

PROJECT INFORMATION	
SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS
SITE ADDRESS:	19 MYRTLE STREET BOSTON, MA 02114
LATITUDE:	42.359569° N
LONGITUDE:	71.065636° W
JURISDICTION:	NATIONAL, STATE & LOCAL CODES OR ORDINANCES
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY
PROJECT TYPE:	ANCHOR
RF CONFIGURATION:	67D5A997DB INDOOR

SITE NUMBER: 4BN0159B
SITE NAME: BN159/BEACON HOUSE RT
 19 MYRTLE STREET
 BOSTON, MA 02114
 SUFFOLK COUNTY
 RF CONFIGURATION: 67D5A997DB INDOOR

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- GENERAL NOTES**
- THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE NORTHEAST, LLC. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
 - THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
 - CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SIGNATURES

APPROVED

CONSTRUCTION DATE

By Ryan Monte de Ramos at 3:20 pm, Sep 09, 2021

RF ENGINEERING	DATE
_____	_____
ZONING / SITE ACQ.	DATE
_____	_____
OPERATIONS	DATE
_____	_____
LANDLORD	DATE
_____	_____

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 East Providence, RI 02914 Fax: (401) 633-6354

CENTERLINE COMMUNICATIONS
 95 RYAN DRIVE, SUITE 1
 RAYNHAM, MA 02767

SITE NUMBER: 4BN0159B
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 19 MYRTLE STREET
 BOSTON, MA 02114
 SUFFOLK COUNTY

T-MOBILE NORTHEAST LLC
 15 COMMERCE WAY, SUITE B
 NORTON, MA 02766
 OFFICE: (508) 286-2700
 FAX: (508) 286-2893

NO.	DATE	REVISIONS	BY	CHK
0	10/30/20	ISSUED FOR REVIEW	MER	MRC
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2	02/01/21	REVISED	JWH	MRC
3	04/01/21	REVISED	JWH	MRC
4	09/03/21	REVISED	CJG	SNA

TITLE SHEET

SHEET NO.	T-1
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GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE LESEE/LICENSEE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS / CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
15. THE CONTRACTOR SHALL NOTIFY THE LESEE/LICENSEE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESEE/LICENSEE REPRESENTATIVE.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY: DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233 CALL BEFORE YOU DIG (CT): 1-800-922-4455
18. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS SHOWN HEREIN.
19. ALL DIMENSIONS SHOWN THIS ± ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH EFFECT THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH PROJECT OWNER PRIOR TO CONSTRUCTION.
20. NORTH ARROW SHOWN ON PLANS REFERS TO APPROXIMATE TRUE NORTH. PRIOR TO THE START OF CONSTRUCTION, ORDERING OR FABRICATING OF ANTENNA MOUNTS, CONTRACTOR SHALL CONSULT WITH PROJECT OWNER'S RF ENGINEER AND FIELD VERIFY ALL ANTENNA SECTOR LOCATIONS AND ANTENNA AZIMUTHS.
21. THE CONTRACTOR AND OR HIS SUB CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
22. ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.
23. COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE PROJECT OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF PROJECT OWNER SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE EXHIBIT 3). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
24. WHEN "PAINT TO MATCH" IS SPECIFIED FOR ANTENNA CONCEALMENT, PAINT PRODUCT FOR ANTENNA RADOME SHALL BE SHERWIN WILLIAMS COROTHANE II. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND PROJECT OWNER'S GUIDELINE'S.
25. COORDINATION, LAYOUT, AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
26. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
27. ALL (E)ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.
28. ALL (E)INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF UTILITY COMPANY ENGINEERING. THE AREAS OF THE PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT, DRIVEWAY OR
29. GRAVEL, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED AND COVERED WITH MULCH UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROLS AT ALL TIMES
30. DURING CONSTRUCTION. PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS
31. FOR WIRELESS COMMUNICATIONS SYSTEMS. PROJECT OWNER'S IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. PROJECT OWNER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.
32. SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
 - AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;
 - TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL
 - ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

APPLICABLE BUILDING CODES:
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE:

MASSACHUSETTS STATE BUILDING CODE 780 CMR, 9TH EDITION
ELECTRICAL CODE: MASSACHUSETTS 527 CMR 12.00 (NEC 2020)
NFPA 780, 2017

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN INSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE AND GREENLEE CONDUIT MEASURING TAPE IN EACH INSTALLED TELCO CONDUIT.
10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY PROJECT OWNER.
13. GROUNDING SHALL COMPLY WITH NEC ART. 250.
14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
20. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
21. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ (E) MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
22. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MAXIMUM RESISTANCE REQUIRED.
23. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

ADDITIONAL NOTE:
GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".



ABBREVIATIONS

AAV	ALTERNATIVE ACCESS VENDOR	EG	EQUIPMENT GROUND	N.T.S.	NOT TO SCALE
AC	ALTERNATING CURRENT	EGB	EQUIPMENT GROUND BAR	REF	REFERENCE
AGL	ABOVE GRADE LEVEL	EGR	EQUIPMENT GROUND RING	REQ	REQUIRED
ATS	AUTOMATIC TRANSFER SWITCH	(F)	FUTURE	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	GALV.	GALVANIZED	RGS	RIGID GALVANIZED STEEL
AZ	AZIMUTH	G.C.	GENERAL CONTRACTOR	RRH	REMOTE RADIO HEAD
BCW	BARE COPPER WIRE	KW	KILOWATT	TBD	TO BE DETERMINED
BEP	BUILDING ENTRY POINT	MGB	MASTER GROUND BUS	TBR	TO BE REMOVED
BTS	BASE TRANSCEIVER STATION	MIN.	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
CSC	CELL SITE CONTROLLER	(P)	PROPOSED	TYP	TYPICAL
(E)	EXISTING	PPC	POWER PROTECTION CABINET	U/G	UNDERGROUND



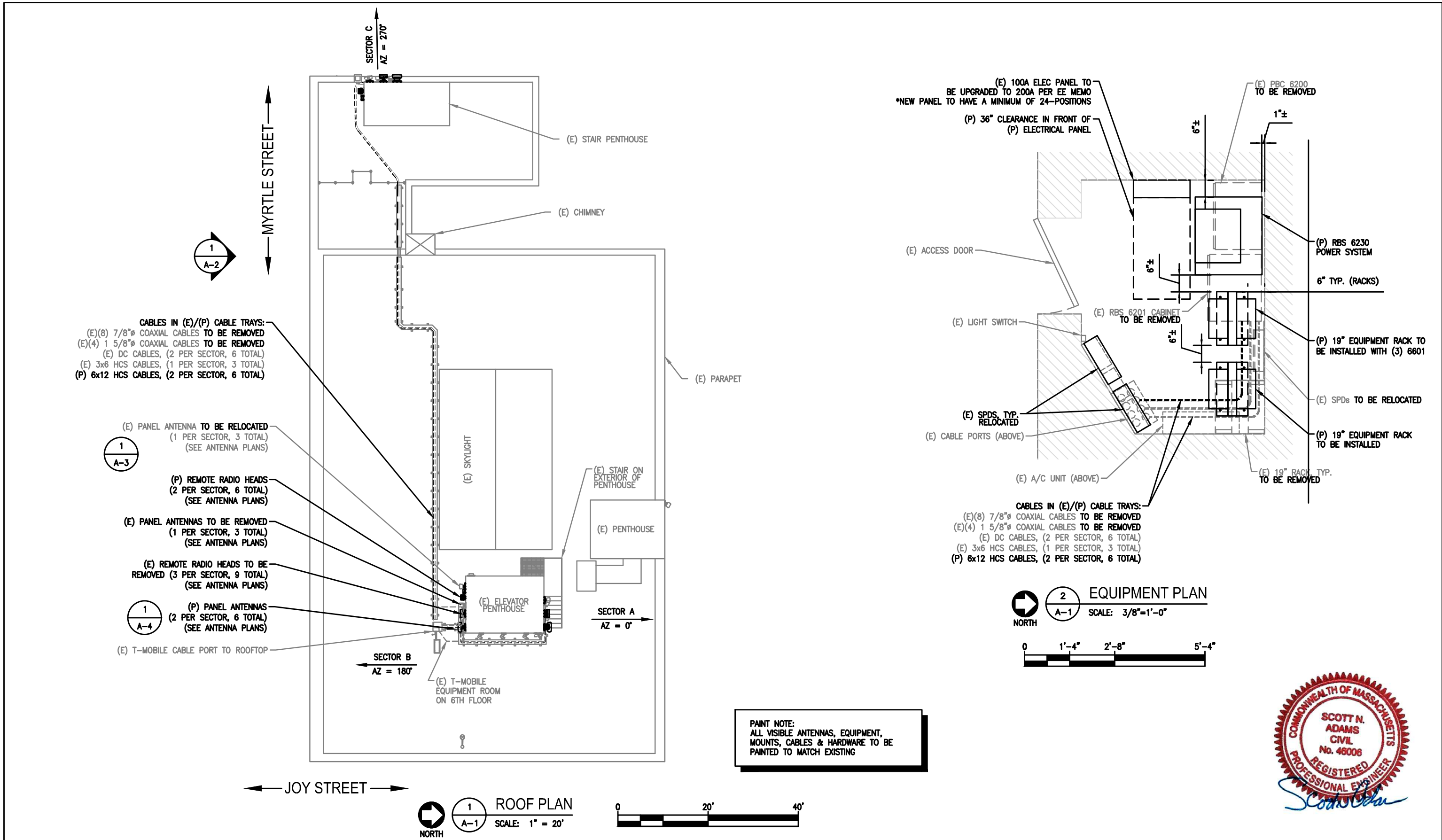
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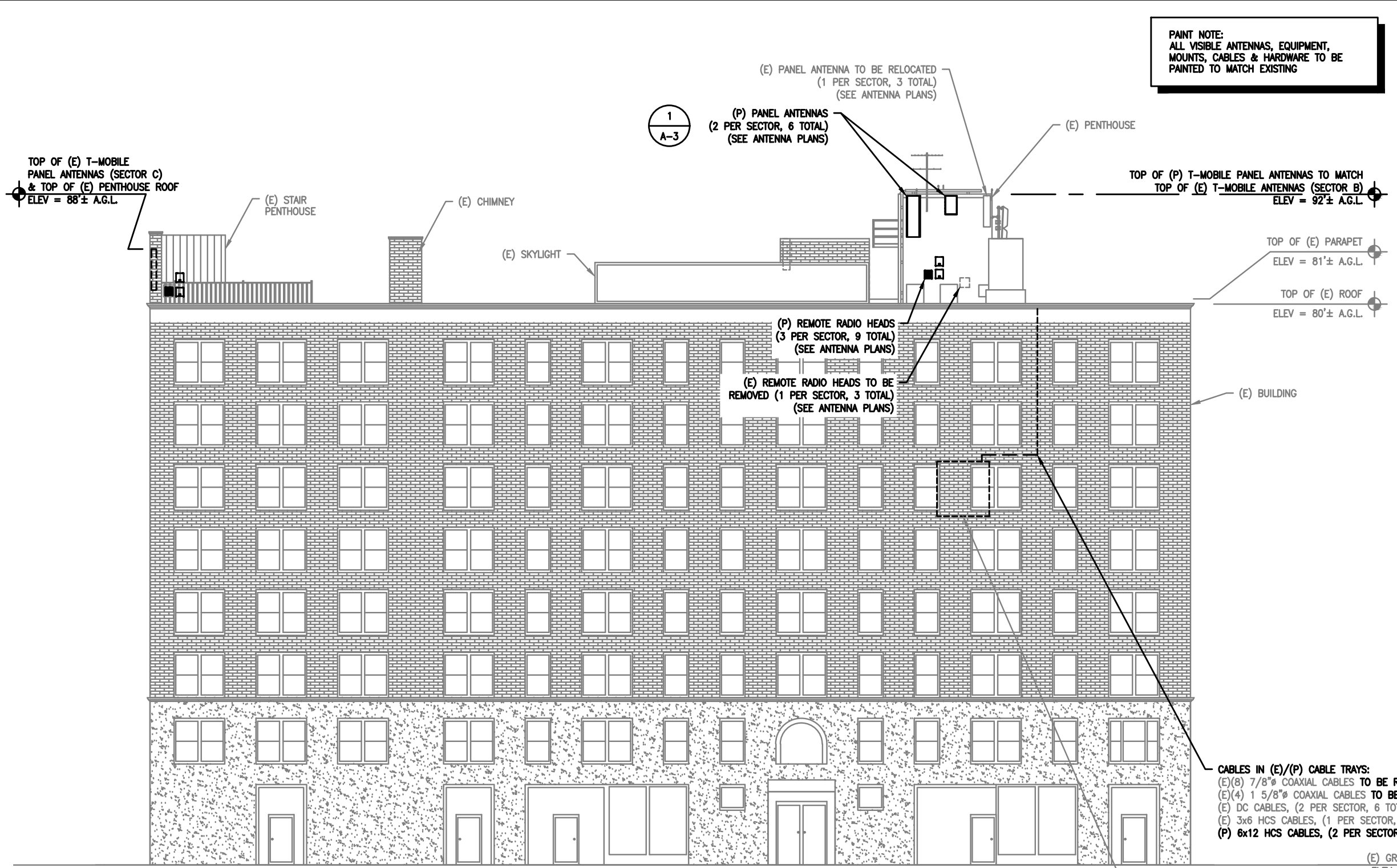
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SHEET NO.

