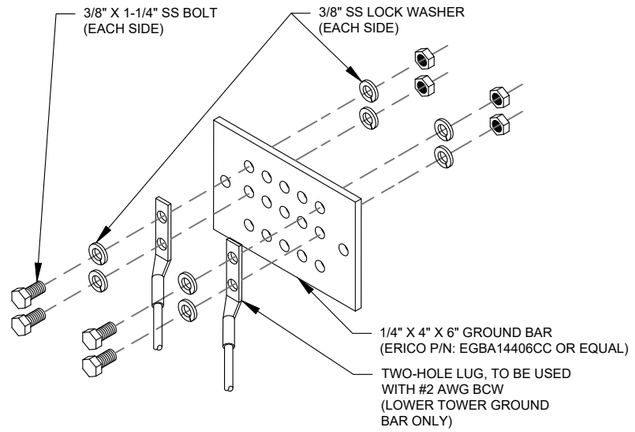


GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.

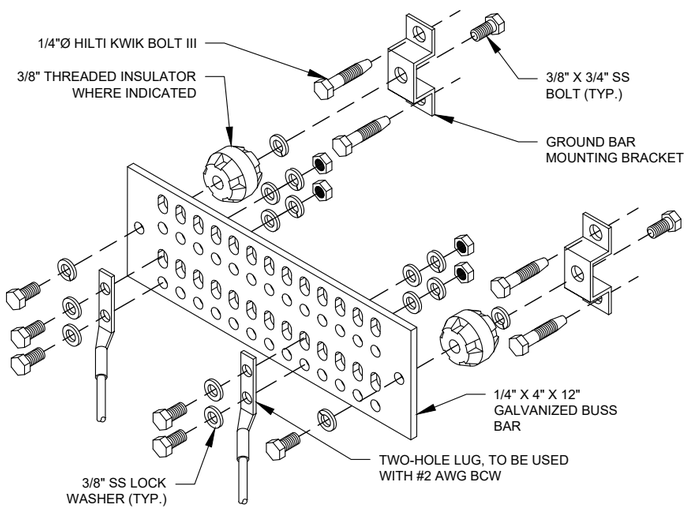


GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

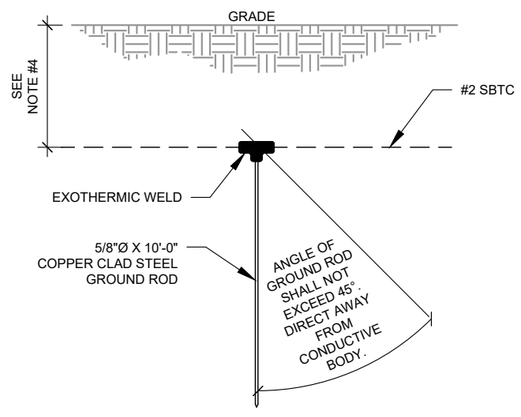


GROUND BAR NOTES

1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

4 MAIN GROUND BAR DETAIL

SCALE: N.T.S.

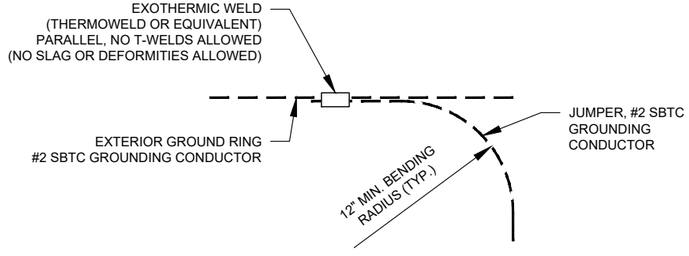


NOTES:

1. SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.
2. COORDINATE UTILITY, LOCATE BEFORE DIGGING.
3. CONDUIT TRENCHING DEPTHS AT 36" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.
4. ALL RING AND RADIAL DEPTHS AT 30" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.

5 GROUND ROD DETAIL

SCALE: N.T.S.



6 TIE CONNECTION DETAIL

SCALE: N.T.S.

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Tel: 954.577.4655
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REV.	DESCRIPTION	BY	DATE
A	PRELIM	NY	01/10/23
0	FINALS	MS	02/06/23

ATC SITE NUMBER:
417139
ATC SITE NAME:
COLUMBIA (CHARLES) FL
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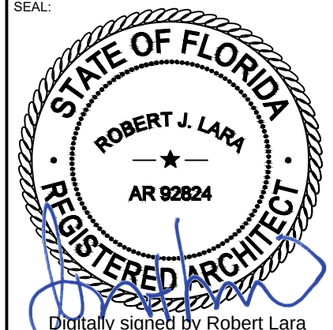
SITE ADDRESS:
CHARLES TERRACE
LAKE CITY,FL 32024

SEAL:



Digitally signed by Robert Lara
Date: 2023.02.06 18:44:44-05'00'

T-Mobile

MH PROJ NO:	220329500
ATC PROJ. #:	14192636
CUST. ID:	9JK2817A (USA)
CUST. #:	9JK2817A

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

RAN Template:	A&L Template:
4Sec-67E5D998E 6160 (no GSM)	4Sec-67E5998E_1xAIR+1OP

9JK2817A_Coverage Strategy_1

Print Name: Standard
PORs: Coverage Strategy_Regional Coverage

Section 1 - Site Information

Site ID: 9JK2817A
Status: ReadyForReview
Version: 1
Project Type: Coverage Strategy
Approved: Not approved
Approved By: Not approved
Last Modified: 11/10/2022 9:52:39 AM
Last Modified By: Ernest.Shuman@T-Mobile.com

Site Name: 9JK2817A (UsA)
Site Class: Self Support Tower
Site Type: Structure Non Building
Plan Year:
Market: JACKSONVILLE FL
Vendor: Nokia
Landlord: Not Specified

Latitude: 30.106319
Longitude: -82.760058
Address: Charles Terrace
City, State: Charles Terrace, FL
Region: SOUTH

RAN Template: 4Sec-67E5D998E 6160 (no GSM)			AL Template: 4Sec-67E5998E_1xAIR+1OP	
Sector Count: 4	Antenna Count: 8	Coax Line Count: 0	TMA Count: 0	RRU Count: 8

Section 2 - Existing Template Images

1 RFDS HEADER
SCALE: NOT TO SCALE

11/10/22, 9:53 AM 9JK2817A_Coverage Strategy_1_2022-11-10

RAN Template:	A&L Template:
4Sec-67E5D998E 6160 (no GSM)	4Sec-67E5998E_1xAIR+1OP

9JK2817A_Coverage Strategy_1

Print Name: Standard
PORs: Coverage Strategy_Regional Coverage

Section 6 - A&L Equipment

Existing Template: Custom
Proposed Template: 4Sec-67E5998E_1xAIR+1OP

Sector 1 (Proposed) view from front (Note: the images show view from behind)

Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	Commscope - FFVV-65C-R3-V1 (Octo)				AIR 6419 B41 (Active Antenna - Massive MIMO)	
Azimuth	50				50	
M. Tilt	0				0	
Height	240				240	
Ports	P1	P2	P3	P4	P5	P6
Active Tech	L700 L600 N600	L700 L600 N600	L2100 L1900 N1900	L2100 L1900 N1900	N2500	N2500
Dark Tech						
Restricted Tech						
Decomm. Tech						
E. Tilt						
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMAs						
Diplexer / Combiners						
Radio	Radio 4480 B71+B85 (At Antenna)	Radio 4480 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						

Unconnected Equipment:

Scope of Work:

*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.

2 ALPHA SETOR INFORMATION
SCALE: NOT TO SCALE

11/10/22, 9:53 AM 9JK2817A_Coverage Strategy_1_2022-11-10

RAN Template:	A&L Template:
4Sec-67E5D998E 6160 (no GSM)	4Sec-67E5998E_1xAIR+1OP

9JK2817A_Coverage Strategy_1

Print Name: Standard
PORs: Coverage Strategy_Regional Coverage

Sector 2 (Proposed) view from front (Note: the images show view from behind)

Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	Commscope - FFVV-65C-R3-V1 (Octo)				AIR 6419 B41 (Active Antenna - Massive MIMO)	
Azimuth	130				130	
M. Tilt	0				0	
Height	240				240	
Ports	P1	P2	P3	P4	P5	P6
Active Tech	L700 L600 N600	L700 L600 N600	L2100 L1900 N1900	L2100 L1900 N1900	N2500	N2500
Dark Tech						
Restricted Tech						
Decomm. Tech						
E. Tilt						
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMAs						
Diplexer / Combiners						
Radio	Radio 4480 B71+B85 (At Antenna)	Radio 4480 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						

Unconnected Equipment:

Scope of Work:

*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.

3 BETA SECTOR INFORMATION
SCALE: NOT TO SCALE

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION:

RAN Template:	A&L Template:
4Sec-67E5D998E 6160 (no GSM)	4Sec-67E5998E_1xAIR+1OP

9JK2817A_Coverage Strategy_1

Print Name: Standard
PORs: Coverage Strategy_Regional Coverage

Sector 3 (Proposed) view from front (Note: the images show view from behind)						
Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	Commscope - FFVV-65C-R3-V1 (Octo)				AIR 6419 B41 (Active Antenna - Massive MIMO)	
Azimuth	220				220	
M. Tilt	0				0	
Height	240				240	
Ports	P1	P2	P3	P4	P5	P6
Active Tech	L700 L600 N600	L700 L600 N600	L2100 L1900 N1900	L2100 L1900 N1900	N2500	N2500
Dark Tech						
Restricted Tech						
Decomm. Tech						
E. Tilt						
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMAs						
Diplexer / Combiners						
Radio	Radio 4480 B71+B85 (At Antenna)	– Radio 4480 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	– Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:						

*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.

