



T-MOBILE SITE NUMBER:

SL07007A

T-MOBILE SITE NAME:

SL07007A

CCI SITE#:

845638

SITE ADDRESS:

745 N WARM SPRINGS ROAD
SALT LAKE CITY, UT 84116

APPROVAL SIGNATURE BLOCK

THE FOLLOWING PARTIES HAVE REVIEWED THESE DOCUMENTS:

SITE ACQUISITION SPECIALIST:	APPROVED: <input type="checkbox"/> REJECTED: <input type="checkbox"/>	DATE:
RF ENGINEER:	APPROVED: <input type="checkbox"/> REJECTED: <input type="checkbox"/>	DATE:
CONSTRUCTION MANAGER:	APPROVED: <input type="checkbox"/> REJECTED: <input type="checkbox"/>	DATE:
OPERATIONS:	APPROVED: <input type="checkbox"/> REJECTED: <input type="checkbox"/>	DATE:
PROJECT MANAGER:	APPROVED: <input type="checkbox"/> REJECTED: <input type="checkbox"/>	DATE:

DRAWINGS ARE NO LONGER TO BE "APPROVED WITH COMMENTS" - IF YOU HAVE ANY REDLINES TO THESE DRAWINGS THEN YOU MUST SELECT REJECTED.

T-Mobile

T-MOBILE SITE NUMBER: SL07007A **CROWN CASTLE BU #:** 845638
T-MOBILE SITE NAME: SL07007A **SITE ADDRESS:** 745 N WARM SPRINGS ROAD
SITE TYPE: MONOPOLE **COUNTY:** SALT LAKE
TOWER HEIGHT: 61.0 FT **JURISDICTION:** CITY OF SALT LAKE CITY

T-MOBILE 2018 NSD LAT: 40° 47' 6.74", LONG: -111° 54' 41.20"

T-Mobile
 12920 SE 38TH STREET
 BELLEVUE, WA 98006

CROWN CASTLE
 1505 WESTLAKE AVE N, STE 800
 SEATTLE, WA 98109

POD
 POWER OF DESIGN
 11490 BLUEGRASS PKWY
 LOUISVILLE, KY 40299
 502-437-5252

T-MOBILE SITE NUMBER:
SL07007A

BU #: 845638
ROSE PARK
 745 N WARM SPRINGS ROAD
 SALT LAKE CITY, UT 84116
 EXISTING 61.0 FT MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG
2	04-09-2019	JAS	FINAL	ELG
3	05-07-2019	JAS	FINAL	ELG
4	07-17-2019	JAS	FINAL	ELG
5	12-22-2020	AK	FINAL	MEP
6	12/23/2020	MAJ	FINAL	MEP
7	01/05/2021	CPT	FINAL	MEP
8	01/11/2021	CPT	FINAL	MEP

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	ROSE PARK
SITE ADDRESS:	745 N WARM SPRINGS ROAD SALT LAKE CITY, UT 84116
COUNTY:	SALT LAKE
MAP/PARCEL #:	08-26-479-004-000
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	40° 47' 6.74"/40.7852300000°
LONGITUDE:	-111° 54' 41.20"/-111.9114900000°
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	4,225 FT
CURRENT ZONING:	----
JURISDICTION:	CITY OF SALT LAKE CITY
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	VB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	MOWER LEASING COMPANY LLC 3310 E TWIN PEAKS DRIVE LAYTON, UT 84040
TOWER OWNER:	CROWN CASTLE, USA 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	T-MOBILE 12920 SE 38TH STREET BELLEVUE, WA 98006
ELECTRIC PROVIDER:	PACIFICORP (888) 221-7070
TELCO PROVIDER:	AT&T MOBILITY (800) 331-0500

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ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR FULL SIZE. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

LOCATION MAP

DRIVING DIRECTIONS FROM T-MOBILE LOCAL OFFICE (121 W. ELECTION RD. DRAPER, UT 84020): HEAD WEST TOWARD S ELECTION RD TURN RIGHT TOWARD S ELECTION RD TURN LEFT ONTO S ELECTION RD TURN RIGHT ONTO LONE PEAK PKWY TURN RIGHT ONTO UT-175/W 11400 S USE THE LEFT 2 LANES TO TAKE THE INTERSTATE 15 N RAMP MERGE ONTO I-15 N TAKE EXIT 309 TOWARD 600 N. E MERGE ONTO 600 N TURN RIGHT ONTO N 400 W TURN RIGHT AT THE 2ND CROSS STREET ONTO 400 N TURN RIGHT ONTO N 600 W N 600 W TURNS RIGHT AND BECOMES I-15 FRONTAGE RD/WARM SPRINGS RD CONTINUE TO FOLLOW WARM SPRINGS RD DESTINATION WILL BE ON THE RIGHT

PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS TO PROPOSE AN ANTENNA MODIFICATION ON AN EXISTING WIRELESS SITE.

TOWER SCOPE OF WORK:

- INSTALL (9) PANEL ANTENNAS
- INSTALL (9) RRU's
- INSTALL (3) HYBRID CABLE LINES
- INSTALL (3) NEW T-ARM MOUNTS
- INSTALL (1) 20' TOWER EXTENSION

GROUND SCOPE OF WORK:

- INSTALLATION OF NEW 11'x13' CONCRETE EQUIPMENT PAD & GENERATOR WITHIN A NEW 11'x13' LEASE AREA WITHIN THE EXISTING FENCED COMPOUND
- INSTALL NEW 10' WIDE ROLLING GATE
- INSTALL (1) 6160 SSC CABINET
- INSTALL (1) B160 BATTERY CABINET
- INSTALL (1) DUG 20
- INSTALL (4) BB 6630
- INSTALL (1) RBS6601
- INSTALL (1) VOLTAGE BOOSTER (PSU 4813)

DESIGN PACKAGE BASED ON THE RFDS
 REVISION: 1
 DATE: 11/2/2020

DESIGN PACKAGE BASED ON THE APPLICATION
 ID: 456325
 REVISION: 0

APPLICABLE CODES/REFERENCE DOCUMENTS

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

CODE TYPE	CODE
BUILDING	2015 IBC
MECHANICAL	2015 IMC
ELECTRICAL	2017 NEC

REFERENCE DOCUMENTS:
 STRUCTURAL ANALYSIS: B+T GROUP
 DATED NOVEMBER 05, 2018

MOUNT ANALYSIS: BY OTHERS

811

CALL UTAH ONE CALL
 (800) 662-4111
 CALL 3 WORKING DAYS
 BEFORE YOU DIG!

PROJECT TEAM

A&E FIRM: POD
 11490 BLUEGRASS PARKWAY
 LOUISVILLE, KY 40299
 (502) 437-5252

CROWN CASTLE CONTACTS: 1505 WESTLAKE AVE N, STE 800
 SEATTLE, WA 98109
 KELSEY PUHALLA - PROJECT MANAGER
 (206) 336-2874

JEFFERY LEE - CONSTRUCTION MANAGER
 (801) 347-6768

T-MOBILE CONTACTS: MACKENZIE KEYS -
 MACKENZIE.KEYS2@T-MOBILE.COM



PROFESSIONAL ENGINEER
 No. 9100922002
 MARK E. PATTERSON
 STATE OF UTAH
 01/11/2021

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: T-1 **REVISION:** 8

CROWN CASTLE SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING 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 CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.
3. ALL SITE WORK TO COMPLY WITH QAS-STD-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE TOWER SITE" AND LATEST VERSION OF TIA 1019 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
4. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS.
5. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
6. ALL EXISTING 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 CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
7. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
9. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
11. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE PROJECT SPECIFICATIONS.
12. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
13. NOTICE TO PROCEED- NO WORK TO COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF A PURCHASE ORDER.
14. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/TIA 1019 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-1019 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.

ABBREVIATIONS AND SYMBOLS:

ABBREVIATIONS:	SYMBOLS:
AGL ABOVE GRADE LEVEL	SOLID GROUND BUS BAR
BTS BASE TRANSCIEVER STATION	
(E) EXISTING	SOLID NEUTRAL BUS BAR
MIN. MINIMUM	
REG REFERENCE	SUPPLEMENTAL GROUND CONDUCTOR
RF RADIO FREQUENCY	
T.B.D. TO BE DETERMINED	2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
T.B.R. TO BE RESOLVED	
TYP TYPICAL	SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
REQ REQUIRED	
EGR EQUIPMENT GROUND RING	CHEMICAL GROUND ROD
AWG AMERICAN WIRE GAUGE	TEST WELL
MGB MASTER GROUND BAR	
EG EQUIPMENT GROUND	DISCONNECT SWITCH
BCW BARE COPPER WIRE	METER
SIAD SMART INTEGRATED ACCESS DEVICE	
GEN GENERATOR	EXOTHERMIC WELD (CADWELD) (UNLESS OTHERWISE NOTED)
IGR INTERIOR GROUND RING (HALO)	MECHANICAL CONNECTION
RBS RADIO BASE STATION	GROUNDING WIRE

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR- GENERAL CONTRACTOR (CONSTRUCTION)
 SUBCONTRACTOR- T-MOBILE
 CARRIER- CROWN CASTLE
 TOWER OWNER- ORIGINAL EQUIPMENT MANUFACTURER
 OEM-
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR AND CROWN CASTLE.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWINGS.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC. HILTI EPOXY ANCHORS ARE REQUIRED BY CROWN CASTLE.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
5. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
6. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E. HOTS), GROUNDING AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PLASTIC TAPE PER COLOR SCHEDULE. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E. PANEL BOARD AND CIRCUIT ID'S).
8. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
10. POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET & DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET & DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION WITH OUTER JACKET LISTED OR LABELED FOR THE LOCATION USED UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E. RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT) OR RIGID NONMETALLIC TUBING (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOW/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
21. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER).
22. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL; SHALL MEET OR EXCEED UL 50 AND RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3R (OR BETTER) OUTDOORS.
24. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
25. NONMETAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
26. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
27. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
28. INSTALL PLASTIC LABEL ON THE METER CENTER TO SHOW "T-MOBILE".
29. ALL CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

GREENFIELD GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDING AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUIT TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 AWG SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 FT. OF MAIN GROUND WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS, WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUND THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 TINNED SOLID IN 3/4" LIQUID TIGHT CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE LIQUID TIGHT CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).

NEC INSULATOR COLOR CODE

DESCRIPTION	PHASE/CODE LETTER	WIRE COLOR
240/120 1ø	LEG 1	BLACK
	LEG 2	RED
AC NEUTRAL	N	WHITE
GROUND (ECG)	G	GREEN
VCD POS	+	*RED-POLARITY MARK AT TERMINATION
VCD NEG	-	*BLACK-POLARITY MARK AT TERMINATION
240V OR 208V, 3ø	PHASE A	BLACK
	PHASE B	RED (ORG. IF HI LEG)
	PHASE C	BLUE
480V, 3ø	PHASE A	BROWN
	PHASE B	ORANGE
	PHASE C	YELLOW

*SEE NEC 210.5(C)(1) AND (2)



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502-437-5252

T-MOBILE SITE NUMBER:
SL07007A

BU #: 845638
ROSE PARK

745 N WARM SPRINGS ROAD
SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
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6	12/23/2020	MAJ	FINAL	MEP
7	01/05/2021	CPT	FINAL	MEP
8	01/11/2021	CPT	FINAL	MEP



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A. GENERAL REQUIREMENTS

THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKMEN WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.

THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF FINISHED STRUCTURE ONLY.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED— CONTACT ENGINEER.

WHERE THE PROJECT INVOLVES THE STRUCTURAL SUPPORT OF NEW CONSTRUCTION BY EXISTING STRUCTURES OR REQUIRES THE PLACEMENT OF NEW STRUCTURES IN CLOSE PROXIMITY TO EXISTING STRUCTURES SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND PLACEMENT OF STRUCTURAL ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE DRAWINGS PRIOR TO THE FABRICATION OF ANY NEW STRUCTURE. IF IT IS DETERMINED THAT THERE DISCREPANCIES AND/OR CONFLICTS WITH THE DRAWINGS, THE ENGINEER IS TO BE NOTIFIED AS SOON AS POSSIBLE.

B. BASIS FOR DESIGN

BUILDING RISK CATEGORY.....II

ENGINEERING DESIGN

SEISMIC LOAD
 SITE CLASSIFICATION.....D
 SEISMIC IMPORTANCE FACTOR (ASCE 7 / TABLE 1.5-2).....1.0
 SEISMIC DESIGN CATEGORY.....D

MAPPED SPECTRAL RESPONSE ACCELERATIONS:
 S.S.....1.407
 S1.....0.498
 SPECTRAL RESPONSE COEFFICIENTS:
 SDS.....0.938
 SD1.....0.499

WIND LOAD
 WIND SPEED (3 SECOND GUST).....115 mph
 EXPOSURE CATEGORY.....C

SNOW LOAD
 ROOF SNOW LOAD.....30 psf
 GROUND SNOW LOAD.....43 psf

FOUNDATIONS

SOIL VALUES:
 FROST DEPTH.....30"
 MINIMUM BEARING DEPTH FOOTINGS.....36"
 ALLOWABLE BEARING AT MINIMUM DEPTH (DEAD + LIVE).....1,500 psf

FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL. SLABS SHALL BEAR ON AGGREGATE BASE COURSE (ABC) FILL COMPACTED TO 98% OF MAXIMUM LABORATORY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557 (MODIFIED PROCTOR). MATERIAL SHOULD BE WITHIN 3% OF OPTIMUM MOISTURE AT TIME OF COMPACTION. NATIVE GRADE SUB-BASE, BELOW ABC FILL, SHALL BE PREPARED BY REMOVING ALL ORGANIC MATERIAL, SCARIFYING TOP 6", THEN RECOMPACTED TO 95% OF MAXIMUM LABORATORY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557 (MODIFIED PROCTOR). MATERIAL SHOULD BE WITHIN 3% OF OPTIMUM MOISTURE AT TIME OF COMPACTION.

CONCRETE

CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY AND APPROVED BY THE ENGINEER. CONCRETE EXPOSED TO FREEZE-THAW CYCLES TO CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH WATER-TO-CEMENT RATIO (W/C) AS SHOWN BELOW. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY ENGINEER. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90° F AT TIME OF PLACEMENT. MINIMUM CONCRETE STRENGTH (f'c) TO BE 3,000 PSI AT 28 DAYS UNLESS NOTED BELOW.

FOUNDATIONS (W/C ≤ 0.50).....4,000 psi
 SLABS ON GRADE (W/C ≤ 0.45).....4,500 psi

UNLESS NOTED OTHERWISE THE DESIGN STRENGTH (f'c) OF CONCRETE FOR ISOLATED FOOTINGS AND CONTINUOUS WALL FOOTINGS FOR STRUCTURES THREE-STORIES OR LESS SHALL BE 2,500 psi REGARDLESS OF THE SPECIFIED STRENGTH OF CONCRETE PLACED.

MINIMUM CONCRETE COVER REQUIREMENTS:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3"
 EXPOSED TO EARTH OR WEATHER (#5 AND SMALLER).....1-1/2"
 EXPOSED TO EARTH OR WEATHER (#6 AND LARGER).....2"
 BEAMS AND COLUMNS (TO TIES).....1-1/2"
 WALLS, SLABS, AND JOISTS (#11 AND SMALLER).....3/4"
 WALLS, SLABS, AND JOISTS (#14 AND LARGER).....1-1/2"

CONCRETE SPLICE LENGTH REQUIREMENT – SEE TABLE IN TYPICAL DETAILS

1. ALL TENSION SPLICES TO BE CLASS B TENSION SPLICES UNLESS NOTED OTHERWISE
2. BAR SPACING TO BE A MINIMUM OF 2 BAR DIAMETERS
3. STAGGER SPLICES A MINIMUM OF ONE LAP LENGTH
4. ALL SPLICE LOCATIONS SUBJECT TO APPROVAL BY THE ENGINEER

MECHANICALLY VIBRATE ALL REINFORCED CONCRETE WHEN PLACED, EXCEPT THAT, UNREINFORCED SLABS ON GRADE NEED VIBRATED ONLY AT TRENCHES, FLOOR DUCTS, TURNDOWNS, ETC. REVIBRATE TOPS OF CAISSONS 15 MINUTES AFTER PLACING CONCRETE. MAXIMUM SLUMP TO BE 4-1/2" FOR CONCRETE WITHOUT PLASTICIZER. IF PLASTICIZER IS USED, A HIGHER FINAL SLUMP MAY BE ALLOWED UPON ENGINEER'S APPROVAL. A 3/4" CHAMFER OF TOOLED EDGE SHALL BE PROVIDED AT ALL EXPOSED CONCRETE EDGES U,N,O,

ALL REINFORCING DIMENSIONS SHOWN ON DRAWINGS AS "CLEAR" SHALL BE CLEAR DIMENSIONS OF PLUS OR MINUS 1/4", TYPICAL UNLESS NOTED OTHERWISE. TOLERANCES FOR "d" DISTANCES TO BE PER SECTION 7.5.2.1 AND 7.5.2.2 OF ACI 318.

PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS. REINFORCING BAR SPACING SHOWN ON DRAWINGS ARE MAXIMUM ON CENTERS. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. DOWEL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90-DEGREE HOOKS UNLESS OTHERWISE NOTED OTHERWISE. ALL REINFORCING BARS, ANCHOR BOLTS, AND HOLDOWNS TO BE SECURELY TIED IN PLACE PRIOR TO PLACING OF CONCRETE. ALL REINFORCING SHALL BE CHAIRED TO ENSURE PROPER CLEARANCES. SUPPORT OF FOUNDATION REINFORCING MUST PROVIDE ISOLATION FROM MOISTURE/CORROSION.

STEEL REINFORCING:

NO TACK WELDING OF REINFORCING BARS IS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE BY THE ENGINEER. REINFORCING BARS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

STANDARD DEFORMED BARS #4 AND SMALLER (Fy = 40 KSI).....ASTM A615
 STANDARD DEFORMED BARS #5 AND LARGER (Fy = 60 KSI).....ASTM A615
 ALL DEFORMED BARS TO BE WELDED (Fy = 60 KSI).....ASTM A706
 WELDED WIRE FABRIC.....ASTM A185

STRUCTURAL STEEL

THESE DRAWINGS ARE NOT MEANT TO BE SHOP DRAWINGS TO BE FABRICATED FROM; THEY ARE TO COMMUNICATE THE DESIGN AND INTENT OF THE ENGINEER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EMPLOY AN APPROVED STEEL FABRICATOR AND/OR STEEL DETAILER TO PROVIDE A CORRECTLY FABRICATED STEEL PACKAGE THAT MATCHES THE STRUCTURAL DRAWINGS PROVIDED.

ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS UNLESS NOTED OTHERWISE:

STRUCTURAL SHAPE	ASTM	Fy (KSI)	Fu (KSI)
W (EXISTING)	A36	36	36
W (NEW)	A3992	50	65
M, S, C, MC, L	A36	36	58
HP	A572	50	65
PIPE	A53 GRADE B	35	60
HSS ROUND	A500 GRADE B	35	60
HSS RECTANGULAR	A500 GRADE B	46	58
PLATES & BARS	A36	36	58
HIGH-STRENGTH PLATES & BAR	A588	50	70

ALL EXPOSED STEEL SHALL BE GALVANIZED. GALVANIZING SHALL CONFORM TO THE FOLLOWING ASTM REQUIREMENTS:

HOT DIPPED GALVANIZING OF STRUCTURAL MEMBERS.....A123/123M
 HOT DIPPED GALVANIZING OF HARDWARE.....A153/A153M
 HOT DIPPED GALVANIZING OF STEEL SHEETS.....A653/A653M
 MECHANICAL GALVANIZING.....B695

WELDING

ALL WELDING SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES. CERTIFICATES SHALL BE THOSE ISSUED BY AN ACCEPTED TESTING AGENCY.

ALL WELDING SHALL BE DONE USING E70 SERIES LOW HYDROGEN RODS UNLESS NOTED OTHERWISE. FOR GRADE 60 REINFORCING BARS, USE E90 SERIES.

THESE DRAWINGS DO NOT DISTINGUISH BETWEEN SHOP AND FIELD WELDS; THE CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS AND FIELD WELDS SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW.

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POD
 POWER OF DESIGN
 11490 BLUEGRASS PKWY
 LOUISVILLE, KY 40299
 502-437-5252

T-MOBILE SITE NUMBER:
SL07007A


BU #: 845638
ROSE PARK

745 N WARM SPRINGS ROAD
 SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

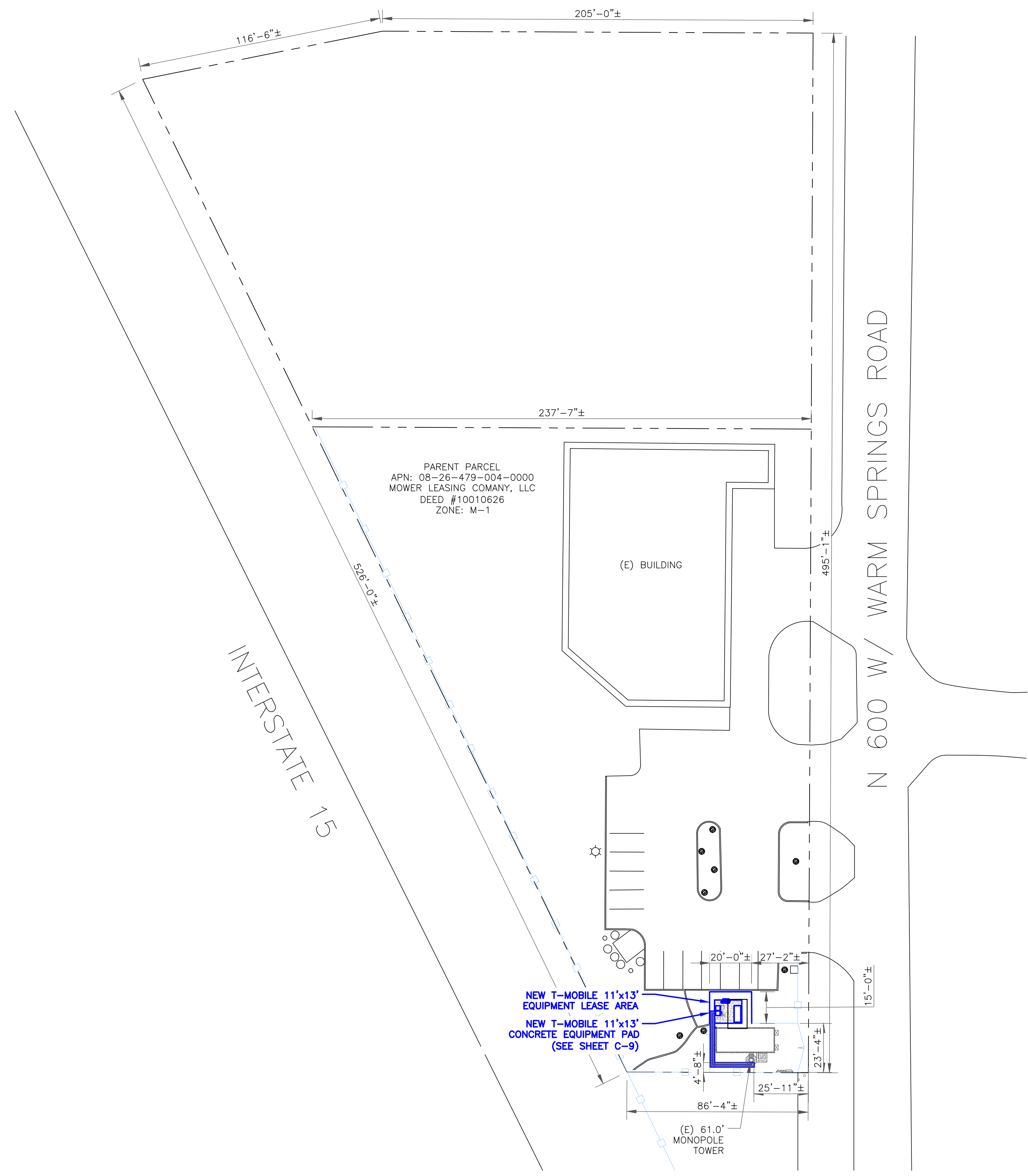
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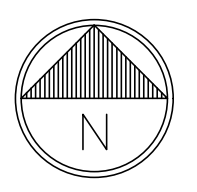

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1 OVERALL SITE PLAN
 SCALE: 1/32"=1'-0" (FULL SIZE)
 1/64"=1'-0" (11x17)



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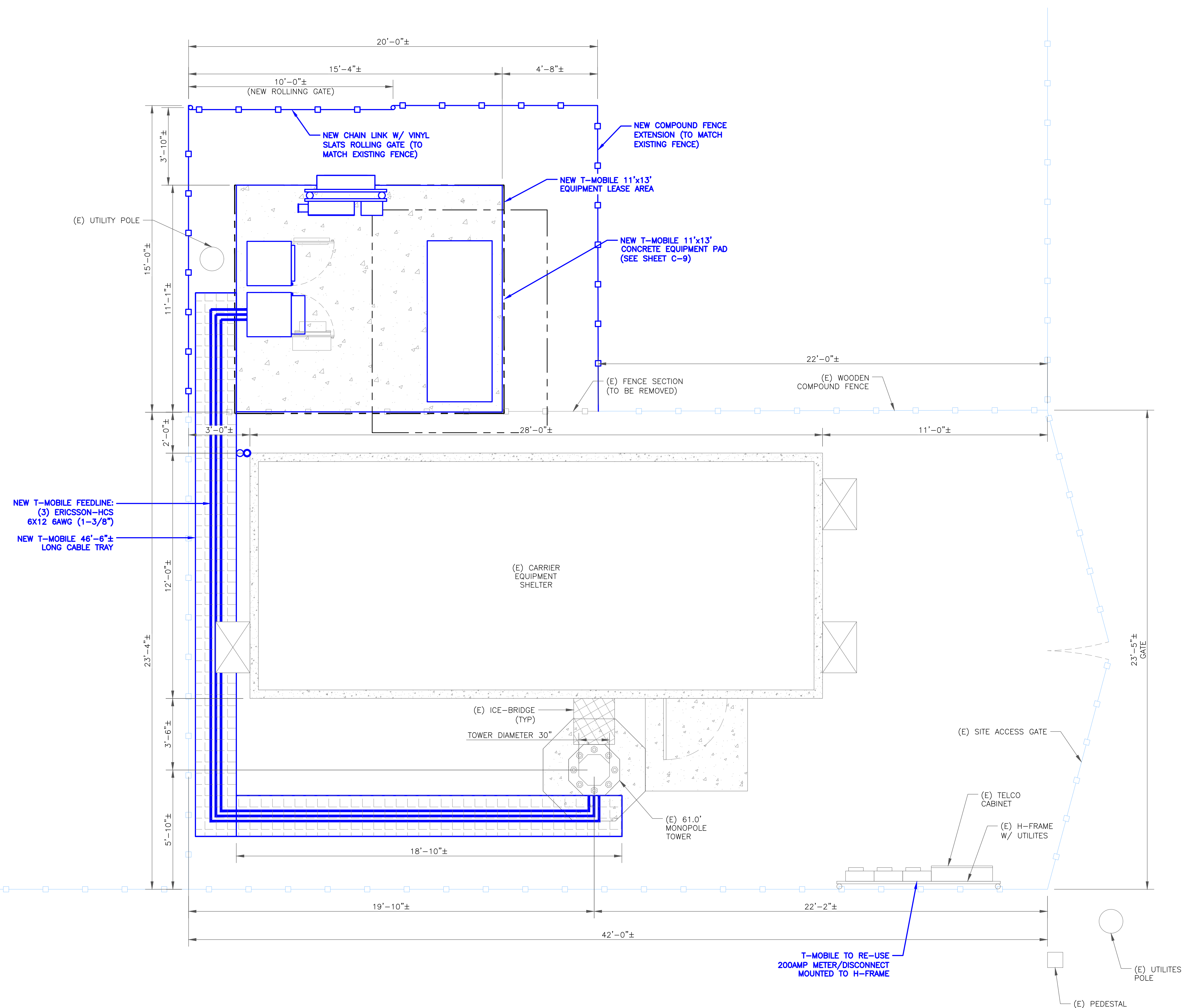
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PROFESSIONAL ENGINEER
 Mark E. Patterson
 STATE OF UTAH
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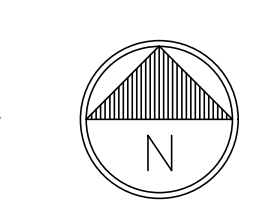
SHEET NUMBER: **C-1.1** REVISION: **8**



NEW T-MOBILE FEEDLINE:
 (3) ERICSSON-HCS
 6X12 6AWG (1-3/8")
 NEW T-MOBILE 48'-6"±
 LONG CABLE TRAY

T-MOBILE TO RE-USE
 200AMP METER/DISCONNECT
 MOUNTED TO H-FRAME

1 FINAL SITE PLAN
 SCALE: 3/8"=1'-0" (FULL SIZE)
 3/16"=1'-0" (11x17)



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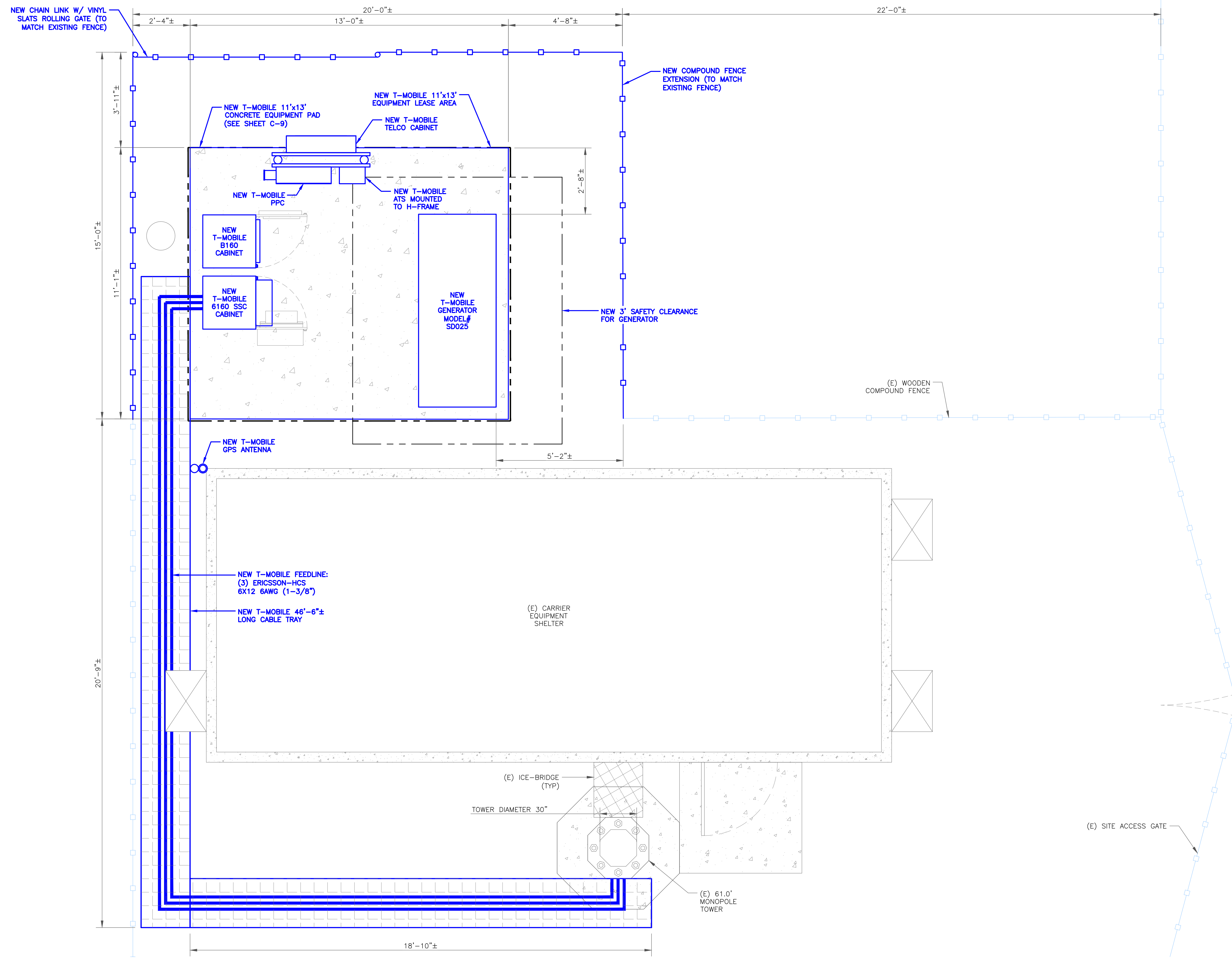
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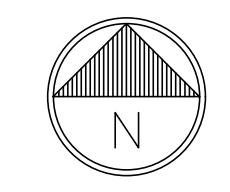
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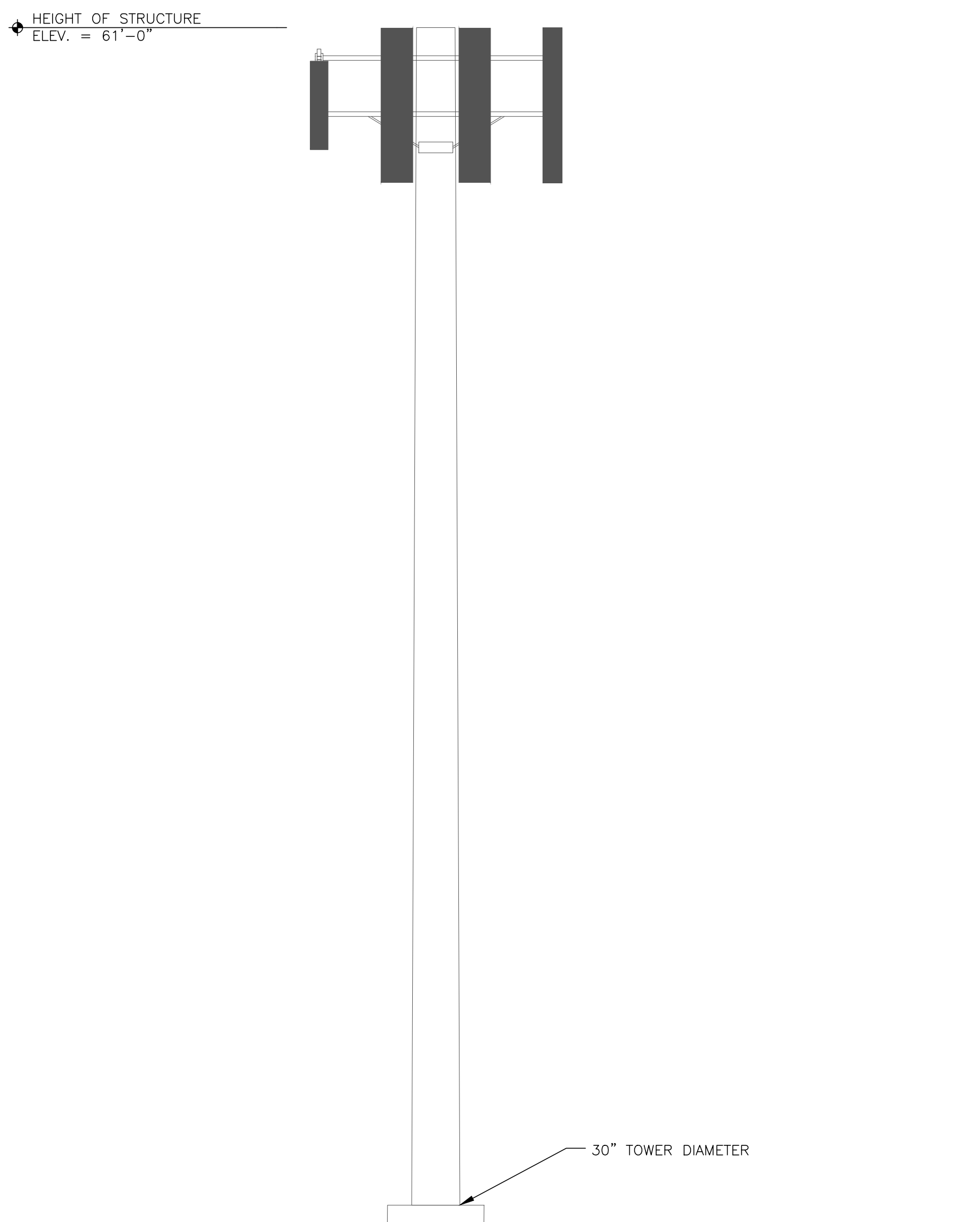
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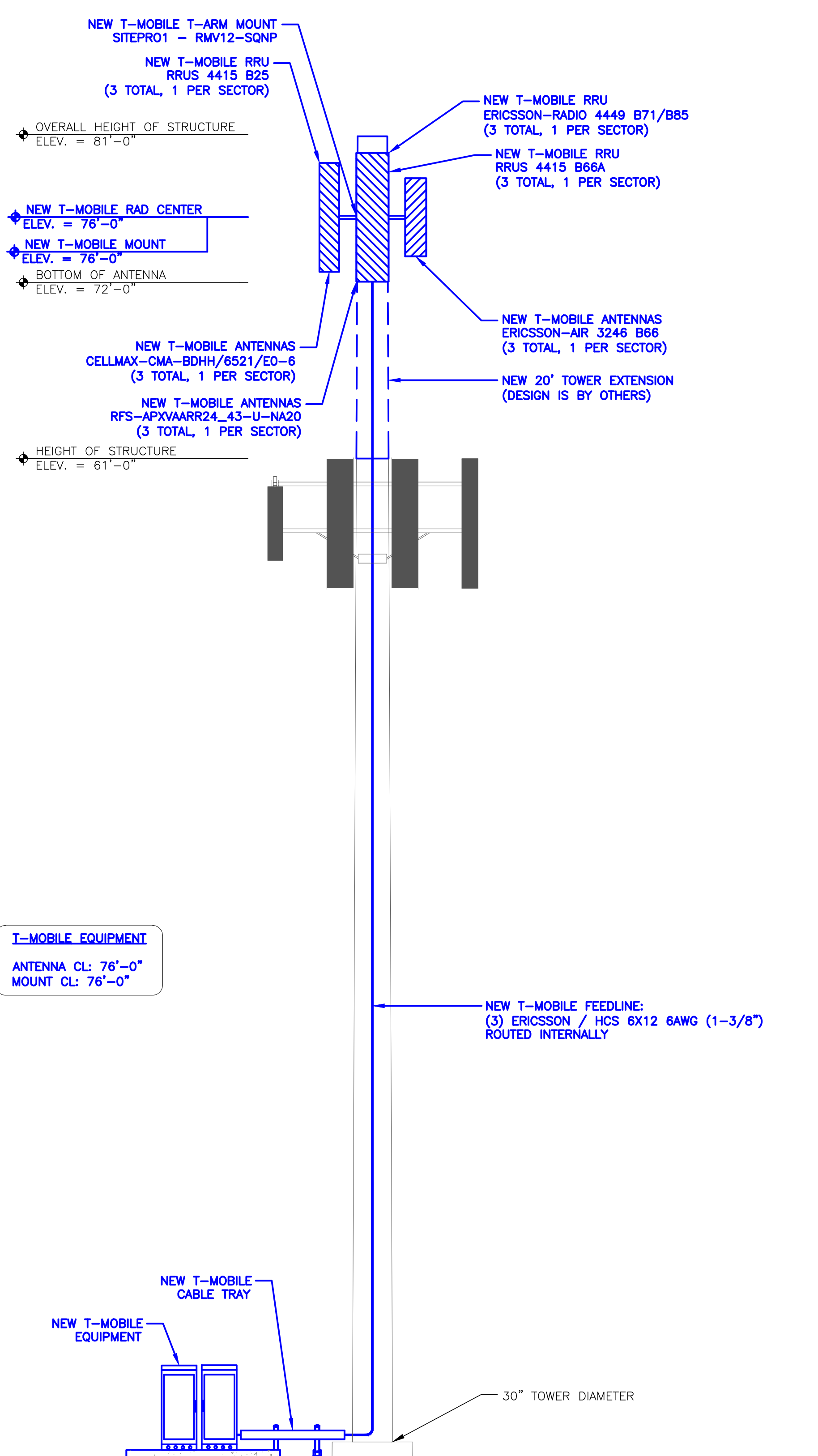
1 ENLARGED EQUIPMENT PLAN
 SCALE: 1/2"=1'-0" (FULL SIZE)
 1/4"=1'-0" (11x17)



SHEET NUMBER: **C-2** REVISION: **8**



1 EXISTING ELEVATION
SCALE: NOT TO SCALE



2 FINAL ELEVATION
SCALE: NOT TO SCALE

INSTALLER NOTE:
DIRECT TOWER MOUNTED EQUIPMENT MUST NOT TRAP OR INTERFERE W/ EXISTING SAFETY CLIMB.

TOWER STRUCTURAL ANALYSIS:
IS BY OTHERS. NO NEW EQUIPMENT TO BE INSTALLED ON TOWER WITHOUT THE APPROVAL OF STRUCTURAL ENGINEER.

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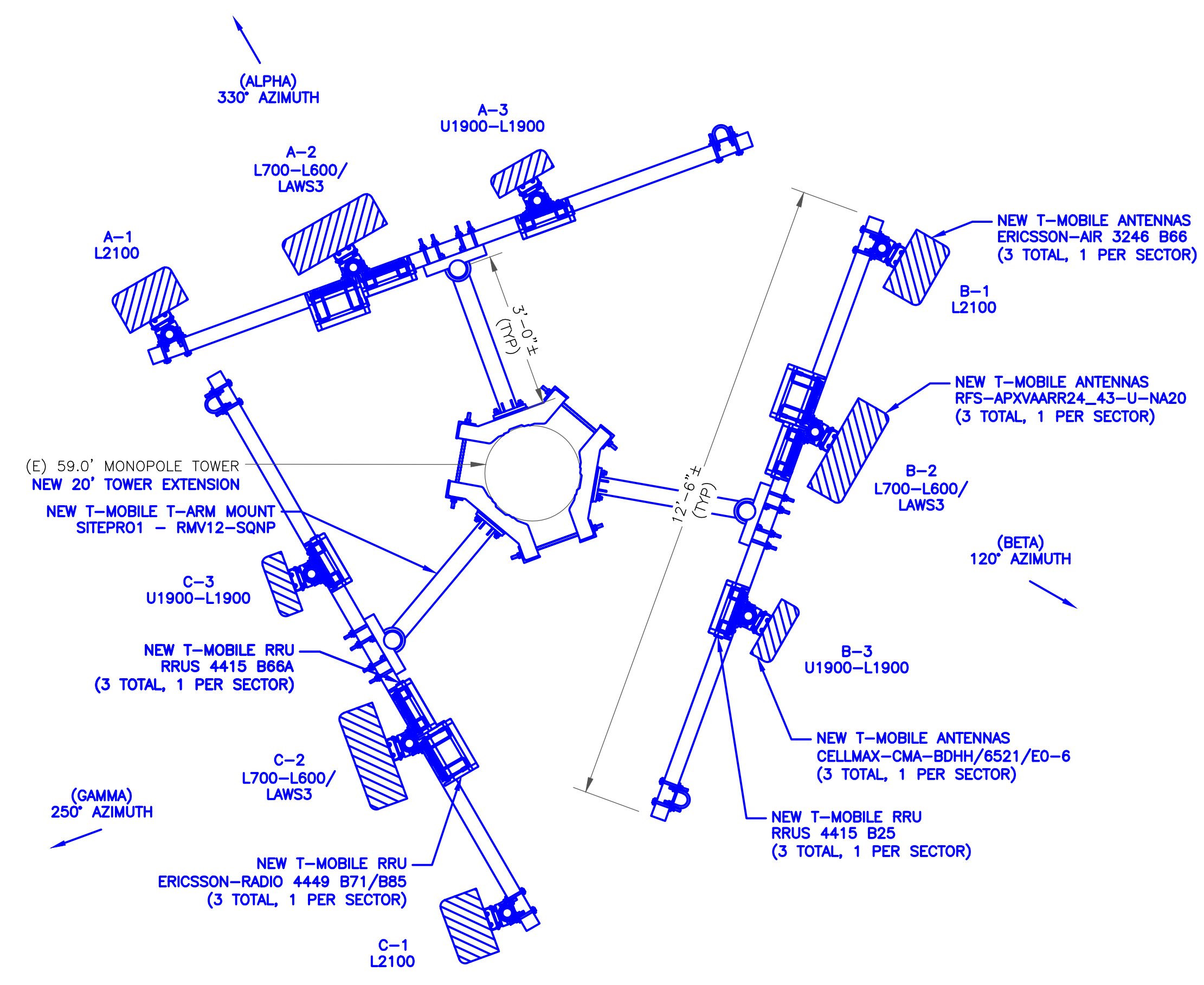
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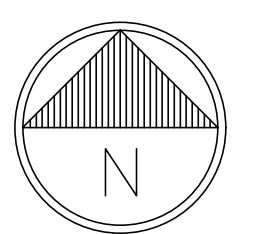
SHEET NUMBER: **C-3** REVISION: **8**

ANTENNA SCHEDULE									
SECTOR	ALPHA			BETA			GAMMA		
ANTENNA POSITION	A-1	A-2	A-3	B-1	B-2	B-3	C-1	C-2	C-3
ANTENNA TYPES	L2100	L700-L600/ LAWS3	U1900-L1900	L2100	L700-L600/ LAWS3	U1900-L1900	L2100	L700-L600/ LAWS3	U1900-L1900
AZIMUTH	330°	330°	330°	120°	120°	120°	250°	250°	250°
RAD CENTER (AGL)	76'-0"	76'-0"	76'-0"	76'-0"	76'-0"	76'-0"	76'-0"	76'-0"	76'-0"
MODEL	ERICSSON - AIR3246 B66	RFS-APXVAARR24_ 43-U-NA20	CELLMAX TECHNOLOGIES CMA-BDHH/6521/E0-6	ERICSSON - AIR3246 B66	RFS-APXVAARR24_ 43-U-NA20	CELLMAX TECHNOLOGIES CMA-BDHH/6521/E0-6	ERICSSON - AIR3246 B66	RFS-APXVAARR24_ 43-U-NA20	CELLMAX TECHNOLOGIES CMA-BDHH/6521/E0-6
FEEDER LENGTH	±110'-0"	±110'-0"	±110'-0"	±110'-0"	±110'-0"	±110'-0"	±110'-0"	±110'-0"	±110'-0"
FEEDER TYPE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE

1 ANTENNA SCHEDULE
SCALE: NOT TO SCALE



2 FINAL ANTENNA LAYOUT
SCALE: NOT TO SCALE



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CROWN CASTLE
1505 WESTLAKE AVE N, STE 800
SEATTLE, WA 98109

POD
POWER OF DESIGN
11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299
502-437-5252

T-MOBILE SITE NUMBER:
SL07007A

BU #: **845638**
ROSE PARK

745 N WARM SPRINGS ROAD
SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

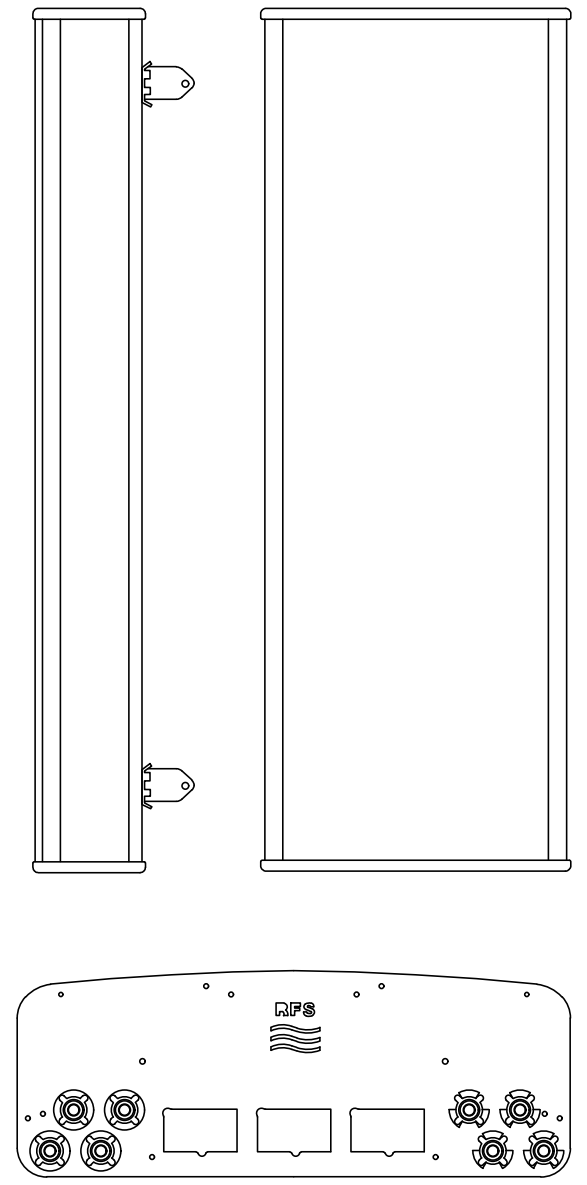
ISSUED FOR:

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6	12/23/2020	MAJ	FINAL	MEP
7	01/05/2021	CPT	FINAL	MEP
8	01/11/2021	CPT	FINAL	MEP

PROFESSIONAL ENGINEER
6/5/2007
MARK E. PATTERSON
STATE OF UTAH
01/11/2021

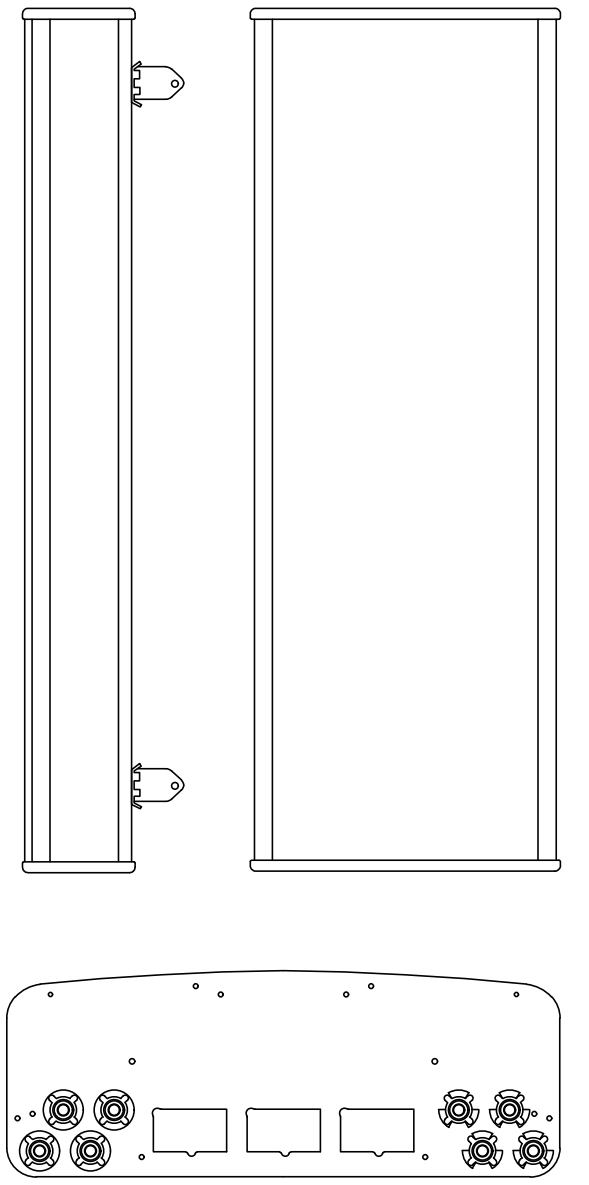
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SHEET NUMBER: **C-4** REVISION: **8**



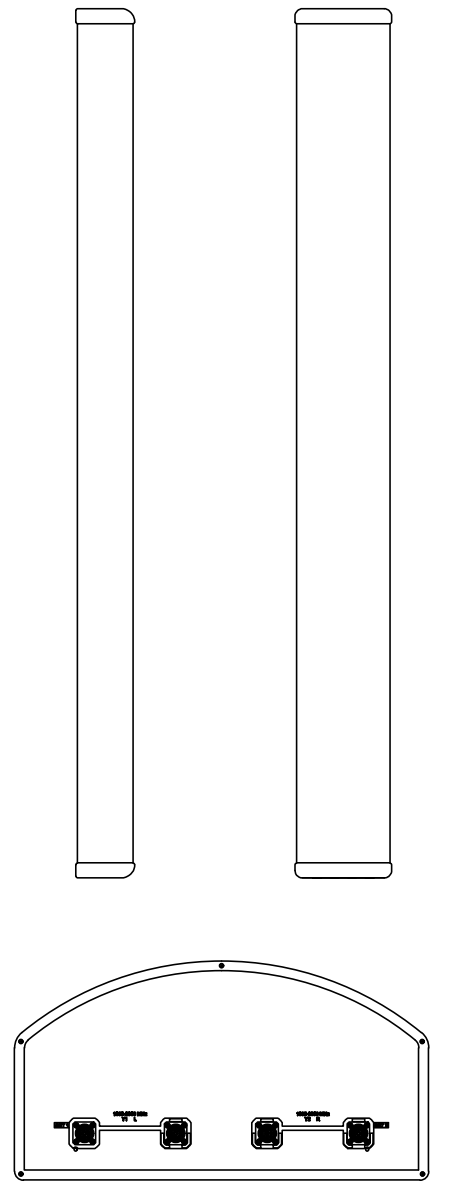
RFS - APXVAARR24_43-U-NA20
 SIZE (HxWxD): 95.9x24x8.7 IN.
 MOUNTING HARDWARE P/N: BSAMNT-4
 RATED WIND VELOCITY: 150.0 MPH
 CONNECTOR TYP: 8 X 4.3-10 FEMALE

1 RFS - APXVAARR24_43-U-NA20
 SCALE: NOT TO SCALE



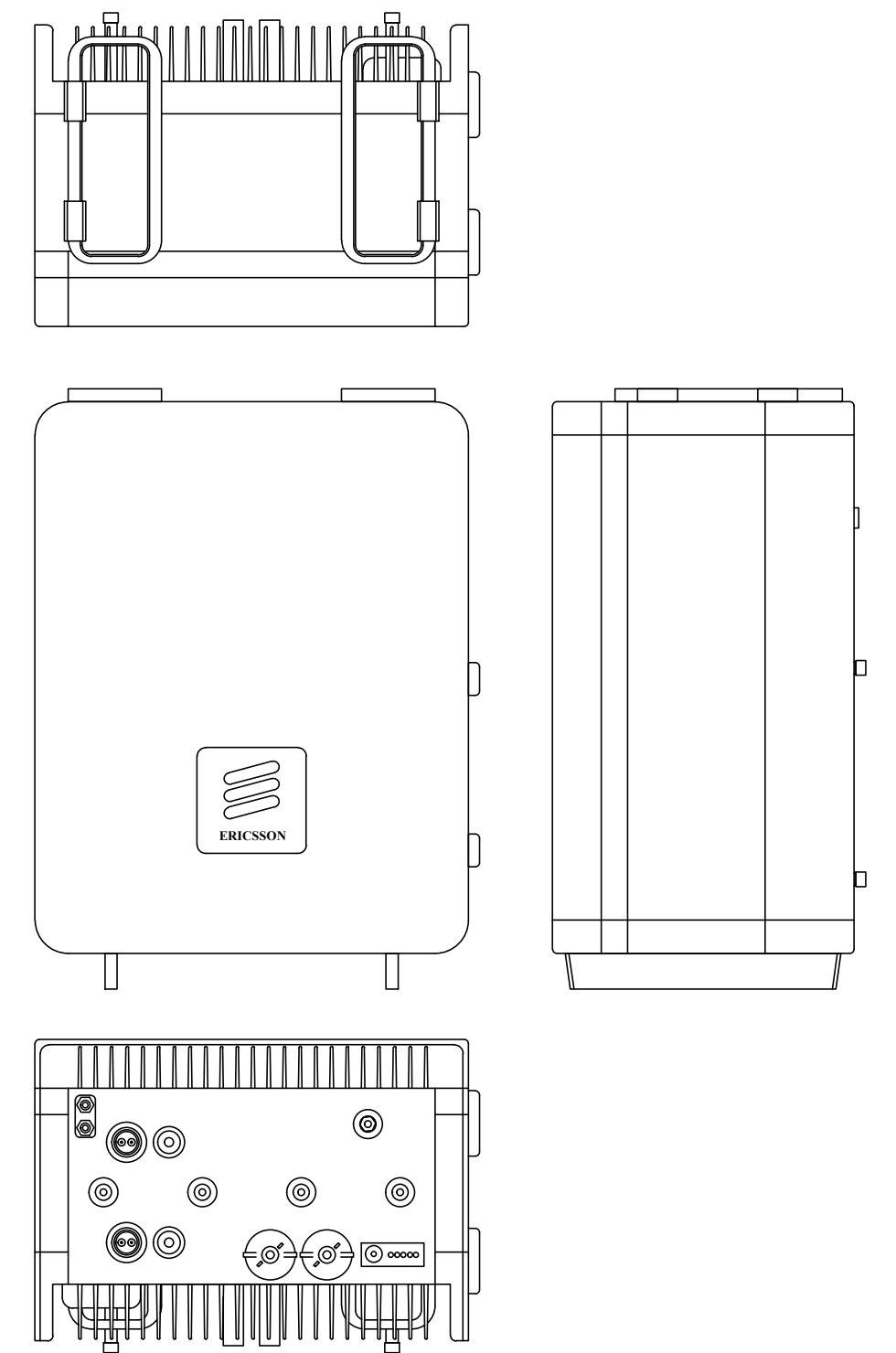
ERICSSON / AIR 3246 B66
 SIZE (HxWxD): 58.1x15.7x9.4 IN.
 MOUNTING HARDWARE P/N: BSAMNT-4
 RATED WIND VELOCITY: 150.0 MPH
 CONNECTOR TYP: 8 X 4.3-10 FEMALE

2 ERICSSON / AIR 3246 B66
 SCALE: NOT TO SCALE



CELLMAX TECHNOLOGIES
 CMA-BDHH/6521/E0-6
 SIZE (HxWxD): 81.1x14.7x5.2 IN.
 MOUNTING HARDWARE P/N: TM600899A-2
 RATED WIND VELOCITY: 150.0 MPH
 CONNECTOR TYP: 7-16 DIN. FEMALE (4)

3 CELLMAX - CMA-BDHH/6521/E0-6
 SCALE: NOT TO SCALE

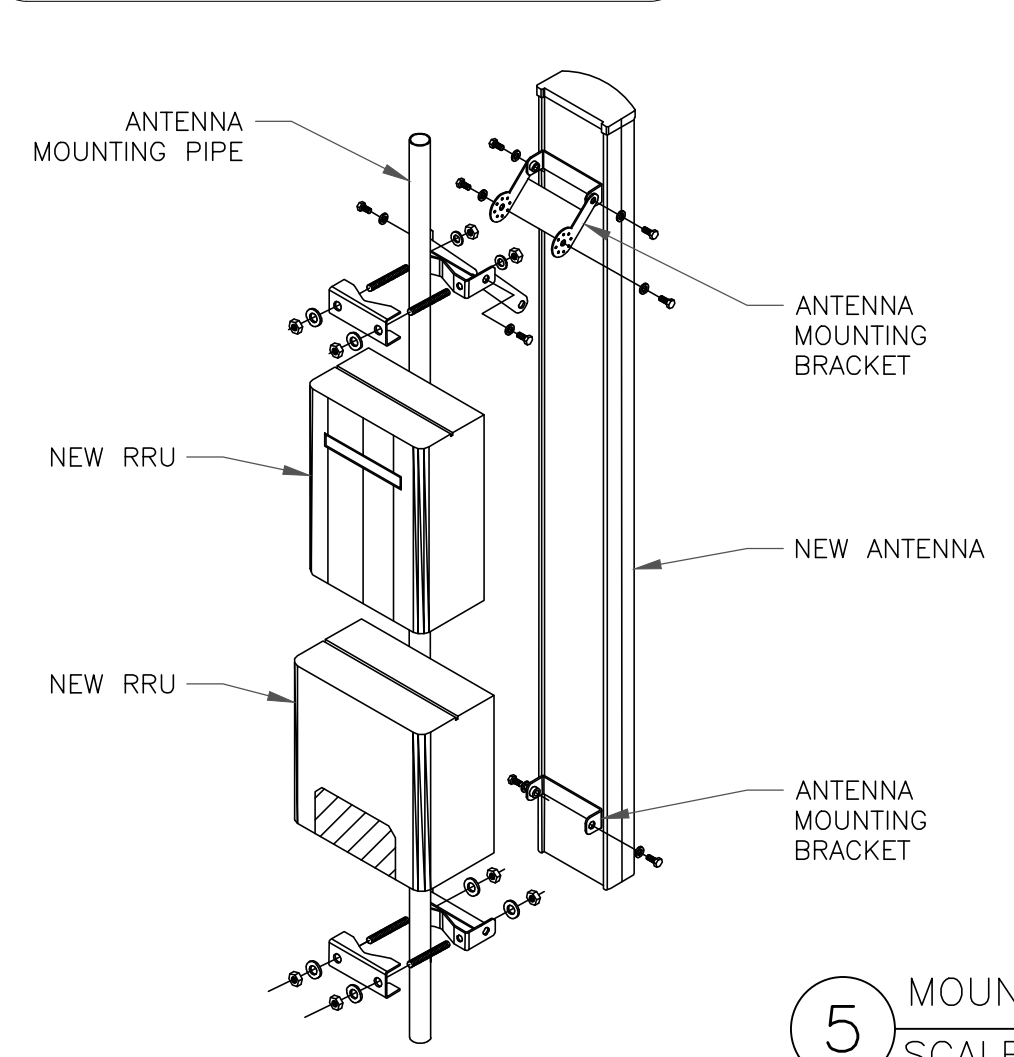


ERICSSON - RADIO 4449 B71/B85
 WEIGHT: 73.21 LBS
 SIZE (HxWxD): 17.91x13.2x10.63 IN.

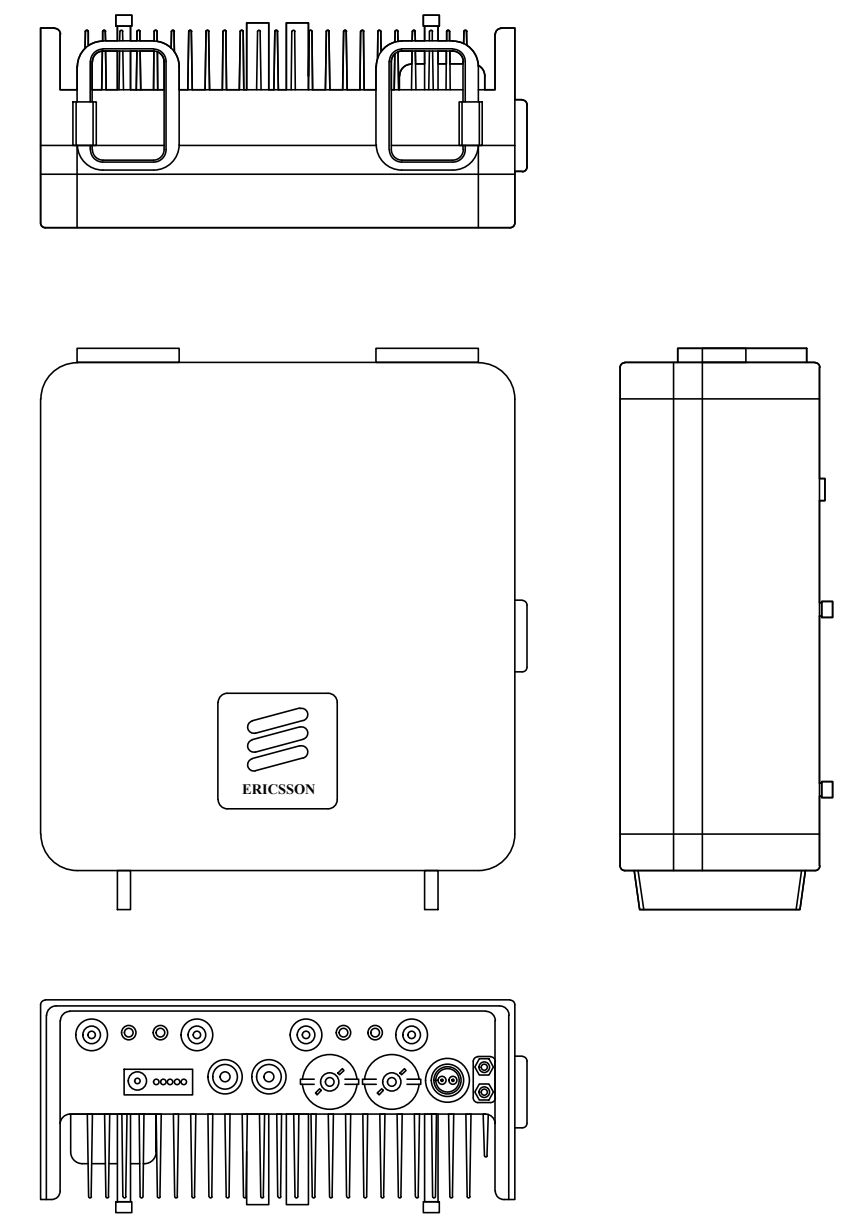
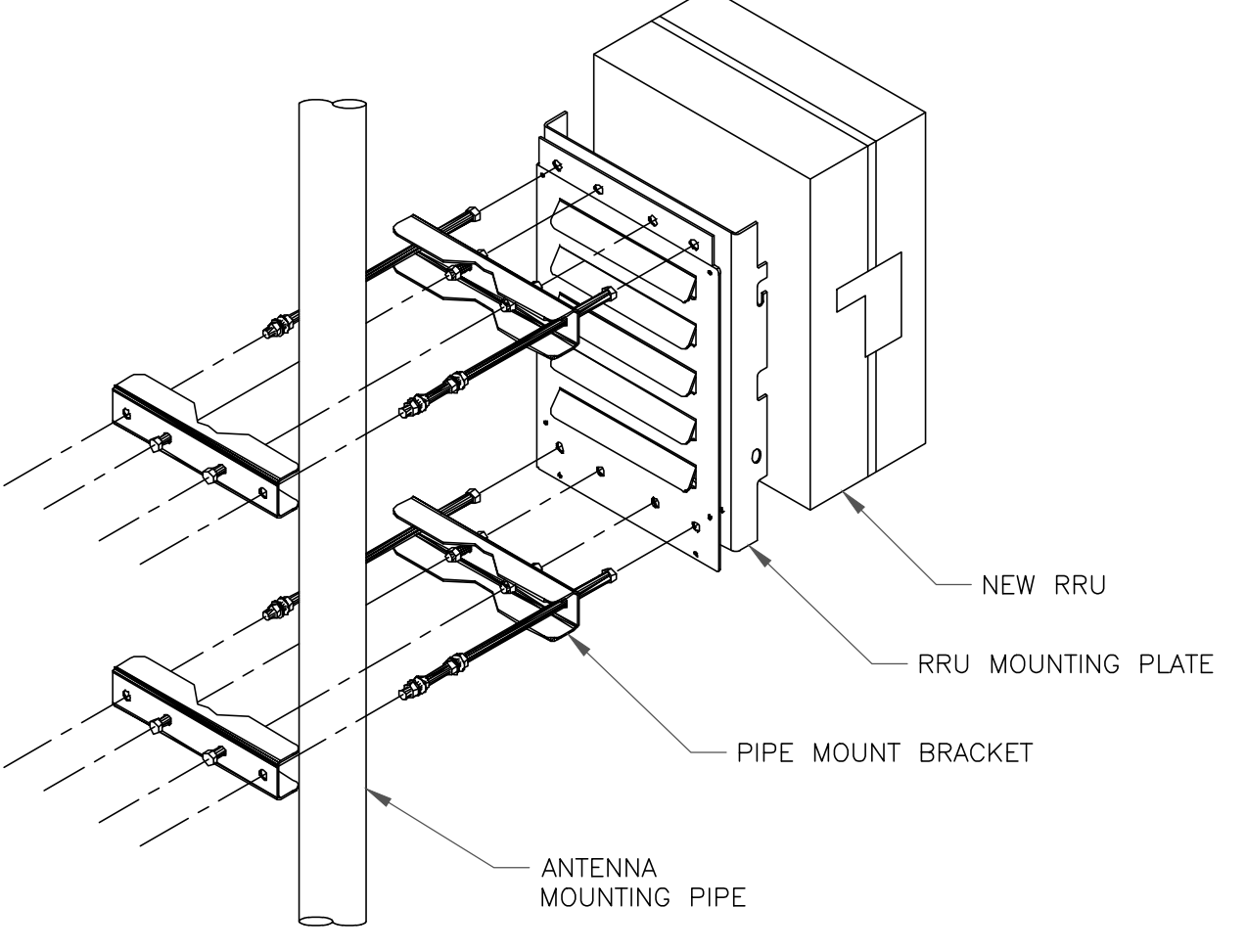
4 ERICSSON - RADIO 4449 B71/B85
 SCALE: NOT TO SCALE

INSTALLER NOTES:
 1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRU'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
 2. DO NOT OPEN RRU PACKAGES IN THE RAIN.
 3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.

NOTE:
 ANTENNA NOT SHOWN FOR CLARITY

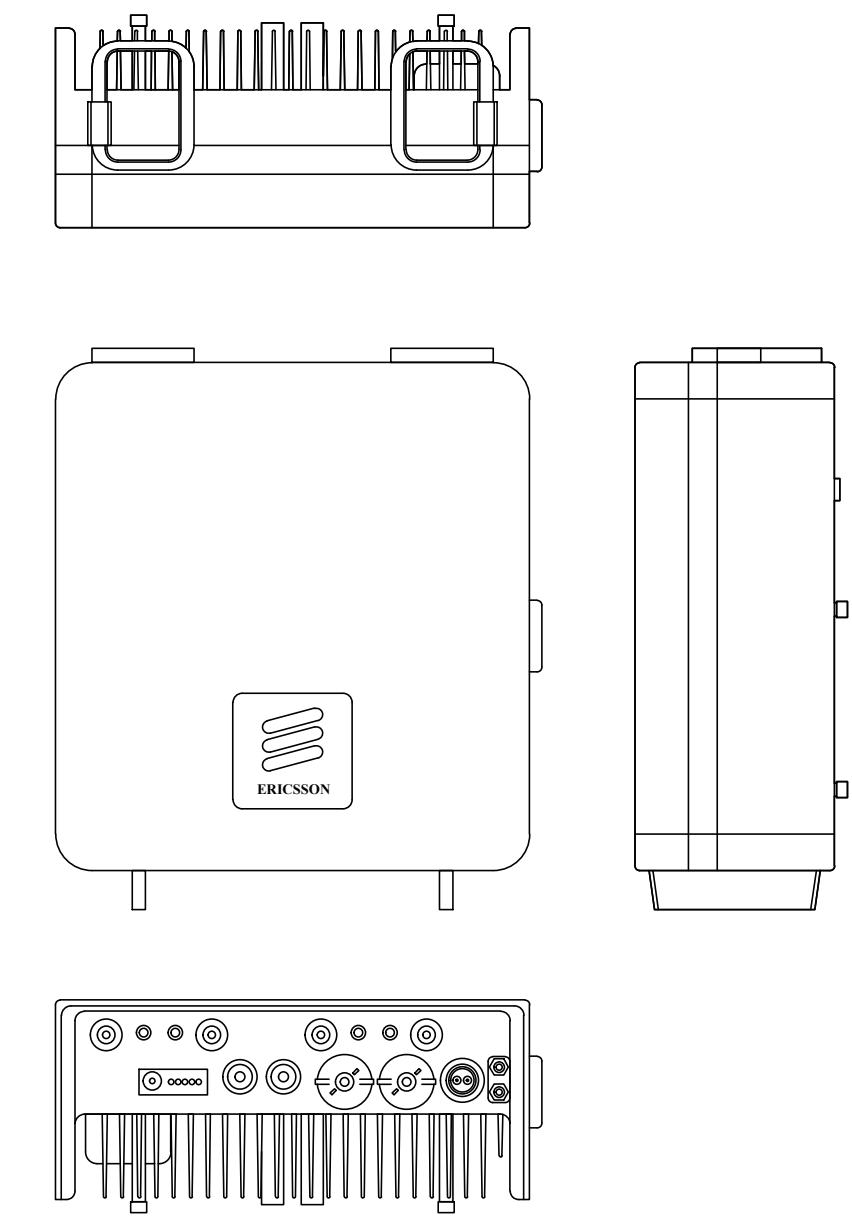


5 MOUNTING DETAILS
 SCALE: NOT TO SCALE



ERICSSON - RADIO 4415 B66A
 WEIGHT: 49.6 LBS
 SIZE (HxWxD): 16.5x13.5x6.3 IN.

6 ERICSSON - RADIO 4415 B66A
 SCALE: NOT TO SCALE



ERICSSON - RADIO 4415 B25
 WEIGHT: 49.6 LBS
 SIZE (HxWxD): 16.5x13.5x6.3 IN.

7 ERICSSON - RADIO 4415 B25
 SCALE: NOT TO SCALE

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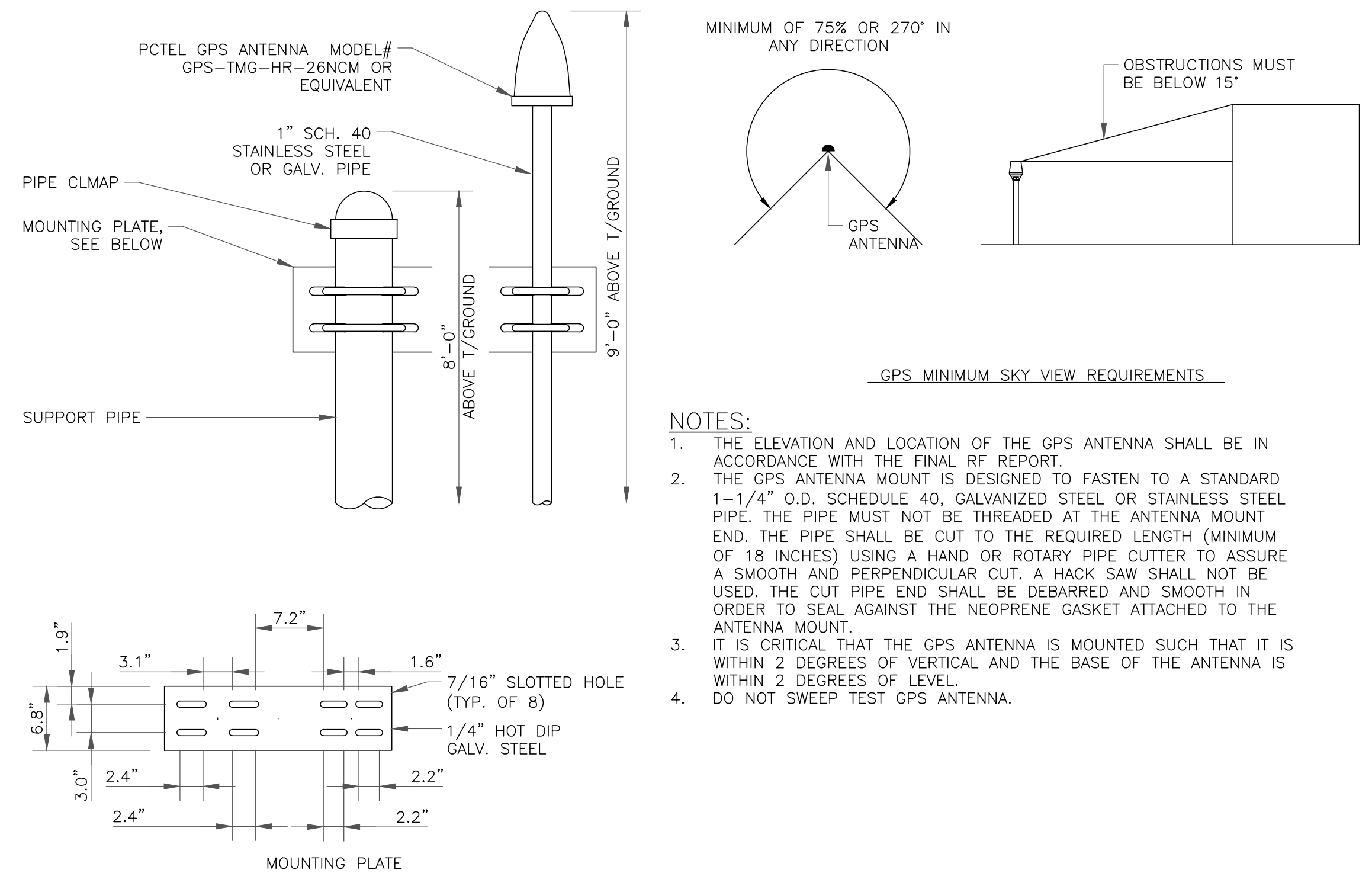
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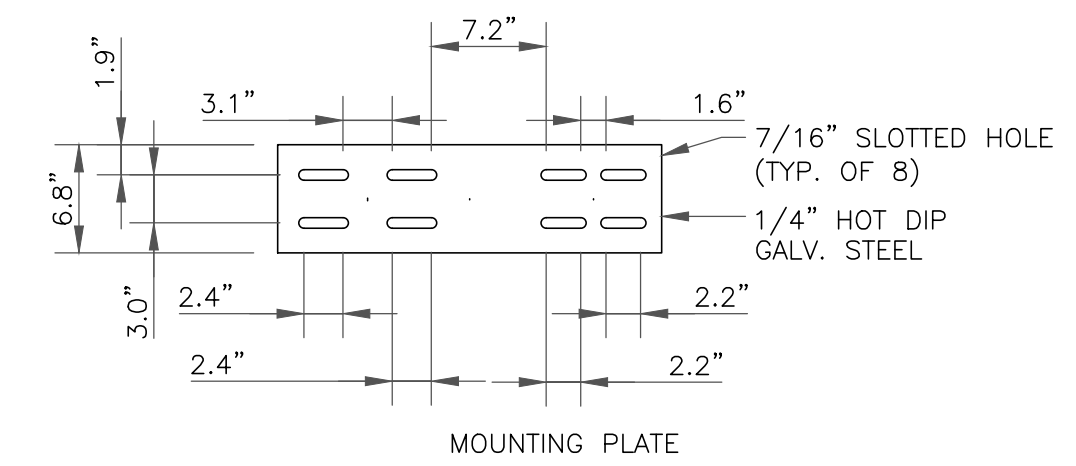
PROFESSIONAL ENGINEER
 No. 970099-2207
 MARK E. PATTERSON
 STATE OF UTAH
 01/11/2021

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SHEET NUMBER: **C-5** REVISION: **8**

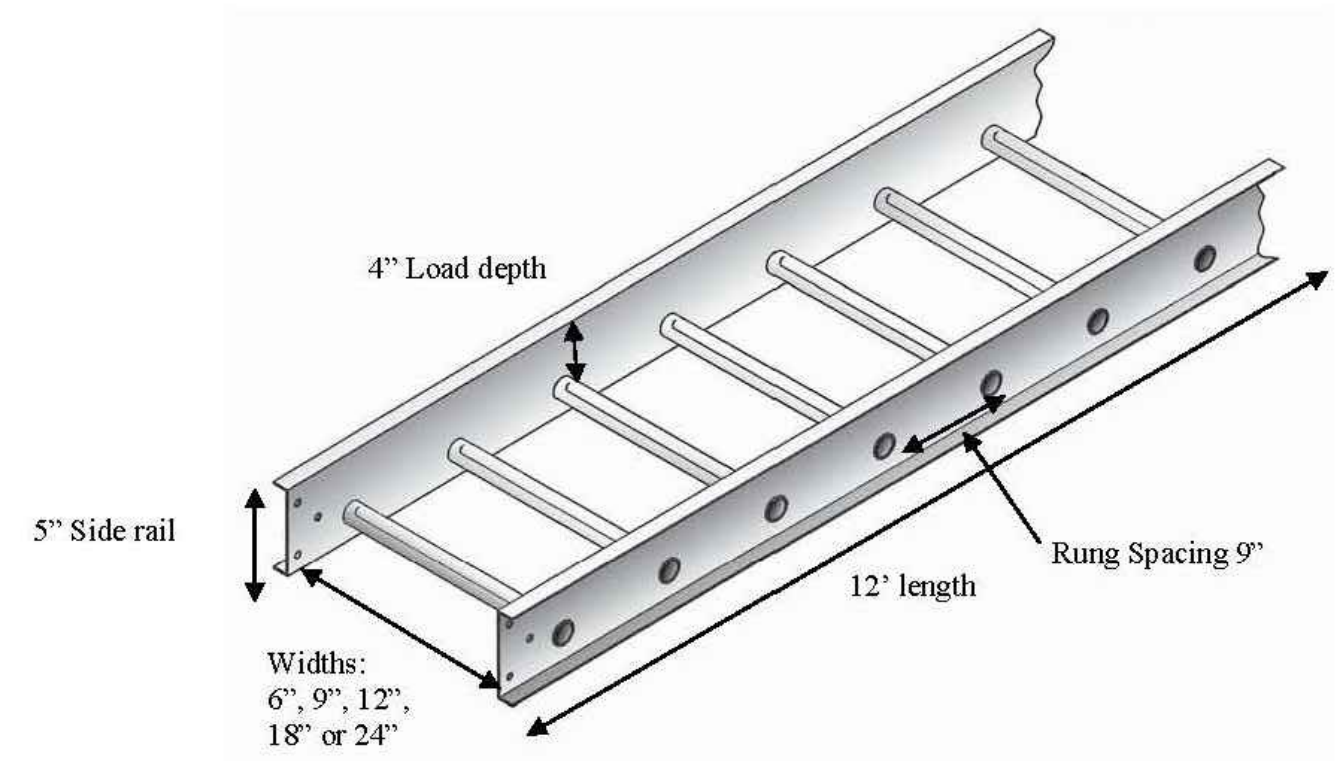


- NOTES:**
1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
 2. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1-1/4" O.D. SCHEDULE 40, GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 18 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBARRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.
 3. IT IS CRITICAL THAT THE GPS ANTENNA IS MOUNTED SUCH THAT IT IS WITHIN 2 DEGREES OF VERTICAL AND THE BASE OF THE ANTENNA IS WITHIN 2 DEGREES OF LEVEL.
 4. DO NOT SWEEP TEST GPS ANTENNA.



1 GPS ANTENNA DETAIL
SCALE: NOT TO SCALE

Aluminum Cable Tray



Features: Aluminum cable tray with press fit rungs. Covers and bends also available.

Construction: Constructed from extruded T-6061 aluminum.

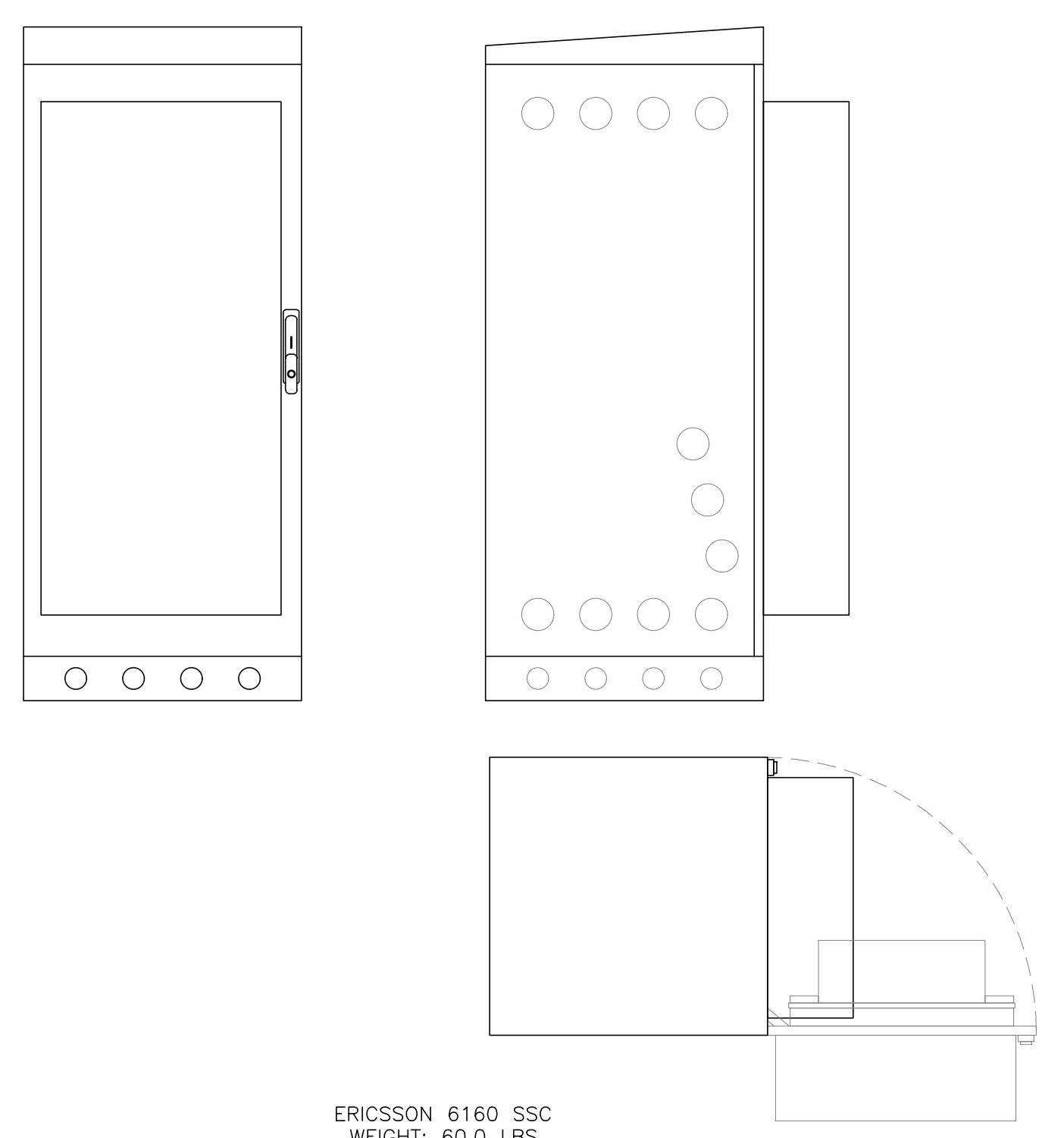
Weight:

- 6"x12' 15 lbs
- 9"x12' 17 lbs
- 12"x12' 19 lbs
- 18"x12' 22 lbs
- 24"x12' 23 lbs

Load:

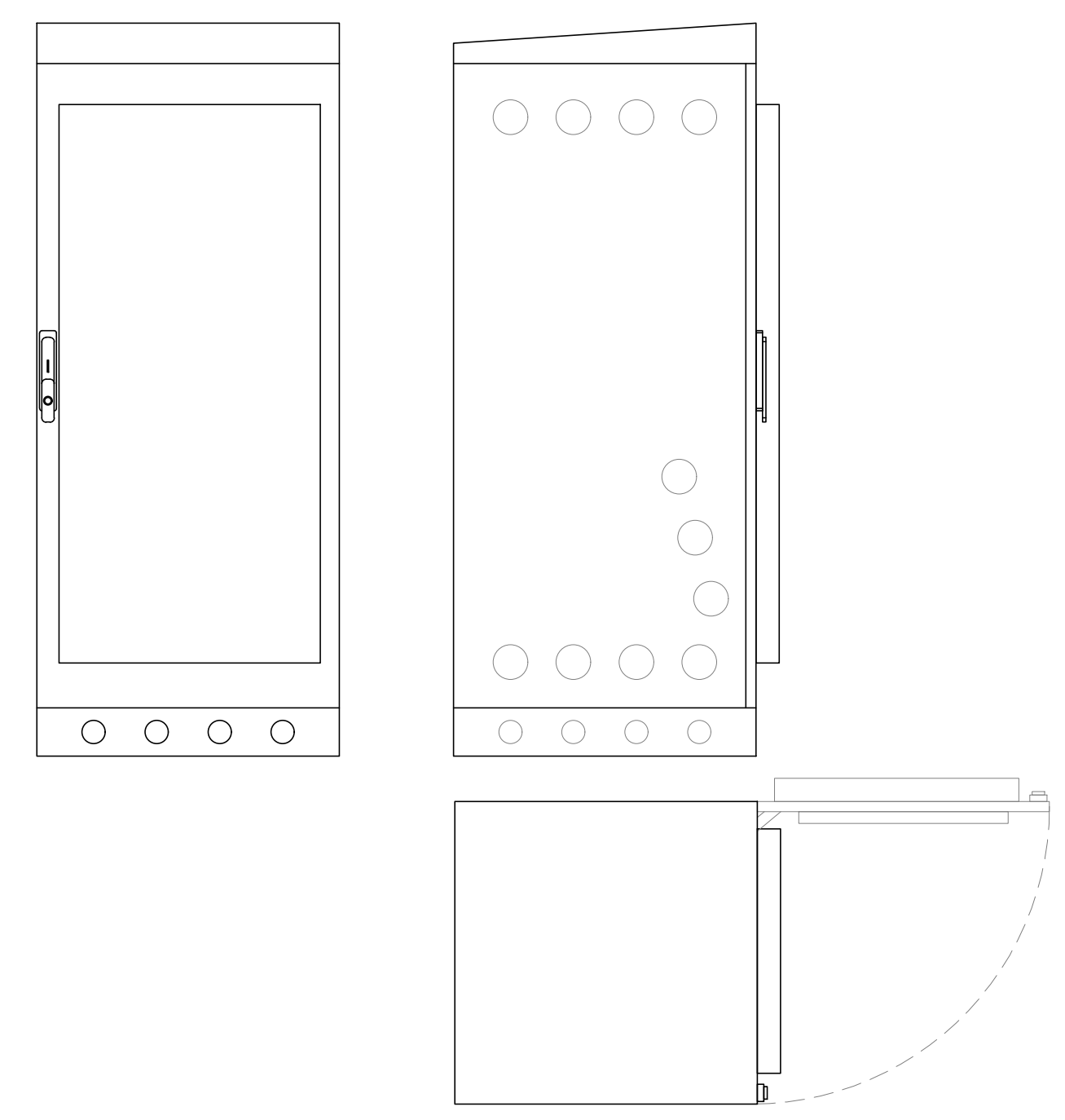
- 6' Span 324 lbs per linear ft
- 8' Span 125 lbs per linear ft
- 10' Span 117 lbs per linear ft
- 12' Span 77 lbs per linear ft

2 CABLE TRAY DETAIL
SCALE: NOT TO SCALE



ERICSSON 6160 SSC
WEIGHT: 60.0 LBS
SIZE (HxWxD): 63"x25.6"x33.5" IN.

3 ERICSSON 6160 SSC
SCALE: NOT TO SCALE



BATTERY CABINET SPECS
MODEL: B160
MANUFACTURE: ERICSSON
SIZE (HxWxD): 63"x26"x26" IN.

4 ERICSSON B160 BATTERY CABINET
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

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SHEET NUMBER: **C-6** REVISION: **8**

REINFORCED CONCRETE NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF CAST-IN-PLACE CONCRETE, AND WHERE CODES CONFLICT THE MORE STRINGENT NATIONAL OR LOCAL CODE SHALL GOVERN.
- SITECAST CONCRETE FOR SLABS AND POST FOOTING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. CONCRETE TESTING IS NOT REQUIRED FOR SLABS AND POST FOOTINGS UNLESS NOTED OTHERWISE.

SLUMP - 4" MIN / 6" MAX

CLASS OF CONCRETE

CLASS	28 DAYS STR.	MAXWATER/CEMENT RATIO	PLACEMENT LOCATION	NOTES
TYPE 1	3000 PSI	0.55	SLAB & POST FOOTING	NORMAL WEIGHT
TYPE 111*	5000 PSI	0.45	SLAB & POST FOOTING	HIGH EARLY STS.

*IF REQUIRED BY THE CONSTRUCTION SCHEDULE THE CONTRACTOR MAY SUBSTITUTE TYPE 111 HIGH EARLY STRENGTH CONCRETE WITH THE APPROVAL OF THE CONSTRUCTION MANAGER.

- REINFORCED STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS OTHERWISE NOTED. SPLICES FOR REBAR SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARDS, UNO. LAPS FOR WELDED WIRE FABRIC SHALL BE AT LEAST 8 INCHES, UNO.

- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS.

CONCRETE CAST AGAINST EARTH.....	3"
CONCRETE EXPOSED TO EARTH OR WATER	
#6 AND LARGER	2"
#5 AND SMALLER & wwf	1-1/2"

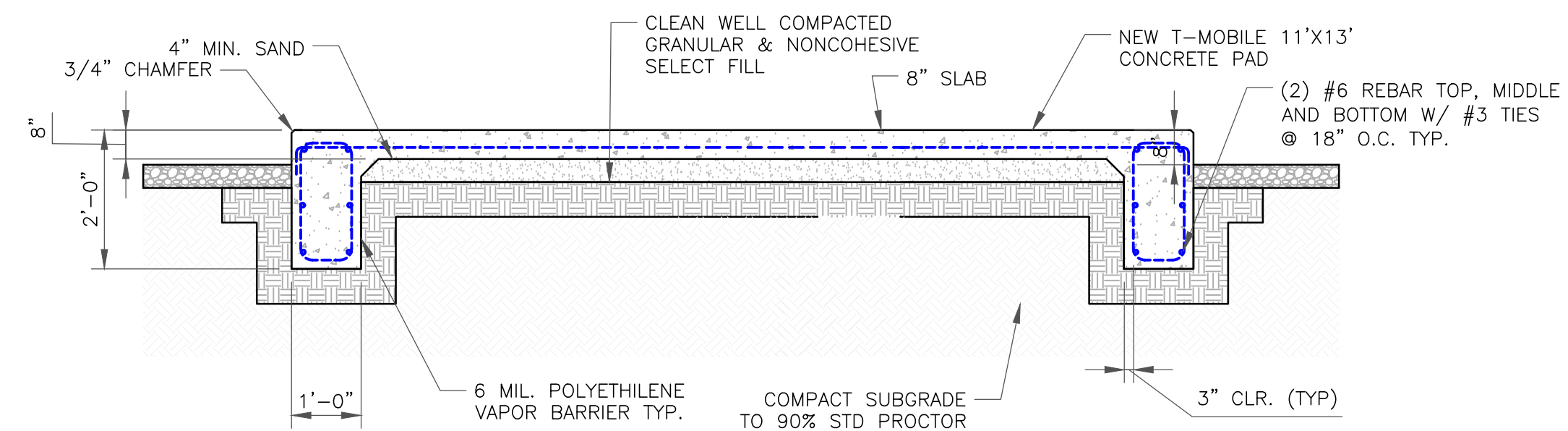
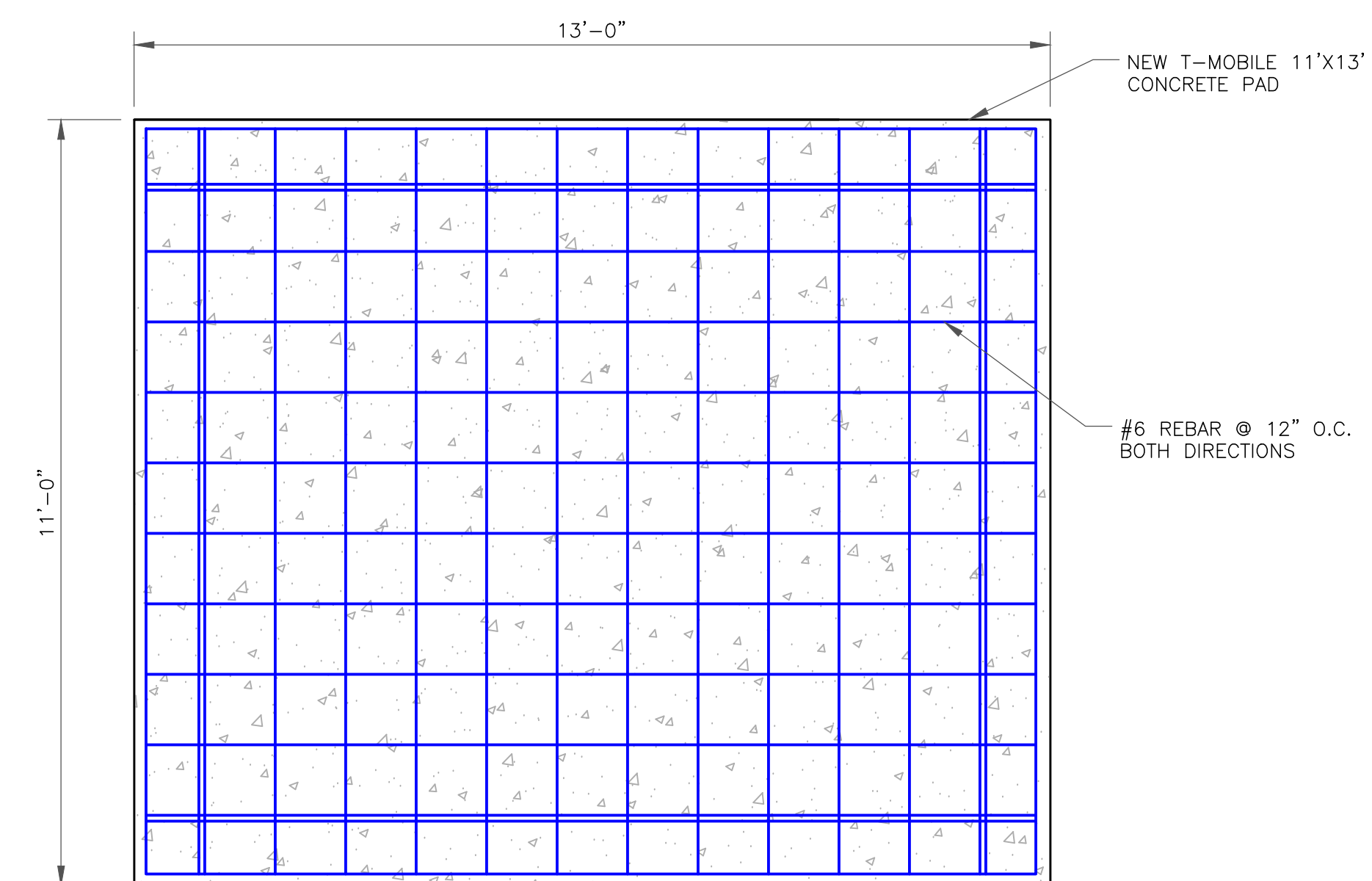
- MAXIMUM COURSE AGGREGATE SIZE SHALL BE 3/4"

- INSTALLATION OF CONCRETE ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATION. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO THE ANCHOR MANUFACTURER'S SPECIFICATIONS FOR MATERIAL STRENGTH, EMBEDMENT DEPTH, SPACING, AND EDGE DISTANCE OR AS DETAILED ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL. WHEN DRILLING HOLES IN CONCRETE, EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI, OR APPROVED EQUAL. IF THE MANUFACTURER'S SPECIFICATIONS AND DETAILS ARE FOUND TO CONFLICT WITH THAT SHOWN HEREIN, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

- THE CONTRACTOR SHALL VERIFY FROST LINE AND FOOTING DEPTH REQUIREMENTS WITH THE JURISDICTION HAVING AUTHORITY PRIOR TO CONSTRUCTION AND CONSULT THE ENGINEER ACCORDINGLY.

- THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL CONDUIT SIZES AND PENETRATION LOCATIONS PRIOR TO POURING THE SLAB.

- SOIL SHALL HAVE MINIMUM 1000 PSF ALLOWABLE BEARING CAPACITY.



1 CONCRETE PAD DETAIL
SCALE: NOT TO SCALE

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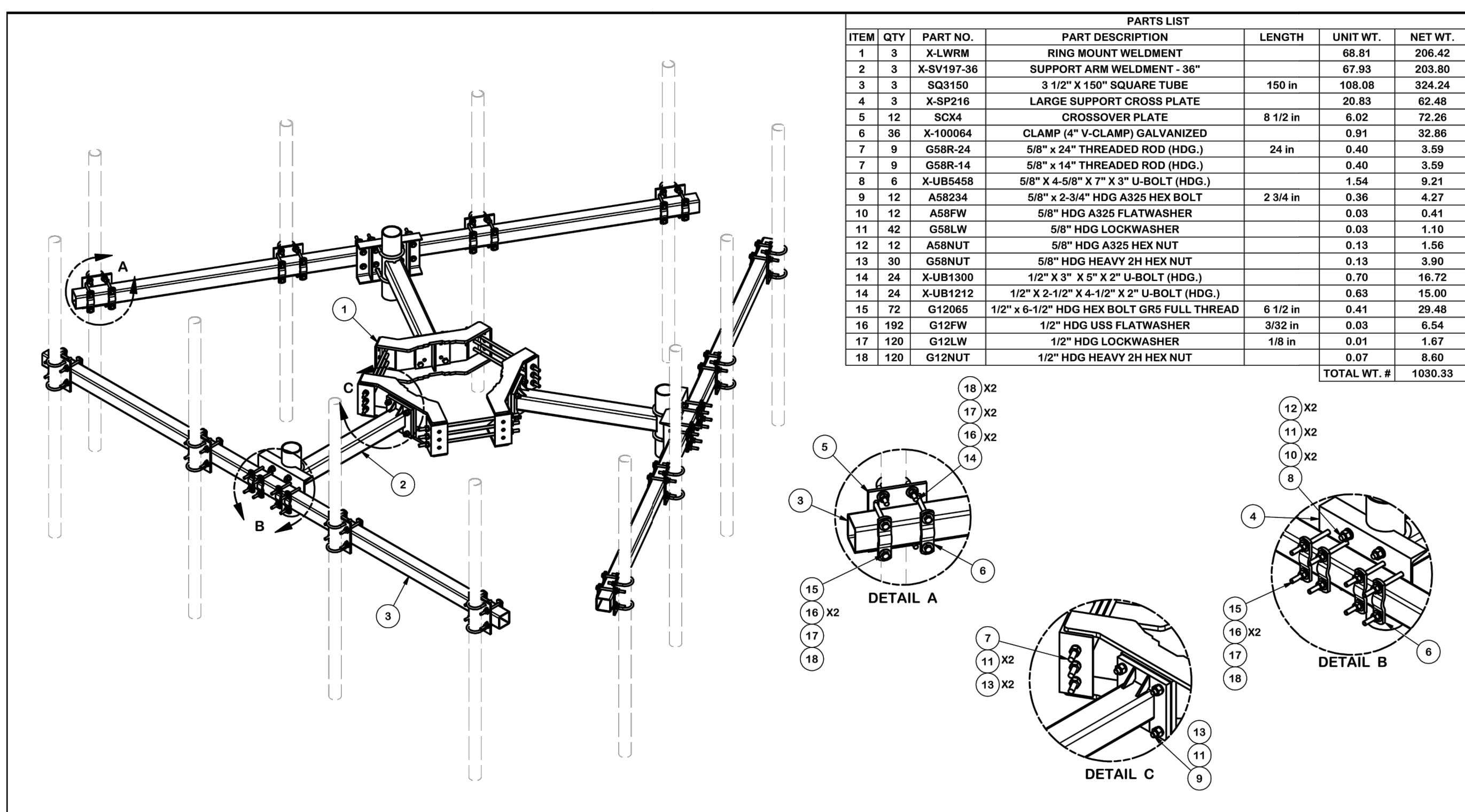
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Professional Engineer
No. 970099-2202
MARK E. PATTERSON
STATE OF UTAH

01/11/2021

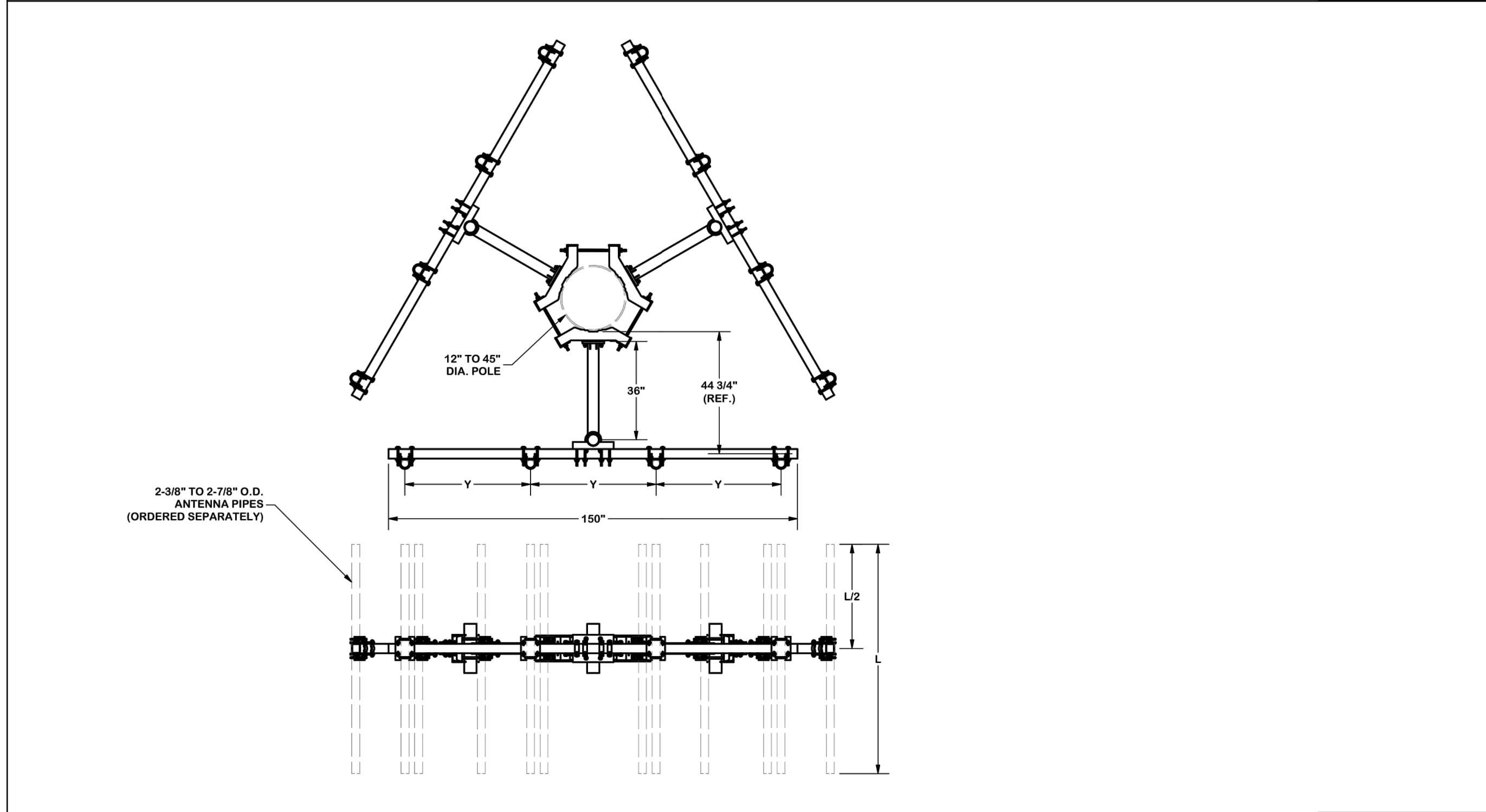
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SHEET NUMBER: **C-7** REVISION: **8**



ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-LWRM	RING MOUNT WELDMENT		68.81	206.42
2	3	X-SV197-36	SUPPORT ARM WELDMENT - 36"		67.93	203.80
3	3	SQ3150	3 1/2" X 150" SQUARE TUBE	150 in	108.08	324.24
4	3	X-SP216	LARGE SUPPORT CROSS PLATE		20.83	62.48
5	12	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	72.26
6	36	X-100064	CLAMP (4" V-CLAMP) GALVANIZED		0.91	32.86
7	9	G58R-24	5/8" x 24" THREADED ROD (HDG.)	24 in	0.40	3.59
7	9	G58R-14	5/8" x 14" THREADED ROD (HDG.)		0.40	3.59
8	6	X-UB5458	5/8" X 4-5/8" X 7" X 3" U-BOLT (HDG.)		1.54	9.21
9	12	A58234	5/8" X 2-3/4" HDG A325 HEX BOLT	2 3/4 in	0.36	4.27
10	12	A58FW	5/8" HDG A325 FLATWASHER		0.03	0.41
11	42	G58LW	5/8" HDG LOCKWASHER		0.03	1.10
12	12	A58NUT	5/8" HDG A325 HEX NUT		0.13	1.56
13	30	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	3.90
14	24	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.70	16.72
14	24	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.63	15.00
15	72	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	29.48
16	192	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	6.54
17	120	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	1.67
18	120	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	8.60
TOTAL WT. #						1030.33

TOLERANCE NOTES TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE: SAWED, SHEARED AND GAS CUT EDGES (± 0.030") DRILLED AND GAS CUT HOLES (± 0.030") - NO CONING OF HOLES LASER CUT EDGES AND HOLES (± 0.010") - NO CONING OF HOLES BENDS ARE ± 1/2 DEGREE ALL OTHER MACHINING (± 0.030") ALL OTHER ASSEMBLY (± 0.060")		DESCRIPTION MONOPOLE TRIPLE T-ARM FOR 12 ANTENNAS		Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX Engineering Support Team 1-888-753-7446	
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	RMV12-SQNP	
81	CEK 4/28/2017	BMC 5/12/2017	DWG. NO.	RMV12-SQNP	
CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
81	01	CUSTOMER	BMC	5/12/2017	



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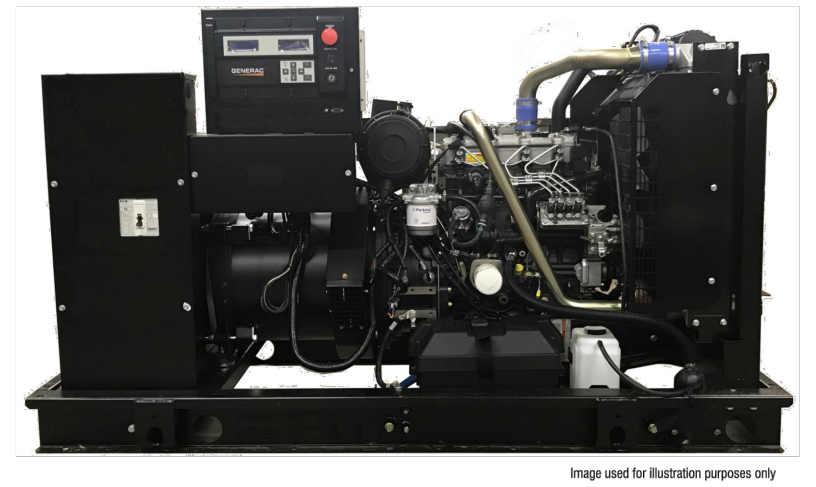
SHEET NUMBER: **C-8** REVISION: **8**

1 SITEPRO1 - RMV12-2QNP
SCALE: NOT TO SCALE

SD025 | 2.2L | 25 kW INDUSTRIAL DIESEL GENERATOR SET



Standby Power Rating 25 kW, 32 kVA, 60 Hz Prime Power Rating* 23 kW, 28 kVA, 60 Hz



Codes and Standards Not all codes and standards apply to all configurations. Contact factory for details.

- UL2200, UL508, UL489, UL142 CSA C22.2 BS5514 and DIN 6271 SAE J1349 NFPA 37, 70, 99, 110 NEC700, 701, 702, 708 ISO 3046, 7637, 8528, 9001 NEMA ICS10, MG1, 250, ICS6, AB1 ANSI C62.41

Powering Ahead For over 50 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

SD025 | 2.2L | 25 kW INDUSTRIAL DIESEL GENERATOR SET



STANDARD FEATURES

- ENGINE SYSTEM: Oil Drain Extension, Air Cleaner, Fan Guard, Stainless Steel Flexible Exhaust Connection, Factory Filled Oil and Coolant, Radiator Duct Adapter, Critical Silencer, Engine Coolant Heater, Fuel System, Cooling System, Electrical System, Alternator System, Enclosure, Fuel Tanks, Generator Set, Engine System, Circuit Breaker Options, Control System, Fuel System, Electrical System, Alternator System, Generator Set, Engine System, Circuit Breaker Options, Control System, Fuel System, Electrical System, Alternator System, Generator Set

CONTROL SYSTEM



- Digital H Control Panel - Dual 4x20 Display Program Functions: Programmable Crank Limiter, 7-Day Programmable Exerciser, Special Applications Programmable Logic Controller, RS-232/485 Communications, All Phase Sensing Digital Voltage Regulator, 2-Wire Start Capability, Date/Time Fault History (Event Log), Isochronous Governor Control, Waterproof/Sealed Connectors, Audible Alarms and Shutdowns, Not in Auto (Flashing Light)

- Auto On/Manual Switch, E-Stop (Red Mushroom-Type), NFPA110 Level I and II (Programmable), Customizable Alarms, Warnings, and Events, Modbus™ Protocol, Predictive Maintenance Algorithm, Sealed Boards, Password/Parameter Adjustment Protection, Single Point Ground, 16 Channel Remote Trending, 0.2 msec High Speed Remote Trending, Alarm Information Automatically Annunciated on the Display

- Alarms and Warnings: Oil Pressure, Coolant Temperature, Customizable Level, Engine Overspeed, Battery Voltage, Alarms and Warnings Time and Date Stamped, Snap Shots of Key Operation Parameters During Alarms and Warnings, Alarms and Warnings Spelled Out (No Alarm Codes)

SD025 | 2.2L | 25 kW INDUSTRIAL DIESEL GENERATOR SET



APPLICATION AND ENGINEERING DATA

Table with columns for General, Cooling System, Fuel System, Engine Governing, Lubrication System, and Alternator Specifications. Includes details like Make Perkins, Cooling System Type Closed Recovery, Fuel Type Ultra Low Sulfur Diesel Fuel, and Alternator Model K0025124Y21.

Table with columns for Standard Model, Pole, Field Type, Insulation Class - Rotor, Insulation Class - Stator, Total Harmonic Distortion, Telephone Interference Factor (TIF), Standard Excitation, Bearings, Coupling, Load Capacity - Standby, Prototype Short Circuit Test, Voltage Regulator Type, Number of Sensed Phases, Regulator Accuracy (Steady State).

SD025 | 2.2L | 25 kW INDUSTRIAL DIESEL GENERATOR SET



OPERATING DATA

Table with columns for Standby, Diesel - gph (Lph), Fuel Pump Flow (Combustion + Return) - gph (Lph). Includes values for Standby 25 kW, Amps: 104 and Diesel 25% at 0.9 (3.2) gph.

Table with columns for kW vs. Voltage Dip, Fuel Consumption Rates*. Includes kW values for 277/480 VAC, 30%, 208/240 VAC, 30%.

Table with columns for Standby, Diesel - gph (Lph), Fuel Pump Flow (Combustion + Return) - gph (Lph). Includes values for Standby 25 kW, Amps: 104 and Diesel 25% at 0.9 (3.2) gph.

Table with columns for Standby, Exhaust Flow (Rated Output), Exhaust Flow (Rated Output) (Post Turbocharger), I/Hg (kPa), Exhaust Temp (Rated Output). Includes values for Standby 285 (7.5) scfm.

Table with columns for Standby, Exhaust Flow (Rated Output), Exhaust Flow (Rated Output) (Post Turbocharger), I/Hg (kPa), Exhaust Temp (Rated Output). Includes values for Standby 285 (7.5) scfm.

Deration - Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO9046, BS5514, ISO8528, and DIN6271 standards. Standby - See Bulletin 0187510SSD Prime - See Bulletin 0187510SSD

SD025 | 2.2L | 25 kW INDUSTRIAL DIESEL GENERATOR SET



CONFIGURABLE OPTIONS

- ENGINE SYSTEM: Oil Heater, Critical Silencer (Open Set Only), Radiator Store Guard, Level 1 Fan and Belt Guards, NPT Flexible Fuel Line, Electrical System, Alternator System, Generator Set, Engine System, Circuit Breaker Options, Control System, Fuel System, Electrical System, Alternator System, Generator Set, Engine System, Circuit Breaker Options, Control System, Fuel System, Electrical System, Alternator System, Generator Set

ENGINEERED OPTIONS

- ENGINE SYSTEM: Coolant Heater Isolation Ball Valves, Fluid Containment Pan, CONTROL SYSTEM: Spare Inputs (x4) / Outputs (x4), Battery Disconnect Switch, ALTERNATOR SYSTEM: 3rd Breaker System, GENERATOR SET: Special Testing, FUEL TANKS: UL2085 Tank, Stainless Steel Tanks, Special Fuel Tanks, Vent Extensions

SD025 | 2.2L | 25 kW INDUSTRIAL DIESEL GENERATOR SET



DIMENSIONS AND WEIGHTS*

Table with columns for Run Time, Usable Capacity, L x W x H - in (mm), Weight - lbs (kg). Includes data for OPEN SET (Includes Exhaust Flex) and WEATHER PROTECTED ENCLOSURE.

Table with columns for Run Time, Usable Capacity, L x W x H - in (mm), Weight - lbs (kg). Includes data for LEVEL 1 ACOUSTIC ENCLOSURE.

Table with columns for Run Time, Usable Capacity, L x W x H - in (mm), Weight - lbs (kg). Includes data for LEVEL 2 ACOUSTIC ENCLOSURE.

Table with columns for Run Time, Usable Capacity, L x W x H - in (mm), Weight - lbs (kg). Includes data for LEVEL 2 ACOUSTIC ENCLOSURE.

* All measurements are approximate and for estimation purposes only. Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings.

T-Mobile logo and address: 12920 SE 38TH STREET, BELLEVUE, WA 98006

CROWN CASTLE logo and address: 1505 WESTLAKE AVE N, STE 800, SEATTLE, WA 98109

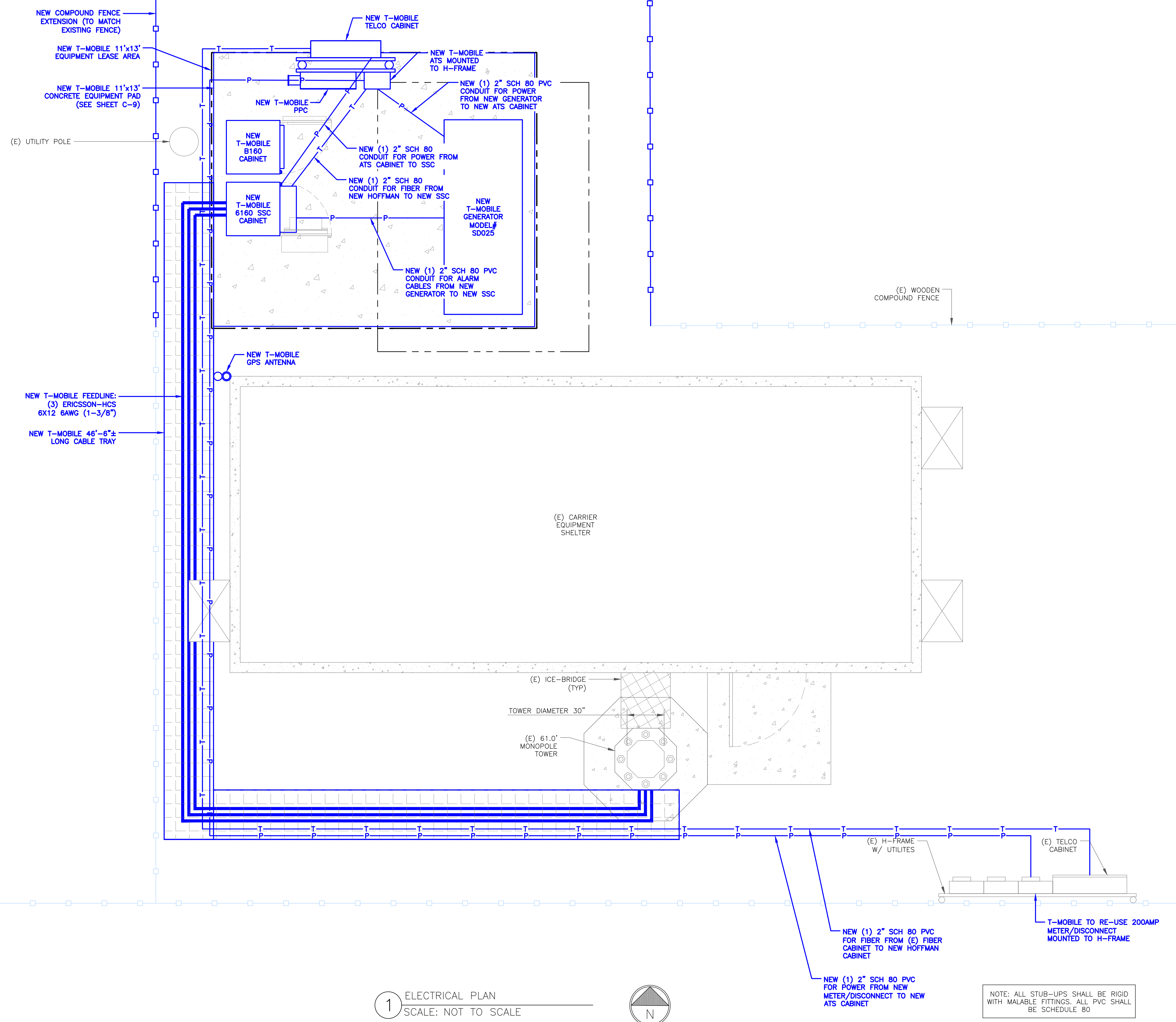
POD POWER OF DESIGN logo and address: 11490 BLUEGRASS PKWY, LOUISVILLE, KY 40299, 502-437-5252

T-MOBILE SITE NUMBER: SL07007A BU #: 845638 ROSE PARK

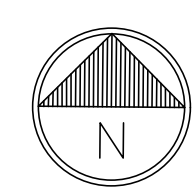
745 N WARM SPRINGS ROAD, SALT LAKE CITY, UT 84116 EXISTING 61.0 FT MONOPOLE

Table with columns: REV, DATE, DRWN, DESCRIPTION, DES./QA. Includes revision history from 0 to 8.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT. SHEET NUMBER: C-9 REVISION: 8



1 ELECTRICAL PLAN
SCALE: NOT TO SCALE



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502-437-5252

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BU #: **845638**
ROSE PARK

745 N WARM SPRINGS ROAD
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EXISTING 61.0 FT MONOPOLE

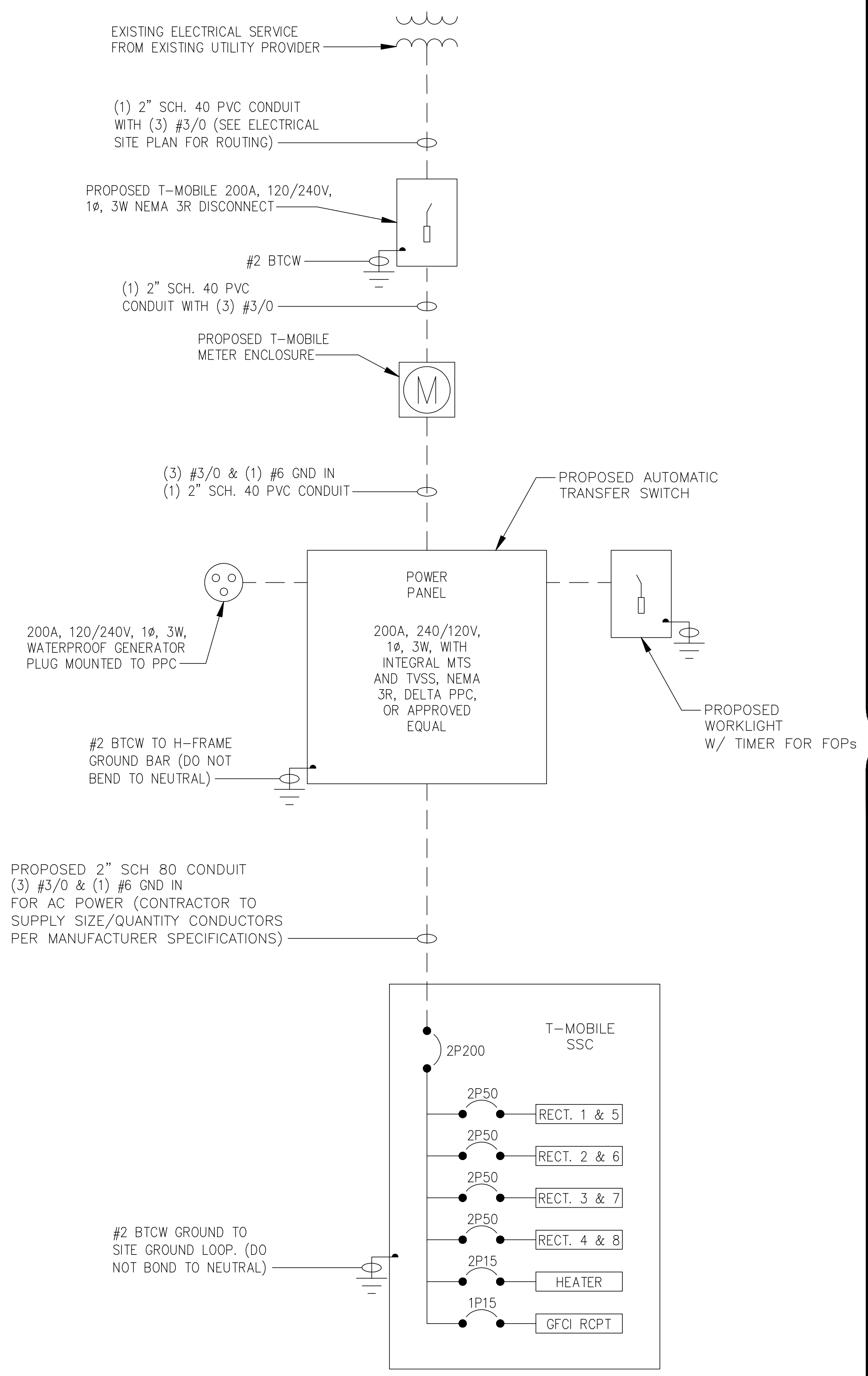
ISSUED FOR:

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2	04-09-2019	JAS	FINAL	ELG
3	05-07-2019	JAS	FINAL	ELG
4	07-17-2019	JAS	FINAL	ELG
5	12-22-2020	AK	FINAL	MEP
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8	01/11/2021	CPT	FINAL	MEP

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SHEET NUMBER: **E-1** REVISION: **8**

NOTE: ALL STUB-UPS SHALL BE RIGID WITH MALLEABLE FITTINGS. ALL PVC SHALL BE SCHEDULE 80



NOTE:
CONTRACTOR TO COORDINATE WITH LOCAL UTILITY PROVIDER PRIOR TO CONSTRUCTION

1 ONE-LINE DIAGRAM
SCALE: NOT TO SCALE

PANEL: PPC
120/240 VOLTS, 1 PHASE, 3 WIRE, S/N, 200A AMP MCB NEMA 3R ENCL
MINIMUM AIC RATING - 22,000A

DESCRIPTION	BKR	POLE	CKT	VA	Φ	VA	CKT	POLE	BKR	DESCRIPTION
SPACE			1	--	A		2			SPACE
2P BRANCH	--	--	3	--	B		4			SPACE
RECEPTACLE/LIGHTS	15	1	5	230	A		6			SPACE
SPACE	20	1	7		B	1000	8			SPACE
SPACE			9		A	1000	10	--	--	2P BRANCH
SPACE			11		B	15,000	12	2	100*	(N) RBS 6102 CABINET
SPACE			13		A	15,000	14	--	--	--
SPACE			15		B	--	16	--	--	2P BRANCH
SPACE			17		A	--	18	--	--	--

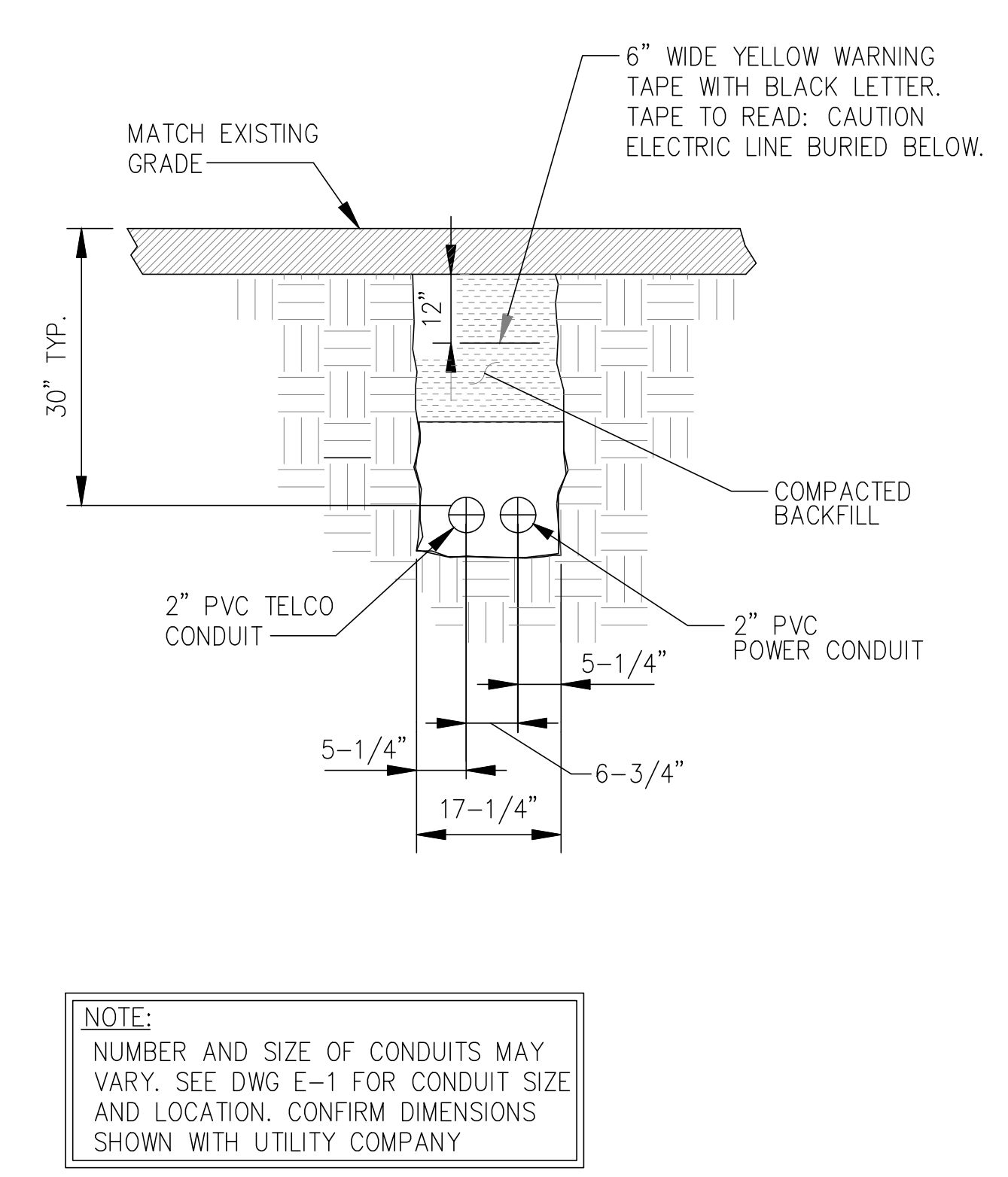
PANEL LOAD CALCULATIONS:

LIGHTS: 50 VOLTAMPS x 1.25 = 63 VA
 RECEPTACLE: 180 VOLTAMPS x 1.00 = 180 VA
 MISC. EQUIPMENT: 32050 VOLTAMPS x 1.00 = 32,050 VA

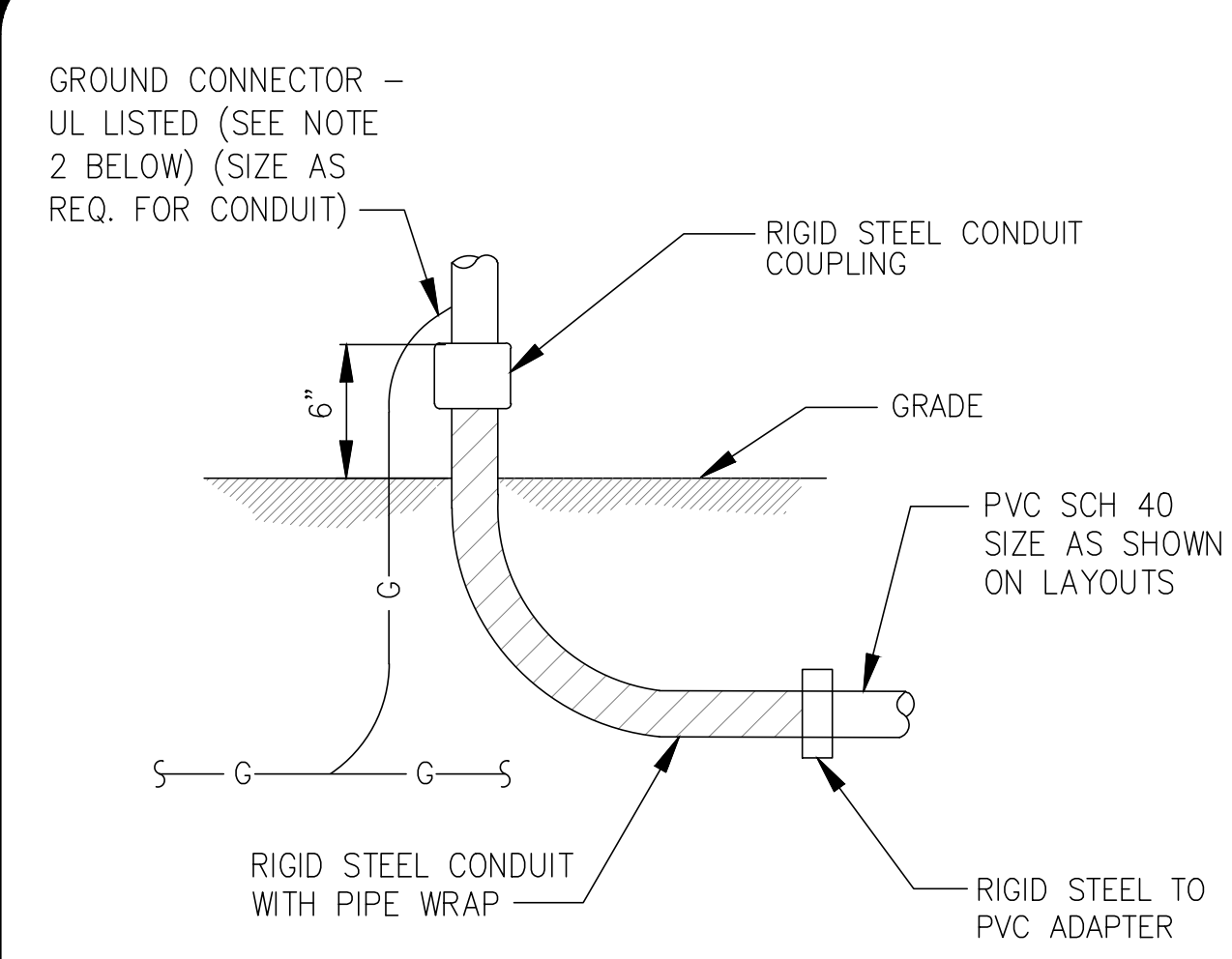
TOTAL CALCULATED CONNECTED LOAD: 32,280 VA
 TOTAL CALCULATED DEMAND LOAD: 32,293 VA

TOTAL CALCULATED DEMAND LOAD: 135A 120/240V 1PH 3W

2 BREAKER PANEL SCHEDULE
SCALE: NOT TO SCALE



3 CONDUIT TRENCH DETAIL
SCALE: NOT TO SCALE



NOTES:
 1. ALL CONDUIT ABOVE GRADE MUST BE RIGID STEEL OR LIQUIDTIGHT.
 2. ALL NEW STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 G90 AFTER FABRICATION.
 3. FIELD ABRASIONS SHALL BE TOUCH UP PAINTED WITH ZINC RICH GALVANIZING REPAIR PAINT IN ACCORDANCE WITH ASTM A780.
 4. ALL EXPOSED ENDS OF CONDUITS SHALL HAVE WEATHER PROOF CAPS. DO NOT USE DUCT TAPE.
 5. PROVIDE 200LB. TEST PULL WIRES IN EACH TELEPHONE AND POWER CONDUIT. STUB CONDUITS INTO ENCLOSURE AND LABEL.

4 UNDERGROUND CONDUIT STUB-UP
SCALE: NOT TO SCALE

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BU #: **845638**
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EXISTING 61.0 FT MONOPOLE

ISSUED FOR:

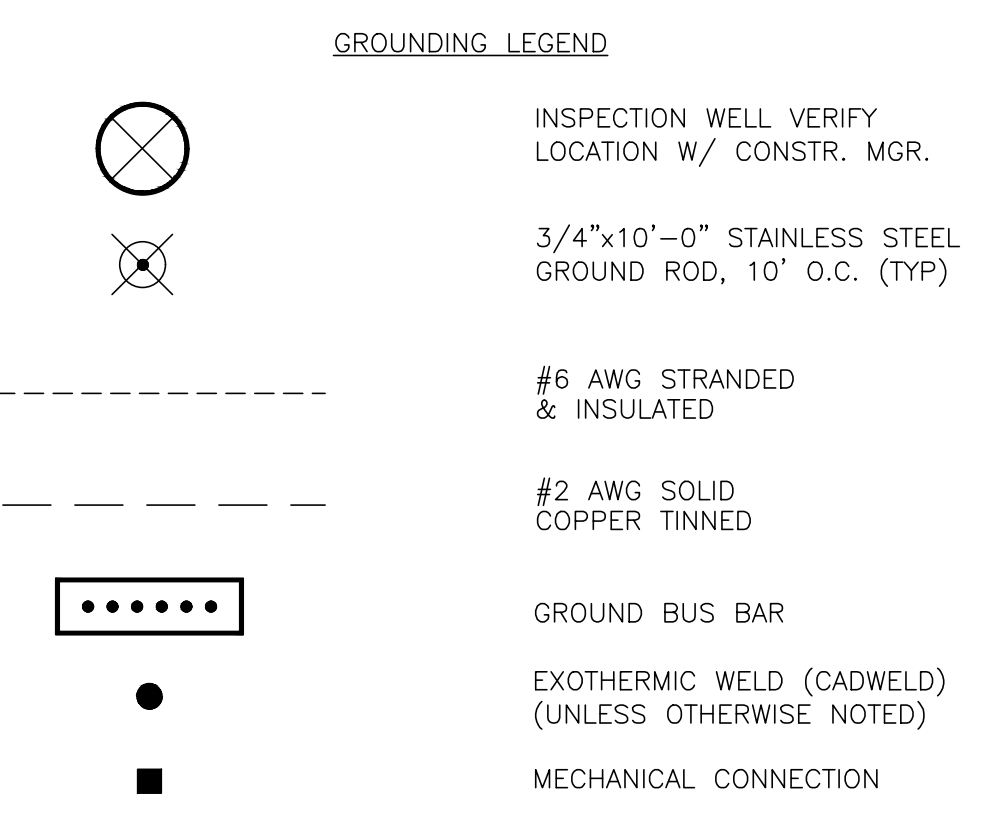
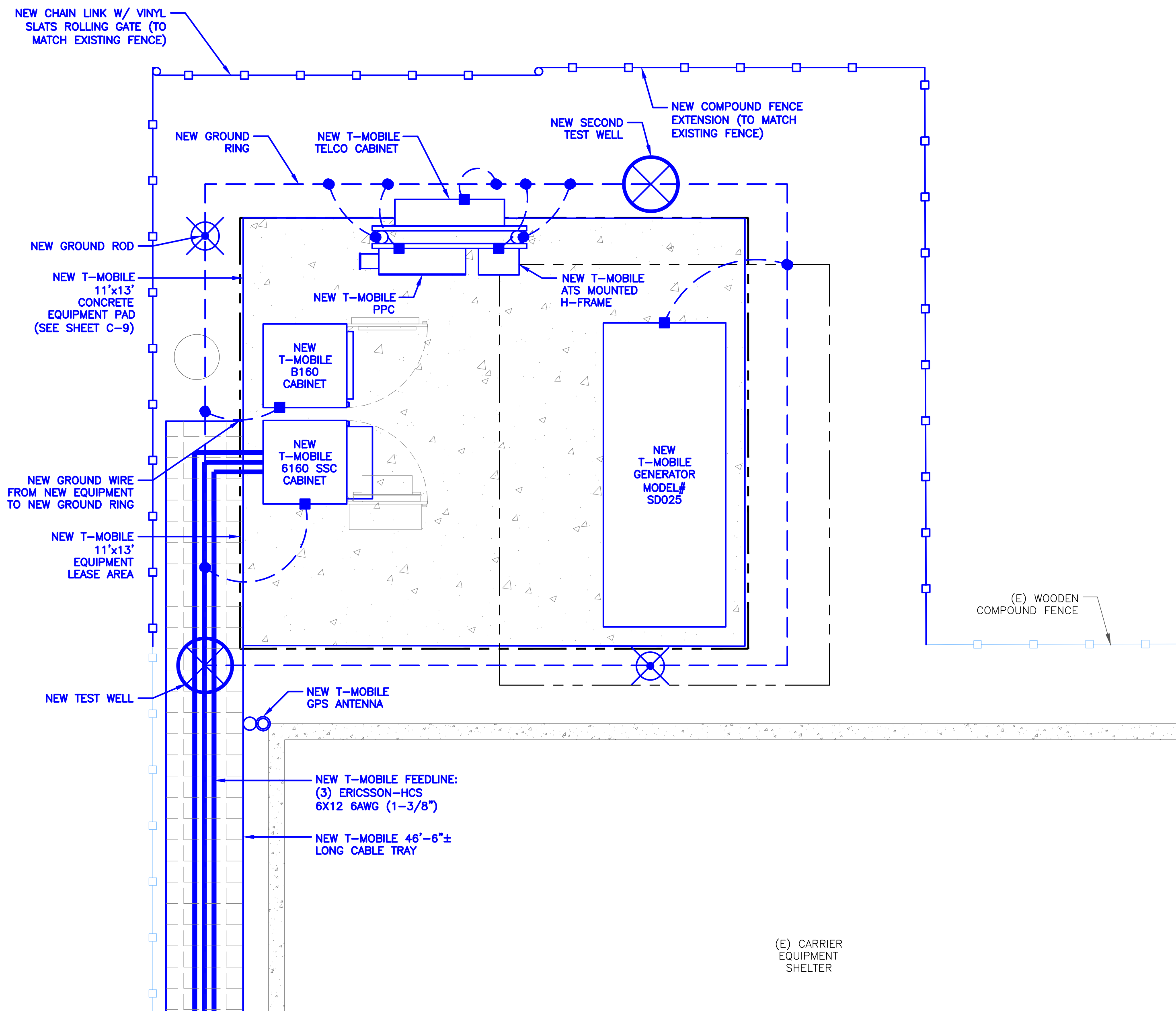
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PROFESSIONAL ENGINEER
 No. 970099-2202
 MARK E. PATTERSON
 STATE OF UTAH

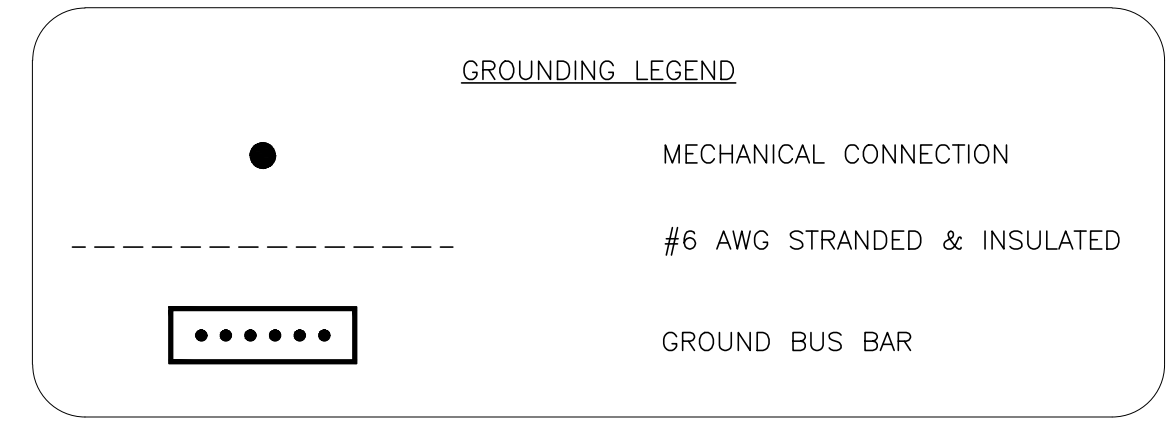
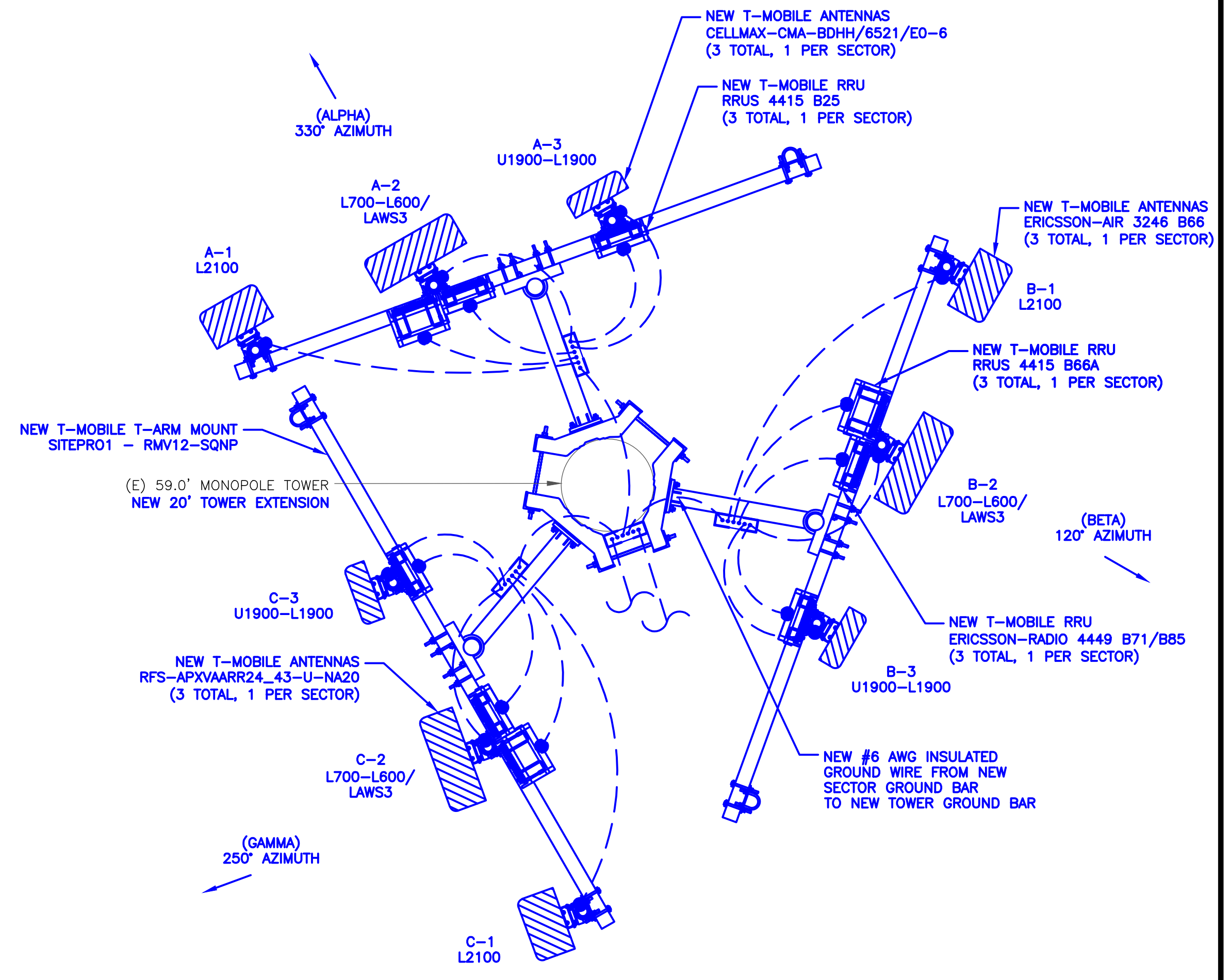
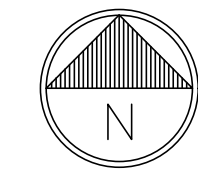
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SHEET NUMBER: **E-2** REVISION: **8**



1 EQUIPMENT GROUNDING DIAGRAM
SCALE: NOT TO SCALE



2 ANTENNA GROUNDING PLAN
SCALE: NOT TO SCALE



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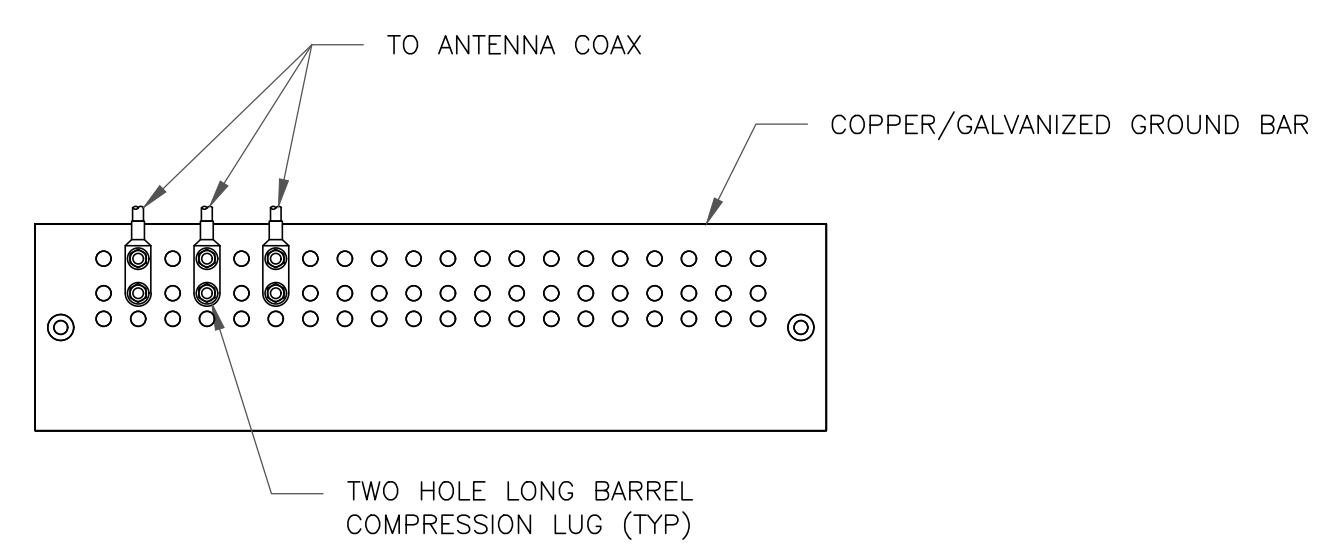
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01/11/2021

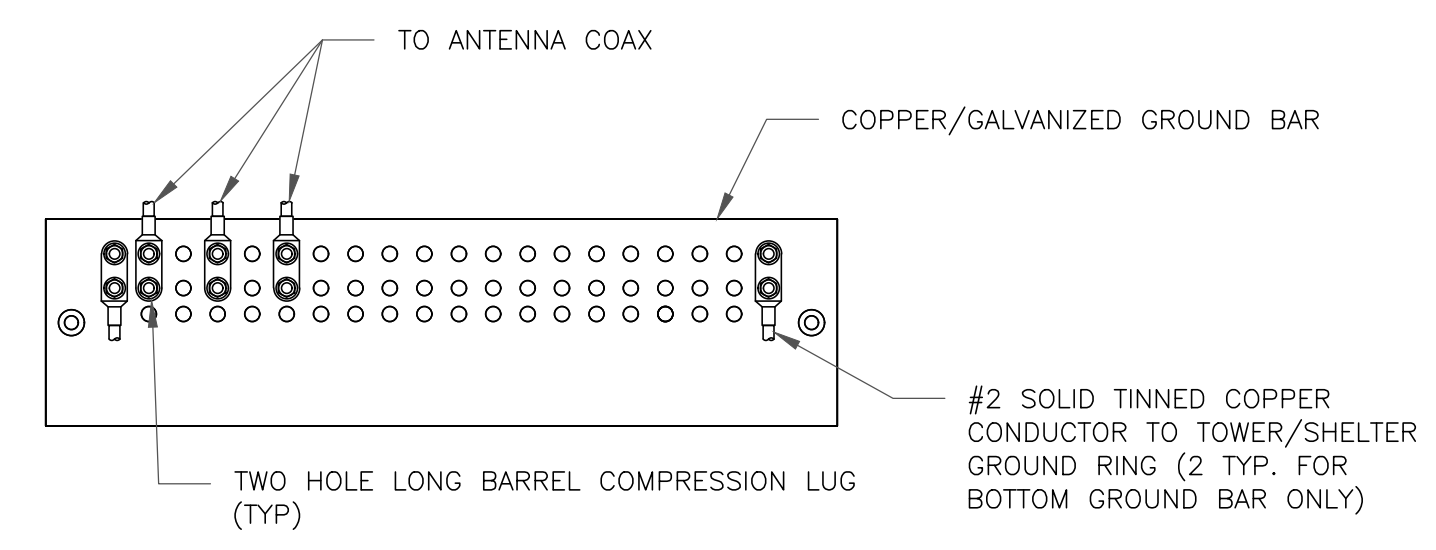
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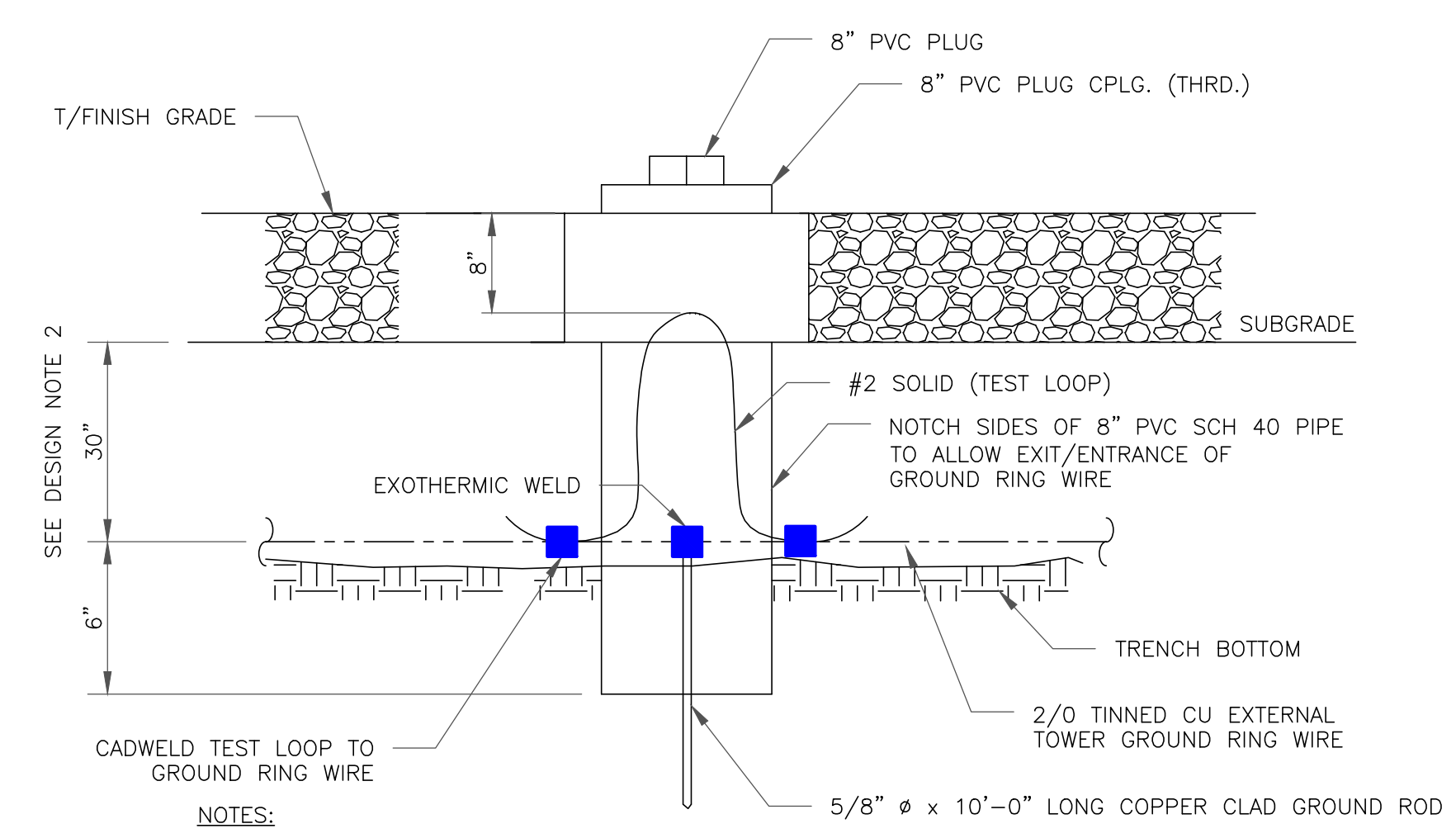
- NOTES:**
1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
 2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
 3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL.

1 ANTENNA GROUND BAR DETAIL
SCALE: NOT TO SCALE



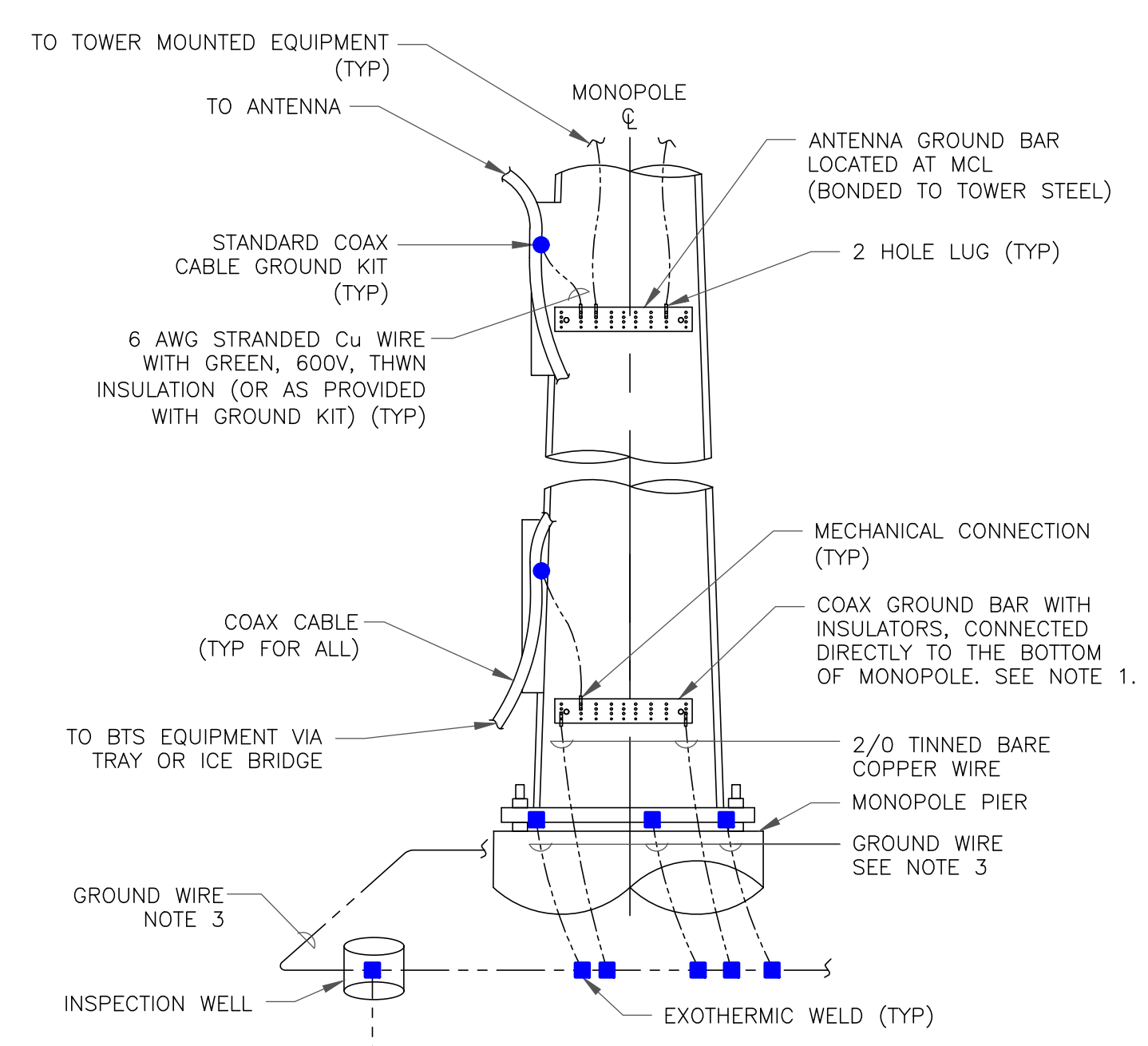
- NOTES:**
1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
 2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
 3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



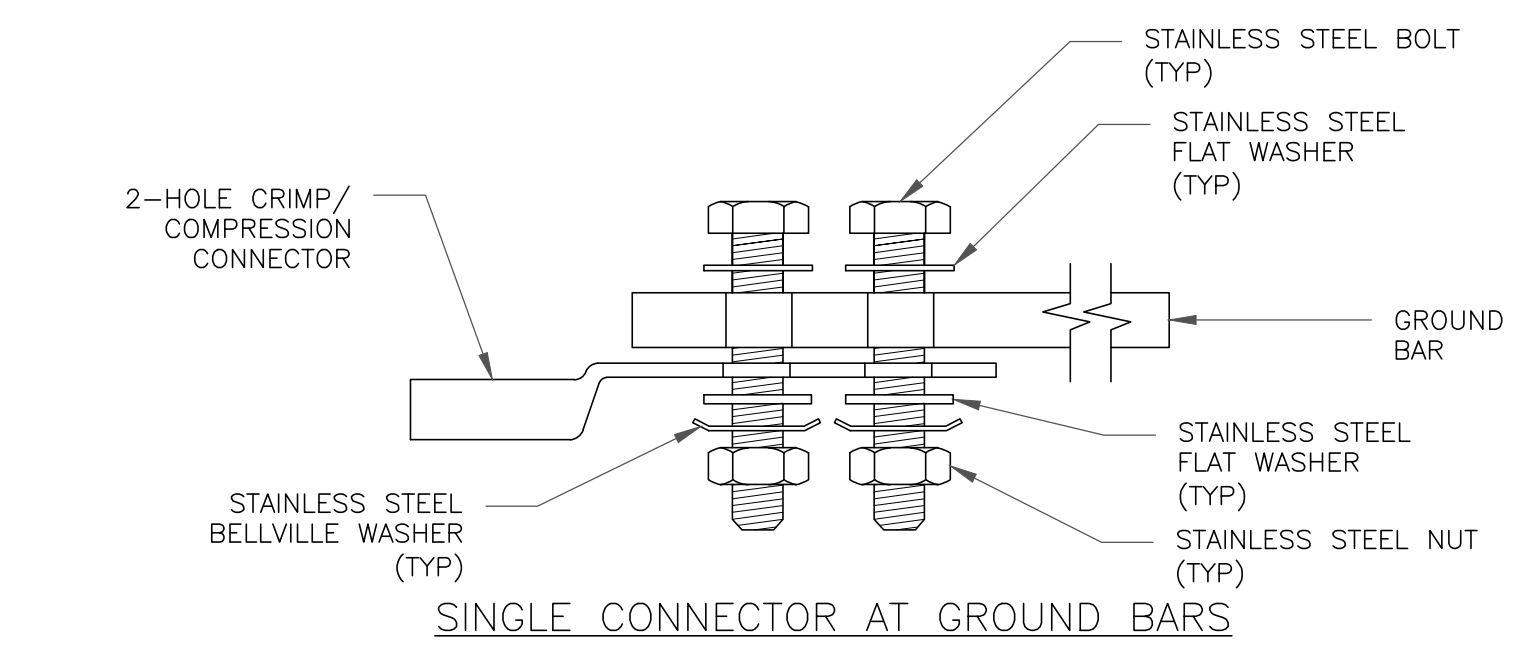
- NOTES:**
1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL
 2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

3 INSPECTION WELL DETAIL
SCALE: NOT TO SCALE

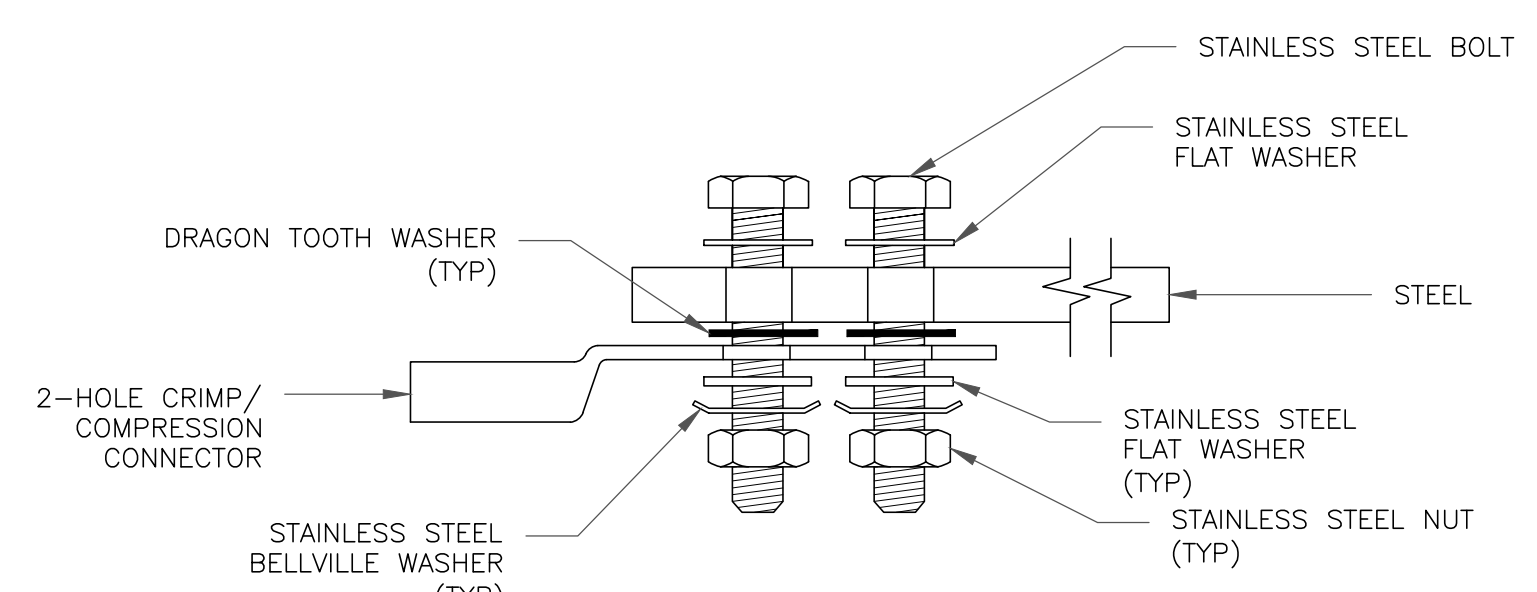


- NOTES:**
1. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. COAXIAL CABLES EXCEEDING 200 FEET ON THE TOWER SHALL HAVE GROUND KITS AT THE MIDPOINT. PROVIDE AS REQUIRED.
 2. ONLY MECHANICAL CONNECTIONS ARE ALLOWED TO BE MADE TO CROWN CASTLE TOWERS. ALL MECHANICAL CONNECTIONS SHALL BE TREATED WITH AN ANTI-OXIDANT COATING.
 3. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE RECOGNIZED EDITION OF ANSI/TIA 222 AND NFPA 780.

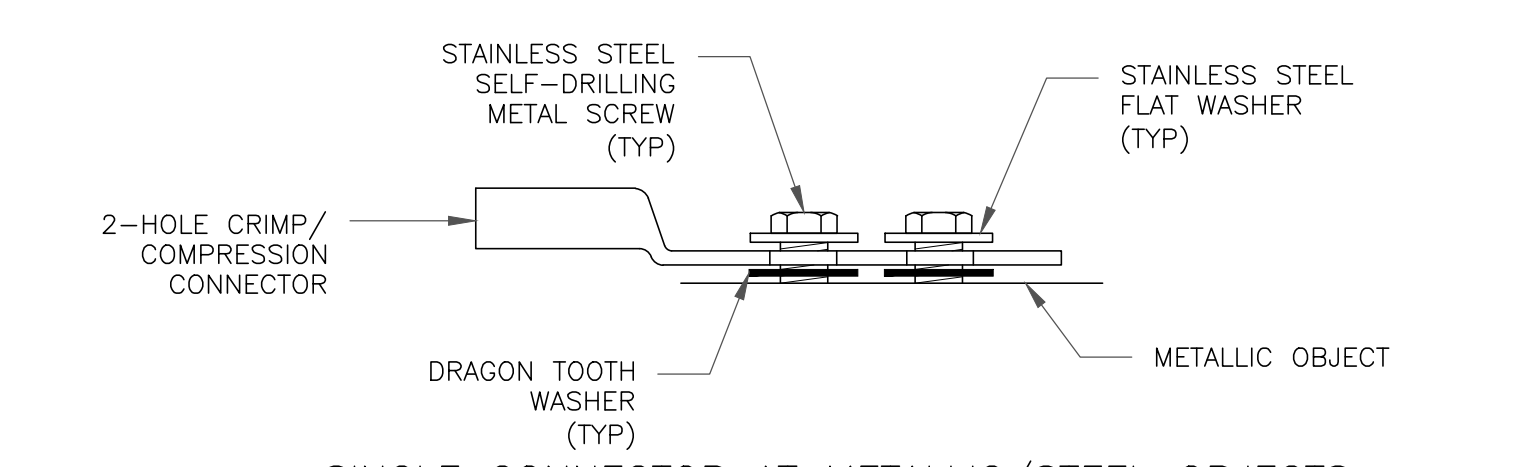
4 TYPICAL ANTENNA CABLE GROUNDING
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS

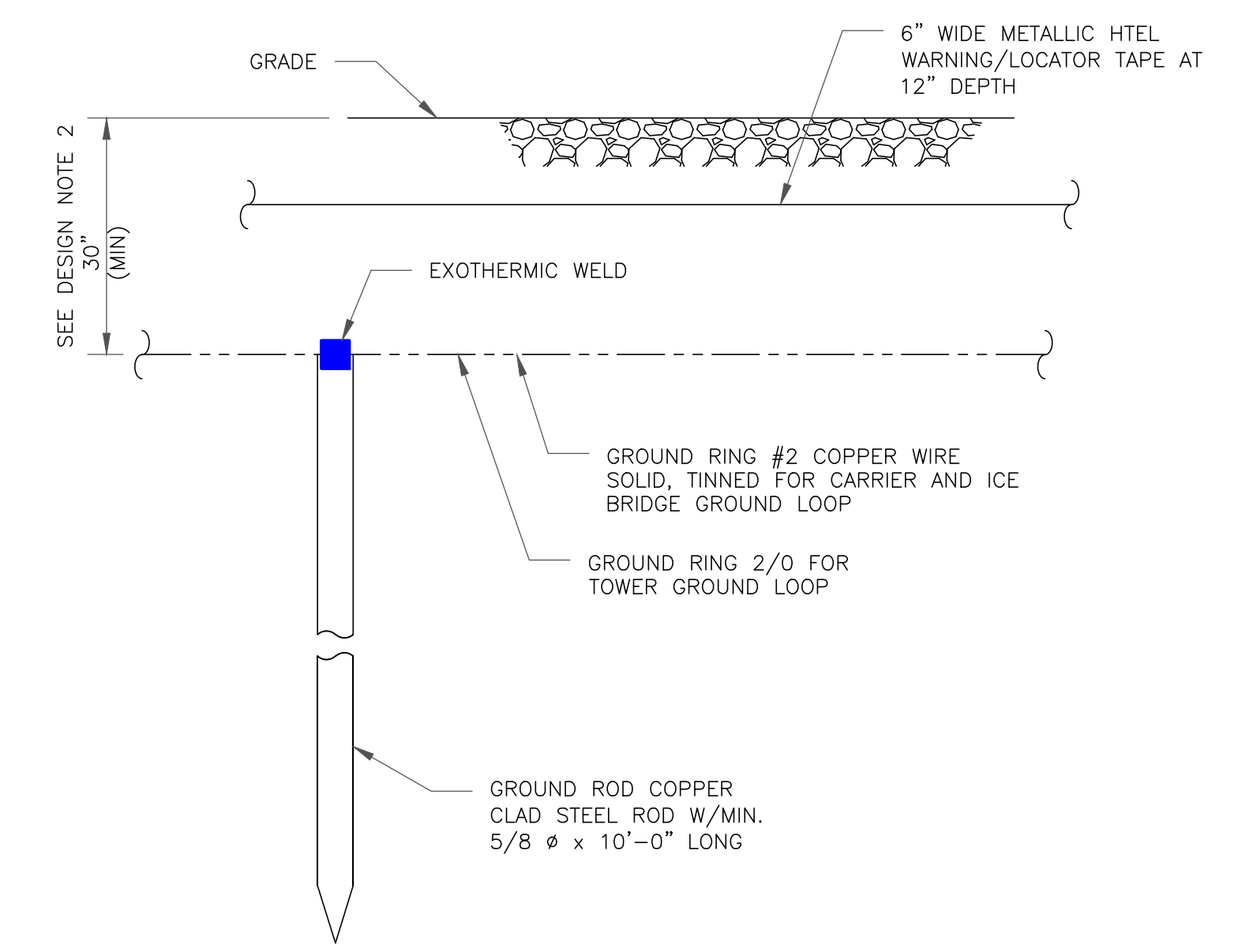


SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



- NOTES:**
1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL
 2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

6 GROUND ROD DETAIL
SCALE: NOT TO SCALE

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EXISTING 61.0 FT MONOPOLE

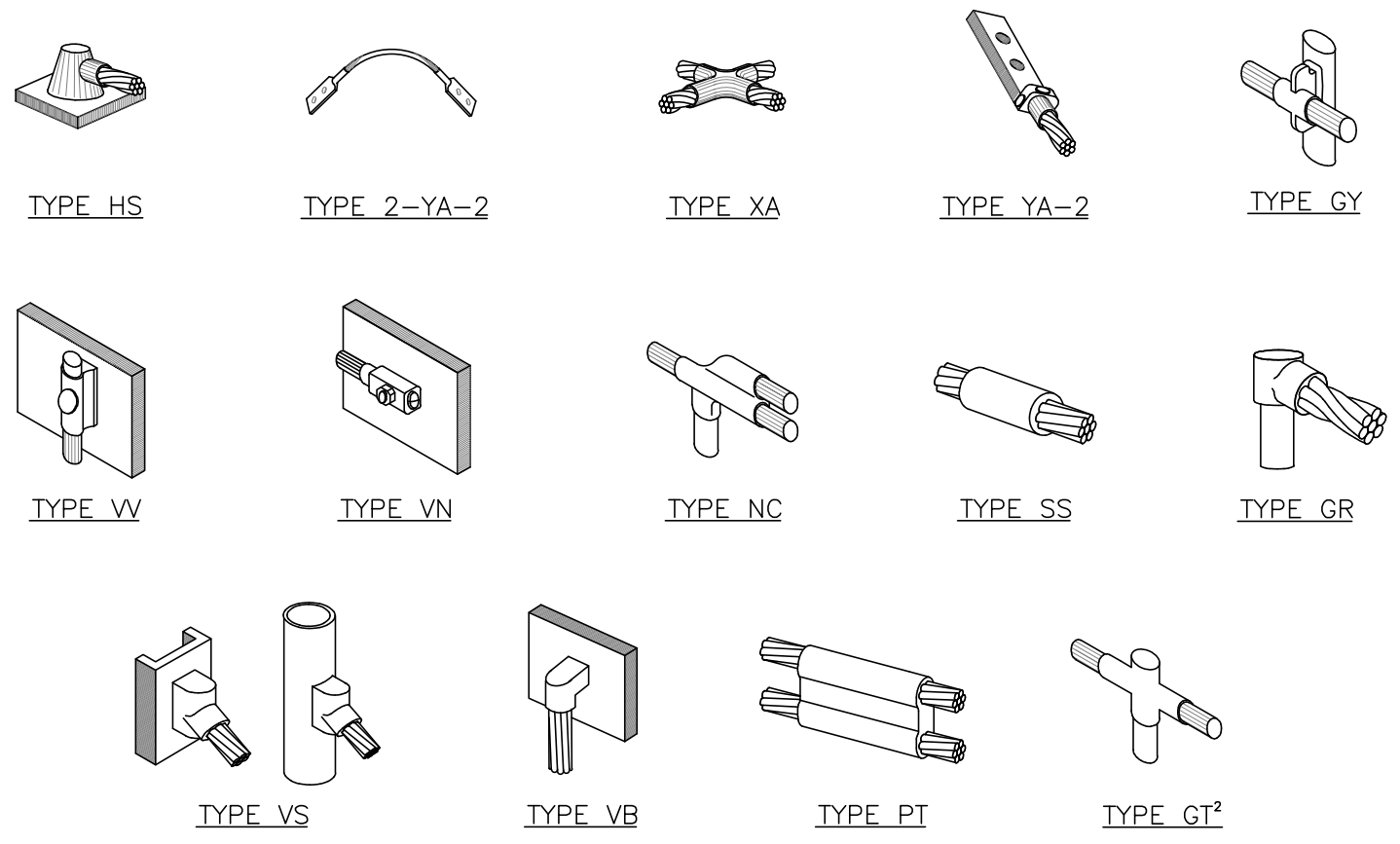
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PROFESSIONAL ENGINEER
No. 9000
MARK E. PATTERSON
STATE OF UTAH
01/11/2021

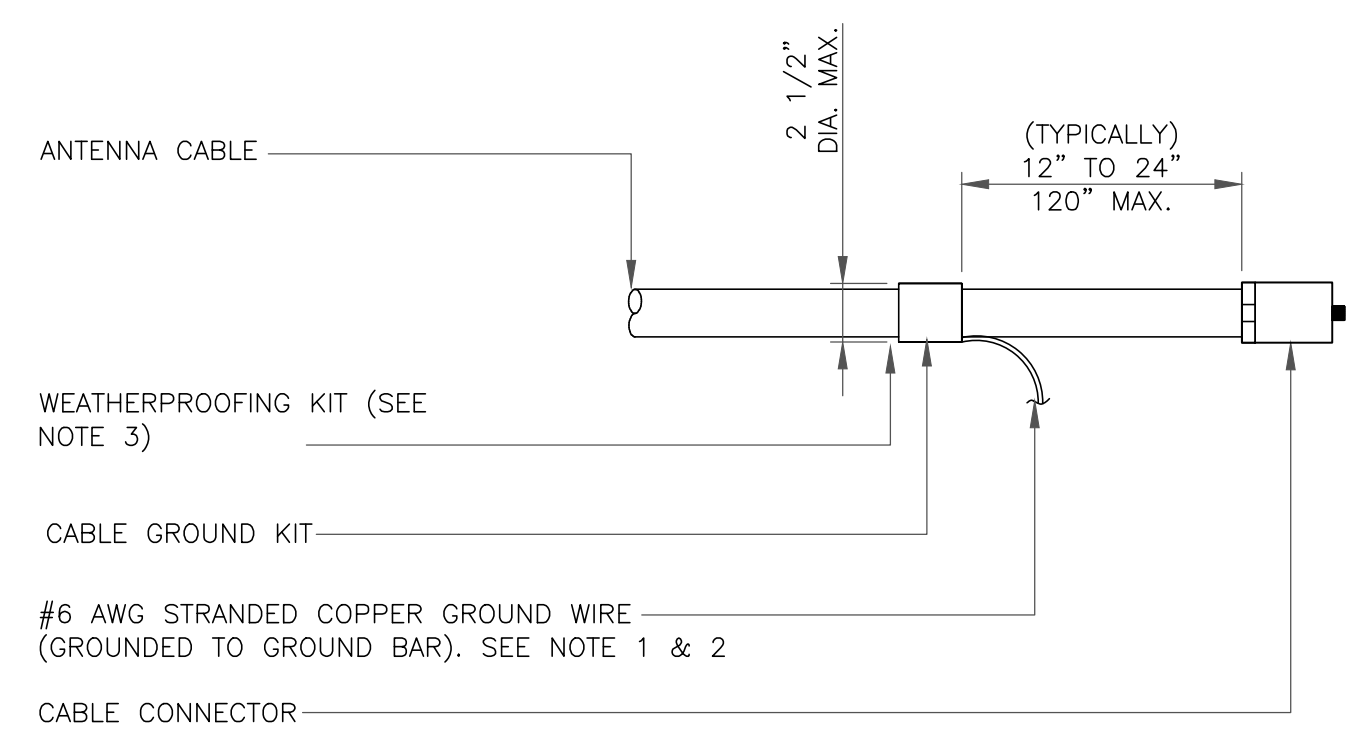
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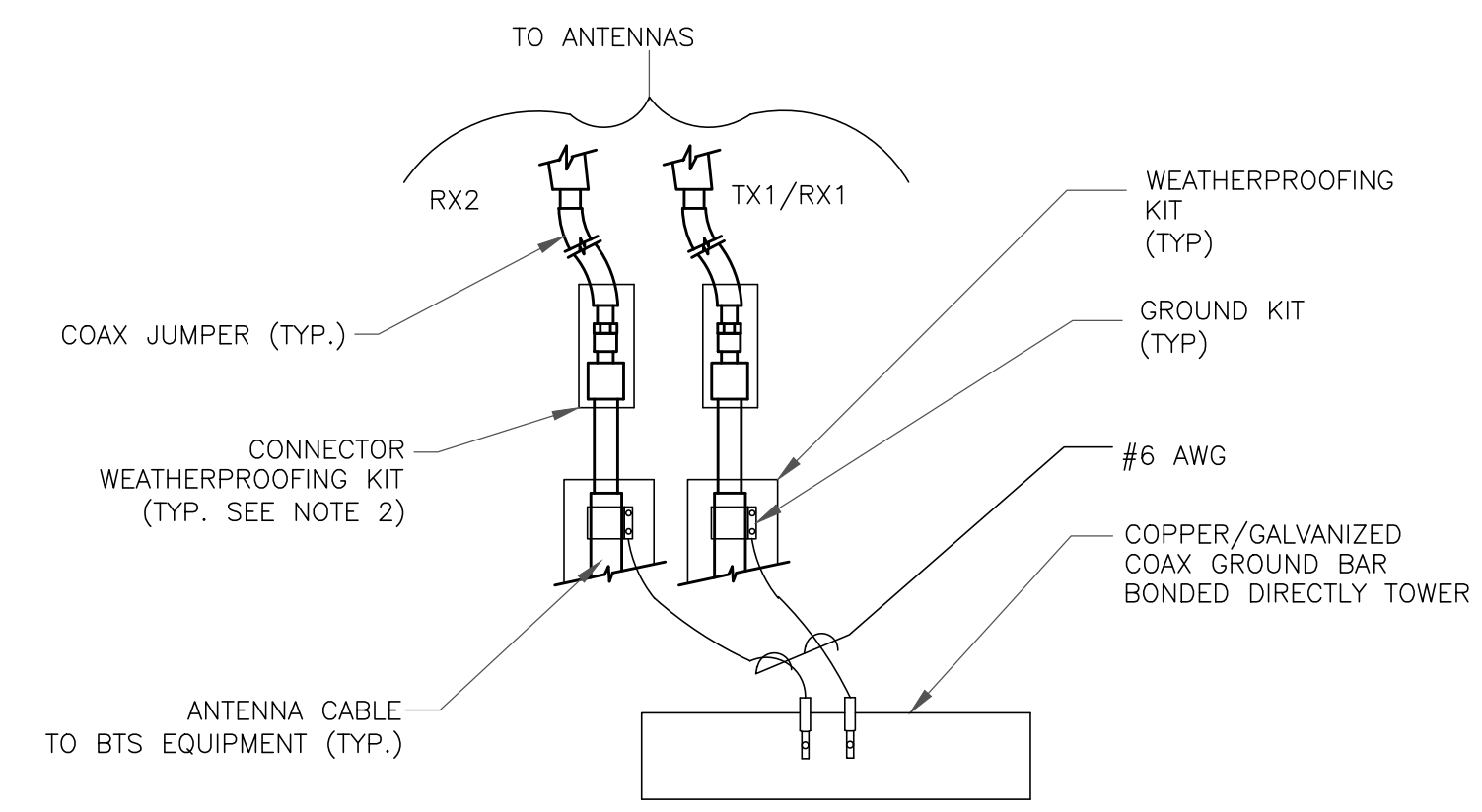
NOTE:
 1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
 2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

1 CADWELD GROUNDING CONNECTIONS
 SCALE: NOT TO SCALE



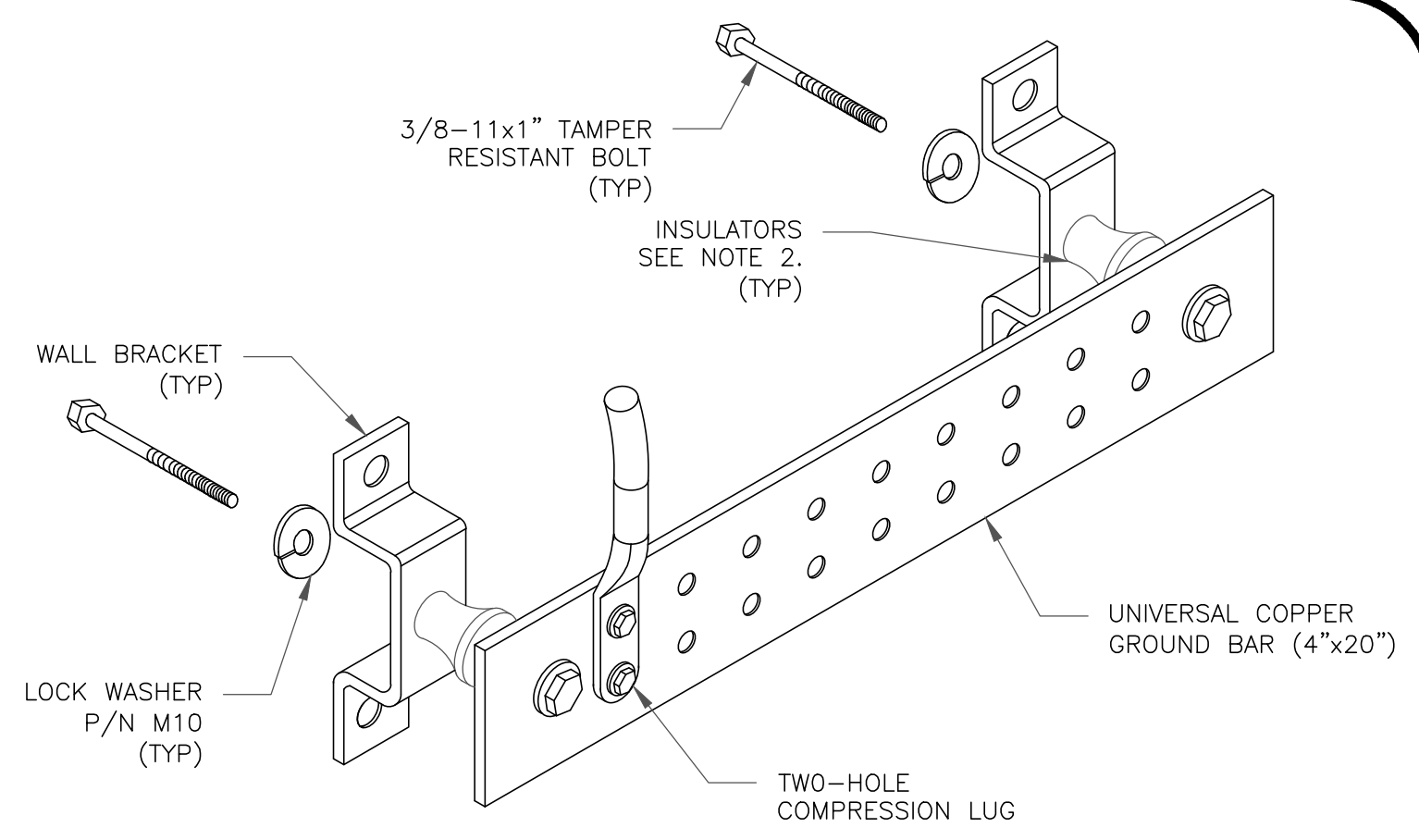
NOTES:
 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
 3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

3 CABLE GROUND KIT CONNECTION
 SCALE: NOT TO SCALE



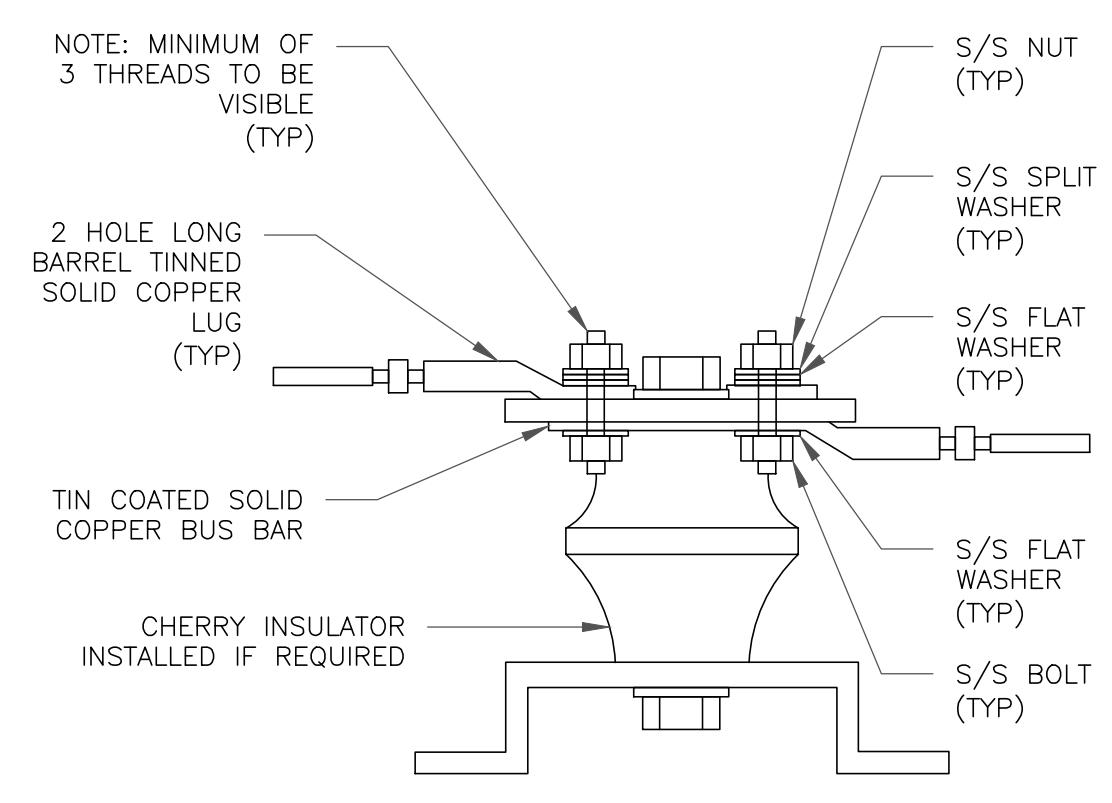
NOTES:
 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
 2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

4 GROUND CABLE CONNECTION
 SCALE: NOT TO SCALE



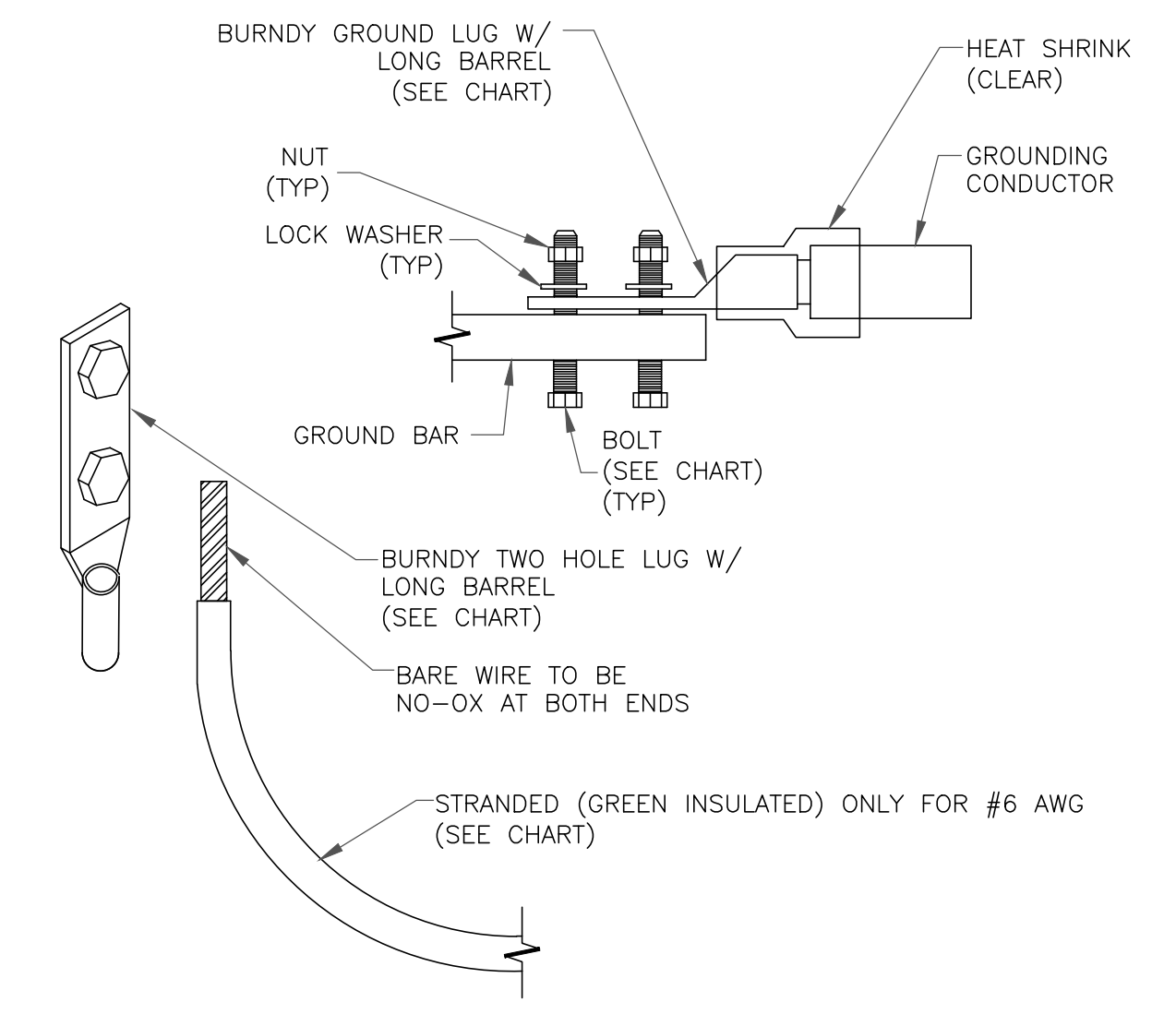
NOTES:
 1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
 2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL. USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

6 GROUND BAR DETAIL
 SCALE: NOT TO SCALE



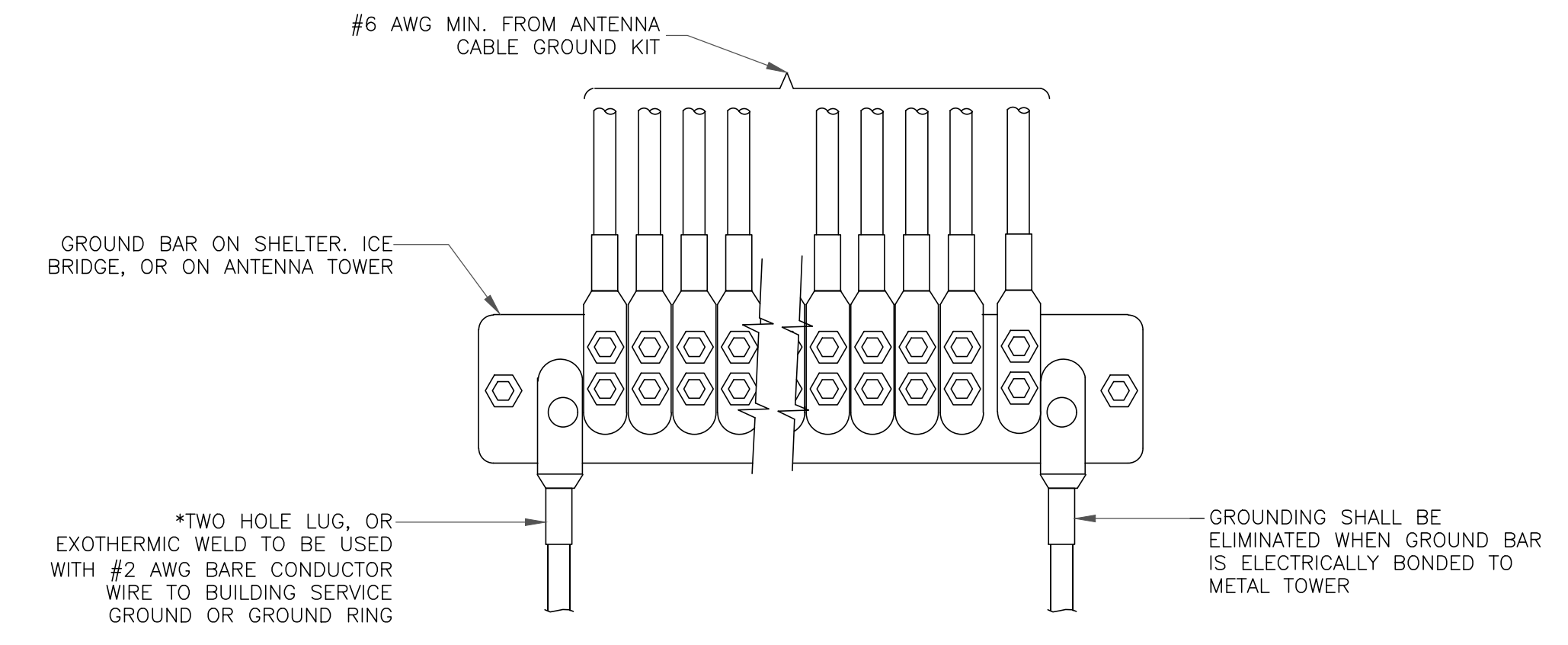
7 LUG DETAIL
 SCALE: NOT TO SCALE

WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



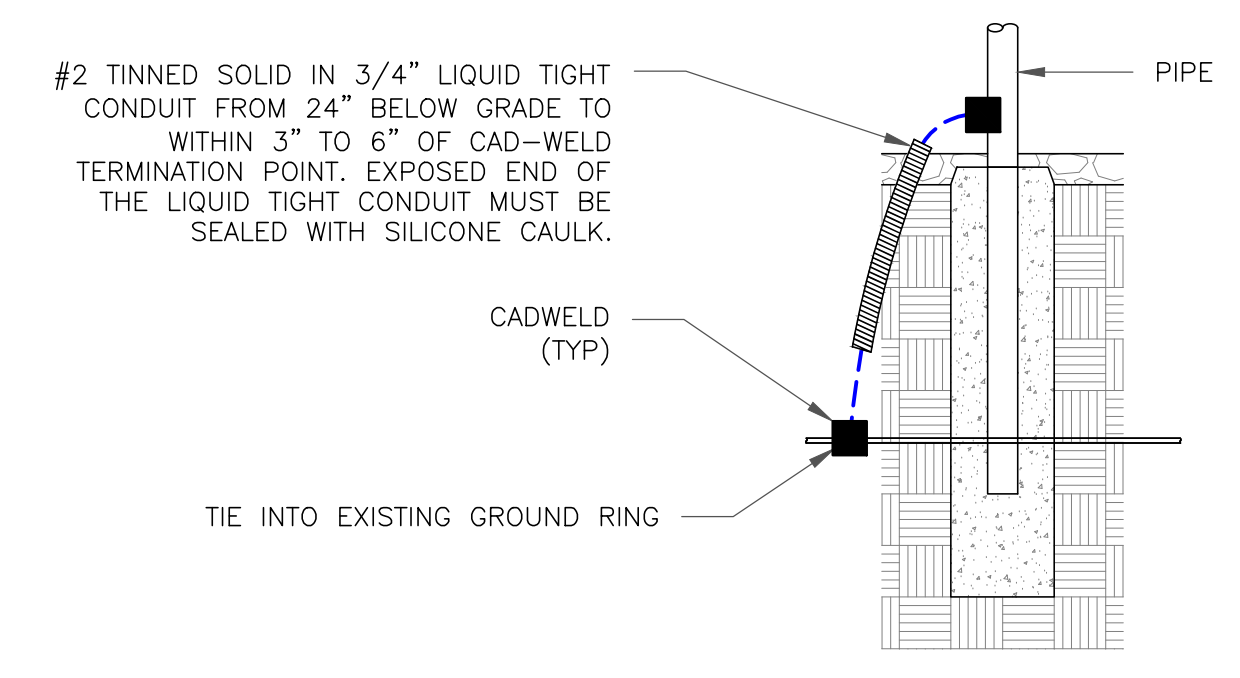
NOTES:
 1. ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.
 STRANDED (GREEN INSULATED) ONLY FOR #6 AWG (SEE CHART)
 BARE WIRE TO BE NO-OX AT BOTH ENDS

2 MECHANICAL LUG CONNECTION
 SCALE: NOT TO SCALE



*TWO HOLE LUG, OR EXOTHERMIC WELD TO BE USED WITH #2 AWG BARE CONDUCTOR WIRE TO BUILDING SERVICE GROUND OR GROUND RING
 GROUNDING SHALL BE ELIMINATED WHEN GROUND BAR IS ELECTRICALLY BONDED TO METAL TOWER

5 GROUNDWIRE INSTALLATION
 SCALE: NOT TO SCALE



8 TRANSITIONING GROUND DETAIL
 SCALE: NOT TO SCALE

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 STATE OF UTAH
 01/11/2021
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: **G-3** REVISION: **8**