GN-1



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PAINT NOTE:
ALL VISIBLE ANTENNAS, EQUIPMENT, MOUNTS, CABLES & HARDWARE TO BE PAINTED TO MATCH EXISTING

EQUIPMENT SCHEDULE

CURRENT EQUIPMENT

QUANTITY	DESCRIPTION
3	ERICSSON AIR21 B2A/B4P PANEL ANTENNAS
3	ERICSSON AIR32 B66A/B2A PANEL ANTENNAS
3	COMMSCOPE LNX-6514DS-A1M
3	ERICSSON RRUS-11-B12
3	GENERIC STYLE 1B TWIN AWS TMA _s
8	7/8" COAXIAL CABLES
4	1 5/8" COAXIAL CABLES
3	3x6 HCS DC/FIBER CABLES
6	DC CABLES

EQUIPMENT TO BE REMOVED

3	COMMSCOPE LNX-6514DS-A1M
3	ERICSSON AIR21 B2A/B4P PANEL ANTENNAS
3	ERICSSON RRUS-11-B12
3	GENERIC STYLE 1B TWIN AWS TMA _s
8	7/8" COAXIAL CABLES
4	1 5/8" COAXIAL CABLES

EQUIPMENT TO BE ADDED

1	RFS APXVAARR18_43-U-NA20 PANEL ANTENNA
3	ERICSSON AIR 6449 B41 PANEL ANTENNAS
2	COMMSCOPE FFVV-65A-R2-V1 PANEL ANTENNAS
3	ERICSSON RRUS-4449 B71+B85
3	ERICSSON RRUS-4415 B25
3	ERICSSON RRUS-4415 B66
3	MICRODATA MI-54131 DIPLEXER
6	6x12 HCS DC/FIBER CABLES

FINAL EQUIPMENT CONFIGURATION

3	ERICSSON AIR 6449 B41 PANEL ANTENNAS
3	ERICSSON AIR32 B66A/B2A PANEL ANTENNAS
1	RFS APXVAARR18_43-U-NA20 PANEL ANTENNAS
2	COMMSCOPE FFVV-65A-R2-V1 PANEL ANTENNAS
3	ERICSSON RRUS-4449 B71+B85
3	ERICSSON RRUS-4415 B25
3	ERICSSON RRUS-4415 B66
3	MICRODATA MI-54131 DIPLEXER
3	3x6 HCS DC/FIBER CABLES
6	DC CABLES
6	6x12 HCS DC/FIBER CABLES

RF CONFIGURATION
67D5A997DB INDOOR

- SCOPE OF WORK**
- REMOVE (6) PANEL ANTENNAS & MOUNTS,
 - (2) PER SECTOR
 - REMOVE (3) REMOTE RADIO HEADS, (1) PER SECTOR
 - REMOVE (12) COAX CABLES
 - INSTALL (6) NEW PANEL ANTENNAS & MOUNTS, (2) PER SECTOR
 - RELOCATE (3) EXISTING PANEL ANTENNAS
 - INSTALL (6) NEW REMOTE RADIO HEADS, (2) PER SECTOR
 - INSTALL (3) NEW HCS CABLES, (1) PER SECTOR
 - RELOCATE (1) ANTENNA @ SECTOR A
 - RELOCATE (1) ANTENNA @ SECTOR A

- CABLES IN (E)/(P) CABLE TRAYS:**
- (E)(8) 7/8" COAXIAL CABLES TO BE REMOVED
 - (E)(4) 1 5/8" COAXIAL CABLES TO BE REMOVED
 - (E) DC CABLES, (2) PER SECTOR, 6 TOTAL
 - (E) 3x6 HCS CABLES, (1) PER SECTOR, 3 TOTAL
 - (P) 6x12 HCS CABLES, (2) PER SECTOR, 6 TOTAL

1 SOUTH ELEVATION
SCALE: 1/16"=1'-0"
0 8'-0" 16'-0" 32'-0"

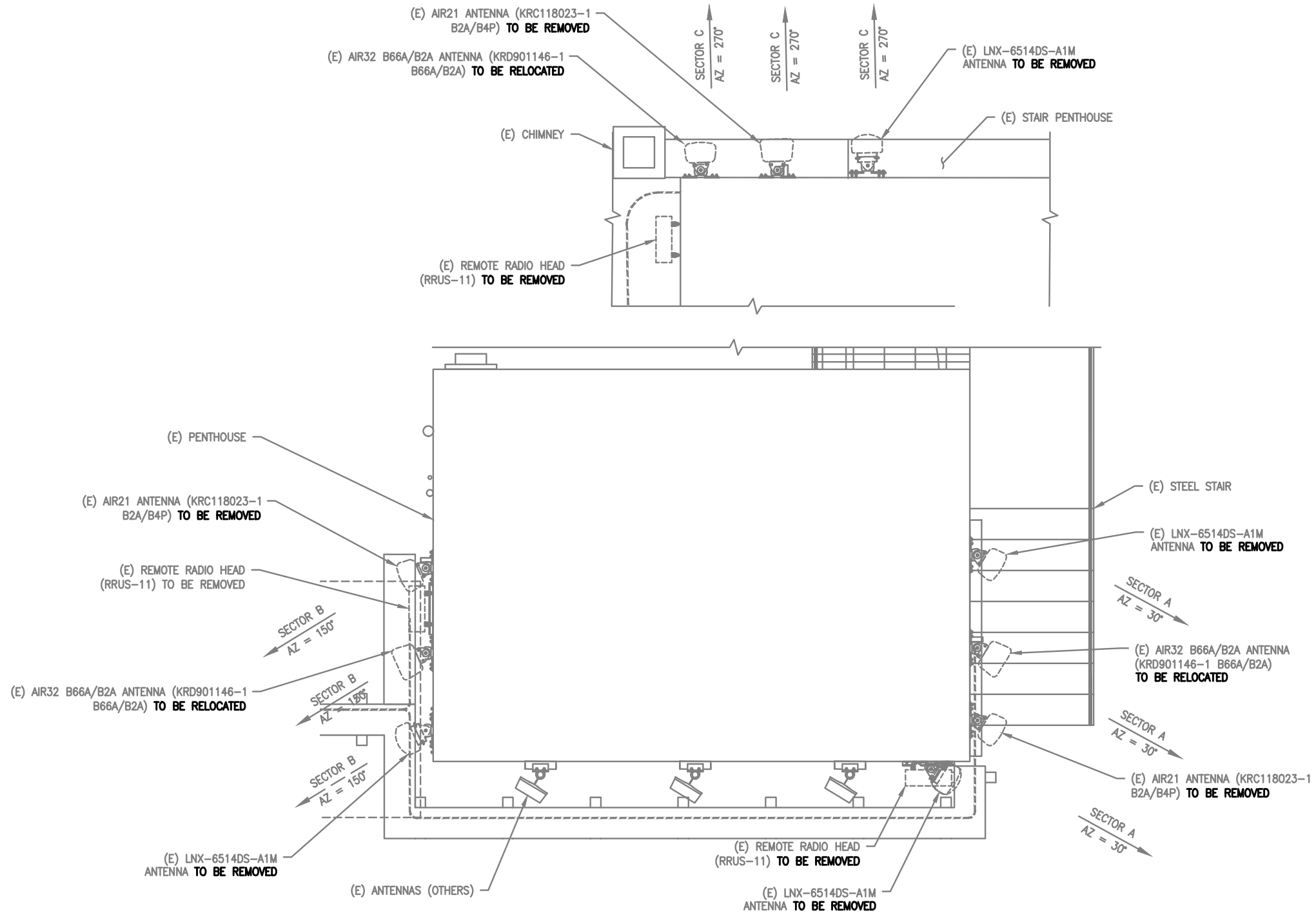


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SHEET NO. **A-2**



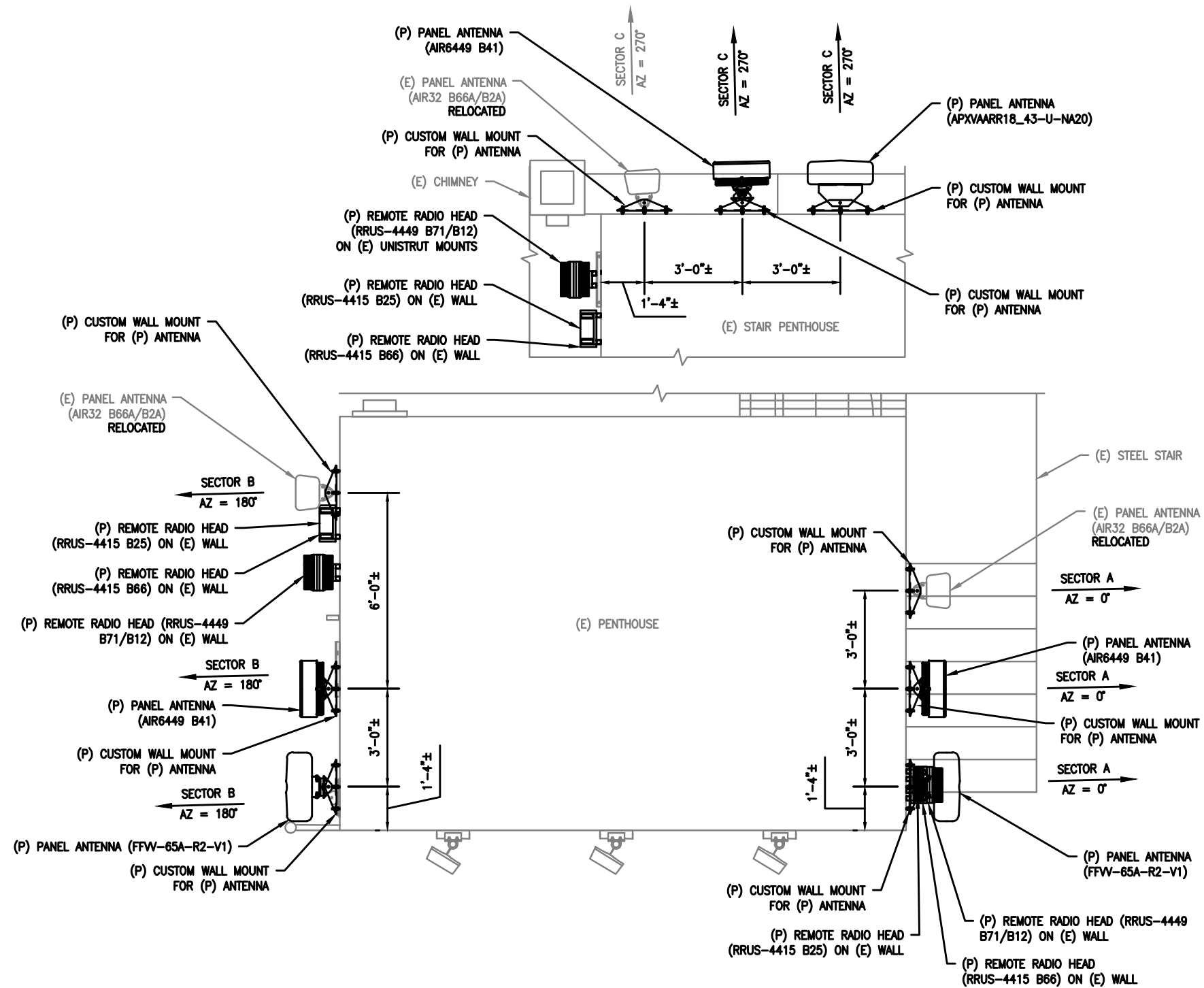
1 EXISTING ANTENNA PLAN
 A-3 SCALE: 1/4"=1'-0"
 NORTH
 0 2'-0" 4'-0" 8'-0"



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PAINT NOTE:
ALL VISIBLE ANTENNAS, EQUIPMENT,
MOUNTS, CABLES & HARDWARE TO BE
PAINTED TO MATCH EXISTING

