



Staff Report

PLANNING DIVISION
DEPARTMENT of COMMUNITY and NEIGHBORHOODS

To: Administrative Hearing Officer, Salt Lake City Planning Division
From: Chris Earl, Principal Planner, christopher.earl@slcgov.com, (801) 535-7932
Date: April 27, 2021
Re: Conditional Use for a Monopole Cellular Antenna Expansion (PLNPCM2021-00137)

Conditional Use

PROPERTY ADDRESS: 745 N Warm Springs Road
MASTER PLAN: Capitol Hill
ZONING DISTRICT: M-1 Light Manufacturing

REQUEST: T-Mobile, represented by Craig Chagnon of Crown Castle USA Inc., is requesting to install a new antenna array with 9 new antennas on top of an existing monopole cellular antenna as well as new ground mounted electrical equipment on the property located at approximately 745 N Warm Springs Road. The subject property is located within the M-1 Light Manufacturing District. This zoning district requires that monopole cellular antennas taller than 60 feet in height be reviewed as a Conditional Use. The request would increase the height of the monopole from 61 feet to 81 feet. The new antenna array will have a smaller overall diameter than the existing array.

RECOMMENDATION/MOTION: Based on the information in this staff report, staff recommends that the Administrative Hearing Officer approve the proposed conditional use for the telecommunications facility expansion subject to the conditions listed below.

The following motion is provided in support of the recommendation:

Based on the findings and information listed in the staff report and the testimony and plans presented, I move that the Administrative Hearing Officer approve the requested conditional use application for the Monopole Cellular Antenna Expansion filed under Planning application PLNPCM2021-00137 subject to the following conditions:

- 1. Any modifications to the approved plans after the issuance of a building permit must be specifically requested by the applicant and approved by the Planning Division prior to execution.*
- 2. Applicant shall comply with all other department/division requirements.*

ATTACHMENTS:

- [A. Vicinity Aerial](#)
- [B. Applicant's Narrative](#)
- [C. Site and Facility Plans](#)
- [D. Existing Conditions](#)

- [E. Analysis of Standards](#)
- [F. Public Process and Comments](#)
- [G. Department Review Comments](#)

PROJECT DESCRIPTION:

This petition is to install a new antenna array with 9 new antennas on top of an existing monopole cellular antenna as well as new ground mounted electrical equipment on the property located at approximately 745 N Warm Springs Road. The subject property is located within the M-1 Light Manufacturing District. The request would increase the height of the monopole from 61 feet to 81 feet. The new antenna array will have a smaller overall diameter than the existing array. Section 21A.40.090.E of the Zoning Ordinance requires that monopole cellular antennas taller than 60 feet in height located in the M-1 Light Manufacturing District be reviewed as a Conditional Use.

Background

The subject property is a commercial property located in the Capitol Hill area measuring approximately 1.34 acres in size. The property fronts Warm Springs Road and backs up to Interstate 15 abutting the rear of the property. The existing utility pole and electrical equipment is located along the south side of the subject property toward the southeast corner. New equipment will be installed adjacent to the existing equipment within a screened fence equipment area.



KEY CONSIDERATIONS:

The key considerations were identified through the analysis of the project ([Attachment E](#)) and department review comments ([Attachment G](#)) and are discussed further in the following section of this report.

Consideration 1 – Visual and Neighborhood Impacts:

The monopole cellular antenna currently exists on the subject property. The proposed modification would increase the overall height of the pole from 61' to 81' in height and the new array will have a smaller diameter

than the existing array. The current visual impact will have minimal intensification. Surrounding properties include the I-15 freeway to the west, a self-storage yard to the east, a contractor's yard to the north and a parcel containing a billboard to the south. Due to the nature of the uses on the surrounding properties, an increase in negative impact with the proposed modification to the monopole is not expected.

Consideration 2 – Location of the Wireless Site Compound and Utility pole on the Site

The existing monopole antenna and electrical equipment is located on the southern portion of the side yard of the parcel towards the southeast corner of the property. With the proximity of the pole in relation to the I-15 freeway and adjacent to a parcel containing only a billboard, the impact on the surrounding properties is minimal. The location is illustrated on the aerial photograph included in [Attachment A](#).

DISCUSSION:

The existing wireless facility is allowed as a conditional use in the M-1 Light Manufacturing District. The proposed array expansion is allowed as a conditional use. The use for the wireless telecommunications facility should be approved if reasonable conditions are proposed, or can be imposed, to mitigate the reasonably detrimental effects of the proposed use.

The proposed use meets the Conditional Use standards and Detrimental Effects Determination as analyzed and discussed in [Attachment E](#) of this report. No detrimental impacts are anticipated and as such, the conditional use should be approved by the Administrative Hearing Officer.

NEXT STEPS:

If the conditional use is approved, the applicant will be required to comply with all other department/division requirements and obtain all necessary building permits for the project.

ATTACHMENT A: VICINITY AERIAL



ATTACHMENT B: APPLICANT'S NARRATIVE



116 Inverness Drive East, Ste. 300
Englewood, CO 80112

Phone: [REDACTED]
Fax: [REDACTED]
www.crowncastle.com

February 19, 2021

SALT LAKE CITY CORPORATION
PLANNING DIVISION
451 SOUTH STATE STREET
SUITE 406
SALT LAKE CITY, UT

RE: Eligible Facilities Request to modify equipment on a communications tower located at:
745 N WARM SPRINGS ROAD, SALT LAKE CITY, UT, 84116
Crown Site Number: 845638 / Crown Site Name: ROSE PARK
Customer Site Number: SLO7007A / Application Number: 456325

Crown Castle USA Inc. ("Crown Castle") on behalf of T-Mobile West LLC ("T-Mobile") is submitting the attached Conditional Use application as an Eligible Facilities Request application to add transmission equipment on a telecommunications tower located at 745 N WARM SPRINGS ROAD, SALT LAKE CITY, UT 84116 in CITY OF SALT LAKE, UT (the "ROSE PARK Tower").

Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, commonly known as the "Spectrum Act" (Pub. Law No. 112-96, 126 Stat 156), mandates that state and local governments "may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." Additionally, if "the reviewing State or local government determines that the application is incomplete" [they] "must provide written notice to the applicant within 30 days of receipt of the application, clearly and specifically delineating all missing documents or information." Under federal law, an Eligible Facilities Request is deemed granted with written notification in sixty (60) days after an application is filed with a local jurisdiction, excluding tolling

T-Mobile proposes to modify the "ROSE PARK Tower" as follows:

TOWER SCOPE OF WORK:

- INSTALL (9) PANEL ANTENNAS
- INSTALL (9) RRUs
- 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



116 Inverness Drive East, Ste. 300
Englewood, CO 80112

Phone: [REDACTED]
Fax: [REDACTED]
www.crowncastle.com

- 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)

Itemized list of submittal documents:

- CUP Application
- Project Narrative – 6409 Eligible Facility Request Letter
- CDs, Site Plan, Elevations, Equipment Detail

Conditional Use Information

- If applicable, what is the anticipated operating/delivery hours associated with the proposed use
 - This is an unmanned facility operating 24/7 with occasional maintenance visits.
- What are the land uses adjacent to the property (abutting and across-the-street properties)
 - Property located in the M-1 zone. Adjacent properties are also in M-1. Adjacent on the West side is Interstate 15.
- How many employees are expected to work on-site during the highest shift
 - This is an unmanned facility operating 24/7 with occasional maintenance visits.
- If applicable, how many seats will be provided as part of the conditional use
 - This is an unmanned facility operating 24/7 with occasional maintenance visits.
- Have you discussed the project with nearby property owners? If so, what responses have you received?
 - No. This is an existing, permitted facility in the M-1 Zone.

T-Mobile is committed to working cooperatively with all jurisdictions around the country to secure expeditious approval of requests to modify existing personal wireless service facilities. If you should require more information regarding the CUP application, please do not hesitate to contact me with your questions.

Sincerely,

Craig Chagnon

Craig Chagnon
Real Estate Specialist



ATTACHMENT C: SITE AND FACILITY PLANS



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 SITE NUMBER: SL07007A

T-MOBILE SITE NAME: SL07007A

SITE TYPE: MONOPOLE

TOWER HEIGHT: 61.0 FT

CROWN CASTLE BU #: 845638

SITE ADDRESS: 745 N WARM SPRINGS ROAD
SALT LAKE CITY, UT 84116

COUNTY: SALT LAKE

JURISDICTION: CITY OF SALT LAKE CITY

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

SITE INFORMATION

CROWN CASTLE USA INC.
SITE NAME:
SITE ADDRESS:

COUNTY:
MAP/PARCEL #:
AREA OF CONSTRUCTION:
LATITUDE:
LONGITUDE:
LAT/LONG TYPE:
GROUND ELEVATION:
CURRENT ZONING:
JURISDICTION:
OCCUPANCY CLASSIFICATION:
TYPE OF CONSTRUCTION:
A.D.A. COMPLIANCE:

ROSE PARK

745 N WARM SPRINGS ROAD
SALT LAKE CITY, UT 84116

SALT LAKE
08-26-479-004-000
EXISTING
40° 47' 6.74"/40.7852300000°
-111° 54' 41.20"/-111.9114900000°
NAD83
4,225 FT

CITY OF SALT LAKE CITY
U
VB
FACILITY IS UNMANNED AND NOT FOR
HUMAN HABITATION

MOWER LEASING COMPANY LLC
3310 E TWIN PEAKS DRIVE
LAYTON, UT 84040

CROWN CASTLE, USA
2000 CORPORATE DRIVE
CANONSBURG, PA 15317

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

PACIFICORP
(888) 221-7070

AT&T MOBILITY
(800) 331-0500

DRAWING INDEX	
SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
T-3	GENERAL NOTES
C-1.1	OVERALL SITE PLAN
C-1.2	FINAL SITE PLAN
C-2	EQUIPMENT PLAN & DIMENSION PLAN
C-3	TOWER ELEVATIONS
C-4	ANTENNA PLAN
C-5	EQUIPMENT DETAILS
C-6	EQUIPMENT DETAILS
C-7	CONCRETE PAD DETAILS
C-8	MOUNT SPECIFICATION
C-9	GENERATOR DETAILS
E-1	ELECTRICAL PLAN
E-2	ELECTRICAL SPECIFICATIONS
G-1	EQUIPMENT AND ANTENNA GROUNDING PLAN
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS
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.	

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

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 NO. 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

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

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

SITE PHOTO

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
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
9	04/02/2021	MAJ	FINAL	MEP

04/02/2021

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:
9

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.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR-
SUBCONTRACTOR-
CARRIER-
TOWER OWNER-
OEM-
GENERAL CONTRACTOR (CONSTRUCTION)
T-MOBILE
CROWN CASTLE
ORIGINAL EQUIPMENT MANUFACTURER
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 AND 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 GROUNDDED 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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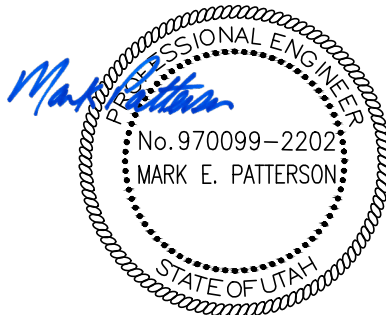
BU #: **845638**
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745 N WARM SPRINGS ROAD
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EXISTING 61.0 FT MONOPOLE

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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

- ALL TENSION SPLICES TO BE CLASS B TENSION SPLICES UNLESS NOTED OTHERWISE
- BAR SPACING TO BE A MINIMUM OF 2 BAR DIAMETERS
- STAGGER SPLICES A MINIMUM OF ONE LAP LENGTH
- 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 HOLDDOWNS 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 TAILER 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.

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:				
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7	01/05/2021	CPT	FINAL	MEP
8	01/11/2021	CPT	FINAL	MEP
9	04/02/2021	MAJ	FINAL	MEP

Professional Engineer

Mark E. Patterson

No. 970099-2202

MARK E. PATTERSON

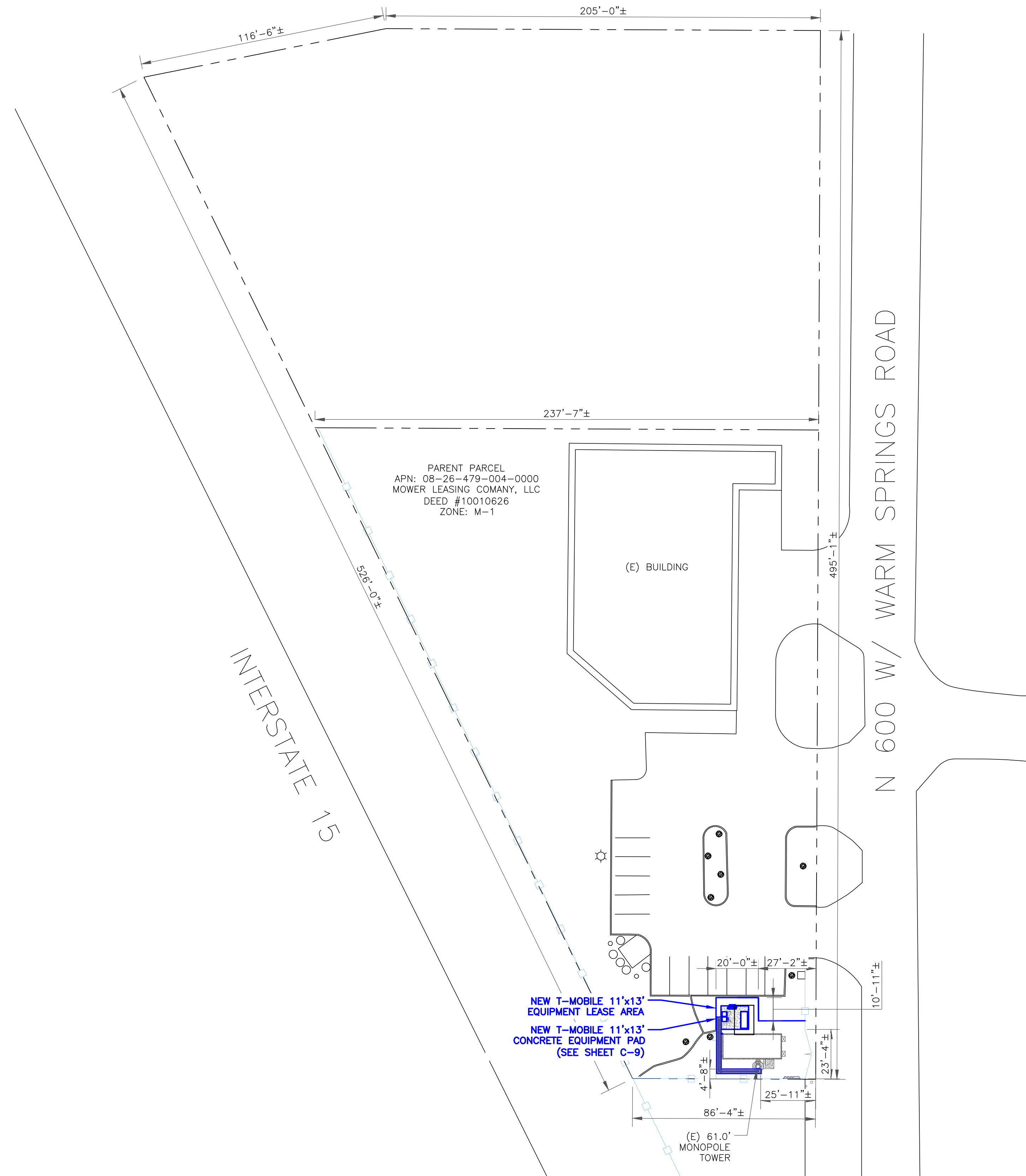
STATE OF UTAH


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



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12920 SE 38TH STREET
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**CROWN
CASTLE**

1505 WESTLAKE AVE N, STE 800
SEATTLE, WA 98109



POD
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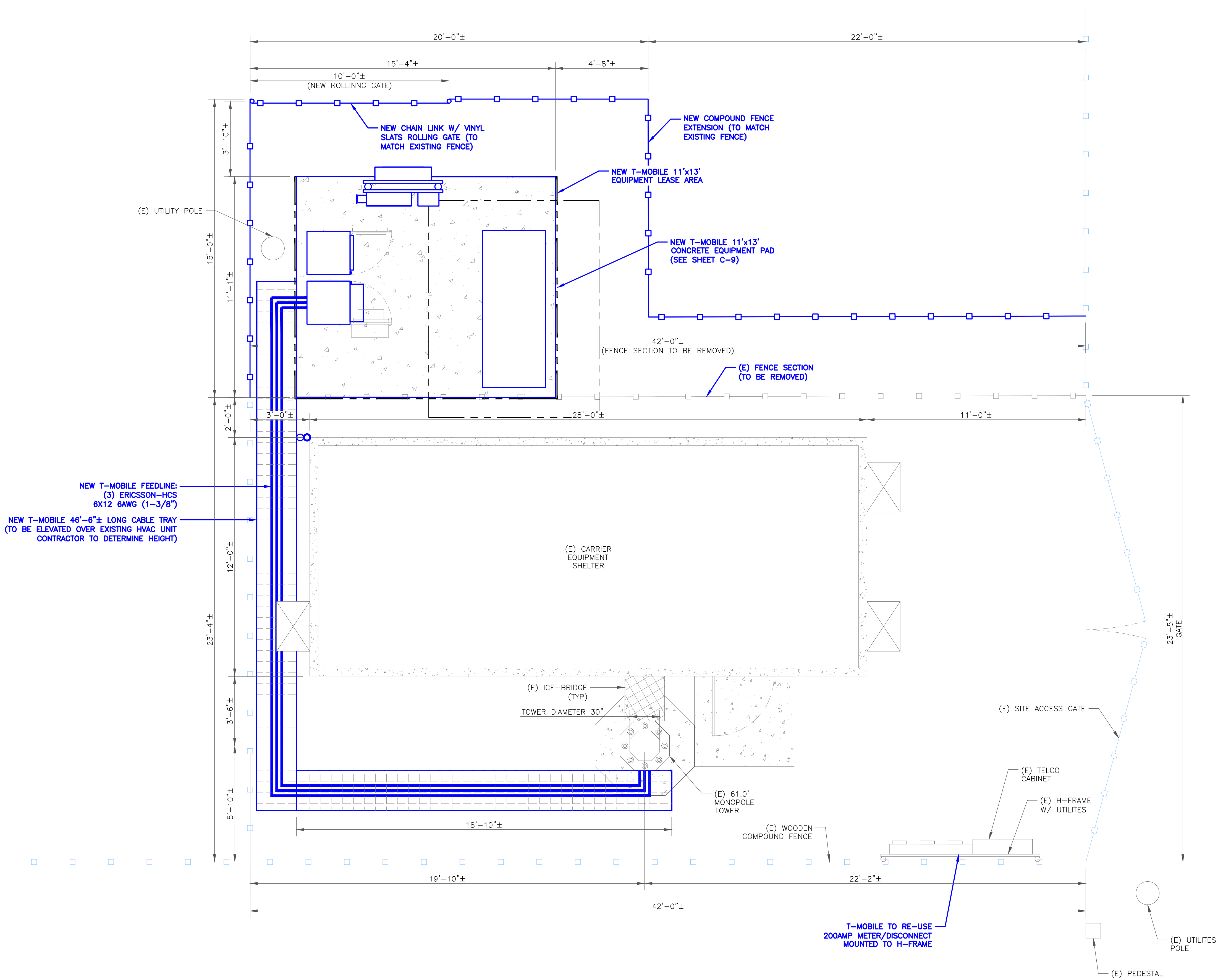


