

T-Mobile®

SF0659 ALMADEN VIA VALIENTE
SF70659M - ANCHOR

APPROVALS SIGNATURE BLOCK

THE FOLLOWING PARTIES HAVE REFERENCED THESE DRAWINGS:

ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL ZONING / BUILDING DEPARTMENTS, AND MAY IMPOSE CHANGES OR NOTIFICATIONS.

PROJECT MANAGER (PRINT)

PROJECT MANAGER

DATE

APPROVED
 REJECTED

RF ENGINEER (PRINT)

RF ENGINEER

DATE

APPROVED
 REJECTED

SITE ACQUISITION (PRINT)

SITE ACQUISITION

DATE

APPROVED
 REJECTED

TMO QUALITY ASSURANCE (PRINT)

TMO QUALITY ASSURANCE

DATE

APPROVED
 REJECTED

T-Mobile®

Stick Together®

SITE NUMBER: SF70659M - ANCHOR
SITE NAME: SF0659 ALMADEN VIA VALIENTE
SITE TYPE: ROOFTOP

CITY: SAN JOSE
COUNTY: SANTA CLARA
JURISDICTION: CITY OF SANTA CLARA



DRAWN BY: SA
 CHECKED BY: VB

REVISIONS			
NO.	DATE	DESCRIPTION	INITIAL
A	09/08/21	ISSUED FOR 90% CD REVIEW	SA

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

CONSTRUCTION DRAWING

IF USING 11"x17" PLOT, DRAWINGS WILL BE HALF SCALE

PROJECT SUMMARY:

APPLICANT: T-MOBILE WEST LLC
 1855 GATEWAY BLVD, STE 900
 CONCORD, CA 94520

PROPERTY OWNER: ADDRESS: 18809 COX AVENUE
 SARATOGA, CA 95707
 CONTACT: JELORA J. W. SANFILIPPO

SITE ADDRESS: 6966 ALMADEN EXPRESSWAY
 SAN JOSE, CA 95120

PHONE: TBD

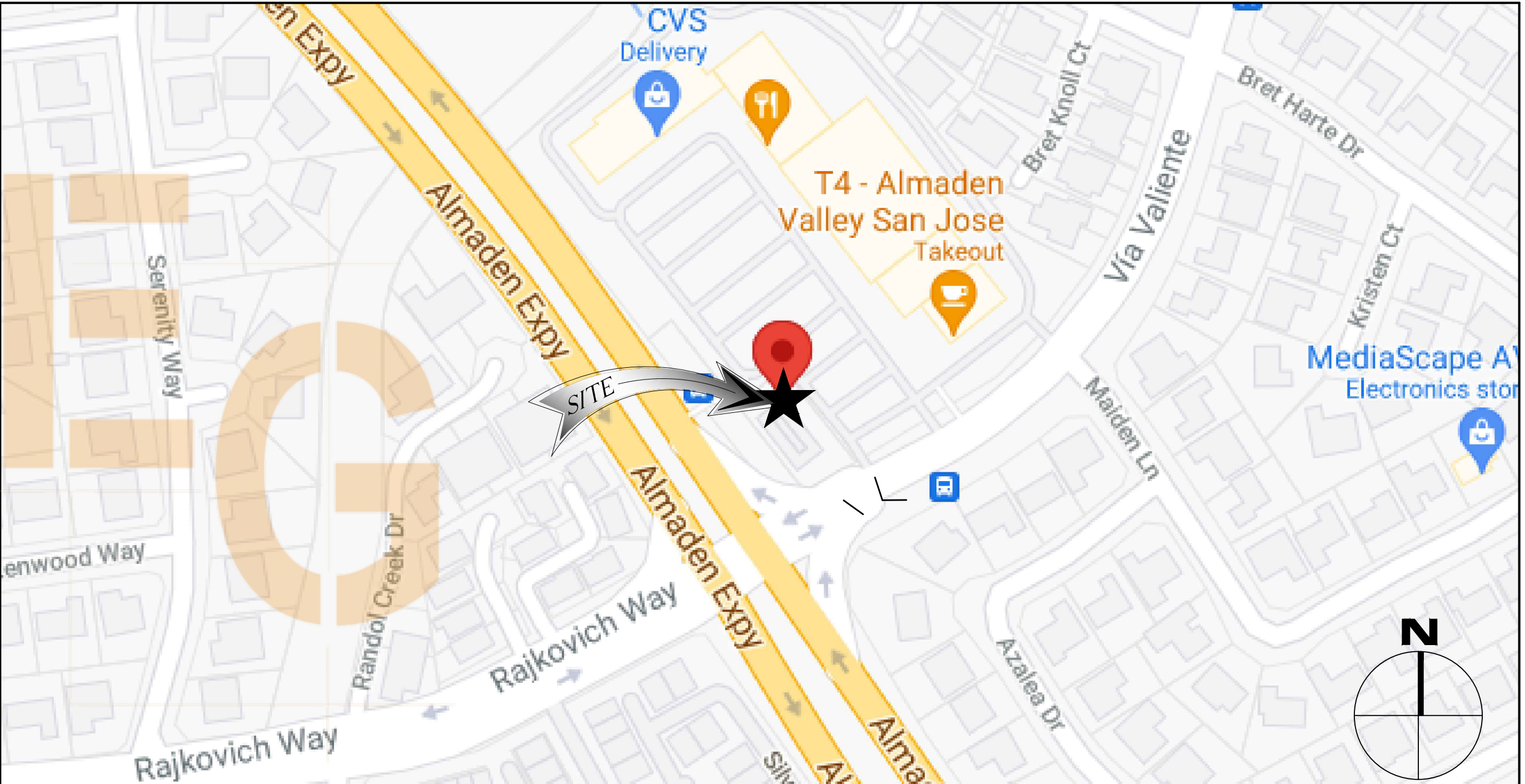
PROJECT DESCRIPTION:

- REMOVE (3) ANDREW - DBXNH-6565B-A2M ANTENNAS (1 PER SECTOR)
- REMOVE (3) COMMSCOPE STYLE 4 - ETM19V2S12UB TMAS (1 PER SECTOR)
- REMOVE (3) ERICSSON AWS/PCS - KRF 102 267/1 DIPLEXERS AT SHELTER
- REMOVE (6) RUS01 B12 RRHS AT RBS 6101 CABINET
- REMOVE (3) RUS01 B2 RRHS AT RBS 6201 ODE CABINET
- REMOVE (6) RUS01 B4 FROM 6201 ODE CABINET
- REMAIN (1) RBS 6201 ODE CABINET
- REMAIN (1) PTS 8003 CABINET
- INSTALL (3) RFS - APXVAALL24_43-U-NA20 (OCTO) ANTENNA (1 PER SECTOR)
- INSTALL (3) ERICSSON - AIR6449 B41 ANTENNA (1 PER SECTOR)
- INSATLL (3) RADIO 4480 B71+B85 (1 PER SECTOR)
- INSTALL (3) RADIO 4480 B25+B66 (1 PER SECTOR)
- INSTALL (1) ENCLOSURE 6160 EQUIPMENT CABINET
- INSTALL (1) ENCLOSURE B160 POWER CABINET
- INSTALL (1) BASE BAND 6648 FOR L700/L600/N600
- INSTALL (3) HCS 6X24 CABLES
- INSTALL (1) BASE BAND 6648 FOR L2100 AND N2100
- INSTALL (1) PSU4813
- INSTALL (1) IXRE ROUTER

APN: 701-53-038
ZONING: CP
LATITUDE: 37° 12' 36" N (37.21000000°)
LONGITUDE: 121° 50' 46" W (-121.84611000°)
GROUND ELEVATION: ± 292' AMSL

SHEET INDEX:

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CONSULTING TEAM:

PROJECT MANAGER: PROJECT A&E:

SITE ACQUISITION: T-MOBILE PROJECT MANAGER
 T-MOBILE WEST LLC
 1855 GATEWAY BLVD, STE 900
 CONCORD, CA 94520
 CONTACT: SUZY STEIGERT
 PHONE: (415) 991-9064
 EMAIL: Suzy.Steigert2@T-Mobile.com

T-MOBILE RF ENGINEER: T-MOBILE CONSTRUCTION MANAGER:
 T-MOBILE WEST LLC
 1855 GATEWAY BLVD, STE 900
 CONCORD, CA 94520
 CONTACT: TBD
 PHONE: TBD
 EMAIL: TBD

APPROVALS:

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL CONSTRUCTION DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND ANY CHANGES AND MODIFICATIONS THEY MAY IMPOSE.

	PRINT NAME	SIGNATURE	DATE
LANDLORD	_____	_____	_____
ZONING REP.	_____	_____	_____
DEVELOP. MGR	_____	_____	_____
CONST. MGR	_____	_____	_____
PROJECT MGR	_____	_____	_____
ZONING MGR.	_____	_____	_____
RF ENGINEER	_____	_____	_____
OPERATIONS	_____	_____	_____
SAC REP.	_____	_____	_____

DIRECTIONS FROM CONCORD T-MOBILE OFFICE:

GET ON CA-242 S FROM CLAYTON RD
 TAKE I-680 S TO ALMADEN EXPY IN SAN JOSE. TAKE EXIT 6 FROM CA-85 N
 FOLLOW ALMADEN EXPY TO YOUR DESTINATION
 USE THE LEFT 3 LANES TO TURN LEFT ONTO ALMADEN EXPY
 USE THE LEFT LANE TO TURN LEFT ONTO VIA VALIENTE
 TURN LEFT
 DESTINATION WILL BE ON THE LEFT.

- APPLICABLE CODES**
- 2019 CALIFORNIA ADMINISTRATIVE CODE.
 - 2019 CALIFORNIA BUILDING CODE (CBC).
 - 2019 CALIFORNIA ELECTRICAL CODE (CEC).
 - 2019 CALIFORNIA ENERGY CODE.
 - 2019 CALIFORNIA MECHANICAL CODE (CMC).
 - 2019 CALIFORNIA PLUMBING CODE (CPC).
 - ANSI/TIA-222-G LIFE SAFETY CODE NFPA-101
 - LOCAL BUILDING CODE.
 - 2019 CALIFORNIA FIRE CODE (CFC)
 - 2019 CALIFORNIA GREEN BUILDING CODE
- ANSI/TIA-222-G OR LATEST EDITION CURRENT LOCAL CODES AND AMENDMENTS IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.

DIGALERT
 DIAL TOLL FREE 811
 AT LEAST TWO WORKING DAYS BEFORE YOU DIG

USA NORTH UNDERGROUND SERVICE ALERT SERVING CALIFORNIA AND NEVADA

THE UTILITIES SHOWN HEREIN ARE FOR THE CONTRACTORS CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER/SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL THE UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO THE (E) UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

VZ-CHRISTIAN
COMM. CHURCH
SF70659M
 6966 ALMADEN EXPRESSWAY
 SAN JOSE, CA 95120

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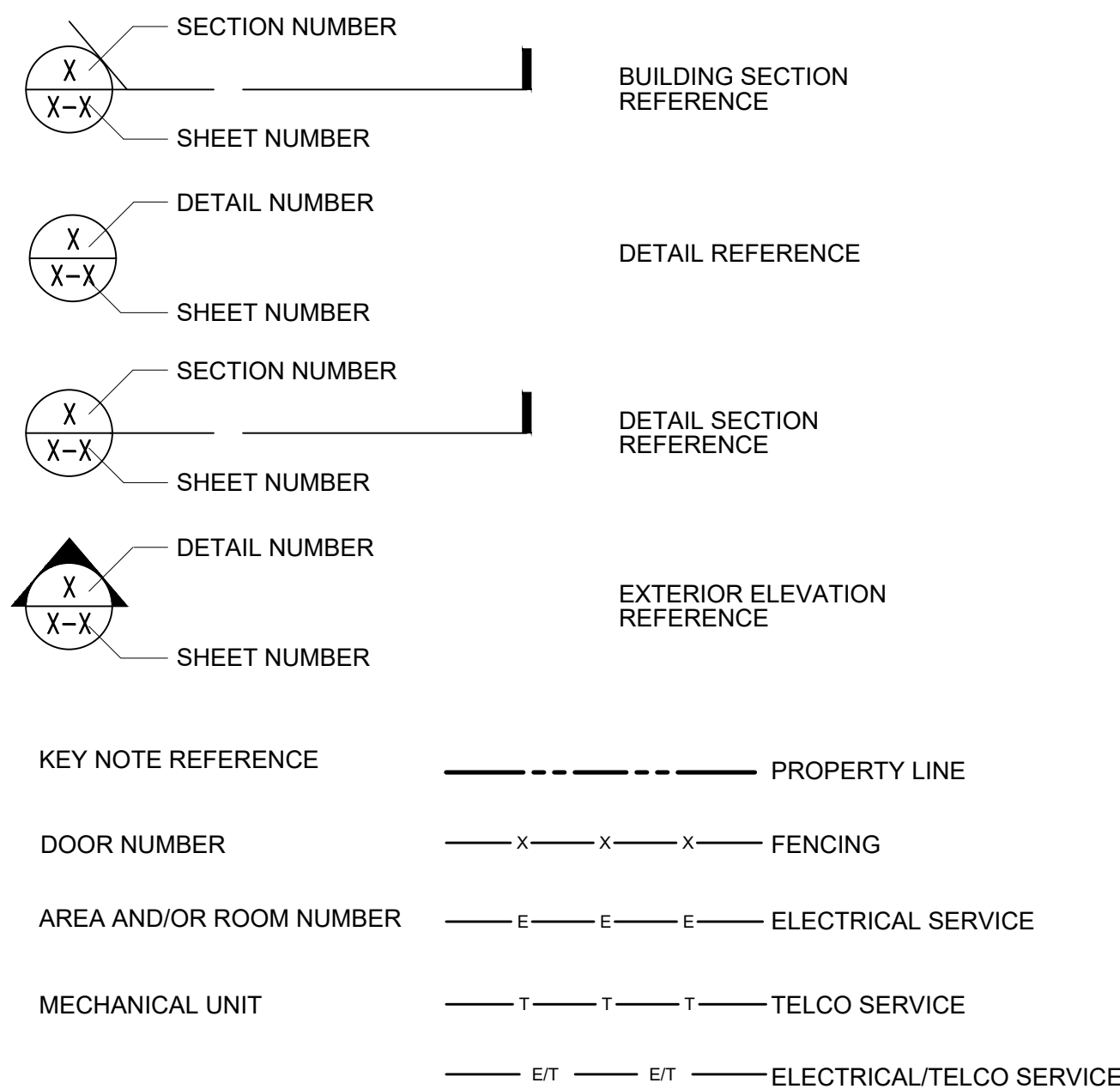
SHEET TITLE
 TITLE SHEET

SHEET NUMBER
T-1

ABBREVIATIONS

Table of abbreviations and their corresponding full names, organized in two columns. Includes terms like ANCHOR BOLT, ASPHALTIC CONCRETE, AIR CONDITIONING, etc.

SYMBOLS:



GENERAL

- 1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE BUILDING CODE AND ALL OTHER GOVERNING CODES. THESE NOTES SHALL BE CONSIDERED A PART OF THE WRITTEN SPECIFICATIONS.
2. THE CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES AS THEY MAY BE DISCOVERED IN THE PLANS, SPECIFICATIONS, & NOTES PRIOR TO STARTING CONSTRUCTION...

GENERAL (CONTINUED)

- 22. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWING (SHEET L51), SHALL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH...
23. NO CHANGES ARE TO BE MADE TO THESE PLANS WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE ARCHITECT/ ENGINEER. UNAUTHORIZED CHANGES RENDER THESE DRAWINGS VOID...

FIRE DEPARTMENT NOTES

- 1. SCHEDULE REQUIRED FINAL FIRE DEPARTMENT INSPECTION 2 DAYS IN ADVANCE.
2. A UNIFORM FIRE CODE PERMIT TO OPERATE BATTERY SYSTEMS WITH STATIONARY LEAD-ACID BATTERIES MAY BE REQUIRED AND ISSUED BY FIRE INSPECTOR.
3. AN APPROVED METHOD TO NEUTRALIZE SPILLED ELECTROLYTE SHALL BE PROVIDED IN THE BATTERY ROOM (IF APPLICABLE)

FLASHING AND SHEET METAL

- 1. ALL FLASHING, COUNTER FLASHING, COPING AND ALL OTHER SHEET METAL SHALL BE OF NOT LESS THAN NO. 20 U.S. GAUGE CORROSION-RESISTANT METAL U.N.O. ALL METAL MUST BE GALVANIZED AFTER FABRICATION.
2. FLASH AND COUNTER FLASH AT ALL ROOF TO WALL CONDITIONS. G.I. FLASH AND CAULK WOOD BEAMS AND OUTLOOKERS PROJECTING THROUGH EXTERIOR WALLS OR ROOF SURFACES.

PAINTING

- 1. THE CONTRACTOR SHALL PREPARE SURFACES, FURNISH ALL PAINT, MATERIAL, LABOR AND EQUIPMENT FOR THE PAINTING OF ALL SURFACES AS REQUIRED.
2. ALL PAINTS TO BE APPLIED IN WORKMANLIKE MANNER. AT COMPLETION, REMOVE ALL MATERIALS AND DEBRIS CAUSED BY THIS CONTRACTOR. ALL FLOORS, GLASS, HARDWARE, FRAMES, FIXTURES, ETC SHALL BE THOROUGHLY CLEANED OF PAINT.

THERMAL & MOISTURE PROTECTION INSULATION

- 1. COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE STATE ENERGY REGULATIONS.
2. PROVIDE R-13 MINIMUM KRAFT-FACED BATT. INSULATION AT WALLS UNLESS NOTED OTHERWISE, AND R-19 MINIMUM AT CEILINGS TO COMPLETELY ENCLOSE EQUIPMENT ROOM. PLACE VAPOR BARRIERS ON WARM SIDE OF WALL.

ACCESSIBILITY NOTE

THE TELECOMMUNICATIONS EQUIPMENT SPACE SHOWN ON THESE PLANS IS NOT CUSTOMARILY OCCUPIED. WORK TO BE PERFORMED IN THIS FACILITY CANNOT REASONABLY BE PERFORMED BY PERSONS WITH A SEVERE IMPAIRMENT: MOBILITY, SIGHT, AND/OR HEARING. THEREFORE, PER 2016 CALIFORNIA BUILDING CODE SECTION 11B-203.5, EXCEPTION 1, THIS FACILITY SHALL BE EXEMPTED FROM ALL TITLE 24 ACCESS REQUIREMENTS.

SITE PREPARATION NOTES:

- 1. THE PREPARATION OF THE SITE FOR CONSTRUCTION SHALL INCLUDE THE REMOVAL OF ALL BROKEN CONCRETE, TREE TRUNKS AND ANY OTHER DEBRIS THAT WOULD BE DAMAGING TO THE FOOTINGS OF THE PROPOSED STRUCTURE.
2. ALL FOUNDATION FOOTINGS SHALL EXTEND INTO AND BEAR AGAINST NATURAL UNDISTURBED SOIL OR APPROVED COMPACTED FILL. FOOTINGS SHALL EXTEND INTO SOIL DEPTH INDICATED ON DETAILS.
3. SHOULD ANY LOOSE FILL, EXPANSIVE SOIL, GROUND WATER OR ANY OTHER DANGEROUS CONDITIONS BE ENCOUNTERED DURING THE EXCAVATION FOR THE PROPOSED FOUNDATION, THE ARCHITECT/ENGINEER SHALL BE NOTIFIED AND ALL FOUNDATION WORK SHALL CEASE IMMEDIATELY.

SUBMITTALS

SUBMITTALS: SUBMITTALS FOR SHOP DRAWINGS, MILL TESTS, PRODUCT DATA, ETC. FOR ITEMS DESIGNED BY THE ARCHITECT/ ENGINEER OF RECORD SHALL BE MADE TO THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW THE SUBMITTAL BEFORE FORWARDING TO THE ARCHITECT. SUBMITTALS SHALL BE MADE IN TIME TO PROVIDE A TWO-WEEK REVIEW PERIOD FOR THE ARCHITECT/ ENGINEER. SUBMITTALS REQUIRED FOR EACH SECTION OF THESE NOTES ARE SPECIFIED IN THAT SECTION.