**VERIFY CURRENT RFDS FOR
REQUIRED ANTENNAS AND
EQUIPMENT**

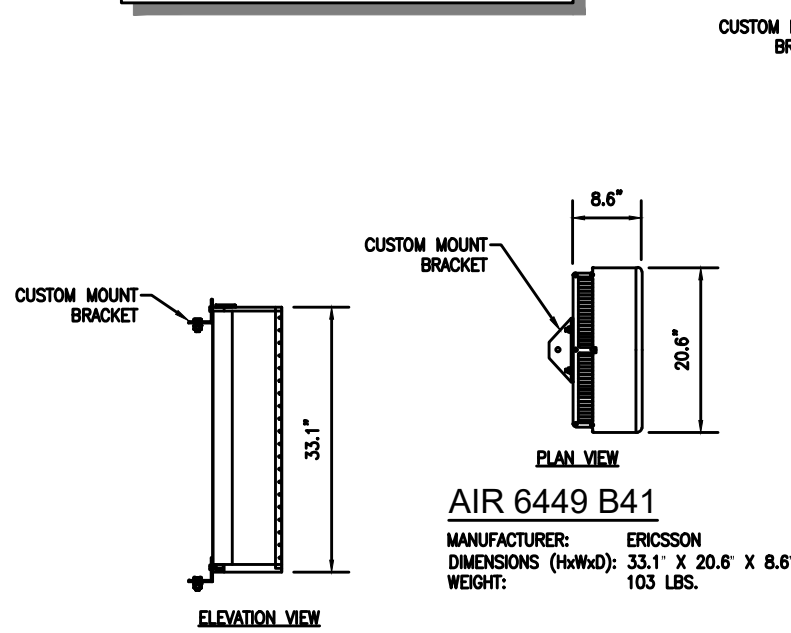


2 PROPOSED ANTENNA PLAN
SCALE: 1/4"=1'-0"
0 2'-0" 4'-0" 8'-0"

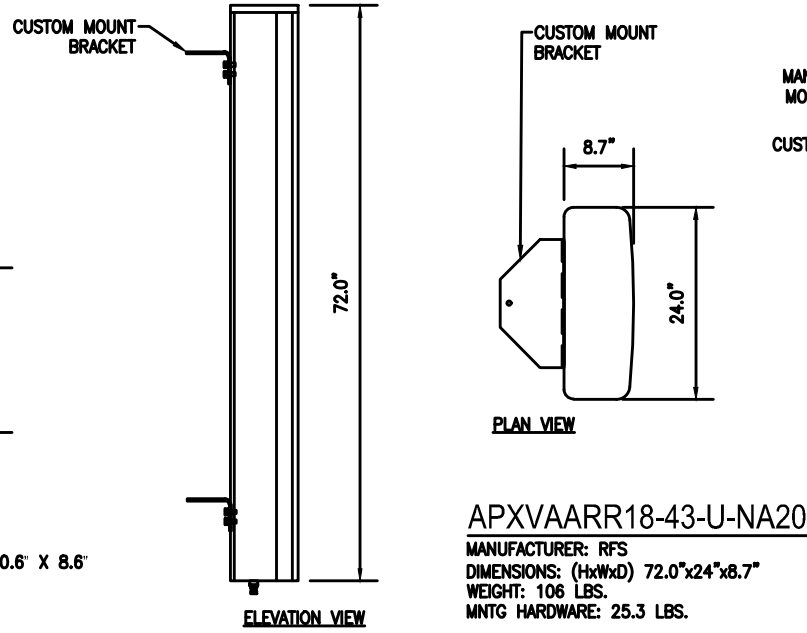


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4	09/03/21	REVISED	CJG	SNA

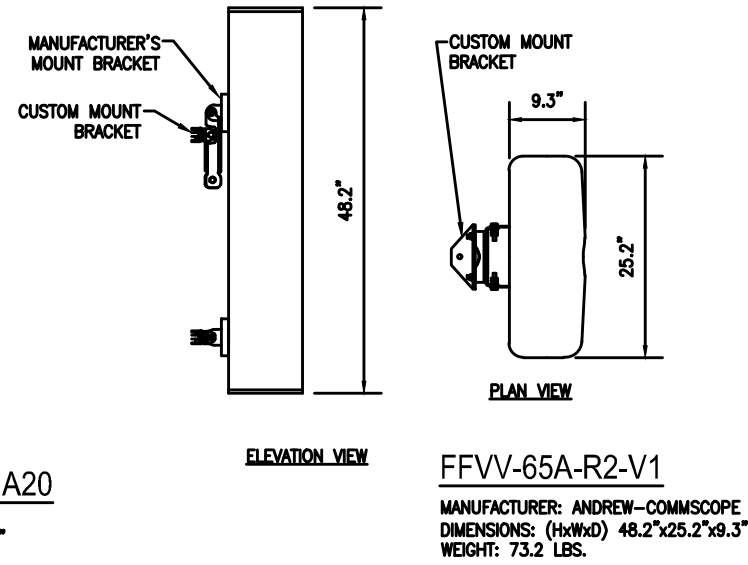
PAINTING NOTE:
 1. ALL ANTENNAS AND APPURTENANCES ARE TO BE PAINTED TO MATCH (E) BUILDING.
 2. ERICSSON WILL APPLY LIMITATIONS TO THE WARRANTY AND SERVICE CONTRACT IF THE AIR 6449 B41 ANTENNA IS PAINTED. PLEASE CONTACT ERICSSON FOR ADDITIONAL INFORMATION PRIOR TO PAINTING.



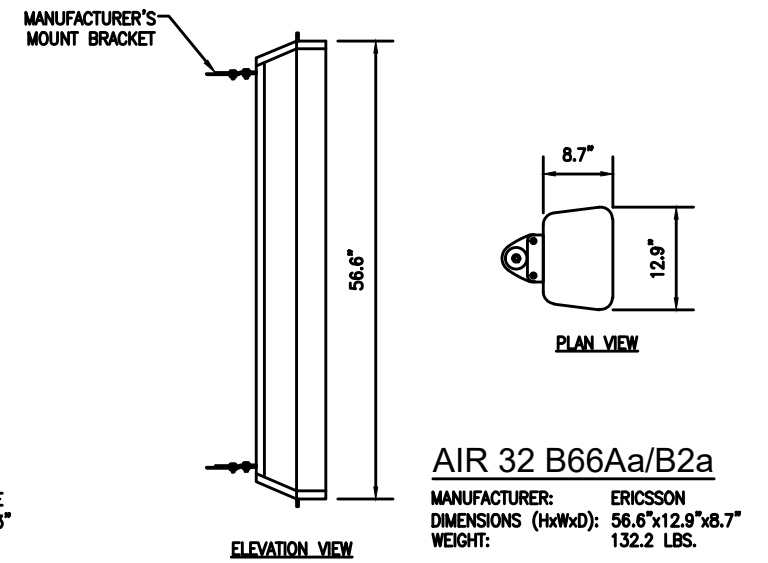
1 ANTENNA DETAIL
 A-5 SCALE: N.T.S.



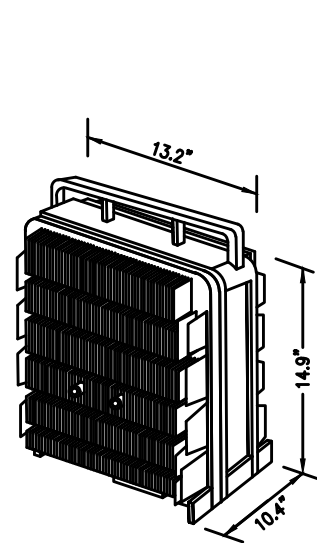
2 ANTENNA DETAIL
 A-5 SCALE: N.T.S.



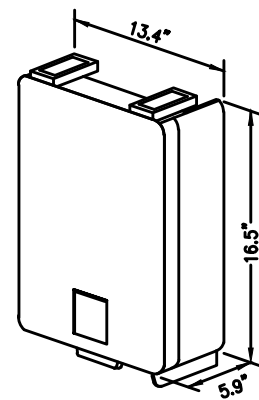
3 ANTENNA DETAIL
 A-5 SCALE: N.T.S.



4 ANTENNA DETAIL
 A-5 SCALE: N.T.S.



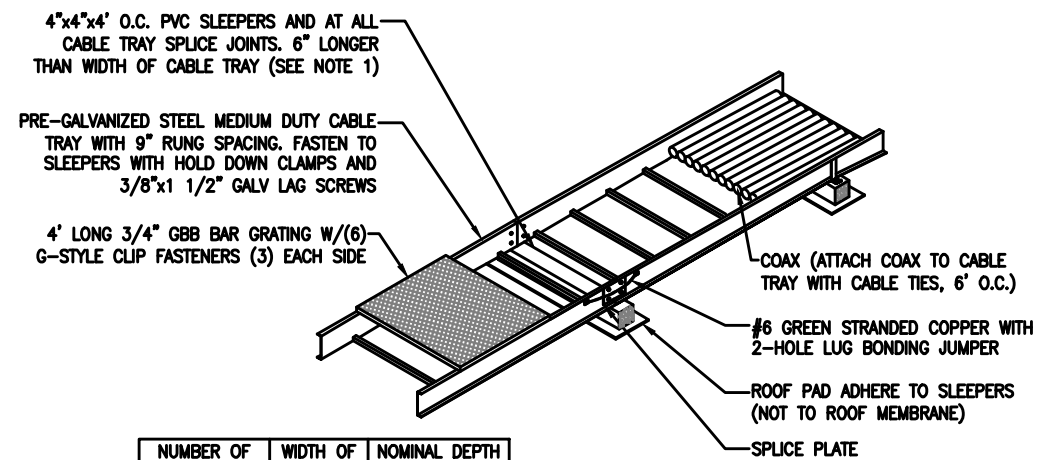
5 REMOTE RADIO UNIT DETAIL
 A-5 SCALE: N.T.S.



6 REMOTE RADIO UNIT DETAIL
 A-5 SCALE: N.T.S.



7 DIPLEXER DETAIL
 A-5 SCALE: N.T.S.



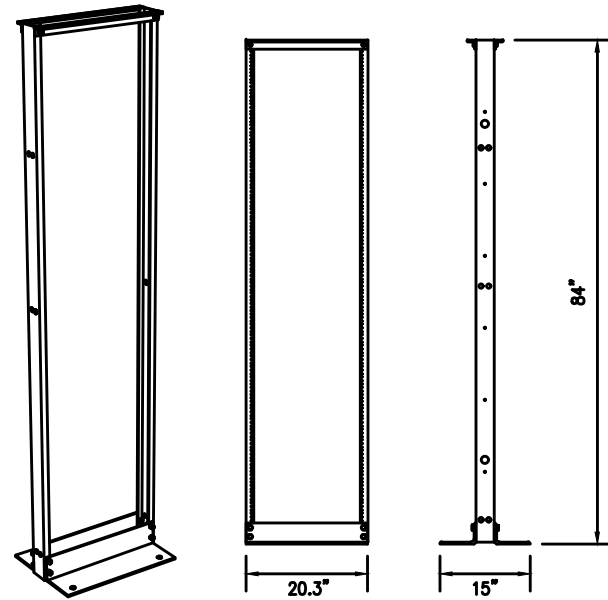
NUMBER OF COAXIAL CABLES	WIDTH OF CABLE TRAY	NOMINAL DEPTH OF CABLE TRAY
18	24"	4"
12	18"	4"
8	12"	4"

NOTE:
 1. PVC SLEEPERS FILLED WITH CONCRETE EVERY 10'-0".

8 CABLE TRAY DETAIL
 A-5 SCALE: N.T.S.



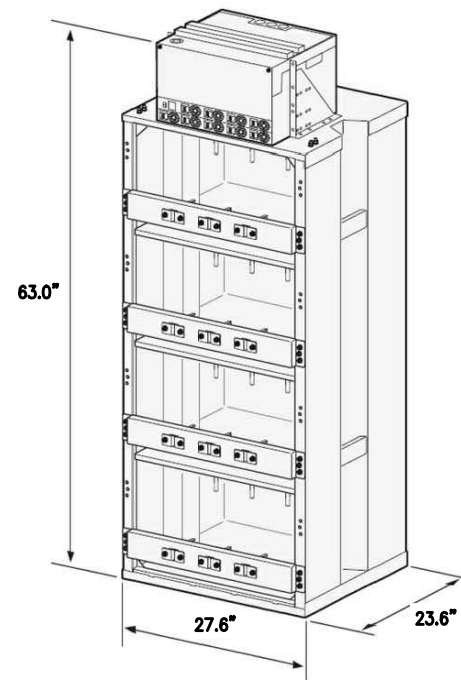
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4	09/03/21	REVISED	CJG	SNA



UNIVERSAL RACK 2-POST

MANUFACTURER: CHATSWORTH PRODUCTS, INC.*
 DIMENSIONS WxDxH 19"-45U (7'H) 20.3"x15"x84"
 19"-37U (6'H) 20.3"x15"x72"
 (* OR AN APPROVED EQUAL)

1 19" EQUIPMENT RACK DETAIL
 A-6 SCALE: N.T.S.