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1 FINAL SITE PLAN

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



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CROWN CASTLE
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SEATTLE, WA 98109

POD
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LOUISVILLE, KY 40299
502-437-5252

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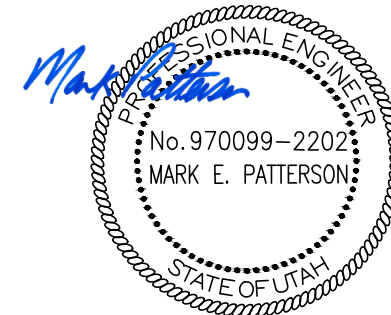
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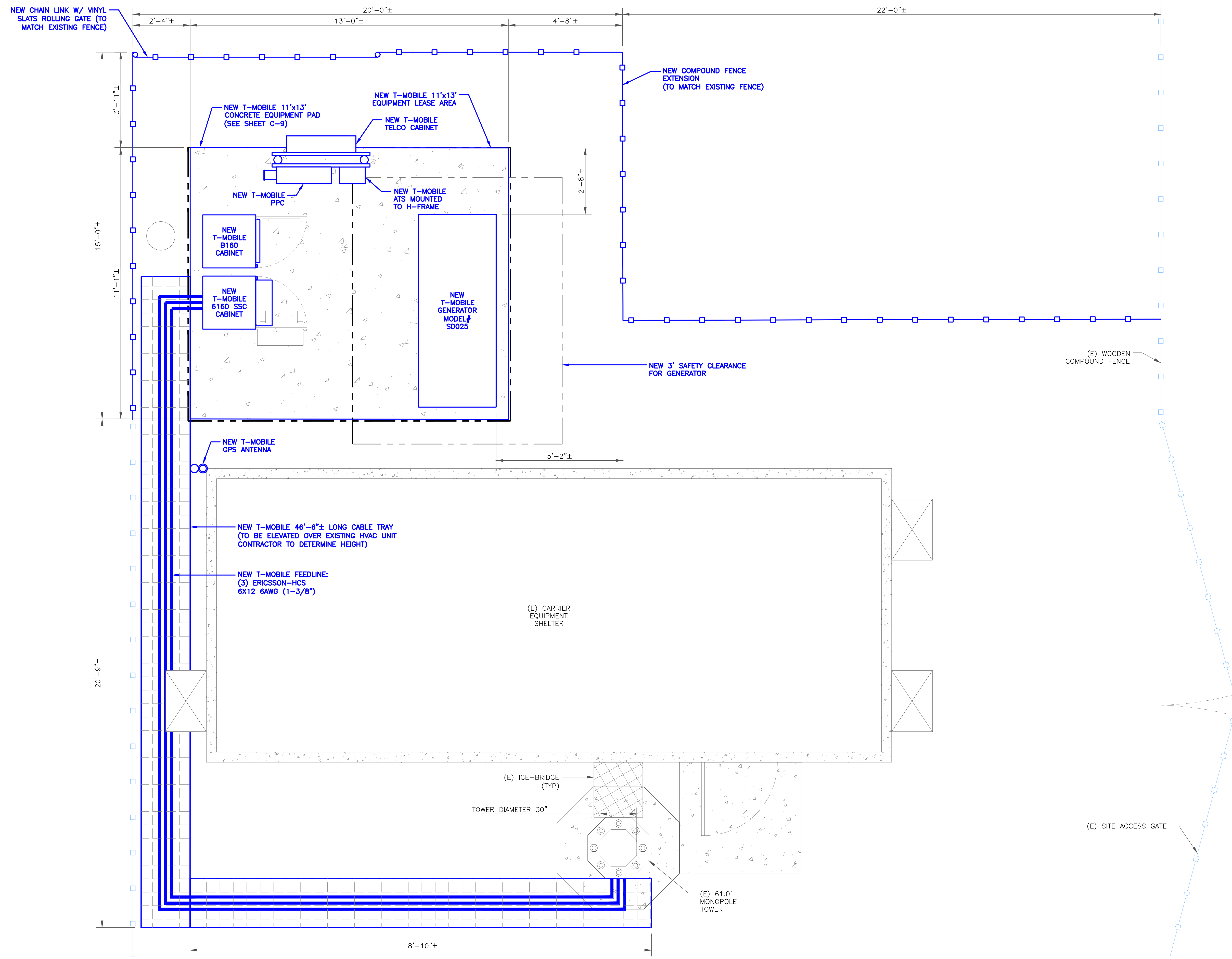
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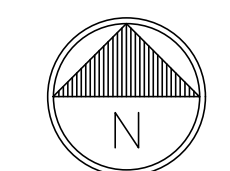
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1 ENLARGED EQUIPMENT PLAN
SCALE: 1/2"=1'-0" (FULL SIZE)
1/4"=1'-0" (11x17)



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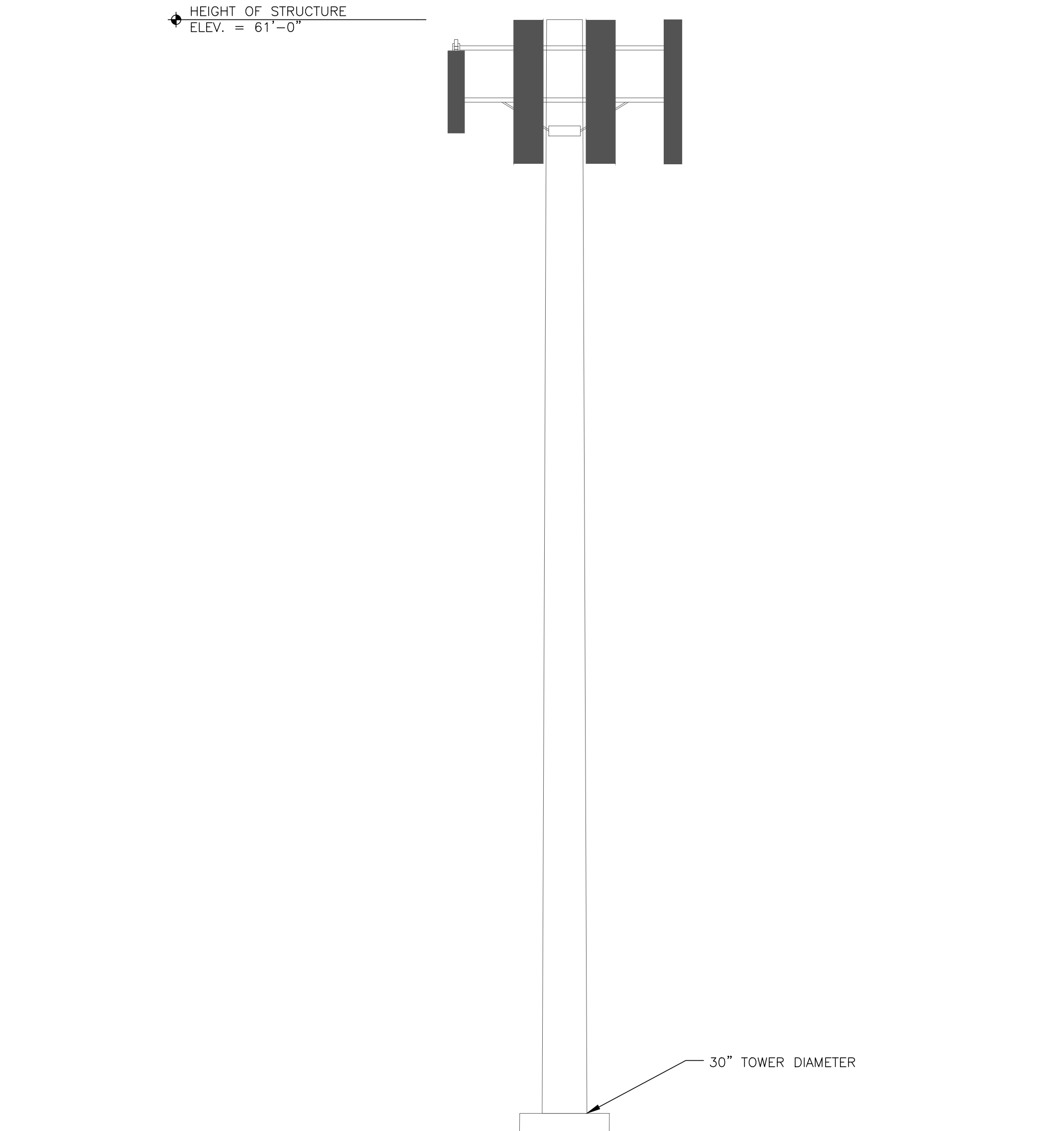
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6	12/23/2020	MAJ	FINAL	MEP
7	01/05/2021	CPT	FINAL	MEP
8	01/11/2021	CPT	FINAL	MEP
9	04/02/2021	MAJ	FINAL	MEP

04/02/2021

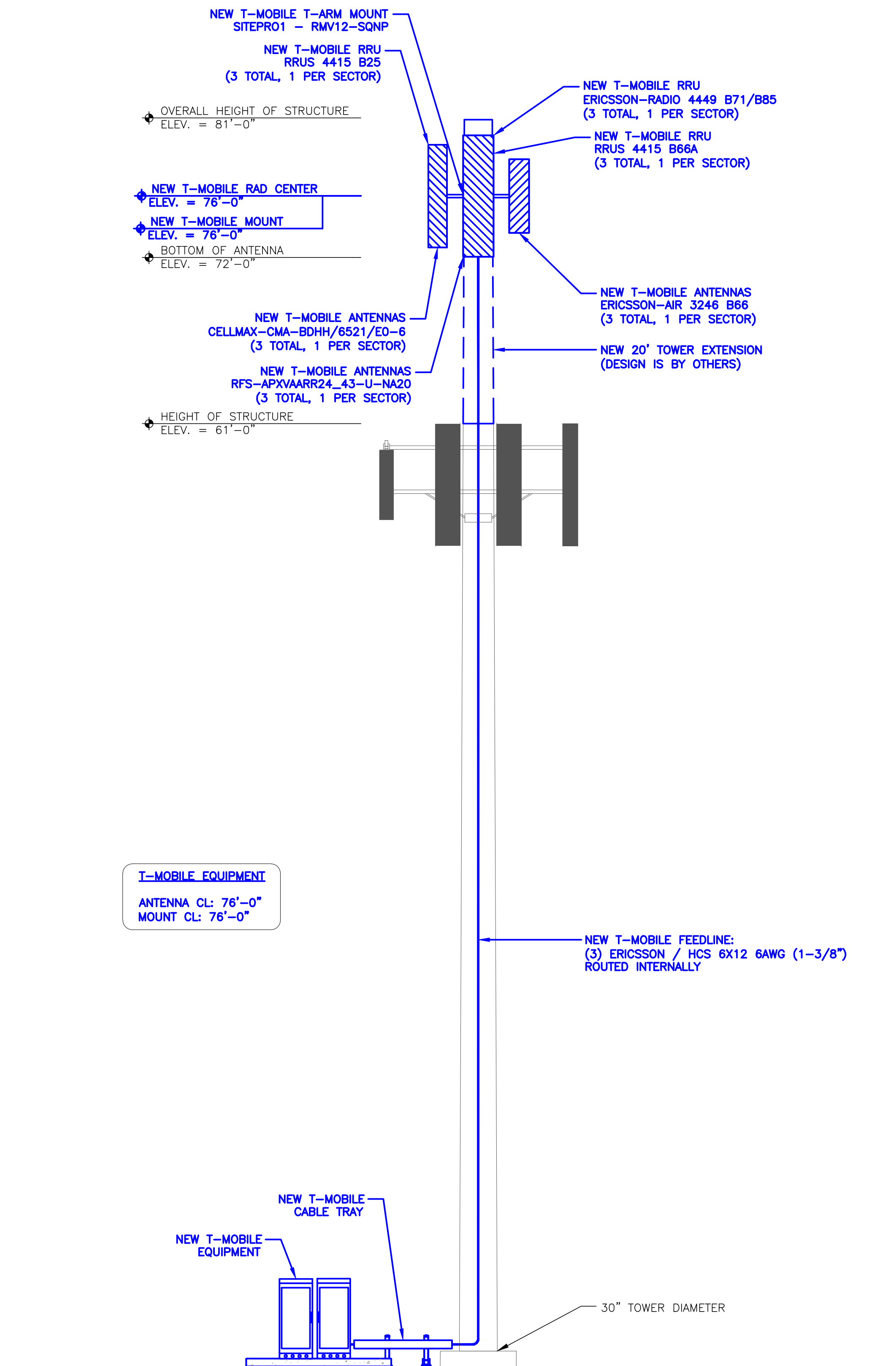
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SHEET NUMBER:
C-2

REVISION:
9



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.

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

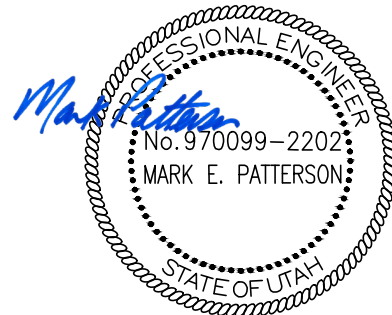
BU #: **845638**
ROSE PARK

745 N WARM SPRINGS ROAD
SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
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9	04/02/2021	MAJ	FINAL	MEP



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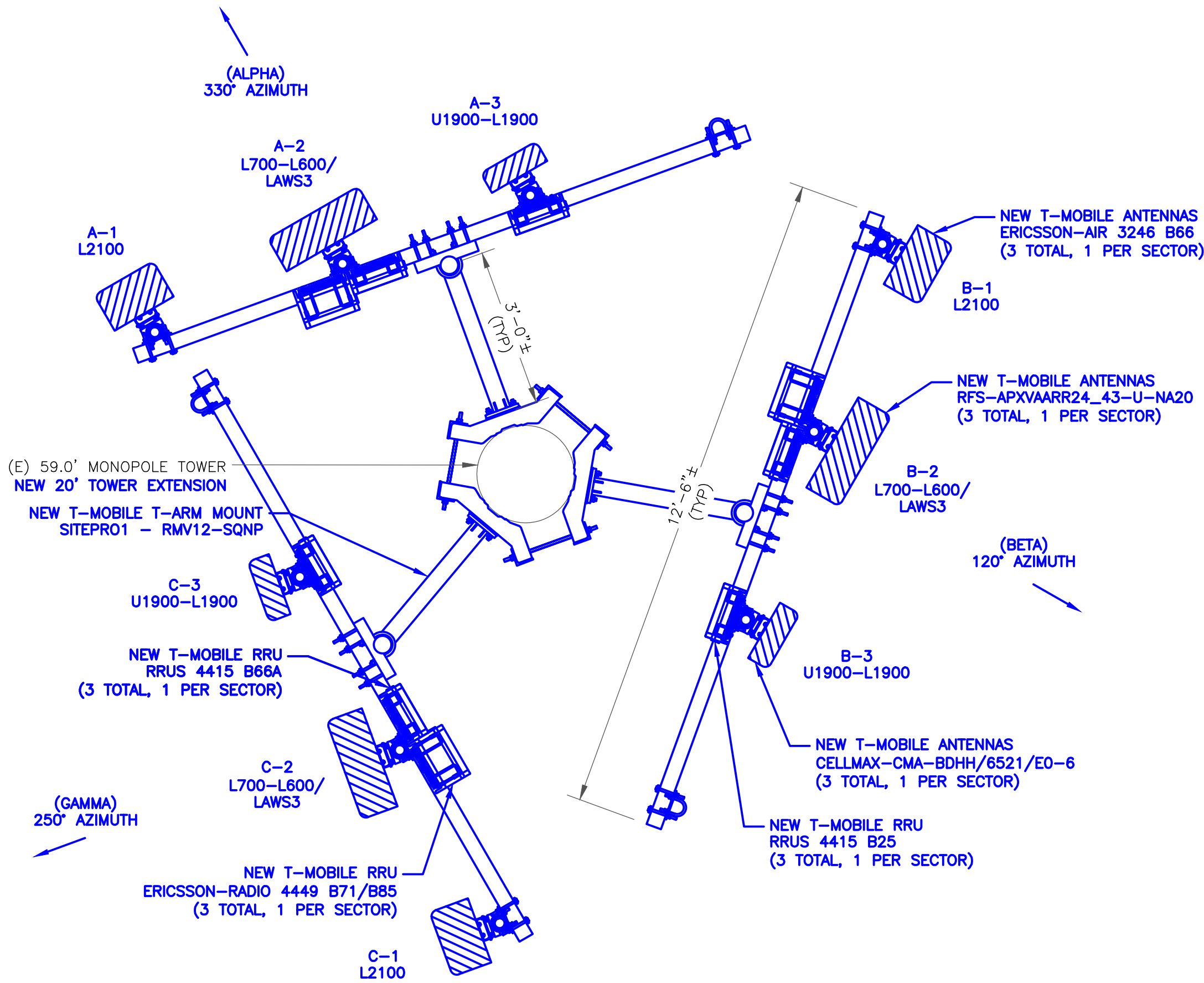
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REVISION:

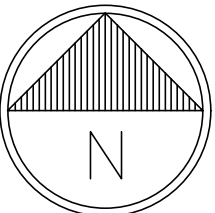
9

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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POD

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LOUISVILLE, KY 40299
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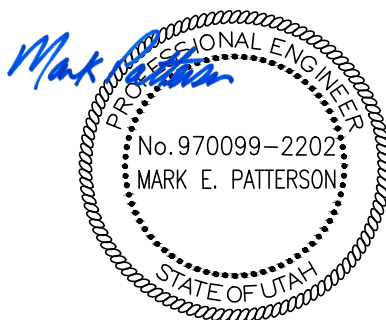
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9	04/02/2021	MAJ	FINAL	MEP