1 GAMMA SECTOR INFORMATION
SCALE: NOT TO SCALE

11/10/22, 9:53 AM 9JK2817A_Coverage Strategy_1_2022-11-10

RAN Template:	A&L Template:
4Sec-67E5D998E 6160 (no GSM)	4Sec-67E5998E_1xAIR+1OP

9JK2817A_Coverage Strategy_1

Print Name: Standard
PORs: Coverage Strategy_Regional Coverage

Sector 4 (Proposed) view from front (Note: the images show view from behind)						
Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	Commscope - FFVV-65C-R3-V1 (Octo)				AIR 6419 B41 (Active Antenna - Massive MIMO)	
Azimuth	330				330	
M. Tilt	0				0	
Height	240				240	
Ports	P1	P2	P3	P4	P5	P6
Active Tech	L700 L600 N600	L700 L600 N600	L2100 L1900 N1900	L2100 L1900 N1900	N2500	N2500
Dark Tech						
Restricted Tech						
Decomm. Tech						
E. Tilt						
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMAs						
Diplexer / Combiners						
Radio	Radio 4480 B71+B85 (At Antenna)	– Radio 4480 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	– Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:						

*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.

2 DELTA SECTOR INFORMATION
SCALE: NOT TO SCALE

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-602

REVISION:

RAN Template:	A&L Template:
4Sec-67E5D998E 6160 (no GSM)	4Sec-67E5998E_1xAIR+1OP

9JK2817A_Coverage Strategy_1

Print Name: Standard
PORs: Coverage Strategy_Regional Coverage

Section 5 - RAN Equipment

Existing RAN Equipment

----- This section is intentionally blank. -----

Proposed RAN Equipment

Template: 4Sec-67E5D998E 6160 (no GSM)

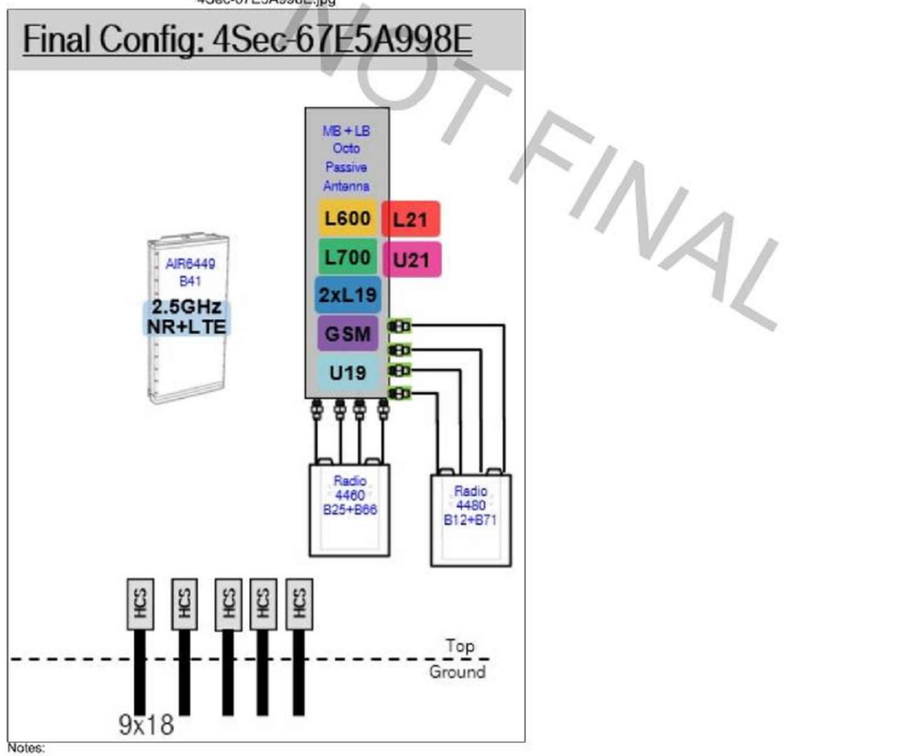
Enclosure	1	2
Enclosure Type	Enclosure 6160 AC V1	B160
Baseband	RP 6651 (N600, L600, L700) RP 6651 (N2500) RP 6651 (N1900, L1900, L2100)	
Transport System	CSR IXRe V2 (Gen2)	
Hybrid Cable System	Hybrid Trunk 6/24 4AWG 90m (x4) PSU 4813 vR4A (Kit) (x2)	

RAN Scope of Work:

1 CABINET CONFIGURATION

Section 3 - Proposed Template Images

4Sec-67E5A998E.jpg



Notes:

2 ANTENNA CONFIGURATION

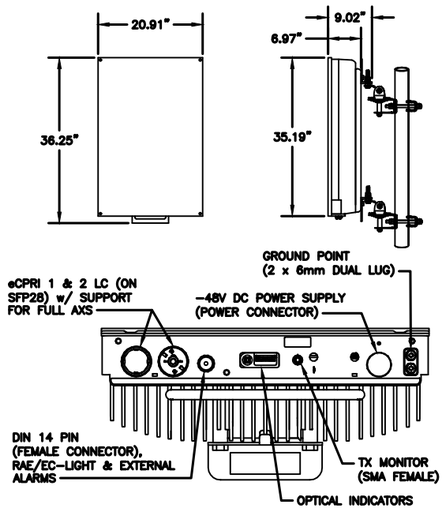
NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

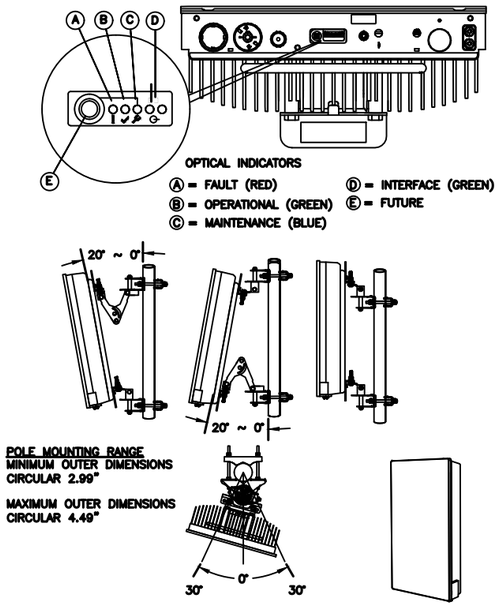
SUPPLEMENTAL

SHEET NUMBER: R-603

REVISION:

MANUFACTURER:	ERICSSON
MODEL:	AIR 6419 B41 (2.5GHz M-MIMO)
DIMENSIONS:	36.25" x 20.91" x 9.02" NOT TO EXCEED (H x W x D)
WEIGHT:	83 LBS (EXCLUDING MOUNTING KIT)
MOUNT WEIGHT:	13.5 LBS (SXK109 2016/1)

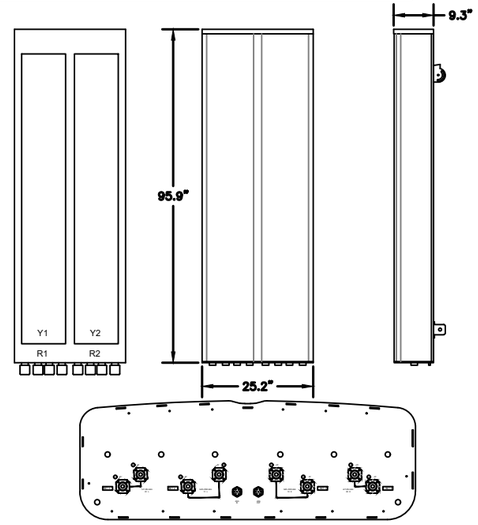




1 34552 - ERICSSON AIR 6419 BAND 41

SCALE: N.T.S.

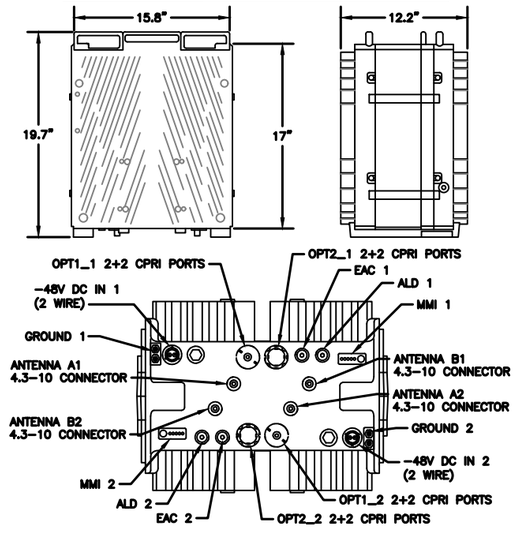
MANUFACTURER:	COMMSCOPE
MODEL:	FFVV-65C-R3-V1 ANTENNA
DIMENSIONS:	95.9" x 25.2" x 9.3"
WEIGHT:	124.6 LB
BAND:	MULTIBAND (8 PORT)
MOUNTING KIT:	BSAMNT-4 & BSAMNT-M4 (INCLUDED)



2 34074 - COMMSCOPE FFVV-65C-R3-V1

SCALE: N.T.S.

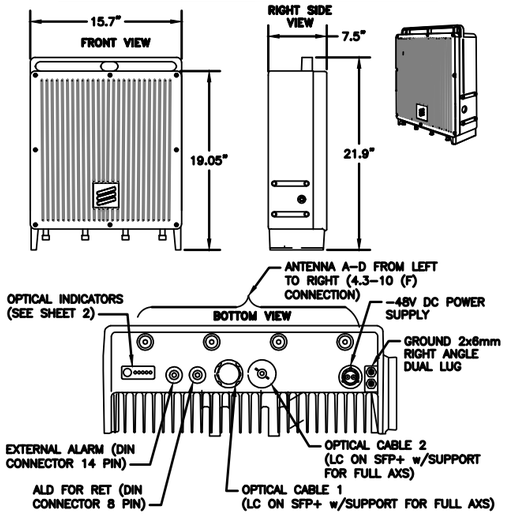
MANUFACTURER:	ERICSSON
MODEL:	4460 RADIO B2/25 B66 (KRC 161 912/3)
DIMENSIONS:	19.7" x 15.8" x 12.2" (H" x W" x D")
WEIGHT:	109 LBS
BRACKET WEIGHT:	4.8 LBS (ERS HEAVY #SXK1255993/1)



3 34373 - ERICSSON 4460 RADIO B2/25 B66

SCALE: N.T.S.