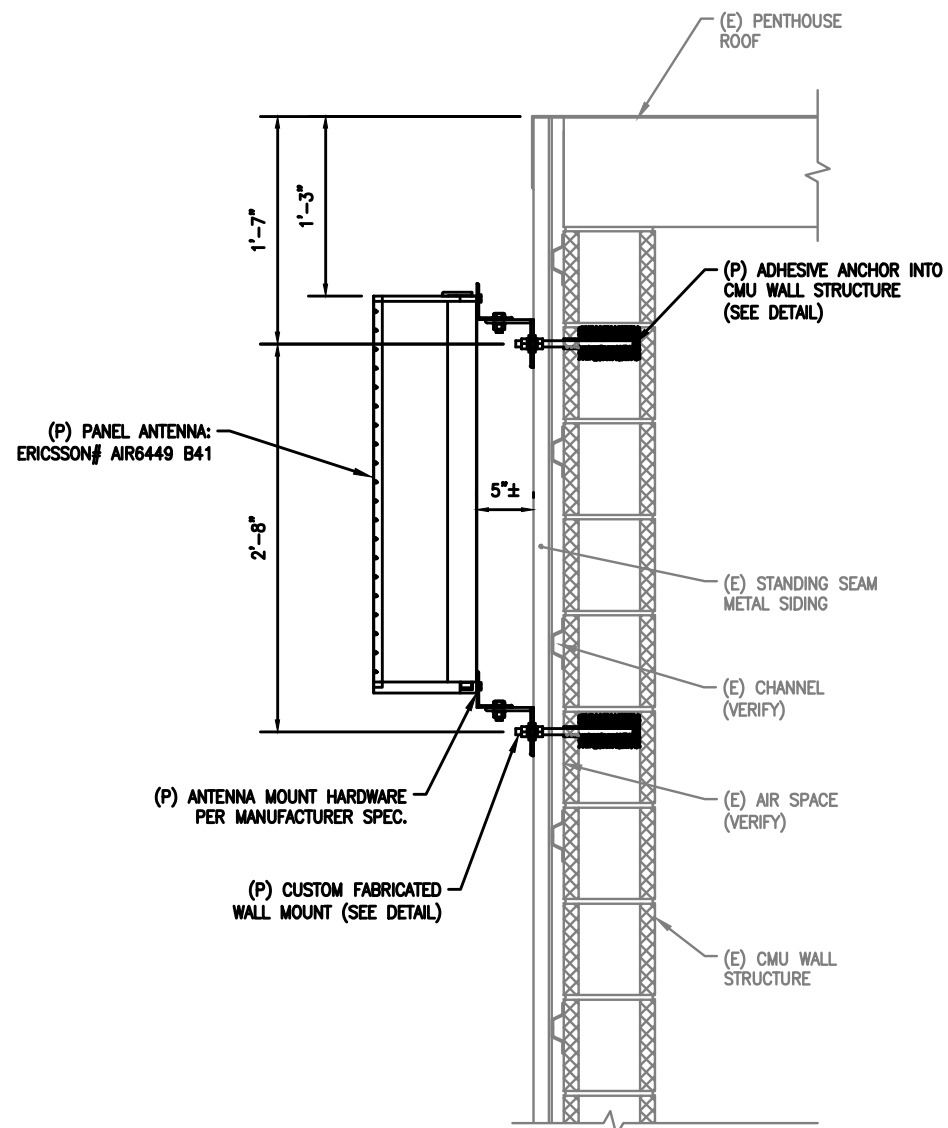
POWER 6230

MANUFACTURER: ERICSSON
 DIMENSIONS WDXH: 27.6"x23.6"x63.0"

