

GEN3 Engineering - C:\Users\mpm17\Desktop\GEN3_Eng\000 Docs\Mastec MCA\COLUMBIA CITY_5G NR RADIO CD.dwg September 9, 2025 4:17:25 PM mpm17

NOTES:

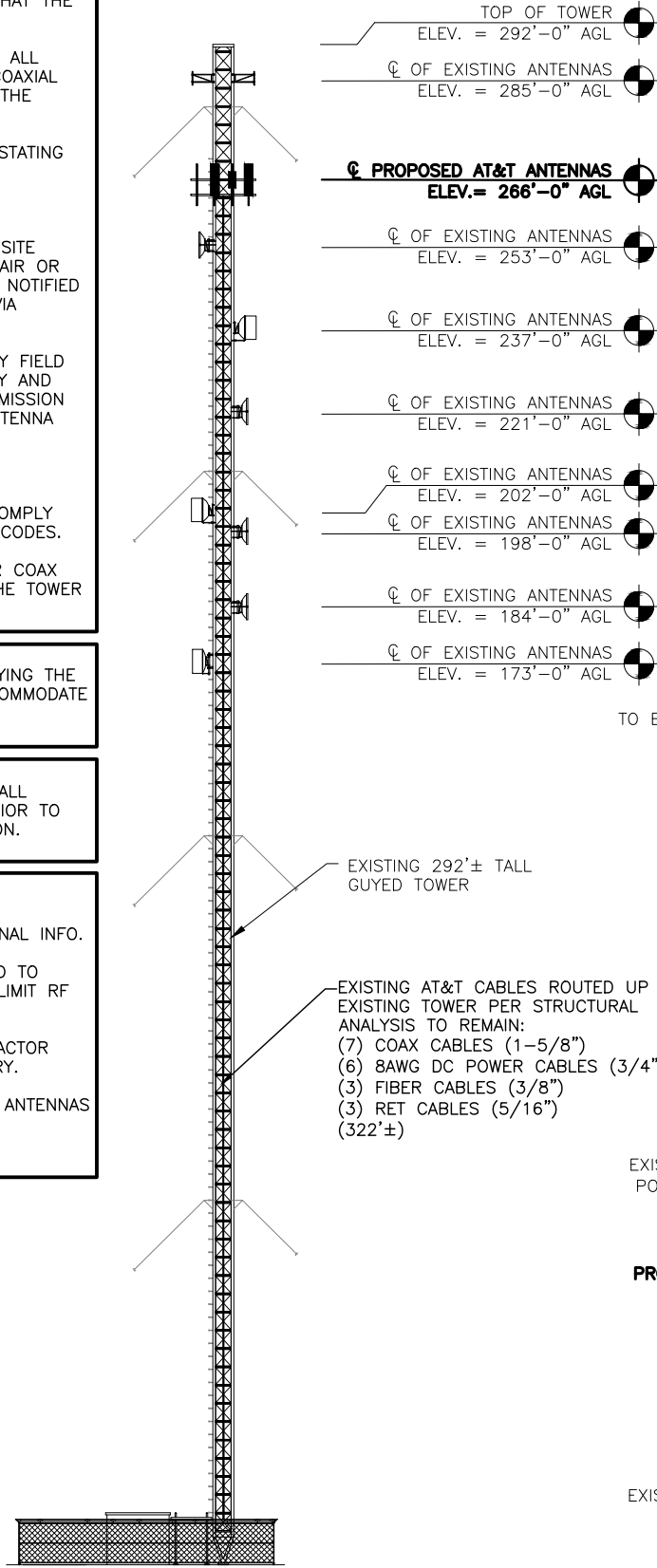
1. A STRUCTURAL ANALYSIS SHALL BE PERFORMED BY THE OWNER'S AGENT TO CERTIFY THAT THE EXISTING/PROPOSED COMMUNICATION STRUCTURE AND COMPONENTS ARE STRUCTURALLY ADEQUATE TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, COAXIAL CABLES AND OTHER APPURTENANCES. THE OWNER'S AGENT SHALL FURNISH A CERTIFICATION LETTER SEALED BY A REGISTERED PROFESSIONAL ENGINEER STATING THAT THIS STRUCTURAL ANALYSIS WAS PREPARED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
2. IF ANY WORK IS PERFORMED AT THIS SITE THAT REQUIRES THE SITE TO BE OFF AIR OR TURNED DOWN, THE SWITCH IS TO BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION VIA NCR/CTS.
3. INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES, AND SUPPORT STRUCTURES. ANTENNA WORK TO BE INSTALLED PER THE REQUIREMENTS OF THE TOWER MANUFACTURER'S SPECIFICATION.
4. ANTENNA AND MOUNT DESIGN MUST COMPLY WITH TIA-EIA-222-H AND ALL LOCAL CODES.
5. CONTRACTOR TO PROVIDE THE PROPER COAX JUMPER SUPPORT ATTACHMENTS TO THE TOWER AND ANTENNA MOUNT.

CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE RAYCAP INSTALLED ON THE TOWER TO ACCOMMODATE THE QUANTITY OF RRU'S.

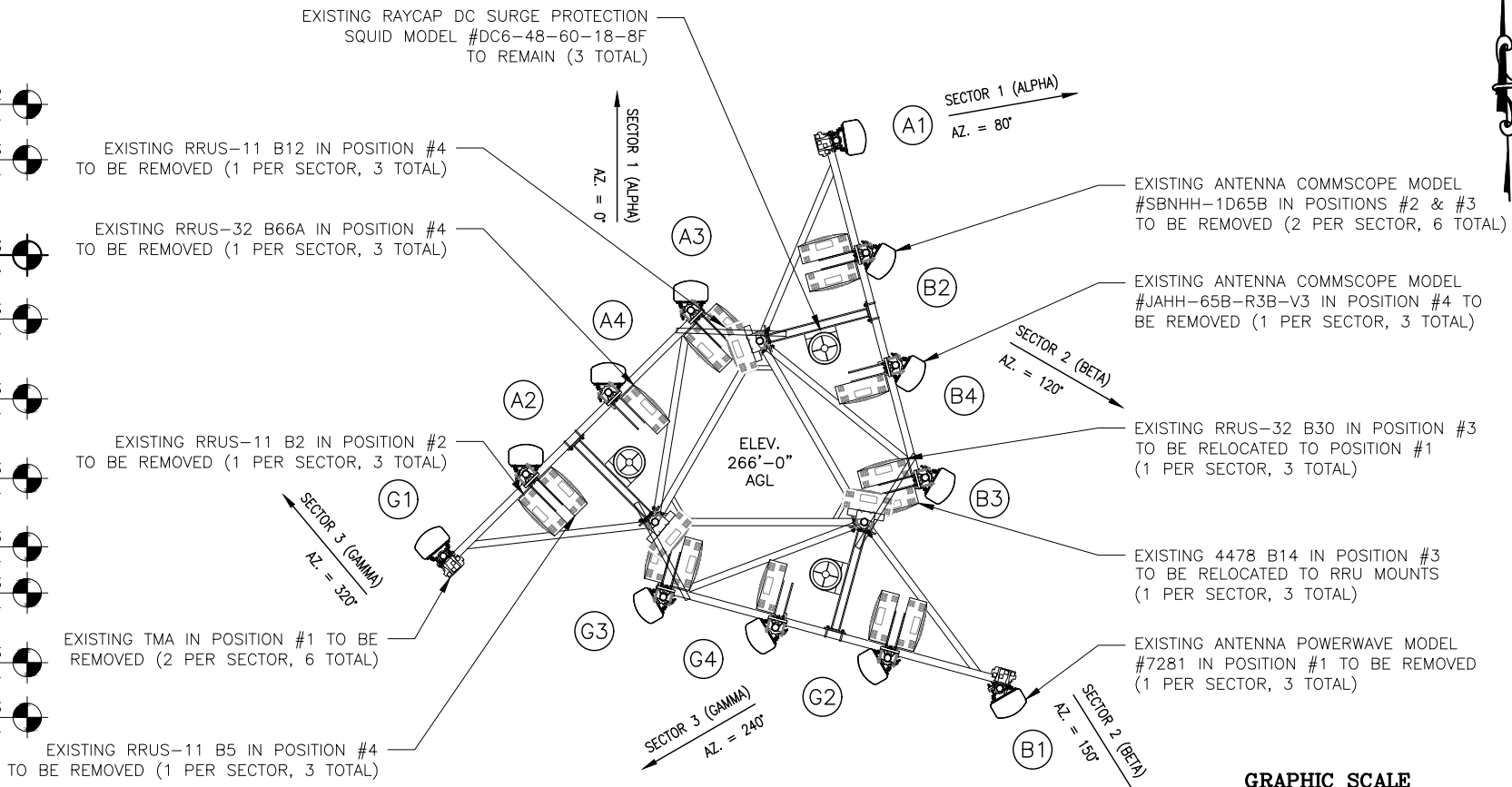
THE CONTRACTOR MUST FIELD VERIFY ALL MEASUREMENTS AND FIELD CONDITIONS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

NOTES:

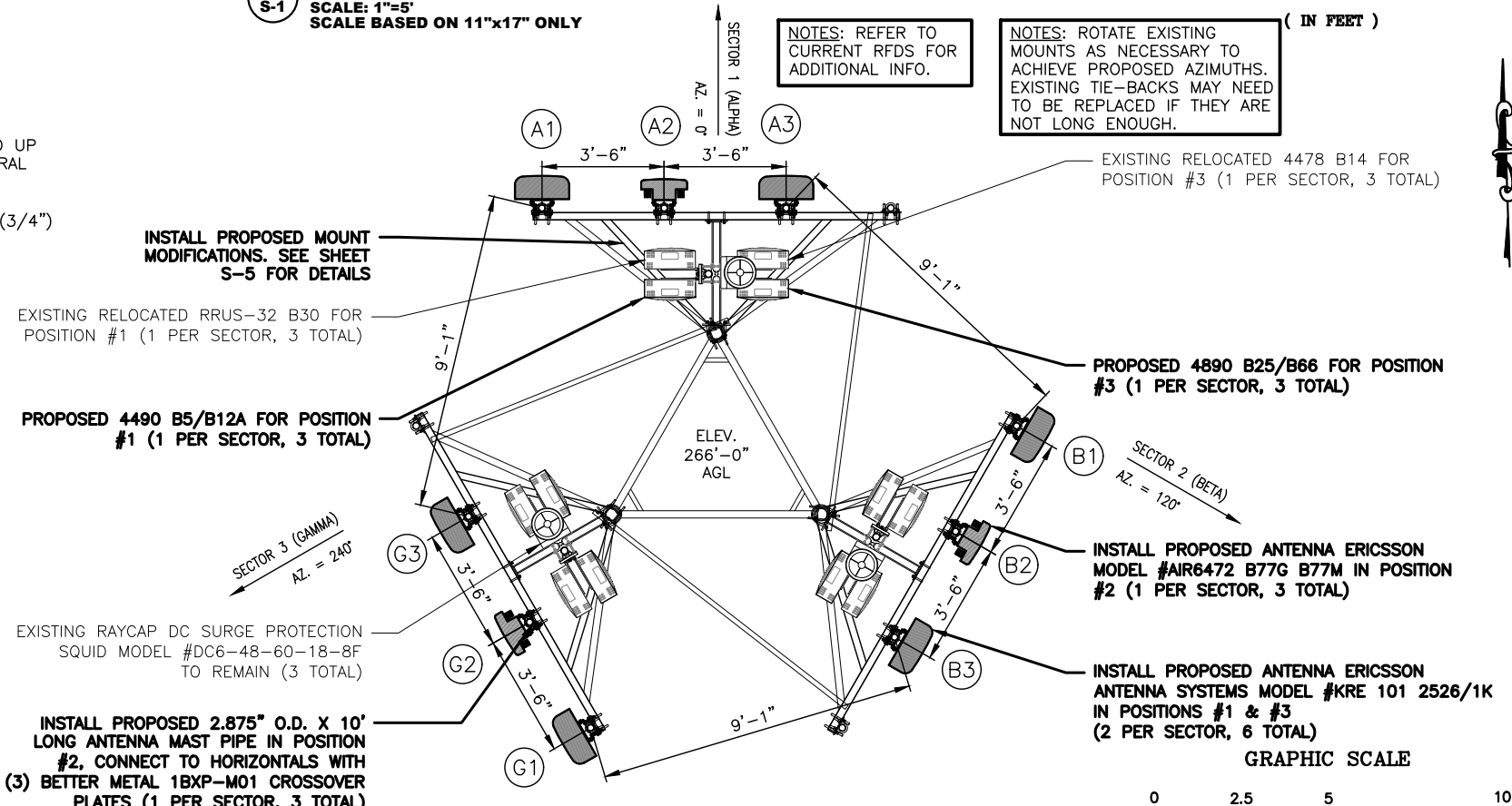
1. REFER TO CURRENT RFDS FOR ADDITIONAL INFO.
2. ADJUST ANTENNA MOUNTS AS REQUIRED TO ACHIEVE THE AZIMUTH SPECIFIED AND LIMIT RF SHADOWING
3. UNLESS NOTED OTHERWISE THE CONTRACTOR MUST PROVIDE ALL MATERIAL NECESSARY.
4. CONTRACTOR TO RETURN ALL EXISTING ANTENNAS BEING REMOVED TO AT&T.



1 TOWER ELEVATION
SCALE: 1"=35'
SCALE BASED ON 11"x17" ONLY



2 EXISTING ANTENNA CONFIGURATION DETAIL
SCALE: 1"=5'
SCALE BASED ON 11"x17" ONLY



3 PROPOSED ANTENNA CONFIGURATION DETAIL
SCALE: 1"=5'
SCALE BASED ON 11"x17" ONLY

REV	DATE	DESCRIPTION
A	07/17/25	PRELIMINARY CDs REV "A"
0	09/09/25	FINAL CDs ISSUED
1		
2		

DRAWN BY: ME
CHECKED BY: MM

AT&T
12150 RESEARCH PARKWAY
ORLANDO, FL 32826

MasTec
Network Solutions
800 S. DOUGLAS ROAD
10TH FLOOR
CORAL GABLES, FL 33134

PREPARED BY:
GEN ENGINEERING
27139 SEA BREEZE WAY
WESLEY CHAPEL, FLORIDA 33544
(813)917-2671
COA # 35409

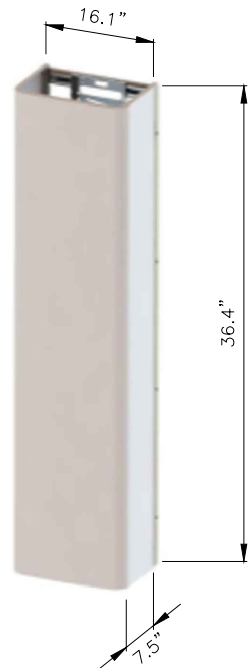
THIS ITEM HAS BEEN DIGITALLY SIGNED & SEALED BY MARC P. MAIER, P.E. ON THE DATE ADJACENT TO THE SEAL. SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

MARC P. MAIER
LICENSE
No 72513
STATE OF FLORIDA
PROFESSIONAL ENGINEER
SEPTEMBER 9, 2025
MARC P. MAIER, PE
FL PROFESSIONAL ENGINEER LIC. # 72513

COLUMBIA CITY
FA #10091913
340 SOUTHWEST KYLE WAY
LAKE CITY, FL 32025

SHEET DESCRIPTION
TOWER ELEVATION AND ANTENNA ORIENTATION

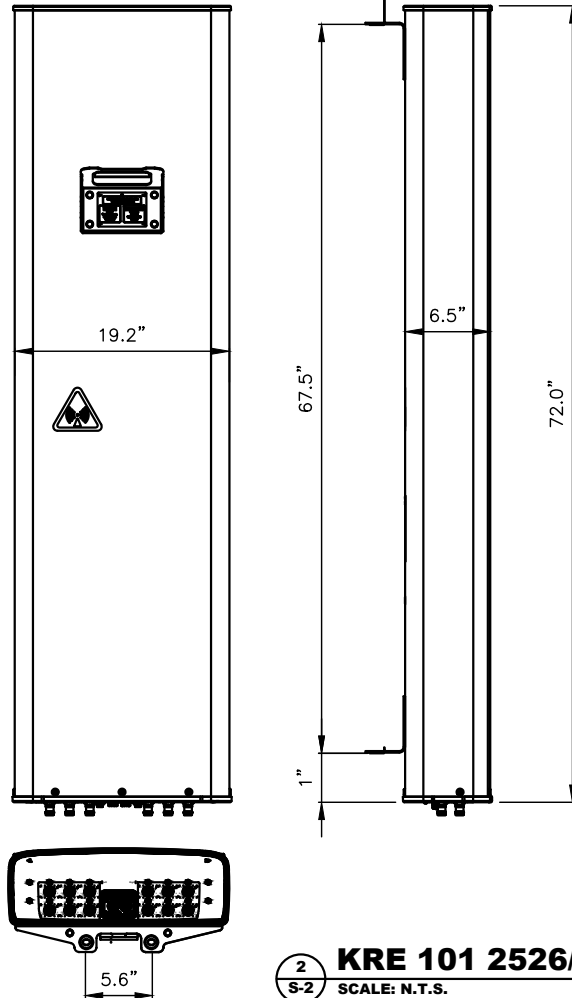
SHEET NUMBER
S-1



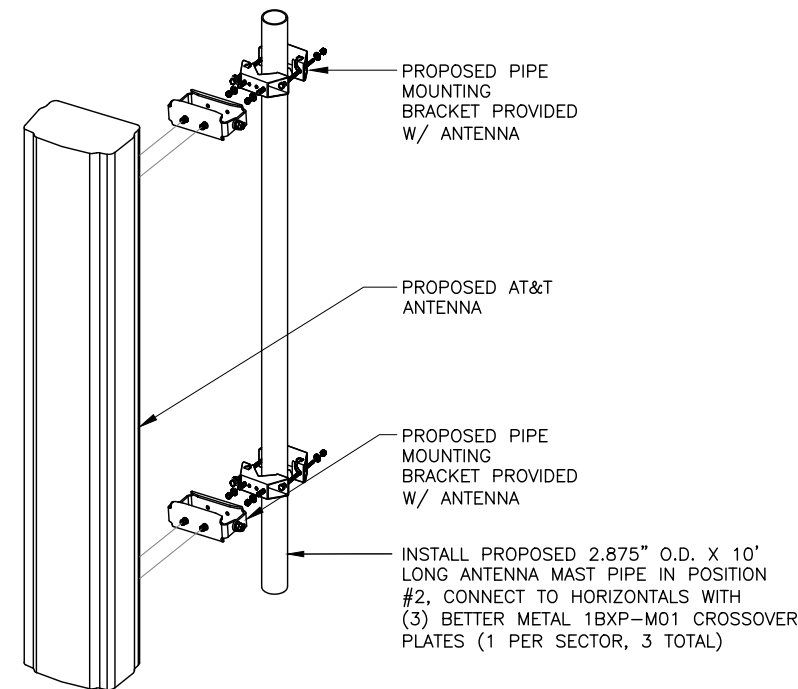
AIR 6472 B77G B77M, Wide band
Product Spec

TRX Branches	64T64R
Antenna Elements	256
Antenna configuration	(4x1)x(4x8)
Operation band	B77G (3450-3550 MHz) + B77M (3840-3980MHz)
Weight	42 kg
Size	925Hx410Wx190D mm, 72 L

1
ERICSSON AIR 6472 B77G B77M
SCALE: N.T.S.



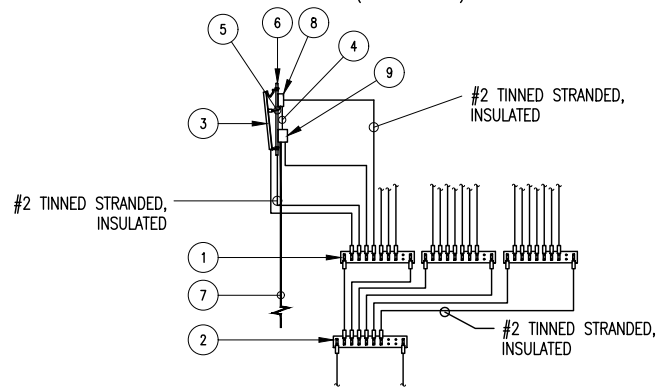
2
KRE 101 2526/1K
SCALE: N.T.S.



3
ANTENNA MOUNTING DETAIL
SCALE: N.T.S.

KEYNOTE LEGEND:

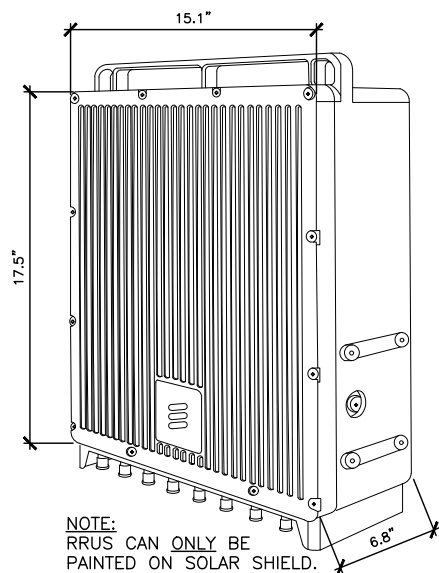
1. SECTOR GROUND BAR (TYP).
2. COLLECTOR GROUND BAR.
3. NEW ANTENNA.
4. SINGLE PAIR FIBER & DC POWER.
5. JUMPER CABLE, 1/2" (TYP).
6. PIPE MOUNT.
7. DC POWER & FIBER TO RAYCAP UNIT.
8. REMOTE RADIO HEAD (RRH) (IF APPLICABLE).
9. DC6 RAYCAP SURGE SUPPRESSOR (IF APPLICABLE).



1. UTILIZE EXISTING AT&T GROUND BARS AND GROUNDING.
2. ADD GROUND BARS IF THERE ARE INSUFFICIENT LUG POSITIONS.
3. REFERENCE AT&T BONDING & GROUNDING PRACTICE TP76416.

4
ANTENNA GROUNDING SCHEMATIC
SCALE: N.T.S.

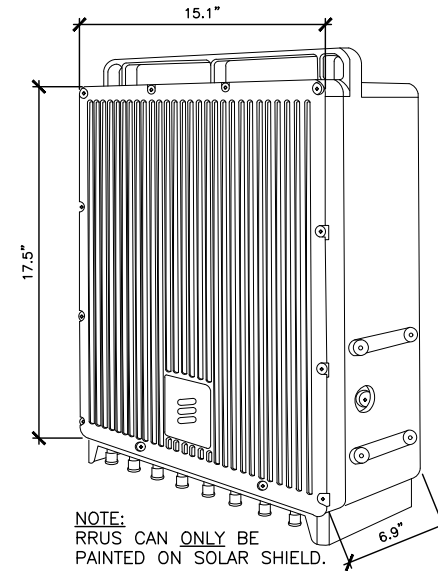
ERICSSON RRUS-4490 B5/B12A
-DIMENSIONS (H x W x D):
17.5" x 15.1" x 6.8" (INCLUDES SUNSHIELD)
-WEIGHT: 68 LBS



NOTE:
RRUS CAN ONLY BE PAINTED ON SOLAR SHIELD.

5
RADIO 4490 B5/B12A
SCALE: N.T.S.

ERICSSON RRUS-4890 B2/B66
-DIMENSIONS (H x W x D):
17.5" x 15.1" x 6.9" (INCLUDES SUNSHIELD)
-WEIGHT: 68 LBS



NOTE:
RRUS CAN ONLY BE PAINTED ON SOLAR SHIELD.

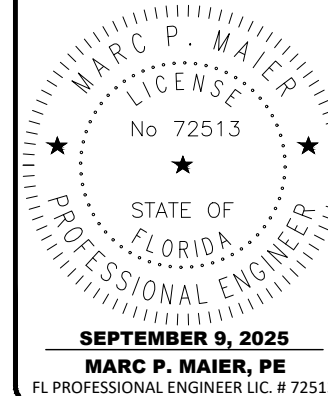
6
RRUS 4890 B25/B66 DETAIL
SCALE: N.T.S.

REV	DATE	DESCRIPTION
A	07/17/25	PRELIMINARY CDs REV "A"
0	09/09/25	FINAL CDs ISSUED
1		
2		

DRAWN BY: ME
CHECKED BY: MM



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COLUMBIA CITY
FA #10091913
340 SOUTHWEST KYLE WAY
LAKE CITY, FL 32025

SHEET DESCRIPTION

MISCELLANEOUS
DETAILS

SHEET NUMBER

S-2

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REV	DATE	DESCRIPTION
A	07/17/25	PRELIMINARY CDs REV "A"
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1		
2		

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12150 RESEARCH PARKWAY
ORLANDO, FL 32826



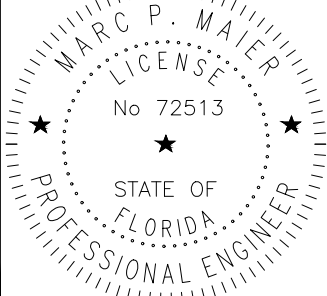
800 S. DOUGLAS ROAD
10TH FLOOR
CORAL GABLES, FL 33134

PREPARED BY:



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WESLEY CHAPEL, FLORIDA 33544
(813)917-2671
COA # 35409

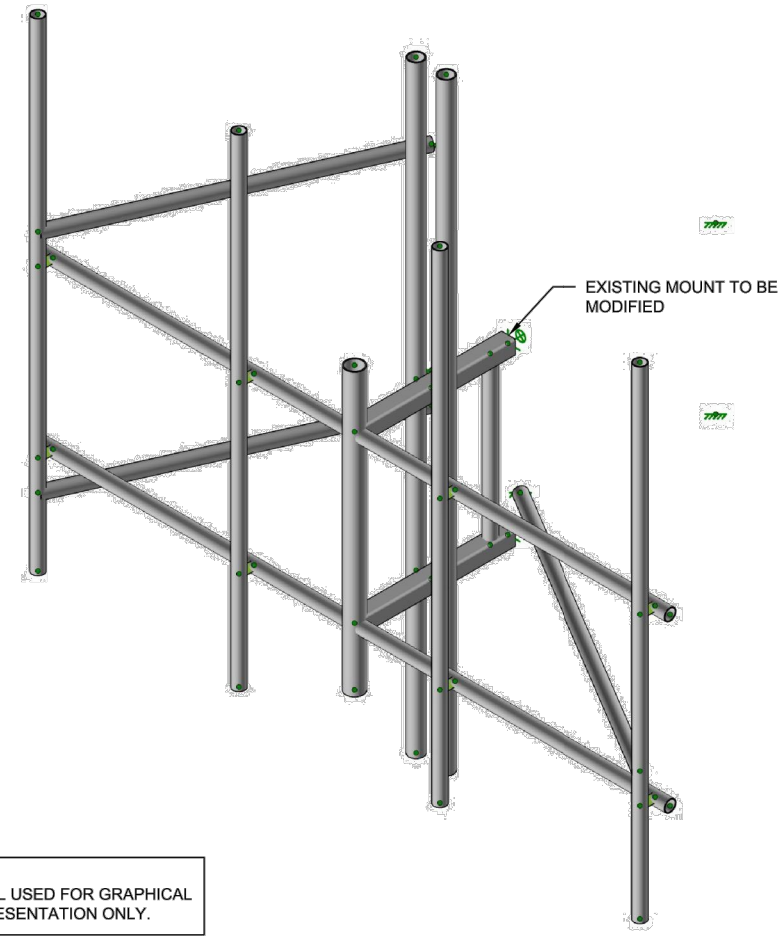
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SEPTEMBER 9, 2025
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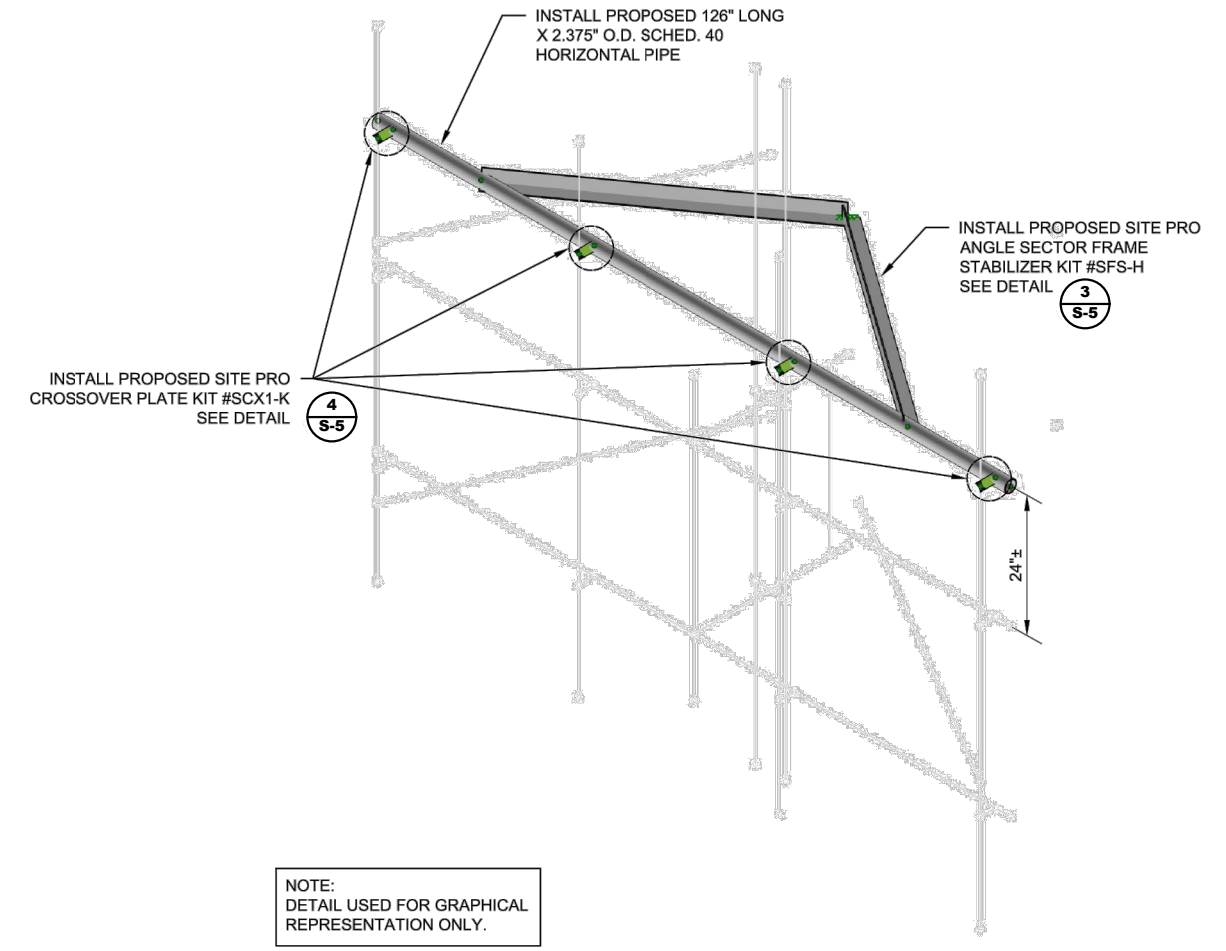
COLUMBIA CITY
FA #10091913
340 SOUTHWEST KYLE WAY
LAKE CITY, FL 32025

SHEET DESCRIPTION
MOUNT MODIFICATION DETAILS
SHEET NUMBER
S-5



NOTE:
DETAIL USED FOR GRAPHICAL
REPRESENTATION ONLY.

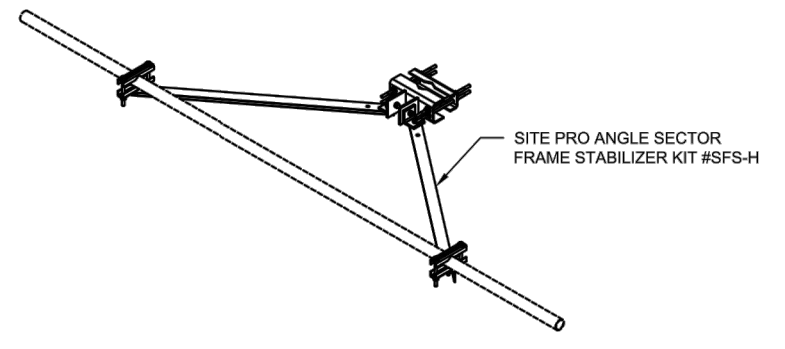
1 ISOMETRIC VIEW - EXISTING MOUNT
SCALE: N.T.S



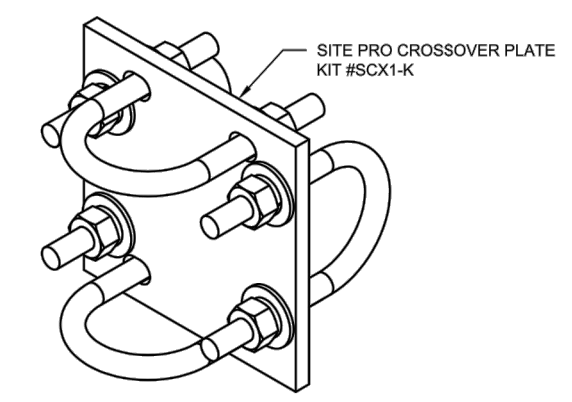
NOTE:
DETAIL USED FOR GRAPHICAL
REPRESENTATION ONLY.

2 ISOMETRIC VIEW - MOUNT MODIFICATIONS
SCALE: N.T.S

BILL OF MATERIALS	
QUANTITY	MODIFICATION DETAIL (MANUFACTURER, PART NUMBER, LENGTH, SHAPE, ETC.)
3	126" LONG X 2.375" O.D. SCHED. 40 HORIZONTAL PIPE
3	SITE PRO ANGLE SECTOR FRAME STABILIZER KIT #SFS-H
12	SITE PRO CROSSOVER PLATE KIT #SCX1-K
-	-

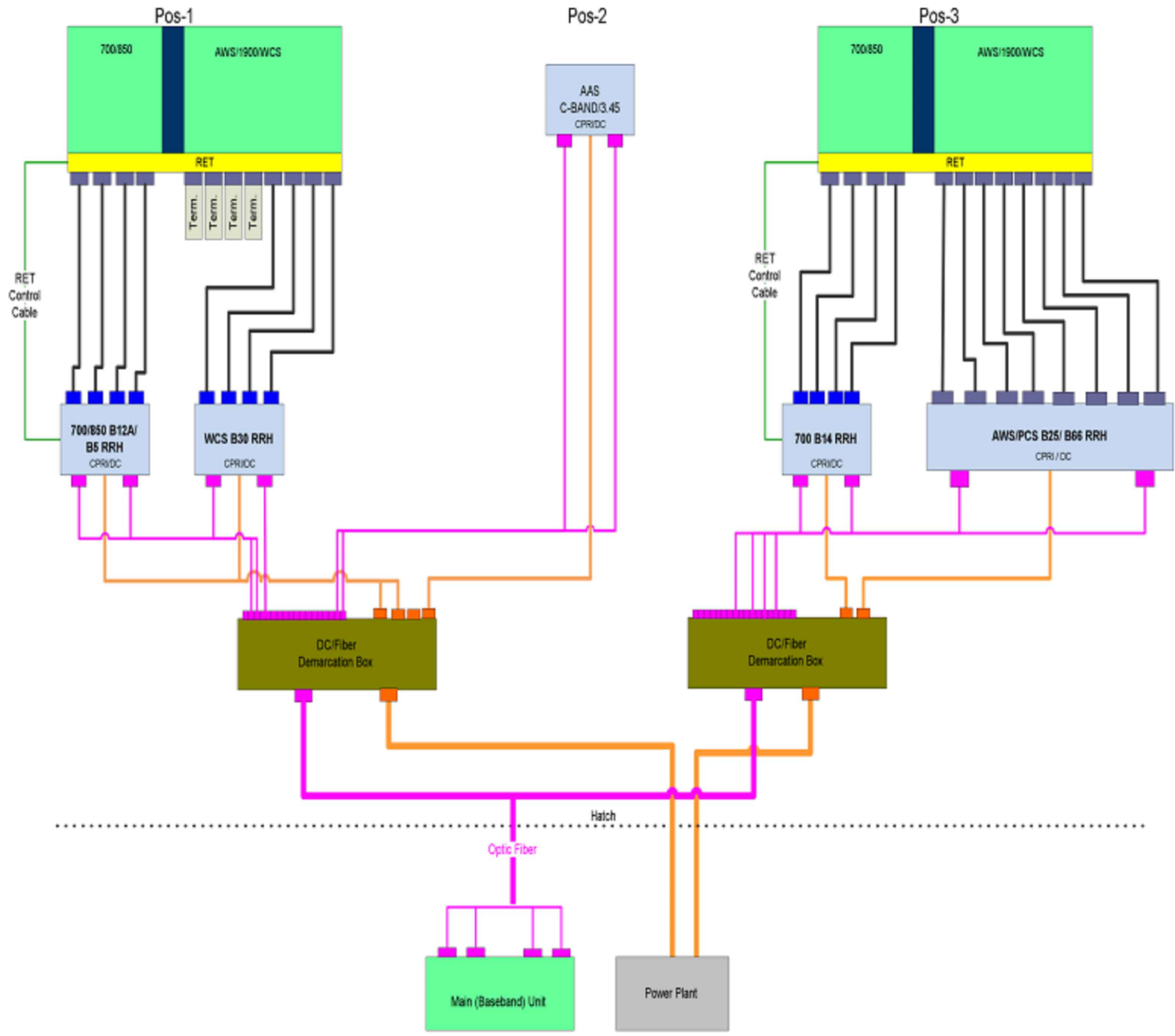


3 SITE PRO #SFS-H
SCALE: N.T.S



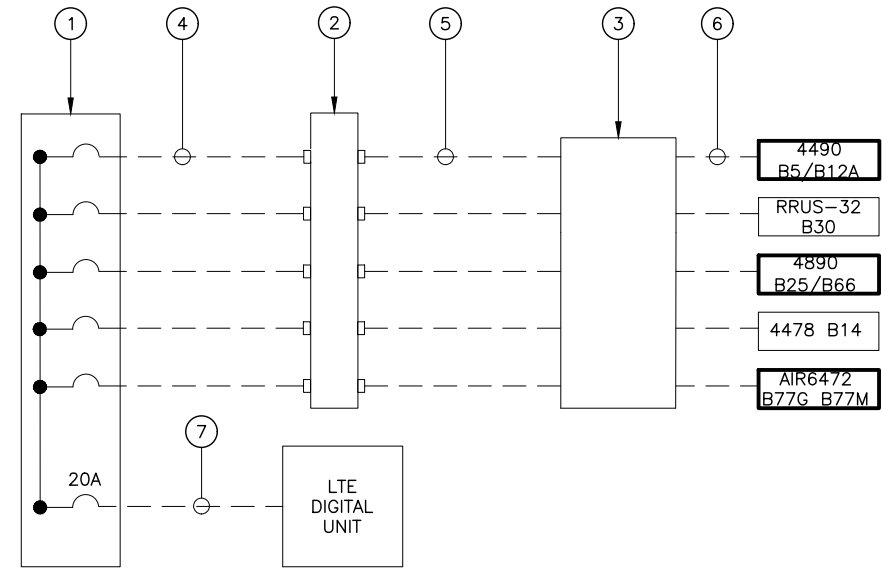
4 SITE PRO #SCX1-K
SCALE: N.T.S

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1 ONE-LINE DIAGRAMS
E-1 SCALE: N.T.S.

ERICSSON RRU BREAKER REQUIREMENTS		
ERICSSON RADIO	SIZE BREAKER	TECHNOLOGY
RRUS 32 B66	30 AMP	AWS (2100)
RRUS 32 B30	20 AMP	WCS (2300)
RRUS 32 B2	30 AMP	PCS (1900)
RRUS 11	25 AMP	VARIOUS BANDS (700 [B12], 850 [B5], 1900 [B2], 2100 [B4])
RRUS12 + A2	25 AMP	VARIOUS BANDS (850 [B5], 1900 [B2], 2100 [B4])
RRUS 4402 B66/B25	10 AMP	PCS (1900), AWS (2100)
RRU 4415 B25	25 AMP	1900
RRU 4415 B30	25 AMP	2300
RRU 4426 B66	30 AMP	2100
RRU 4455	15A AC	1900/2100
RRU 4478 B12	25 AMP	700
RRU 4478 B14	25 AMP	700
RRU 4478 B5	25 AMP	850
RRUS E2 B29	25 AMP	700 (B29 Tx ONLY)
RRUS 4449 B5/B12	2x25 AMP	700/850
RRUS 8843 B2/B66	2x30 AMP	1900/2100
RRUS 4460 B2/B66	2x40 AMP	1900/2100
AIR6488 B48	35 AMP	CBRS 3.55-3.7 GHz
AIR6449 B77	50 AMP	C BAND 3.3-4.2 GHz
AIR6419 B77	50 AMP	B77G DOD SUB BAND 3.4-3.6 GHz
RRU8863 B77	50 AMP	C BAND 3.8-4.2 GHz
DUAL AIR6464	2x50 AMP	C BAND 3.4 GHz
RADIO 4467	45 AMP	N77 DUAL C-BAND 3.45 GHz
RADIO 4490	50 AMP	B5/B12 DUAL BAND
RADIO 4408	10A AC 15A DC	3.45 GHz PICO RADIO
RADIO 4890	50 AMP	B2-B5/B66
6472 B77G/B77M	50 AMP	B77G/B77M



- KEYNOTE LEGEND:**
- 48V DC POWER PLANT. CONTRACTOR TO VERIFY CORRECT BREAKER SIZE IS INSTALLED FOR EACH RRU PER CHART.
 - (1) RACK MOUNTED RAYCAP DC SURGE PROTECTOR.
 - RAYCAP FIBER AND DC DISTRIBUTION UNIT TOWER MOUNTED.
 - #8 AWG SHIELDED CONDUCTORS.
 - PROVIDE (2) 6-CONDUCTOR #6 AWG BUNDLES FOR DC POWER FROM RACK MOUNTED RAYCAP SURGE PROTECTION UNIT TO THE RAYCAP FIBER AND DISTRIBUTION UNIT ON TOWER.
 - DC CABLE ROUTED TO RRH UNITS.
 - #12 AWG SHIELDED CONDUCTORS (WR-VG122ST-BRDA).

2 TYPICAL DC RISER DIAGRAM
E-1 SCALE: N.T.S.

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PREPARED BY:

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FA #10091913
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LAKE CITY, FL 32025

SHEET DESCRIPTION
ANTENNA ONE-LINE DIAGRAM

SHEET NUMBER
E-1