



VICINITY MAP

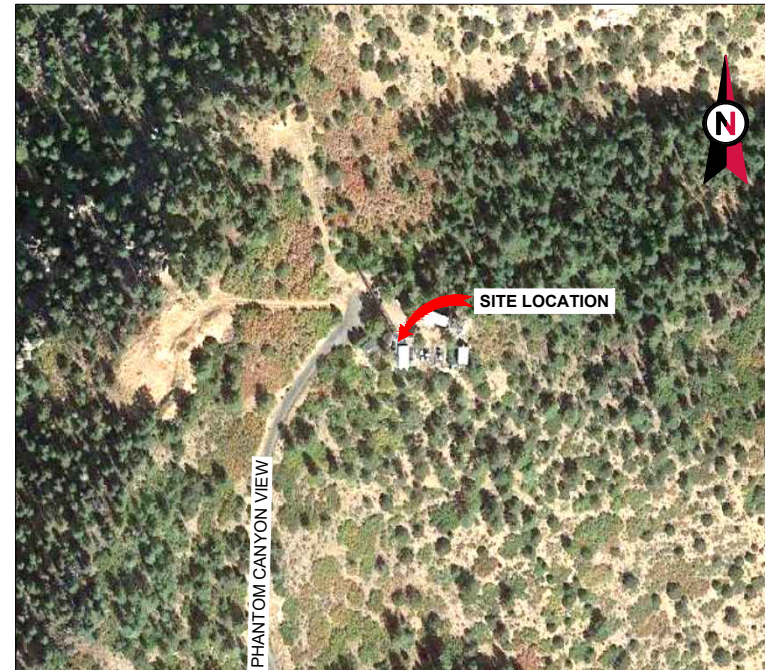
AT&T MOBILITY ANTENNA AMENDMENT PLAN



AMERICAN TOWER®

ATC SITE NAME: MORLEY 1  
 ATC SITE NUMBER: 383495  
 AT&T MOBILITY SITE ID: COL06029  
 AT&T MOBILITY FA LOCATION CODE: 10093580  
 AT&T MOBILITY SITE NAME: MOUNT PITTSBURG  
 SITE ADDRESS: 15743 PHANTOM CANYON VIEW  
 COLORADO SPRINGS, CO 80903

AT&T MOBILITY IWM JOB NUMBER  
 SITE OVERLAY.LTE.2ND CARRIER: WSUTH0032394  
 5G NR 1SR CBAND: WSUTH0032547  
 5G NR 1DR-2 SOFTWARE CARRIER: WSUTH0032475  
 5G NR 1DR-2 SOFTWARE CARRIER: WSUTH0032434  
 5G NR RRH SWAP: WSUTH0032589  
 LTE 1C RRH SWAP: WSUTH0032710  
 5G NR 1SR CBAND: WSUTH0032719



LOCATION MAP

Administrative Approved Set

Date: 12/9/2024

EPC Planning & Community Development Department

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
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. 2021 INTERNATIONAL BUILDING CODE (IBC) 2. 2020 NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 15743 PHANTOM CANYON VIEW COLORADO SPRINGS, CO 80903  COUNTY: EL PASO  <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 38.61255 LONGITUDE: -104.93483  GROUND ELEVATION: 7,924' AMSL  <u>ZONING INFORMATION:</u> JURISDICTION: EL PASO COUNTY  PARCEL ID: 7600000276	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (4) ANTENNA(S), (4) RRH(S), AND (2) TMA(S).  INSTALL (6) ANTENNA(S), (6) RRU(S), (1) SQUID(S), (1) CABLE HOISTING ANCHOR(S), (3) CABLE HOISTING GRIP(S), (3) BACK TO BACK RRU BRACKET(S), (6) PIPE MOUNT(S), (12) CROSSOVER PLATE KIT(S), (1) 0.39" (10 mm) FIBER TRUNK(S), AND (2) 0.96" (24.3 mm) 6 AWG 6 DC POWER TRUNK(S).  EXISTING (1) SQUID(S), (4) 7/8" COAX CABLE(S), (4) 1-5/8" COAX CABLE(S), (1) 0.39" (10 mm) FIBER TRUNK(S), AND (2) 0.78" (19.7 mm) 8 AWG 6 DC POWER TRUNK(S) TO REMAIN.  <u>GROUND WORK:</u> REMOVE (1) -48VDC/+24VDC POWER PLANT(S), (1) BATTERY CABINET(S), (5) RECTIFIER(S), (2) CONVERTER(S), (20) GNB MARATHON M12V155FT BATTER(IES), (1) DC12(S), AND (2) NOKIA FSM4 BBU(S).	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u>  <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801  <u>ENGINEER:</u> TEP 326 TRYON RD RALEIGH, NC 27603  <u>APPLICANT:</u> AT&T MOBILITY  <u>PROPERTY OWNER:</u> Z INVESTMENTS LLC PO BOX 50005 COLORADO SPRINGS, CO 80949-0005	INSTALL (1) VERTIV NETSURE 5100 -48VDC/+24VDC POWER PLANT(S), (1) PURCELL FLX42 CABINET(S), (8) -48VDC RECTIFIER(S), (1) VERTIV CONVERTER SHELF(VES), (6) -48VDC/-58VDC CONVERTER(S), (2) -48VDC/+24VDC CONVERTER(S), (12) ENERSYS POWERSAFE SBS-190F BATTER(IES), (1) DC12-48-60-0-25E(S), (3) 50A AIR6419 B77G DC BREAKER(S), (3) 50A AIR6419 B77D DC BREAKER(S), (3) 50A 4890 B25/B66 DC BREAKER(S), (3) 25A 4478 B14 DC BREAKER(S), (1) 100A FLX FEED BREAKER(S), (2) 250A +24V CONV FEED DC BREAKER(S), (2) 15A 6651 BBU DC BREAKER(S), (1) 25A 6601 DC BREAKER(S), (1) 6651 BBU(S), AND (1) 6601 SITE CONTROLLER(S).	G-001	TITLE SHEET	0	11/20/24	CAM
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).	<u>PROJECT LOCATION DIRECTIONS</u>  OBEY ALL SPEED LIMITS AT ALL TIMES AS THERE ARE HIDDEN DRIVEWAYS AND BLIND CURVES ALONG THE ROAD TURN RIGHT ONTO TURKEY CANON RANCH ROAD FROM HWY 115 1.3 MILES TURN LEFT ONTO HENRY RIDE HTS 1.3 MILES YOU WILL COME TO GATE, PUNCH IN COMBO PROVIDED BY ATC 1.9 MILES TURN RIGHT ONTO PHANTOM CANYON VW .5 MILES TO TOWERS AT THE TOP.	<u>UTILITY COMPANIES</u>  POWER COMPANY: BLACK HILLS CORPORATION PHONE: (888) 890-5554  TELEPHONE COMPANY: CENTURYLINK PHONE: (866) 642-0400	G-002	GENERAL NOTES	0	11/20/24	CAM
			C-001	OVERALL SITE PLAN	0	11/20/24	CAM
			C-101	DETAILED SITE PLAN	0	11/20/24	CAM
			C-102	DETAILED EQUIPMENT LAYOUT	0	11/20/24	CAM
			C-201	TOWER ELEVATION	0	11/20/24	CAM
			C-401	ANTENNA INSTALLATION	0	11/20/24	CAM
			C-402	ANTENNA SCHEDULE	0	11/20/24	CAM
			C-501	CONSTRUCTION DETAILS	0	11/20/24	CAM
			E-101	ELECTRICAL PANELS	0	11/20/24	CAM
			E-102	ONE-LINE DIAGRAM	0	11/20/24	CAM
			E-103	GROUNDING PLAN	0	11/20/24	CAM
			E-501	GROUNDING DETAILS	0	11/20/24	CAM
			R-601 - R-615	SUPPLEMENTAL			

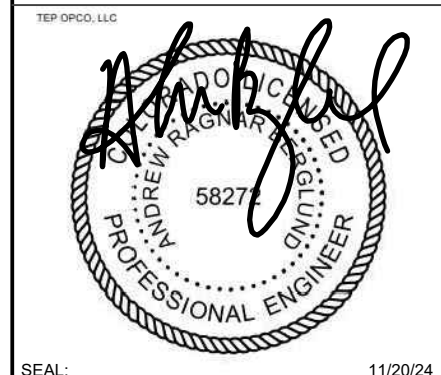


PLANS PREPARED BY:  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
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O	CONSTRUCTION	CAM	11/20/24

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DATE DRAWN:	11/20/24
ATC JOB NO:	14758439
CUSTOMER NAME:	MOUNT PITTSBURG
CUSTOMER ID:	COL06029

TITLE SHEET	
SHEET NUMBER: <b>G-001</b>	REVISION: <b>0</b>



**GENERAL CONSTRUCTION NOTES:**

1. OWNER FURNISHED MATERIALS, AT&T MOBILITY "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 AT&T MOBILITY 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 AT&T MOBILITY REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE AT&T MOBILITY REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE AT&T MOBILITY 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 AT&T MOBILITY 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 AT&T MOBILITY 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 AT&T MOBILITY 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 AT&T MOBILITY 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 AT&T MOBILITY REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY AT&T MOBILITY MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
  23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T MOBILITY SPECIFICATIONS AND REQUIREMENTS.
  24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO AT&T MOBILITY FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
  25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T MOBILITY 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 AT&T MOBILITY 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. WHEN THE PROJECT SCOPE REQUIRES THE USE OF THE SAFETY CLIMB, THE GENERAL CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS FREE OF OBSTRUCTIONS, NOT RUBBING ON OR TRAPPED BY ANY INSTALLED CUSTOMER EQUIPMENT. IS VISUALLY TAUT, MEETS MANUFACTURER INSTALLATION SPECIFICATIONS, AND IS FIRMLY SECURED AT ALL CABLE GUIDE LOCATIONS UPON PROJECT COMPLETION.
  29. COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.
  30. 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.
  31. 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 NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE 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.
  32. 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 AT&T MOBILITY REP. ANY WORK FOUND BY THE AT&T MOBILITY REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
  33. 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.
  34. AT&T MOBILITY FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE AT&T MOBILITY 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.
  35. AT&T MOBILITY 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 AT&T MOBILITY OR THEIR ARCHITECT/ENGINEER.

**SPECIAL CONSTRUCTION**

**ANTENNA INSTALLATION NOTES:**

1. WORK INCLUDED:
  - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY AT&T MOBILITY 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 AT&T MOBILITY SPECIFICATIONS.
  - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
  - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
  - 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)

**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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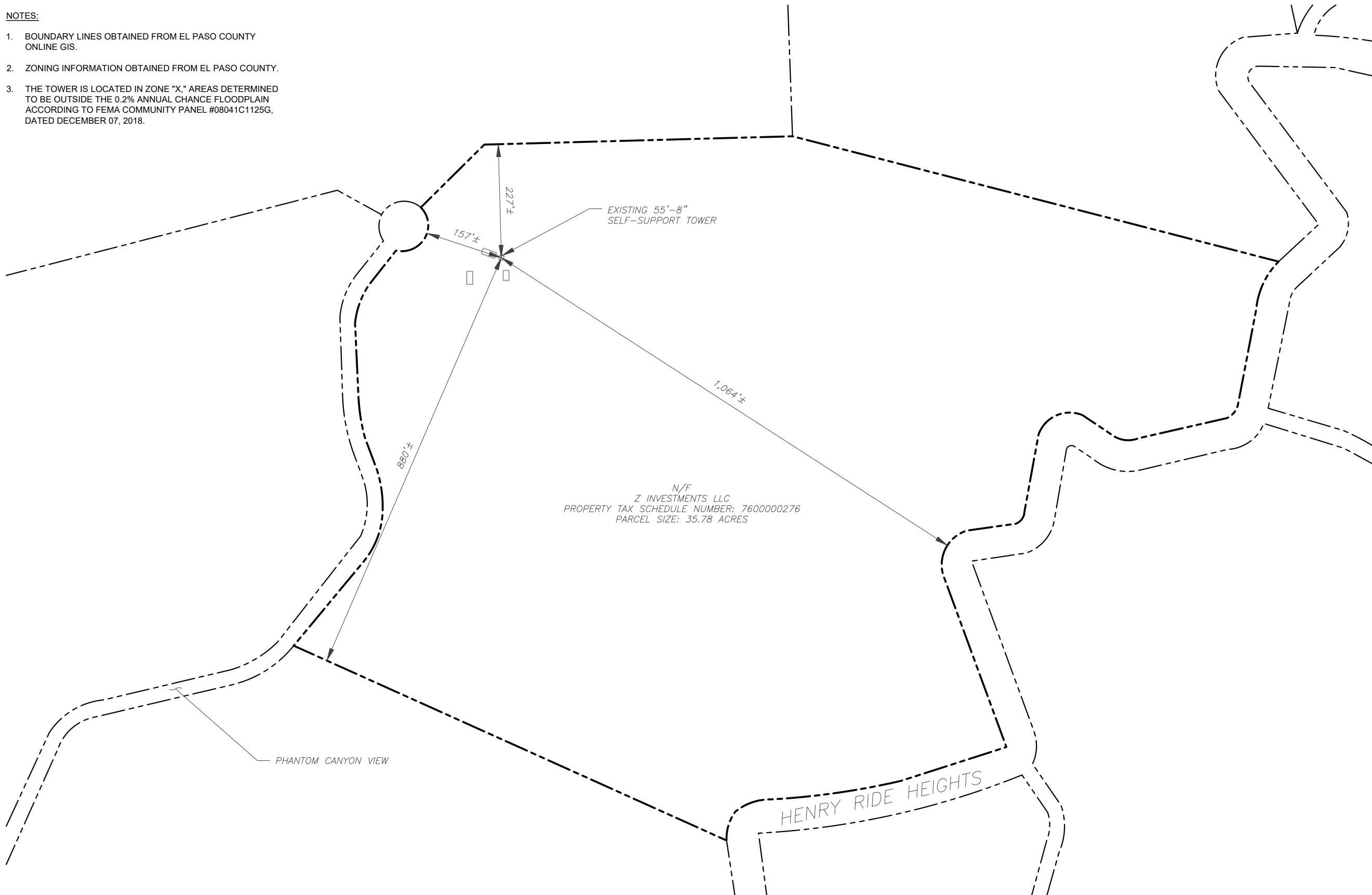
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ATC JOB NO:	14758439
CUSTOMER NAME:	MOUNT PITTSBURG
CUSTOMER ID:	COL06029

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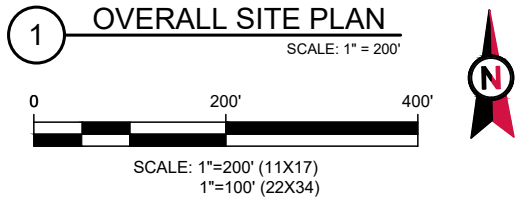
SHEET NUMBER: <b>G-002</b>	REVISION: <b>0</b>
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**NOTES:**

- BOUNDARY LINES OBTAINED FROM EL PASO COUNTY ONLINE GIS.
- ZONING INFORMATION OBTAINED FROM EL PASO COUNTY.
- THE TOWER IS LOCATED IN ZONE "X." AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #08041C1125G, DATED DECEMBER 07, 2018.



LEGEND	
	EXISTING PROPERTY LINE
	EXISTING ADJACENT PROPERTY LINE
	EXISTING LEASE AREA



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TEP OPCO, LLC

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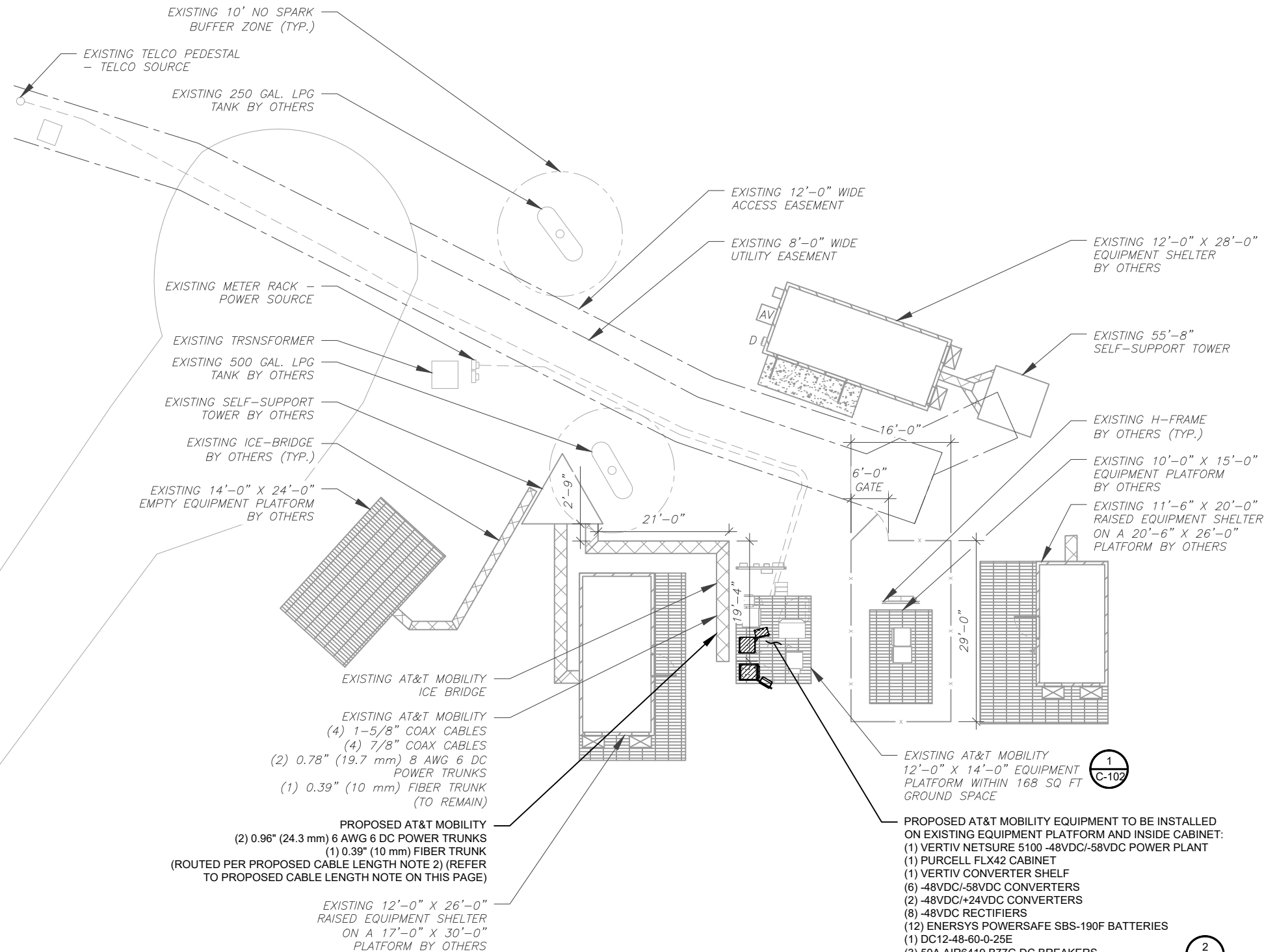
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OVERALL SITE PLAN

SHEET NUMBER: <b>C-001</b>	REVISION: <b>0</b>
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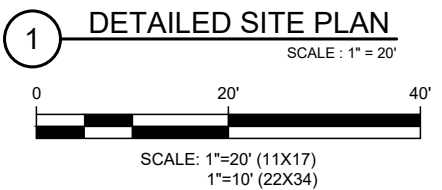
**SITE PLAN NOTES:**

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. THIS CONSTRUCTION DRAWING SET IS NOT INTENDED TO REPRESENT ANY ELECTRICAL DESIGN OTHER THAN THE GROUNDING SHOWN, OR TO BE USED TO OBTAIN AN ELECTRICAL PERMIT. AN ELECTRICAL PERMIT IS REQUIRED TO WIRE UP THE PROPOSED EQUIPMENT. ANY ELECTRICAL UPGRADES WILL BE ENGINEERED AND PERMITTED IN A SEPARATE CONSTRUCTION DRAWING SET.



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 **225'**. 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).