04/02/2021

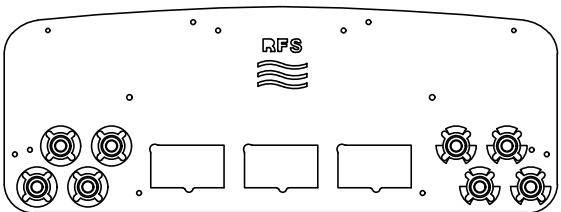
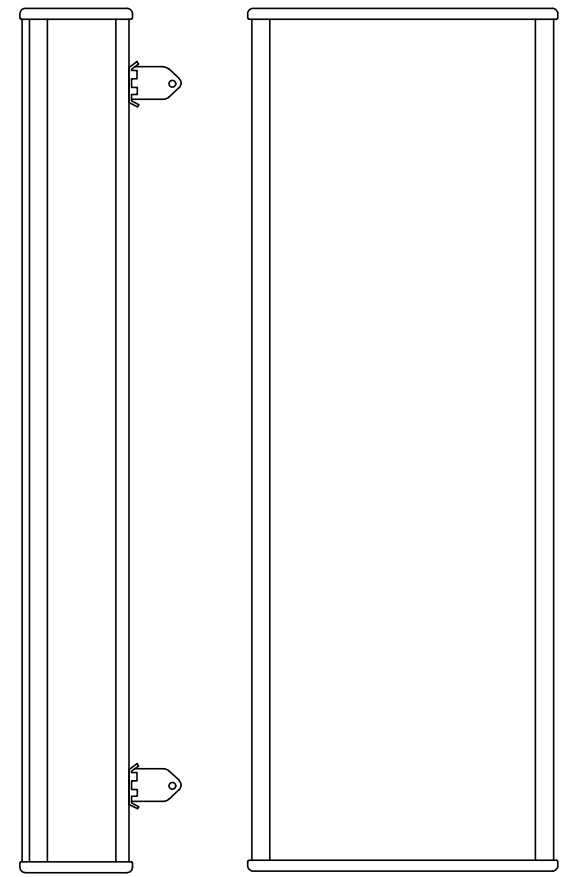
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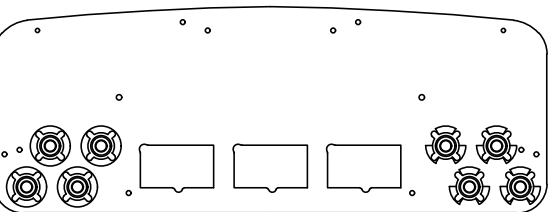
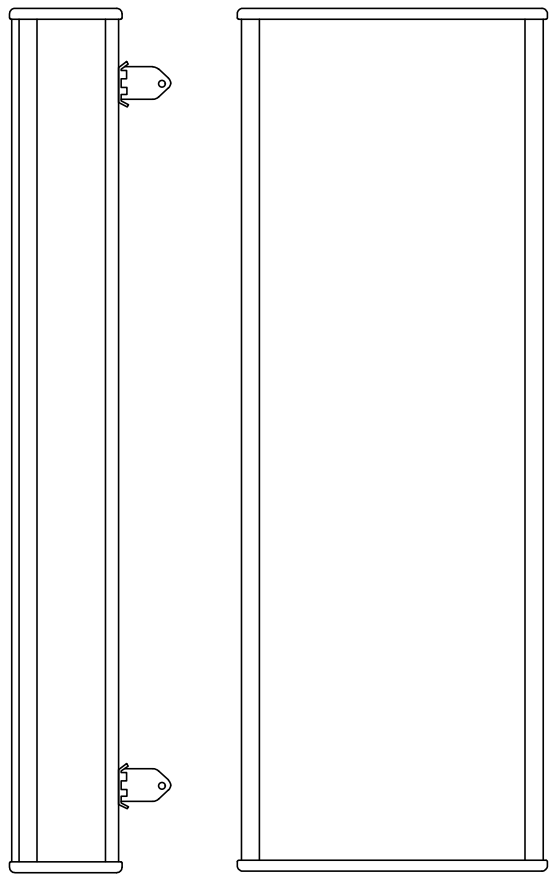
C-4

REVISION:

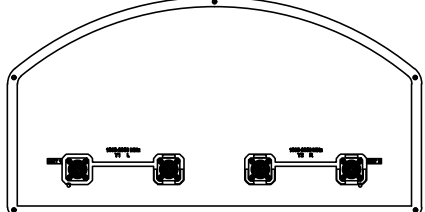
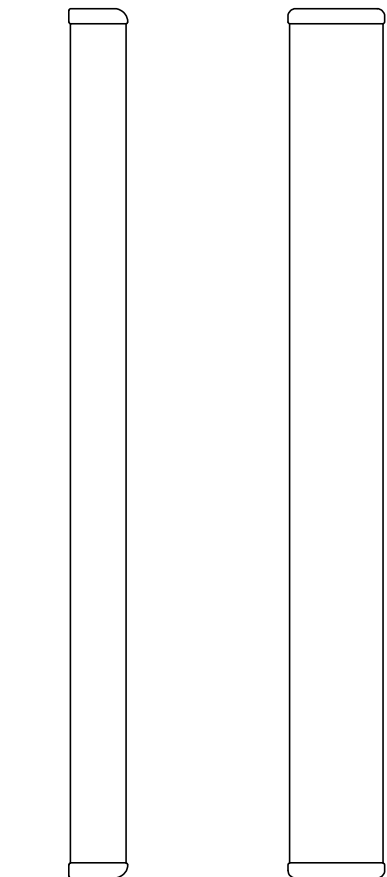
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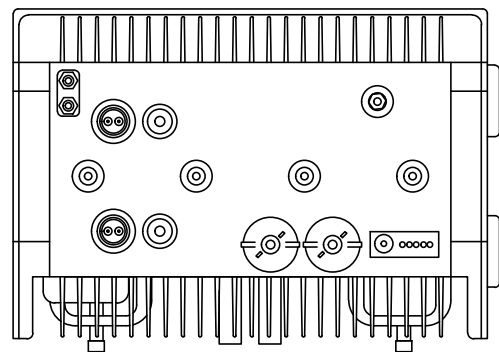
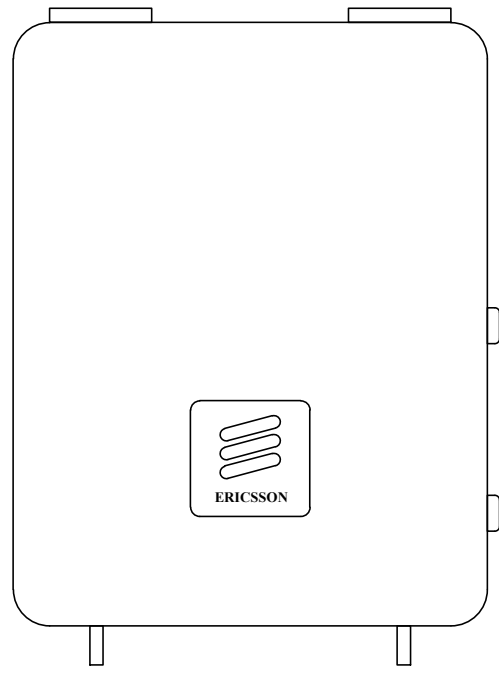
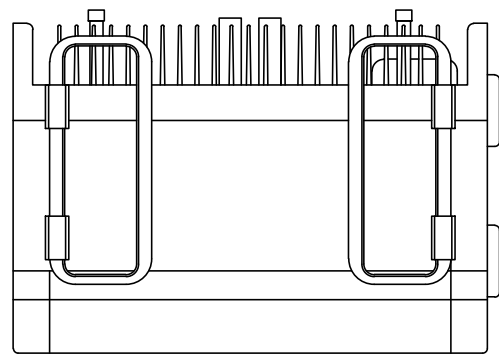
RFS – APXVAARR24_43–U–NA20
SIZE (HxWxD): 95.9x24x8.7 IN.
MOUNTING HARDWARE P/N: BSAMNT–4
RATED WIND VELOCITY:150.0 MPH
CONNECTOR TYP: 8 X 4.3–10 FEMALE



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



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 TYPY: 7–16 DIN. FEMALE (4)



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

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

2 ERICSSON / AIR 3246 B66
SCALE: NOT TO SCALE

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

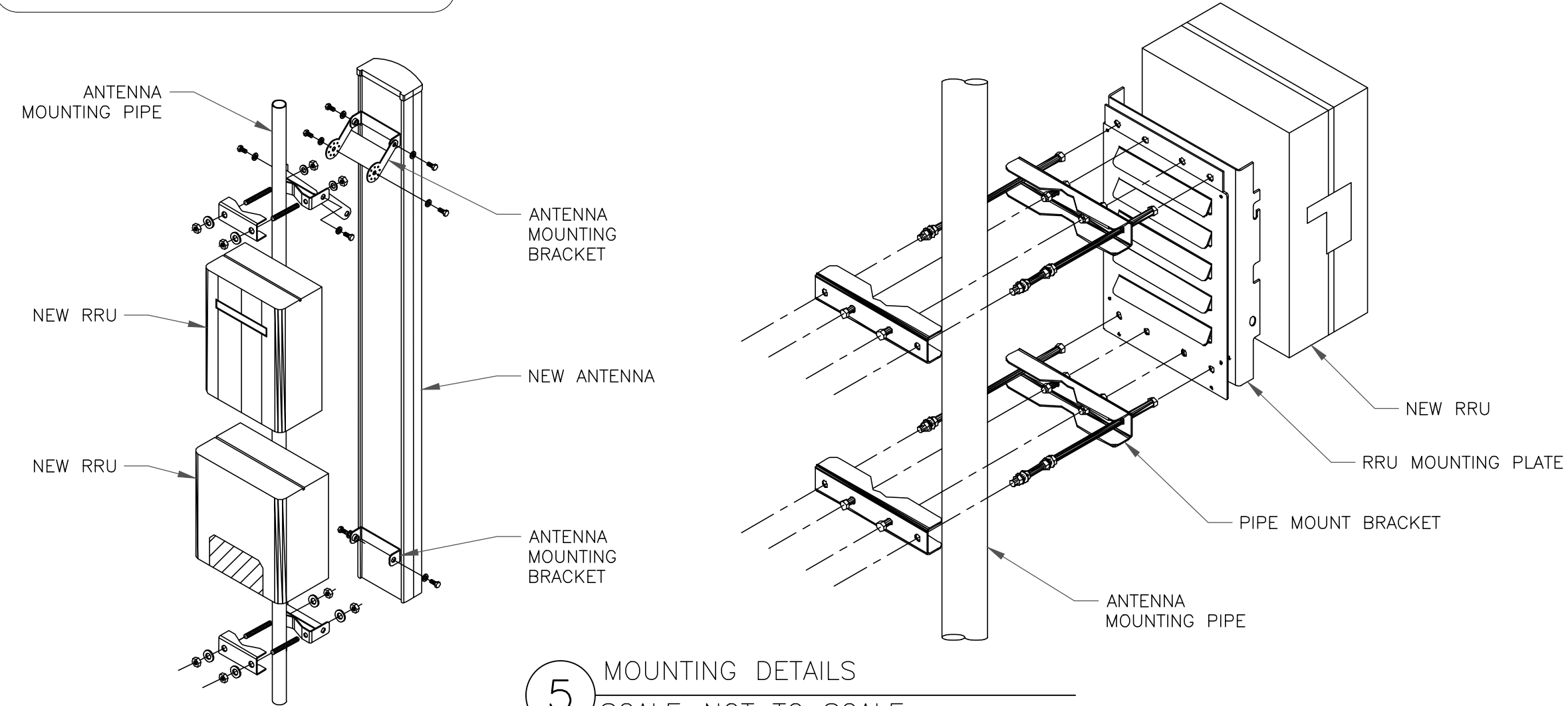
4 ERICSSON – RADIO 4449 B71/B85
SCALE: NOT TO SCALE

INSTALLER NOTES:

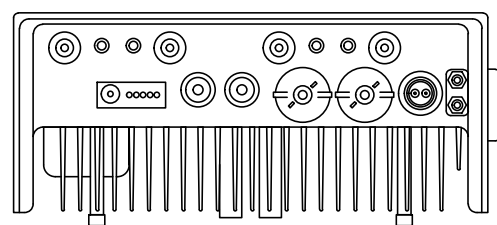
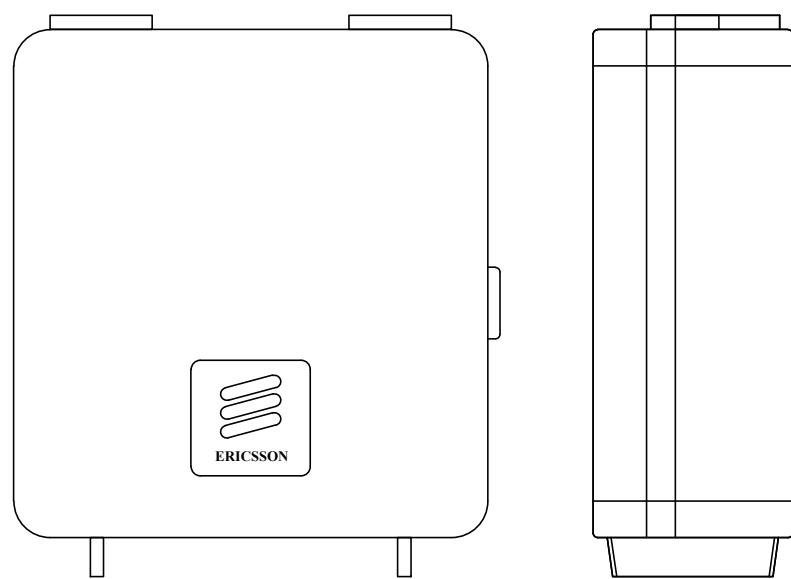
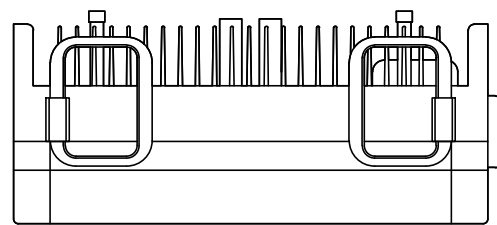
1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRU'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRU PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.

NOTE:

ANTENNA NOT SHOWN FOR CLARITY

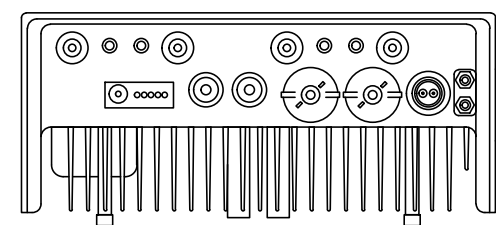
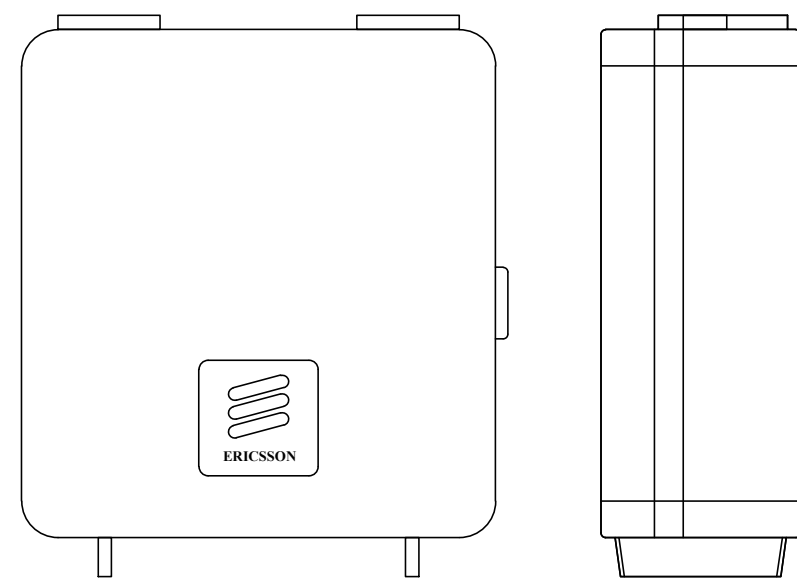
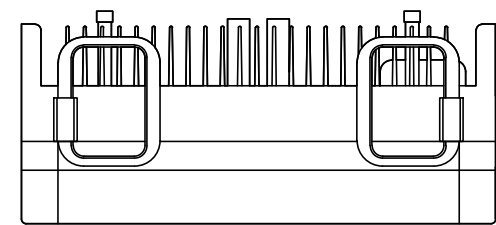


5 MOUNTING DETAILS
SCALE: NOT TO SCALE



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

T-MOBILE SITE NUMBER:
SL07007A

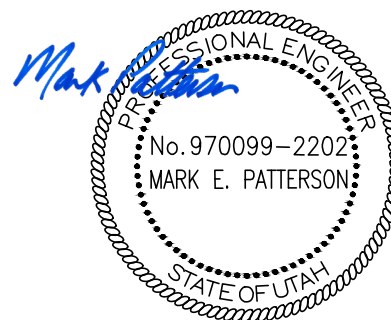
BU #: **845638**
ROSE PARK

745 N WARM SPRINGS ROAD
SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

ISSUED FOR:

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04/02/2021

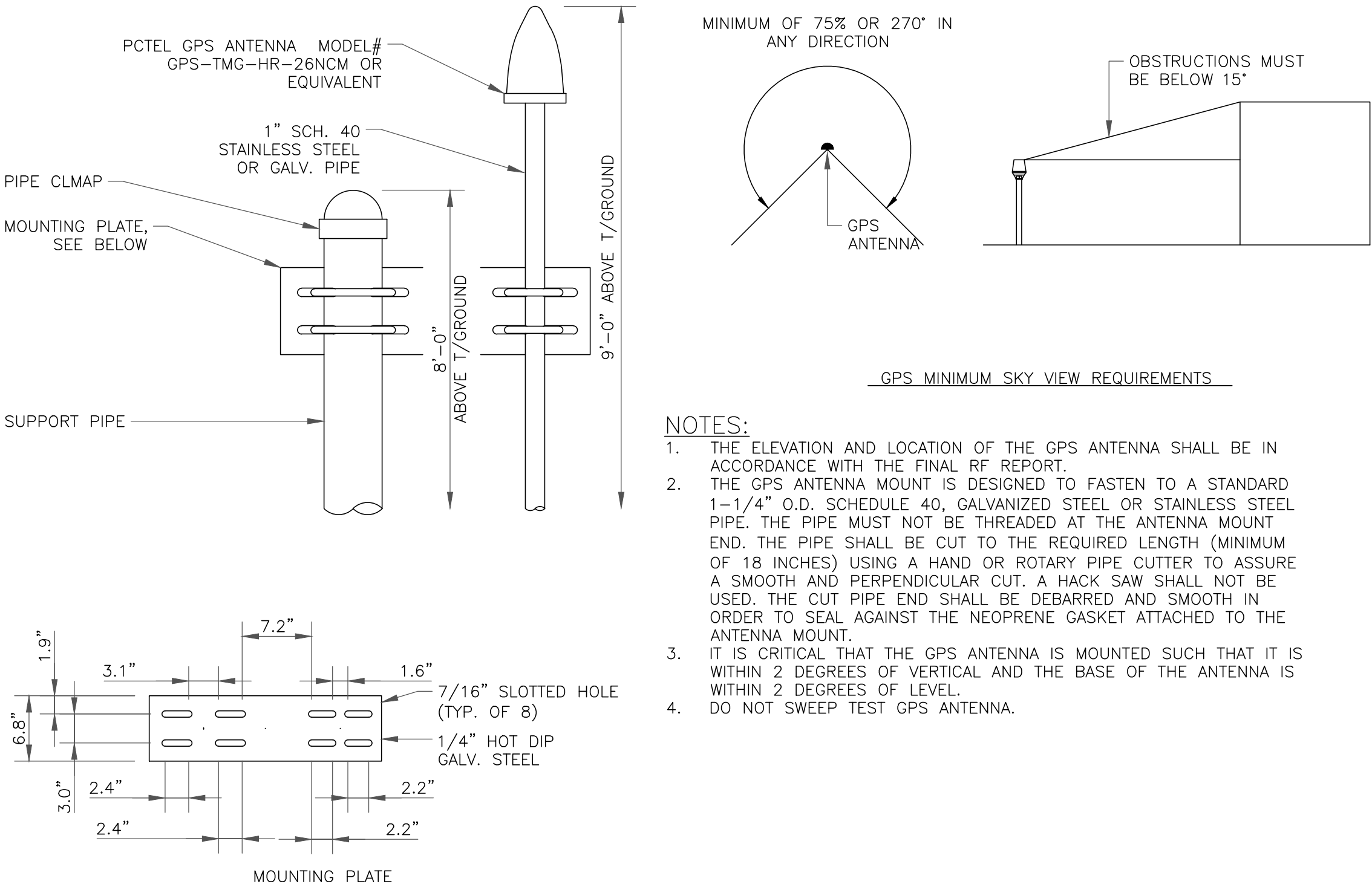
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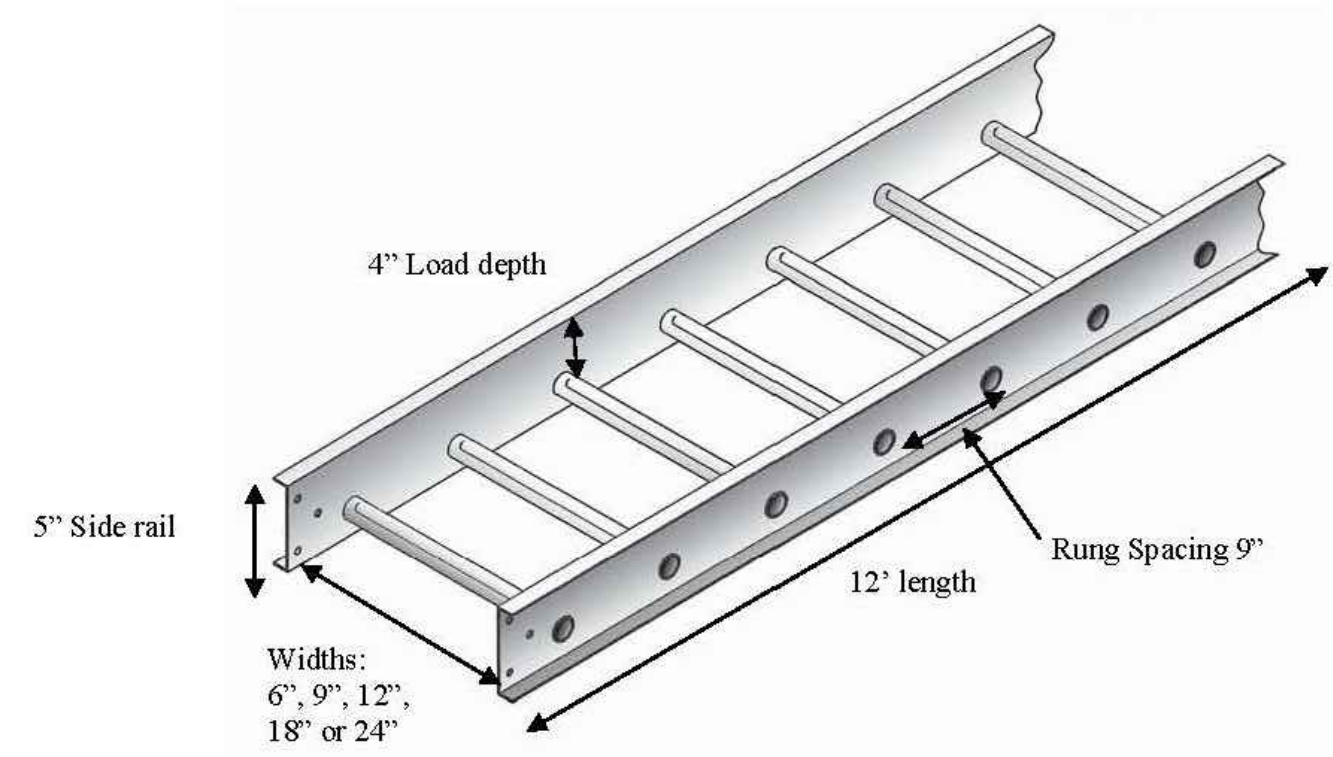
REVISION:

9



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.

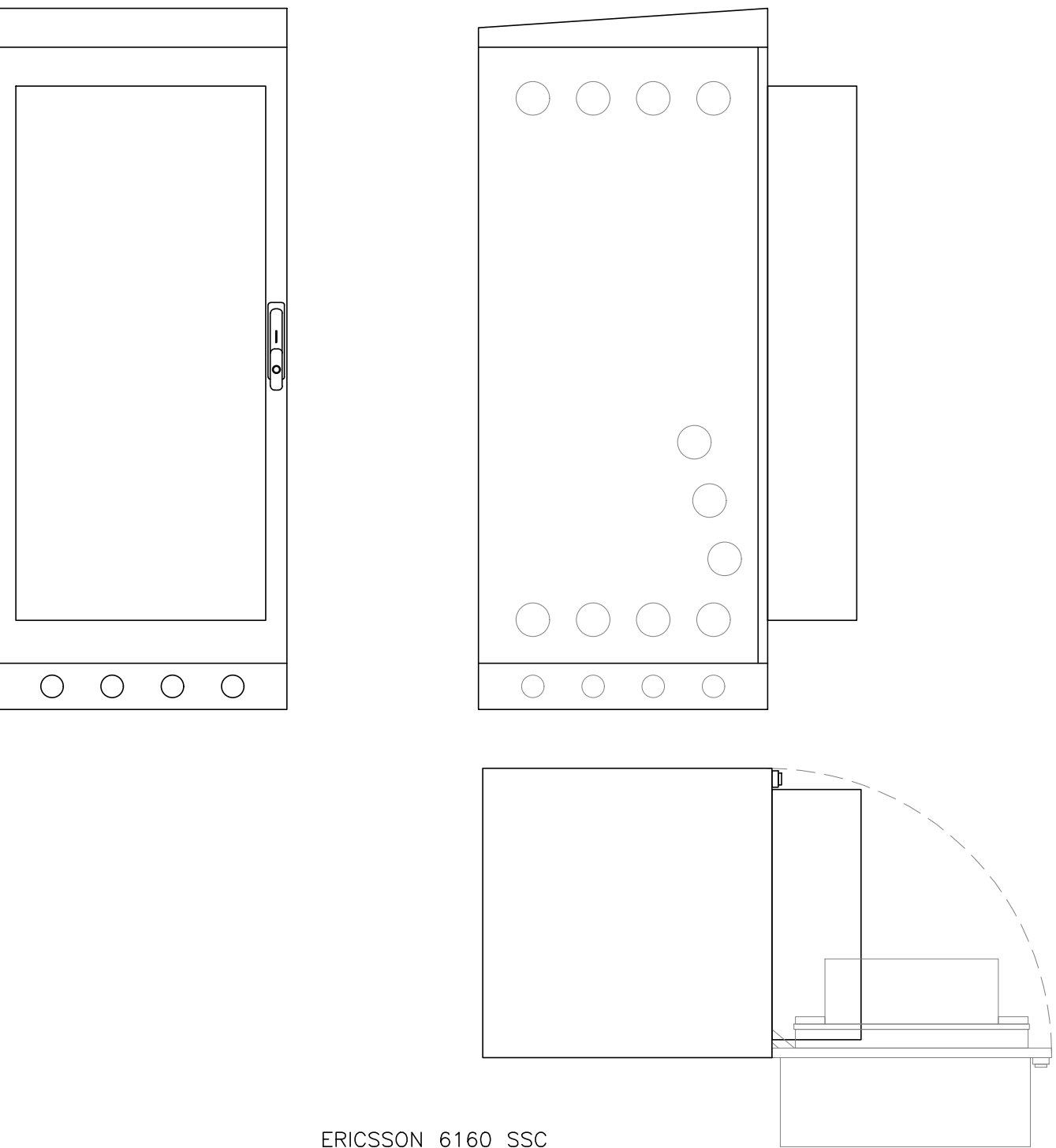
Weight:

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

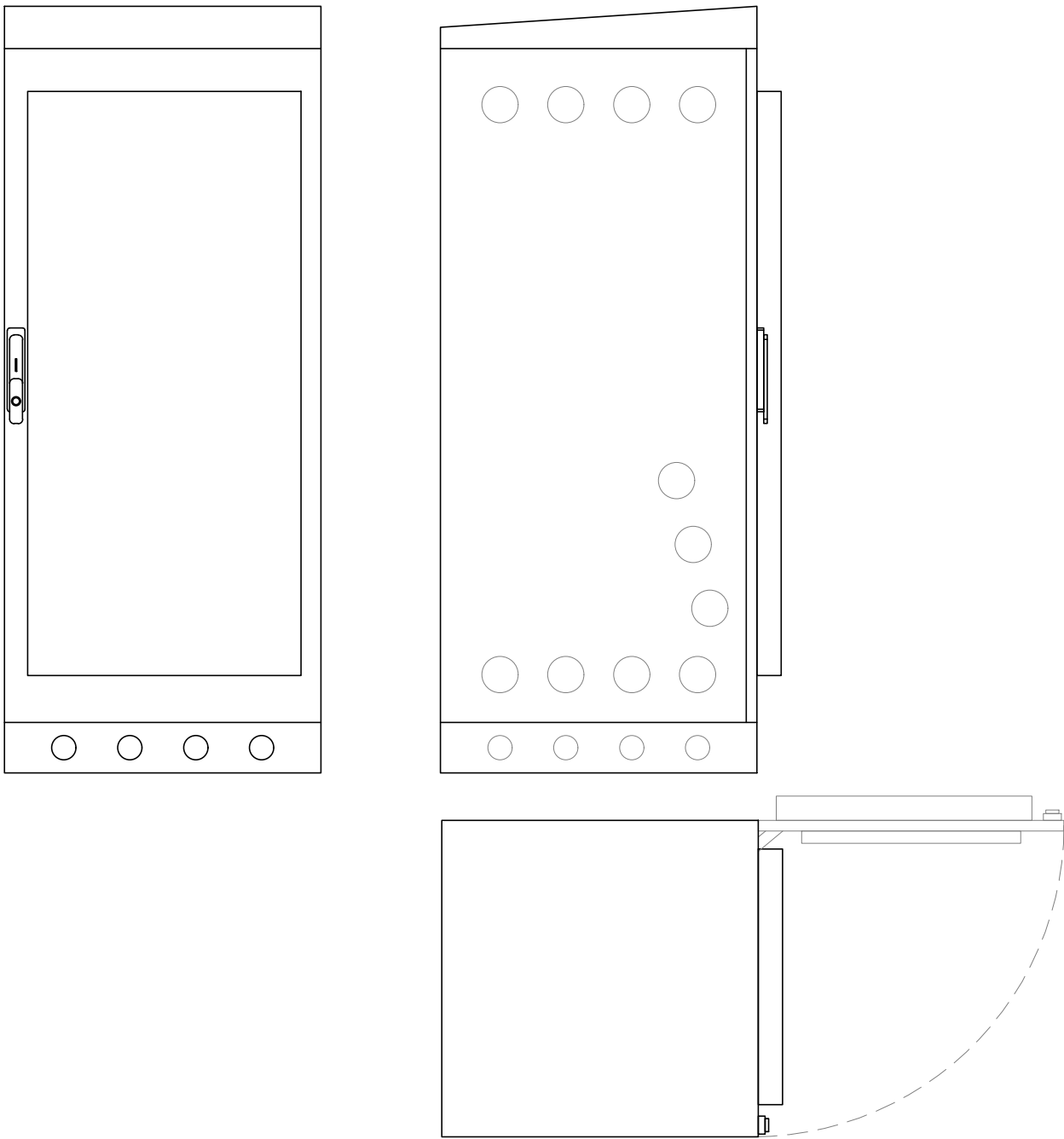
Load:

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



3 ERICSSON 6160 SSC
SCALE: NOT TO SCALE



4 ERICSSON B160 BATTERY CABINET
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

T-Mobile
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BELLEVUE, WA 98006

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

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

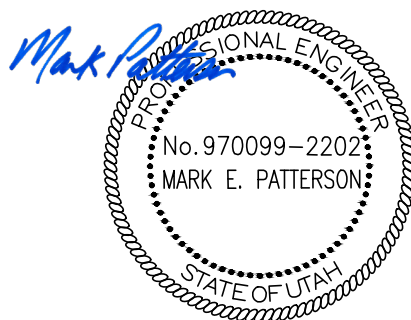
T-MOBILE SITE NUMBER:
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**BU #: 845638
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REINFORCED CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL BE IS 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.
2. 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.

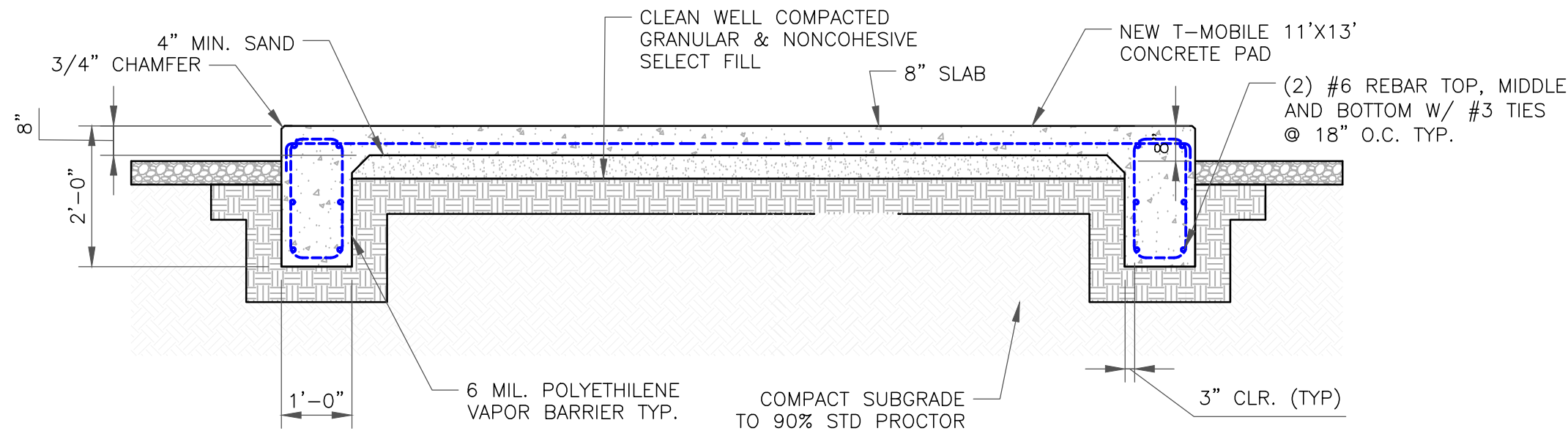
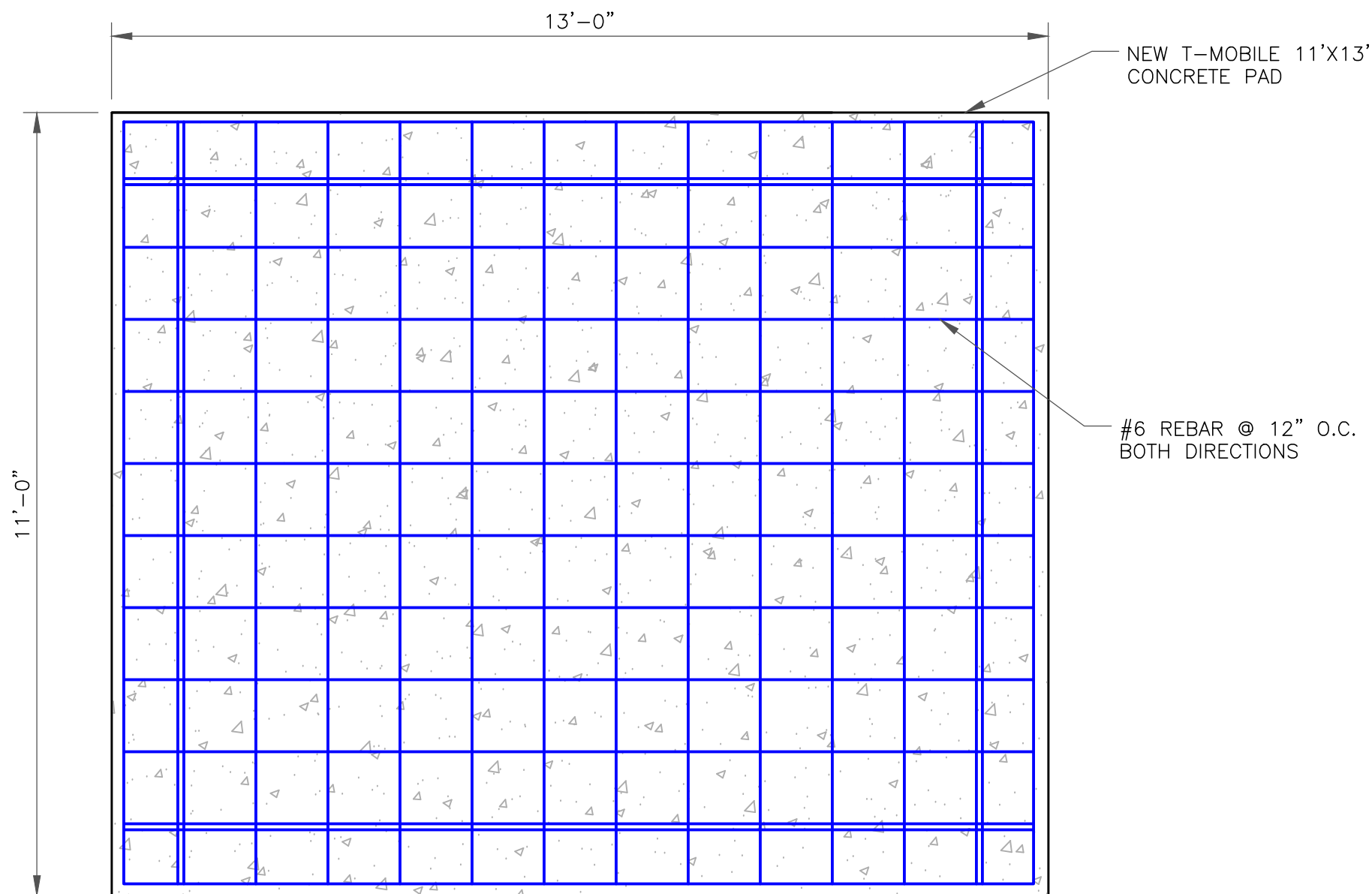
*IF REQUIRED BY THE CONSTRUCTION SCHEDULE THE CONTRACTOR MAY SUBSTITUTE TYPE 111 HIGH EARLY STRENGTH CONCRETE WITH THE APPROVAL OF THE CONSTRUCTION MANAGER.

3. 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.

4. 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"

5. MAXIMUM COURSE AGGREGATE SIZE SHALL BE 3/4"
6. 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.
7. THE CONTRACTOR SHALL VERIFY FROST LINE AND FOOTING DEPTH REQUIREMENTS WITH THE JURISDICTION HAVING AUTHORITY PRIOR TO CONSTRUCTION AND CONSULT THE ENGINEER ACCORDINGLY.
8. THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL CONDUIT SIZES AND PENETRATION LOCATIONS PRIOR TO POURING THE SLAB.
9. SOIL SHALL HAVE MINIMUM 1000 PSF ALLOWABLE BEARING CAPACITY.