SHOP DRAWING REVIEW

REVIEW BY THE ARCHITECT/ENGINEER IS FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT AND THE CONTRACT DOCUMENTS. MARKINGS OR COMMENTS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, NOR DEPARTURES THEREFROM. THE CONTRACTOR REMAINS RESPONSIBLE FOR DETAILS AND ACCURACY, FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FOR SELECTING FABRICATION PROCESSES, ETC. WHEN SHOP DRAWINGS DIFFER FROM OR ADD TO THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS THEY SHALL BE DESIGNED AND STAMPED BY A SPECIALTY STRUCTURAL ENGINEER (SSE)

Table titled 'BATTERY INFORMATION' with columns: INSTALL STATUS, BATTERY MODEL, TOTAL # OF BATTERY UNITS INSTALLED (E), VOLTAGE (V), AMP-HOURS (AH), KWh, Kilowatt-hours = (V*AH)/1000, TOTAL BATTERY CAPACITY, KWh, STATIONARY BATTERY STORAGE SYSTEM THRESHOLD QUANTITY, PER CFC SECTION 1206 (Kwh), STATIONARY BATTERY STORAGE SYSTEM CODE CHECK, TOTAL ELECTROLYTE VOLUME (GALLONS) PER UNIT, TOTAL ELECTROLYTE BY VOLUME (GALLONS) =



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CHECKED BY: VB

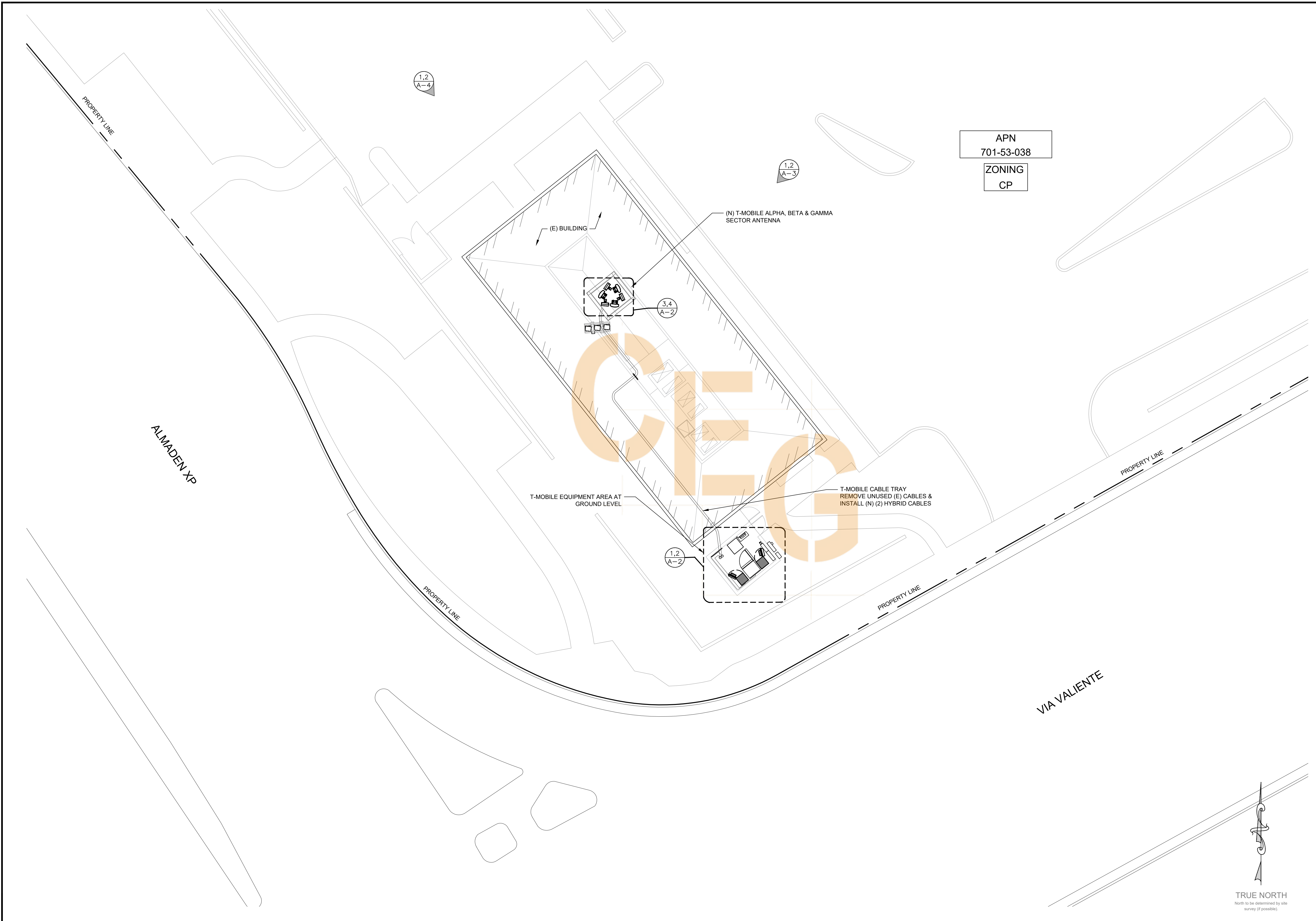
Table titled 'REVISIONS' with columns: NO., DATE, DESCRIPTION, INITIAL. Includes one revision: A 09/08/21 ISSUED FOR 90% CD REVIEW SA

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SHEET TITLE
GENERAL NOTES AND SPECIFICATIONS

SHEET NUMBER
T-2



APN
701-53-038
ZONING
CP

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SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER
A-1

DRAWN BY: SA
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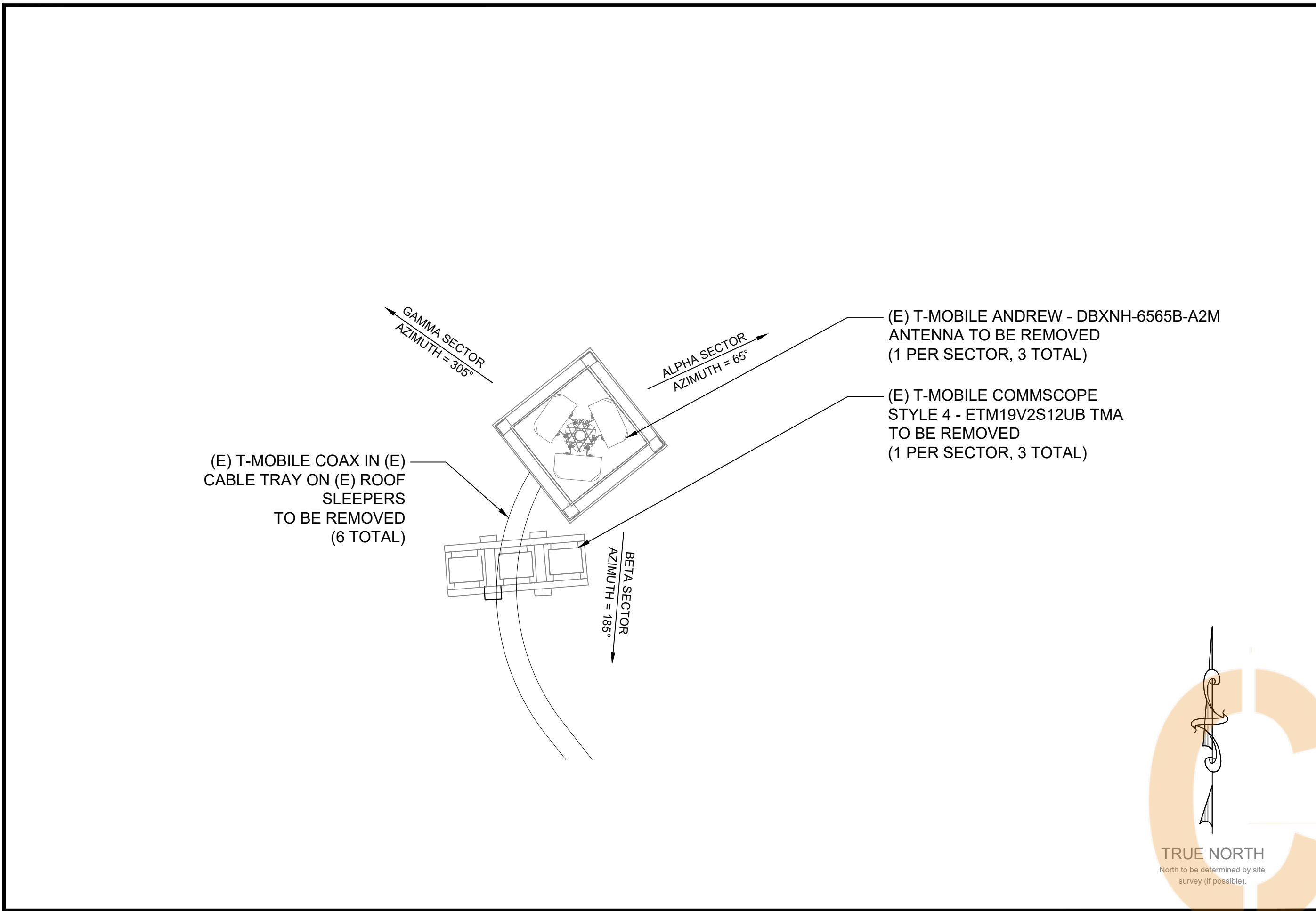
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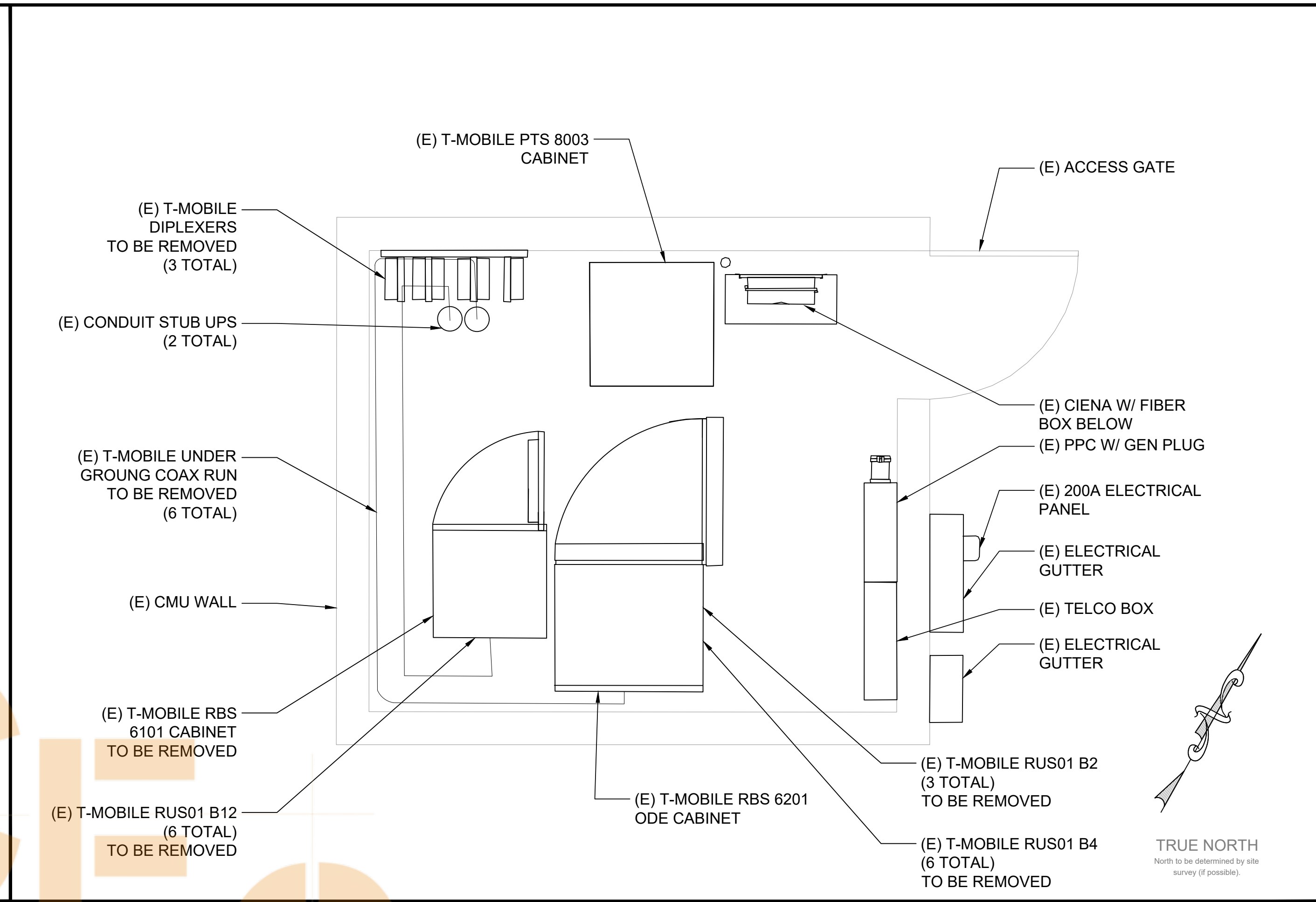
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SHEET TITLE
 ANTENNA AND EQUIPMENT LAYOUT PLANS

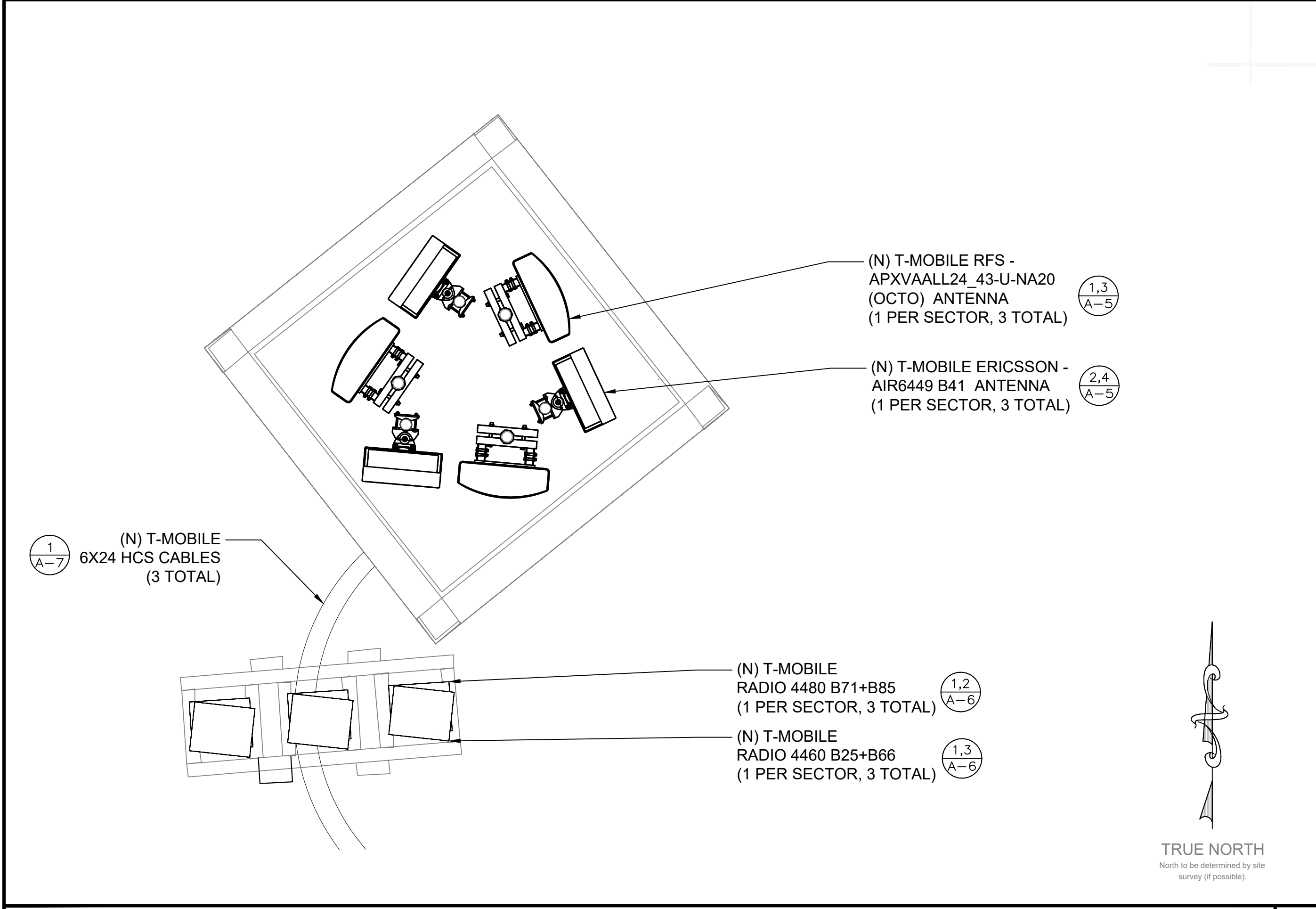
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A-2



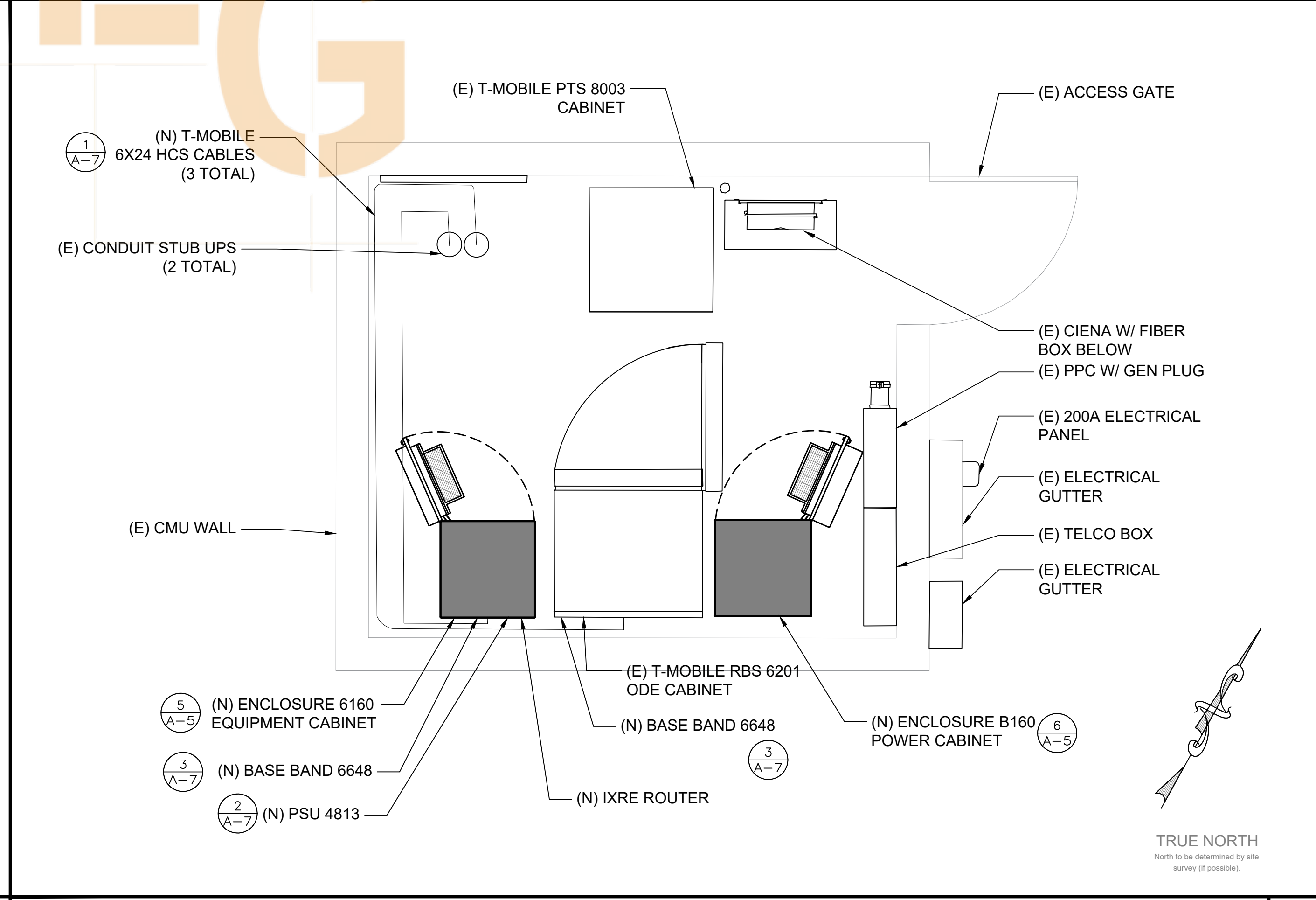
22"x34" SCALE: 1/2" = 1'-0"
 11"x17" SCALE: 1/4" = 1'-0"
EXISTING ANTENNA LAYOUT PLAN 4



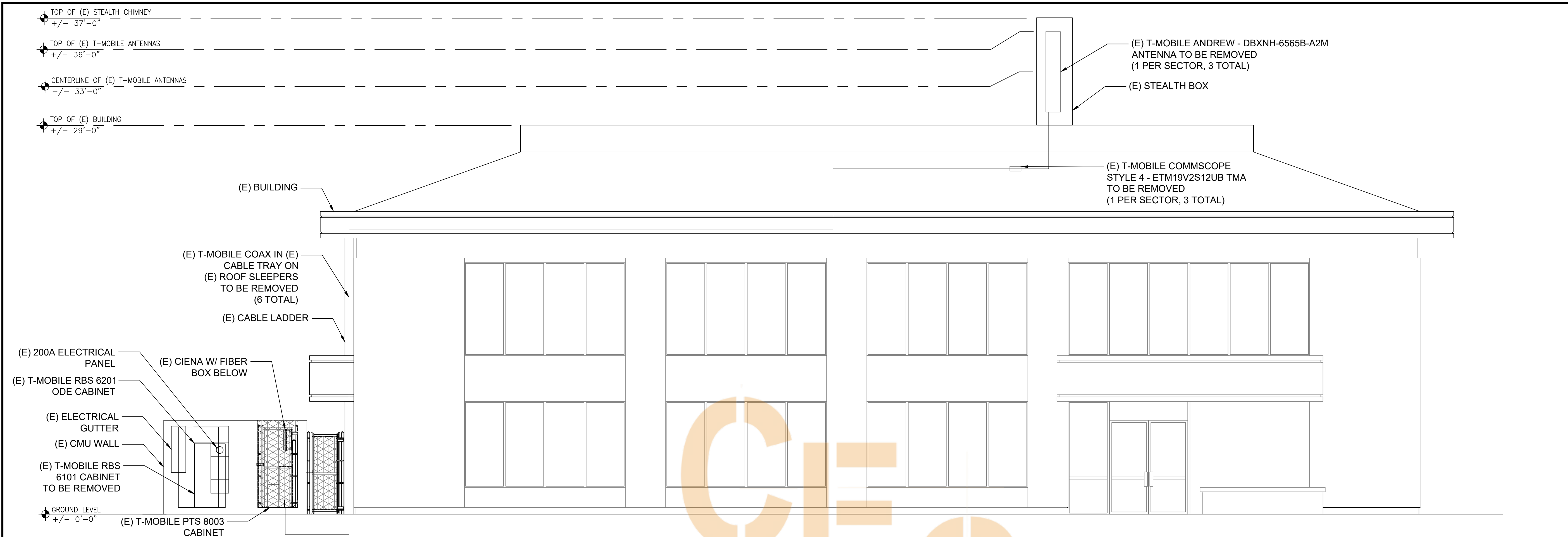
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 11"x17" SCALE: 1/4" = 1'-0"
EXISTING EQUIPMENT LAYOUT PLAN 2