2 POWER PLANT DETAIL
 A-6 SCALE: N.T.S.

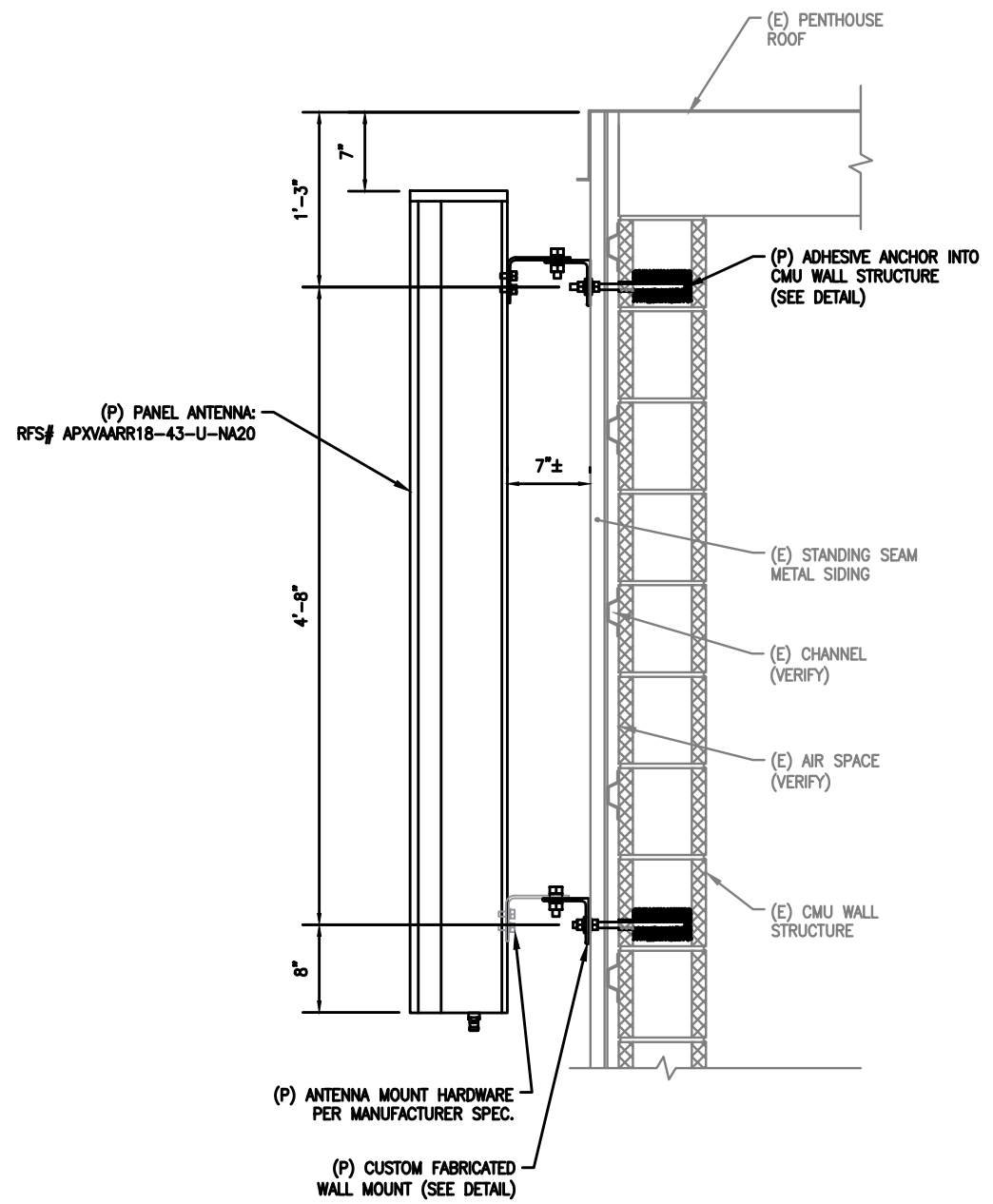


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4	09/03/21	REVISED	CJG	SNA



PANEL ANTENNA:
ERICSSON# AIR6449 B41

1 ANTENNA MOUNT DETAIL
S-1 SCALE: 3/4" = 1'-0"

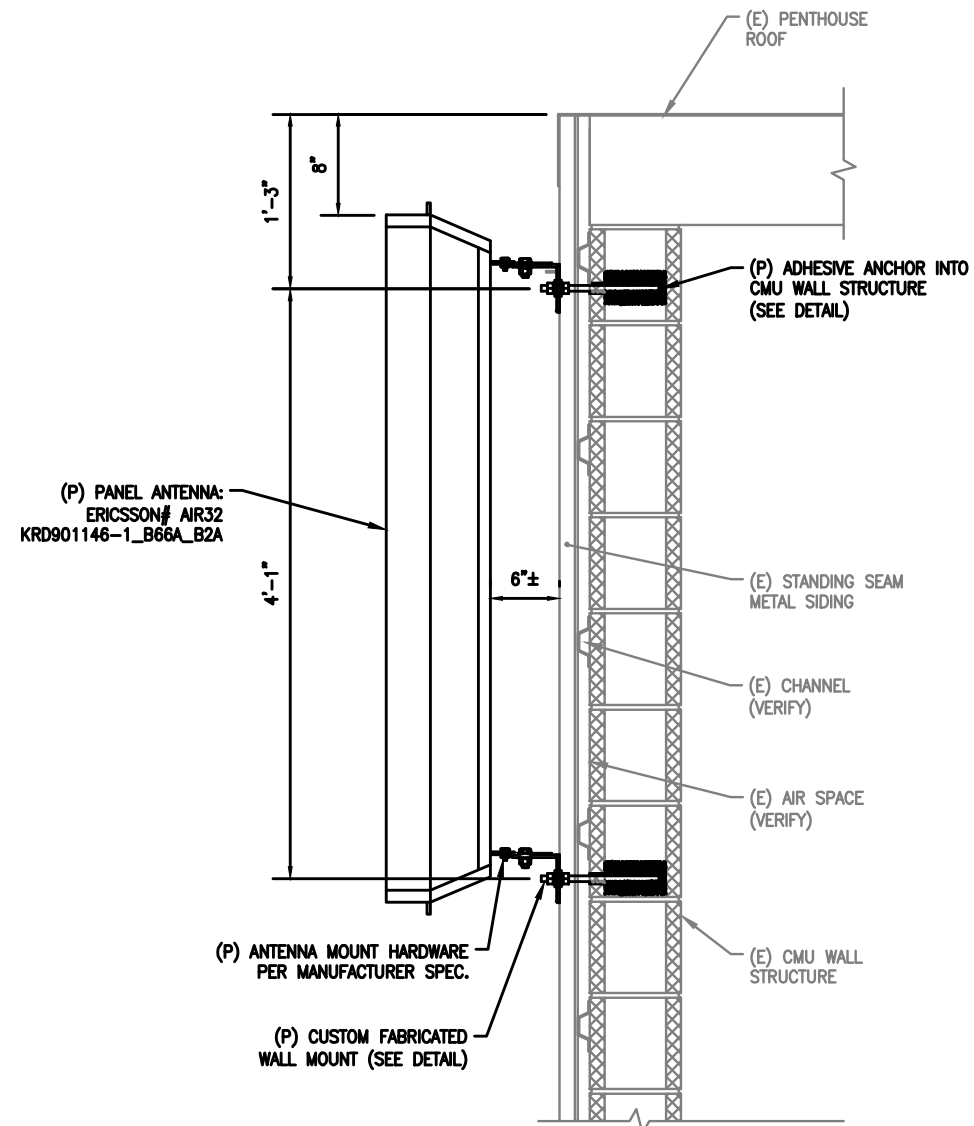


PANEL ANTENNA:
RFS# APXVAARR18_43-U-NA20

2 ANTENNA MOUNT DETAIL
S-1 SCALE: 3/4" = 1'-0"

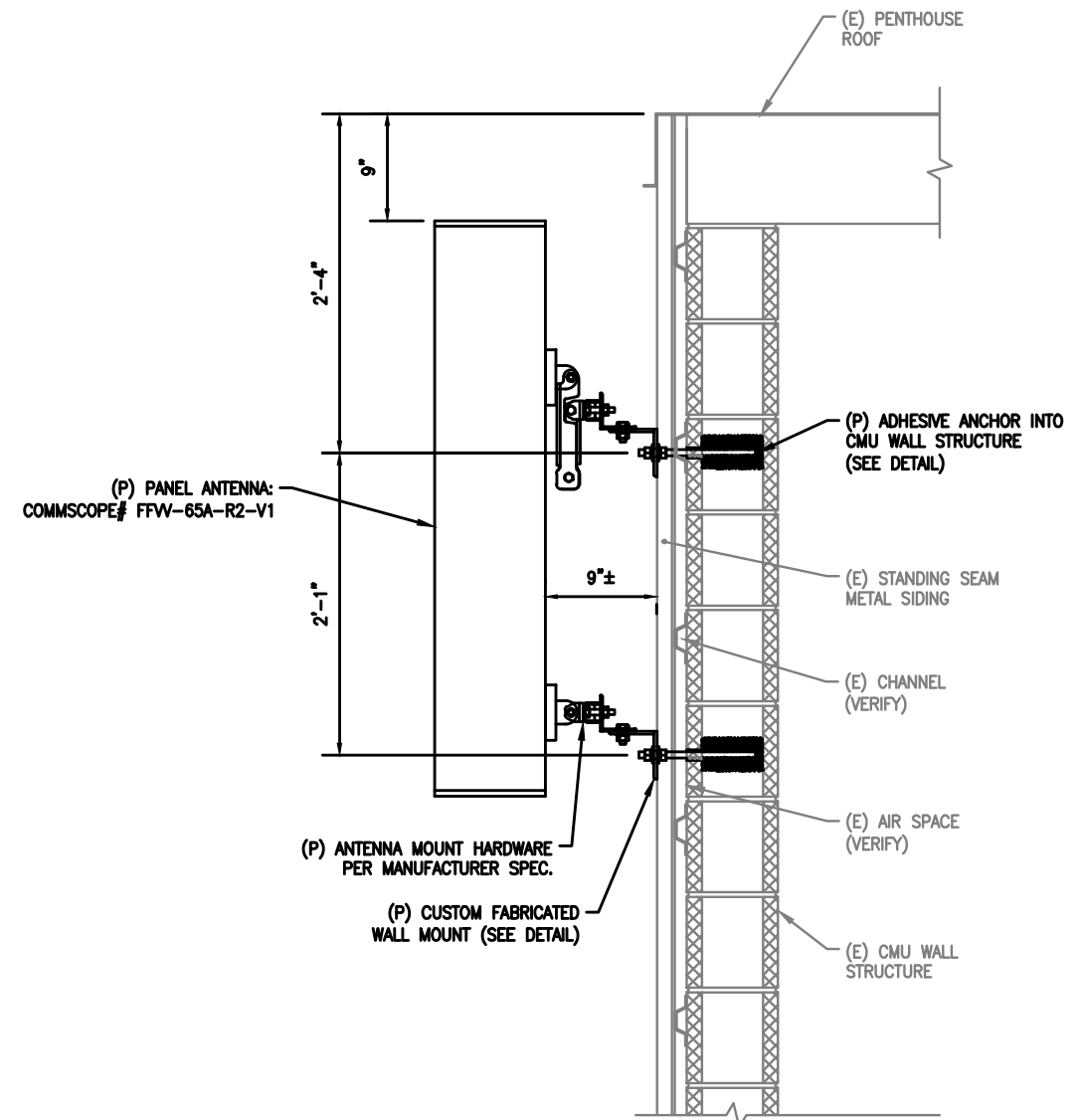


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4	09/03/21	REVISED	CJG	SNA



PANEL ANTENNA:
ERICSSON# AIR32 KRD901146-1_B66A_B2A

1 ANTENNA MOUNT DETAIL
S-2 SCALE: 3/4" = 1'-0"

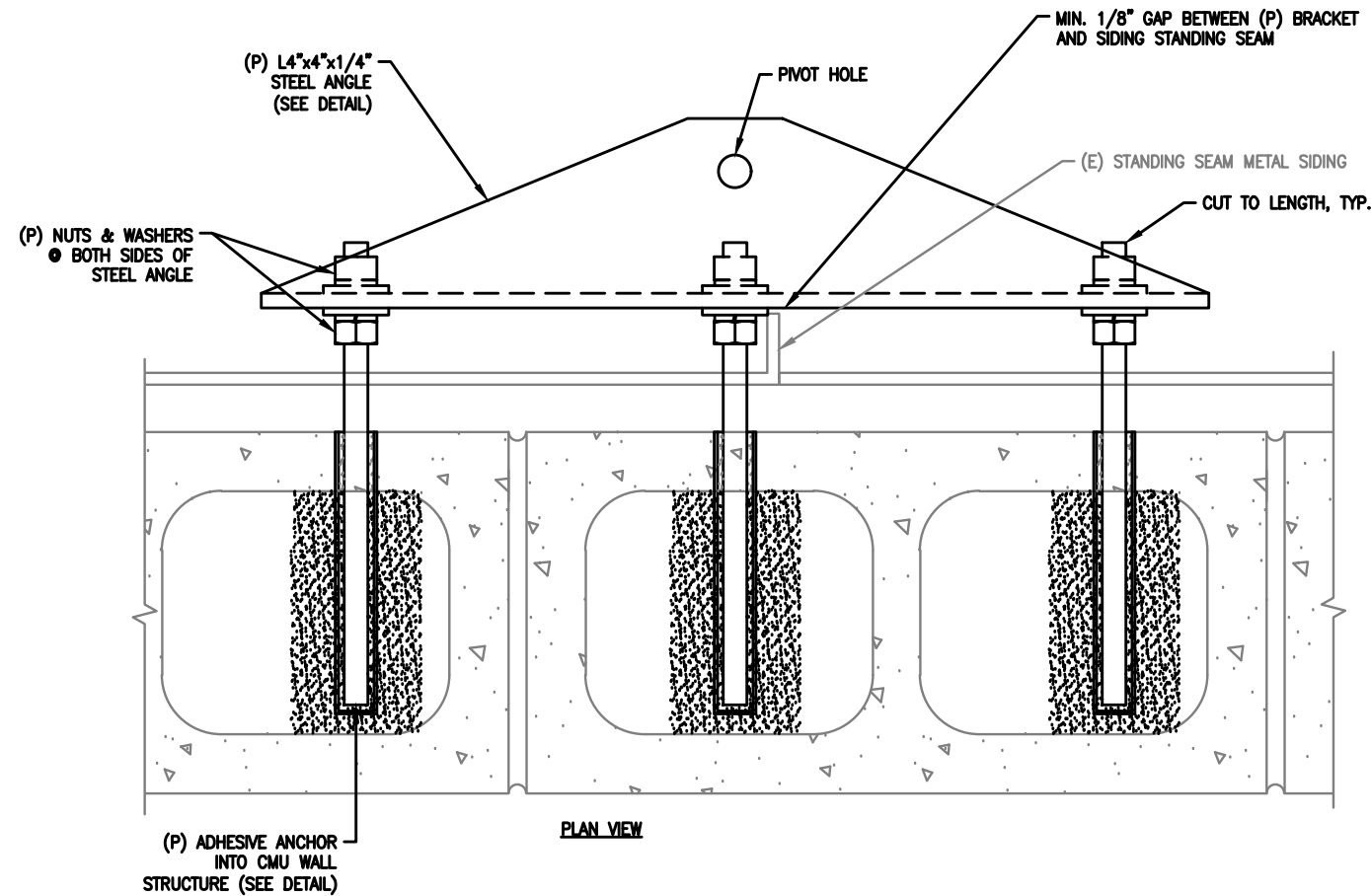
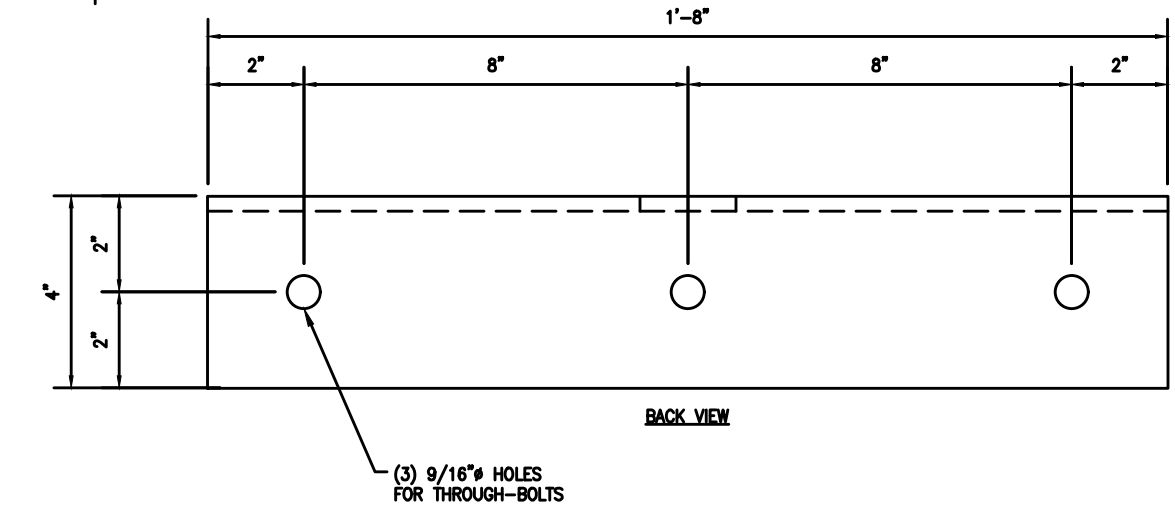
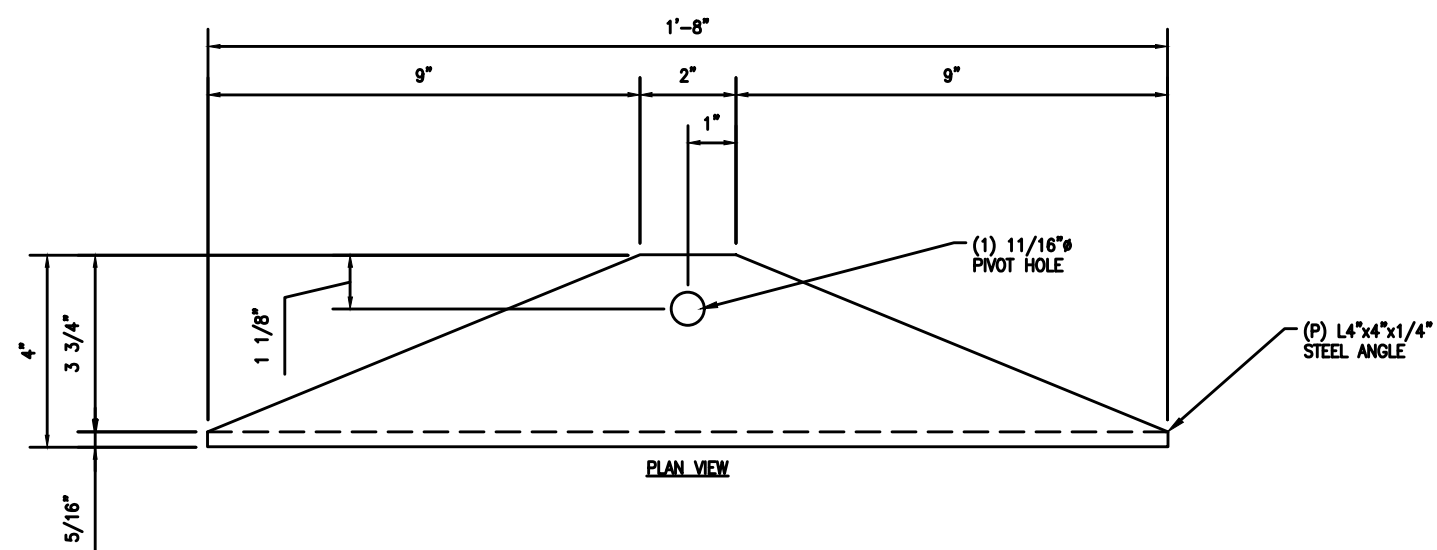
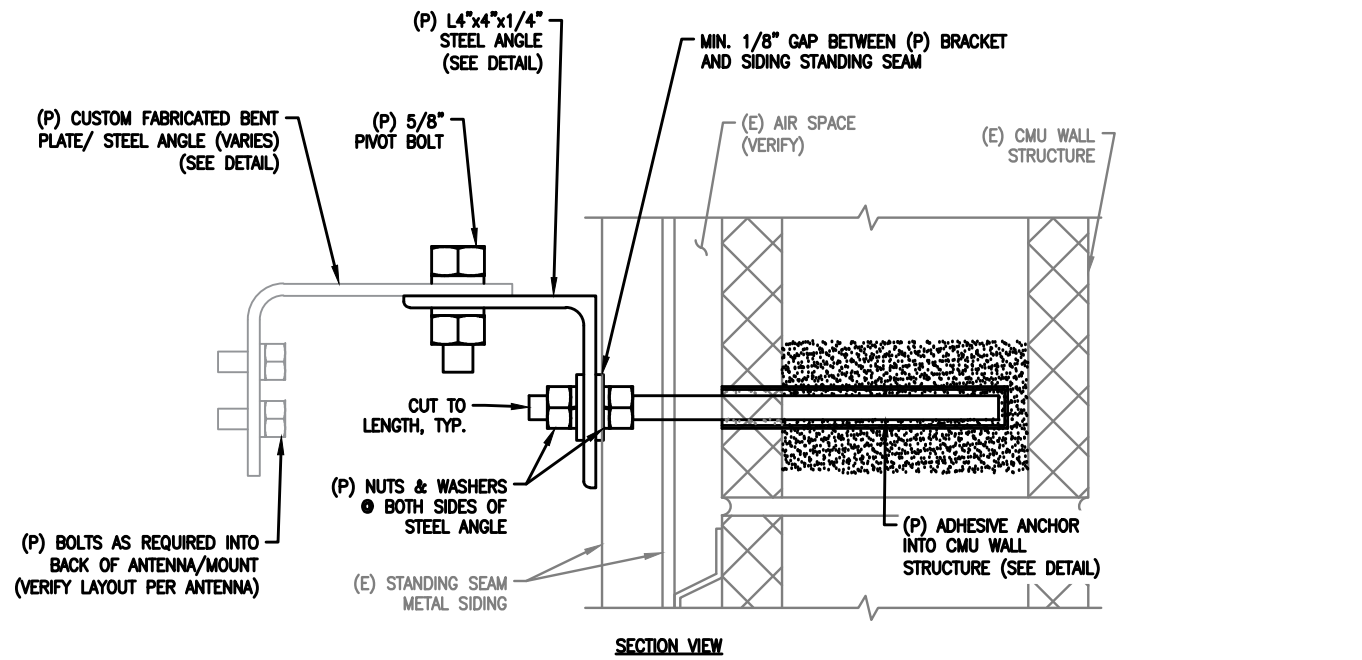