1 CONCRETE PAD DETAIL
SCALE: NOT TO SCALE

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502-437-5252

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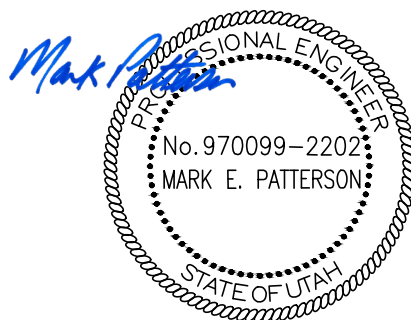
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04/02/2021

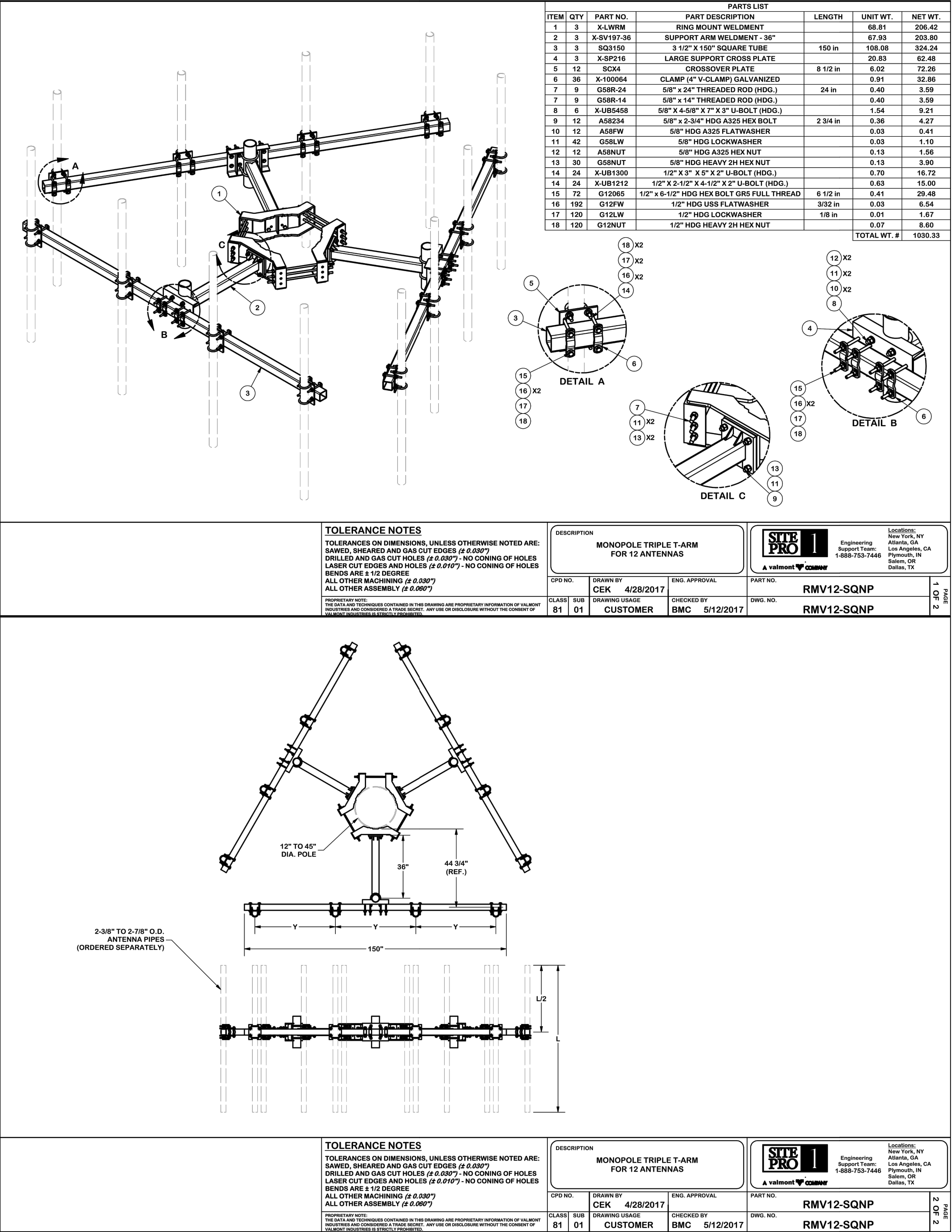
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1 SITEPRO1 – RMV12–2QNP
SCALE: NOT TO SCALE

NOTE: POWER OF DESIGN GROUP, NOR OUR ENGINEER IS RESPONSIBLE FOR DESIGN OR MANUFACTURE OF THE SPECS SHOWN ON THIS SHEET. PLEASE CONTACT THE MANUFACTURER FOR ANY QUESTIONS OR CONCERNS.

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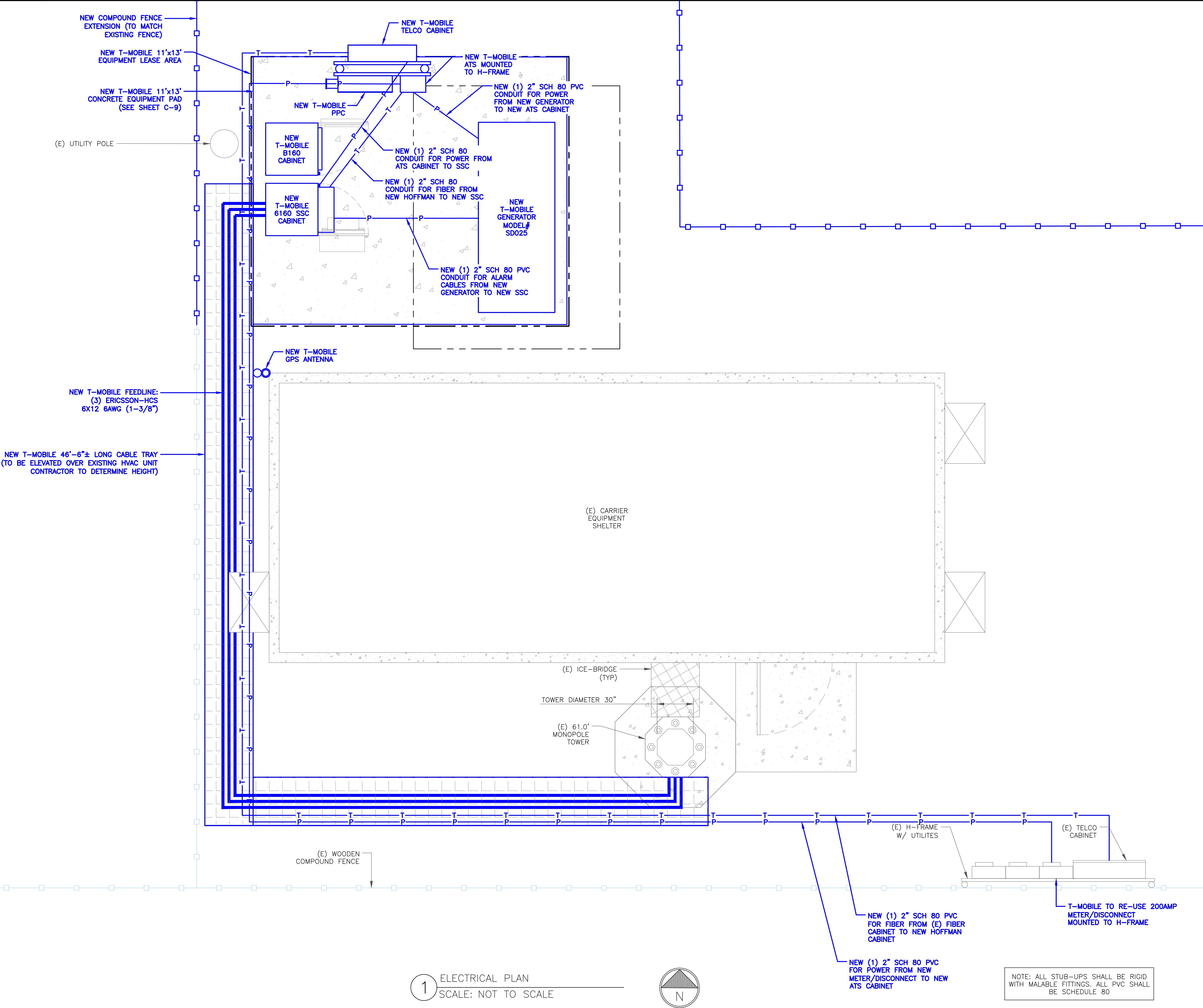
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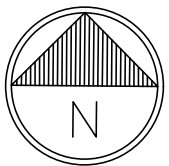
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1 ELECTRICAL PLAN
SCALE: NOT TO SCALE



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

T-MOBILE SITE NUMBER:
SL07007A

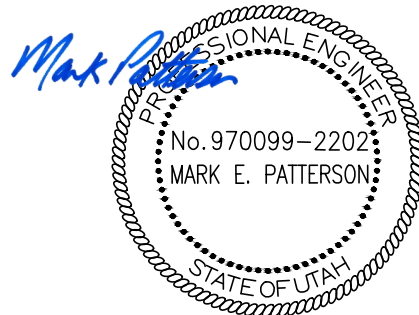
BU #: **845638**
ROSE PARK

745 N WARM SPRINGS ROAD
SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
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3	05-07-2019	JAS	FINAL	ELG
4	07-17-2019	JAS	FINAL	ELG
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6	12/23/2020	MAJ	FINAL	MEP
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8	01/11/2021	CPT	FINAL	MEP
9	04/02/2021	MAJ	FINAL	MEP



04/02/2021

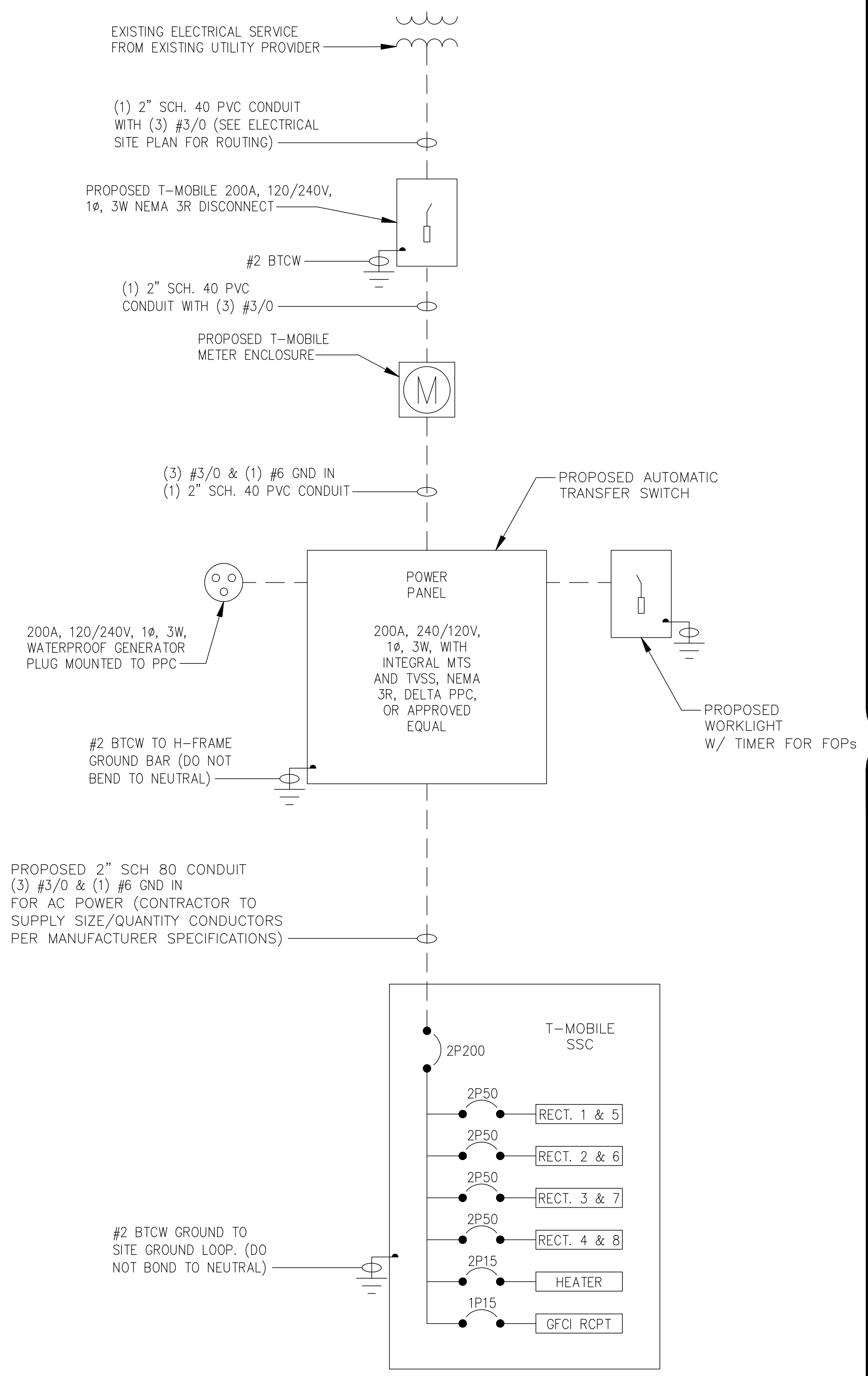
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SHEET NUMBER:

E-1

REVISION:

9



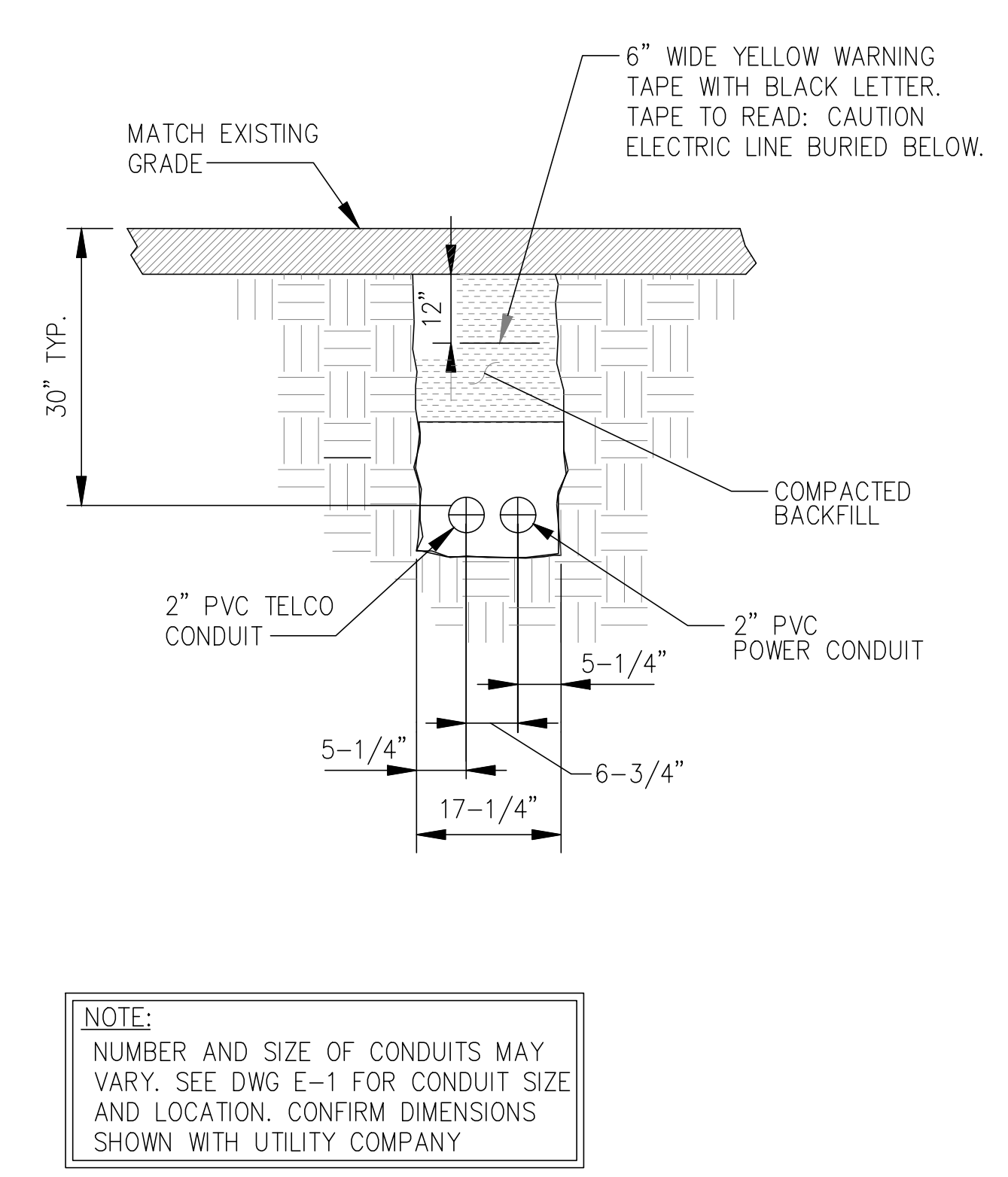
NOTE:
CONTRACTOR TO COORDINATE WITH LOCAL UTILITY PROVIDER PRIOR TO CONSTRUCTION