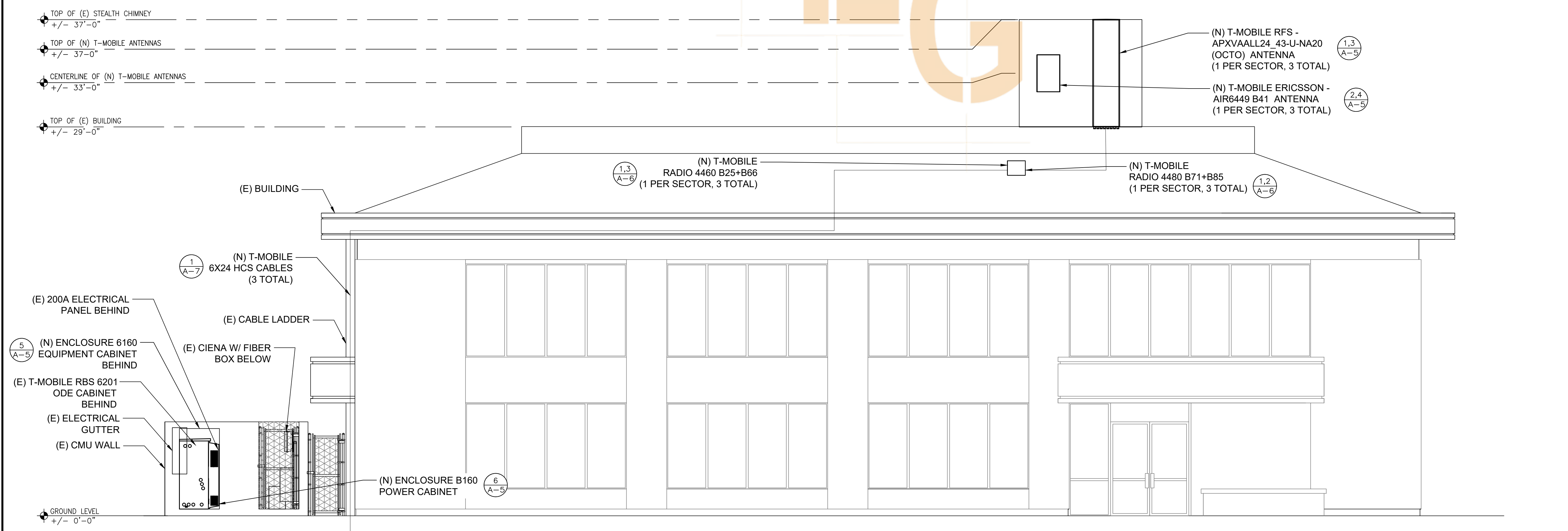
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 11"x17" SCALE: 1/4" = 1'-0"
NEW ANTENNA LAYOUT PLAN 3



22"x34" SCALE: 1/2" = 1'-0"
 11"x17" SCALE: 1/4" = 1'-0"
NEW EQUIPMENT LAYOUT PLAN 1



22"x34" SCALE: 1/4" = 1'-0"
 11"x17" SCALE: 1/8" = 1'-0"
 4' 3' 2' 1' 0" 4'
 EXISTING EAST ELEVATION 2



22"x34" SCALE: 1/4" = 1'-0"
 11"x17" SCALE: 1/8" = 1'-0"
 4' 3' 2' 1' 0" 4'
 NEW EAST ELEVATION 1

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 CHECKED BY: VB

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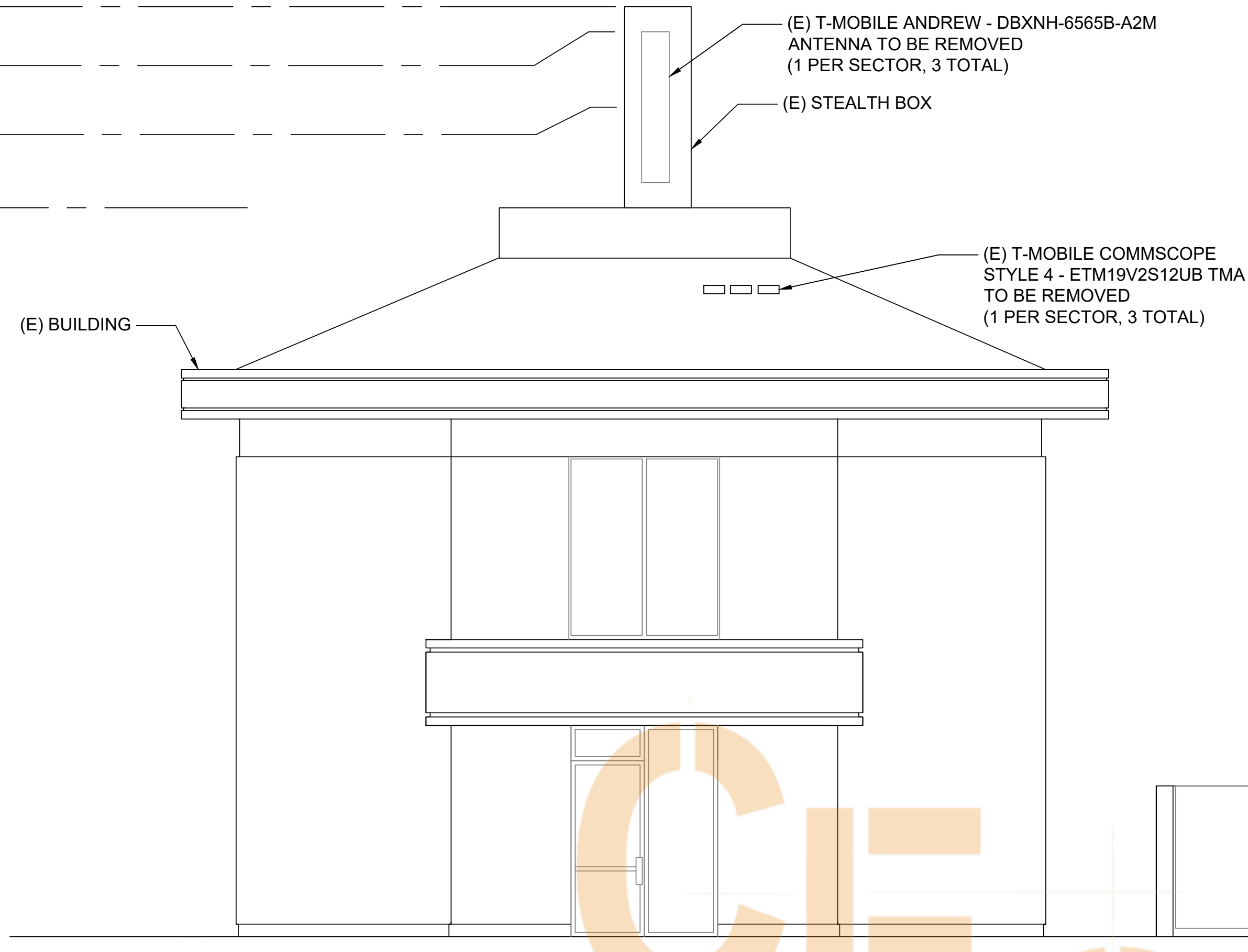
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SHEET TITLE
 ARCHITECTURAL ELEVATIONS

SHEET NUMBER
A-3

TOP OF (E) STEALTH CHIMNEY
 +/- 37'-0"
 TOP OF (E) T-MOBILE ANTENNAS
 +/- 36'-0"
 CENTERLINE OF (E) T-MOBILE ANTENNAS
 +/- 33'-0"
 TOP OF (E) BUILDING
 +/- 29'-0"



(E) T-MOBILE ANDREW - DBXNH-6565B-A2M
 ANTENNA TO BE REMOVED
 (1 PER SECTOR, 3 TOTAL)
 (E) STEALTH BOX
 (E) T-MOBILE COMMSCOPE
 STYLE 4 - ETM19V2S12UB TMA
 TO BE REMOVED
 (1 PER SECTOR, 3 TOTAL)

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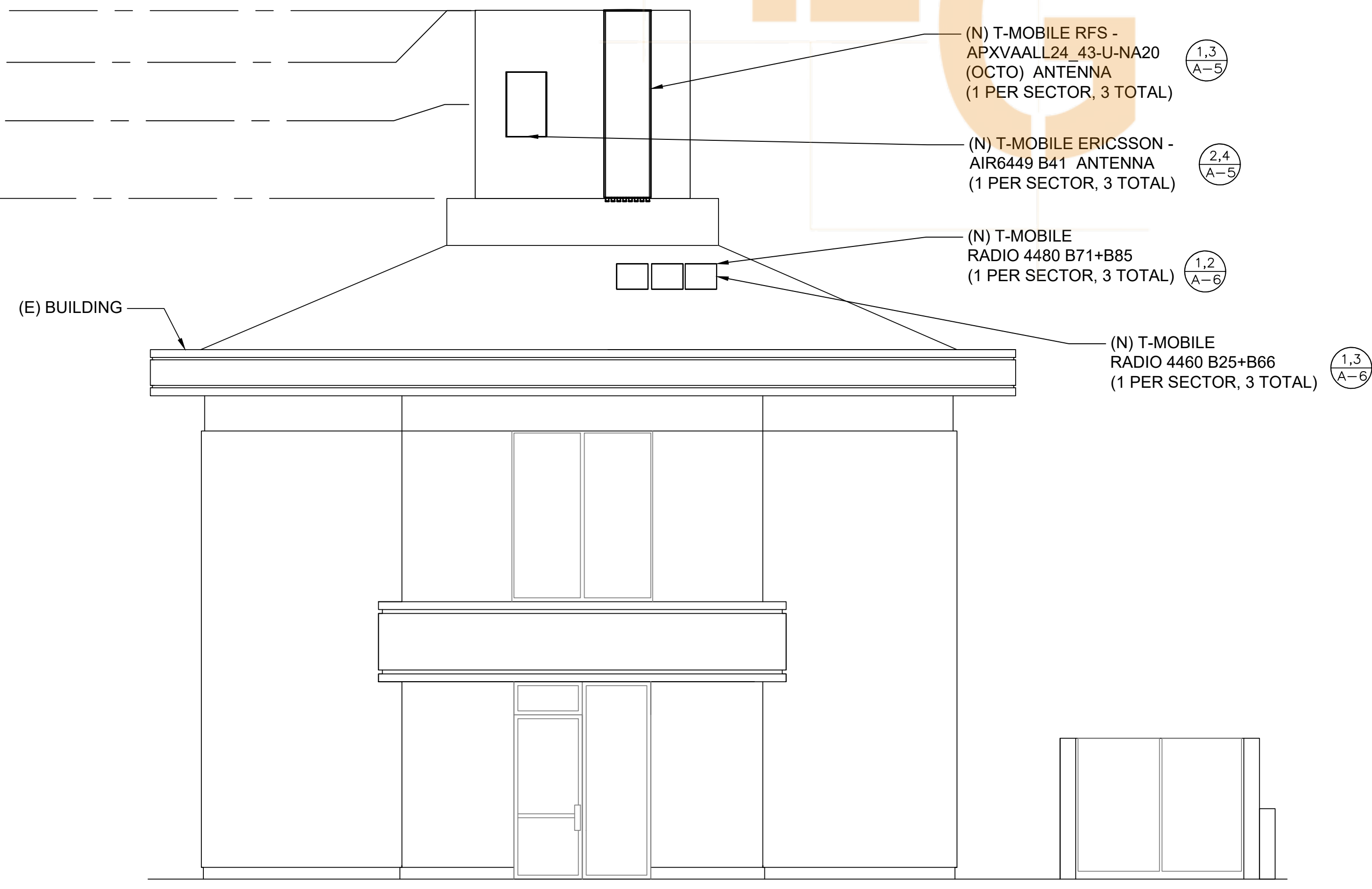
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 11"x17" SCALE: 1/8" = 1'-0"
 4' 3' 2' 1' 0" 4'

EXISTING NORTH ELEVATION 2

TOP OF (E) STEALTH CHIMNEY
 +/- 37'-0"
 TOP OF (N) T-MOBILE ANTENNAS
 +/- 37'-0"
 CENTERLINE OF (N) T-MOBILE ANTENNAS
 +/- 33'-0"
 TOP OF (E) BUILDING
 +/- 29'-0"



(N) T-MOBILE RFS - APXVAALL24_43-U-NA20 (OCTO) ANTENNA
 (1 PER SECTOR, 3 TOTAL) (1,3 / A-5)
 (N) T-MOBILE ERICSSON - AIR6449 B41 ANTENNA
 (1 PER SECTOR, 3 TOTAL) (2,4 / A-5)
 (N) T-MOBILE RADIO 4480 B71+B85
 (1 PER SECTOR, 3 TOTAL) (1,2 / A-6)
 (N) T-MOBILE RADIO 4460 B25+B66
 (1 PER SECTOR, 3 TOTAL) (1,3 / A-6)

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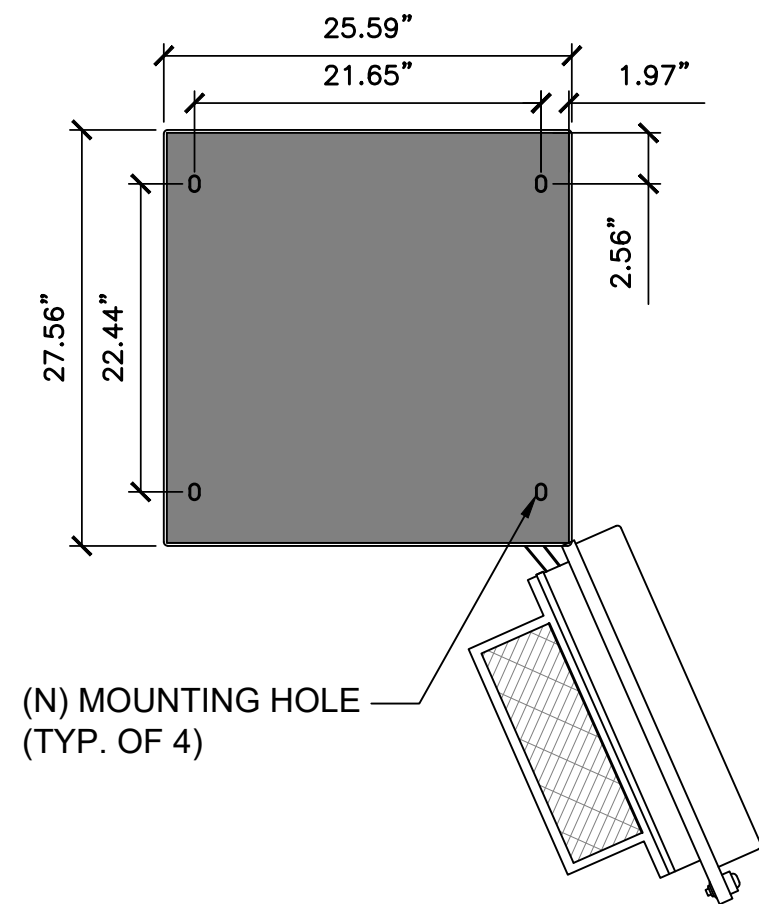
SHEET TITLE
 ARCHITECTURAL ELEVATIONS

SHEET NUMBER
A-4

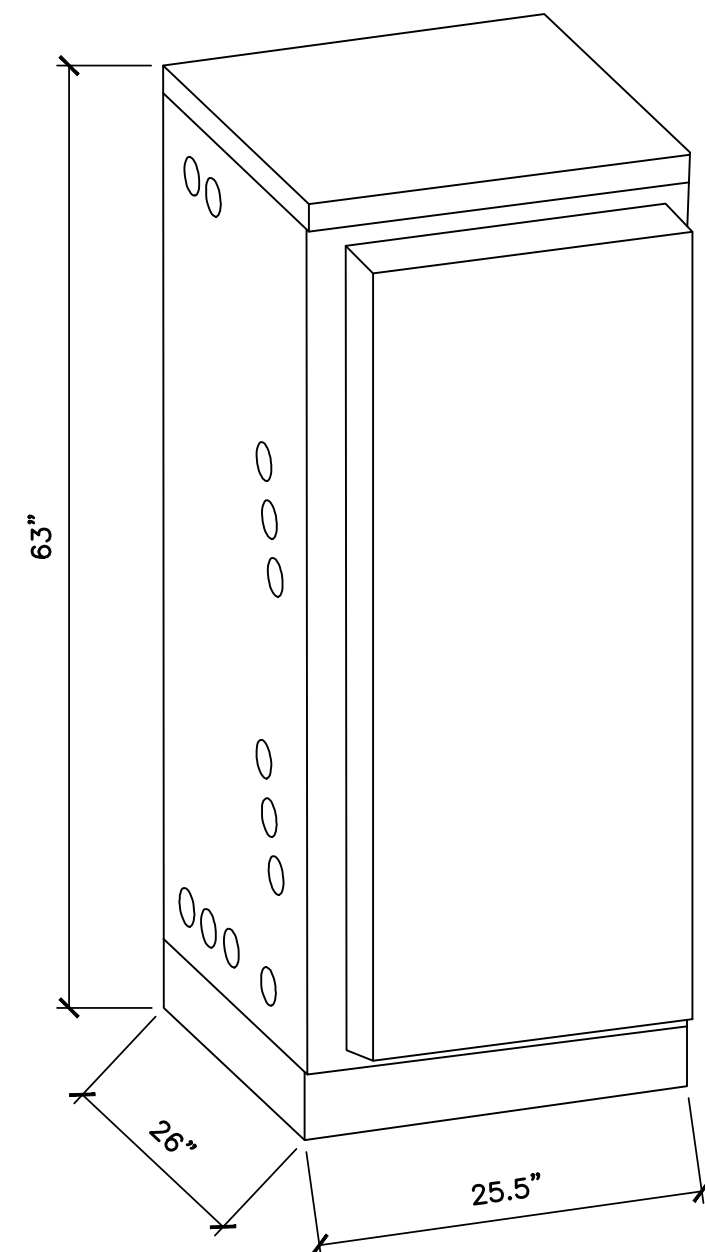
22"x34" SCALE: 1/4" = 1'-0"
 11"x17" SCALE: 1/8" = 1'-0"
 4' 3' 2' 1' 0" 4'

NEW NORTH ELEVATION 1

B160 SPECIFICATIONS
 MANUFACTURER: ERICSSON
 MODEL: B160
 HEIGHT: 63"
 WIDTH: 25.5"
 DEPTH: 26"
 WEIGHT: 295 LBS (EMPTY)
 WEIGHT: 1883 LBS MAX. (W/
 3 BATTERY STRINGS)

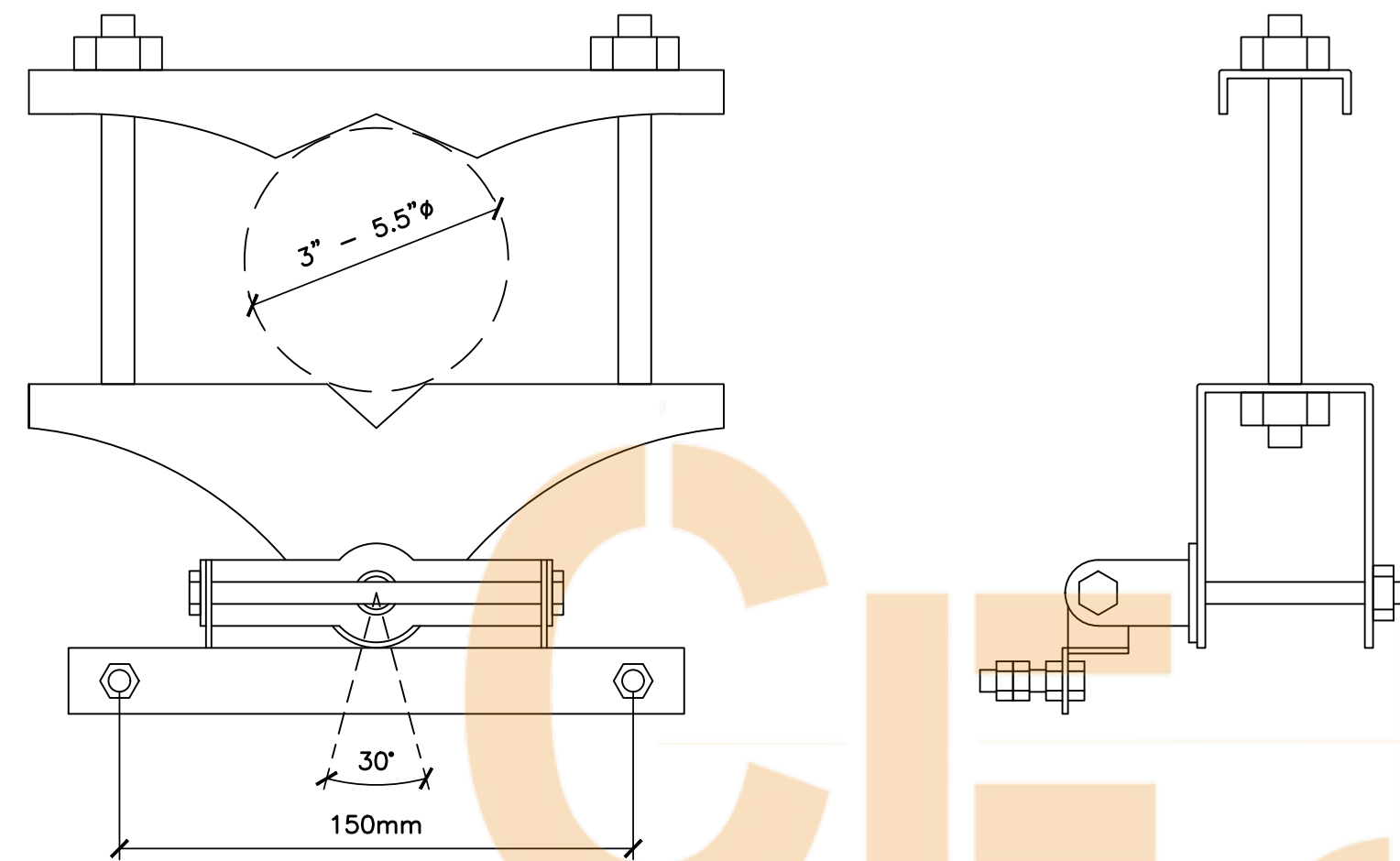


PLAN VIEW



ISOMETRIC VIEW

TYPE NO.	SXK 109 2064/1
NAME	AIR BRACKET MEDIUM
SUITABLE FOR MAST DIAMETER	3"-5.5" (76-114 MM)
ANTENNA - MAST DISTANCE F	128-132 MM
COMPATABILITY	AIR UNITS W/ 150MM INTERFACE
NUMBER OF PIECES	2 PIECES
MATERIAL - CLAMP	HOT-DIP GALVANIZED STEEL
-SCREWS	HOT-DIP GALVANIZED STEEL
-NUTS	STAINLESS STEEL
WEIGHT	9 LBS (4.4 KG)