MANUFACTURER:	ERICSSON
MODEL:	4480 RADIO (KRC 161 922/1)
DIMENSIONS:	21.9" x 15.7" x 7.5" (H x W x D)
MODEL BAND:	B71, B85 FOR NR AND LTE
WEIGHT:	81 LBS
BRACKET WEIGHT:	3.75 LBS (MULTI ERS #109 1973/2)



4 34372 - ERICSSON B71/85 RADIO

SCALE: N.T.S.

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

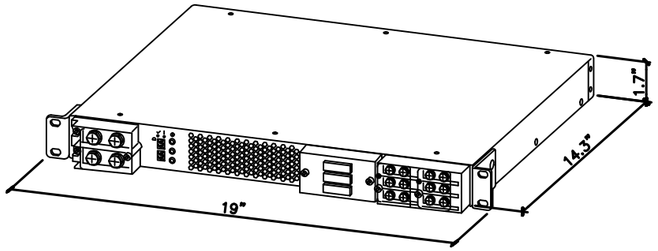
SUPPLEMENTAL

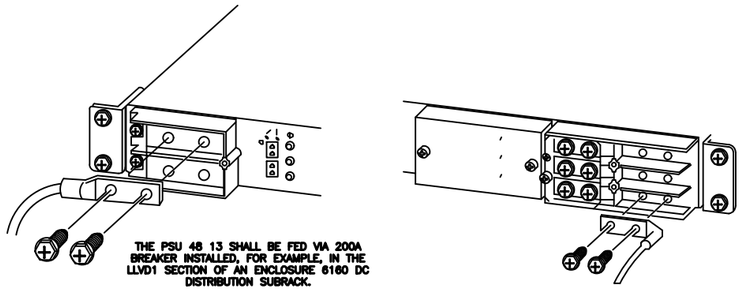
SHEET NUMBER: R-604

REVISION:

MANUFACTURER:	ERICSSON
MODEL:	PSU 48 13
WEIGHT:	17.1 LBS
DIMENSIONS:	19"x 1.7"x 14.3"

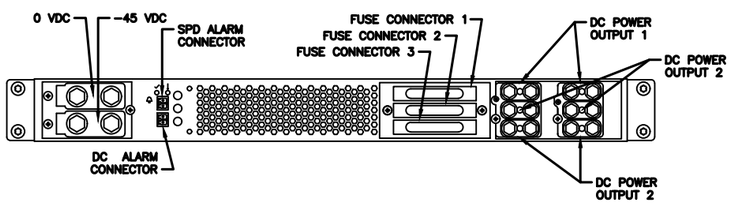
NEEDED INSTALL KIT (PICK 1)	
34133	PSU4813 INSTALL KIT FOR RBS61XX
34134	PSU4813 INSTALL KIT FOR PBC6200
34135	PSU4813 INSTALL KIT FOR 6X60/RBS6230





THE PSU 48 13 SHALL BE FED VIA 200A BREAKER INSTALLED, FOR EXAMPLE, IN THE LLVD1 SECTION OF AN ENCLOSURE 6160 DC DISTRIBUTION SUBRACK.

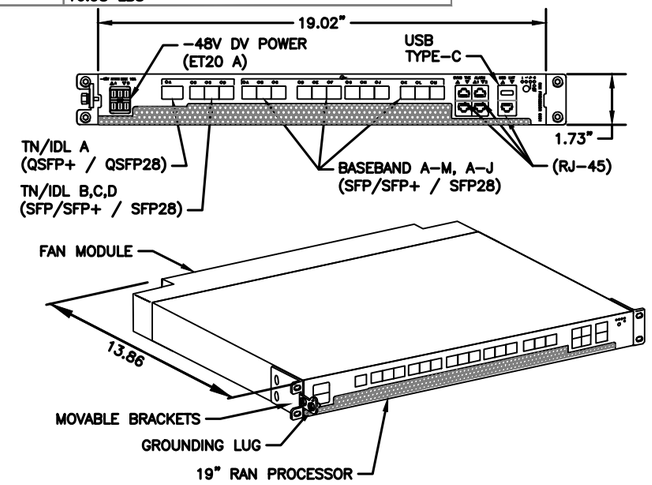
CONNECT –58 VDC DISTRIBUTION CABLE TO TERMINAL AT THE RIGHT, WHICH WILL BE FED TO RRU/AIR AT THE OTHER END.



1 SKU# 34132 - PSU 48 13

SCALE: N.T.S.

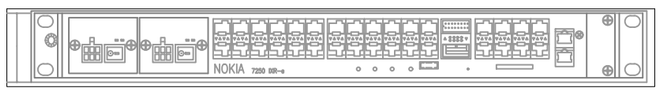
MANUFACTURER:	ERICSSON
MODEL:	6651 RAN PROCESSOR (KDU1370093/11)
DIMENSIONS:	1.73" X 19.02" X 13.86" (H" X W" X D")
WEIGHT:	16.98 LBS



2 ERICSSON 6651 RAN PROCESSOR

SCALE: N.T.S.

	NOKIA
	IXR-E MODULE
	17.25"x10.0"x1.75" (HxWxD)
	TBD



3 IXRE

VPSCALE

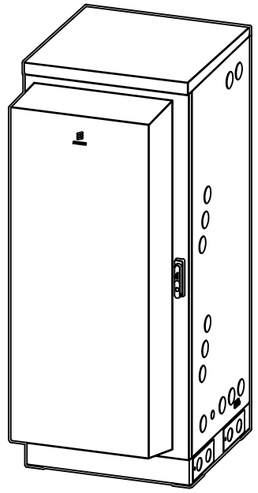
NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

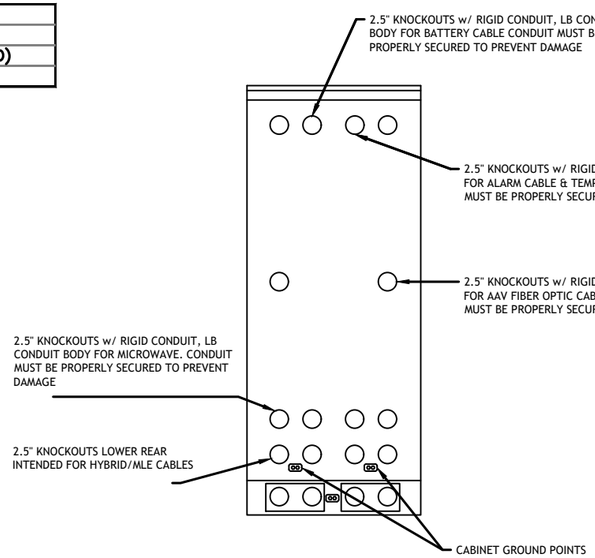
SUPPLEMENTAL

SHEET NUMBER: R-605

REVISION:

MANUFACTURER:	ERICSSON
MODEL:	6160 SITE SUPPORT CABINET
DIMENSIONS:	63" x 25.6" x 33.6" (H x W x D)
WEIGHT:	373 LBS

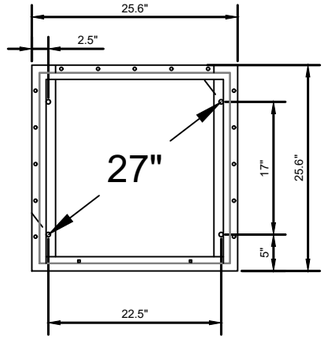




REAR VIEW

NOTE:

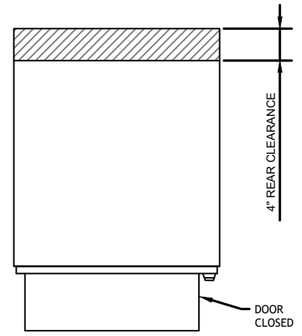
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING

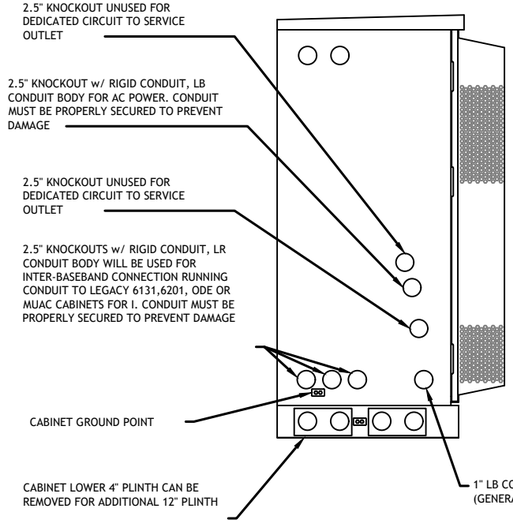


BOLT DOWN PATTERN

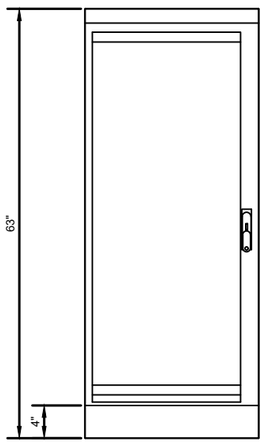
GROUNDING NOTE:

"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."