1 ONE-LINE DIAGRAM
SCALE: NOT TO SCALE

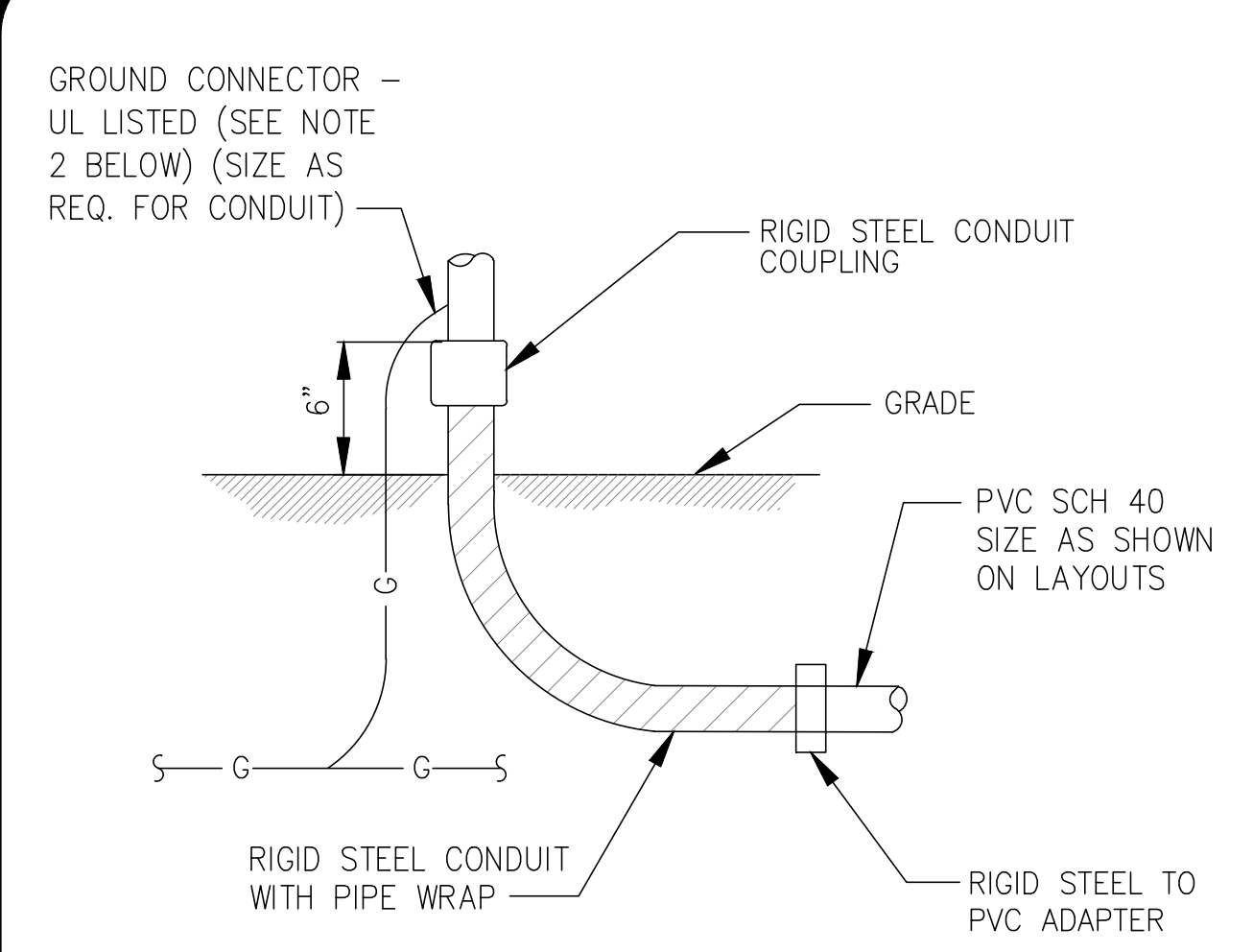
PANEL: PPC											
120/240 VOLTS, 1 PHASE, 3 WIRE, S/N, 200A AMP MCB NEMA 3R ENCL											
MINIMUM AIC RATING - 22,000A											
DESCRIPTION	BKR	POLE	CKT	VA	Φ	VA	CKT	POLE	BKR	DESCRIPTION	
SPACE			1	--	A		2			SPACE	
2P BRANCH	--	--	3	--	B		4			SPACE	
RECEPTACLE/LIGHTS	15	1	5	230	A		6			SPACE	
SPACE	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	TOTAL CALCULATED CONNECTED LOAD:	32,280 VA			
RECEPTACLE:	180 VOLTAMPS x 1.00 =	180 VA	TOTAL CALCULATED DEMAND LOAD:	32,293 VA			
MISC. EQUIPMENT:	32050 VOLTAMPS x 1.00 =	32,050 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 C90 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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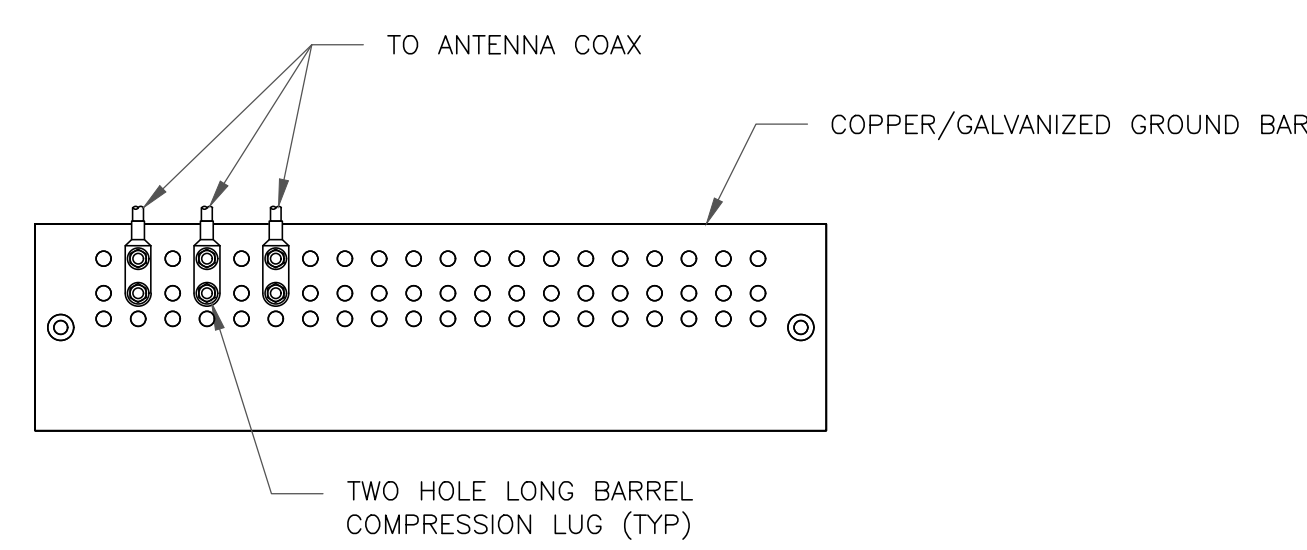
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04/02/2021

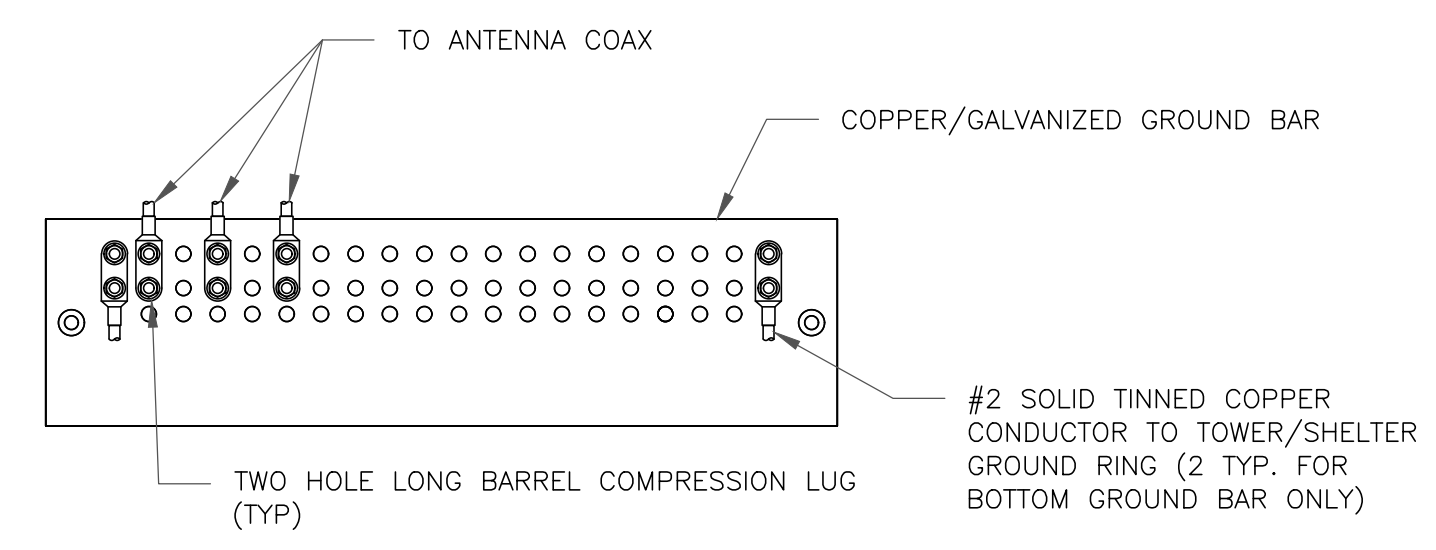
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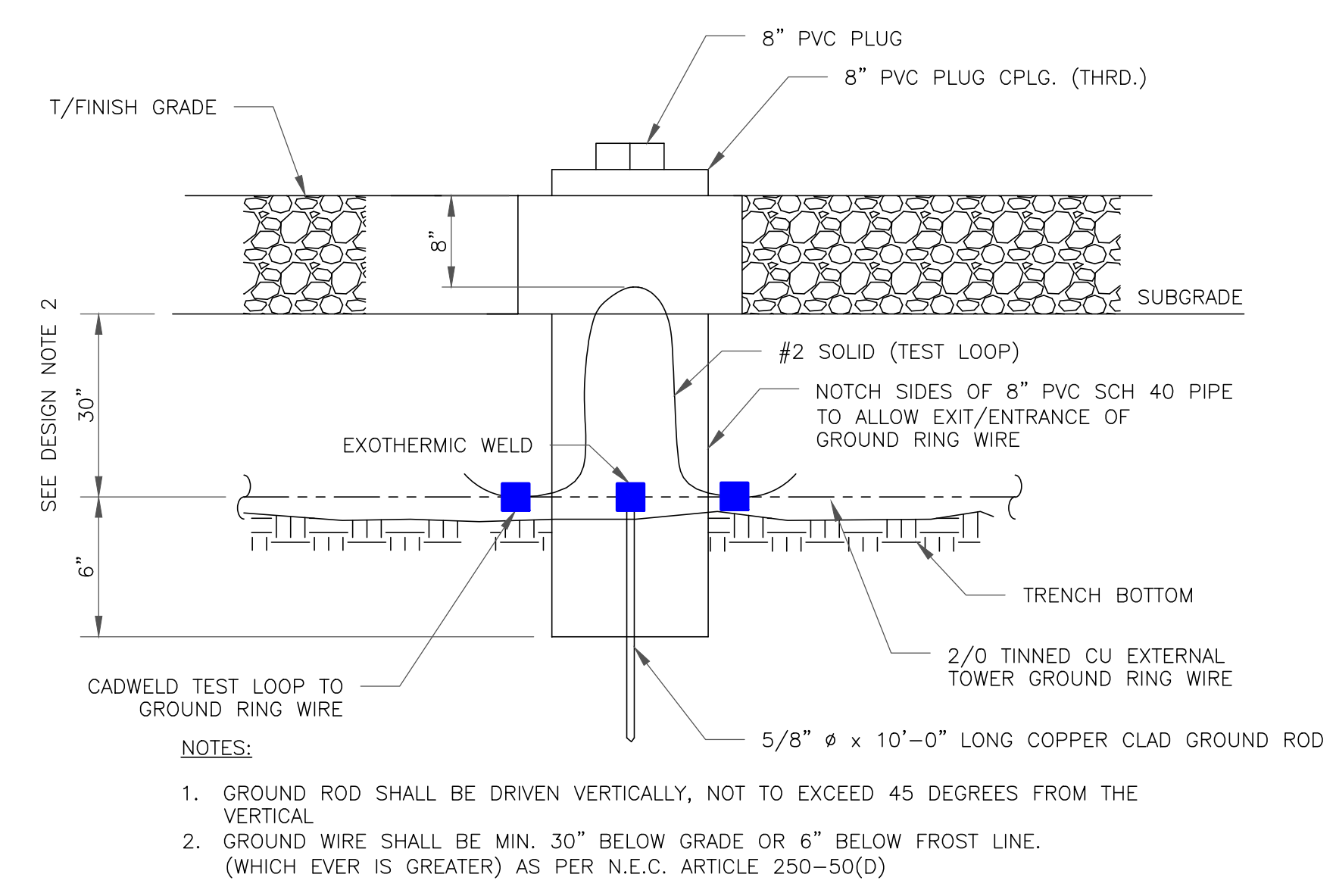




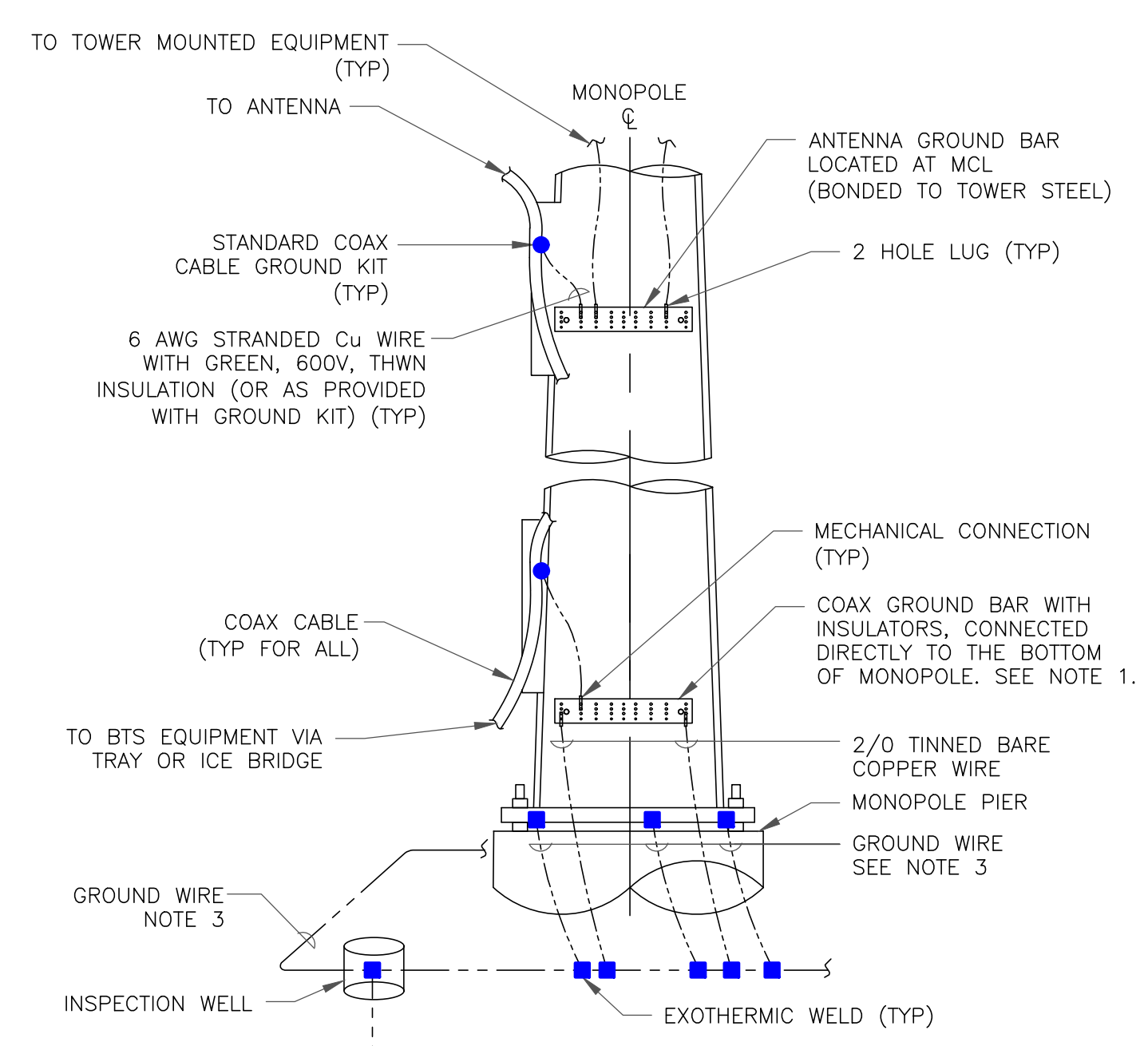
1 ANTENNA GROUND BAR DETAIL
SCALE: NOT TO SCALE



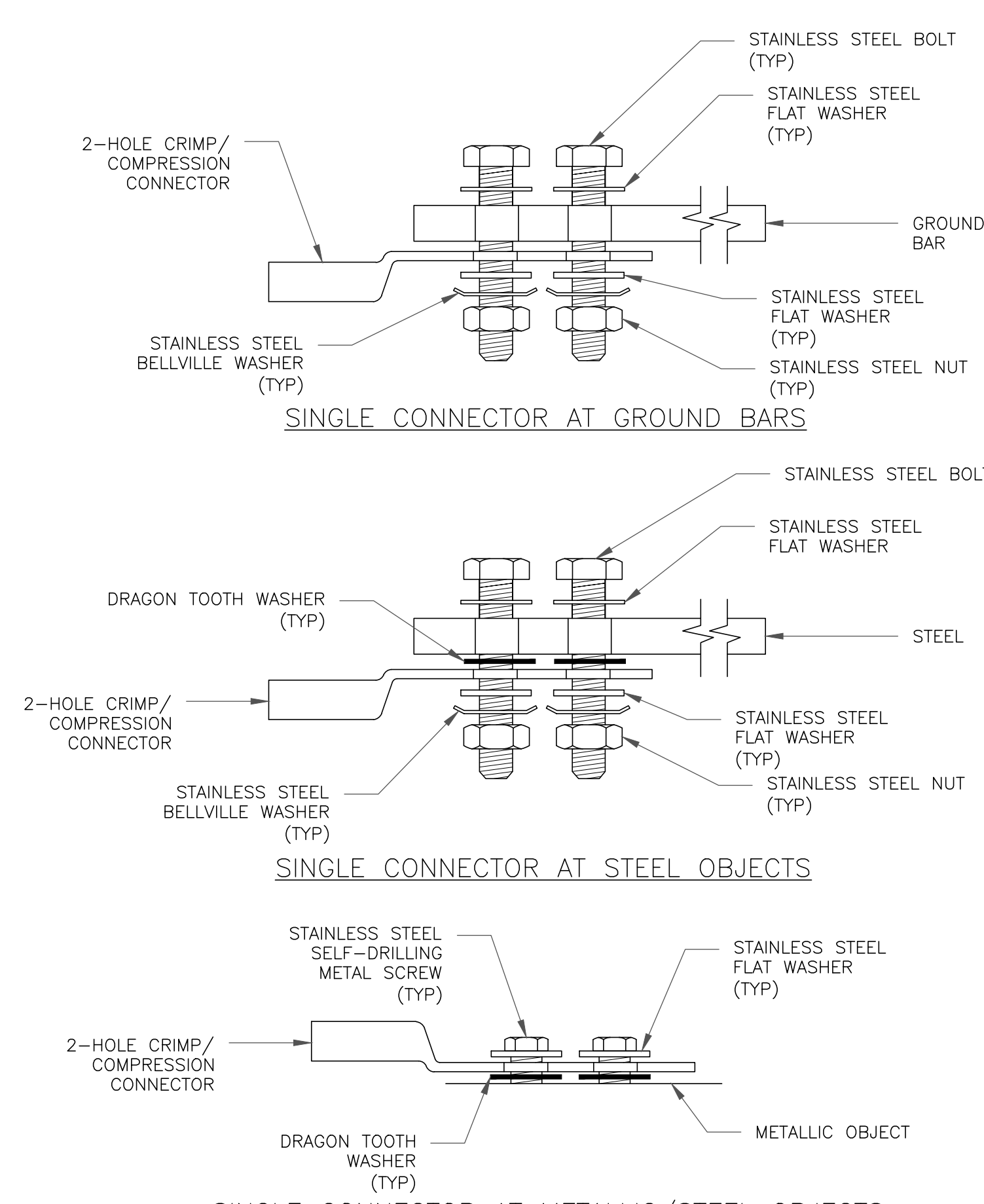
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