PANEL ANTENNA:
COMMSCOPE# FFV-65A-R2-V1

2 ANTENNA MOUNT DETAIL
S-2 SCALE: 3/4" = 1'-0"



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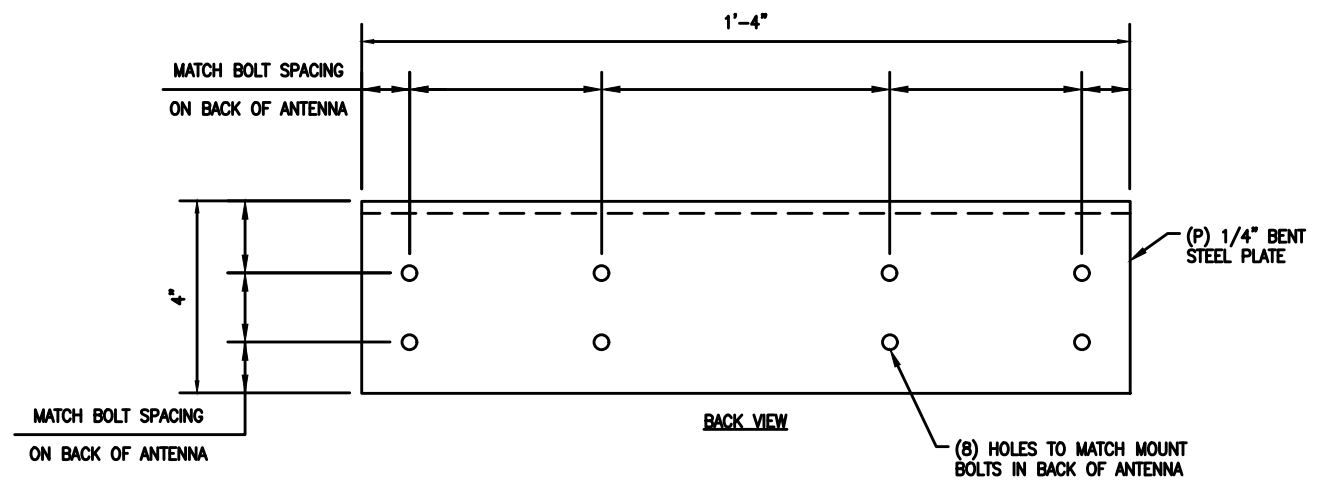
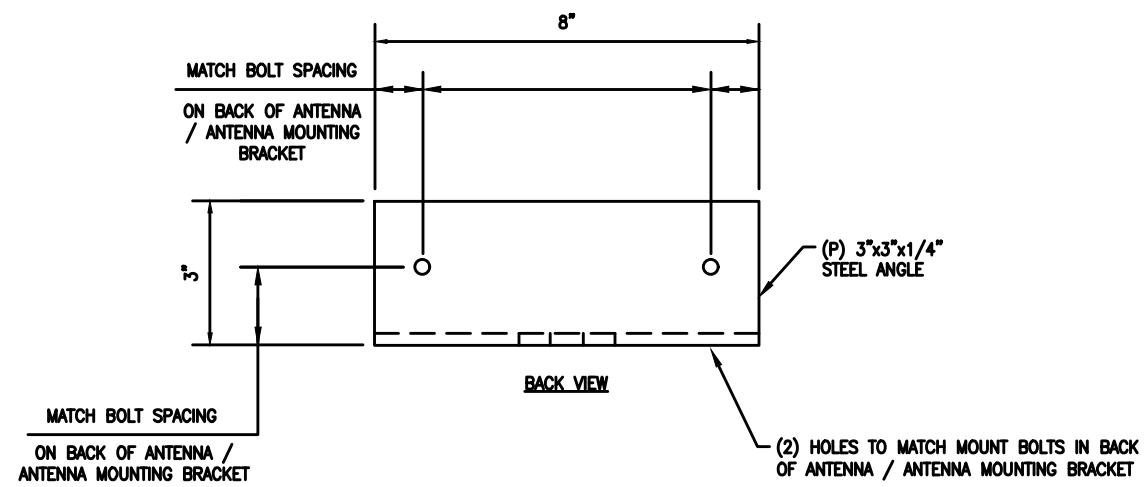
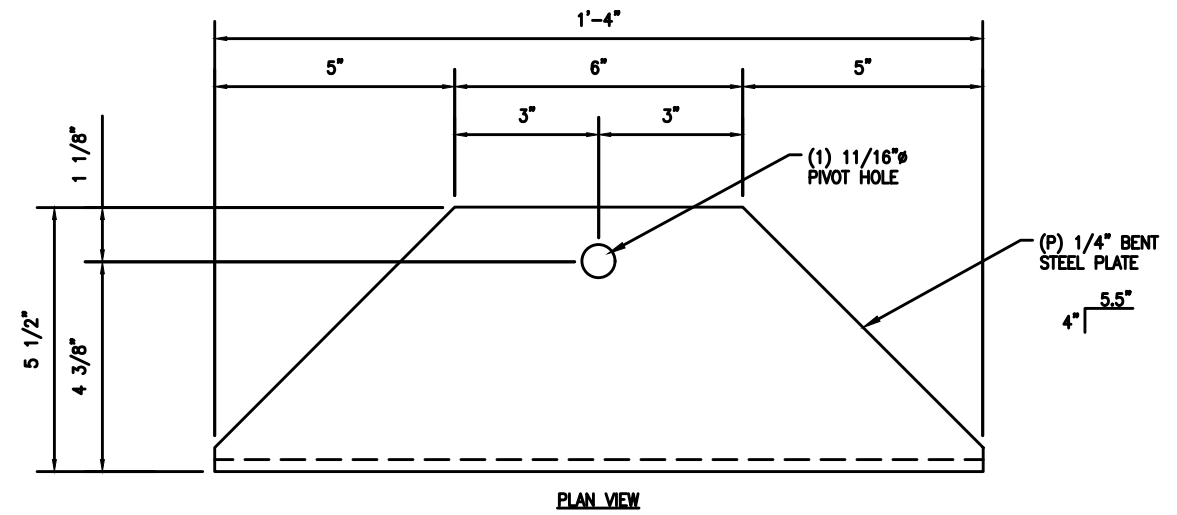
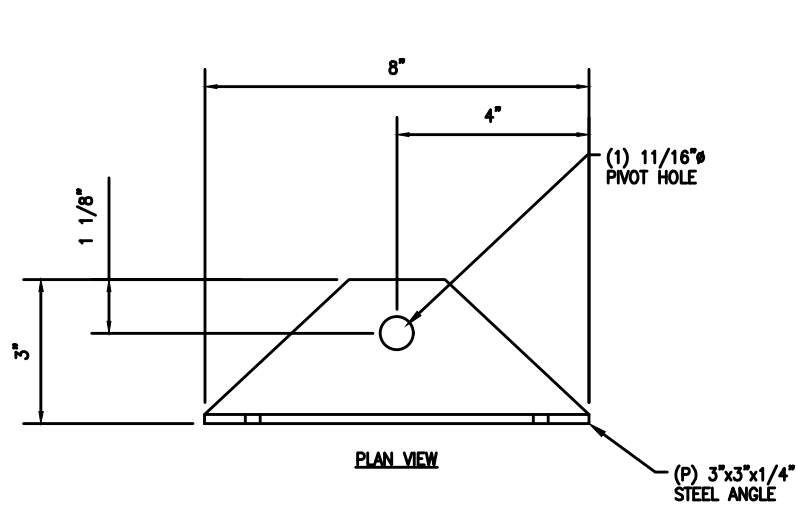


1 TYP. WALL MOUNT DETAIL
S-3 SCALE: 3" = 1'-0"

2 WALL MOUNT ANGLE DETAIL
S-3 SCALE: 3" = 1'-0"



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PANEL ANTENNA:
COMMSCOPE# FFV-65A-R2-V1

PANEL ANTENNA:
ERICSSON# AIR6449 B41

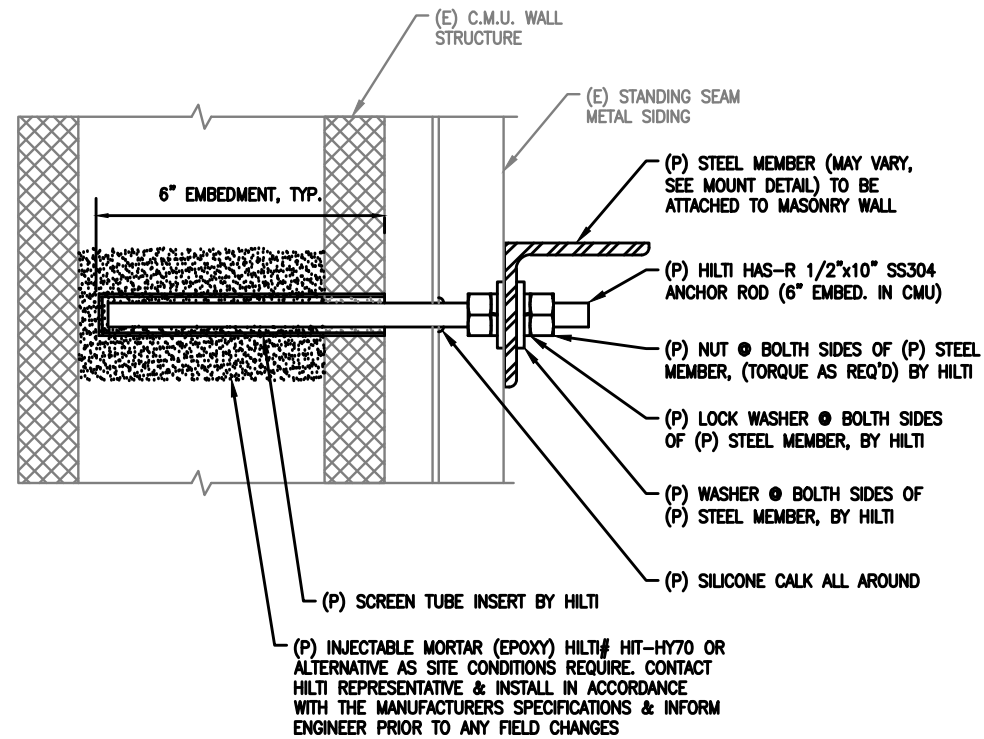
1 ANTENNA BACK DETAIL (ANGLE)
S-4 SCALE: 3" = 1'-0"