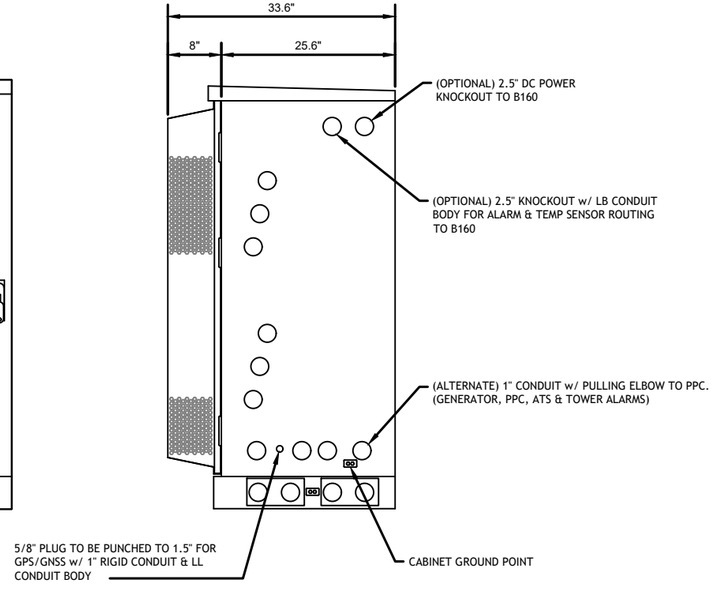




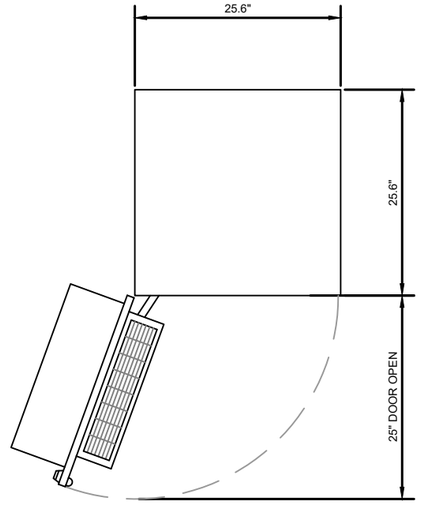
LEFT VIEW



FRONT VIEW



RIGHT VIEW



PLAN VIEW

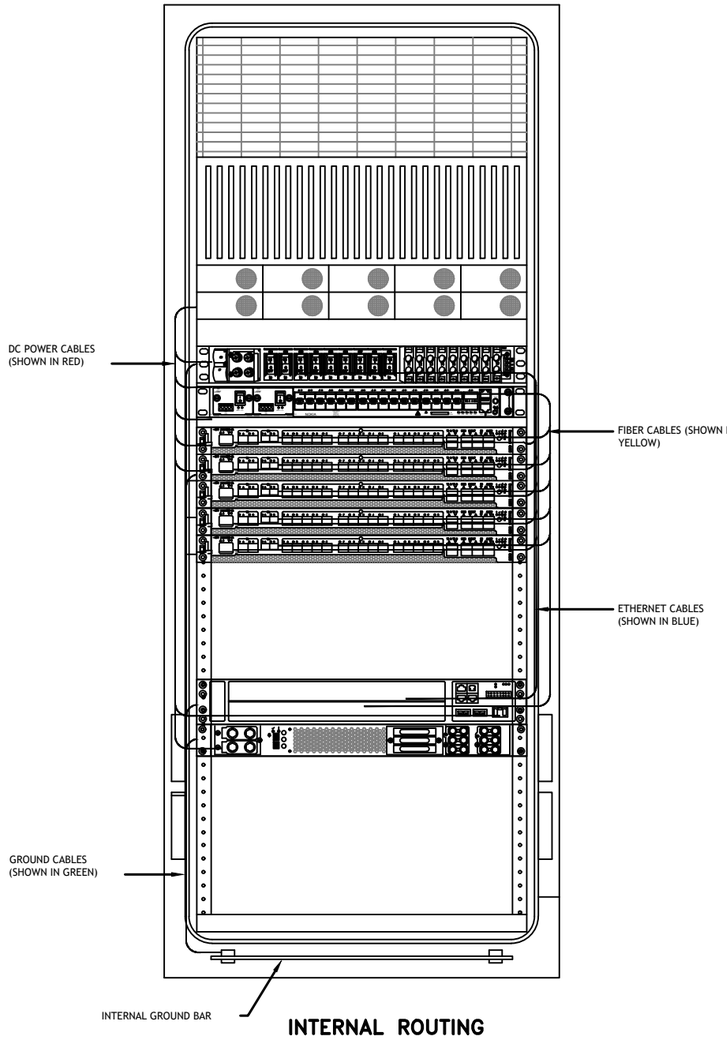
1 ERICSSON 6160 SITE SUPPORT CABINET SPECIFICATIONS

SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

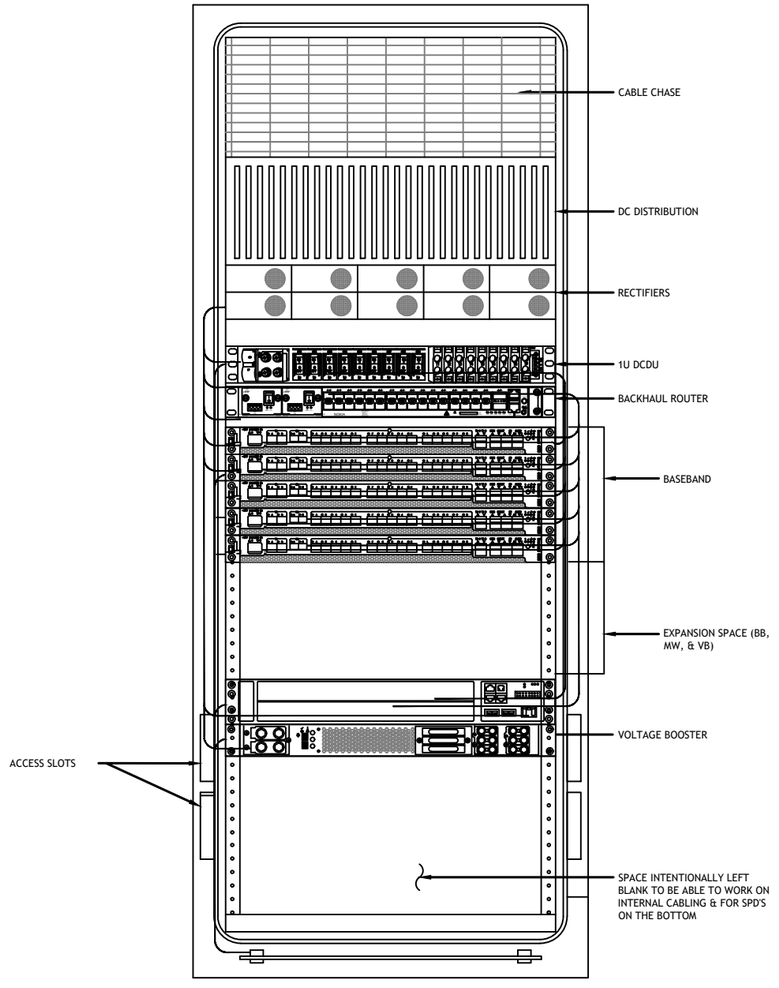
SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-606	



INTERNAL ROUTING
(DOOR OPEN)

RACK ASSIGNMENTS	
RU SLOTS	DESCRIPTION
1	DC DISTRIBUTION
2	
3	
4	
5	RECTIFIER SHELF
6	
7	FIBER BOX
8	DCDU
9	BACKHAUL ROUTER
10	
11	1ST BASEBAND
12	2ND BASEBAND
13	3RD BASEBAND
14	4TH BASEBAND
15	5TH BASEBAND
16	EXPANSION
17	
18	
19	
20	EXPANSION / LEGACY BASEBAND / VOLTAGE BOOSTER
21	
22	VOLTAGE BOOSTER
23	OPEN SPACE FOR SPD ACCESS
24	
25	



FRONT VIEW
(DOOR OPEN)

1 ERICSSON 6160 CABINET DETAILS

SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

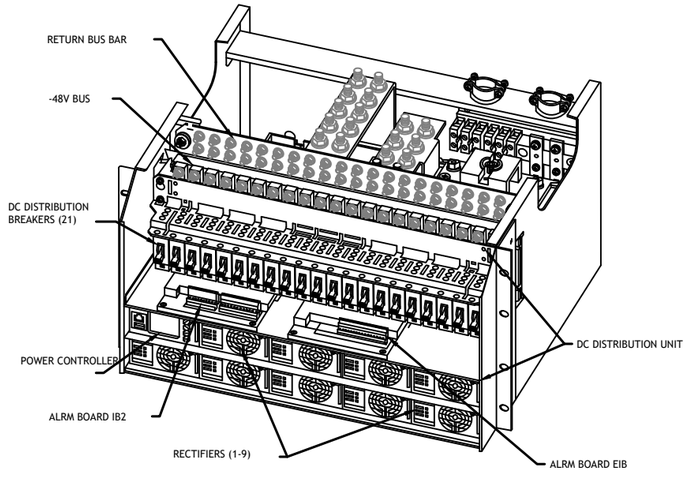
SUPPLEMENTAL

SHEET NUMBER: R-607

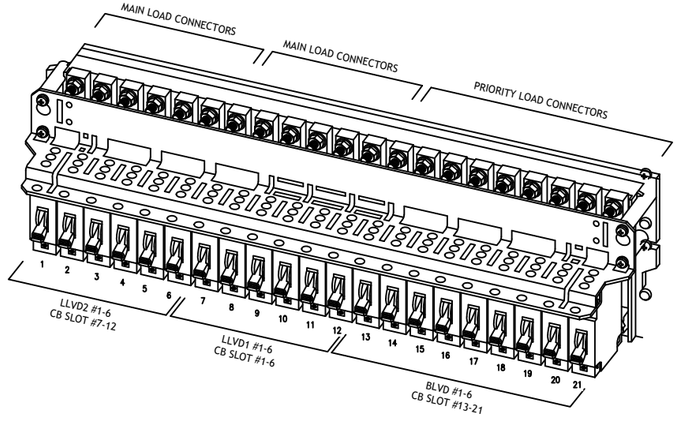
REVISION:

NOTE:
THIS IS FOR REFERENCE ONLY, CHECK FOR SPECIFIC DETAIL IN T–MOBILE CABINET SPECIFIC INSTALLATION GUIDES

Breaker Allocation for E6160					
CB SLOT	Ckt #		w/ DCDU Prior to availability of the 4460 and 4480	w/ DCDU Later Design Post-4460 and Post-4480	w/ DCDU 4 and 6 Sector designs
1	LVD1 47.0V	1	Router PS-2*/Future		Radio 4460 B25/66 ζ-1
2		2	Future		Radio 4460 B25/66 ζ-2
3		3	PSU 4813 feeding B25/66 α, β and γ (AIR 1641s)		PSU 4813 feeding B41-δ & B71/12-δ (Air 6449s and Radio 4480s)
4		4			
5		5	PSU 4813 feeding B41 α, β and γ (Air 6449s)		
6		6			
7	LVD2 45.1V	1	PSU 4813 feeding B71/12 α, β and γ (Radio 4449s)	PSU 4813 feeding B71/12 α, β and γ (Radio 4480s)	
8		2			
9		3	Future		Radio 4460 B25/66 δ-1
10		4	Future		Radio 4460 B25/66 δ-2
11		5	Future		Radio 4460 B25/66 ε-1
12		6	Future		Radio 4460 B25/66 ε-2
13	BLVD 43.2V	1	Router PS-1		
14		2	Radio 4415 B25/66 α	Radio 4460 B25/66 α-1	
15		3	Radio 4415 B25/66 β	Radio 4460 B25/66 α-2	
16		4	Radio 4415 B25/66 γ	Radio 4460 B25/66 β-1	
17		5	PSU 4813 feeding B2/25 α, β and γ (Radio 4424s)	Radio 4460 B25/66 β-2	
18		6		Radio 4460 B25/66 γ-1	
19		7	Future	Radio 4460 B25/66 γ-2	
20		8	DCDU		
21		9	AAV		
Sector Identification α = Alpha, β = Beta, γ = Gamma, δ = Delta, ε = Epsilon, ζ = Zeta					



POWER SUBRACK



DC DISTRIBUTION

1 ERICSSON 6160 ELECTRICAL DETAILS

SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

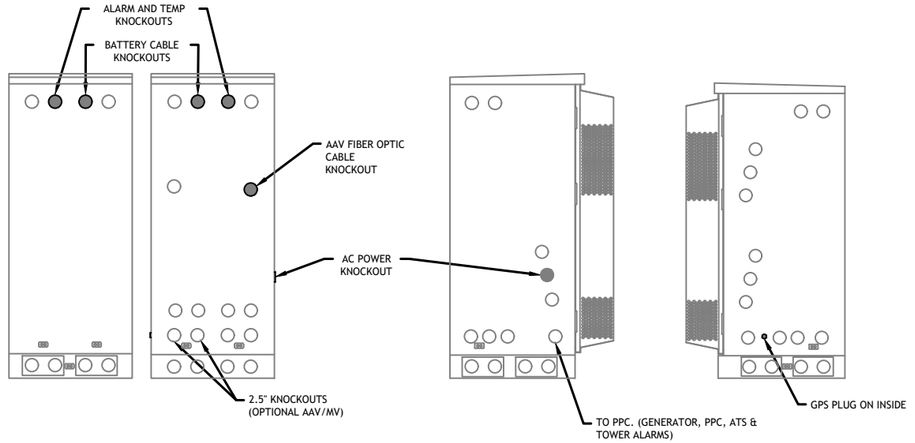
SUPPLEMENTAL

SHEET NUMBER: R-608

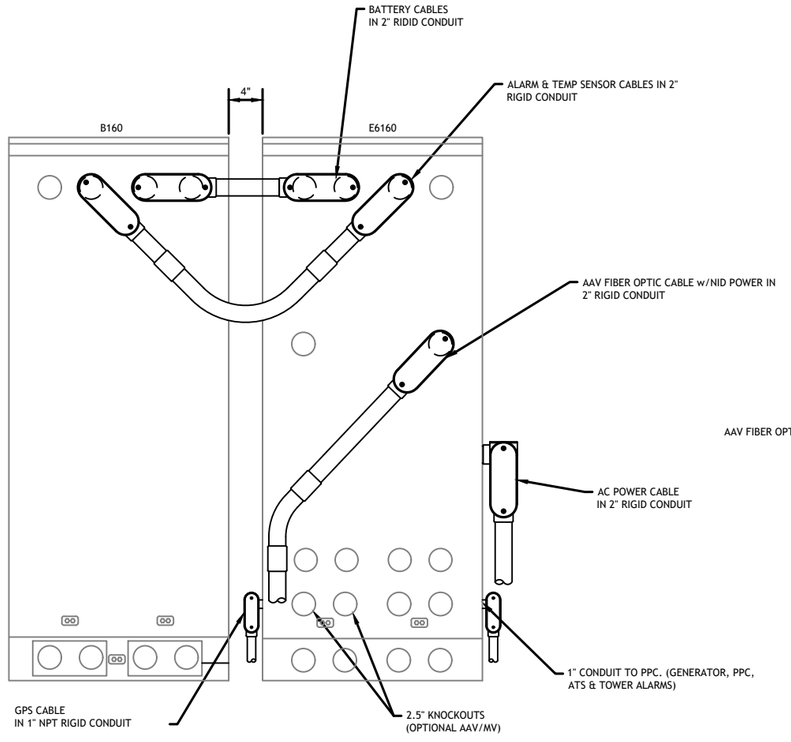
REVISION:

NOTE:

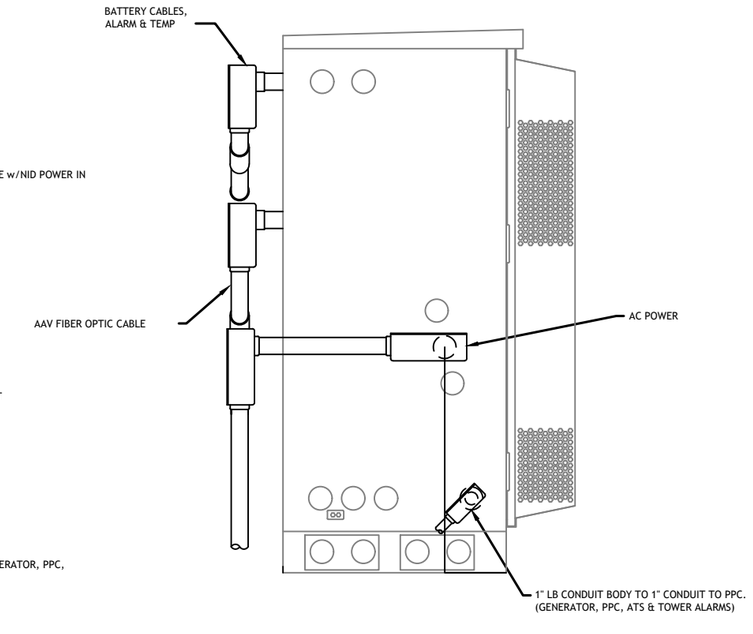
1. ALL CONDUIT AND FITTING ENTRANCES INTO CABINETS AND ENCLOSURES MUST UTILIZE MYERS OR EQUIVALENT HUBS OR SEALING WASHERS TO PREVENT WATER ENTRY/SEEPAGE INTO CABINETS AND ENCLOSURES.
2. (LIQUIDFLEX) FLEXIBLE METALLIC CONDUIT (LFMC) & ASSOCIATED FITTINGS CAN BE USED AS NEEDED BUT ONLY FOR TIGHT CONDUIT BENDS AND RUNS SUBJECT TO UL AND NEC LIMITATIONS. 6' MAX PER CONDUIT RUN.
3. POWER CONDUIT BODY ATTACHED WITH SHORT NIPPLE AND SEALING WASHER INSIDE & OUT. (FOR DOOR HOOD CLEARANCE)
4. PULLING ELBOWS MAY BE USED IN LIEU OF A CONDUIT BODIES WHEN CLEARANCE IS LIMITED.
5. ALL EXTERNAL ALARM CONDUITS ARE TOO TERMINATE AT THE PPC WITH A SINGLE 1" ALARM CONDUIT TO THE 6160.
6. (DO NOT USE CHASE NIPPLES) CONDUIT SHOULD HAVE SEALING WASHERS INSIDE AND OUT w/ LOCK NUT AND CAP.



CONDUIT LOCATIONS



REAR VIEW



SIDE VIEW

1 ERICSSON 6160/B160 CONDUIT ROUTING DETAILS

SCALE: N.T.S.

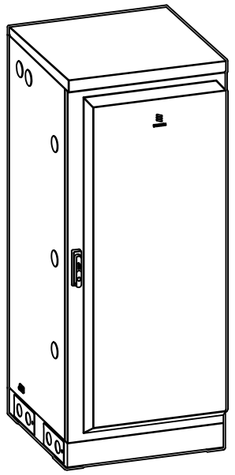
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

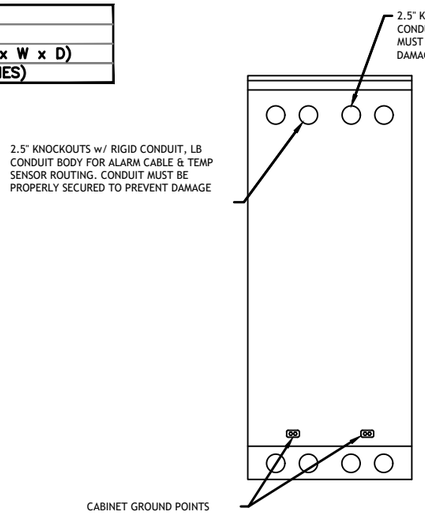
SUPPLEMENTAL

SHEET NUMBER: R-609

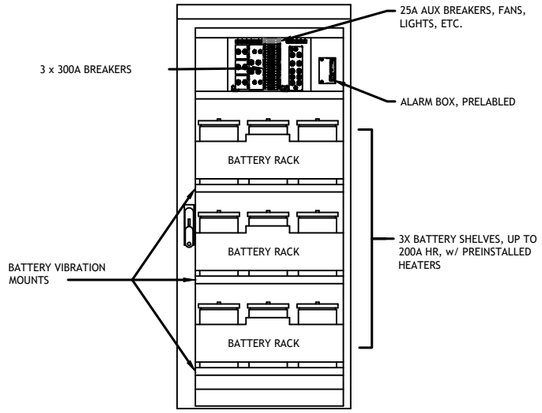
REVISION:

MANUFACTURER:	ERICSSON
MODEL:	B160 BATTERY CABINET
DIMENSIONS:	63" x 25.6" x 29.5" (H x W x D)
WEIGHT:	295 LBS (WITHOUT BATTERIES)