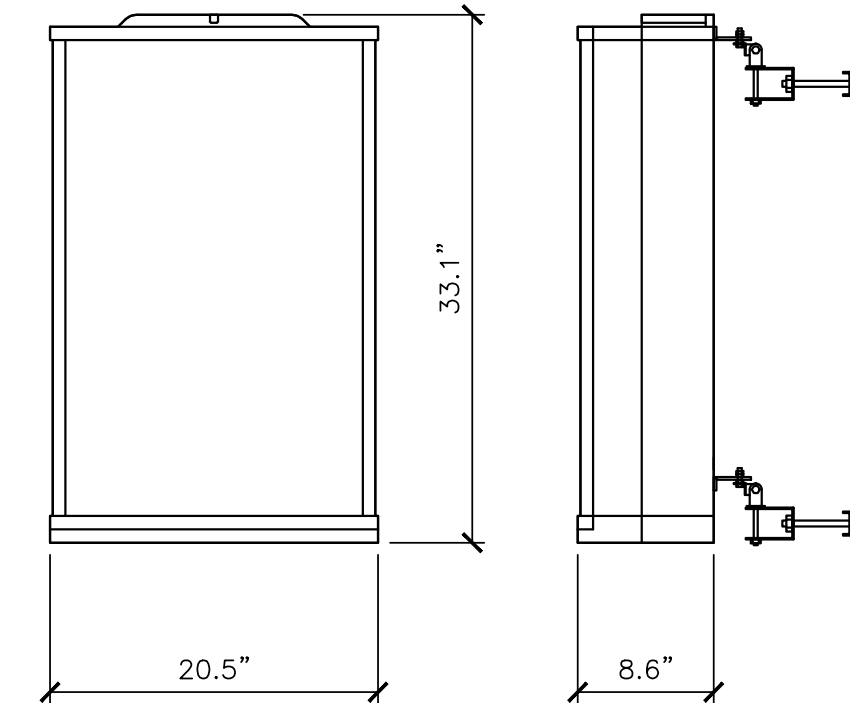


N.T.S.

ERICSSON B160 DETAIL 6

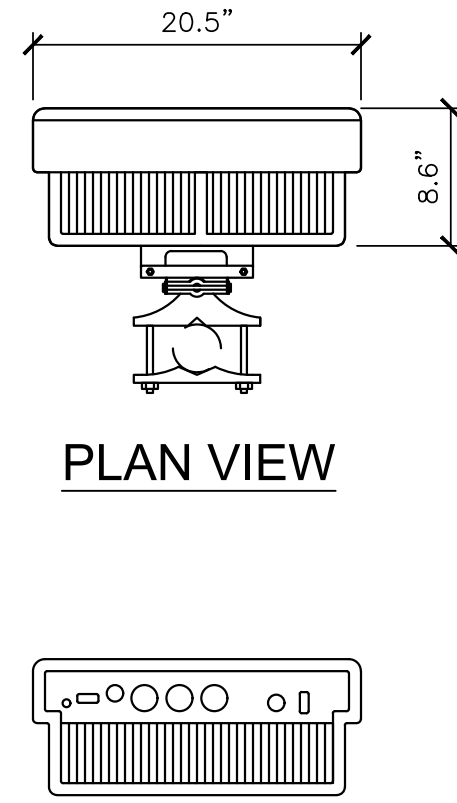
'AIR' BRACKET MEDIUM DETAIL 4

ANTENNA SPECIFICATIONS
 MANUFACTURER: ERICSSON
 MODEL: AIR 6449
 HEIGHT: 33.1"
 WIDTH: 20.5"
 DEPTH: 8.6"
 WEIGHT: 104 LBS



FRONT VIEW

SIDE VIEW



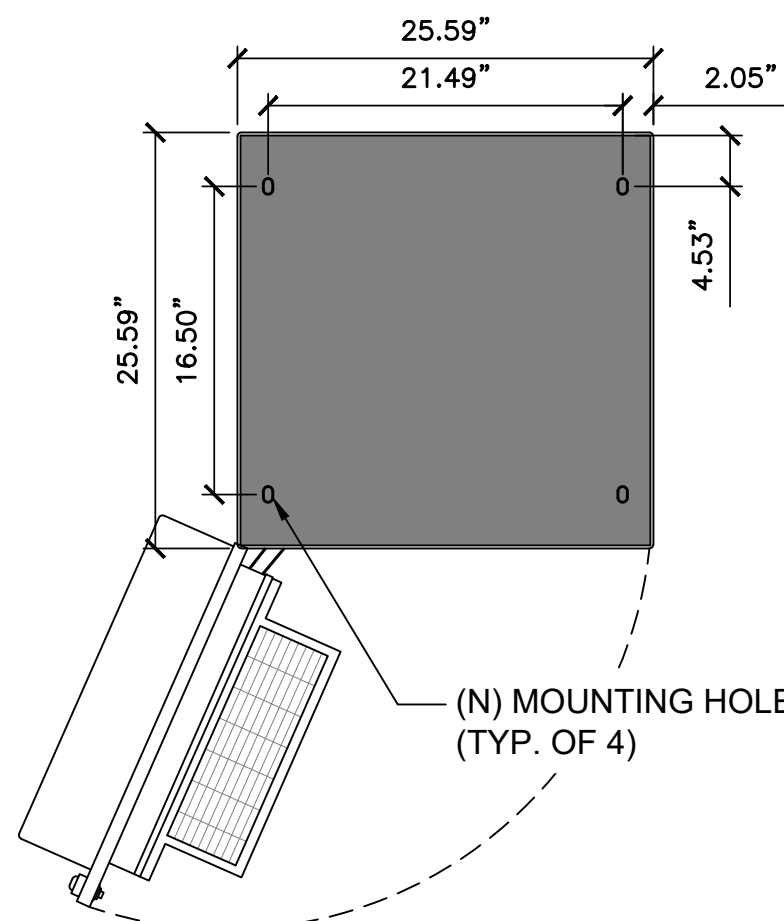
PLAN VIEW

CONNECTOR PORT VIEW

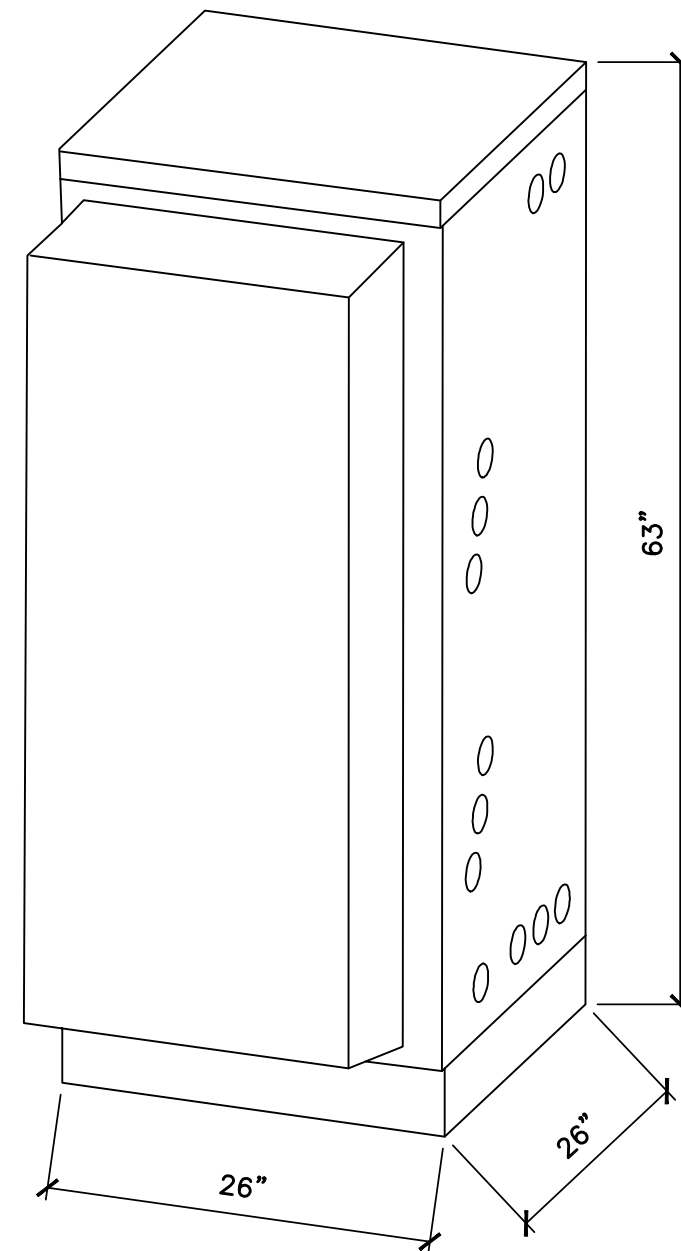
N.T.S.

ERICSSON AIR 6449 ANTENNA DETAILS 2

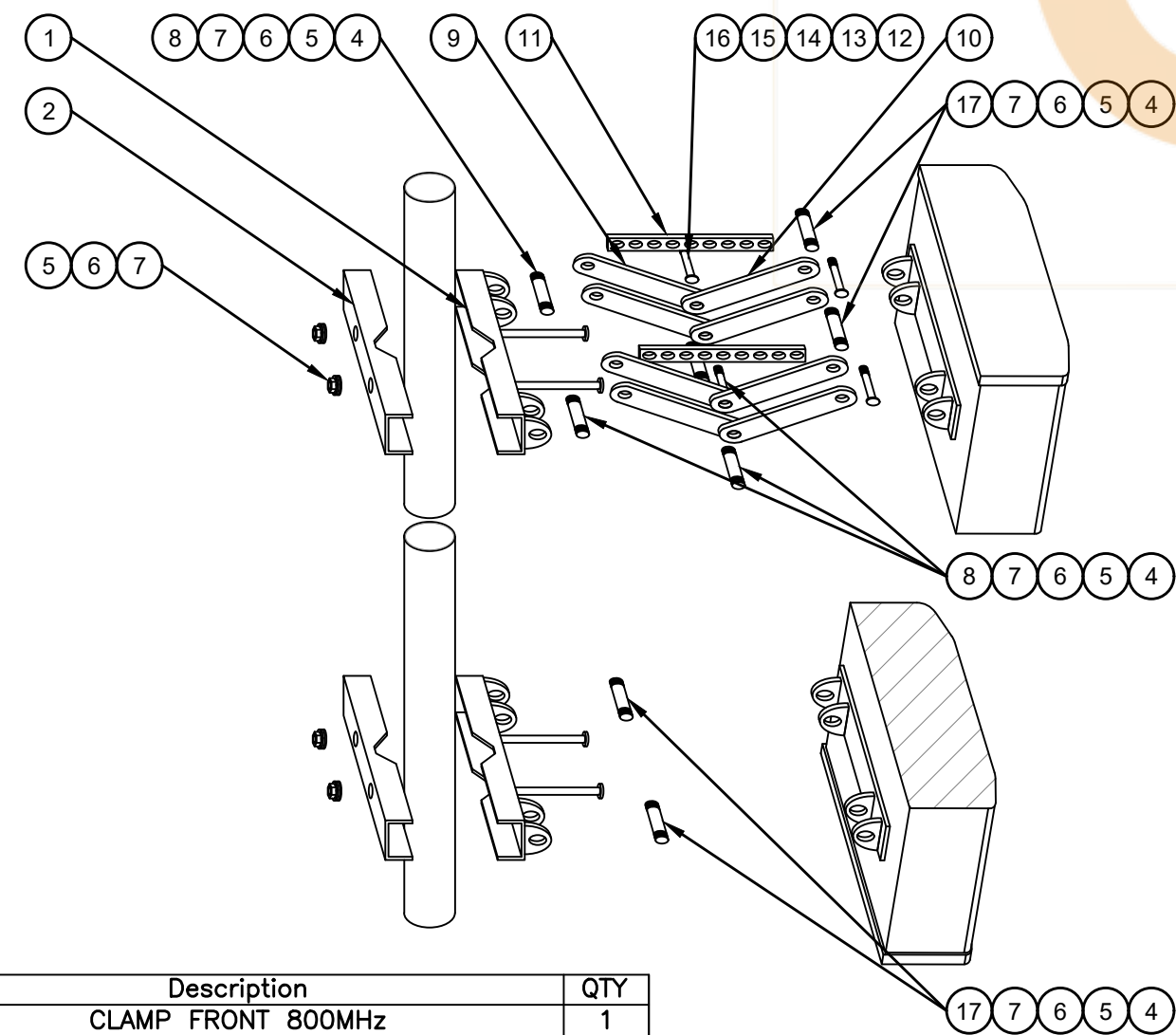
SSC 6160 SPECIFICATIONS
 MANUFACTURER: ERICSSON
 MODEL: 6160
 HEIGHT: 63"
 WIDTH: 26"
 DEPTH: 26"
 WEIGHT: 320 LBS (EMPTY)
 EQUIP: 120 LBS
 TOTAL: 440 LBS



PLAN VIEW



ISOMETRIC VIEW

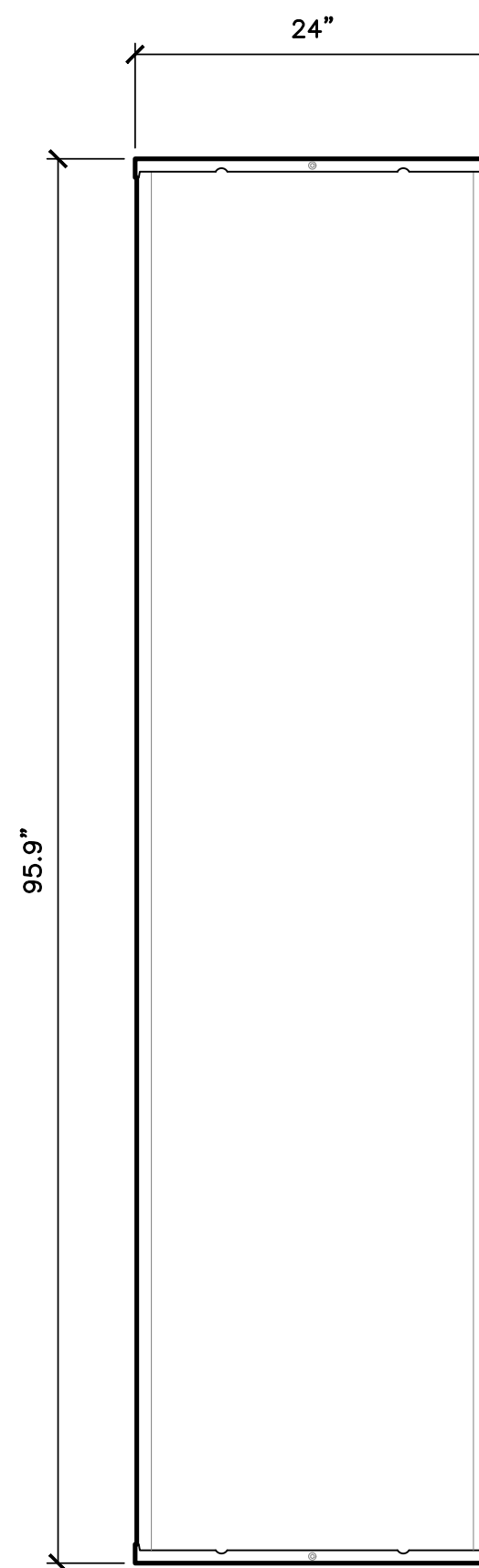


Item	Description	QTY
1	CLAMP FRONT 800MHz	1
2	CLAMP REAR 800MHz	1
3	M12-200, GALV. DIN603/ISO8677, CLASS 8.8	1
4	SCREW H M12X110 CS 35K 8.8 GVRO ISO4017	4
5	WASHER FL 13X24X2.5 CS 200HV GVRO GB97	4
6	WASHER SP 12X3.5 65Mn 200HV GVRO GB7244	2
7	NUT H M12X19X10 CS 35K 8 GVRO DIN934	2
8	STUB FOR SCISSOR	1
9	DOWNTILT SCISSOR	1
10	DOWNTILT BEAM	1
11	MECHANICAL DOWNTILT INDICATOR 800MHz 2.6M	4
12	STUB SPACER 3mm	4
13	M8-100 GALV. ISO8677, CLASS 4.8	2
14	SPRING LOCK WASHER A8 DIN127 A2	2
15	FLAT WASHER DIN125 8.4 A2 (FRTR)	4
16	M8X1, 25 HEX NUT STL GALV.	2
17	SPACER FOR BOTTOM MOUNTING	2

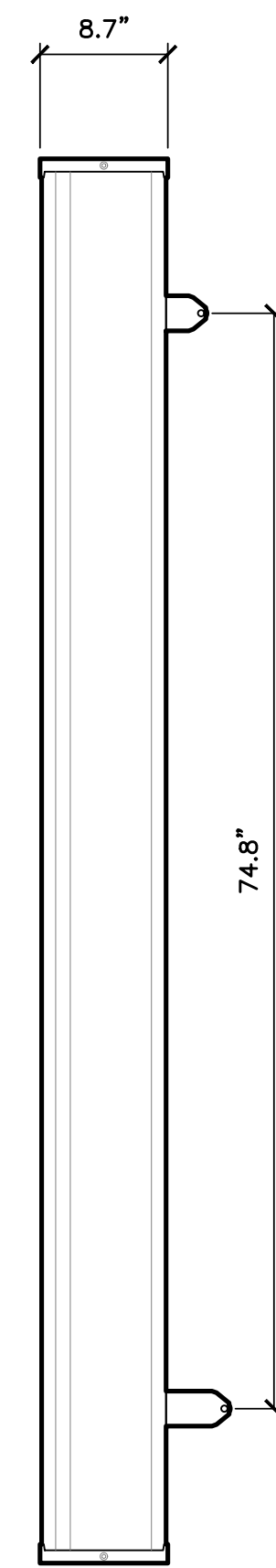
MANUFACTURER: RFS
 MODEL: AMP40-5E MOUNTING KIT
 WEIGHT: 22 LBS

N.T.S.

RFS AMP40-5E ANTENNA MOUNT KIT DETAIL 3

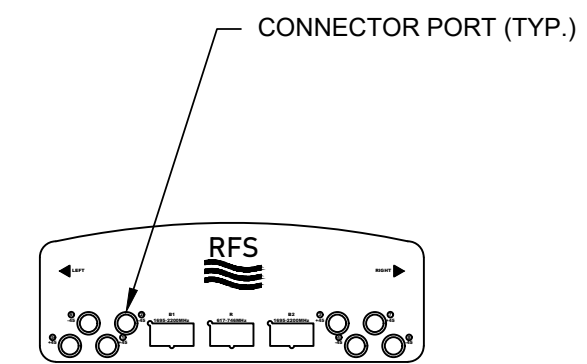


FRONT VIEW



SIDE VIEW

ANTENNA SPECIFICATIONS
 MANUFACTURER: RFS
 MODEL: APXVAARR24_43-U-NA20
 HEIGHT: 95.9"
 WIDTH: 24"
 DEPTH: 8.7"
 WEIGHT: 128 LBS



CONNECTOR PORT VIEW

N.T.S.