PANEL ANTENNA:
RFS# APXVAARR18_43-U-NA20

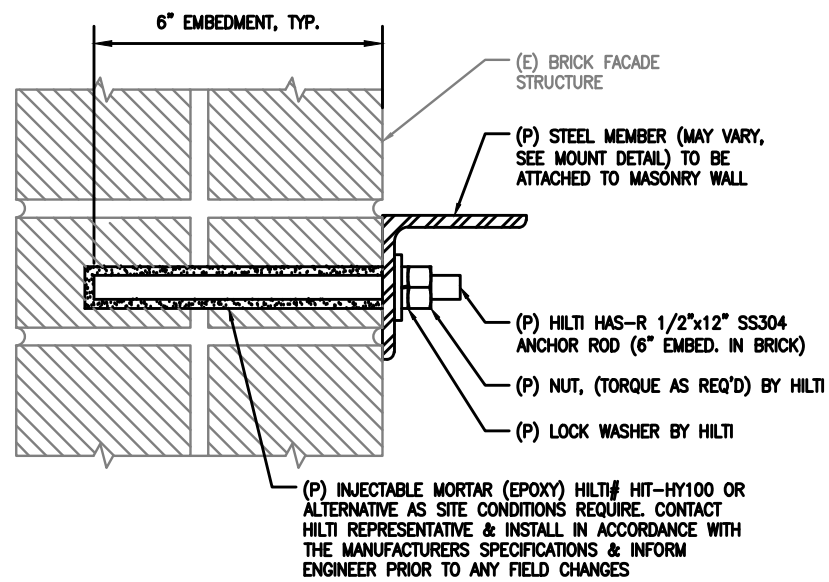
2 ANTENNA BACK DETAIL (BENT PLATE)
S-4 SCALE: 3" = 1'-0"



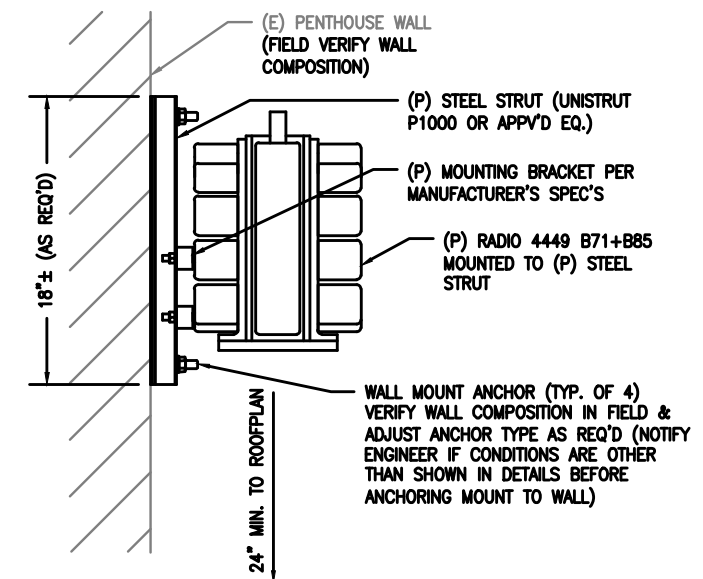
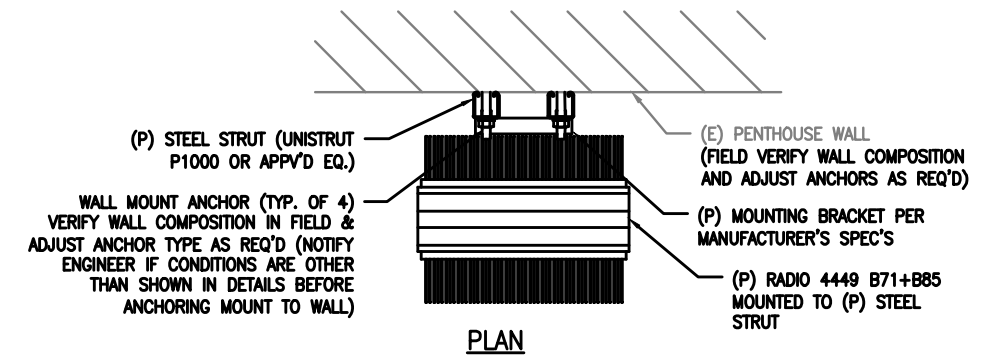
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1 WALL ANCHOR DETAIL
S-5 SCALE: 3" = 1'-0"



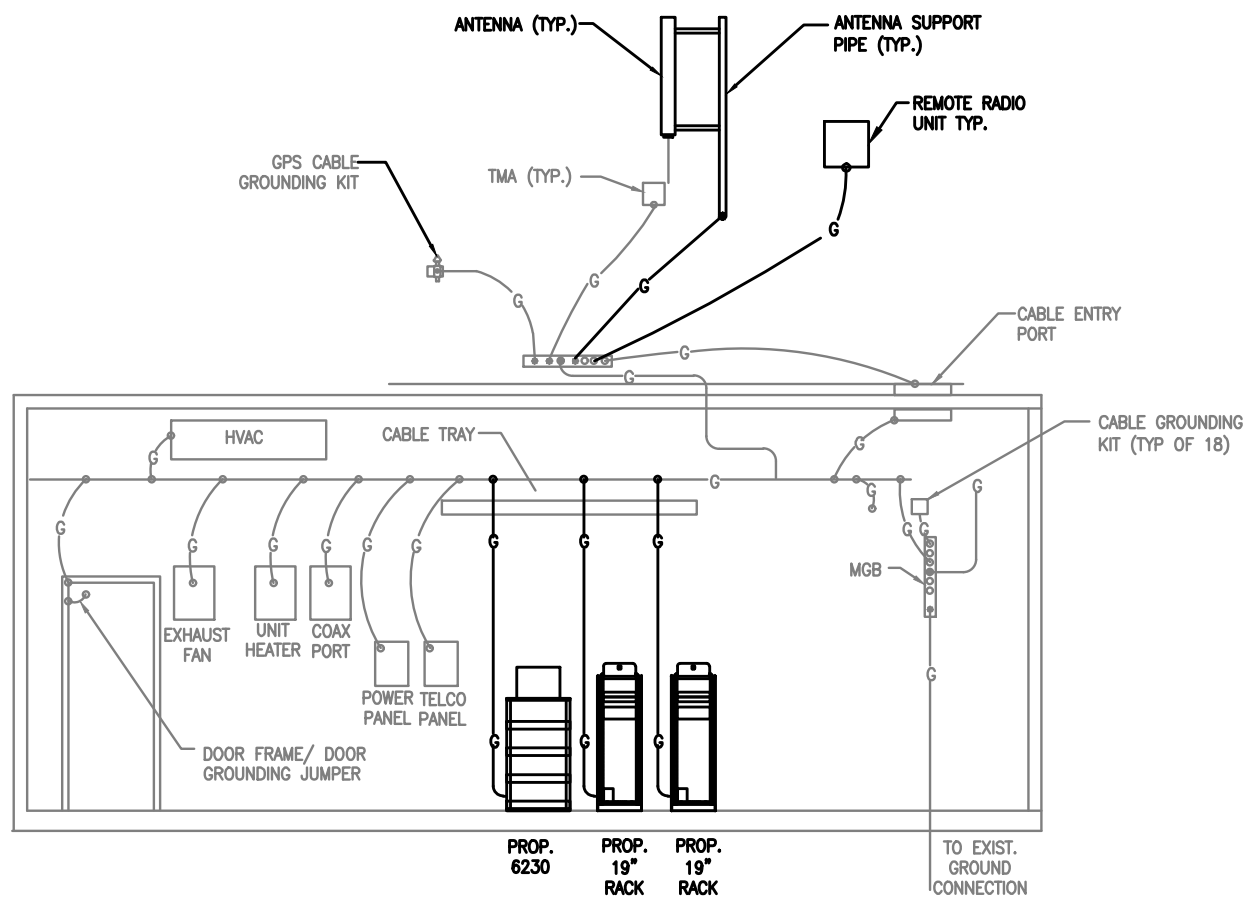
2 WALL ANCHOR DETAIL
S-5 SCALE: 3" = 1'-0"



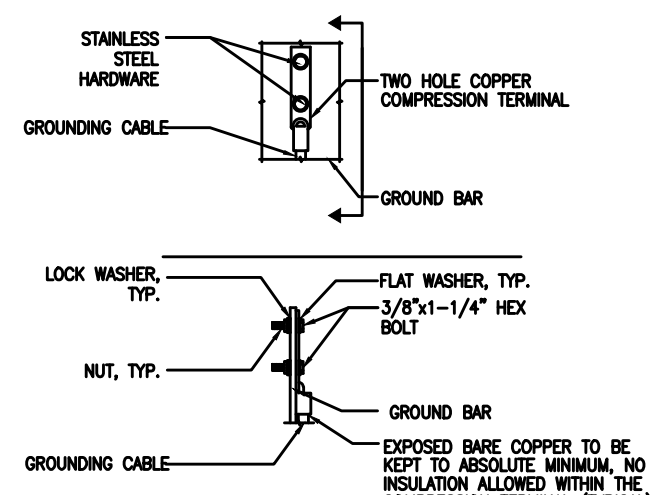
4 RRH MOUNT DETAILS
S-5 SCALE: 1/2" = 1'-0"



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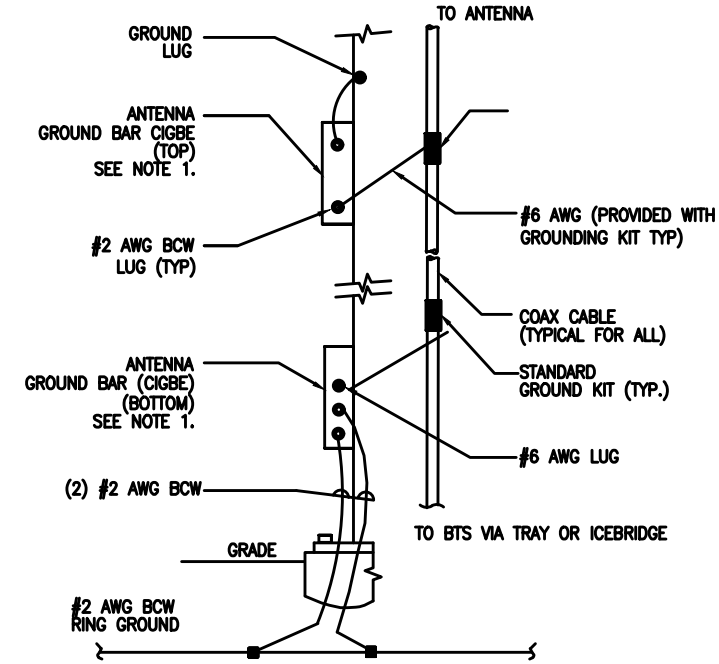


1 TYP. GROUNDING RISER DIAGRAM
G-1 SCALE: N.T.S.



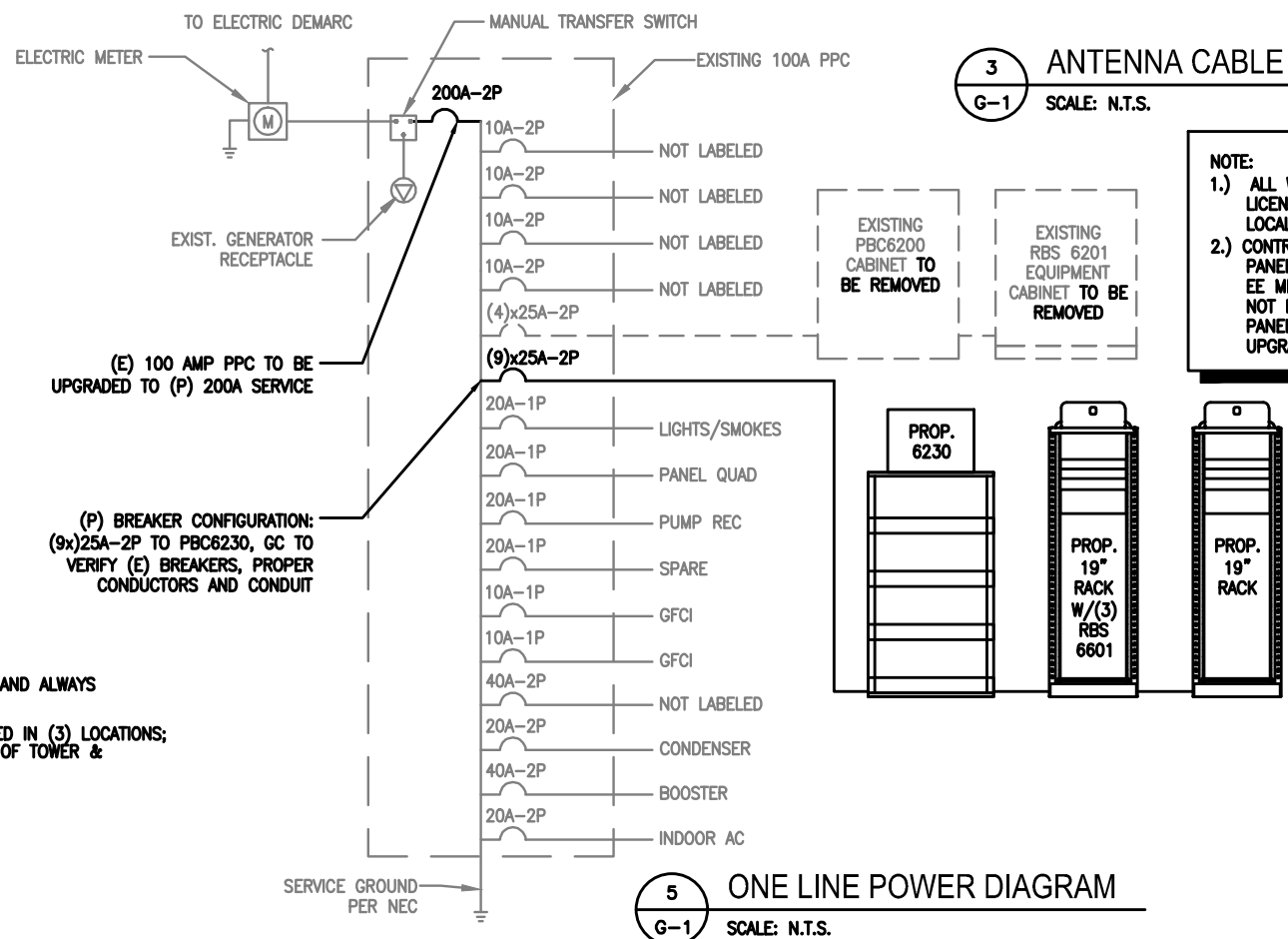
- NOTES:
 1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
 3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.
 4. ALL GROUND LUGS MUST BE HEAT SHRUNK AT WIRE/LUG CONNECTION