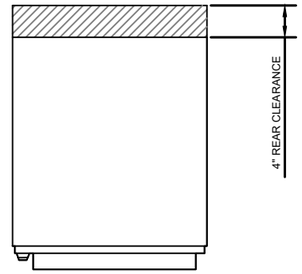


REAR VIEW



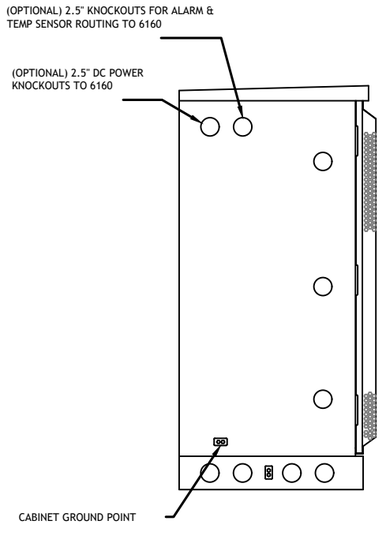
FRONT VIEW
(DOOR OPEN)

NOTE:
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING

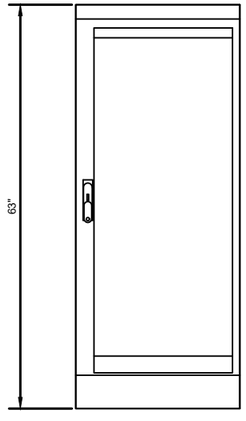


GROUNDING NOTE:

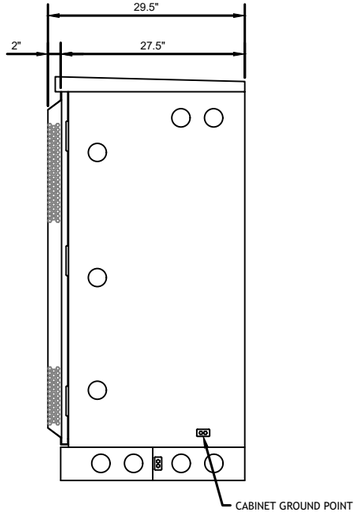
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."



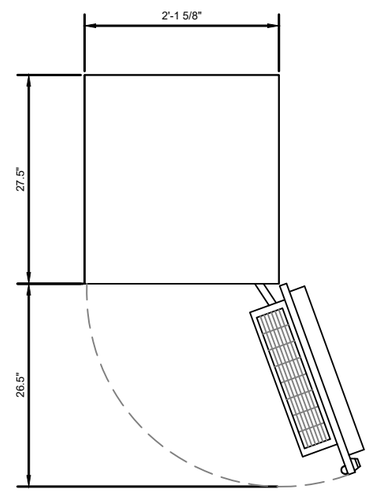
LEFT VIEW



FRONT VIEW



RIGHT VIEW



PLAN VIEW

B160 ERICSSON SITE SUPPORT BATTERY CABINET

1 ERICSSON B160 BATTERY CABINET SPECIFICATIONS

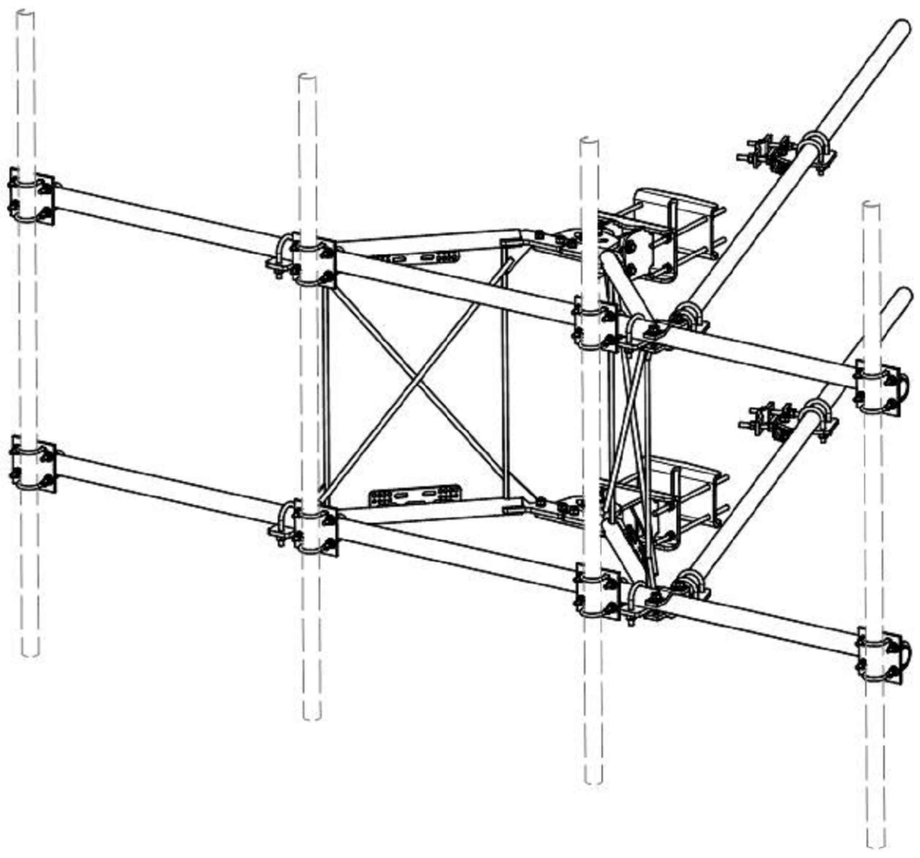
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-610

REVISION:



PARTS LIST

ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-VFAW	SUPPORT ARM		71.41	142.81
2	1	X-HDCAMTBW	CLAMP WELDMENT FOR BCAM-HD		33.86	33.86
3	1	X-MHTPHD	MULTI-HOLE TAPER PLATE WELDMENT		36.24	36.24
4	2	X-VFAPL4	VFA-HD PIVOT PLATE	12 in	15.88	31.77
5	2	X-LCBP4	BENT BACKING PLATE	13 in	19.00	38.01
6	1	X-HDCAMSS	ANGLE ADJUSTMENT WELDMENT FOR BCAM-HD		16.39	16.39
7	4	X-SPTB	SLIDING PIPE TIE BACK PLATE	5 1/2 in	5.87	23.49
8	1	X-HDCAMSP	POSITIONING PLATE WELDMENT FOR BCAM-HD		2.58	2.58
9	4	X-TBCA	TIE BACK CLIP ANGLE		2.01	8.02
10	8	SCX2	CROSSOVER PLATE	7 in	4.80	38.37
11	4	MCP	CLAMP HALF 1/2" THICK, 11-5/8" LONG	12 1/16 in	3.59	14.37
12	8	DCP	1/2" THICK, 5-3/4" CNTER TO CENTER CLAMP HALF	8 1/8 in	2.36	18.90
13	2	P2126	2-3/8" X 126" (2" SCH. 40) GALVANIZED PIPE	126 in	40.75	81.50
14	2	P30150	2-7/8" X 150" (2-1/2" SCH. 40) GALVANIZED PIPE	150 in	76.94	153.87
15	4	A34212	3/4" x 2-1/2" UNC HEX BOLT (A325)	2 1/2 in	0.48	1.92
16	4	G34FW	3/4" HDG USS FLATWASHER		0.06	0.24
17	4	G34LW	3/4" HDG LOCKWASHER		0.04	0.17
18	4	G34NUT	3/4" HDG HEAVY 2H HEX NUT		0.21	0.85
19	8	G58R-18	5/8" x 18" THREADED ROD (HDG.)	18 in	0.40	3.19
20	4	G58R-12	5/8" x 12" THREADED ROD (HDG.)		1.05	4.18
21	4	G58R-8	5/8" x 8" THREADED ROD (HDG.)		0.70	2.79
22	4	X-UB5300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	4.60
23	8	X-UB5258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	8.00
24	2	G5807	5/8" x 7" HDG HEX BOLT GR5 FULL THREAD	7 in	0.70	1.41
25	1	G5806	5/8" x 6" HDG HEX BOLT GR5 FULL THREAD	6 in	0.62	0.62
26	8	G5804	5/8" x 4" HDG HEX BOLT GR5		0.44	3.55
27	4	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.08
28	8	A582114	5/8" x 2-1/4" HDG A325 HEX BOLT	2 1/4 in	0.31	2.50
29	25	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	1.76
30	66	G58LW	5/8" HDG LOCKWASHER		0.03	1.72
31	71	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	9.22
32	32	X-UB1300	1/2" X 3" X 5" X 2" GALV U-BOLT		0.74	23.64
33	16	X-UB1212	1/2" X 2" X 3" X 1-1/4" U-BOLT (HDG.)		0.60	9.56
34	64	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	2.18
35	64	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.89
36	64	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	4.58
					TOTAL WT. #	738.06

REVISION HISTORY

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
D	UPDATED BCAM VERSION 1 TO BCAM VERSION 2		CEK	6/29/2018
C	UPDATED PIN LEG CONNECTION TO B-CAM CONNECTION		CEK	12/7/2017
B	CHANGED TIE-BACK BACK CONNECTION		CEK	7/31/2017
A	CHANGED TIE-BACK FRONT CONNECTION		CEK	2/2/2017

TOLERANCE NOTES

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BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
12' 6" HEAVY DUTY
V-FRAME ASSEMBLY
WITH TWO STIFF ARMS

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
	CEK 1/25/2017		VFA12-HD	1 OF 5
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
81 / 02	CUSTOMER	BMC 12/13/2017	VFA12-HD	

SITE PRO 1
A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations:
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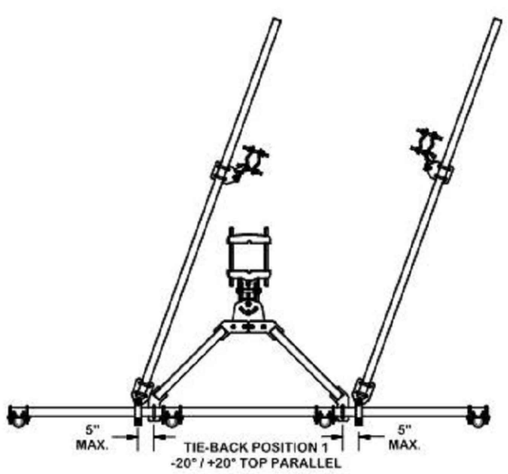
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