RFS ANTENNA APXVAARR24_43-U-NA20 DETAIL 1

DRAWN BY: SA
 CHECKED BY: VB

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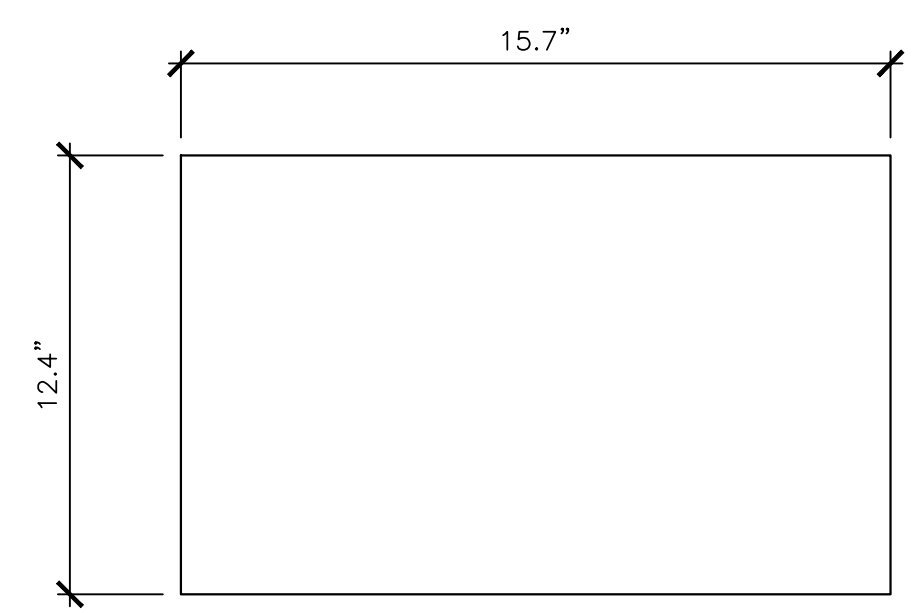
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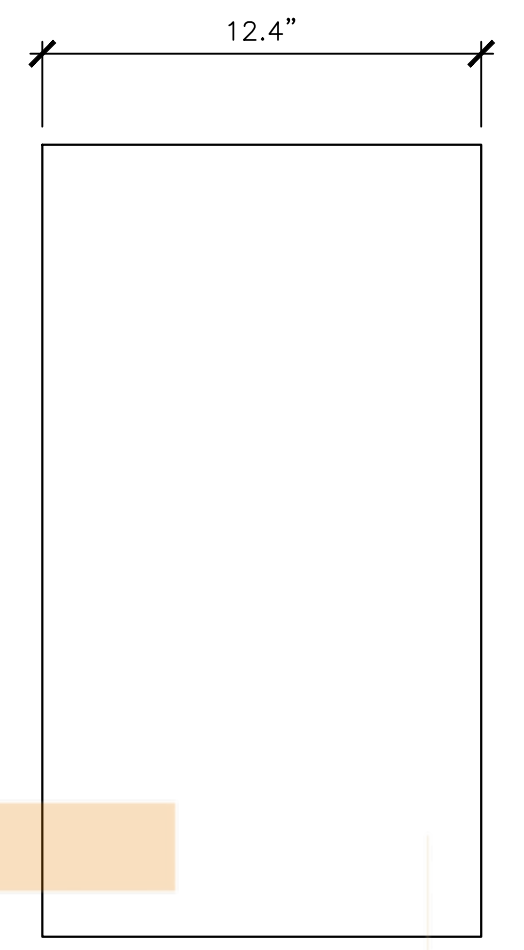
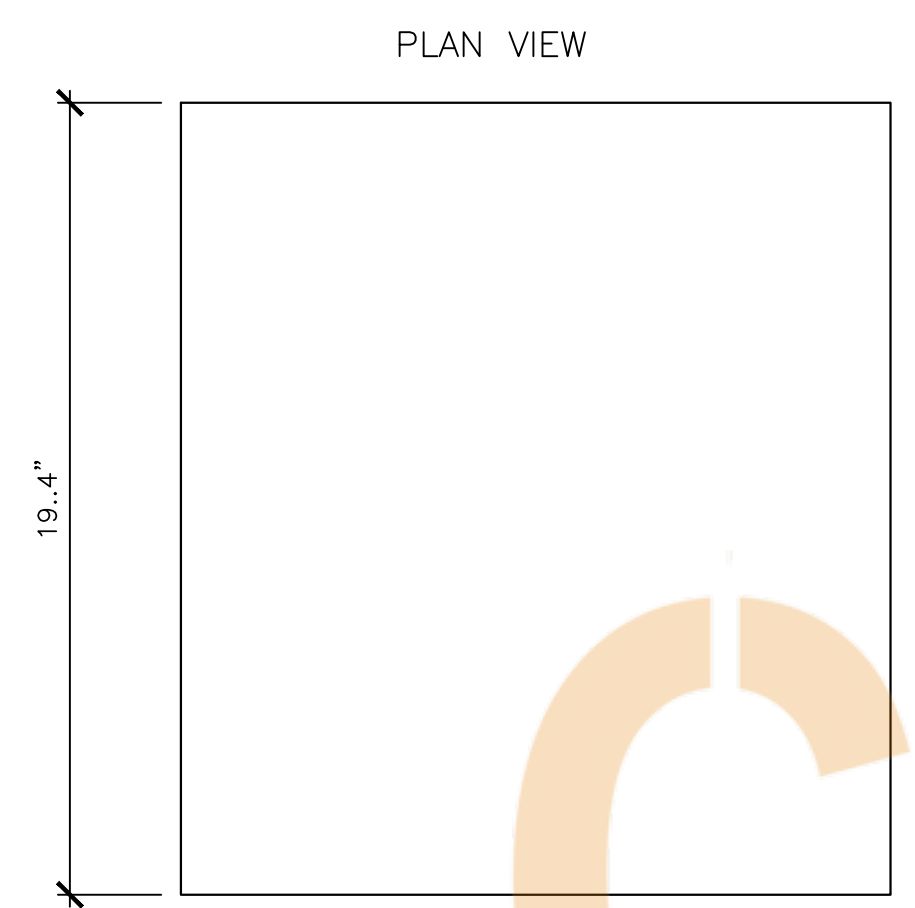
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SHEET TITLE
 EQUIPMENT DETAILS

SHEET NUMBER
A-5



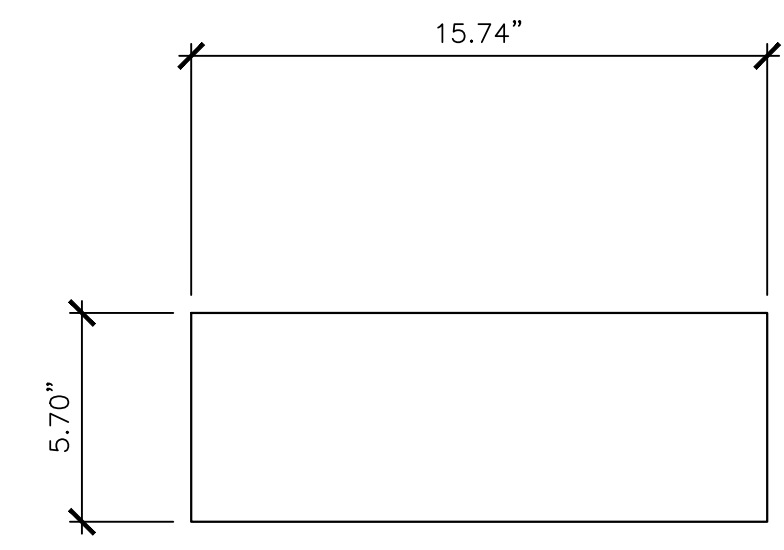
RRU SPECIFICATIONS
 MANUFACTURER: ERICSSON
 MODEL: RRUS-4460
 HEIGHT: 15.7"
 WIDTH: 19.4"
 DEPTH: 12.4"
 WEIGHT: 108 LBS



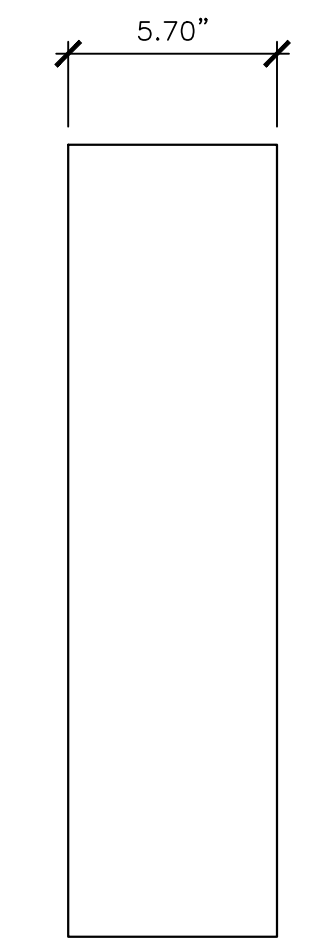
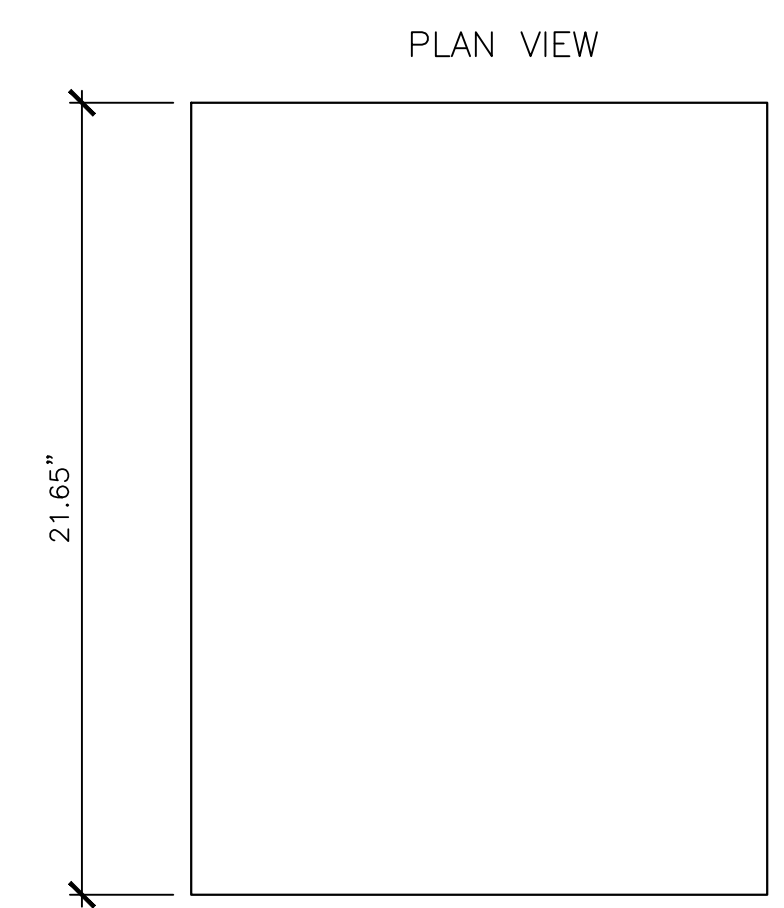
FRONT VIEW

SIDE VIEW

PLAN VIEW



RRU SPECIFICATIONS
 MANUFACTURER: ERICSSON
 MODEL: RRUS-4480
 HEIGHT: 21.6535"
 WIDTH: 15.7480"
 DEPTH: 5.7086"
 WEIGHT: 70.54 LBS



FRONT VIEW

SIDE VIEW

PLAN VIEW

DRAWN BY: SA
 CHECKED BY: VB

REVISIONS			
NO.	DATE	DESCRIPTION	INITIAL
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NOT USED 6

N.T.S.

ERICSSON RADIO 4460 DETAIL 4

N.T.S.

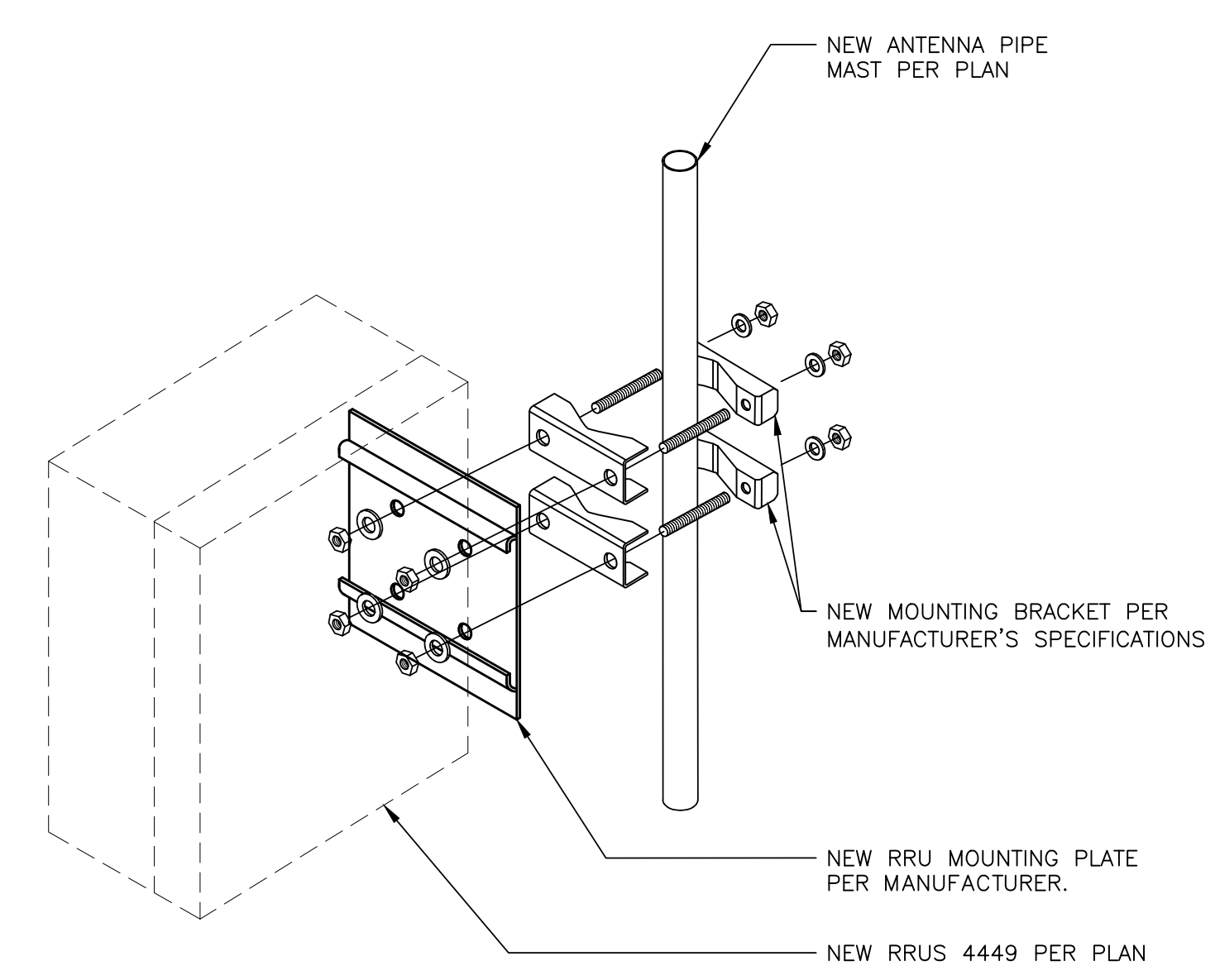
ERICSSON RADIO 4480 DETAIL 2

NOT USED 5

NOT USED 3

N.T.S.

RADIO MOUNTING BRACKET 1



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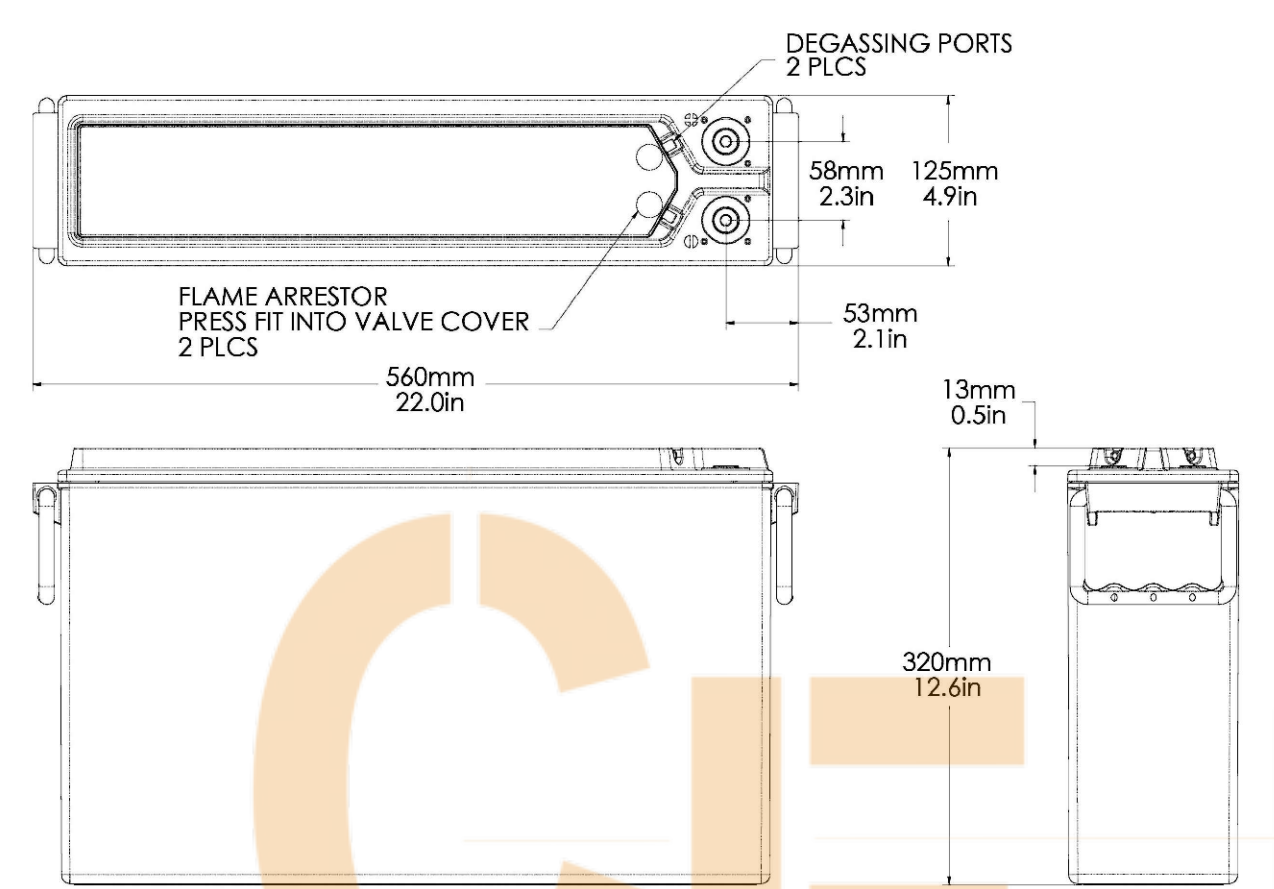
SHEET TITLE
 EQUIPMENT DETAILS

SHEET NUMBER
A-6

NORTHSTAR – NSB 190FT HT RED

NOM. VOLTAGE: 12v
 NOM. CAPACITY 190AMP-HOURS; 8 HOUR RATE TO 1.75 VOLTS PER CELL @ 25°C (77°F)
 LENGTH: 22.00" (558.80 mm)
 WIDTH: 4.90" (124.46 mm)
 HEIGHT: 12.60" (320.04 mm)
 WEIGHT: 132 lbs (59.9 kg) Nominal
 TERMINAL: FRONT ACCESSIBLE, HEAVY DUTY THREADED (M8x1.25) COPPER ALLOY
 LEAD WEIGHT: 92.4 LBS
 ELECTROLYTE VOLUME: 2.03 GAL
 ELECTROLYTE WEIGHT: 22.44 LBS
 SULFURIC ACID VOLUME: 0.60 GAL
 SULFURIC ACID WEIGHT: 9.41 LBS

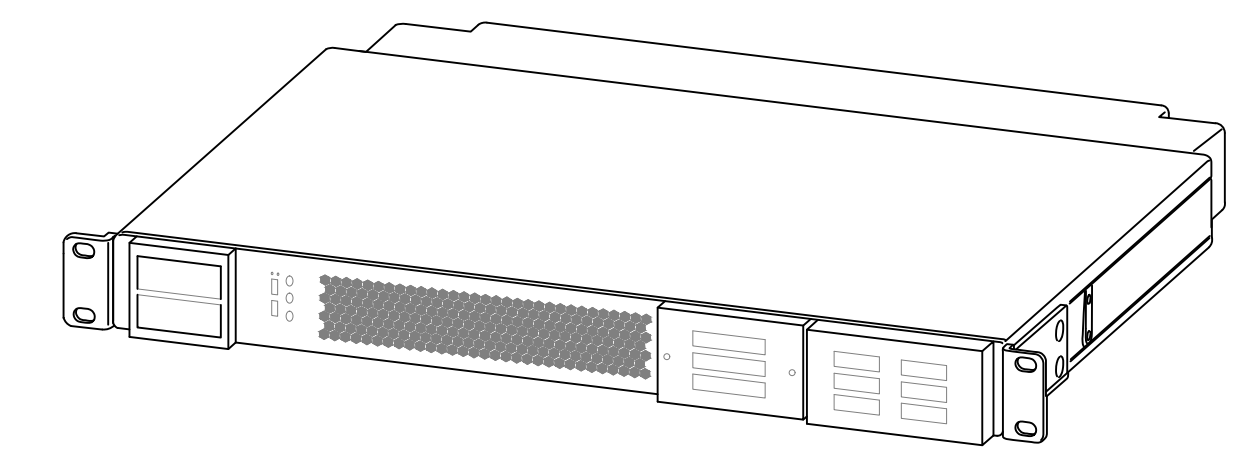
190 AH x 12V / 1000 = 2.28 KWH/BATTERY
 TOTAL BATTERIES INSTALLED = 12
 2.28 x 12 BATTERIES = 27.36 KWH TOTAL



NOTE:
 1. USE MANUFACTURER SUPPLIED MOUNTING HARDWARE.

BASEBAND SPECIFICATIONS

MANUFACTURER: TBD
 MODEL: PSU 48130
 HEIGHT: 1.75" (1 RU)
 WIDTH: 19"
 DEPTH: 13"
 WEIGHT: TBD LBS



NOT USED 6

N.T.S.

NSB 190FT HT RED BATTERY DETAIL 4

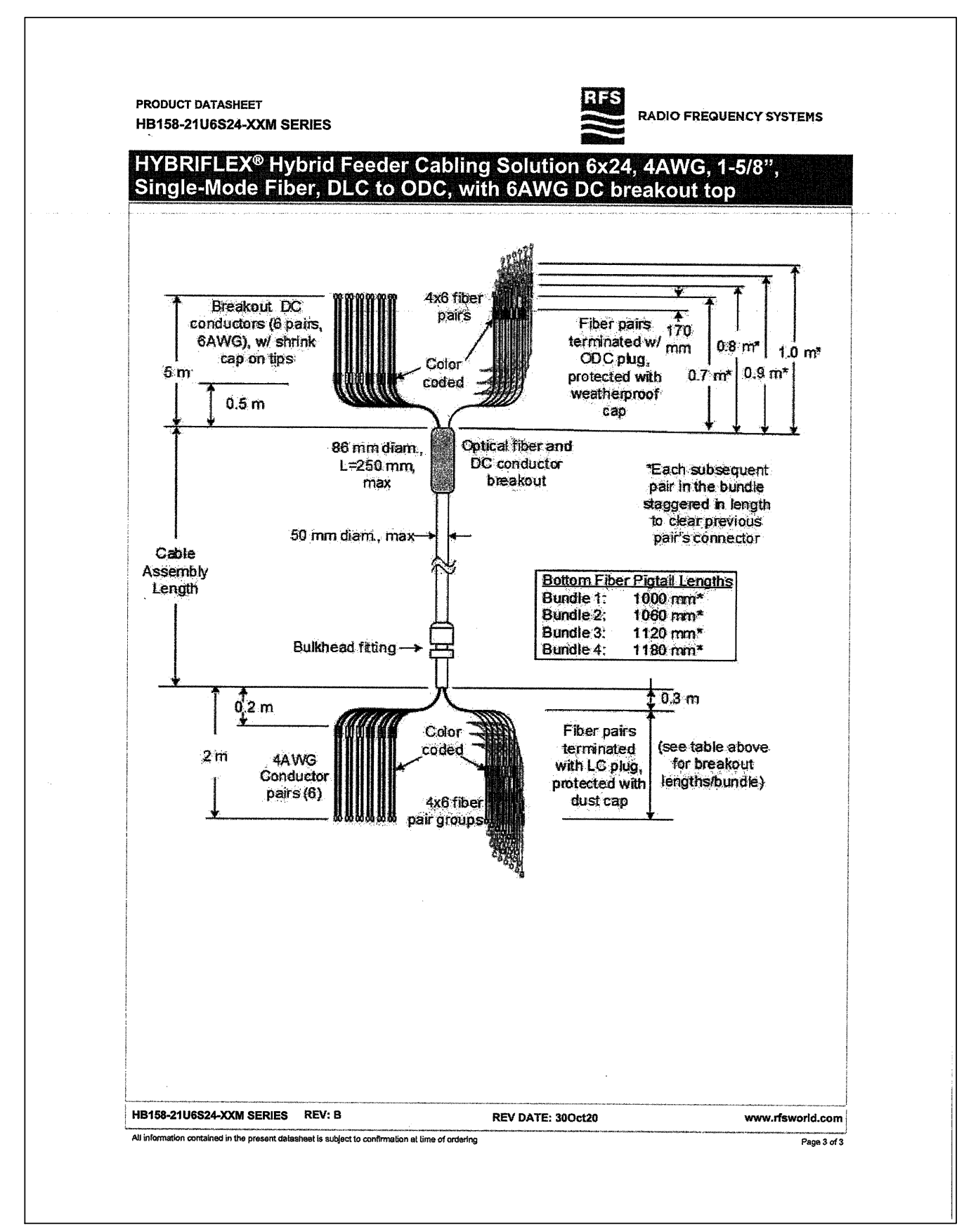
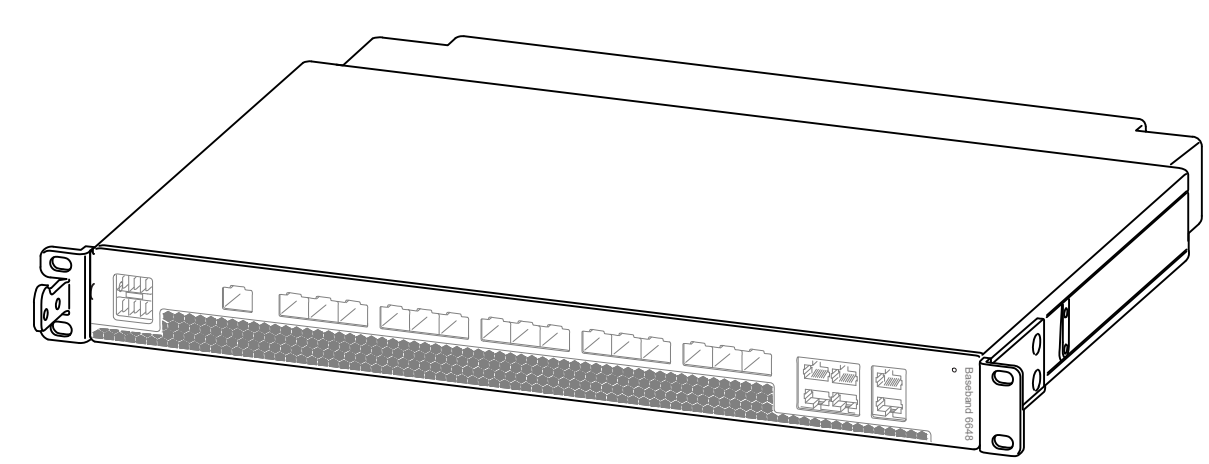
N.T.S.

PSU 4813 DETAIL 2

NOTE:
 1. USE MANUFACTURER SUPPLIED MOUNTING HARDWARE.

BASEBAND SPECIFICATIONS

MANUFACTURER: ERICSSON
 MODEL: BASEBAND 6648
 HEIGHT: 1.75" (1 RU)
 WIDTH: 19"
 DEPTH: 14.3"
 WEIGHT: 16.5 LBS



NOT USED 5

N.T.S.

BASEBAND 6648 DETAIL 3

N.T.S.

6X24 HCS CABLE DETAIL 1

DRAWN BY: SA
 CHECKED BY: VB

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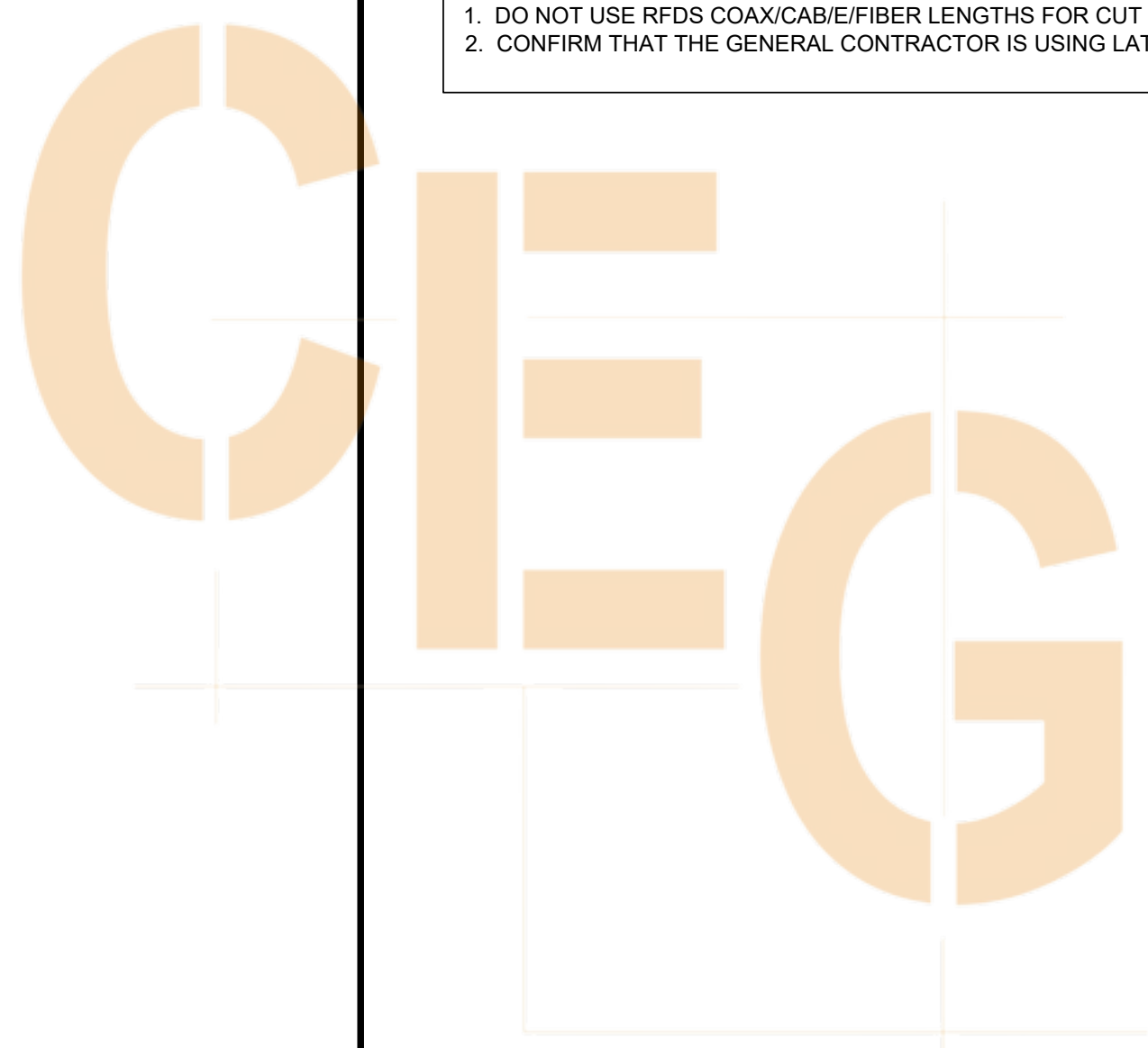
SHEET TITLE
 EQUIPMENT DETAILS

SHEET NUMBER
A-7

EXISTING ANTENNA SCHEDULE										
POSITION		ANTENNA			ANTENNA AZIMUTH	RAD CENTER	TMA/RRU	CABLE TYPE	CABLE LENGTH	JUMPERS
		TECH	MODEL	SIZE						
ALPHA SECTOR	A1	L700 L2100 U1900	ANDREW - DBXNH-6565B-A2M	72"	65°	33'-0"	COMMSCOPE STYLE 4 - ETM19V2S12UB	(2) 7/8" COAX	20M	-
	B1	L700 L2100 U1900	ANDREW - DBXNH-6565B-A2M	72"	185°	33'-0"	COMMSCOPE STYLE 4 - ETM19V2S12UB	(2) 7/8" COAX	20M	-
BETA SECTOR	B1	L700 L2100 U1900	ANDREW - DBXNH-6565B-A2M	72"	305°	33'-0"	COMMSCOPE STYLE 4 - ETM19V2S12UB	(2) 7/8" COAX	20M	-
	B2	L700 L2100 U1900	ANDREW - DBXNH-6565B-A2M	72"	305°	33'-0"	COMMSCOPE STYLE 4 - ETM19V2S12UB	(2) 7/8" COAX	20M	-
TOTAL		(3) ANDREW - DBXNH-6565B-A2M			(3) COMMSCOPE STYLE 4 - ETM19V2S12UB		(6) 7/8" COAX		-	

NEW ANTENNA SCHEDULE											
POSITION		ANTENNA			ANTENNA AZIMUTH	RAD CENTER	TMA/RRU	CABLE TYPE	CABLE LENGTH	JUMPERS	
		TECH	MODEL	SIZE							
ALPHA SECTOR	A1	L700 L600 N600 L2100 L1900 U1900 G1900	RFS - APXVAALL24_43-U-NA20 (OCTO)	95.9"	65°	33'-0"	(1) RADIO 4480 B71+B85 (1) RADIO 4460 B25+B66	(1) HCS 6X24	20M	(18) FIBER	
	A2	L2500 N2500	ERICSSON - AIR6449 B41	33.1"			-				
BETA SECTOR	B1	L700 L600 N600 L2100 L1900 U1900 G1900	RFS - APXVAALL24_43-U-NA20 (OCTO)	95.9"	185°	33'-0"	(1) RADIO 4480 B71+B85 (1) RADIO 4460 B25+B66	(1) HCS 6X24	20M	(18) FIBER	
	B2	L2500 N2500	ERICSSON - AIR6449 B41	33.1"			-				
GAMMA SECTOR	C1	L700 L600 N600 L2100 L1900 U1900 G1900	RFS - APXVAALL24_43-U-NA20 (OCTO)	95.9"	305°	33'-0"	(1) RADIO 4480 B71+B85 (1) RADIO 4460 B25+B66	(1) HCS 6X24	20M	(18) FIBER	
	C2	L2500 N2500	ERICSSON - AIR6449 B41	33.1"			-				
TOTAL		(3) RFS - APXVAALL24_43-U-NA20 (OCTO) UKNOWN (3) ERICSSON - AIR6449 B41					(3) RADIO 4480 B71+B85 (3) RADIO 4460 B25+B66		(3) HCS 6X24		(54) FIBER

NOTE:
 1. DO NOT USE RFDS COAX/CAB/E/FIBER LENGTHS FOR CUT LENGTHS: ESTIMATES ONLY.
 2. CONFIRM THAT THE GENERAL CONTRACTOR IS USING LATEST VERSION OF RFDS



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SHEET TITLE
 ANTENNA SCHEDULES

SHEET NUMBER
RF-1

Section 5 - RAN Equipment			
Existing RAN Equipment			
Template: 705F			
Enclosure	1	2	3
Enclosure Type	RBS 6201 ODE	RBS 6101	PTS 8003
Baseband	DUW30 BB 6630 (U1900) L700 L2100 L700		
Multiplexer		XMU	
Radio	RUS01 B2 (x 3) U1900	RUS01 B4 (x 5) L2100	RUS01 B12 (x 6) L700

Proposed RAN Equipment			
Template: 67ESA98E ODE+6160			
Enclosure	1	2	3
Enclosure Type	RBS 6201 ODE	Enclosure 6160	(B160)
Baseband	DUW30 BB 6648 (U1900) L700 L800 N2500	BB 6648 L2500 N2500	
Hybrid Cable System	Ericsson Hybrid Trunk 6/24 4AWG 20m (x2)	PSU 4813 Ericsson Hybrid Trunk 6/24 4AWG 20m	
Transport System		CSR DRE V2 (Gen2)	

RAN Scope of Work:

*Anchor SOW:
 Remove unused equipment
 1. Add (1) BBS648 for L700/L800/N2500
 2. Add (1) B160 and (1) B160
 3. Add (3) B24 HCS
 4. Add (1) BBS648 for L2500 & N2500
 5. Add (1) PSU4813 and (1) DRE*



Sector 1 (Proposed) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APXVALL24_43-U-NA20 (Octo)			Ericsson - AIR649 B41 (Active Antenna - Massive MIMO)		
Azimuth	85			85		
M. Tilt	0			0		
Height	32			32		
Ports	P1	P2	P3	P4	P5	P6
Active Tech.	L700 L600 N800	L700 L600 N600	L2100 L1900	L2100 L1900 U1900	L2500 N2500	L2500 N2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt	0	0	0	0	0	0
Cables	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper (x2)	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper (x2)	Fiber Jumper (x2)	Fiber Jumper (x2)
TIMAs						
Diplexers / Combiners						
Radio	Radio 4480 (B71+B85 (AI Antenna))	Radio 4480 (B71+B85 (AI Antenna))	Radio 4480 (B25+B66 (AI Antenna))	Radio 4480 (B25+B66 (AI Antenna))		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:	Anchor Project ABL SOW : Replace Andrew antenna with a B Octo Add (1) AIR649 Add (1) 44480 RRU Add (1) 44180 RRU					

Sector 2 (Proposed) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APXVALL24_43-U-NA20 (Octo)			Ericsson - AIR649 B41 (Active Antenna - Massive MIMO)		
Azimuth	185			185		
M. Tilt	0			0		
Height	32			32		
Ports	P1	P2	P3	P4	P5	P6
Active Tech.	L700 L600 N800	L700 L600 N800	L2100 L1900	L2100 U1900 L1900	L2500 N2500	L2500 N2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt	0	0	0	0	0	0
Cables	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper (x2)	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper (x2)	Fiber Jumper (x2)	Fiber Jumper (x2)
TIMAs						
Diplexers / Combiners						
Radio	Radio 4480 (B71+B85 (AI Antenna))	Radio 4480 (B71+B85 (AI Antenna))	Radio 4480 (B25+B66 (AI Antenna))	Radio 4480 (B25+B66 (AI Antenna))		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:	Anchor Project ABL SOW : Replace Andrew antenna with a B Octo Add (1) AIR649 Add (1) 44480 RRU Add (1) 44180 RRU					

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

Sector 3 (Proposed) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APXVALL24_43-U-NA20 (Octo)			Ericsson - AIR649 B41 (Active Antenna - Massive MIMO)		
Azimuth	300			300		
M. Tilt	0			0		
Height	32			32		
Ports	P1	P2	P3	P4	P5	P6
Active Tech.	L700 L600 N800	L700 L600 N600	L2100 L1900	L2100 U1900 L1900	L2500 N2500	L2500 N2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt	0	0	0	0	0	0
Cables	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper (x2)	JUMPER 10 FT SUREFLEX 4.3-10 TO 4.3-10 (x2) Fiber Jumper (x2)	Fiber Jumper (x2)	Fiber Jumper (x2)
TIMAs						
Diplexers / Combiners						
Radio	Radio 4480 (B71+B85 (AI Antenna))	Radio 4480 (B71+B85 (AI Antenna))	Radio 4480 (B25+B66 (AI Antenna))	Radio 4480 (B25+B66 (AI Antenna))		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:	Anchor Project ABL SOW : Replace Andrew antenna with a B Octo Add (1) AIR649 Add (1) 44480 RRU Add (1) 44180 RRU					

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

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 CHECKED BY: VB

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SHEET TITLE
 RFDS INFORMATION

SHEET NUMBER
RF-2

KEY NOTES

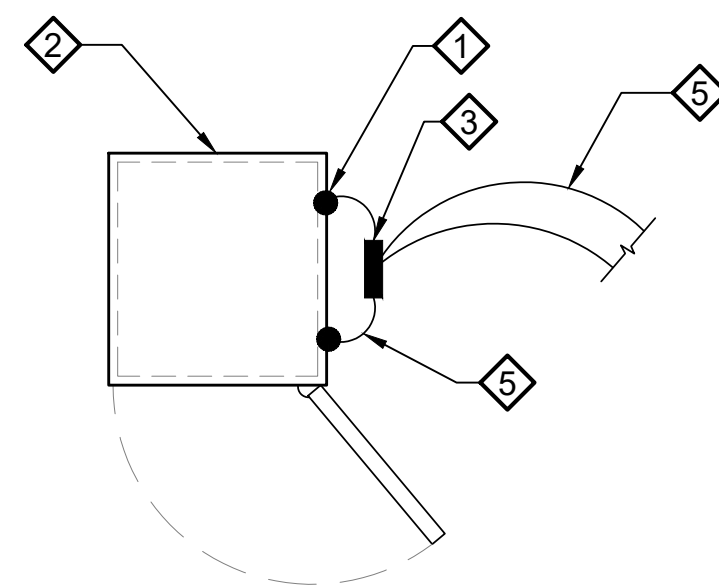
- 1 MECHANICAL CONNECTION
- 2 NEW T-MOBILE EQUIPMENT CABINET
- 3 MASTER GROUND BUS BAR AT EQUIPMENT (DETAIL 7/G-2) (CONTRACTOR TO FIELD VERIFY LOCATION)
- 4 ANTENNA GROUND BUS BAR NEAR ANTENNAS (CONTRACTOR TO FIELD VERIFY LOCATION)
- 5 (2) #2 BARE TINNED COPPER WIRES FROM NEW CABINET TO NEW MASTER GROUND BAR
- 6 AWG 2 INSULATED COPPER GROUND WIRE TO GROUND RING.
- 7 AWG 6 INSULATED COPPER GROUND WIRE FROM ANTENNA GROUND KIT TO ANTENNA BUS BAR (TYP.)
- 8 AWG 2 INSULATED COPPER GROUND FROM RRU, PIPE MOUNT TO ANTENNA BUS BAR
- 9 AWG 2 INSULATED COPPER GROUND WIRE CONNECTED TO MASTER GROUND BUS BAR.
- 10 AWG 2 TO BUILDING STEEL OR (E) BUILDING SERVICE GROUND
- 11 COPPER CLAD GROUND ROD SEE DETAIL 8, G-2
- 12 GROUND TEST WELL SEE DETAIL 6, G-2

LEGEND

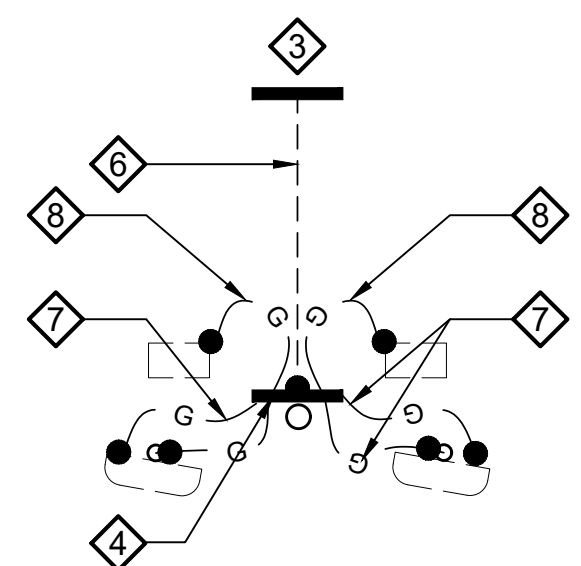
- MECHANICAL CONNECTION
- EXOTHERMIC WELD (CADWELD/THERMOWELD) CONNECTION.
- G — #2 AWG INSULATED, COPPER WIRE (UNLESS OTHERWISE SPECIFIED).

GENERAL NOTES:

1. PLAN DRAWINGS SHOWN HEREIN ARE DIAGRAMMATIC AND DO NOT NECESSARILY DEPICT THE EXACT EQUIPMENT QUANTITIES, LOCATION, LAYOUT AND CONFIGURATION. REFER TO ARCHITECTURAL PLANS FOR EXACT EQUIPMENT LOCATION, LAYOUT AND CONFIGURATION.
2. PLAN DRAWINGS SHOWN HEREIN DO NOT NECESSARILY DEPICT ELECTRICAL REQUIREMENTS OF INDIVIDUAL EQUIPMENT AND DEVICES SUCH AS THE EQUIPMENT GROUNDING REQUIREMENTS, POWER REQUIREMENTS AND TELCO RACEWAY REQUIREMENTS.
3. REFER TO A-1 FOR THE LOCATION OF POWER AND TELCO POINT OF CONNECTIONS, THE DISTANCE OF THE RUN AND THE SUGGESTED CONDUIT ROUTING. FIELD VERIFY EXISTING CONDITIONS SPECIFICALLY FOR CONDUIT ROUTING PRIOR TO BID.



EQUIPMENT GROUNDING



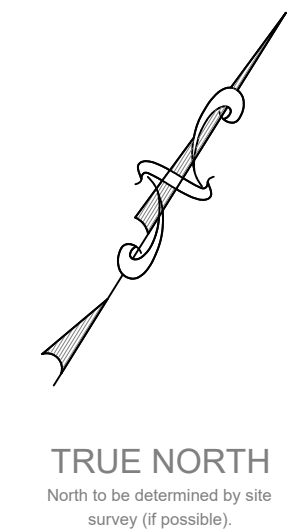
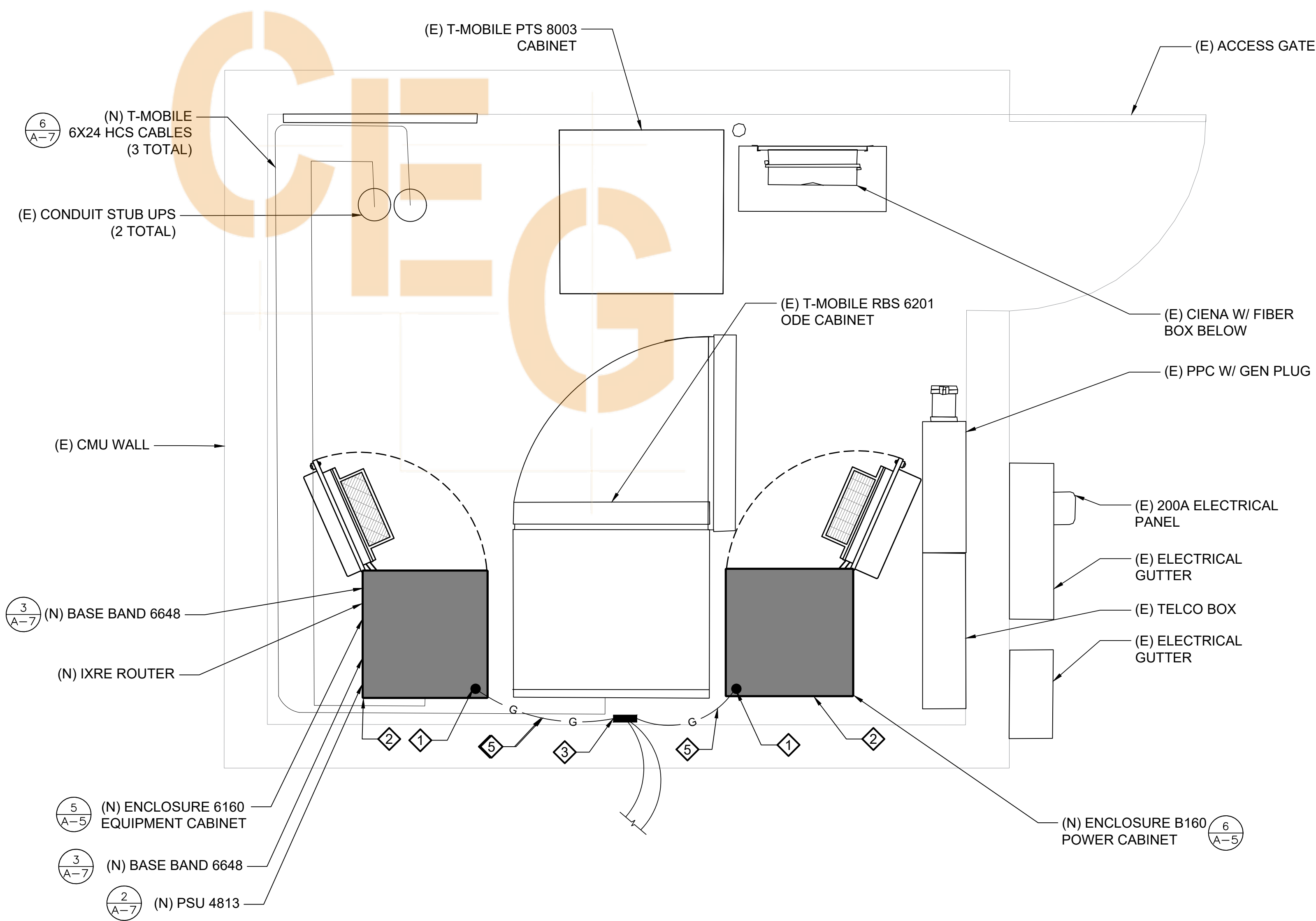
TYP. ANTENNA GROUNDING

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
2. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #2 GROUND WIRES AND CONNECT TO SURFACE MOUNTED GROUND BUS BARS AS SHOWN. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS USING MANUFACTURER'S PRACTICES. ALL UNDERGROUND WATER PIPES, METAL CONDUITS AND GROUNDS THAT ARE A PART OF THIS SYSTEM SHALL BE BONDED TOGETHER.
3. ALL GROUND CONNECTIONS SHALL BE #2 AWG U.N.O. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE SOLID TIN COATED OR STRANDED GREEN INSULATED WIRE.
4. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE, 5 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE T-MOBILE REPRESENTATIVE.
5. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
6. BARE GROUNDING CONDUCTOR SHALL BE HARD DRAWN TINNED COPPER SIZES AS NOTED ON PLAN.
7. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED MINIMUM 12" BELOW GRADE/FROST-LINE IN TRENCH, U.N.O., AND BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT.
8. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.

9. ALL SUPPORT STRUCTURES, CABLE CHANNEL WAYS OR WIRE GUIDES SHALL BE BONDED TO GROUND SYSTEM AT A POINT NEAREST THE MAIN GROUNDING BUS "MGB" (OR DIRECTLY TO GROUND-RING).
10. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
 - a. BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR INDOOR USE OR AS APPROVED BY T-MOBILE PROJECT MANAGER.
 - b. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
 - c. TWO (2) HOLE TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS (BUS BAR CONNECTIONS).
11. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES).
12. PRIOR TO ANY LUG-BUSSBAR CONNECTIONS, THE BUS BAR SHALL BE CLEANED BY USE OF "SCOTCH-BRITE" OR PLAIN STEEL WOOL AS TO REMOVE ALL SURFACE OXIDATION AND CONTAMINANTS. A COATING OF "NO-OX-ID" SHALL BE APPLIED TO THE CONNECTION SURFACES.
13. ALL CONNECTION HARDWARE SHALL BE TYPE 316 SS (NOT ATTRACTED TO MAGNETS).
14. THE GROUND RING SHALL BE INSTALLED 24" MINIMUM BEYOND ANY BUILDING DRIP LINE.
15. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS, GROUND RING IF SERVICE IS WITHIN THE RADIO EQUIPMENT LOCATION, BUILDING STEEL IF APPLICABLE. COLD WATER CONNECTIONS MUST BE MADE ON THE STREET SIDE OF MAIN SHUT-OFF VALVE.

GROUNDING NOTES 2

NOTE: THIS PLAN IS NOT INTENDED TO SHOW ALL EXISTING GROUNDING. ONLY PROPOSED GROUNDING AND MAIN GROUND BARS ARE DEPICTED



DRAWN BY: SA
CHECKED BY: VB

REVISIONS			
NO.	DATE	DESCRIPTION	INITIAL
A	09/08/21	ISSUED FOR 90% CD REVIEW	SA

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**VZ-CHRISTIAN
COMM. CHURCH
SF70659M**

6966 ALMADEN EXPRESSWAY
SAN JOSE, CA 95120

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SHEET TITLE
GROUNDING SCHEMATIC & NOTES

SHEET NUMBER
G-1

GROUNDING SCHEMATIC 3

22"x34" SCALE: 3/4" = 1'-0"
11"x17" SCALE: 3/8" = 1'-0"
1" = 6" 0"

GROUNDING PLAN 1

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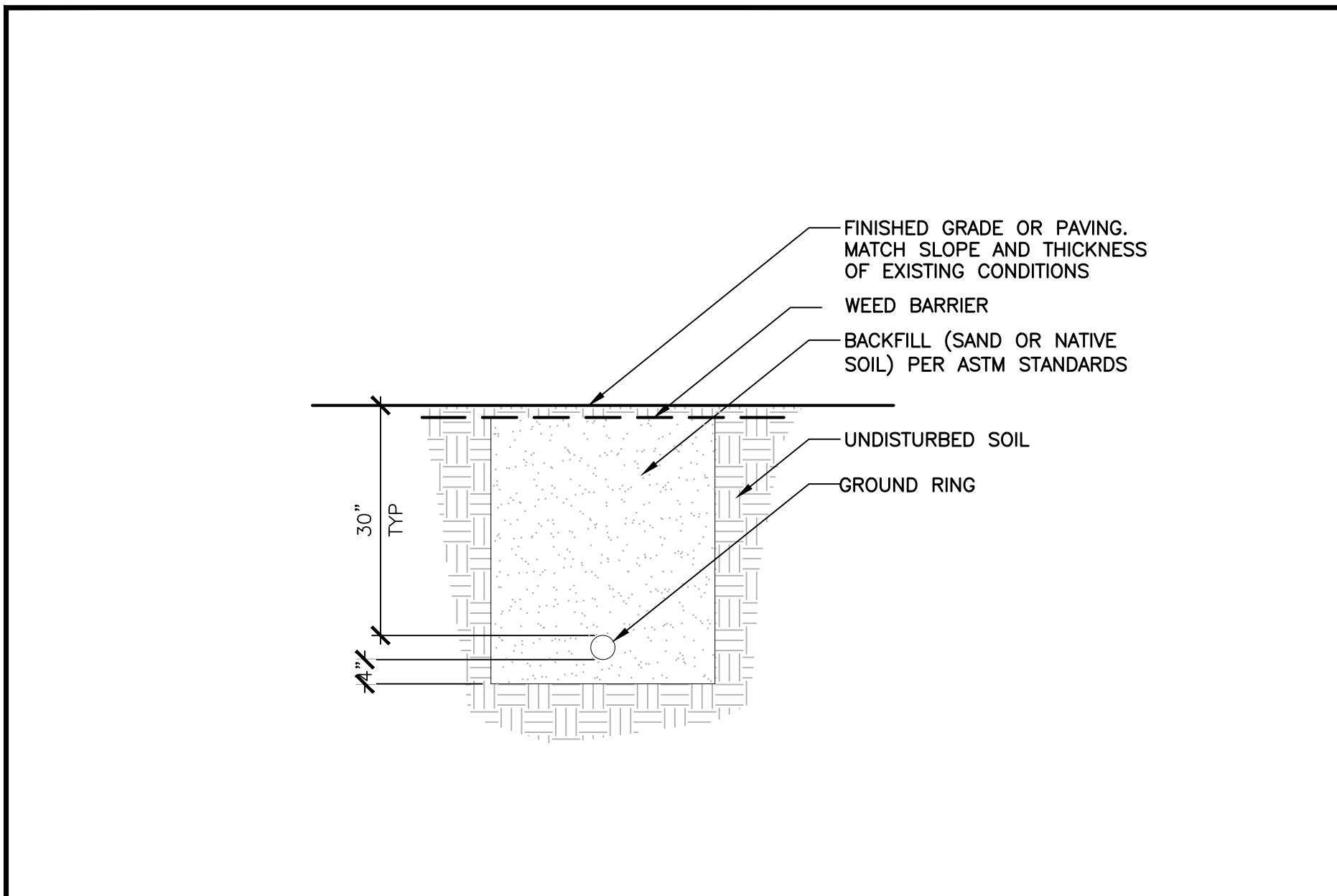
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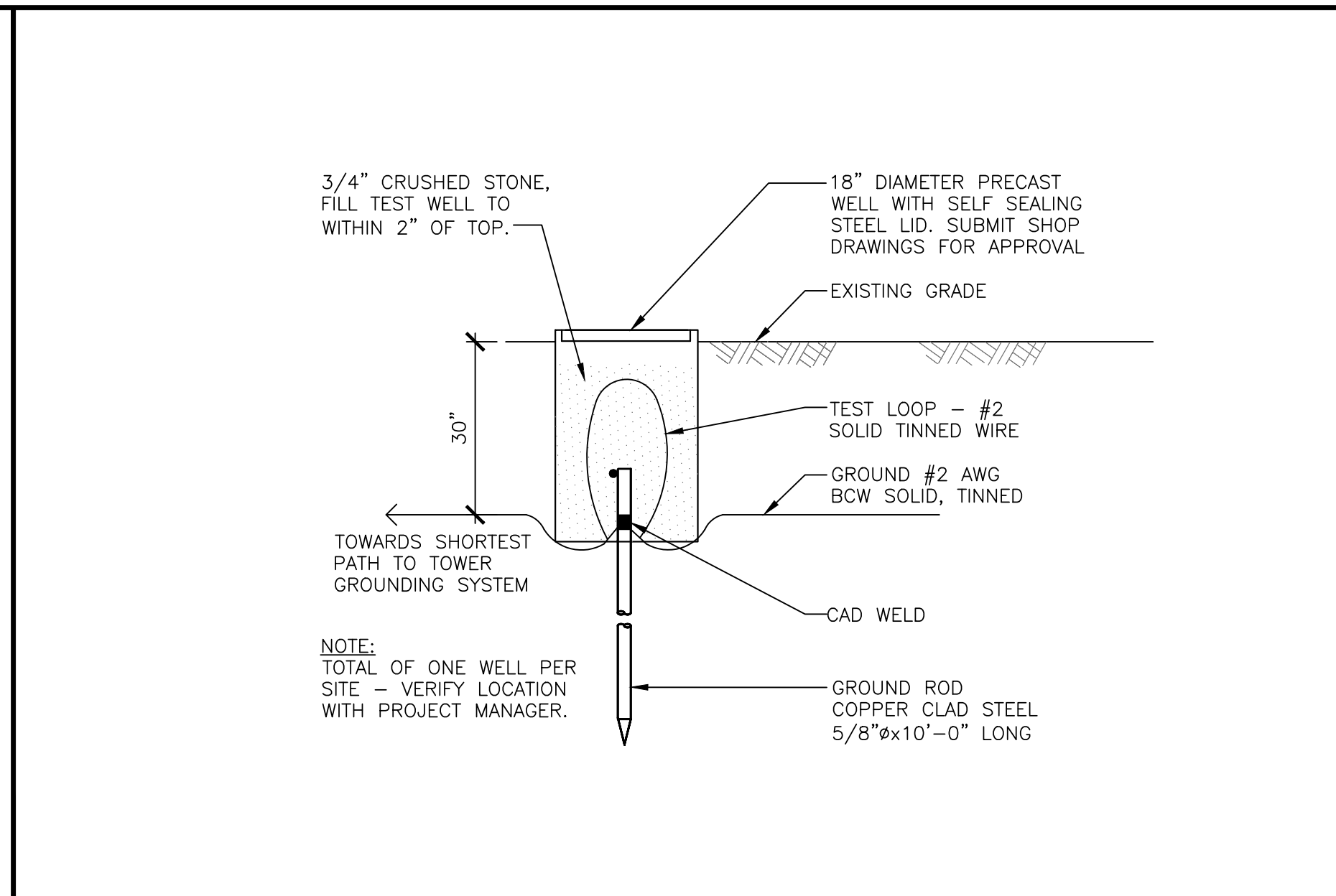
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SHEET TITLE
 GROUNDING DETAILS

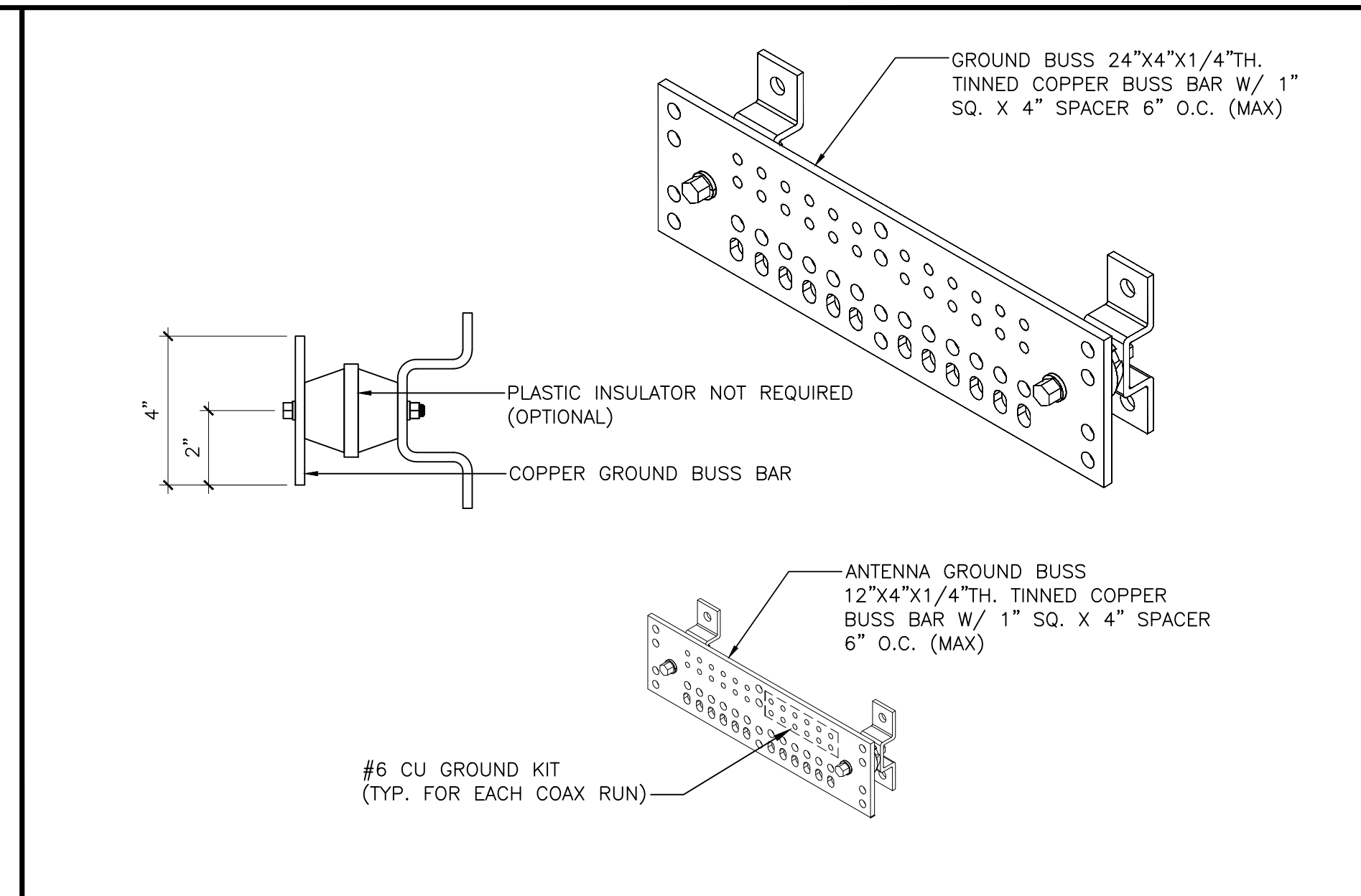
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G-2



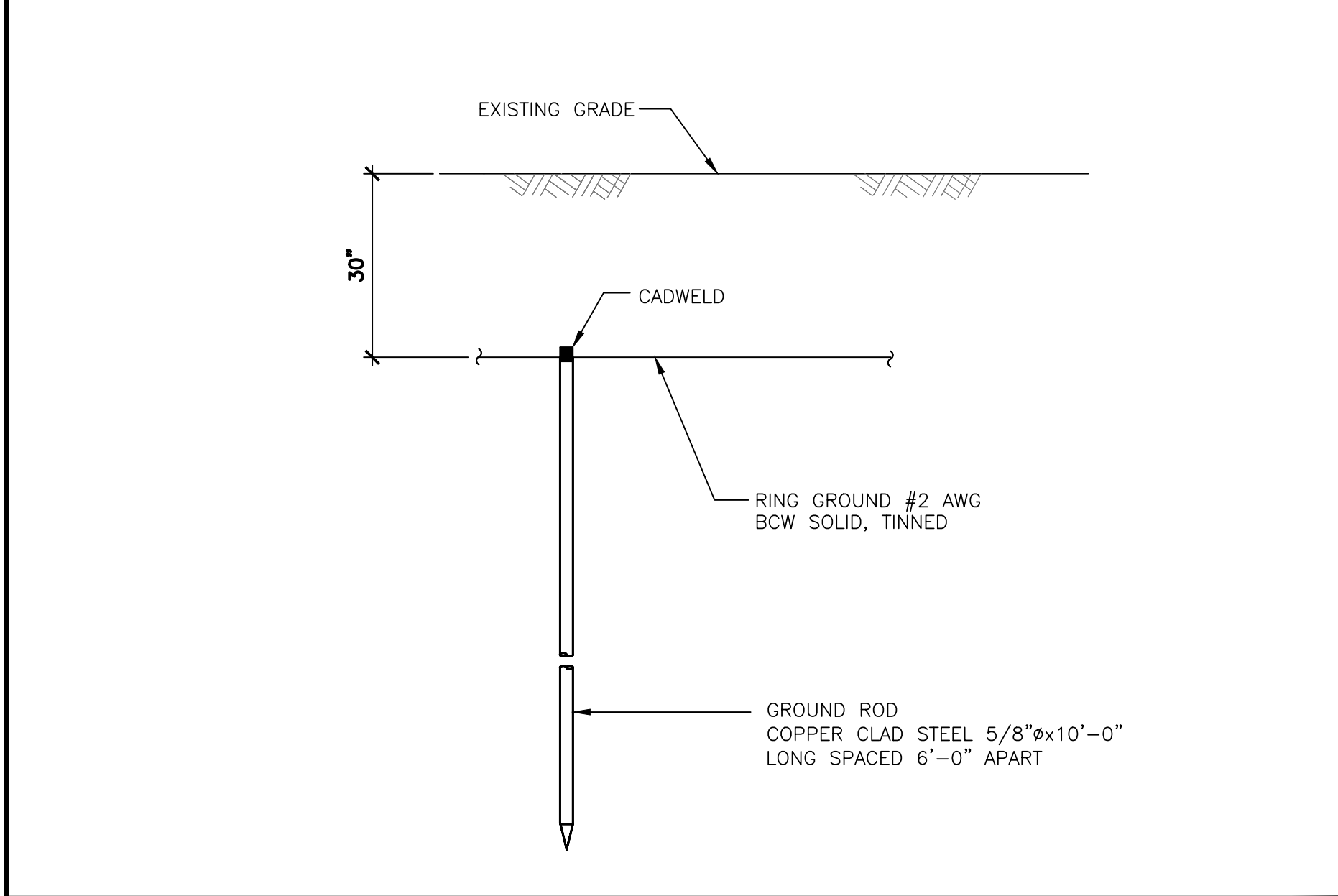
N.T.S. POWER/TELCO TRENCH DETAIL 9



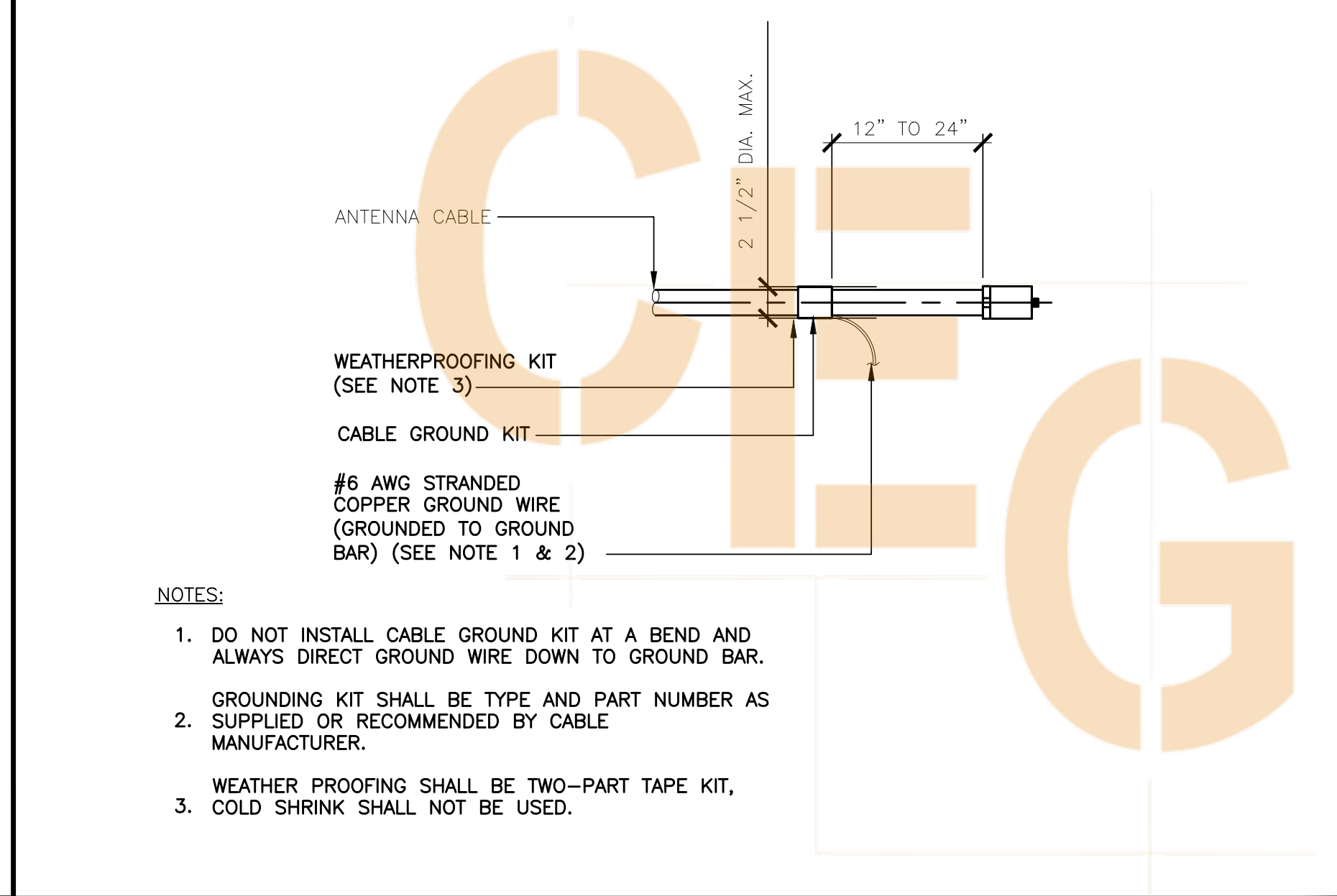
N.T.S. TEST WELL DETAIL 6



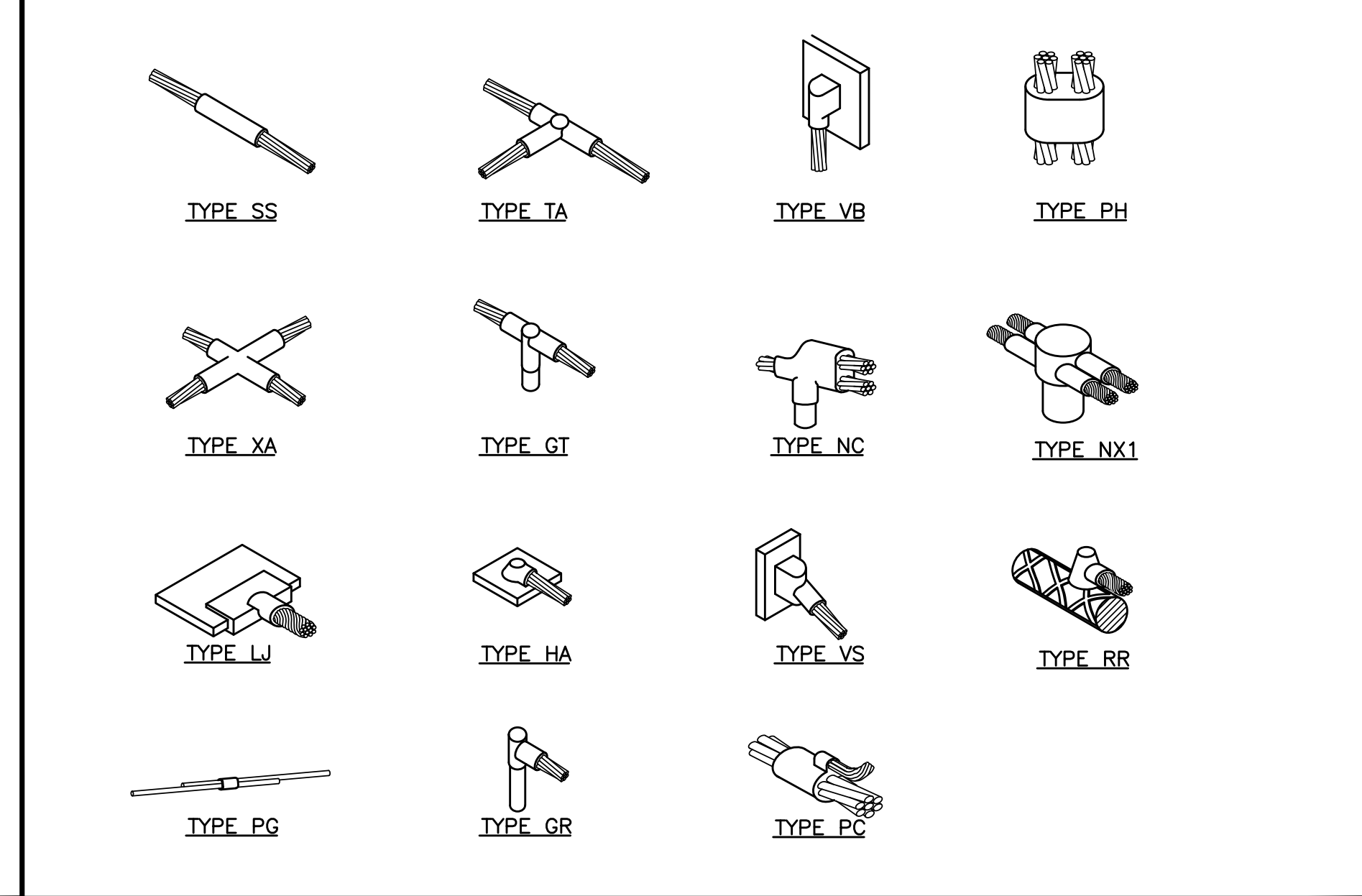
N.T.S. GROUND BAR DETAIL 3



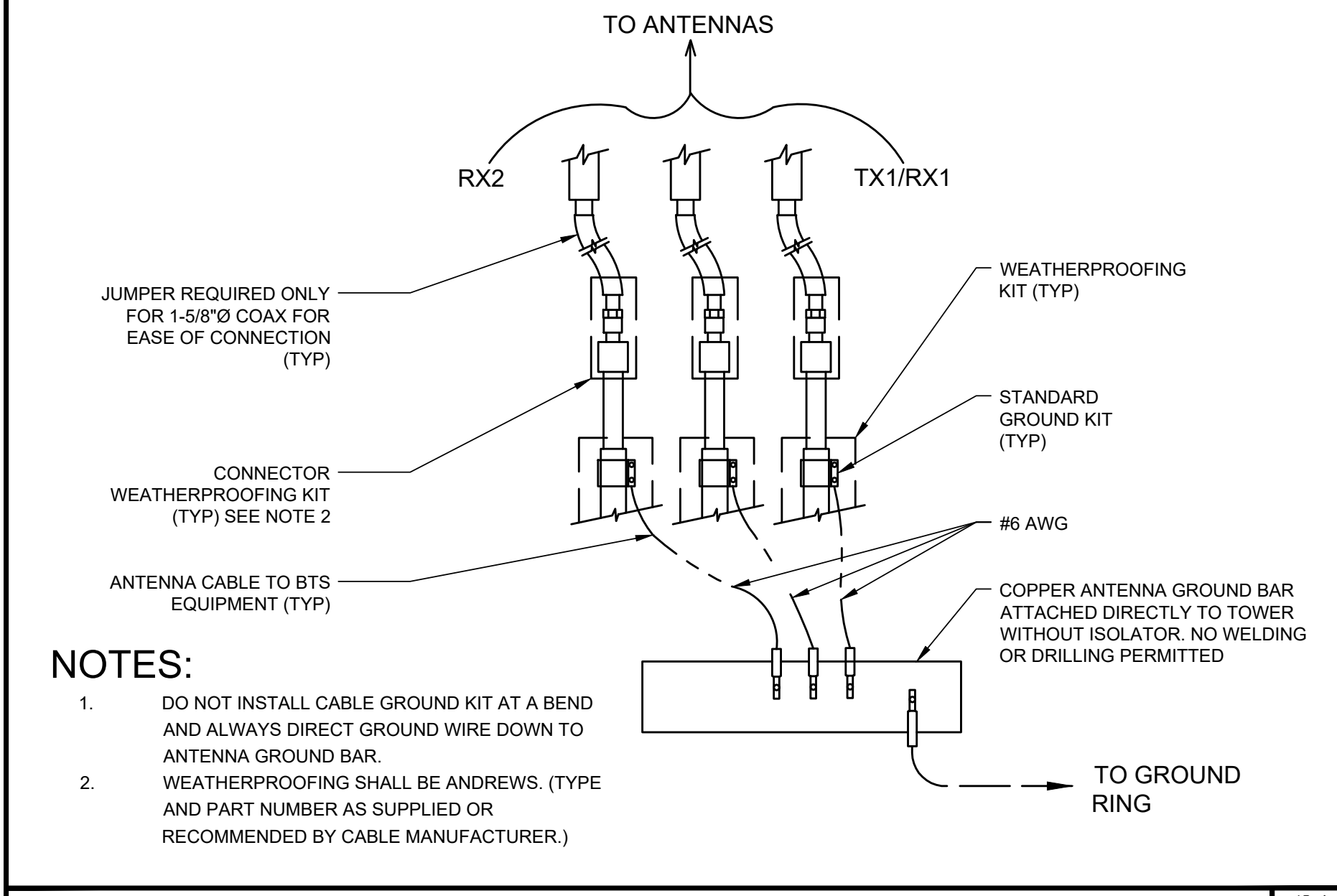
N.T.S. GROUND ROD DETAIL 8



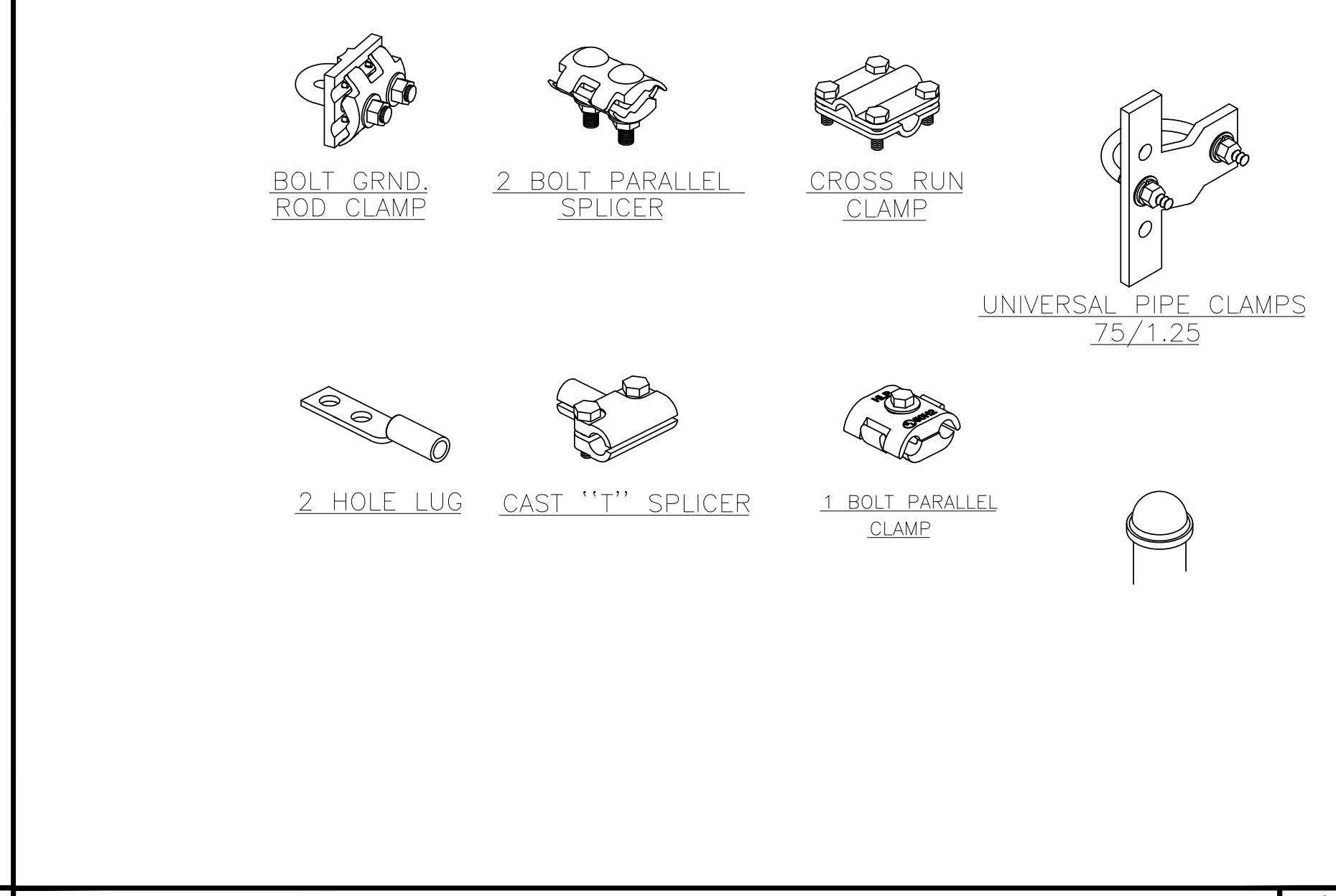
N.T.S. CABLE GROUND KIT DETAIL 5



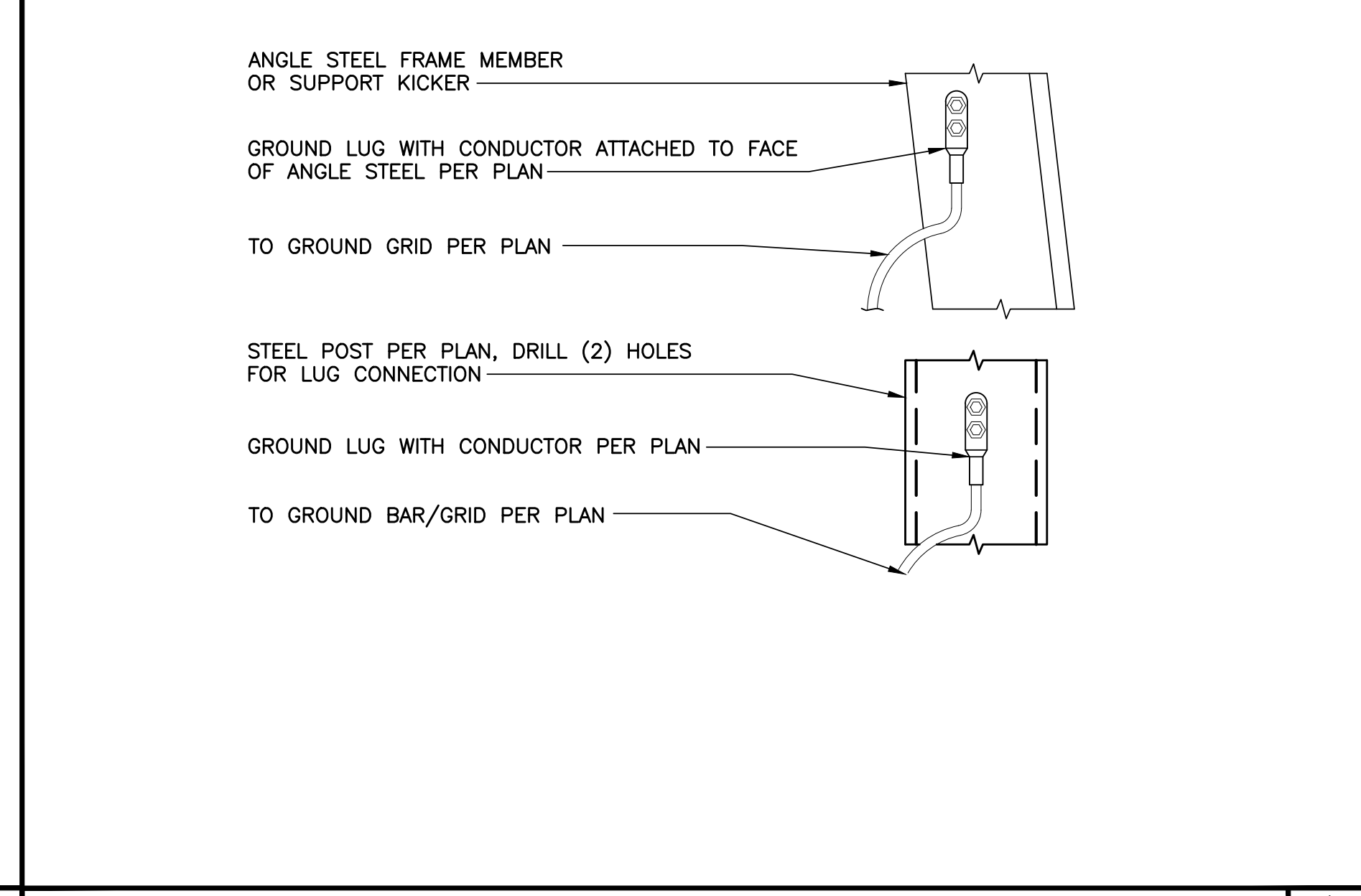
N.T.S. CADWELD CONNECTION DETAIL 2



N.T.S. CABLE GROUND SCHEMATIC 7



N.T.S. GROUND CLAMP DETAIL 4



N.T.S. FRAME GROUNDING DETAIL 1