PLANS PREPARED BY:  
**TEP**  
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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SDD	11/01/24
B	CONSTRUCTION	CAM	11/20/24

ATC SITE NUMBER: 383495  
 ATC SITE NAME: MORLEY 1  
 AT&T MOBILITY SITE NUMBER: COL06029  
 AT&T MOBILITY SITE NAME: MOUNT PITTSBURG  
 SITE ADDRESS: 15743 PHANTOM CANYON VIEW  
 COLORADO SPRINGS, CO 80903



SEAL: 11/20/24

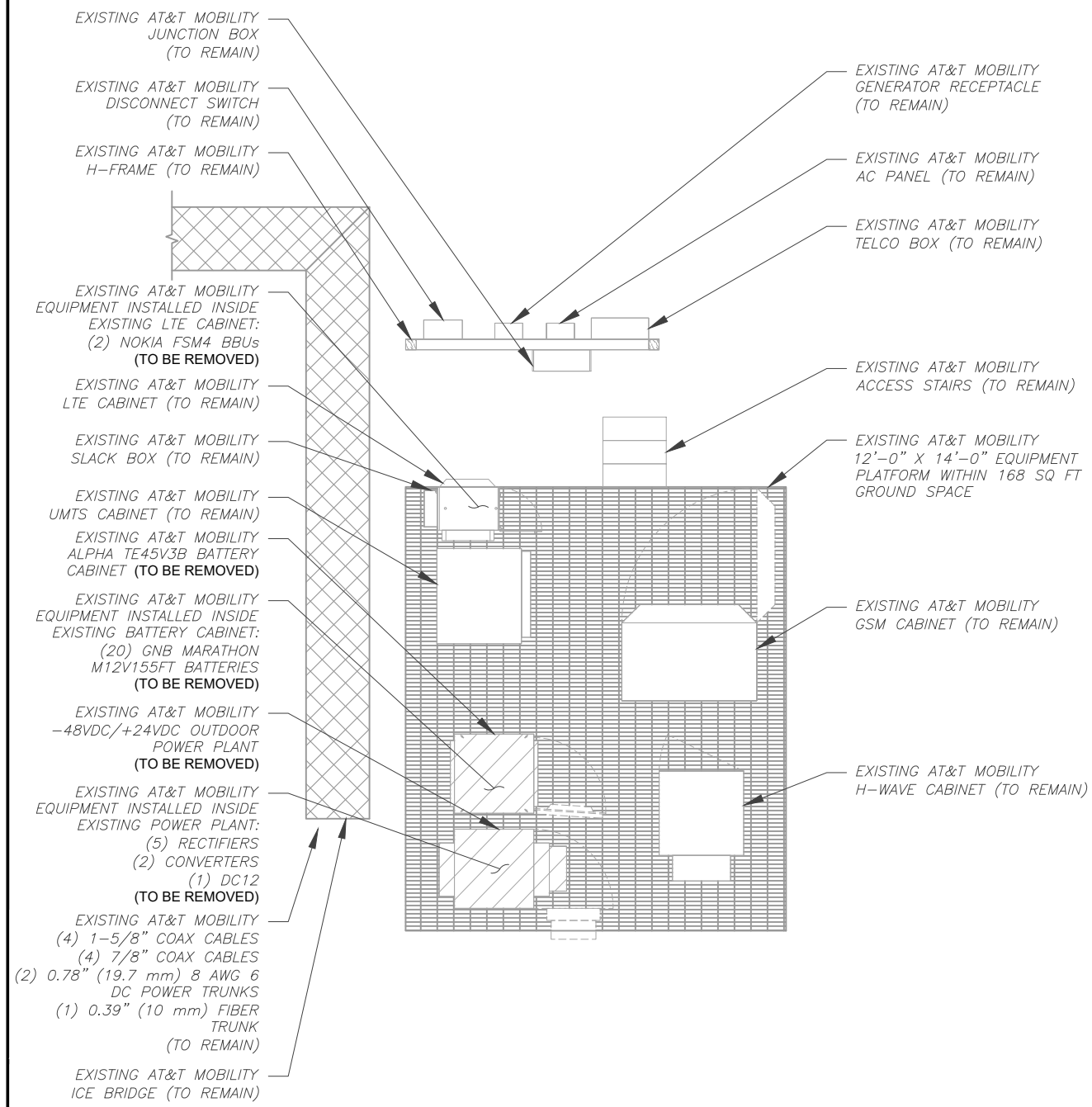
DATE DRAWN:	11/20/24
ATC JOB NO:	14758439
CUSTOMER NAME:	MOUNT PITTSBURG
CUSTOMER ID:	COL06029

<b>DETAILED SITE PLAN</b>	
SHEET NUMBER: <b>C-101</b>	REVISION: <b>0</b>

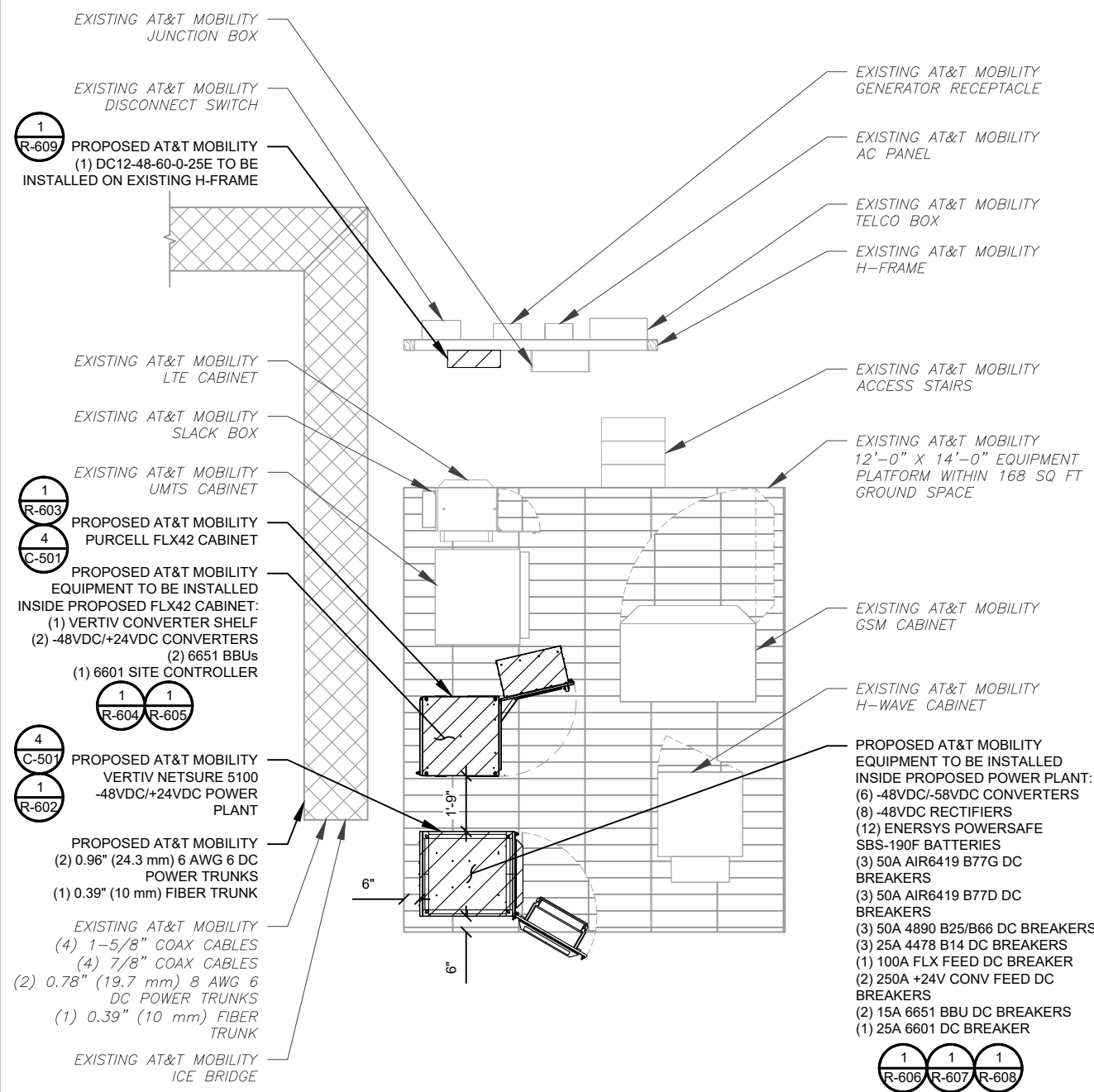
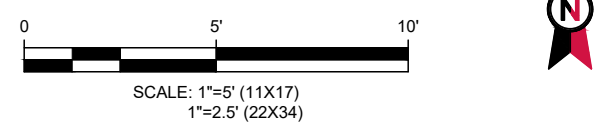
- PROPOSED AT&T MOBILITY EQUIPMENT TO BE INSTALLED ON EXISTING EQUIPMENT PLATFORM AND INSIDE CABINET:**
- (1) VERTIV NETSURE 5100 -48VDC/-58VDC POWER PLANT
  - (1) PURCELL FLX42 CABINET
  - (1) VERTIV CONVERTER SHELF
  - (6) -48VDC/-58VDC CONVERTERS
  - (2) -48VDC/+24VDC CONVERTERS
  - (8) -48VDC RECTIFIERS
  - (12) ENERSYS POWERSAFE SBS-190F BATTERIES
  - (1) DC12-48-60-0-25E
  - (3) 50A AIR6419 B77G DC BREAKERS
  - (3) 50A AIR6419 B77D DC BREAKERS
  - (3) 50A 4890 B25/B66 DC BREAKERS
  - (3) 25A 4478 B14 DC BREAKERS
  - (1) 100A FLX FEED DC BREAKER
  - (2) 250A +24V CONV FEED DC BREAKERS
  - (2) 15A 6651 BBU DC BREAKERS
  - (1) 25A 6601 DC BREAKER
  - (2) 6651 BBUs
  - (1) 6601 SITE CONTROLLER

1  
C-102

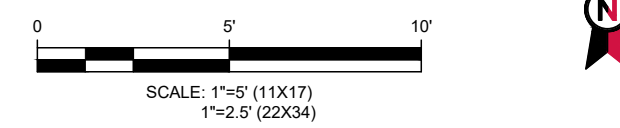
2  
C-102



1 EXISTING DETAILED EQUIPMENT LAYOUT SCALE: 1" = 5'



2 PROPOSED DETAILED EQUIPMENT LAYOUT SCALE: 1" = 5'

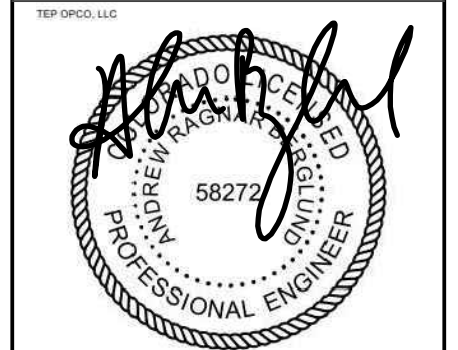


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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SDD	11/01/24
O	CONSTRUCTION	CAM	11/20/24

ATC SITE NUMBER: 383495  
 ATC SITE NAME: MORLEY 1  
 AT&T MOBILITY SITE NUMBER: COL06029  
 AT&T MOBILITY SITE NAME: MOUNT PITTSBURG  
 SITE ADDRESS: 15743 PHANTOM CANYON VIEW COLORADO SPRINGS, CO 80903



SEAL: 11/20/24

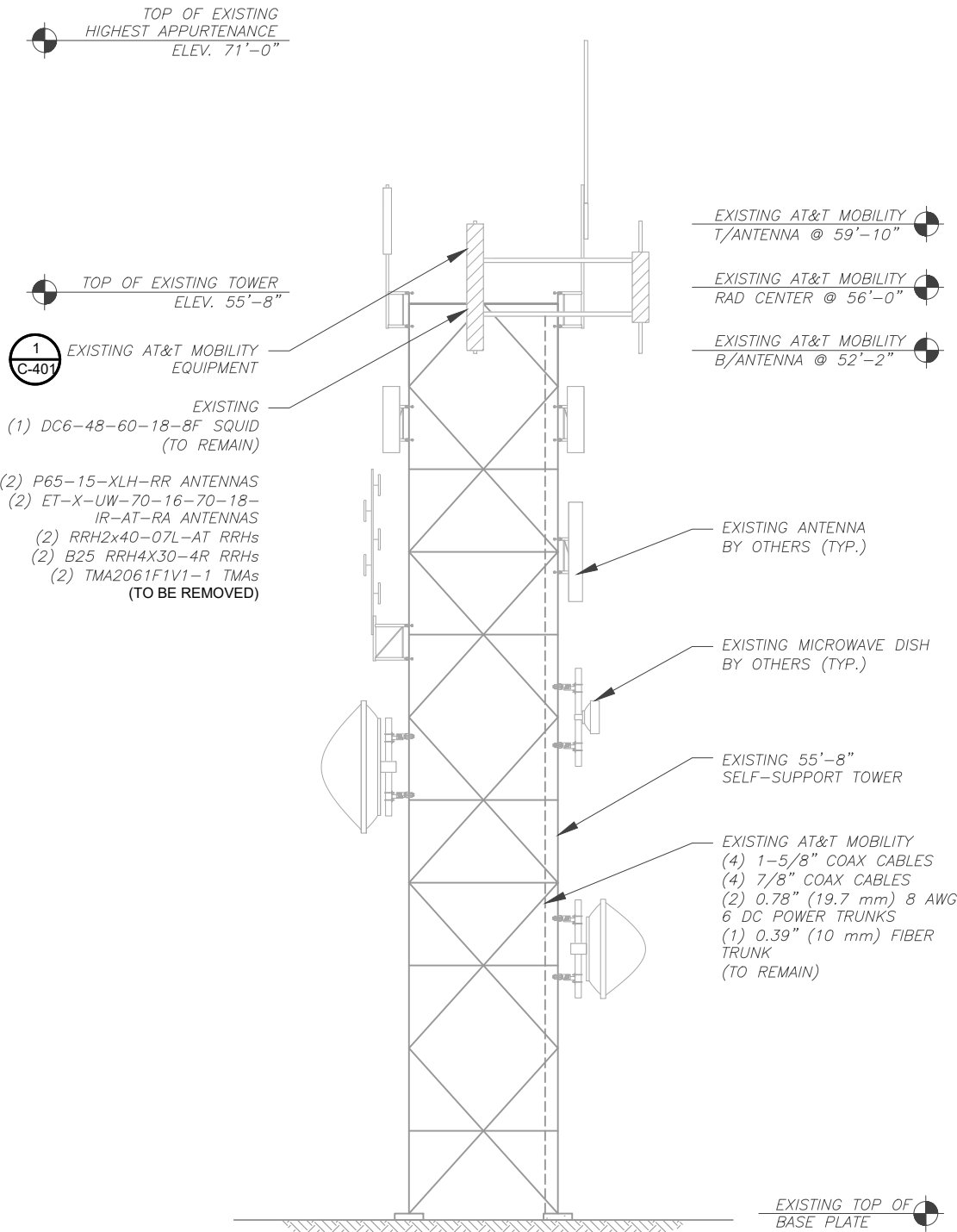


DATE DRAWN:	11/20/24
ATC JOB NO:	14758439
CUSTOMER NAME:	MOUNT PITTSBURG
CUSTOMER ID:	COL06029

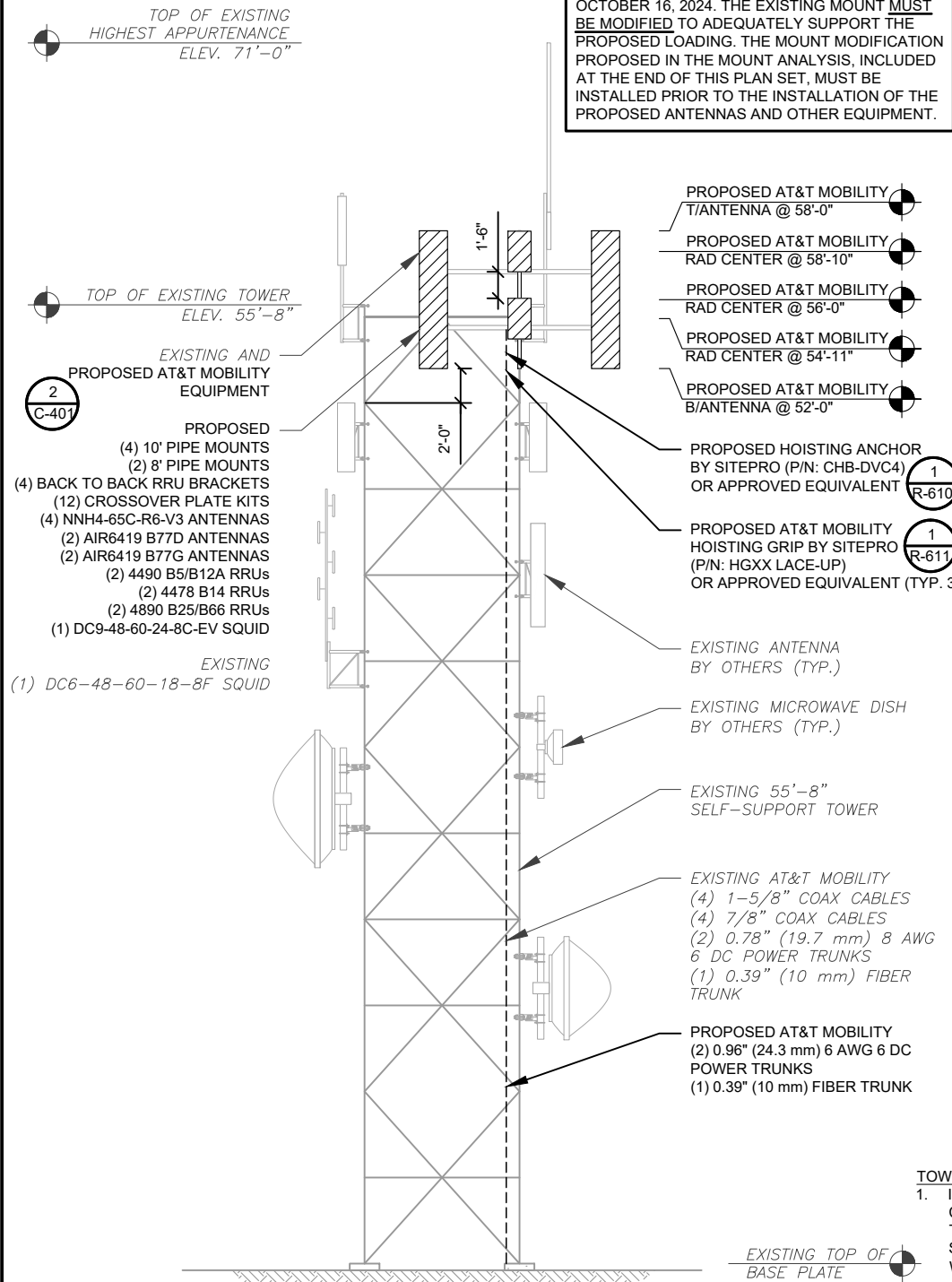
## DETAILED EQUIPMENT LAYOUT

SHEET NUMBER:	REVISION:
C-102	0

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**1 EXISTING TOWER ELEVATION**  
SCALE: 1" = 15'  
0 15' 30'  
SCALE: 1"=15' (11X17)  
1"=7.5' (22X34)




**2 PROPOSED TOWER ELEVATION**  
SCALE: 1" = 15'  
0 15' 30'  
SCALE: 1"=15' (11X17)  
1"=7.5' (22X34)


PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED OCTOBER 16, 2024. THE EXISTING MOUNT **MUST BE MODIFIED** TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.

- DETAILED SOW:**  
\*\*\*TOPSIDE\*\*\*  
REMOVE (2) P65-15-XLH-RR ANTENNAS  
REMOVE (2) ET-X-UW-70-16-70-18-IR-AT-RA ANTENNAS  
REMOVE (2) RRH2x40-07L-AT RRHs  
REMOVE (2) B25 RRH4X30-4R RRHs  
REMOVE (2) TMA2061F1V1-1 TMAs  
INSTALL (4) NNH4-65C-R6-V3 ANTENNAS  
INSTALL (2) AIR6419 B77D ANTENNAS  
INSTALL (2) AIR6419 B77G ANTENNAS  
INSTALL (2) 4490 B5/B12A RRUs  
INSTALL (2) 4890 B25/B66 RRUs  
INSTALL (2) 4478 B14 RRUs  
INSTALL (1) DC9-48-60-24-8C-EV SQUID  
INSTALL (1) 0.39" (10 mm) FIBER TRUNK  
INSTALL (2) 0.96" (24.3 mm) 6 AWG 6 DC POWER TRUNK  
INSTALL (1) CABLE HOISTING ANCHOR  
INSTALL (2) CABLE HOISTING GRIPS  
INSTALL (4) 10' PIPE MOUNTS  
INSTALL (2) 8' PIPE MOUNTS  
INSTALL (4) BACK TO BACK RRU BRACKETS  
INSTALL (12) CROSSOVER PLATE KITS  
RETAIN (1) DC6-48-60-18-8F SQUID  
RETAIN (1) 0.39" (10 mm) FIBER TRUNKS  
RETAIN (2) 0.78" (19.7 mm) 8 AWG 6 DC POWER TRUNKS  
RETAIN (4) 7/8" COAX CABLES  
RETAIN (4) 1-5/8" COAX CABLES  
TEST NEW LINES PER MARKET SPEC  
LABEL NEW CABLES PER MARKET SPEC  
GROUND NEW EQUIPMENT PER MARKET SPEC  
\*\*\*BOTTOMSIDE\*\*\*  
-REMOVE (1) -48VDC/+24VDC POWER PLANT  
-REMOVE (1) BATTERY CABINET  
-REMOVE (5) RECTIFIERS  
-REMOVE (2) CONVERTERS  
-REMOVE (20) GNB MARATHON M12V155FT BATTERIES  
-REMOVE (1) DC12  
-REMOVE (2) NOKIA FSM4 BBU's  
-INSTALL (1) VERTIV NETSURE 5100  
-INSTALL -48VDC/+24VDC POWER PLANT  
-INSTALL (1) PURCELL FLX42 CABINET  
-INSTALL (8) -48VDC RECTIFIERS  
-INSTALL (1) VERTIV CONVERTER SHELF  
-INSTALL (6) -48VDC/-58VDC CONVERTERS  
-INSTALL (2) -48VDC/+24VDC CONVERTERS  
-INSTALL (20) ENERSYS POWERSAFE SBS-190F BATTERIES  
-INSTALL (1) DC12-48-60-0-25E  
-INSTALL (3) 50A AIR6419 B77G DC BREAKERS  
-INSTALL (3) 50A AIR6419 B77D DC BREAKERS  
-INSTALL (3) 50A 4890 B25/B66 DC BREAKERS  
-INSTALL (3) 25A 4478 B14 DC BREAKERS  
-INSTALL (1) 100A FLX FEED BREAKER  
-INSTALL (2) 250A +24V CONV FEED DC BREAKERS  
-INSTALL (2) 15A 6651 BBU DC BREAKERS  
-INSTALL (1) 25A 6601 DC BREAKER  
-INSTALL (2) 6651 BBU's  
-INSTALL (1) 6601 SITE CONTROLLER  
TEST NEW LINES PER MARKET SPEC  
LABEL NEW CABLES PER MARKET SPEC  
GROUND NEW EQUIPMENT PER MARKET SPEC

- TOWER NOTES:**  
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 ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



PLANS PREPARED BY:




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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SDD	11/01/24
B	CONSTRUCTION	CAM	11/20/24
C			
D			
E			

ATC SITE NUMBER: 383495  
ATC SITE NAME: MORLEY 1  
AT&T MOBILITY SITE NUMBER: COL06029  
AT&T MOBILITY SITE NAME: MOUNT PITTSBURG  
SITE ADDRESS: 15743 PHANTOM CANYON VIEW COLORADO SPRINGS, CO 80903



SEAL: 11/20/24

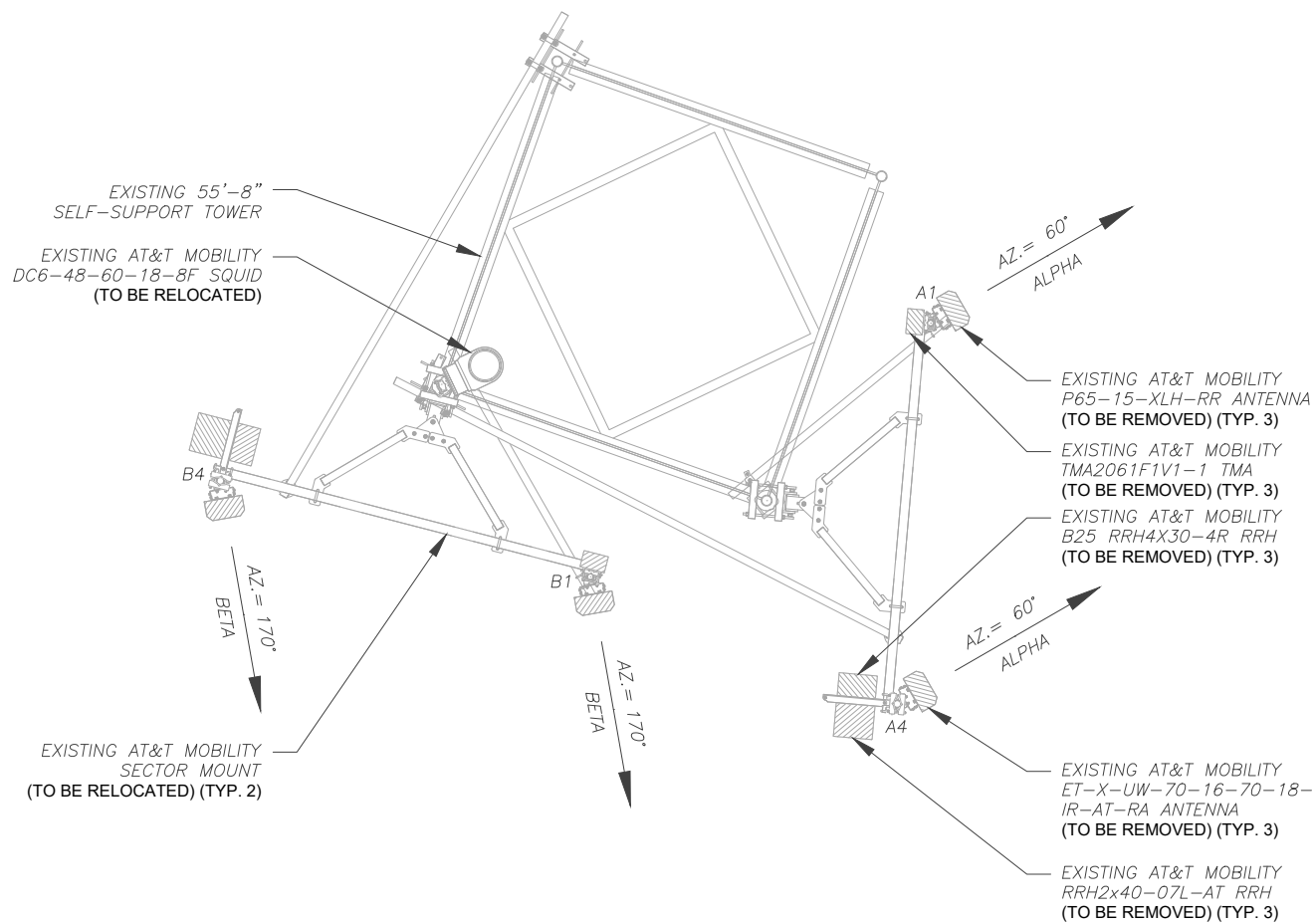


DATE DRAWN:	11/20/24
ATC JOB NO:	14758439
CUSTOMER NAME:	MOUNT PITTSBURG
CUSTOMER ID:	COL06029

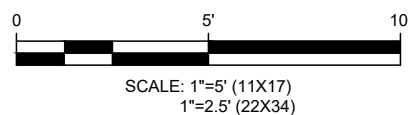
TOWER ELEVATION

SHEET NUMBER: <b>C-201</b>	REVISION: <b>0</b>
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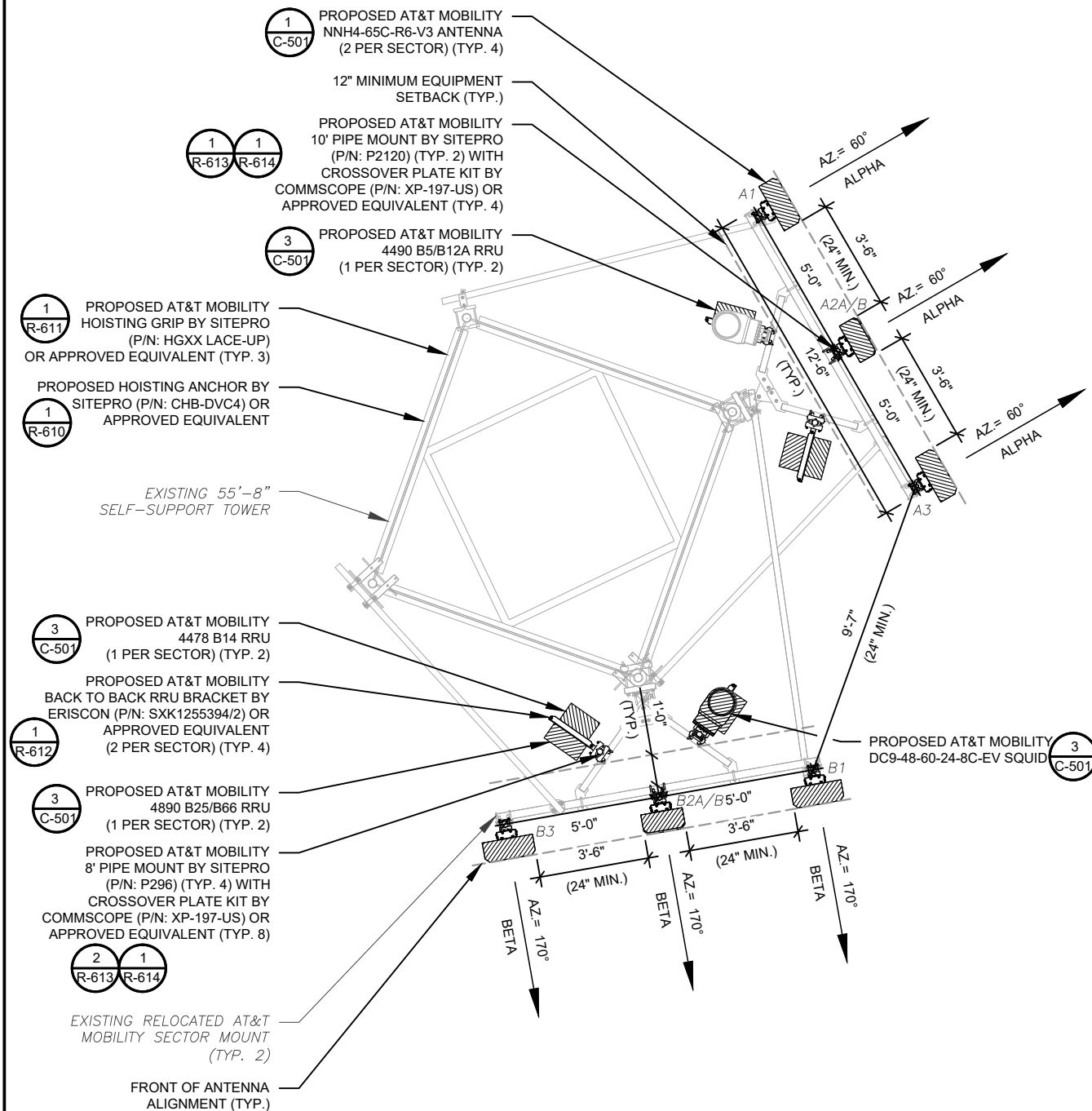
EXISTING CONFIGURATIONS ARE BASED ON RFDS.  
CONTRACTOR TO VERIFY EXISTING CONDITIONS.



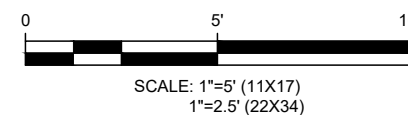
1 EXISTING ANTENNA PLAN  
SCALE: 1" = 5'



PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED OCTOBER 16, 2024. THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



2 FINAL ANTENNA PLAN  
SCALE: 1" = 5'



PROPOSED RRUs MUST BE INSTALLED A MINIMUM OF 12" AWAY FROM ALL ANTENNAS



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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SDD	11/01/24
0	CONSTRUCTION	CAM	11/20/24

ATC SITE NUMBER: 383495

ATC SITE NAME: MORLEY 1

AT&T MOBILITY SITE NUMBER:

COL06029

AT&T MOBILITY SITE NAME:

MOUNT PITTSBURG

SITE ADDRESS:

15743 PHANTOM CANYON VIEW  
COLORADO SPRINGS, CO 80903

TEP OPCO, LLC



SEAL: 11/20/24



DATE DRAWN:	11/20/24
ATC JOB NO:	14758439
CUSTOMER NAME:	MOUNT PITTSBURG
CUSTOMER ID:	COL06029

ANTENNA INSTALLATION

SHEET NUMBER: REVISION:

C-401

0



PLANS PREPARED BY:



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B	CONSTRUCTION	CAM	11/20/24
C			
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ATC SITE NUMBER: 383495

ATC SITE NAME: MORLEY 1

AT&T MOBILITY SITE NUMBER:

COL06029

AT&T MOBILITY SITE NAME:

MOUNT PITTSBURG

SITE ADDRESS:

15743 PHANTOM CANYON VIEW  
COLORADO SPRINGS, CO 80903

TEP OPCO, LLC



SEAL: 11/20/24



DATE DRAWN:	11/20/24
ATC JOB NO:	14758439
CUSTOMER NAME:	MOUNT PITTSBURG
CUSTOMER ID:	COL06029

### ANTENNA SCHEDULE

SHEET NUMBER: C-402

REVISION: 0

EXISTING ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	56'	60°	A1	P65-15-XLH-RR	UMTS 1900	0°	RMV	(1) TMA2061F1V1-1	RMV
			A4	ET-X-UW-70-16-70-18-IR-AT-RA	LTE 700/LTE 1900	0°	RMV	(1) RRH2x40-07L-AT (1) B25 RRH4X30-4R	RMV RMV
BETA	56'	170°	B1	P65-15-XLH-RR	UMTS 1900	0°	RMV	(1) TMA2061F1V1-1	RMV
			B4	ET-X-UW-70-16-70-18-IR-AT-RA	LTE 700/LTE 1900	0°	RMV	(1) RRH2x40-07L-AT (1) B25 RRH4X30-4R	RMV RMV

**NOTES**

- GC TO VERIFY THE FINAL RFDS MATCHES THE FINAL CONSTRUCTION DRAWINGS. GC TO NOTIFY ATC PM OF ANY DISCREPANCY PRIOR TO INSTALLING THE EQUIPMENT.
- GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
- THE ANTENNA ORIENTATION PLAN IS A SCHEMATIC. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA AZIMUTHS, MOUNT CONFIGURATIONS AND TOWER ORIENTATION. SCALES SHOWN ARE FOR REFERENCE ONLY AND EXISTING DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION AND NOTIFY ATC OF ANY DISCREPANCIES.
- CONTRACTOR TO ENSURE PROPER SEPARATION IN ACCORDANCE WITH AT&T'S FIRSTNET REQUIREMENTS.

**STATUS ABBREVIATIONS**

RMV: TO BE REMOVED  
RMN: TO REMAIN  
REL: TO BE RELOCATED  
ADD: TO BE ADDED

**CABLE LENGTHS FOR JUMPERS**

JUNCTION BOX TO RRU: 15'  
RRU TO ANTENNA: 10'

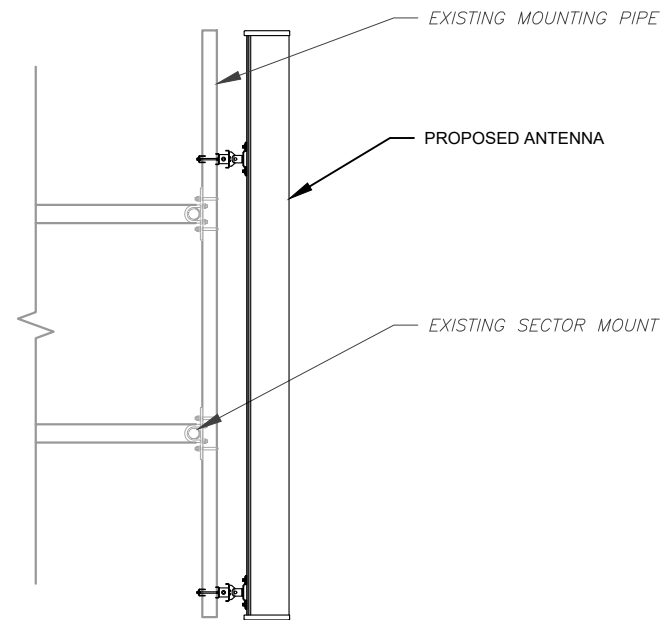
FINAL ANTENNA SCHEDULE										
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY			
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS	
ALPHA	56'-0"	60°	A1	NNH4-65C-R6-V3	OTHER	2°	ADD	(1) 4490 B5/B12A	ADD	
			58'-10"	A2A	AIR6419 B77D	5G CBAND	-	ADD	-	-
			54'-11"	A2B	AIR6419 B77G	5G DOD	-	ADD	-	-
			56'-0"	A3	NNH4-65C-R6-V3	OTHER	2°	ADD	(1) 4890 B25/B66 (1) 4478 B14	ADD ADD
BETA	56'-0"	170°	B1	NNH4-65C-R6-V3	OTHER	2°	ADD	(1) 4490 B5/B12A	ADD	
			58'-10"	B2A	AIR6419 B77D	5G CBAND	-	ADD	-	-
			54'-11"	B2B	AIR6419 B77G	5G DOD	-	ADD	-	-
			56'-0"	B3	NNH4-65C-R6-V3	OTHER	2°	ADD	(1) 4890 B25/B66 (1) 4478 B14	ADD ADD

EXISTING FIBER DISTRIBUTION/SQUID		EXISTING CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC/RET	FIBER	STATUS
(1) DC6-48-60-18-8F	REL	(4) 7/8"	(2) 0.78" (19.7 MM) 8 AWG 6	(1) 0.39" (10 MM) TRUNK	RMN
-	-	(4) 1-5/8"	-	-	RMV

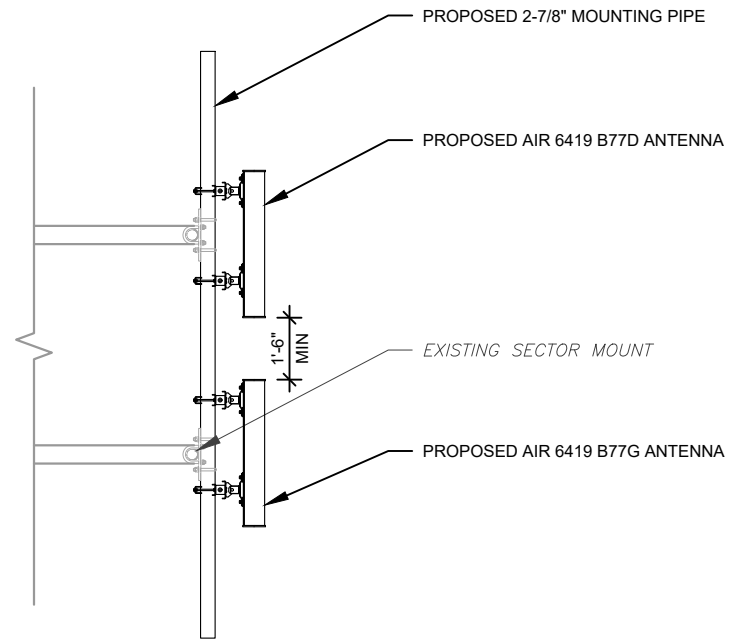
FINAL FIBER DISTRIBUTION/SQUID		FINAL CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(1) DC6-48-60-18-8F	RMN	(4) 7/8"	(2) 0.78" (19.7 MM) 8 AWG 6	(1) 0.39" (10 MM) TRUNK	RMN
-	-	(4) 1-5/8"	-	-	RMN
(1) DC9-48-60-24-8C-EV	ADD	-	(2) 0.96" (24.3 MM) 6 AWG 6	(1) 0.39" (10 MM) TRUNK	ADD

### 1 EQUIPMENT SCHEDULES

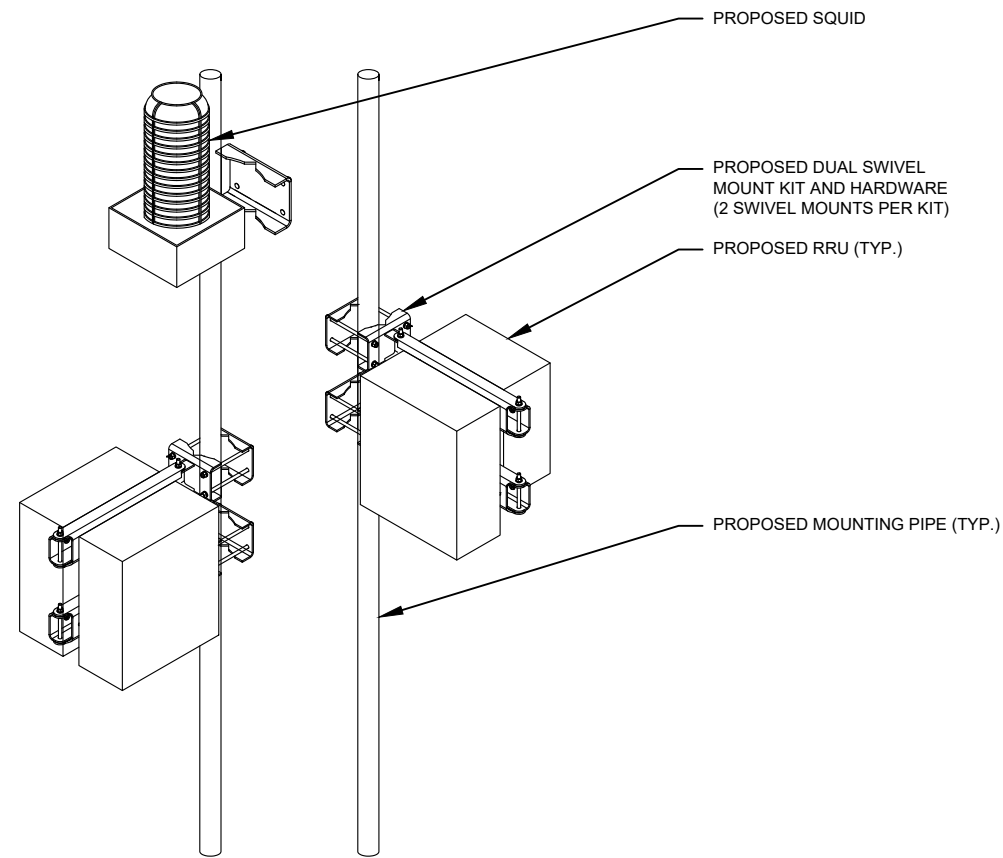




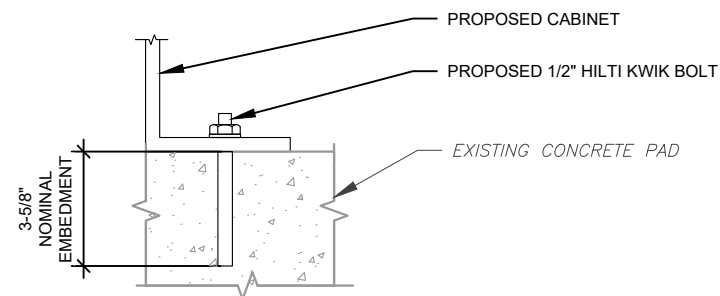
1 PROPOSED ANTENNA MOUNTING DETAIL  
SCALE: N.T.S.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL  
SCALE: N.T.S.



3 PROPOSED RRU & SQUID MOUNTING DETAIL  
SCALE: N.T.S.



NOTE:  
INSTALL HILTI KWIK BOLT ANCHORS STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.US.HILTI.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

4 PROPOSED CABINET ATTACHMENT DETAIL  
SCALE: N.T.S.



326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SDD	11/01/24
0	CONSTRUCTION	CAM	11/20/24

ATC SITE NUMBER: 383495  
ATC SITE NAME: MORLEY 1  
AT&T MOBILITY SITE NUMBER: COL06029  
AT&T MOBILITY SITE NAME: MOUNT PITTSBURG  
SITE ADDRESS: 15743 PHANTOM CANYON VIEW, COLORADO SPRINGS, CO 80903



SEAL: 11/20/24



DATE DRAWN:	11/20/24
ATC JOB NO:	14758439
CUSTOMER NAME:	MOUNT PITTSBURG
CUSTOMER ID:	COL06029

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

AC POWER PANEL A (EXISTING)											
120/240 VOLTS, 1-PHASE, 3-WIRE, 200A											
MAIN BREAKER RATING (A) :				200		SYSTEM VOLTAGE (V) :				240	
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
ERICSSON CAB / OFF	0	c	50/2	1	0		2	60/2	c	0	TVSS
	0	c		3		0	4		c	0	
850 GSM / OFF	0	nc	50/2	5	180		6	20/1	nc	180	GFI REC
	0	nc		7		1920	8	20/1	c	1920	LTS
TELCO REG	1920	c	20/1	9	1920		10	20/1	nc	0	E-911 / OFF
UNKNOWN UMTS GFCI & HEATER	3100	c	20/1	11		3100	12	20/1	nc	0	E-911 / OFF
ALPHA PDF RECT 1	1200	c	20/1	13	1980		14	20/1	nc	780	ALPHA GFCI
ALPHA PDF RECT 1			20/1				30/1	ALPHA PDF RECT 2			
UNKNOWN SAID M/W CAB HVAC	3520	c	20/1	15		4720	16	30/1	c	1200	ALPHA PDF RECT 2
SAID M/W CAB HVAC	2200	c	20/1	17	3400		18	30/1	c	1200	ALPHA PDF RECT 3
ALPHA PDF RECT 4			20/1				30/1	ALPHA PDF RECT 5			
ALPHA PDF RECT 4	600	c	20/1	19		1200	20	20/1	c	600	ALPHA PDF RECT 5
PHASE TOTALS (VA):					7480	10940					
PHASE TOTALS (A):					62	91					
CURRENT PER PHASE W/ 125% Continuous Loads (A):					76	114	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					18420	Legend: c = continuous, nc = non-continuous					
PANEL TOTAL W/ 125% Continuous Loads (VA):					22785						

1 EXISTING AC PANEL  
SCALE: N.T.S.

AC POWER PANEL A (PROPOSED)											
120/240 VOLTS, 1-PHASE, 3-WIRE, 200A											
MAIN BREAKER RATING (A) :				200		SYSTEM VOLTAGE (V) :				240	
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
RECTIFIER 1,2	1400	c	30/2	1	1400		2	60/2	c	0	TVSS
	1400	c		3		1400	4		c	0	
RECTIFIER 3,4	1400	c	30/2	5	1580		6	20/1	nc	180	GFI REC
	1400	c		7		3320	8	20/1	c	1920	LTS
TELCO REG	1920	c	20/1	9	1920		10	20/1	nc	0	E-911 / OFF
UNKNOWN SPARE / OFF	1920	c	20/1	11		1920	12	20/1	nc	0	E-911 / OFF
SPARE / OFF	0	c	20/1	13	1400		14	30/2	c	1400	RECTIFIER 5,6
SPARE / OFF			20/1				c		1400		
UNKNOWN SAID M/W CAB HVAC	3520	c	20/1	15		4920	16		c	1400	
SAID M/W CAB HVAC	1600	c	20/1	17	3000		18	30/2	c	1400	RECTIFIER 7,8
SPARE / OFF			20/1				c		1400		
SPARE / OFF	0	c	20/1	19		1400	20		c	1400	
PHASE TOTALS (VA):					9300	12960					
PHASE TOTALS (A):					78	108					
CURRENT PER PHASE W/ 125% Continuous Loads (A):					97	135	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					22260	Legend: c = continuous, nc = non-continuous					
PANEL TOTAL W/ 125% Continuous Loads (VA):					27780						

2 PROPOSED AC PANEL  
SCALE: N.T.S.

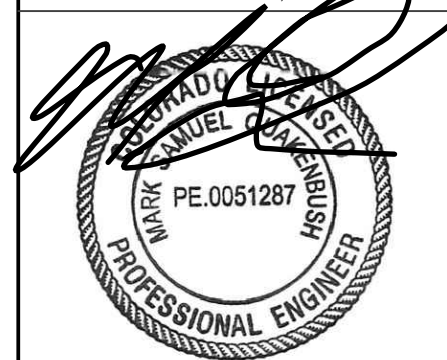


PLANS PREPARED BY:  
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A	PRELIMINARY	SDD	11/01/24
B	CONSTRUCTION	CAM	11/20/24

ATC SITE NUMBER: 383495  
ATC SITE NAME: MORLEY 1  
AT&T MOBILITY SITE NUMBER:  
COL06029  
AT&T MOBILITY SITE NAME:  
MOUNT PITTSBURG  
SITE ADDRESS:  
15743 PHANTOM CANYON VIEW  
COLORADO SPRINGS, CO 80915



SEAL: 11/20/24



DATE DRAWN:	11/20/24
ATC JOB NO:	14758439
CUSTOMER NAME:	MOUNT PITTSBURG
CUSTOMER ID:	COL06029

ELECTRICAL PANELS

SHEET NUMBER:	REVISION:
E-101	0

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LEGEND:  
 (E) - EXISTING  
 (N) - NEW  
 (F) - FUTURE

1 ONE-LINE DIAGRAM  
 SCALE: N.T.S.



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 SITE ADDRESS:  
 15743 PHANTOM CANYON VIEW  
 COLORADO SPRINGS, CO 80905



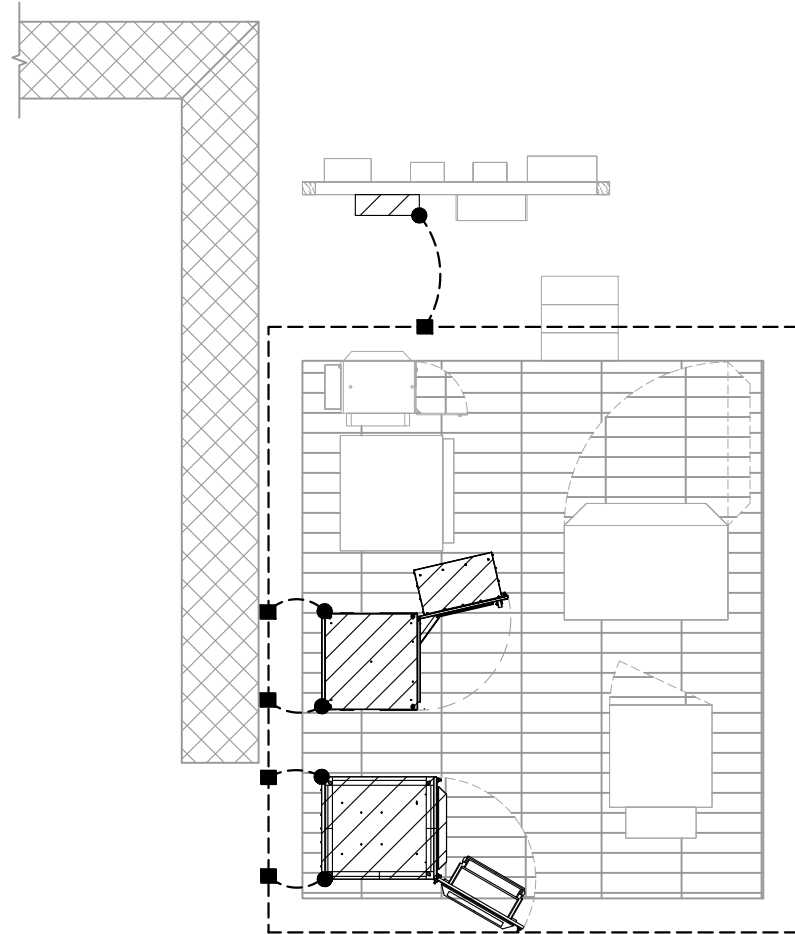
SEAL: 11/20/24



DATE DRAWN:	11/20/24
ATC JOB NO:	14758439
CUSTOMER NAME:	MOUNT PITTSBURG
CUSTOMER ID:	COL06029

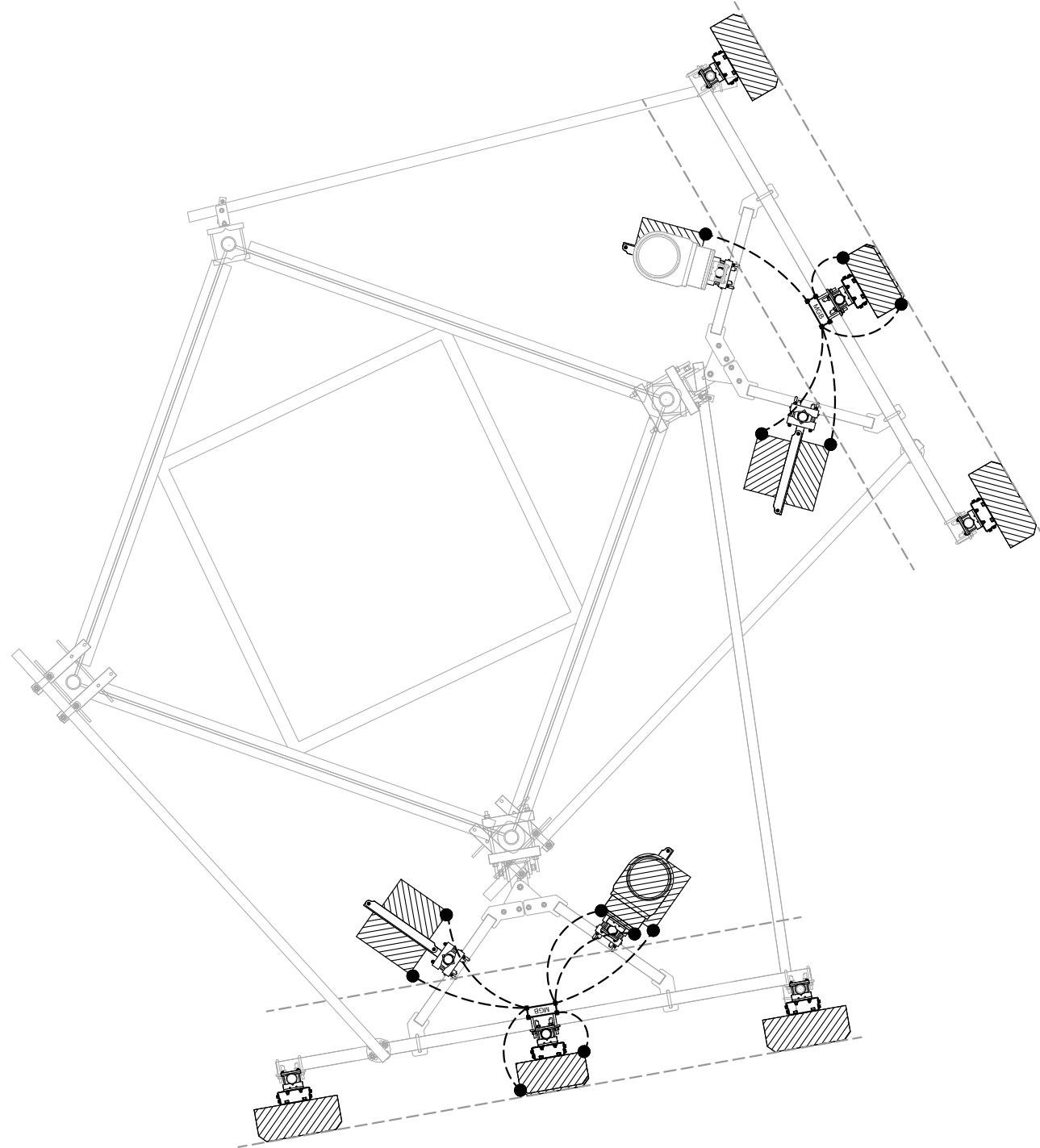
ONE-LINE DIAGRAM

SHEET NUMBER: <b>E-102</b>	REVISION: <b>0</b>
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LEGEND	
■	EXOTHERMIC CONNECTION
●	MECHANICAL CONNECTION
▭	ANTENNA GROUND BAR
▭	MASTER GROUND BAR

① **EQUIPMENT GROUNDING PLAN**  
SCALE: N.T.S.



LEGEND	
■	EXOTHERMIC CONNECTION
●	MECHANICAL CONNECTION
▭	ANTENNA GROUND BAR
▭	MASTER GROUND BAR

② **ANTENNA GROUNDING PLAN**  
SCALE: N.T.S.



PLANS PREPARED BY:



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△	PRELIMINARY	SDD	11/01/24
△	CONSTRUCTION	CAM	11/20/24
△			
△			

ATC SITE NUMBER: 383495

ATC SITE NAME: MORLEY 1

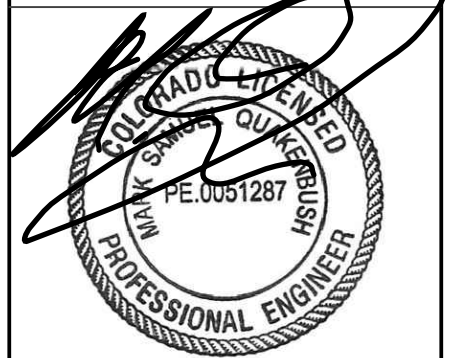
AT&T MOBILITY SITE NUMBER:

COL06029

AT&T MOBILITY SITE NAME:

**MOUNT PITTSBURG**

SITE ADDRESS:  
15743 PHANTOM CANYON VIEW  
COLORADO SPRINGS, CO 80903



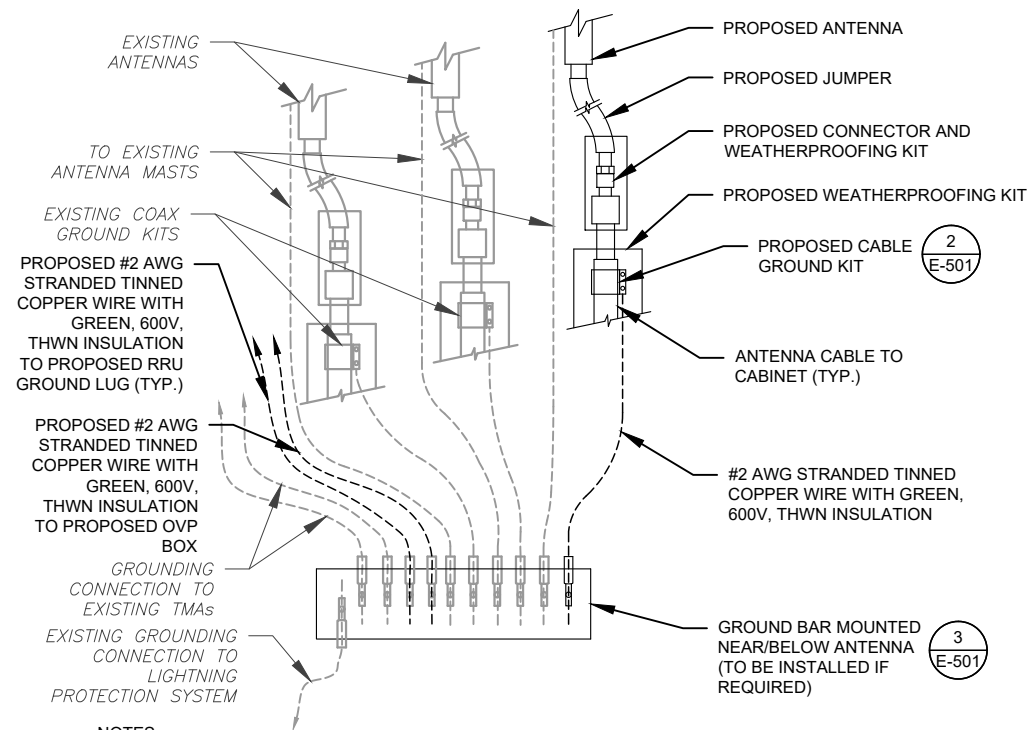
SEAL: 11/20/24



DATE DRAWN:	11/20/24
ATC JOB NO:	14758439
CUSTOMER NAME:	MOUNT PITTSBURG
CUSTOMER ID:	COL06029

**GROUNDING PLAN**

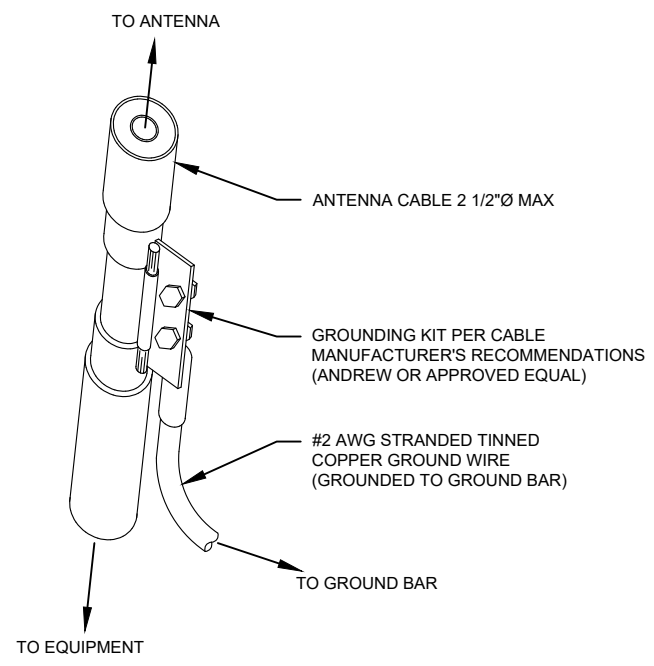
SHEET NUMBER:	REVISION:
<b>E-103</b>	<b>0</b>



**NOTES:**

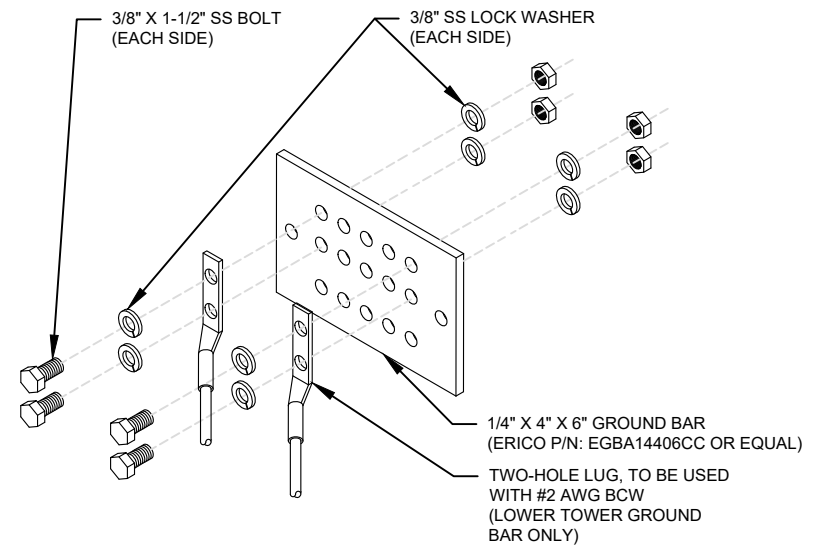
1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH AT&T MOBILITY GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH AT&T MOBILITY 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.



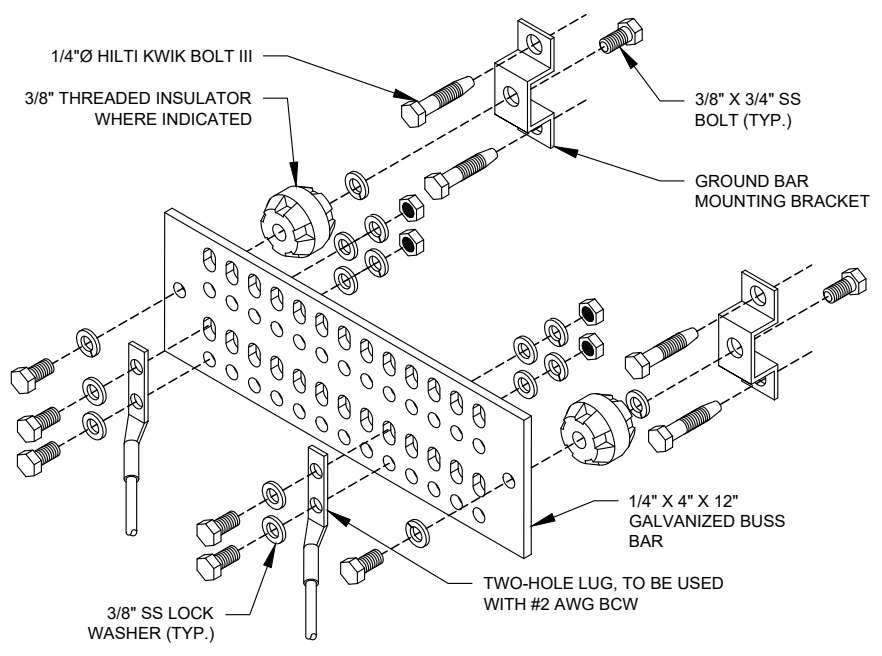
- GROUND KIT NOTES:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
  2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

**2 CABLE GROUND KIT CONNECTION DETAIL**  
SCALE: N.T.S.



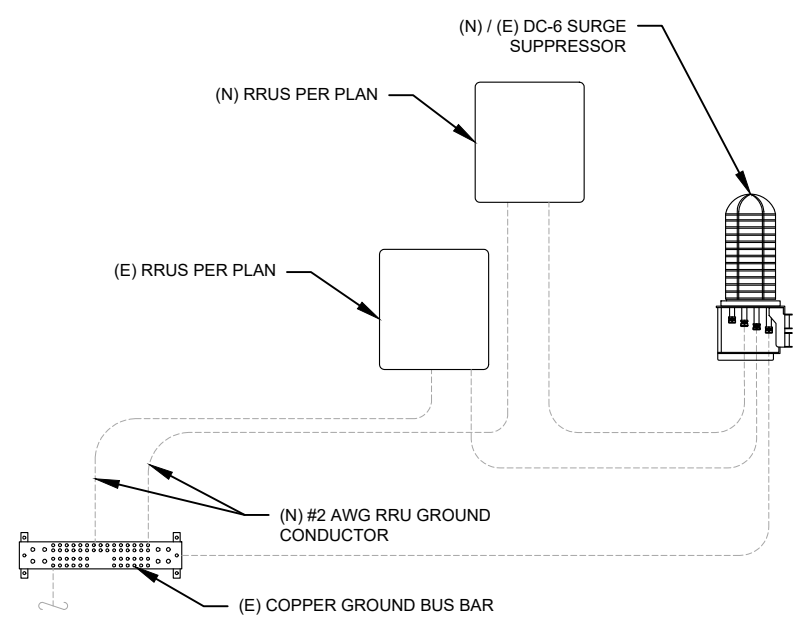
- GROUND BAR NOTES:**
1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
  2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

**3 TOWER GROUND BAR DETAIL**  
SCALE: N.T.S.

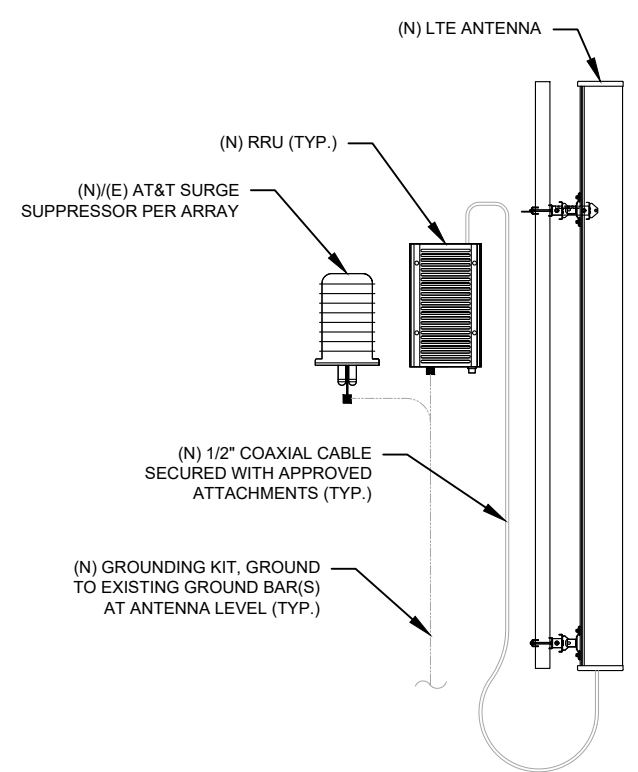


- GROUND BAR NOTES**
1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
  2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

**4 MAIN GROUND BAR DETAIL**  
SCALE: N.T.S.



**5 RRU GROUNDING**  
SCALE: N.T.S.



**6 ANTENNA/RRU GROUNDING**  
SCALE: N.T.S.

AMERICAN TOWER®

PLANS PREPARED BY:

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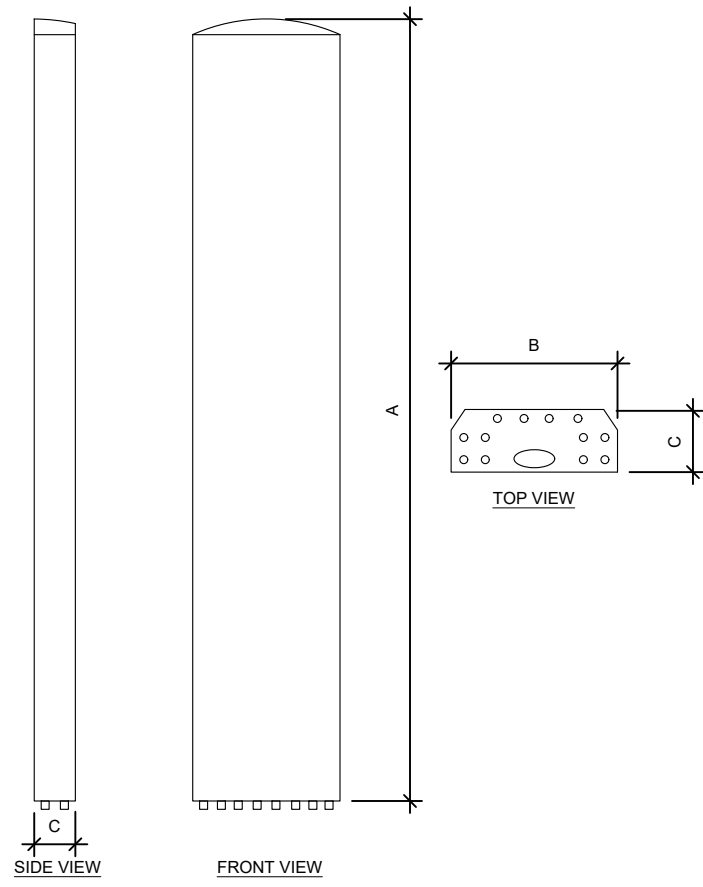
ATC SITE NUMBER: 383495  
ATC SITE NAME: MORLEY 1  
AT&T MOBILITY SITE NUMBER: COL06029  
AT&T MOBILITY SITE NAME: MOUNT PITTSBURG  
SITE ADDRESS: 15743 PHANTOM CANYON VIEW, COLORADO SPRINGS, CO 80908

SEAL: 11/20/24

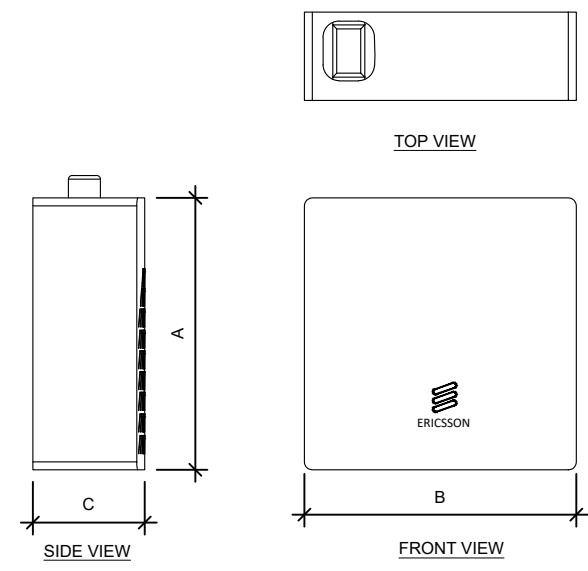
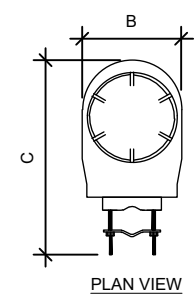
DATE DRAWN: 11/20/24  
ATC JOB NO: 14758439  
CUSTOMER NAME: MOUNT PITTSBURG  
CUSTOMER ID: COL06029

**GROUNDING DETAILS**

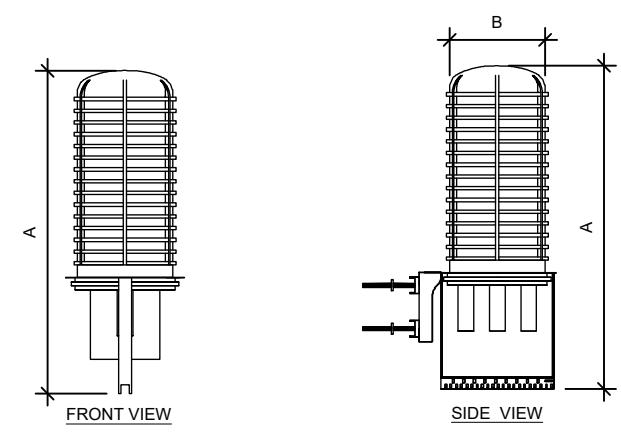
SHEET NUMBER: E-501  
REVISION: 0




ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
NNH4-65C-R6-V3	96.0"	19.6"	7.8"	102.5
AIR6419 B77D	28.3"	16.1"	7.3"	64.0
AIR6419 B77G	28.3"	16.1"	7.9"	66.1



RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
4490 B5/B12A	17.5"	15.1"	6.8"	68.3
4890 B25/B66	17.5"	15.1"	6.9"	68.3
4478 B14	16.5"	13.4"	7.7"	59.9



RAYCAP SPECIFICATIONS				
RAYCAP MODEL	A	B	C	WEIGHT (LBS)
DC9-48-60-24-8C-EV	25.9"	12.4"	9.7"	18.5


**EQUIPMENT SPECIFICATIONS**  
 SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER: <b>R-601</b>	REVISION: <b>-</b>
-------------------------------	-----------------------

# NETSURE™ 5100 SERIES

DC Power System – 2 kW to 28.8 kW



## NETSURE™ 5100 SERIES



### KEY FEATURES

- High Efficiency – 96.2% efficient eSure™ rectifiers ensure optimized total cost of ownership
- Solar/Hybrid Capability (non-integrated version) – allows for connection of solar panels and facilitates hybrid site solutions to reduce grid dependency
- Wide Operating Temperature Range – rectifiers function at -40°C to +80°C, up to +65°C without derating, enabling CapEx and OpEx savings on climate systems in outdoor applications
- Modular Design – simple to install and operate; allows incremental cost effective system growth
- ECO Mode – an innovative function that enables energy savings, even at low load operation
- Remote Access – monitoring through web browsers, TCP/IP & SNMP as standard, 2nd Ethernet port option available
- Battery Management (582137100 only) – automatic battery tests in conjunction with battery midpoint or block voltage monitoring ensures early detection of battery problems

NetSure™ 5100 Series is designed for wireless access and fixed network applications offering unmatched temperature performance and high power density.

### Description

The NetSure 5100 Series, a compact -48 volt DC power solution which can provide +24 volt DC power when equipped with converters, features an advanced control unit, a high efficiency rectifier, converter, solar converter and multiple distribution options to meet the demands of many different applications. The system is available in two types; an integrated version and an external distribution version.

The rack mountable 19" wide integrated version (582137200) provides up to 150A at -48 VDC and up to (9) positions available (with expansion rectifier shelf) for 2000 watt high efficiency eSure rectifiers and a distribution panel consisting of either (36) GMT fuse positions, (4) load breakers and (12) GMT fuse positions or (2) load breakers, (2) battery breakers and (12) GMT fuse positions. Optional battery or load low voltage disconnect contactors are available.

The external distribution version (582137100) provides up to 600A at -48 VDC and up to (29) positions available (23" version with five module shelves) for 2000 watt eSure rectifiers, 1500 watt -48V to +24V converters or 2000 watt solar converters, a single or dual row distribution cabinet, and hybrid and solar connectivity panels. The rack mountable 19" or 23" wide power system is available in a number of configurations and designed to work with a wide range of applications. The 23" wide distribution cabinet supports up to (52) 1A to 300A circuit breakers or 1A to 100A TPS/TLS fuses. Options for battery disconnect breaker positions and

dual voltage (-48V /+24V) breaker panels are available. Multiple LVD levels are supported in the dual row distribution configuration, allowing load prioritization in up to two steps.

Remote monitoring and control is supported by multiple web browsers including IE, Firefox, Chrome and Safari. Standard protocols include ModBus, SNMP V2 & V3. Encrypted security is provided by IPv6 and SNMPV3. Local access is provided through the controllers' keypad and TFT display.

NetSure DC Power systems from Vertiv™ offer extremely low failure rates, as well as low total cost of ownership. The 2000 watt eSure rectifier delivers peak system efficiency above 96%. Maximum value is achieved by an advanced energy optimization function known as ECO mode, enabling energy savings even at low loads.

### Application

NetSure 5100 Series DC power systems are designed for deployment in telecom access network applications requiring a reliable and high power density supply up to 600 A at -48 VDC or up to 400 A at +24 VDC (external distribution version). The high operating temperature (+65°C) in conjunction with high operational efficiency has a positive impact on climate system dimensioning in outdoor enclosure applications. This DC power system is designed for insertion into EQ zone 4 compliant relay racks and cabinets.

### Technical Specifications

INPUT	INTEGRATED	SINGLE ROW	TWO ROW
Nominal	Rectifier: 120 VAC, 208 VAC, 240 VAC	Rectifier: 120 VAC, 208 VAC, 240 VAC	Solar Converter: 140 VDC to 400 VDC
Operational	Rectifier: (Single Phase) 85 VAC to 300 VAC	Rectifier: (Single Phase) 85 VAC to 300 VAC	Solar Converter: 120 VDC to 420 VDC
Frequency	45 Hz to 65 Hz	45 Hz to 65 Hz, DC (solar input)	
Input Connections	Molex	Molex, terminal strip or breaker (solar)	

OUTPUT			
Nominal	-48 VDC	-48 VDC / +24 VDC	
Adjustable Range	-42 VDC to -58 VDC	-42 VDC to -58 VDC, +24 VDC to +28 VDC	
Capacity (at 40 °C)	1 shelf: 150 A @ 208-240 VAC; 2 shelves: 150 A (N+1) @ 208-240 VAC or @ 120 VAC	400 amps at -48 VDC; 600 amps at -48 VDC with List 27	600 amps at -48 VDC, 400 amps at +24 VDC
Breakers	1A to 150 A E/M or E breakers	1A to 300 A E/M or E breakers	
Fuses	18/100 A to 15 A GMT	3 A to 100 A TPS/TLS and 18/100 A to 15 A GMT	

PHYSICAL CHARACTERISTICS			
Mounting	Standard 19" rack mounting	Standard 19" and 23" rack mounting	
Distribution Shelf / Cabinet Dimensions (H x W x D)	1U x 19" x 15" shelf	4U x (19" or 23") x 15" cabinet 8U x (19" or 23") x 15" cabinet (19" depth with AC/solar termination panel)	
Module Shelf Dimensions (H x W x D)	1U x 19" x 15"	1U x (19" or 23") x 15" 1U x (19" or 23") x 15"	
System Dimensions (H x W x D)	(3.5' up to 5.25') x 19" x 15"	(8.75' to 7.5') x (19" or 23") x 23.14" (with batteries)	
AC Accessibility	Rear/front	Rear	Rear
DC Load Accessibility	Front	Top or rear cabled with front and top access	

ENVIRONMENTAL	
Operating	-40°C to +65°C (-40°F to +149°F)
Storage	-40°C to +85°C (-40°F to +185°F)

STANDARDS COMPLIANCE	
Safety	UL 1801
EMC	Conforms to FCC rules Part 15, Subpart B, Class B and EN55022 Class B, radiated and conducted
NEBS	Level 3 (pending)      Level 3      Level 3

### Ordering Information

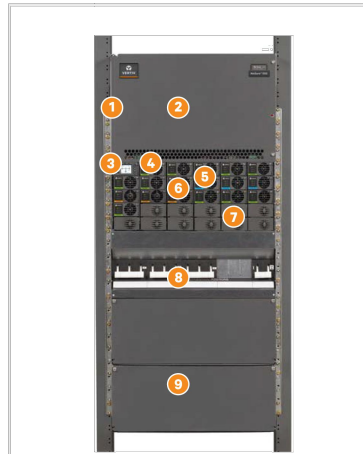
MODEL NUMBER	PART NUMBER	DESCRIPTION
NetSure 5100	582137100*	-48V NetSure 5100 DC power system with external distribution
NetSure 5100	582137200*	-48V NetSure 5100 DC power system with integrated distribution
R48-2000E3	1R482000E3	Rectifier, 2 kW, high efficiency, refer to separate data sheet
C4824-1500	1C48241500**	Converter, 1.5 kW, high efficiency, refer to separate data sheet
S48-2000E3	1S482000E3**	Solar converter, 2 kW, high efficiency, refer to separate data sheet
M830B	1M830BNA*	NCU controller, refer to separate data sheet

\* Overall base system or controller number.  
\*\* The converter and solar converter are only used on the NetSure 5100 with external distribution (582137100).

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DC-00104 (R11/18)



Hybrid NetSure™ 5100 Series, 28.8 kW, 23" Rack with 2 Row Distribution



Integrated NetSure™ 5100 Series

### OVERVIEW

- Relay Rack
- Dis:ribution Panel
- NetSure Control Unit, M830B
- eSure™ Rectifier, R48-2000e3
- 48 V to +24 V Converter, C4824-1500
- Solar Converter, S48-2000e3
- Blank Cover
- Hybrid Panel
- Solar Panel



NetSure 5100 System, Integrated 7.2 kW, 19" Rack (582137200)



NetSure 5100 System, External Distribution 18 kW, 19" Rack (582137100)



NetSure 5100 System, External Distribution 19.2 kW, 23" Rack (582137100)

## 1 PROPOSED VERTIV NETSURE 5100 -48VDC/+24VDC POWER PLANTDETAIL

SCALE : N.T.S.

## SUPPLEMENTAL

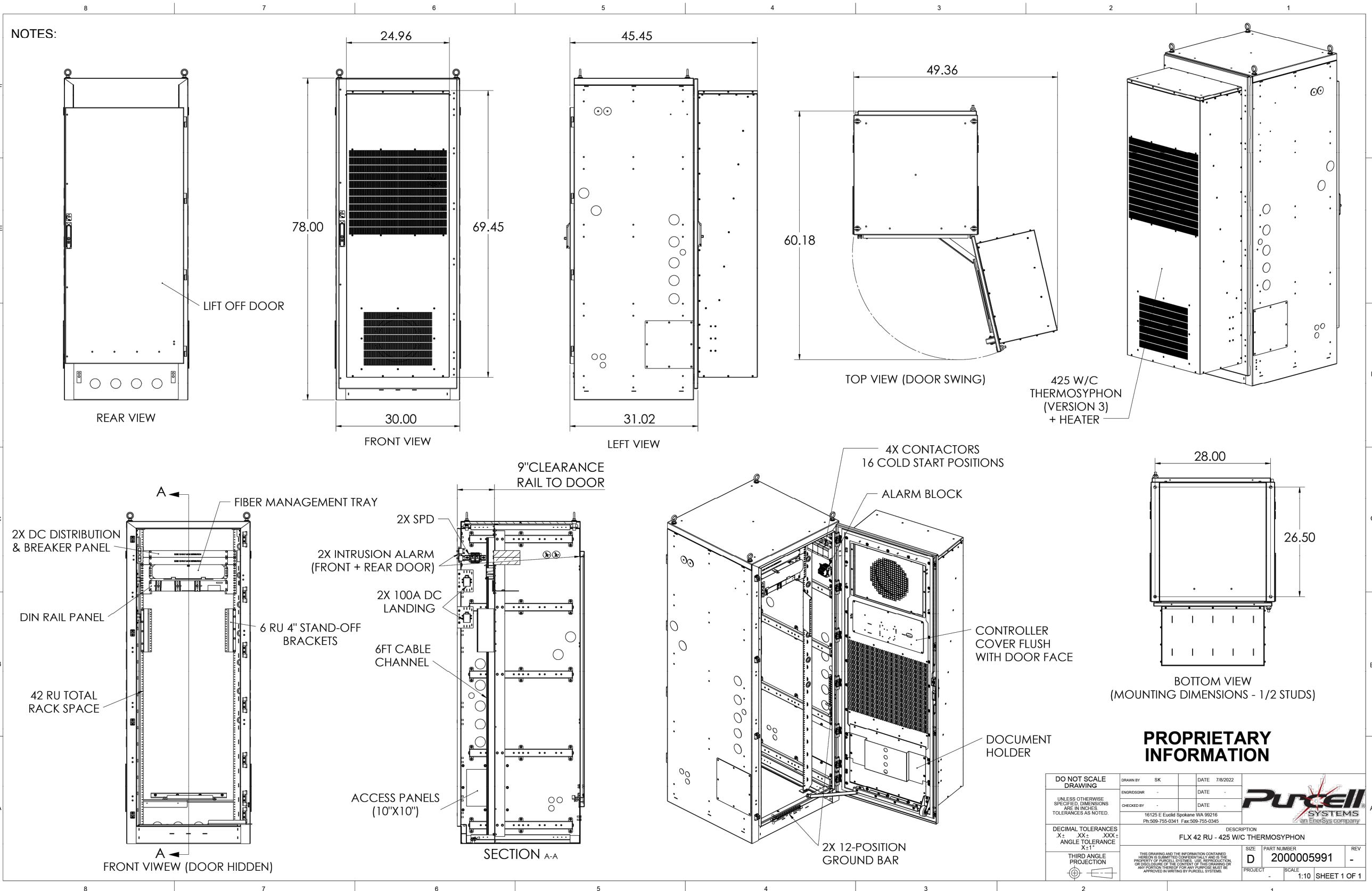
SHEET NUMBER:

R-602

REVISION:

-

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DECIMAL TOLERANCES X+ .XX - .XX ANGLE TOLERANCE X ± 1°	16125 E Euclid Spokane WA 99216 Ph: 509-755-0341 Fax: 509-755-0345	DESCRIPTION FLX 42 RU - 425 W/C THERMOSYPHON	SIZE: D
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**1 PROPOSED PURCELL FLX42 CABINET DETAIL**  
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SUPPLEMENTAL

SHEET NUMBER: **R-603**  
REVISION: -



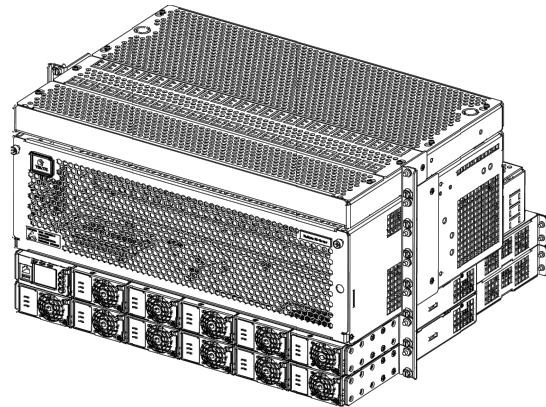
Vertiv™ NetSure™ DCS48/58-600 Converter System  
System Application Guide



**SYSTEM OVERVIEW**

**Description:** -48 VDC to -58 VDC @ up to 600 Amperes Converter System

The Vertiv™ NetSure™ DCS48/58-600 Converter System is a complete integrated converter system containing -48 VDC to -58 VDC converters, intelligent control, metering, monitoring, and distribution. The converter system is designed for operation with the positive output grounded.



This system consists of the following components.

- **DC Distribution Cabinet**  
The base system includes one (1) distribution cabinet, which provides DC distribution through fuses and/or circuit breakers. The distribution cabinet can be equipped either with a 1-row, 26-position bullet nose type circuit breaker and TPS/TLS fuseholder distribution panel or a distribution panel equipped with four (4) GJ/218 type circuit breaker positions. The distribution cabinet may be equipped with a load disconnect contactor.  
A field installed only expansion distribution cabinet is available which provides DC distribution through fuses and/or circuit breakers. The expansion distribution cabinet is equipped with a 1-row, 26-position bullet nose type circuit breaker and TPS/TLS fuseholder distribution panel. The expansion distribution cabinet may be equipped with a load disconnect contactor.
- **Controller**  
NCU (NetSure™ Control Unit) Controller: The NCU controller provides power system control, converter module control, metering functions, monitoring functions, local/remote alarm functions, and connections for binary inputs and programmable relay outputs. The system also accepts up to two (2) temperature probes to monitor ambient and/or battery temperature. The controller also provides data acquisition and system alarm management. The controller contains a color TFT display and keypad for local access. The controller provides an Ethernet port and comes with comprehensive webpages for local/remote access. The controller has SNMP V3 capability for remote system management. The controller supports software upgrade via its USB port. Refer to the NCU Controller Instructions (UM1M830BNA) for more information.
- **Converter Module Mounting Shelf (Spec. No. 588705300)**  
The system contains two (2) Spec. No. 588705300 converter module mounting shelves, each of which houses the converter modules. The top converter module mounting shelf also houses the NCU controller.  
A field installed only expansion converter module mounting shelf is available. Up to two (2) expansion converter module mounting shelves can be installed in an existing system.
- **-48 VDC to -58 VDC Converter Modules**  
The system accepts 2000 watt peak, 1600 watt average converter modules to provide -58 VDC load power. Refer to the Converter Instructions (UM1C48582000P3) for more information.

Vertiv™ NetSure™ DCS48/58-600 Converter System  
System Application Guide

**General Converter Systems Specifications**

See detailed specifications on page 41.

Family:	NetSure™
Spec. No.:	584641000
Model:	DCS48/58-600
DC Input Voltage:	Nominal -48 VDC (-41 VDC to -58.5 VDC).
DC Output Voltage:	Nominal -57 VDC, positive ground. Output voltage is adjustable from -56.0 VDC to -58.0 VDC via the system controller.
DC Output Capacity:	600 A, maximum
1C48582000P3 Converter Rating:	See UM1C48582000P3.
Agency Approval:	UL Listed to UL/CSA 62368-1 (cULus), Meets NEBS Level 1
Mounting Type:	Nominal 23" Relay Rack or Equipment Rack Mounting
Mounting Depth:	See "Overall Dimensions" on page 43.
Mounting Height:	See "Overall Dimensions" on page 43.
Access:	Front and Rear for Installation, Expansion, and Maintenance. Front for Operation.
Control:	Microprocessor
Color:	Faceplates: Textured Gray Other Surfaces: Bright Zinc
Environment:	-40 °C to +65 °C (-40 °F to +149 °F)

1 PROPOSED VERTIV CONVERTER SHELF DETAILS

SCALE: N.T.S.

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SUPPLEMENTAL

SHEET NUMBER: <b>R-604</b>	REVISION: -
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# ESURE™ CONVERTER

C48/24-1500



## ESURE™ CONVERTER



### KEY FEATURES

#### Converter, 48 to 24 VDC, 1500 W

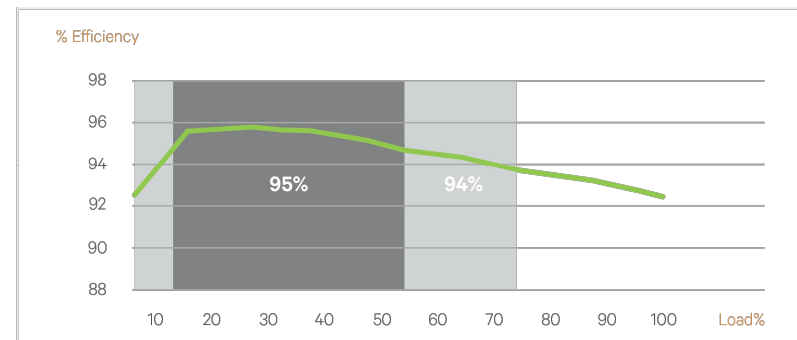
- High efficiency over 95% – reduces power consumption lowering operating costs
- High power density – provides more space for revenue generating equipment
- Hot pluggable and interchangeable – for easy expansions and maintenance
- Digital signal processing (DSP) – means fewer components, optimized operation and active load sharing for increased reliability
- Wide input voltage range (41 VDC to 58 VDC) – allows for flexibility, durability and resilience
- Wide operating temperature range from -40°C to +65° – meets the harshest climatic environment requirements
- Compliant with global standards – delivers quality, performance and reliability no matter what the application or location demands

In addition to reducing power consumption and lowering operating cost, eSure™ high-efficiency converters offer superior performance and uncompromised reliability.

### Description

The eSure C48/24-1500 high-efficiency converter is designed to operate from a nominal 48 Vdc source to provide nominal 24 VDC load power, which is adjustable to application needs. This constant power converter designed with the latest patented switchmode technology, uses digital signal processing (DSP) for efficient operation.

When redundancy is critical or loads are high, multiple C48/24-1500 converters can be connected in parallel to support a variety of telecom applications. Unified remote management and control of the power system is enabled when combined with a Vertiv™ controller.



C48 24-1500 Efficiency Curve at 58 VDC Nominal

### Technical Specifications

DC INPUT	
Voltage	41 VDC to 58.5 VDC
Maximum Current	39.5 A
DC OUTPUT	
Voltage	24 VDC to 28 VDC
Maximum Power	1500 W @ Vout >24 VDC
Maximum Current	63 A @ 48-24 VDC, limit set point 6.3 to 63 A (see figure 1)
Peak Efficiency	>95%
Psophometric Noise (System)	<2 mV, <32 dBnc
Temperature Derating	See figure 2
CONTROL AND MONITORING	
Rectifier Alarm and Signaling	Alarm and status reported via CAN bus to system controller
Visual Indications	Green LED: Normal Operation Yellow LED: Alarm Red LED: Failure Flashing Red LED: Fan Failure
ENVIRONMENTAL	
Operating	-40°C to +80°C / -40°F to +176°F
Storage	-40°C to +85°C / -40°F to +185°F
Relative Humidity	0 to 95%
Altitude	2000 m / 6560 ft at full power
STANDARDS COMPLIANCE	
Safety	60950 (EN, IEC and UL)
EMC	ETSI EN 300 386 class A, FCC CFR 47 Part 15 class A, Telcordia GR-1089-CORE class A
Environment	REACH, R5, WEEE
MECHANICS	
Dimensions (H x W x D)	41 x 84.5 x 252.5 (mm) / 1.61 x 3.33 x 9.94 (Inches)
Weight	1.13 kg / 2.49 lbs

### Ordering Information

MODEL NUMBER	DESCRIPTION
1C48241 500	Converter, 48 to 24 VDC, 1500 W

### Figures

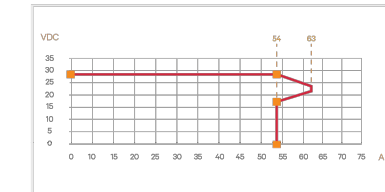


Figure 1:  
Output voltage vs. Output current  
at max. output power 1500 W

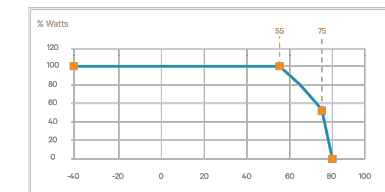


Figure 2:  
Output Power vs. Temperature

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# Vertiv™ eSure™ Converter

C48/58-2000P3



## Vertiv™ eSure™ Converter



### Key Benefits

#### Converter, 48 to 58 VDC, 2000 W Peak / 1600 W Average

- Reduce power consumption and lower operating costs with 95% peak efficiency.
- Easily add capacity with hot pluggable interchangeable components.
- Ensure high availability with wide input voltage range from 41 VDC to 58 VDC.
- Power your 5G sites in the harsh environments with operation from -40°C to +65°C.
- Enjoy peace of mind with high quality UL recognized design.

Easily support higher power 5G remote radios on cell towers with modular 2000 watt eSure™ power extend converters.

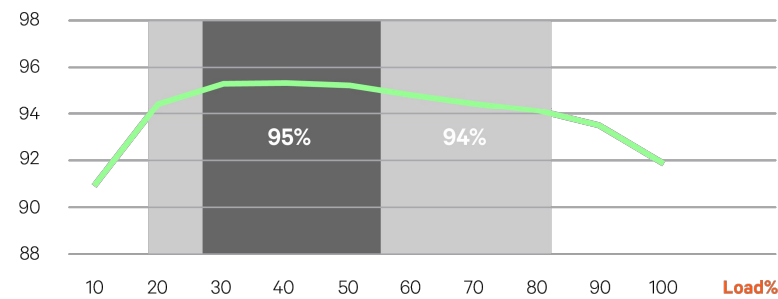
### Description

The Vertiv™ eSure™ C48/58-2000P3 high-efficiency converter is designed to operate from a nominal -48 VDC source to provide nominal -58 VDC load power, which is adjustable to application needs up to 2000 watts peak, 1600 watts average. This constant power converter designed with the latest patented switchmode technology, uses digital signal processing (DSP) for efficient operation.

The eSure C48/58-2000P3 DC to DC converter is ideal for feeding high power remote radio heads (RRHs). 58 VDC is regulated over a wide input range to minimize voltage drop in the cable feeding the RRH and sustain operation to end of battery discharge. When redundancy is critical or loads are high, multiple eSure C48/58-2000P3 converters can be connected in parallel to support a variety of telecom applications. Unified remote management and control of the power system is enabled when combined with a Vertiv™ NetSure™ controller.



### % Efficiency



C48/58-2000P3 Efficiency Curve at 53.5 VDC Nominal Input

### Technical Specifications

DC Input	C48/58-2000P3
Voltage	41 VDC to 58.5 VDC, 48 VDC (nominal)
Maximum Current	53 A

DC Output	C48/58-2000P3
Voltage	56 VDC to 58 VDC
Maximum Power	2000 W peak, 1600 W average at 40°C, 1280 W average at 65°C
Maximum Current	35.7 A at 2000 W peak (see figure 1), 28.6 A at 1600 W average, 22.9 A at 1280 W average, all at 56 VDC
Peak Efficiency	>95%
Noise	< 250mV pk-pk; < 20mV rms; < 38 dBnC

Control and Monitoring	C48/58-2000P3
Alarms and Signaling	Alarm and status reported via CAN bus to system controller
Visual Indications	Green LED: Normal Operation Yellow LED: Alarm Red LED: Failure Flashing Red LED: Fan Failure

Environmental	C48/58-2000P3
Operating Temperature	-40°C to +80°C / -40°F to +176°F (see figure 2)
Storage Temperature	-40°C to +85°C / -40°F to +185°F
Relative Humidity	0 to 90%
Altitude	2000 m / 6560 ft at full power

Standards Compliance	C48/58-2000P3
Safety	UL62368-1, EN62368-1, IEC62368-1
EMC	FCC CFR 47 Part 15 Class A conducted and Class B radiated
Environment	REACH, RoHS

Mechanics	C48/58-2000P3
Dimensions (H x W x D)	41 x 84.5 x 252.5 mm / 1.61 x 3.33 x 9.94 inches
Weight	113 kg / 2.49 lbs

### Ordering Information

Part Number	Description
1C48582000P3	eSure™ converter, -48 to -58 VDC, 2000 W peak / 1600 W average

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C48/58-2000P3 (02/2024)

### Figures

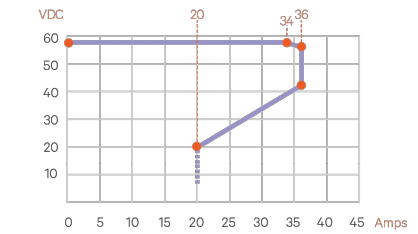


Figure 1: Output Voltage vs. Output Current at Maximum peak Power 2000 W

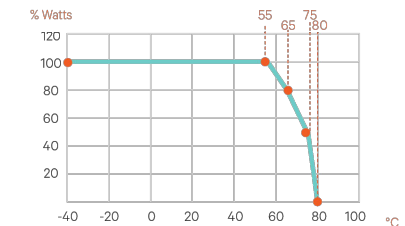


Figure 2: Output Power vs. Temperature at -41VDC <math>V\_{in}</math> <math>\ge</math> -58VDC

SUPPLEMENTAL

SHEET NUMBER:

R-606

REVISION:

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1 PROPOSED -48VDC/-58VDC CONVERTER DETAIL  
SCALE : N.T.S.

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# eSure™ Rectifier

R48-2000e3



eSure™ Rectifier



## Benefits

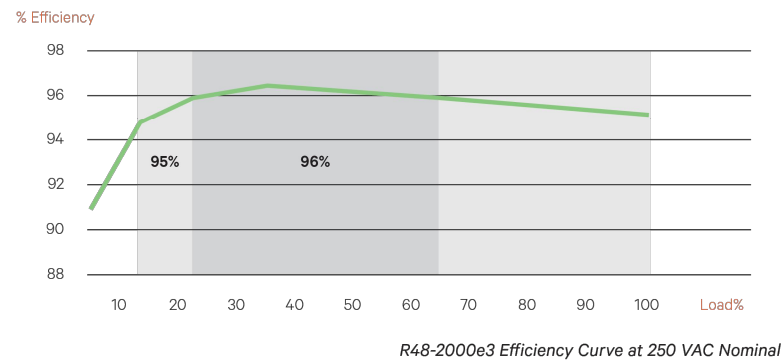
- Optimize the amount of energy delivered and reduce power consumption with over 96% efficiency.
- Increase space for revenue generating equipment with modules that pack more power in a small space with high power density.
- Facilitate easy maintenance, expansion and system changes with hot swappable capabilities.
- Enjoy increased reliability and active load sharing with Digital Signal Processing (DSP) which translates into fewer components and optimized operation.
- Appreciate the flexibility to utilize in a variety of applications with a wide input voltage range of 85 VAC to 300 VAC and full power output at temperatures from -40°C to +65°C.

*In addition to reducing power consumption and lowering operating cost, eSure™ high-efficiency rectifiers offer superior performance and uncompromised reliability.*

## Description

The 2000 watt high-efficiency eSure rectifier (model R48-2000e3) converts standard AC supply voltages into stable nominal -48 VDC voltage that is adjustable to application needs. This constant power rectifier designed with the latest patented switch-mode technology, uses DSP (Digital Signal Processing) for efficient operation.

The R48-2000e3 can be connected in parallel with other rectifiers and converters to support a variety of telecom applications. Unified remote management and control of the power system is enabled when combined with a Vertiv™ controller.



## Technical Specifications

AC Input	R48-2000E3
Voltage	85 VAC to 300 VAC (see figure 1), 187 VAC to 264 VAC (nominal)
Frequency	45 Hz to 65 Hz
Maximum Current	12 A
Power Factor	>0.99 from 50 to 100% load
Protection	High and low voltage protection, surge and lightning protection Adapts to poor quality grid (voltage dip, weak mains) Disconnection at 415 VAC Mains fuses in both lines
DC Output	
Voltage	-42 VDC to -58 VDC
Maximum Power	2000 W
Maximum Current	42 A @ -48 VDC, limit set point 0 to 42 A (see figure 2)
Peak Efficiency	96.2%
Protection	Fuse for reverse connection and back feeding protection High voltage shutdown High temperature protection
Control and Monitoring	
Converter Alarm and Signaling	Alarm and status reported via CAN bus to system controller
Visual Indications	Green LED: Normal Operation Yellow LED: Alarm Red LED: Failure
Environmental	
Operating	-40°C to 80°C / -40°F to +176°F (see figure 3 for derating)
Temperature Derating	Full output power up to +65°C at input voltage range 200 to 250 VAC (see figure 3)
Storage	-40°C to +70°C / -40°F to +158°F
Relative Humidity	0 to 95%
Altitude	Full output power up to +65°C at input voltage range @200- 250 VAC
Standards Compliance	
Safety	60950-1 (EN, IEC and UL)
EMC	EN55022, CISPR22, ETSI EN300 286: 2005, FCC CFR 47 Part 15, Telcordia GR-1089-CORE issue 6 (Class B conducted and radiated)
Environment	REACH, RoHS, WEEE
Mechanics	
Dimensions (H x W x D)	41 x 84.5 x 252.5 (mm) / 1.61 x 3.33 x 9.94 (inches)
Weight	1.13 kg / 2.49 lbs

## Ordering Information

Model Number	Description
1R482000E3	eSure™ rectifier, -48 VDC, 2000 W

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R48-2000E3 (R06/20)

## Figures

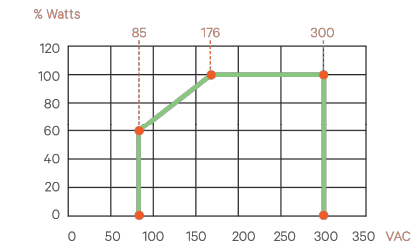


Figure 1: Output Power vs. Input Voltage and  $V_o > 48\text{ V}$  at  $T_{amb} < 55^\circ\text{C}$

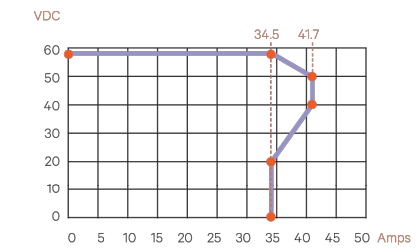


Figure 2: Output Voltage vs. Output Current at Maximum Output Power 2000 W

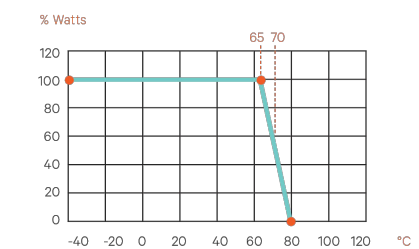


Figure 3: Output Power vs. Temperature at  $U_{in} > 200\text{VAC}$



## Battery Range Summary

The PowerSafe® SBS® Front Terminal battery further extends the technical leadership of PowerSafe SBS battery product line: not only do PowerSafe SBS Front Terminal monoblocs retain the benefits typically associated with Thin Plate Pure Lead (TPPL) Technology such as long life, high energy density, superior shelf life, etc., they also deliver exceptional cyclic performance in both float and fast charge applications, even in the hottest and harshest operating environments.

Where conventional Valve Regulated Lead Acid (VRLA)/Absorbed Glass Mat (AGM) batteries struggle to cope with harsh conditions and frequent power outages, cutting edge (TPPL) technology makes PowerSafe 12V batteries the perfect solution for the challenging operating conditions of today's telecommunication networks.

PowerSafe SBS batteries are designed to high quality standards and a unique manufacturing methods means superior energy and power, high performance and proven reliability, there is no substitute to PowerSafe SBS Front Terminal batteries.

### Features and Benefits

- Capacity range 31-190Ah
- 12V monobloc configurations
- Multiple string configurations available
- Two year shelf life
- SR4228 compliant
- Proven long service life
- High energy density and cycling capability



Publication No: US-SBSF-RS-004 - January 2014

### Construction

- Robust positive plates are designed to prolong service life and enhance corrosion resistance
- Separators are low resistance microporous (AGM). The electrolyte is absorbed within the AGM, preventing acid spills in case of accidental damage
- Container and cover in flame retardant UL94-V0 material, highly resistant to shock and vibration
- Terminals are stainless steel front access with top access copper alloy insert. Top and front access terminations provide maximum conductivity
- Self-regulating one way pressure relief valves prevents ingress of atmospheric oxygen

### Installation and Operation

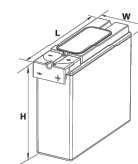
- Space efficient footprint
- VRLA design, reduces maintenance requirements
- Lifting handles for easy handling
- Greater than 10 year life expectancy in float service at 77°F (25°C)
- Increased active material surface area yields great cycling capability
- Operating temperature: -40°F (-40°C) to 122°F (50°C)  
Recommended temperature: 68°F (20°C) to 86°F (30°C)

### Standards

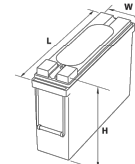
- Meets criteria for "non-spillable" batteries
- Complies with Telcordia® SR-4228, Network Equipment Building System (NEBS™) Criteria Levels
- The management systems governing the manufacture of this product are ISO 9001:2008 and ISO 14001:2004 certified

### General Specifications

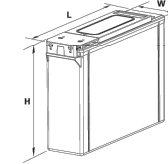
Cell Type	Nominal Capacity (Ah)		Nominal Dimensions				Weight - Volumes			
	10 hr rate to 1.80Vpc @20°C	8 hr rate to 1.75Vpc @77°F	Length in	Width mm	Height in	mm	Unpacked lbs	kg		
SBS B8F	31	31	11.9	303	3.8	97	6.3	159	22.7	10.3
SBS B10F	38	38	11.9	303	3.8	97	7.2	184	28.2	12.8
SBS B14F	62	62	11.9	303	3.8	97	10.4	264	42.0	19.1
SBS C11F	92	91	16.4	417	4.1	105	10.1	256	61.6	28.0
SBS 100F	100	100	15.6	395	4.3	108	11.3	287	71.9	32.6
SBS 112F	112	112	22.1	561	4.9	125	9.0	228	90.4	41.1
SBS 145F	145	145	17.9	455	6.8	173	9.4	238	105.0	47.7
SBS 165F	165	165	17.9	455	6.8	173	10.8	273	117.4	53.3
SBS 170F	170	170	22.1	561	4.9	125	11.1	283	115.7	52.5
SBS 190F	190	190	22.1	561	4.9	125	12.4	316	132.3	60.0



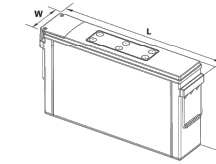
SBS B8F-B14F



SBS C11F



SBS 100F-112F



SBS 145F - 190F



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### Battery Services for Backup Power

- Battery Installation
- Capacity and Acceptance
- Preventative Maintenance

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**DATA SHEET**

**DC Surge Protection Solutions for Base Station - Outdoor Rated**  
**DC12-48-60-0-25E**  
 Overvoltage Protection and Power Management Junction Box

**Base Protection - Outdoor**

The DC12-48-60-0-25E is designed to be the most robust lightning and power surge protector available for distributed node B or e-node B applications. The flexible design provides electrical protection/cable management at the rooftop or base of sites. The solution employs the patented Strikesorb® 30-V1-HV surge protective device (SPD), capable of providing 60kA (8/20 µs) of surge capacity for up to 12 -48V DC circuits.

powered by  
**Strikesorb®**



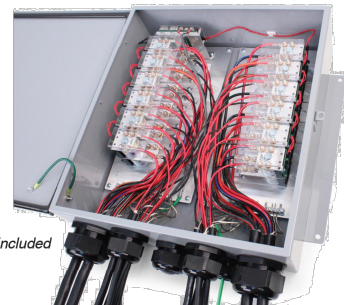
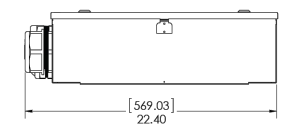
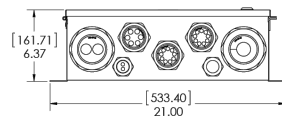
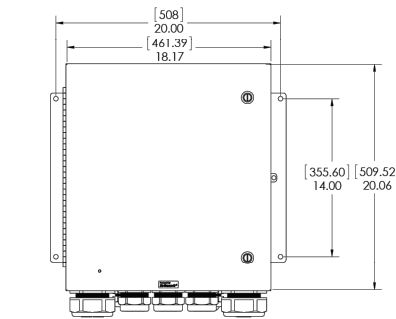
DC12-48-60-0-25E  
 ships with Conduit Fittings installed

**Features**

- Provides protection for 12 individual -48V DC circuits at the base of sites
- Surge protection of 60kA 8/20 µs
- Maximum impulse current 5kA 10/350 µs
- Simplifies inter-connectivity and cable management for DC conductors
- UL 1449 4th Edition Type 2 protective device
- IEC 61643-11 Class I protection for DC applications
- Form C relay contacts included, allowing remote monitoring of suppressor status
- Patent pending

**Benefits**

- Strikesorb modules are fully recognized to UL 1449 4th Edition, and IEC 61643-11 Safety Standards, meeting all intermediate and high current fault requirements to facilitate use in original equipment manufacturers (OEM) applications
- Strikesorb offers unique maintenance-free protection against direct lightning currents
- NEMA 4 enclosure allows for indoor or outdoor installation



Cable Gland kit included

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 G02-00-267 150115

**Raycap** | www.raycap.com

**SPECIFICATIONS**

**DC Surge Protection Solutions for Base Station - Outdoor Rated**  
**DC12-48-60-0-25E**  
 Overvoltage Protection and Power Management Junction Box

powered by  
**Strikesorb®**

**Electrical**

Model Number	DC12-48-60-0-25E
CEQ / ANT Number	CEQ. 12659
Number of Circuits Protected	12
Surge Protective Device (SPD) Type per UL 1449 4th Edition	Type 2
Surge Protection Class as per IEC 61643-11	Class I
Nominal Operating DC Voltage [U <sub>n</sub> ]	48 V
Nominal Discharge Current [I <sub>n</sub> ] per UL 1449 3rd Edition	20kA 8/20 µs
Maximum Surge Current [I <sub>max</sub> ] per IEC 61643-11	60kA 8/20 µs
Maximum Impulse (Lightning) Current [I <sub>imp</sub> ] per IEC 61643-11	5kA 10/350 µs
Maximum Continuous Operating DC Voltage [U <sub>c</sub> ] (MCOV)	75 VDC
Voltage Protection Level [U <sub>p</sub> ] per IEC 61643-11	300 V
Voltage Protection Rating (VPR)	700 V
Suppression Technology	MOV
Strikesorb Module Type 2CA (UL 1449 4th edition)	30-V1-HV
Protection Modes:	
Normal Mode	-48V to Return
Common Mode	Return to Ground

**Mechanical**

Connection Terminal (Alarm) Method	Form C Hardwired, #22 to #12 AWG [0.34 to 4 mm <sup>2</sup> ]
Connection Terminal (Suppression) Method	Compression lug 2 hole, #10, 5/8 pitch, 12-4 AWG [3.31-21 mm <sup>2</sup> ]
Connection Terminal (Terminal Block) Method	Copper #14 to #2 AWG [2.5 to 35 mm <sup>2</sup> ] Aluminum #12 to #2 AWG [4 to 35 mm <sup>2</sup> ]
Environmental Ingress Protection (IP) Rating	IP 68
Operating Temperature (°C)	-40° C to +100° C
Storage Temperature (°C)	-70° C to +80° C
Cold Temperature Cycling IEC 61300-2-22	-30° C to +60° C 200 hrs @5 PSI
Resistance to Aggressive Materials CEI IEC 61073-2	Including Acids and Bases
UV Protection ISO 4892-2 Method A	Xenon-Arc 2160 hrs
Enclosure Type	Outdoor - NEMA 4 Rated
Enclosure Dimensions (L x W x H)	18.17" x 20.06" x 6.37" [461.39 x 509.52 x 161.71 mm]
Weight	56.3 lbs [25.54 kg]
Combined Wind Loading	Sustained 135.3 lbs [602 N] Gust 228.6 lbs [1016 N]

**Optional Product Configurations**

Conduit Fittings	3- 2" Conduit Fittings, 2- 2½" Conduit Fittings, 1- 1" Conduit Fitting
Cable Glands (kit included)	3- NPT 1" Cable Glands, 2- M75 Cable Glands, 3- M63 Cable Glands

**Standards Compliance & Certifications**

Strikesorb modules are compliant to the following Surge Protection Device Standards:
Standards: UL 1449 4 <sup>th</sup> Edition: 2011, IEC 61643-11: 2011, EN 61643-11: 2012, IEEE C62.11: 2005, IEEE C62.41: 2002, IEEE C62.45: 2002, NEMA-LS-1
Certifications: UL, VDE, CE

AWG=American Wire Gauge



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G02-00-267 150115

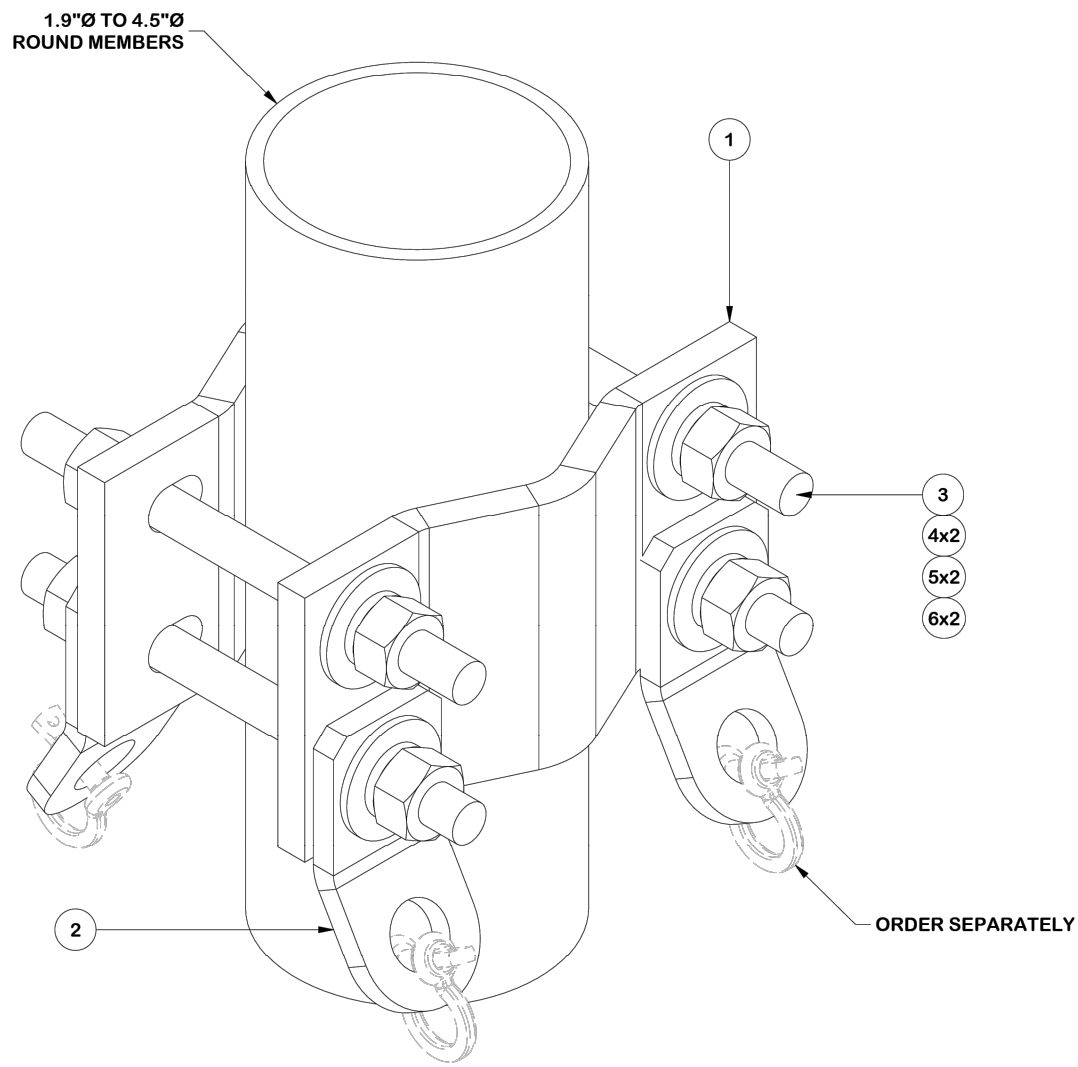
1 PROPOSED DC12-48-60-0-25E DETAIL  
 SCALE : N.T.S.

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

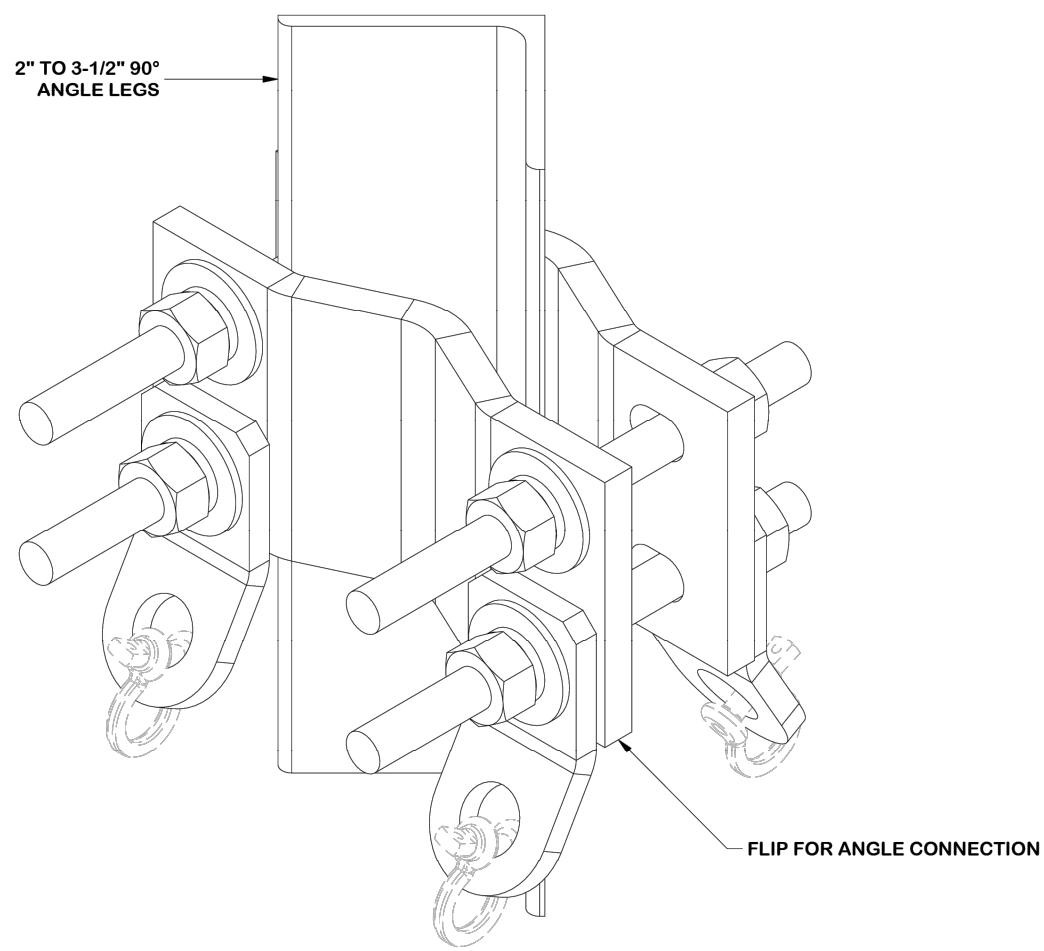
SUPPLEMENTAL

SHEET NUMBER: **R-609**  
 REVISION: -

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	V-CLAMP	LARGE V-CLAMP	8 21/32 in	5.55	11.09
2	4	X-TOAB-BPL	TIE-OFF ANCHOR BRACKET BENT PLATE	2 in	0.83	3.33
3	4	G58R-8	5/8" x 8" THREADED ROD (HDG.)		0.70	2.79
4	8	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	0.56
5	8	G58LW	5/8" HDG LOCKWASHER		0.03	0.21
6	8	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	1.04
					<b>TOTAL WT. #</b>	<b>19.02</b>



**ROUND LEG CONNECTION**



**ANGLE LEG CONNECTION**

FINISH:  
HOT DIP GALVANIZED.

**TOLERANCE NOTES**  
 TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:  
 SAWED, SHEARED AND GAS CUT EDGES ( $\pm 0.030"$ )  
 DRILLED AND GAS CUT HOLES ( $\pm 0.030"$ ) - NO CONING OF HOLES  
 LASER CUT EDGES AND HOLES ( $\pm 0.010"$ ) - NO CONING OF HOLES  
 BENDS AND ANGLES ARE  $\pm 1/2$  DEGREE  
 ALL OTHER MACHINING ( $\pm 0.030"$ )  
 ALL OTHER ASSEMBLY ( $\pm 0.060"$ )

PROPRIETARY NOTE:  
 THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION  
**CABLE HANGER BRACKET  
 DUAL V-CLAMP W/ FOUR TABS**



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

Engineering Support Team:  
 1-888-753-7446

CPD NO.	DRAWN BY	ENG. APPROVAL
	CMFL 5/4/2023	5/4/2023
CLASS	DRAWING USAGE	CHECKED BY
87	02 CUSTOMER	BMC 5/4/2023

PART NO.	CHB-DVC4
DWG. NO.	CHB-DVC4

1 OF 1  
PAGE

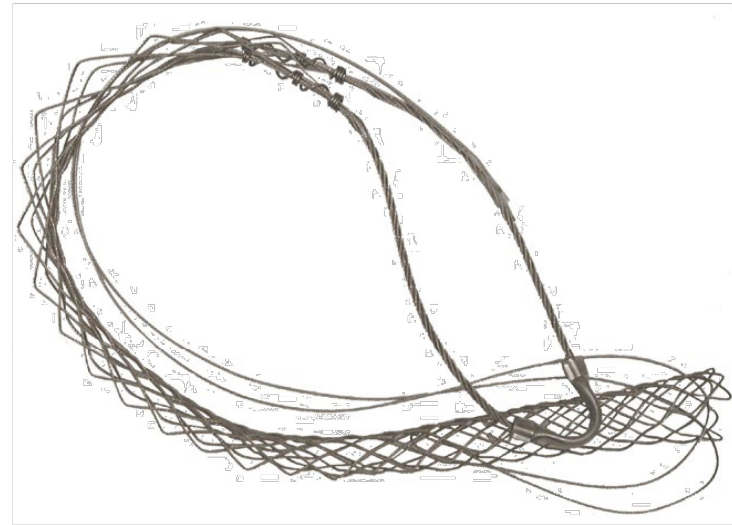
**1 PROPOSED SITEPRO HOISTING ANCHOR DETAIL**  
 SCALE: N.T.S.

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

SUPPLEMENTAL

SHEET NUMBER: <b>R-610</b>	REVISION: -
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HGxx: Lace-Up Hoisting Grips



**Features:**

- Lace-up design allows installation after connectors have been installed
- Longer grips result in less cable stress and greater resistance to pull-out, flexure, and vibration
- Use for lifting cables and for strain relief at 200' intervals on long cable runs

**Construction:**

- Stainless steel braided wire construction

Part #	Cable Size & Type	Overall Length	Mesh Length	Weight
HG12	1/2" Coax & LMR-600	15"	8"	0.1 lb
HG58	5/8" Coax & LMR-900	29"	22"	0.3 lb
HG78	7/8" Coax & LMR-1200	34"	21-1/2"	0.4 lb
HG114	1-1/4" Coax & LMR-1700	40"	27"	0.4 lb
HG158	1-5/8" Coax	45"	30"	0.4 lb
HG214	2-1/4" Coax	45"	30"	0.6 lb

created on: 12/12/2017

New York  
1-888-438-7761

Georgia  
1-866-901-0603

Indiana  
1-888-753-7446

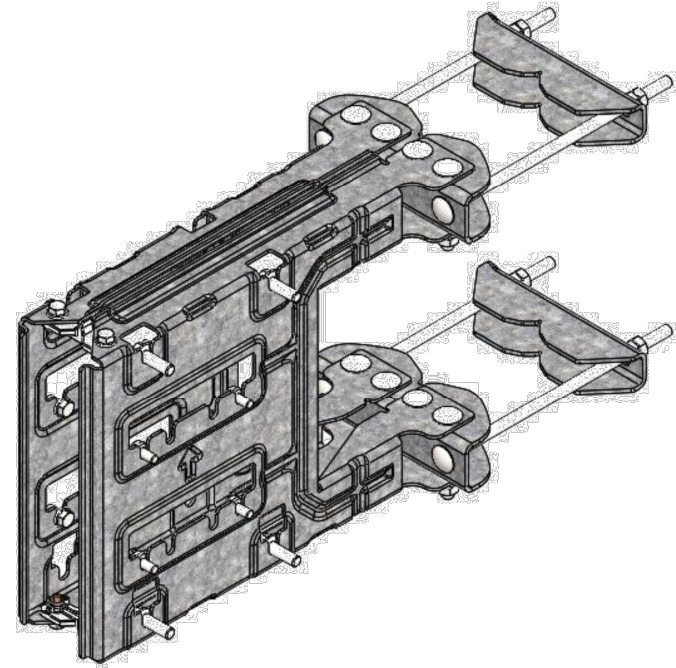
Oregon  
1-888-880-9191

California  
1-888-776-1937

Texas  
1-888-809-5151

Florida  
1-844-278-6371





SXX 125 5394/2

## Universal B2B Bracket CC110

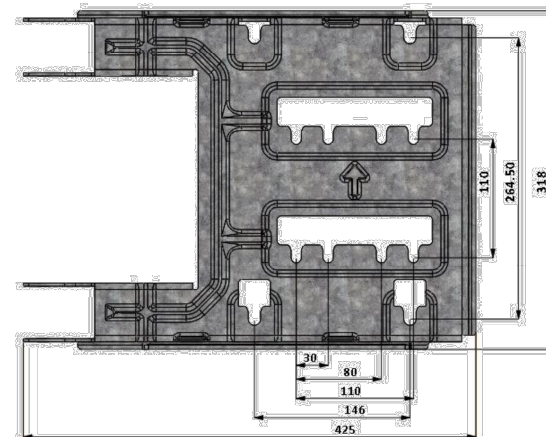
Universal B2B Bracket CC110 is designed for installation of back to back ERS on any supporting structure i.e. pole, mast, tower leg etc. It is Low PIM bracket. When installed properly, it meets the requirements of installation in High Risk PIM Zones. Static and dynamic testing was conducted as per IEC 61000-4-3: 2020 PRV and ITU-R SM-329.

### Robustness

The Universal B2B Bracket CC110 kit supports for installation of back to back ERS weight upto 50 kg on each side simultaneously. It supports the ERS mounting on pole, mast, tower leg or square tube. Easy installation due to use of carriage bolts for mounting on the supporting structure and key holes for ERS in the bracket. Bush separators has been provided to avoid any contact of arms with each other.

### Quality

All components of the assembly are made of galvanized High Tensile Steel, which supports corrosion resistance.

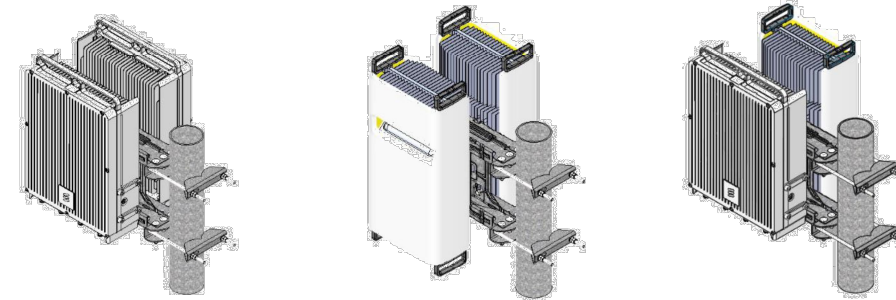


## Technical specification

### Functional Description

#### SXX 125 5394/2

Universal B2B Bracket CC110 kit supports installation of ERS back to back with Centre to Centre distance of 30mm x 110mm, 80mm x 110mm and 110mm x 110mm. It also supports two RRUs (back to back) with Centre to Centre distance of 146mm x 264.5 mm (old generation ERS). ERS or RRU are mounted back to back in portrait position on any supporting structure with ERS or RRU weight up to 50kg on each side.



<b>Product</b>	Universal B2B Bracket CC110		
<b>Product number</b>	SXX 125 5394/2		
<b>Mounting range</b>	Profile	Minimum	Maximum
	Circular tube	Ø25 mm (1 inch)	Ø120 mm (4.7 inch)
	60° Angle	35 mm Opening (1.4 inch)	115 mm Opening (4.5 inch)
	90° Angle	35 x 35 mm (1.4 X 1.4 inch)	112 x 112 mm (4.4 X 4.4 inch)
	Square tube	35 x 35 mm (1.4 X 1.4 inch)	80 x 80 mm (3.1 X 3.1 inch)
<b>Mechanical specification</b>	Brackets	High Tensile Steel, Galvanized	
	Fasteners	Grade 8.8 Galvanized & A4	
	Bush Separators	Composite material(PBT+PET)-GF30	
<b>Recommended tools</b>	M8 ISO, 13mm torque wrench (10-22 Nm) M10 ISO, 16mm & 17mm torque wrench (15-25 Nm)		
<b>Performance</b>	Maximum wind speed	67 m/s (240 km/h, 149 mph)	
	Survival wind speed	90 m/s (324 Km/h, 201 mph)	
	Maximum equipment weight	2 x 50 Kg (2 x 110.2 lbs)	
<b>Packaging dimension</b>	Length	Width	Height
Universal B2B Bracket CC110 (SXX 125 5394/2)	480 mm (18.9 in)	360 mm (14.2 in)	80 mm (3.2 in)
	Package Weight	Product Weight	
	10.4 Kg (22.9 lbs)	10.0 Kg (22.0 lbs)	

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287 01- SXX 125 5394/2, Rev. A  
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1 PROPOSED RRU BACK TO BACK BRACKET DETAIL

SCALE: N.T.S.

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SUPPLEMENTAL

SHEET NUMBER:

R-612

REVISION:

-

# Pxxx: Bulk Pipe



Part #	Length	OD x Length (in)
Schedule 40		
P260	5'-0"	2-3/8" x 60"
P263	5'-3"	2-3/8" x 63"
P272	6'-0"	2-3/8" x 72"
P284	7'-0"	2-3/8" x 84"
P296	8'-0"	2-3/8" x 96"
P2108	9'-0"	2-3/8" x 108"
P2120	10'-0"	2-3/8" x 120"
P2126	10'-6"	2-3/8" x 126"
P2150	12'-6"	2-3/8" x 150"
P2174	14'-6"	2-3/8" x 174"
P2252	21'-0"	2-3/8" x 252"
P3072	6'-0"	2-7/8" x 72"
P3084	7'-0"	2-7/8" x 84"
P3096	8'-0"	2-7/8" x 96"
P30108	9'-0"	2-7/8" x 108"
P30120	10'-0"	2-7/8" x 120"
P30126	10'-6"	2-7/8" x 126"
P30150	12'-6"	2-7/8" x 150"
P30174	14'-6"	2-7/8" x 174"
P30252	21'-0"	2-7/8" x 252"
P360	5'-0"	3-1/2" x 60"
P372	6'-0"	3-1/2" x 72"
P384	7'-0"	3-1/2" x 84"
P396	8'-0"	3-1/2" x 96"
P3150	12'-6"	3-1/2" x 150"
P3160	13'-4"	3-1/2" x 160"
P3174	14'-6"	3-1/2" x 174"
P3216	18'-0"	3-1/2" x 216"
P3252	21'-0"	3-1/2" x 252"
P472	6'-0"	4-1/2" x 72"
P4126	10'-6"	4-1/2" x 126"
P4252	21'-0"	4-1/2" x 252"



**Features:**

- Factory cut end, hot-dip galvanized pipe

**Construction:**

- ASTM A53 Grade B
- Schedule 40 or Schedule 80

**Design Criteria:**

- ASTM A53 Grade B (Yield Fy = 35 ksi [240 MPa]/ Tensile Fu = 60 ksi [415 MPa])
- Hot dip galvanized in accordance with ASTM A123 requirements

Part #	Length	OD x Length (in)
Schedule 80		
P2252-80	21'	2-1/2" x 252"
P30126-80	10'-6"	2-7/8" x 126"
P30252-80	21'	2-7/8" x 252"
P3252-80	21'	3-1/2" x 252"

Created on: 03/09/2023

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888-438-7761

1 PROPOSED 10' PIPE MOUNT DETAIL  
SCALE: N.T.S.

# Pxxx: Bulk Pipe



Part #	Length	OD x Length (in)
Schedule 40		
P260	5'-0"	2-3/8" x 60"
P263	5'-3"	2-3/8" x 63"
P272	6'-0"	2-3/8" x 72"
P284	7'-0"	2-3/8" x 84"
P296	8'-0"	2-3/8" x 96"
P2108	9'-0"	2-3/8" x 108"
P2120	10'-0"	2-3/8" x 120"
P2126	10'-6"	2-3/8" x 126"
P2150	12'-6"	2-3/8" x 150"
P2174	14'-6"	2-3/8" x 174"
P2252	21'-0"	2-3/8" x 252"
P3072	6'-0"	2-7/8" x 72"
P3084	7'-0"	2-7/8" x 84"
P3096	8'-0"	2-7/8" x 96"
P30108	9'-0"	2-7/8" x 108"
P30120	10'-0"	2-7/8" x 120"
P30126	10'-6"	2-7/8" x 126"
P30150	12'-6"	2-7/8" x 150"
P30174	14'-6"	2-7/8" x 174"
P30252	21'-0"	2-7/8" x 252"
P360	5'-0"	3-1/2" x 60"
P372	6'-0"	3-1/2" x 72"
P384	7'-0"	3-1/2" x 84"
P396	8'-0"	3-1/2" x 96"
P3150	12'-6"	3-1/2" x 150"
P3160	13'-4"	3-1/2" x 160"
P3174	14'-6"	3-1/2" x 174"
P3216	18'-0"	3-1/2" x 216"
P3252	21'-0"	3-1/2" x 252"
P472	6'-0"	4-1/2" x 72"
P4126	10'-6"	4-1/2" x 126"
P4252	21'-0"	4-1/2" x 252"



**Features:**

- Factory cut end, hot-dip galvanized pipe

**Construction:**

- ASTM A53 Grade B
- Schedule 40 or Schedule 80

**Design Criteria:**

- ASTM A53 Grade B (Yield Fy = 35 ksi [240 MPa]/ Tensile Fu = 60 ksi [415 MPa])
- Hot dip galvanized in accordance with ASTM A123 requirements

Part #	Length	OD x Length (in)
Schedule 80		
P2252-80	21'	2-1/2" x 252"
P30126-80	10'-6"	2-7/8" x 126"
P30252-80	21'	2-7/8" x 252"
P3252-80	21'	3-1/2" x 252"

Created on: 03/09/2023

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888-438-7761

2 PROPOSED 8' PIPE MOUNT DETAIL  
SCALE: N.T.S.

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SUPPLEMENTAL

SHEET NUMBER: <b>R-613</b>	REVISION: -
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# XP-197-US



Single Crossover Plate kit for MT-197 Stand-off: Mounts one 2-3/8"-3-1/2" Pipe to 4-1/2" Round or 4" Square Members

## Product Classification

**Product Type** Pipe mount kit

## General Specifications

**Mounting** Stand-off arm

**Pipe, quantity** 0

## Dimensions

**Height** 10 in | 254 mm

**Width** 10 in | 254 mm

**Length** 10 in | 254 mm

**Mounting Diameter, maximum** 4.5 in | 114.3 mm

**Pipe Outer Diameter** 2.4 in | 60.96 mm | 2.9 in | 73.66 mm | 3.5 in | 88.9 mm

## Material Specifications

**Material Type** Hot dip galvanized steel

## Packaging and Weights

**Included** Crossover bracket | Hardware

**Packaging quantity** 1

**Weight, net** 11.3 kg | 24.912 lb

## Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value

# XP-197-US

REACH-SVHC Compliant as per SVHC revision on [www.commscope.com/ProductCompliance](http://www.commscope.com/ProductCompliance)

ROHS Compliant

UK-ROHS Compliant



Page 1 of 2

Page 2 of 2

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## 1 PROPOSED CROSSOVER PLATE KIT DETAIL

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SUPPLEMENTAL

SHEET NUMBER: <b>R-614</b>	REVISION: -
-------------------------------	----------------



This report was prepared for American Tower Corporation by



Eng. Number 14758439\_C8\_01  
October 28, 2024  
Page 4

**Conclusion**

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above provided the modifications listed below are completed:

- Move the existing beta sector mount to the tower leg with the existing Pike omni antenna to become alpha sector and rotate the existing alpha sector mount to azimuth to become new beta sector.
- Install two (2) Site Pro 1 P30120 mount pipes in position 2. Connect pipes to the sector frame rails with Commscope XP-197-US crossover plate kits (or approved equivalent).
- Install four (4) Site Pro 1 P296 RRH pipes. Connect pipes to the sector frame arms with Commscope XP-197-US crossover plate kits (or approved equivalent).

No structural failures were addressed with the noted contingencies. Contingencies address the Carrier's antenna spacing requirements.

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact MountAnalysis@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

**Antenna Mount Analysis Report**

**Mount Type** : 10.5-ft Sector Frame  
**ATC Site Name** : Morley 1, CO  
**ATC Site Number** : 383495  
**Engineering Number** : 14758439\_C8\_01  
**Mount Elevation** : 55 ft  
**Carrier** : AT&T Mobility  
**Carrier Site Name** : MOUNT PITTSBURG  
**Carrier Site Number** : WSUTH0032710  
**Site Location** : 15743 Phantom Canyon View  
 Colorado Springs, CO 80903  
 38.6126, -104.9348  
  
**County** : El Paso  
**Date** : October 28, 2024  
**Max Usage** : 50%  
**Result** : Contingent Pass

Prepared By:  
Dmitriy Albul  
Professional Engineer

Reviewed By:



*D. Albul*  
10-28-24

Expiration Date: 10-31-25

**NOTE:** THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONSTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: <b>R-615</b>	REVISION: -
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