SUPPLEMENTAL

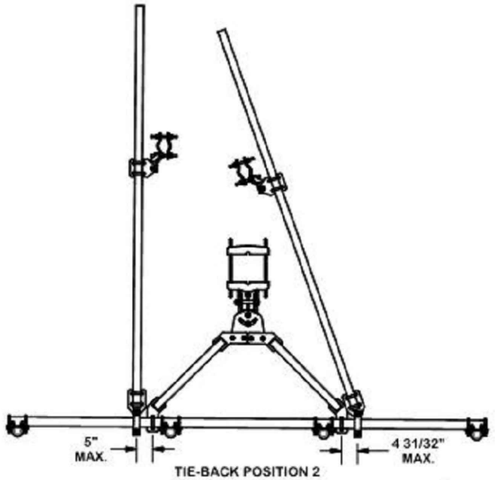
SHEET NUMBER: R-611

REVISION:

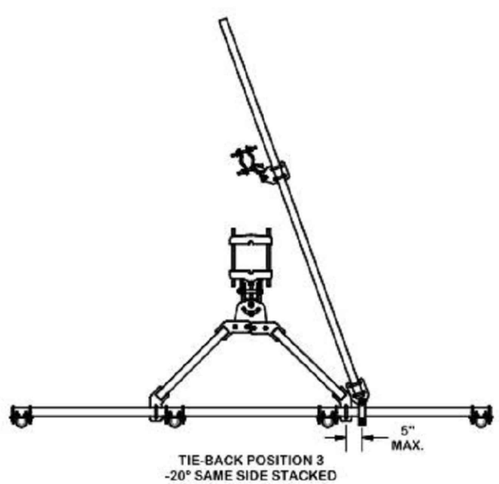
TIE-BACK POSITIONS



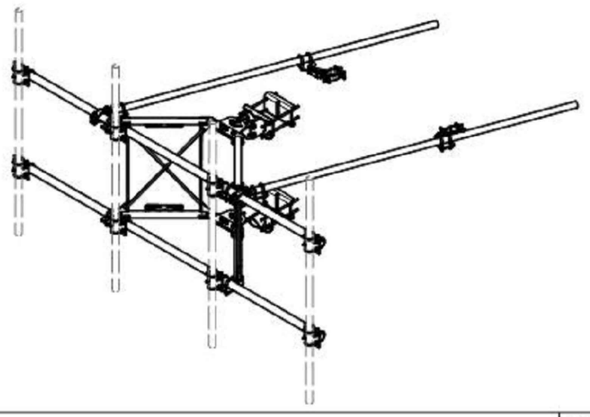
TIE-BACK POSITION 1
-20° / +20° TOP PARALLEL

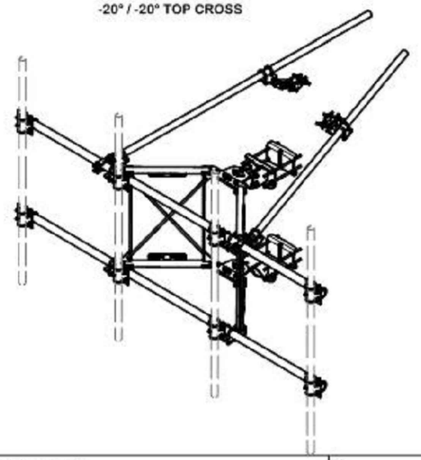


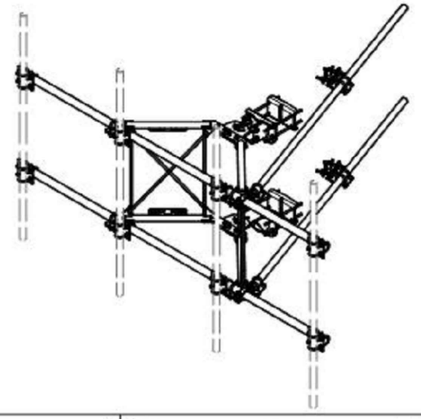
TIE-BACK POSITION 2
-20° / -20° TOP CROSS



TIE-BACK POSITION 3
-20° SAME SIDE STACKED







REVISION HISTORY				
REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
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ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
12' 6" HEAVY DUTY
V-FRAME ASSEMBLY
WITH TWO STIFF ARMS

SITE PRO 1
A valmont COMPANY

Engineering Support Team:
1-888-753-7446

Locations:
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CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
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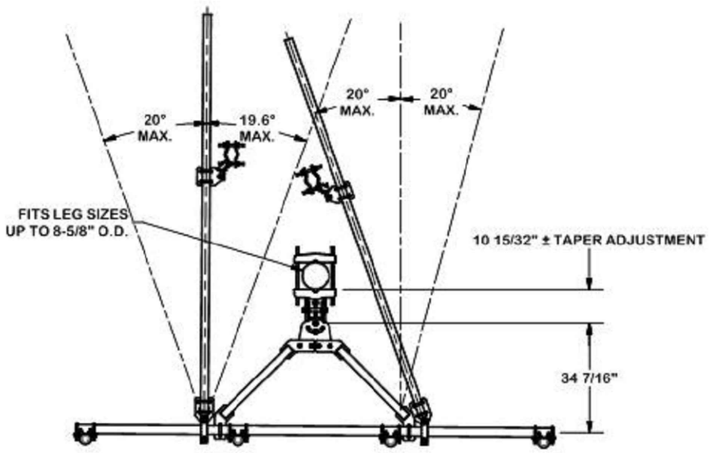
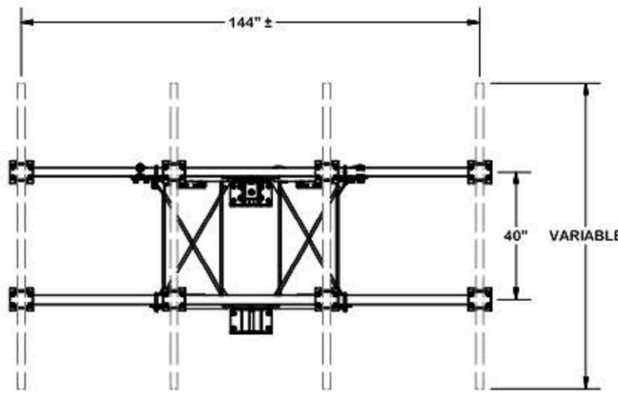
CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 12/13/2017	VFA12-HD

SUPPLEMENTAL

SHEET NUMBER: R-612

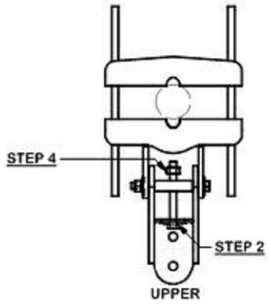
REVISION:

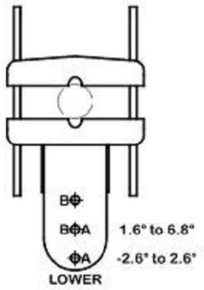


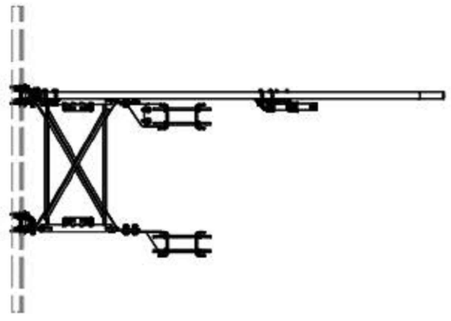


ANGLE CALIBRATING PROCEDURE:

1. MEASURE TOWER TAPER AND PICK LOWER BRACKET HOLE:
   - HOLE A = -2.6° TO 2.6°
   - HOLE B = 1.6° TO 6.8°
2. USE CALIBRATING BOLT TO ADJUST FRAME TO DESIRED TAPER
3. TORQUE LOCKING BOLTS TO 100 ft.-lbs.
4. ADVANCE LOCKING NUT TO POSITIONING PLATE, THEN TIGHTEN.







REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			
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ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION			
12' 6" HEAVY DUTY V-FRAME ASSEMBLY WITH TWO STIFF ARMS			
CPD NO.	DRAWN BY: CEK 1/25/2017	ENG. APPROVAL	PART NO.: VFA12-HD
CLASS: 81 / SUB: 02	DRAWING USAGE: CUSTOMER	CHECKED BY: BMC 12/13/2017	DWG. NO.: VFA12-HD