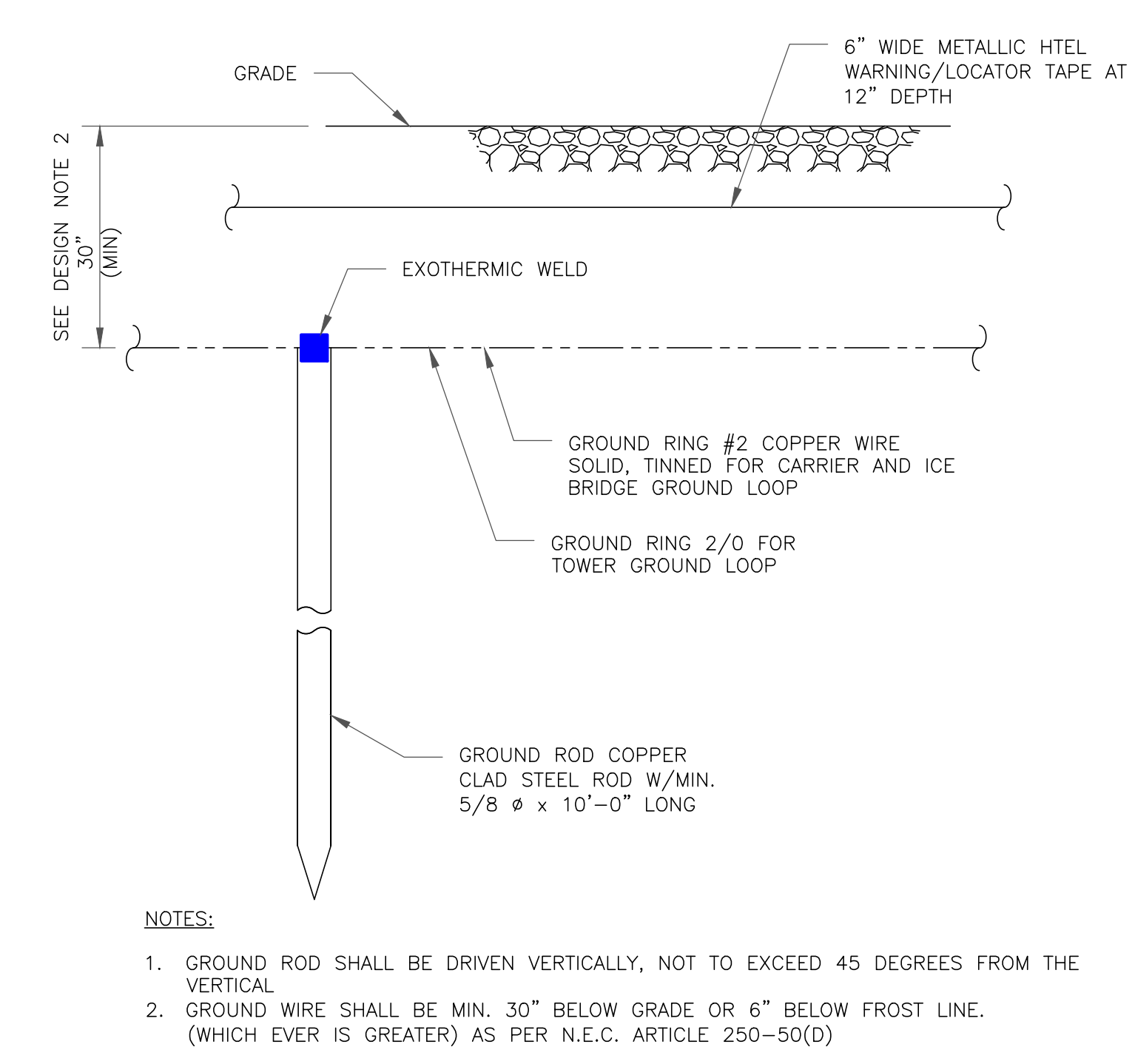
3 INSPECTION WELL DETAIL
SCALE: NOT TO SCALE



4 TYPICAL ANTENNA CABLE GROUNDING
SCALE: NOT TO SCALE



5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



6 GROUND ROD DETAIL
SCALE: NOT TO SCALE

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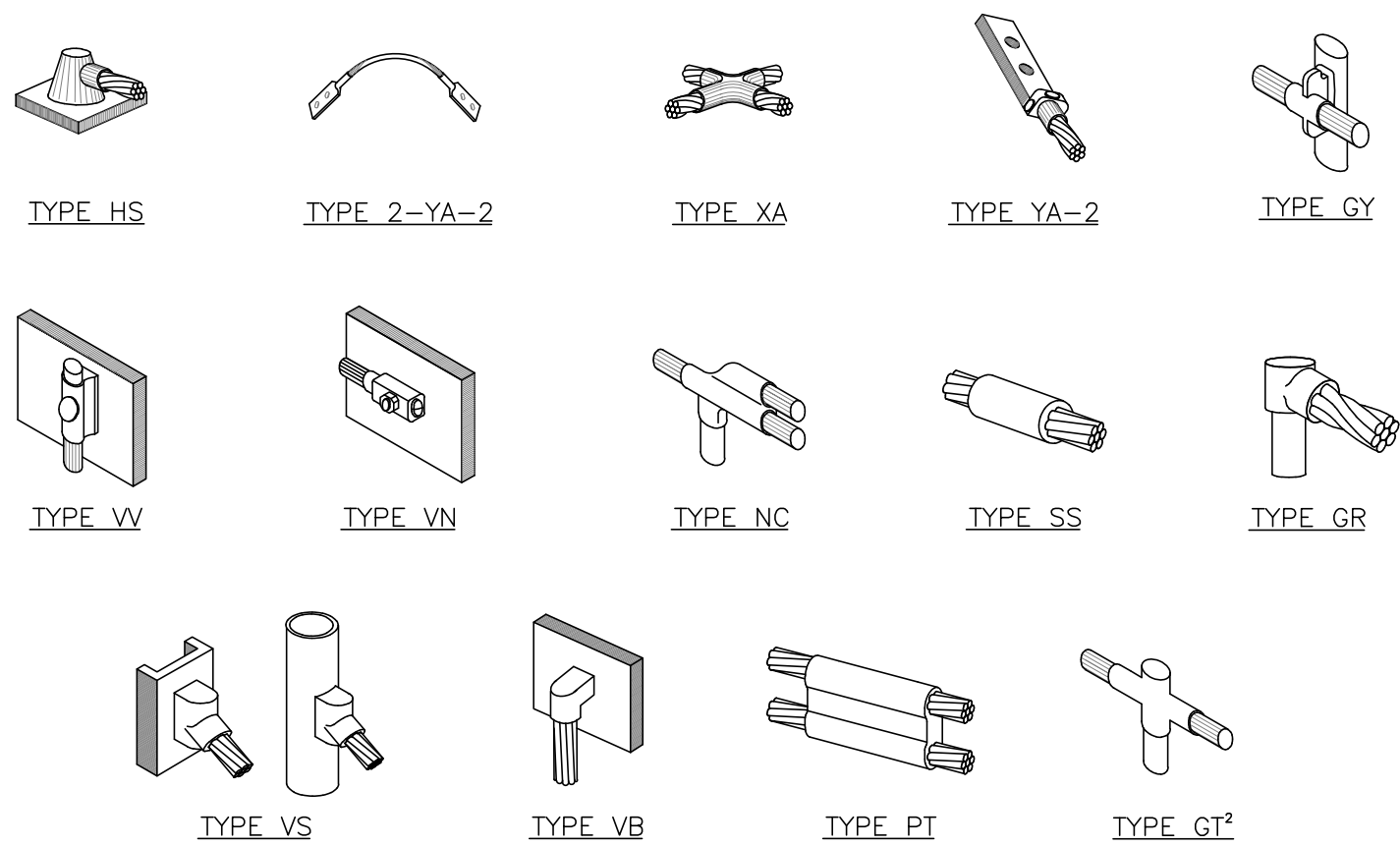
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04/02/2021

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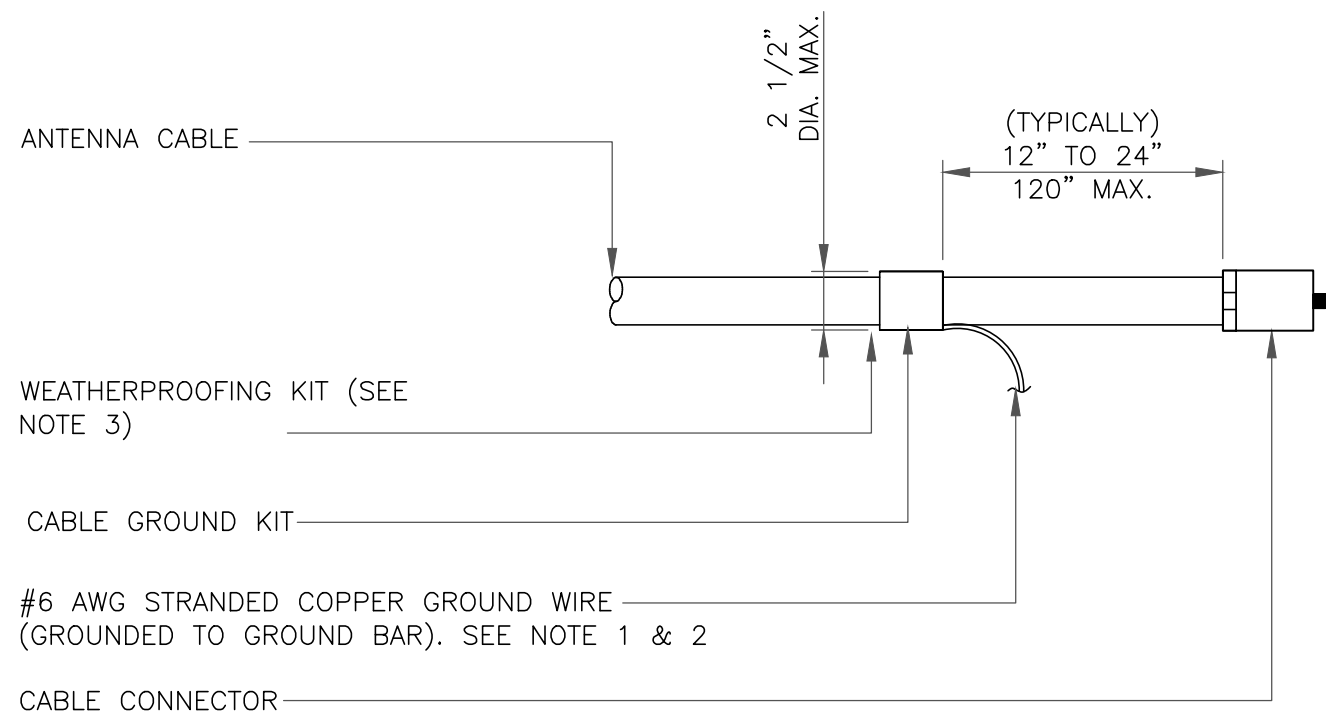
SHEET NUMBER: **G-2** REVISION: **9**



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.

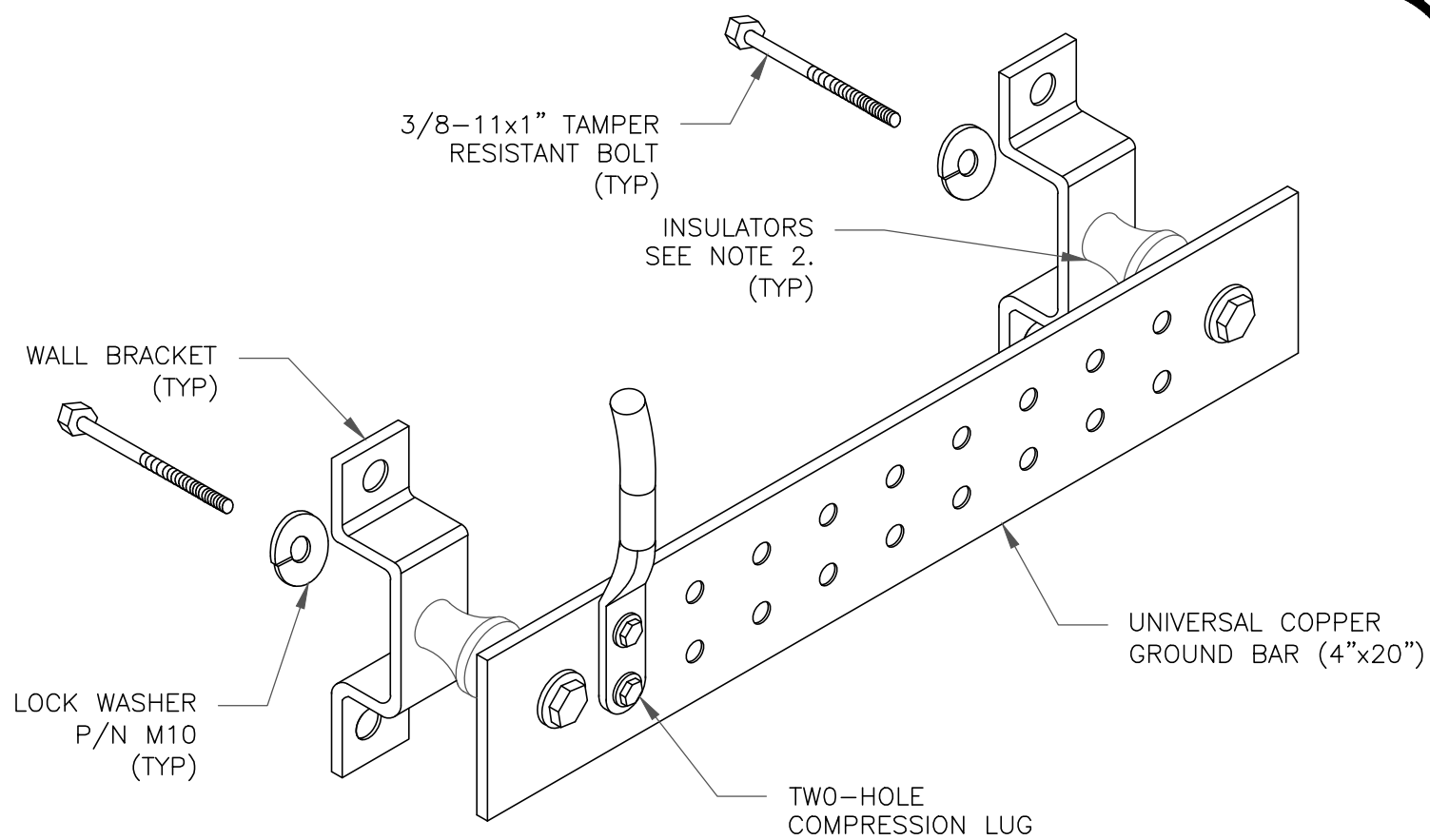
1 CADWELD GROUNDING CONNECTIONS
SCALE: NOT TO SCALE



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.

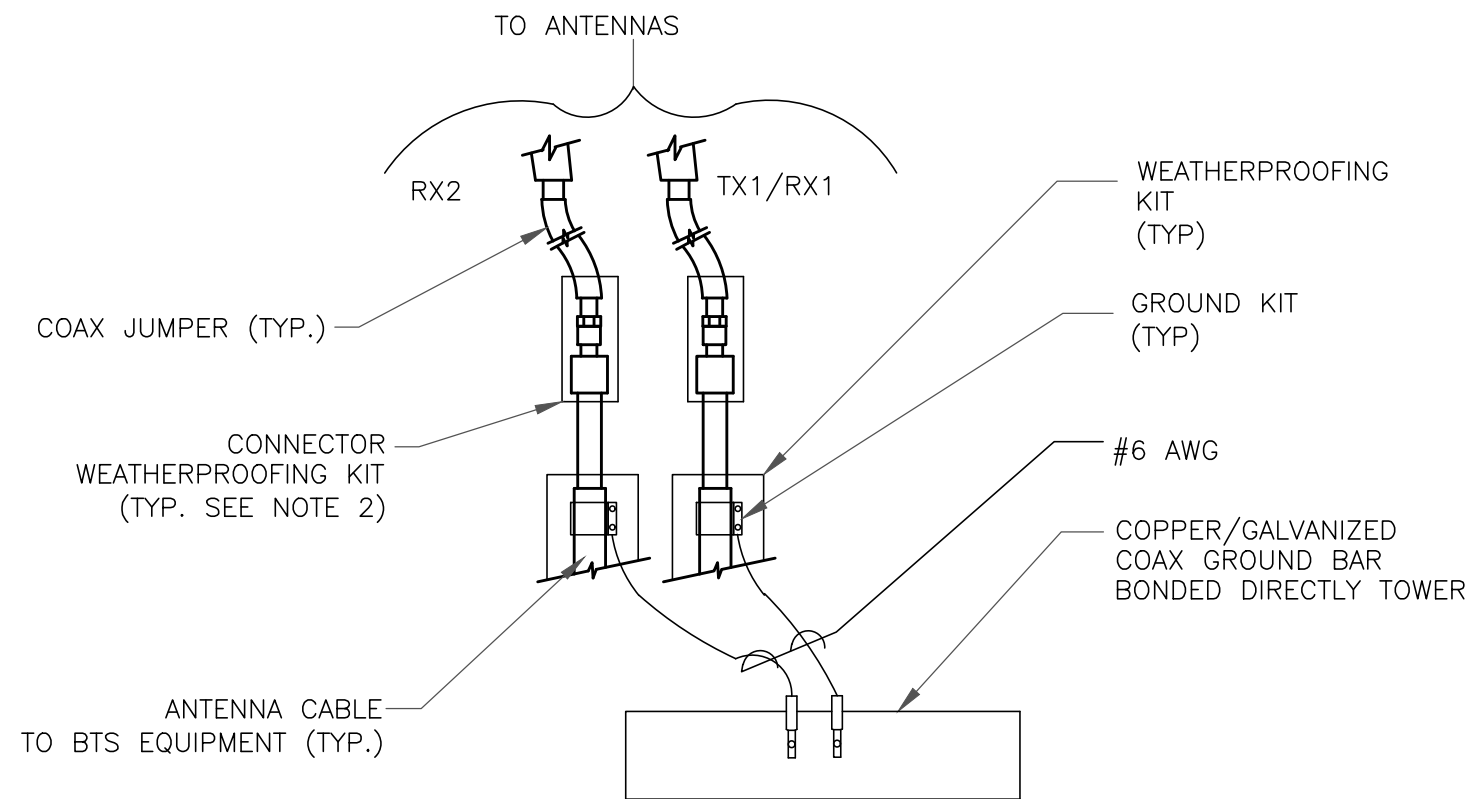
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



NOTES:

1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STG-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.

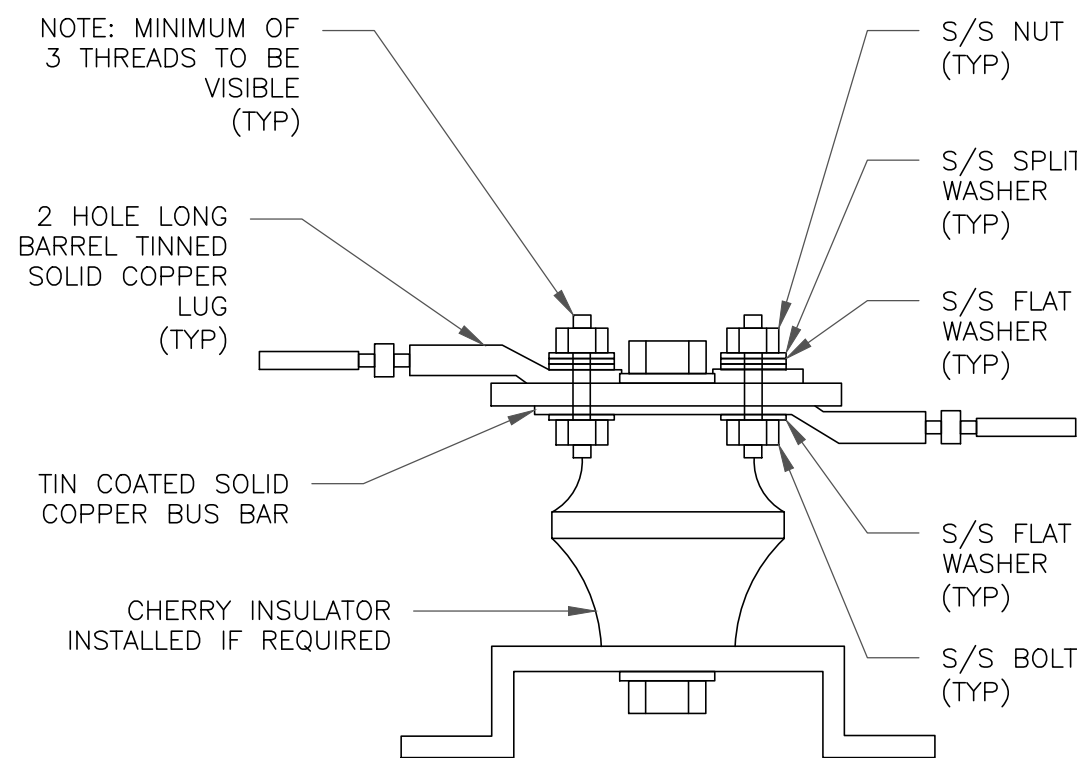
6 GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

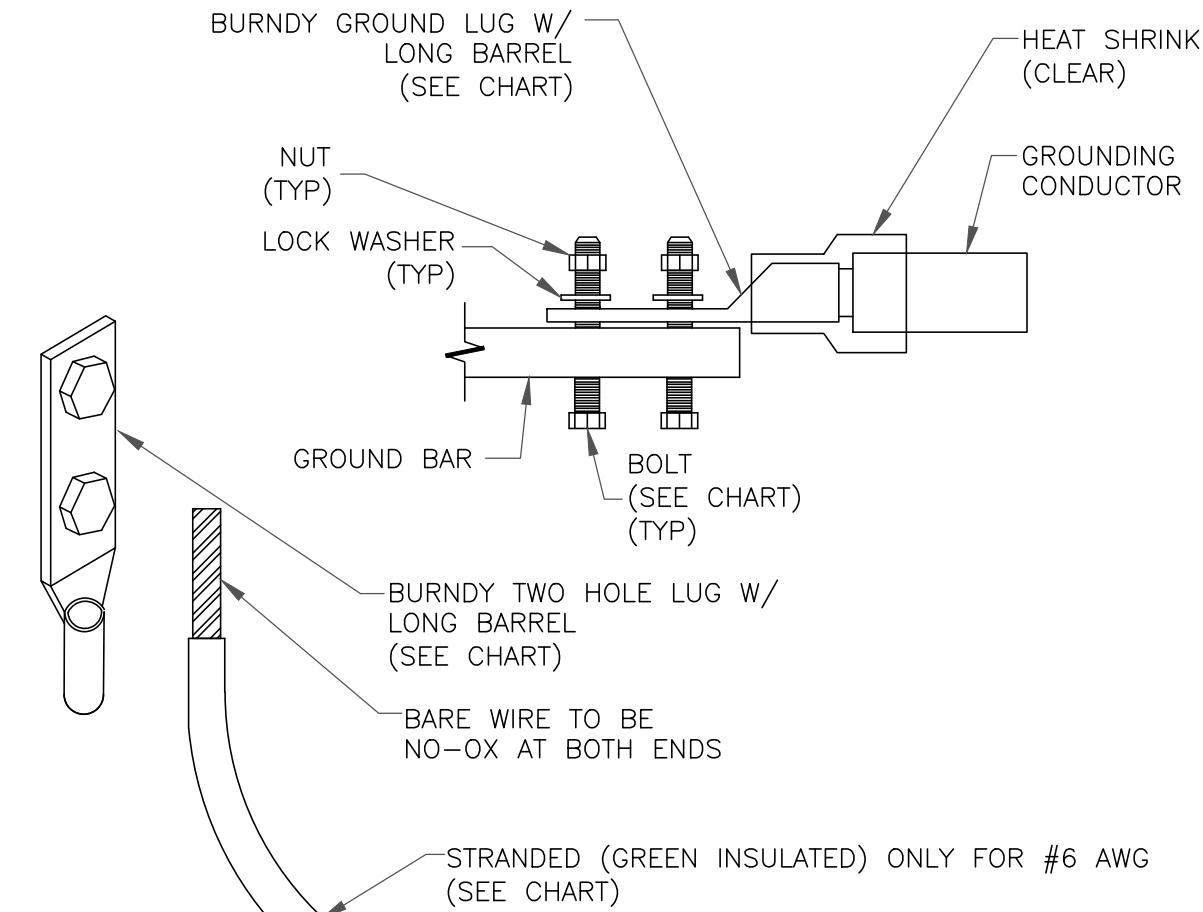
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

4 GROUND CABLE CONNECTION
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE

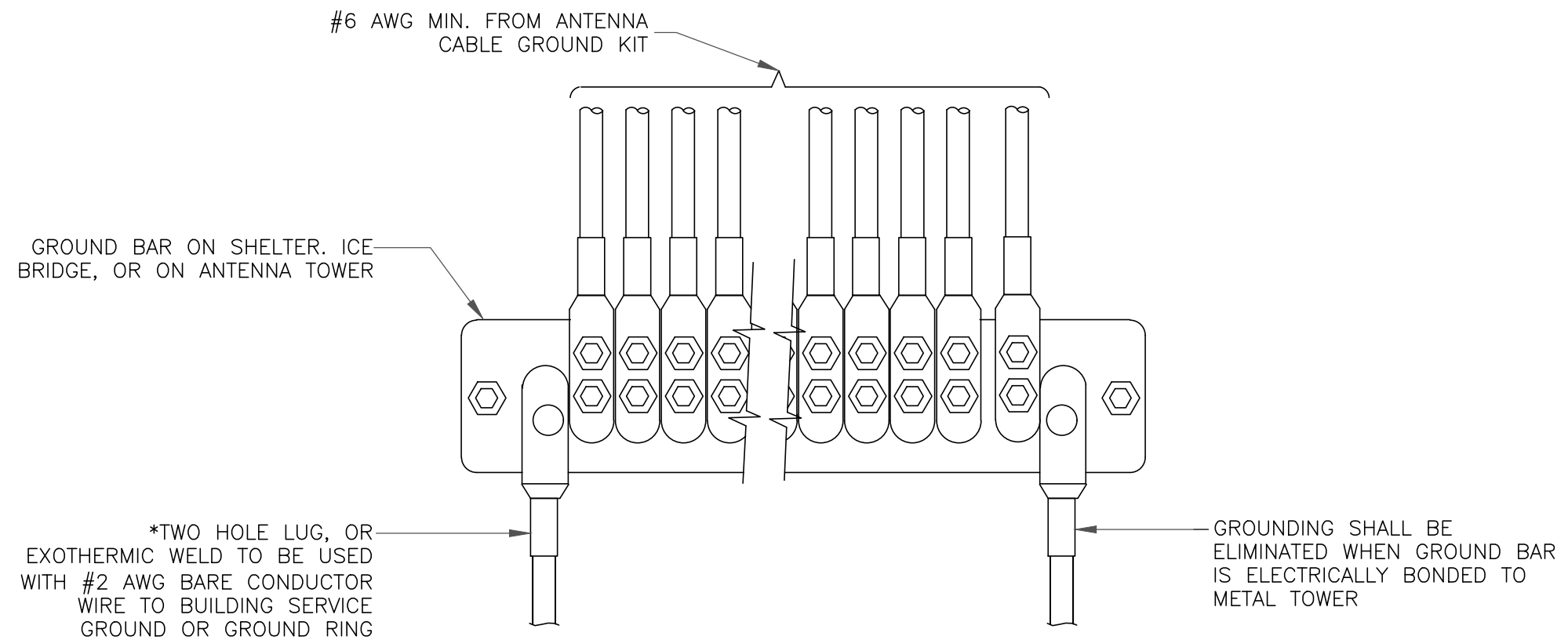
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



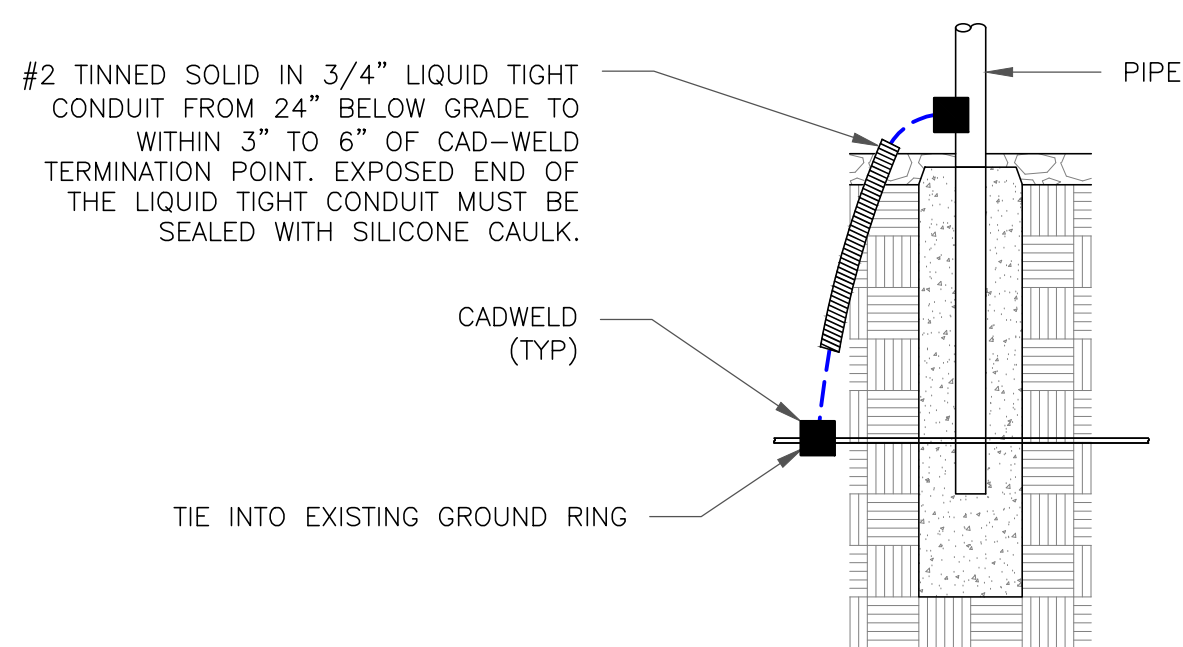
NOTES:

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.

2 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



5 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



8 TRANSITIONING GROUND DETAIL
SCALE: NOT TO SCALE

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ATTACHMENT D: EXISTING CONDITIONS

Adjacent Land Uses and Zoning

- North: M-1 – Contractor’s yard
- South: M-1 – Billboard
- East: M-1 – Self-storage facility
- West: I-15 Freeway

The property is located in a commercial and industrial area between the I-15 freeway and Warm Springs Road north of 600 N. The general area is zoned M-1 Light Manufacturing with some RMF-35 Moderate Density Multi-Family Residential zoning to the west separated by the I-15 Freeway. Adjacent properties have been developed for a variety of commercial and industrial uses. The only residential uses in the general area are separated by the I-15 Freeway.

Applicable Master Plan Policies

The property is included within the Capitol Hill Master Plan area. The master plan suggests limiting the number of communication towers and utilizing the co-location of towers where possible. This proposal involves co-location rather than the construction of a new tower, aligning with the goals of the Capitol Hill Master Plan.

Salt Lake City Zoning Ordinance Provisions

21A.40.090: ANTENNA REGULATIONS:

E. Wireless Telecommunications Facilities

Monopoles 60 feet in height or less with an antenna support structure greater than 2’ wide in the CG Zone require Conditional Use approval.

ATTACHMENT E: ANALYSIS OF STANDARDS

21A.54.080 Standards for Conditional Use

Approval Standards: A conditional use shall be approved unless the planning commission, or in the case of administrative conditional uses, the planning director or designee, concludes that the following standards cannot be met:

Standard	Finding	Rationale
1. The use complies with applicable provisions of this title	Complies	See detailed analysis below.
2. The use is compatible, or with conditions of approval can be made compatible, with surrounding uses	Complies	See detailed analysis below.
3. The use is consistent with applicable adopted city planning policies, documents, and master plans	Complies	See detailed analysis below.
4. The anticipated detrimental effects of a proposed use can be mitigated by the imposition of reasonable conditions	Complies	See detailed analysis below.

21A.54.080 Standards for Conditional Use

Approval Standards: A conditional use shall be approved unless the planning commission, or in the case of administrative conditional uses, the planning director or designee, concludes that the following standards cannot be met:

1. The use complies with applicable provisions of this title

Analysis: The proposed wireless facility expansion will be constructed on a property in the M-1 zoning district. Wireless facilities including a monopole are allowed as Permitted Uses in the zoning district with a maximum monopole height of 60-feet. Per section 21A.40.090 (E) of the Zoning Ordinance, all monopoles 60' or exceeding the maximum height limit of the zone require Conditional Use approval. The proposed modification will increase the height of the monopole from 61' to 81' which necessitates that it be reviewed as a Conditional Use.

Finding: The proposal complies with the applicable provisions of the Salt Lake City Zoning Ordinance, provided that the request meets the conditions recommended as part of this staff report.

2. The use is compatible, or with conditions of approval can be made compatible, with surrounding uses;

Analysis: The proposed wireless facility will be located within an industrial area of the city, surrounded by properties that are being used for a variety of industrial and commercial uses including a billboard, self-storage facilities, construction yard and the I-15 Freeway. The proposed height of the monopole is minimally taller than the height of buildings allowed in the underlying zoning district by right and the proposed array will be a minimal visual impact.

Finding: Given the industrial nature of the area and activities that take place in the general vicinity, no detrimental impacts either visually, or otherwise are anticipated to neighboring properties. The proposal is compatible with the nature of the area.

3. The use is consistent with applicable adopted city planning policies, documents, and master plans; and

Analysis: The Capitol Hill Master Plan suggests the co-location of communication towers where possible, limiting the need for new communication towers as demand increases. The proposal requests approval for colocation of the new antenna rather than construction of a new tower, aligning with goals found in the applicable master plan. Because this specific proposal must be reviewed as a conditional use, if the proposal meets all of the conditions and standards listed, it should be considered as meeting this standard.

Finding: The use is consistent with the adopted Capitol Hill Master Plan and the character of the area. The proposed use is listed as a conditional use in this zoning district.

4. The anticipated detrimental effects of a proposed use can be mitigated by the imposition of reasonable conditions. (Refer to Detrimental Effects Table below for details)

21a.54.080B: Detrimental Effects Determination: In analyzing the anticipated detrimental effects of a proposed use, the planning commission, or in the case of administrative conditional uses, the planning director or designee, shall determine compliance with each of the following:

Criteria	Finding	Rationale
1. This title specifically authorizes the use where it is located	Complies	A monopole exceeding 60-feet with an antenna support structure greater than 2 feet in width is allowed as a conditional use. The existing monopole is 61-feet in height with an array radius greater than 2 feet. The proposed expansion will increase the height of the monopole to a height of 81 feet, which requires conditional use approval. If the conditional use is approved according to the Zoning Ordinance process and all required standards, the proposal will not create a detrimental effect.
2. The use is consistent with applicable policies set forth in adopted citywide, community, and small area master plans and future land use maps	Complies	The use aligns with applicable master plan goals by co-locating the antenna rather than proposing a new monopole (see analysis from standard 3 above).
3. The use is well-suited to the character of the site, and adjacent uses as shown by an analysis of the intensity, size, and scale of the use compared to existing uses in the surrounding area	Complies	Surrounding the wireless facility are a variety of industrial and commercial uses such as a billboard, self-storage facilities, construction yard and the I-15 Freeway. The use is well suited to the character of the site. The antenna will provide service connectivity to property owners and businesses in the area.
4. The mass, scale, style, design, and architectural detailing of the surrounding structures as they relate to the proposed have been considered	Complies	There are few surrounding structures and the proposed facility will not be intrusive in nature.
5. Access points and driveways are designed to minimize grading of natural topography, direct vehicular traffic onto major streets, and not impede traffic flows	Complies	The proposal will have no traffic impact.
6. The internal circulation system is designed to mitigate adverse impacts on adjacent property from motorized, non-motorized, and pedestrian traffic	Complies	The proposal will have no traffic impact.
7. The site is designed to enable access and circulation for pedestrian and bicycles	Complies	The proposal will have no traffic impact.
8. Access to the site does not unreasonably impact the service level of any abutting or adjacent street	Complies	The proposal will have no traffic impact.
9. The location and design of off-street parking complies with applicable standards of this code	Complies	The proposal will not require additional off-street parking.
10. Utility capacity is sufficient to support the use at normal service levels	Complies	The proposal will not require additional utility service.

11. The use is appropriately screened, buffered, or separated from adjoining dissimilar uses to mitigate potential use conflicts	Complies	The proposal will not change the land use.
12. The use meets City sustainability plans, does not significantly impact the quality of surrounding air and water, encroach into a river or stream, or introduce any hazard or environmental damage to any adjacent property, including cigarette smoke	Complies	The proposal will not significantly impact the environment or introduce any hazard.
13. The hours of operation and delivery of the use are compatible with surrounding uses	Complies	The equipment will be serviced by a technician as needed for routine maintenance and repair.
14. Signs and lighting are compatible with, and do not negatively impact surrounding uses	Complies	The proposal will not require signs and lighting.
15. The proposed use does not undermine preservation of historic resources and structures	Complies	The proposal is not associated with any historic resources or structures.

Section 21A.40.090.E.9 Additional Conditional Use Requirements (for antennas)

In addition to conditional use standards outlined in Section 21A.54 (above) of the zoning ordinance; the following shall be considered by the Planning Commission:

- a. Compatibility of the proposed structure with the height and mass of existing buildings and utility structures;
- b. Whether collocation of the antenna on the other existing structures in the same vicinity such as other towers, buildings, water towers, utility poles, etc., is possible without significantly impacting antenna transmission or reception;
- c. The location of the antenna in relation to existing vegetation, topography and buildings to obtain the best visual screening;
- d. Whether the spacing between monopoles and lattice towers creates detrimental impacts to adjoining properties.

Analysis: Surrounding the monopole are a variety of commercial and industrial uses. Monopoles and other wireless equipment installations are common in industrial areas of the City where they are needed to provide services to businesses in the area. There are generally few if any concerns with compatibility that come up when wireless facilities are located in these areas. At 81 feet in height, the proposed monopole expansion will be minimally taller than the existing monopole and will not be a greater visual impact.

It would be difficult to attempt to screen the antenna with existing vegetation, topography or buildings but this should not be a problem given the industrial nature of the area.

There are no other monopoles or lattice towers in the area so spacing will not be an issue in terms creating detrimental impacts on adjoining properties.

Finding: This project satisfies the additional requirements of Section 21A.40.090.E.9.

ATTACHMENT F: PUBLIC PROCESS AND COMMENTS

The following is a list of public meetings that have been held, and other public input opportunities, related to the proposed project:

- Notice of the project and request for comments was sent to the Chairs of the Capitol Hill and Rose Park Community Councils on March 9, 2021 in order to solicit comments.
- Staff sent an early notification announcement of the project to all residents and property owners located within 300 feet of the project site on March 9, 2021 providing notice about the project and information on how to give public input on the project.
- Staff held a virtual Open House for the project on the Salt Lake City website to solicit comments.

Public Notice:

- Early notice of application mailed on March 9, 2021
- Public hearing notice mailed on April 15, 2021
- Public hearing sign posted on the property on April 16, 2021
- Agenda posted on the Planning Division and Utah Public Meeting Notice websites on April 15, 2021

Public Comments:

- Neither the Capitol Hill nor the Rose Park Community Council Chair asked staff to attend a meeting to present the project.
- At the time of this publication, staff has not received any public comment.
- Any additional comments received after the publication of the staff report will be forwarded to the Planning Commission.

ATTACHMENT G: DEPARTMENT REVIEW COMMENTS

Fire (Ted Itchon at edward.itchon@slcgov.com)

Review completed. No comments provided.

Engineering (Scott Weiler at scott.weiler@slcgov.com)

No objections.

Transportation (Michael Barry at michael.barry@slcgov.com)

Transportation does not have any issues with this Conditional Use.

Public Utilities (Jason Draper at jason.draper@slcgov.com)

No public utility issues with this.

Building (Jason Rogers at jason.rogers@slcgov.com)

No issues at this time project dox review standard request to upload for commercial permit

Zoning (Katilynn Harris at katilynn.harris@slcgov.com)

Appears to comply with standards for monopoles with mounting structures greater than 2' diameter.