2 TYP. GROUND BAR CONNECTION DETAIL
G-1 SCALE: N.T.S.



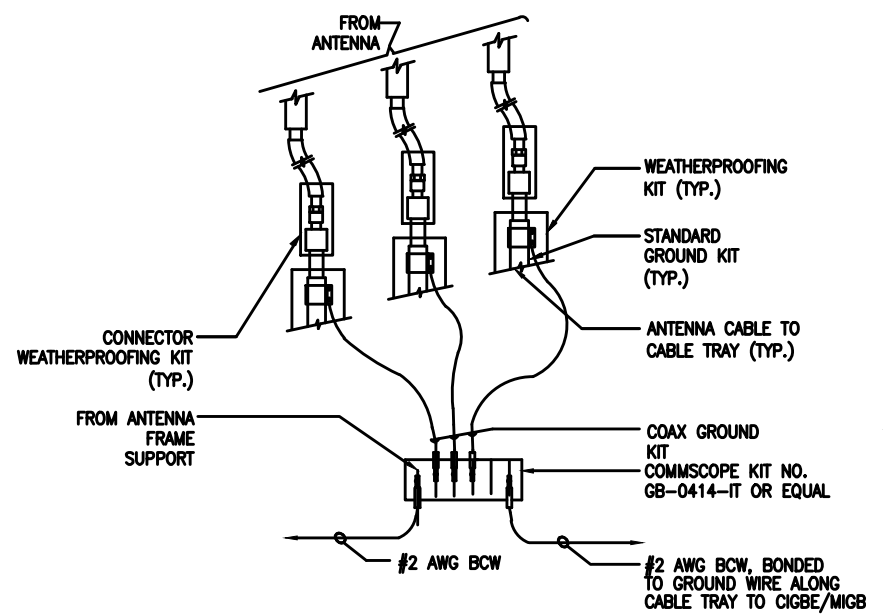
- NOTE:
 1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION AND CONNECTION ANTENNA LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
 2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

3 ANTENNA CABLE GROUNDING
G-1 SCALE: N.T.S.



- (E) 100 AMP PPC TO BE UPGRADED TO (P) 200A SERVICE
 (P) BREAKER CONFIGURATION:
 (9)x25A-2P TO PBC6230, GC TO VERIFY (E) BREAKERS, PROPER CONDUCTORS AND CONDUIT

5 ONE LINE POWER DIAGRAM
G-1 SCALE: N.T.S.



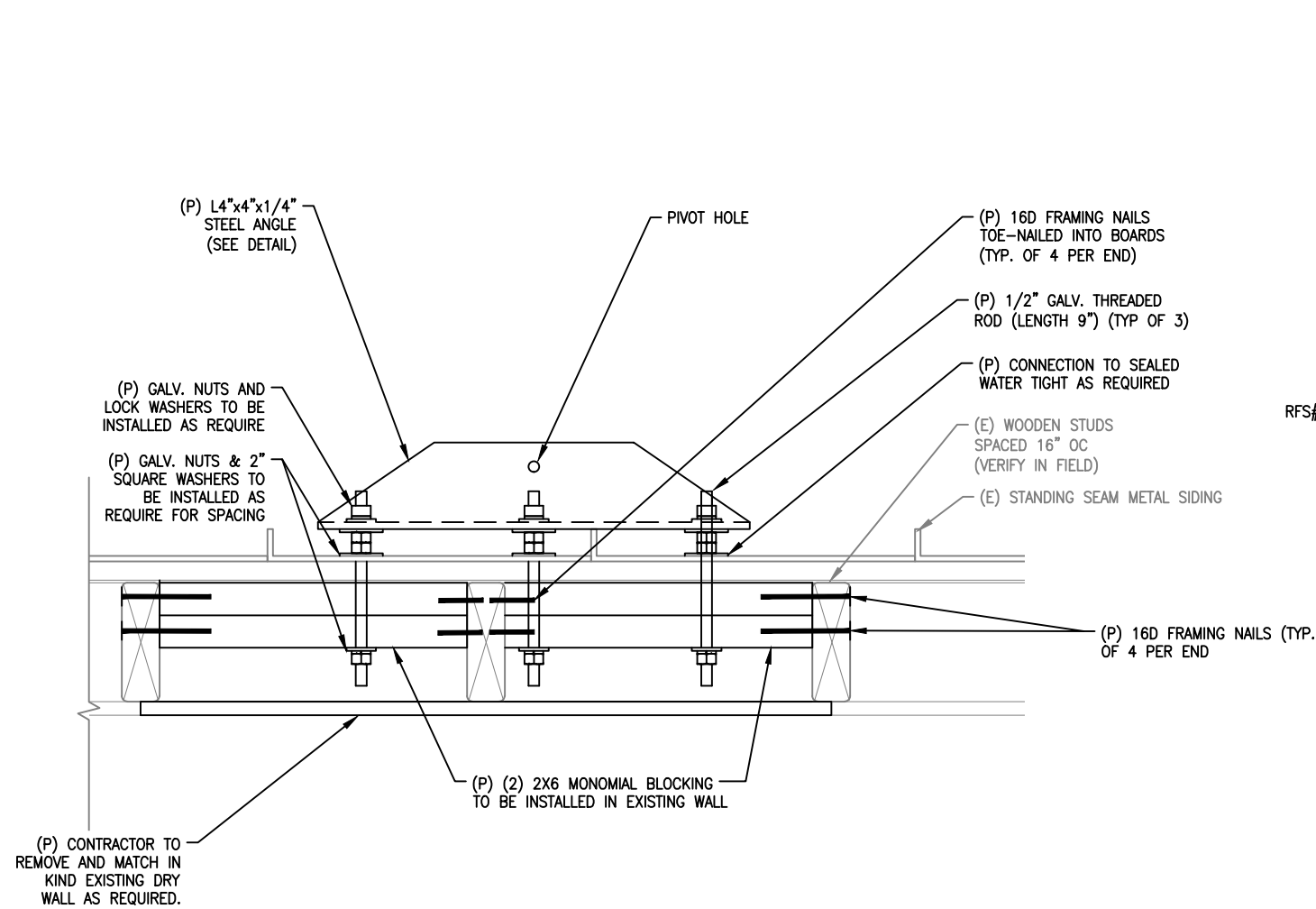
- NOTE:
 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.
 2. ALL PROPOSED COAXIAL CABLING TO BE GROUNDED IN (3) LOCATIONS; BELOW JUMPER/HARDLINE CONNECTION, AT BASE OF TOWER & PRIOR TO BUILDING/CABINET ENTRY.

4 GROUND WIRE TO GROUND BAR CONNECTION DETAIL
G-1 SCALE: N.T.S.

NOTE:
 1.) ALL WORK MUST BE PERFORMED BY A LICENSED ELECTRICIAN ADHERING TO THE NEC AND LOCAL REQUIREMENTS.
 2.) CONTRACTOR TO UPGRADE EXISTING ELECTRIC PANEL SIZE AS REQUIRED FOR CONSTRUCTION PER EE MEMO. ADVANCED ENGINEERING GROUP HAS NOT PERFORMED A LOAD STUDY OF THE EXISTING PANEL LICENSED ELECTRICIAN TO PERFORM UPGRADE AS REQUIRED.

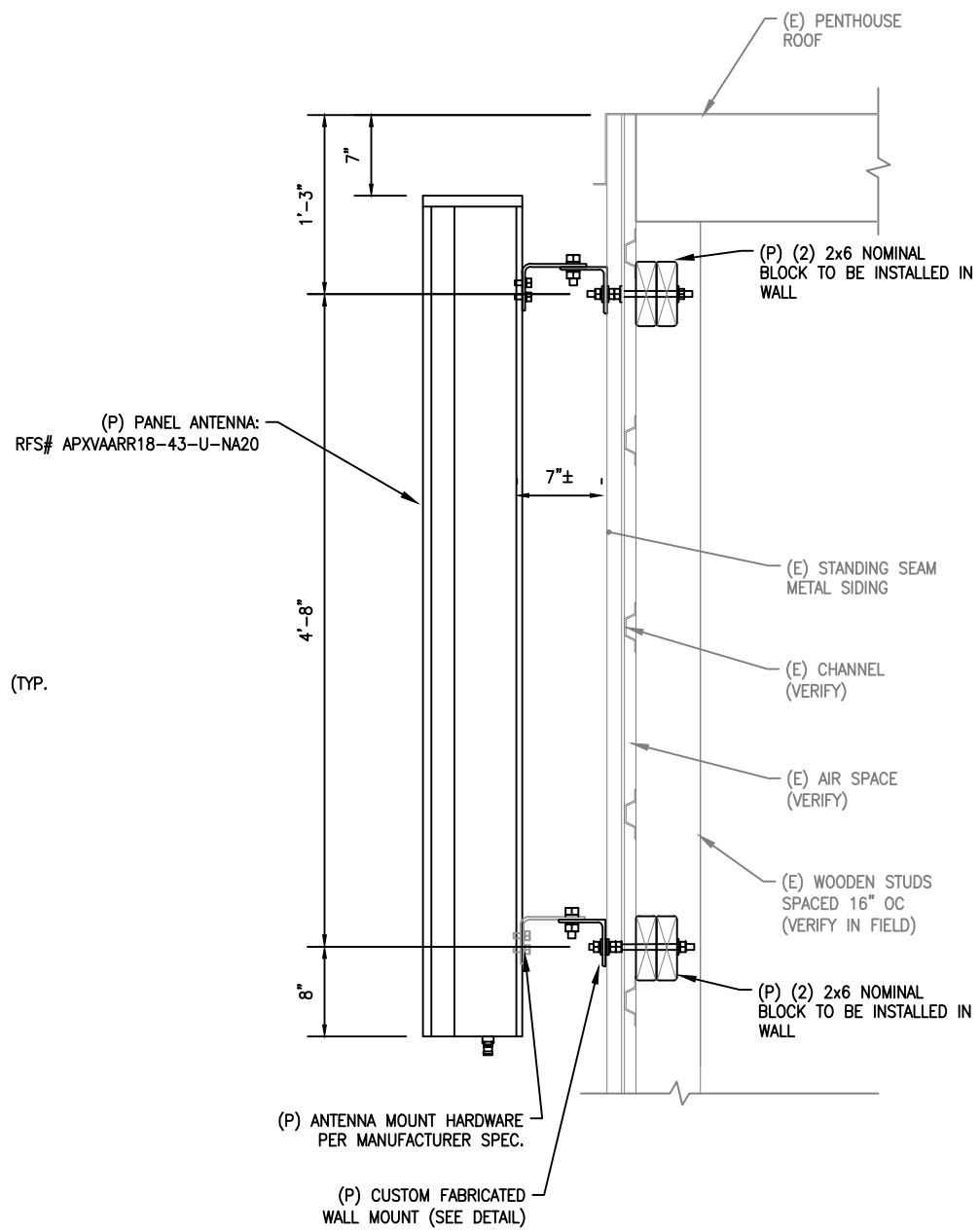


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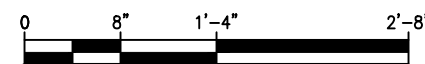
1 PLAN VIEW WALL MOUNT DETAIL

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



2 ELEVATION MOUNT DETAIL

SK-1 SCALE: 3/4" = 1'-0"



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