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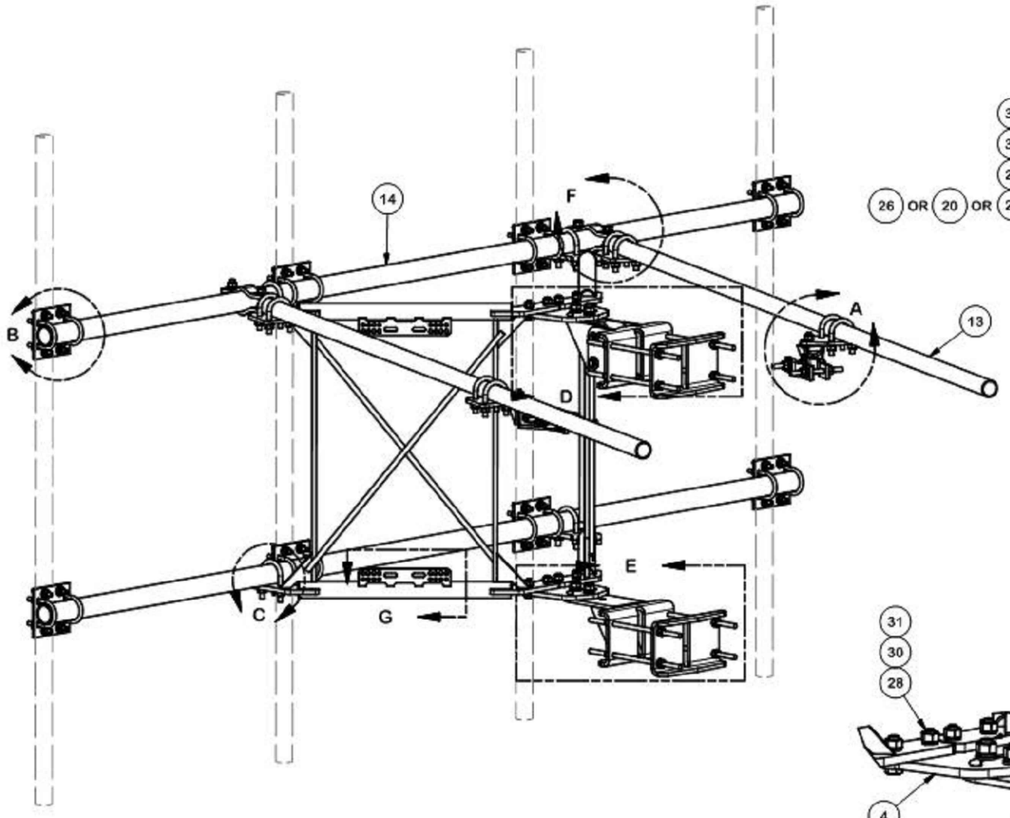
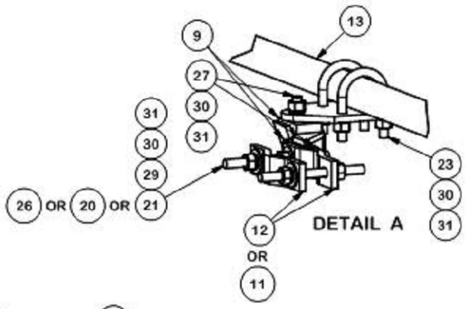
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

SUPPLEMENTAL

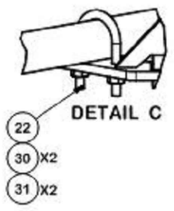
SHEET NUMBER: R-613

REVISION:

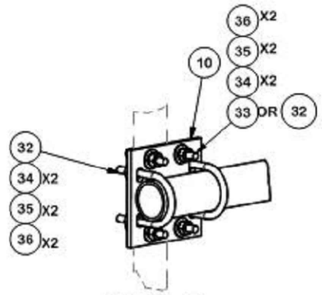




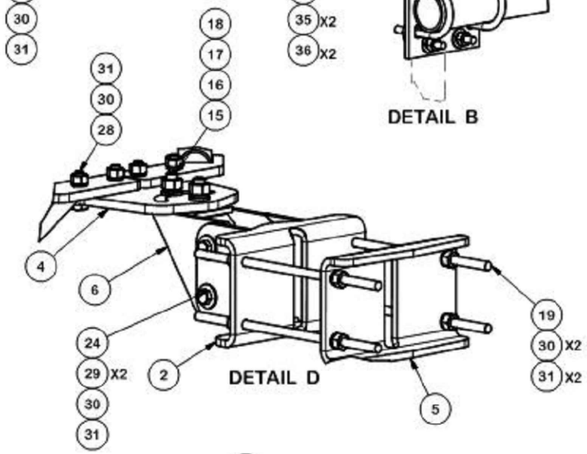
DETAIL A



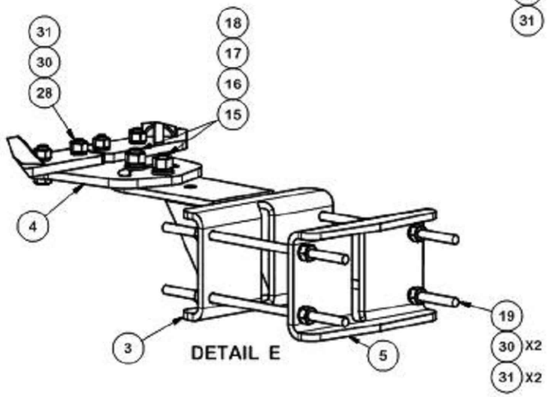
DETAIL C



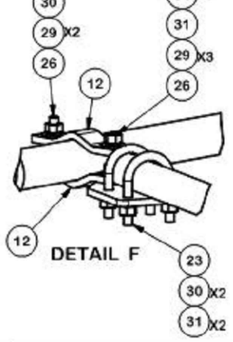
DETAIL B



DETAIL D



DETAIL E

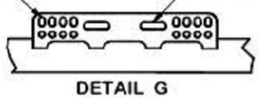


DETAIL F

7/16" LUG HOLES

REVIEW CARRIER STANDARDS FOR PROPER SURFACE PREPARTION AND ASSEMBLY OF ELECTRICAL CONNECTIONS

9/16" SLOTTED HOLE FOR EQUIPMENT PIPE U-BOLT



DETAIL G

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
D	UPDATED BCAM VERSION 1 TO BCAM VERSION 2		CEK	6/29/2018
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REVISION HISTORY

TOLERANCE NOTES

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DESCRIPTION
12' 6" HEAVY DUTY
V-FRAME ASSEMBLY
WITH TWO STIFF ARMS

SITE PRO 1 — A valmont COMPANY

Engineering Support Team: 1-888-753-7446

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CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
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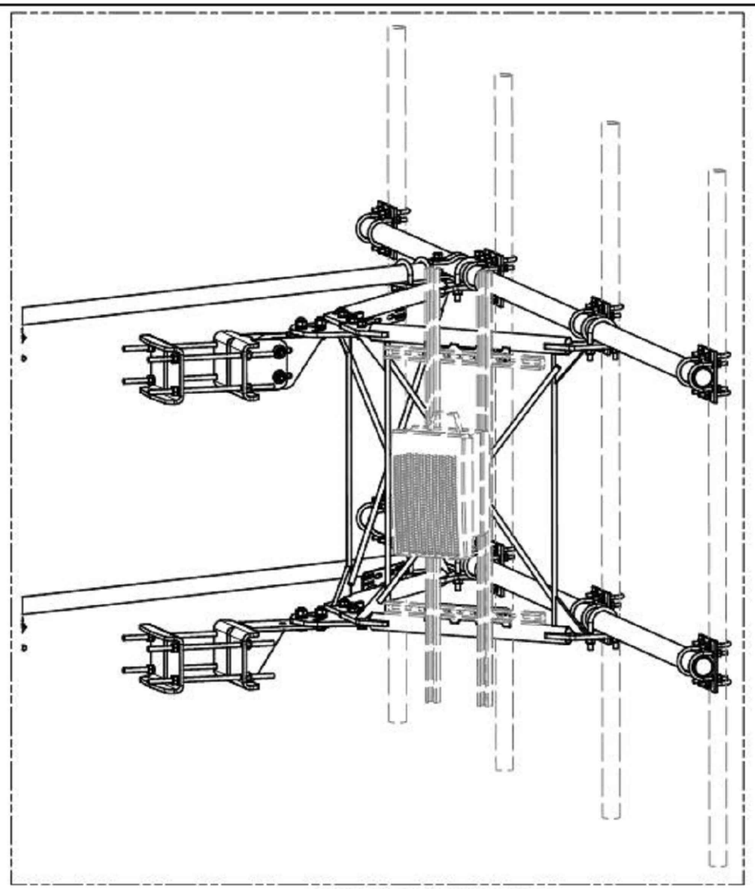
CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 12/13/2017	VFA12-HD

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

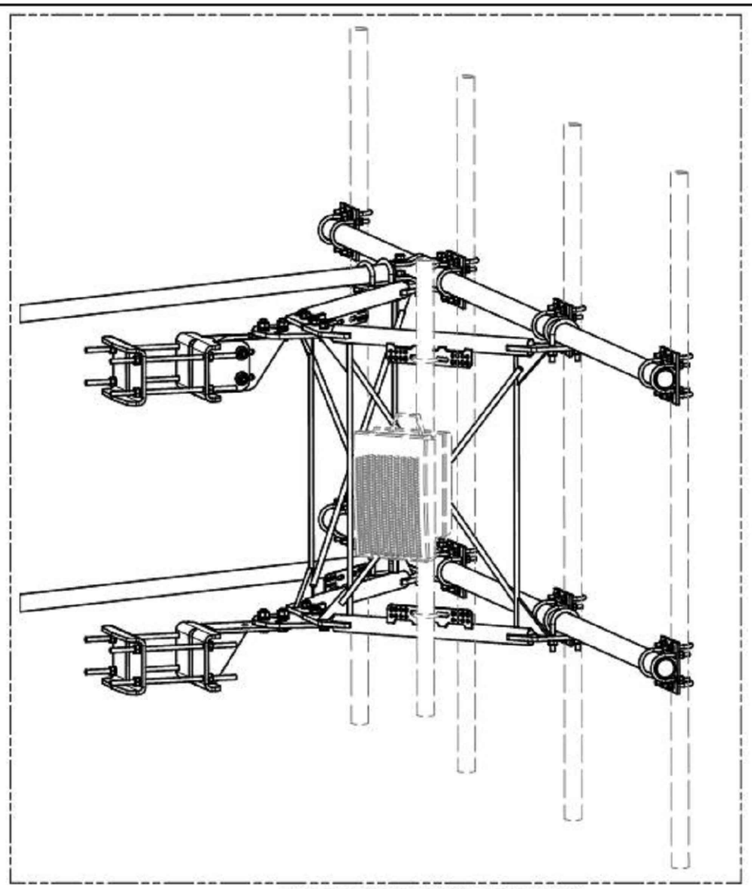
SHEET NUMBER: R-614

REVISION:



UNISTRUT AND HARDWARE
SOLD SEPARATELY.

REQUIRES 3/8" HARDWARE



EQUIPMENT PIPE AND HARDWARE
SOLD SEPARATELY.

REQUIRES 1/2" HARDWARE
AND 2-3/8" TO 4-1/2" O.D. PIPE

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
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V-FRAME ASSEMBLY
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CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
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CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 12/13/2017	VFA12-HD

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SUPPLEMENTAL

SHEET NUMBER: R-615

REVISION: