



**BUSINESS UNIT #:** 877055  
**SITE ADDRESS:** 7421 TEMPLETON GAP  
 COLORADO SPRINGS, CO 80922  
**COUNTY:** EL PASO  
**SITE TYPE:** MONOPOLE  
**TOWER HEIGHT:** 100'-0"



**Kimley»Horn**

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

## DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1.1	COMPOUND PLAN
C-1.2	EQUIPMENT PLAN
C-2	GENERATOR PAD DETAILS
C-3	SIGNAGE REQUIREMENTS & EQUIPMENT DETAILS
C-4	FENCE DETAIL
C-5	ATS SPECIFICATIONS
C-6	GENERATOR SPECIFICATIONS
C-7	GENERATOR SPECIFICATIONS
E-1	ELECTRICAL PLAN
E-2	PANEL SCHEDULES & ONE-LINE DIAGRAM
E-3	CONDUIT DETAILS
E-4	UTILITY DETAILS
E-5	UTILITY DETAILS
E-6	UTILITY DETAILS
G-1	TYPICAL GROUNDING SCHEMATIC
G-2	GROUNDING DETAILS

<u>T-MOBILE SIGNATURE BLOCK</u>		
<u>APPROVAL</u>	<u>SIGNATURE</u>	<u>DATE</u>
SITE ACQUISITION		
CONSTRUCTION		
RADIO		
MICROWAVE		
TELCO		
EQUIPMENT		
PROJECT ADMINISTRATOR		
WO ADMINISTRATOR		

A map of the area around Mount E. Wood, showing roads, landmarks, and a route to the N/A DN03223F location. The map includes a compass rose in the bottom left corner and a scale bar at the bottom. The route is marked with a red line and a red dot at the destination. Landmarks include Walmart Supercenter, CommonSpirit St. Francis Hospital, Villa Sport, Legends Miniature Golf & Batting Cages, Chick-fil-A, Jared Jensen Park, Banning Lewis Ranch Recreation Center, Quick Quack Car Wash, and Aspen Meadows by Aspen View Homes. Roads shown include Chancellor Dr, Potomac Dr, Turf Blvd, Cowpoke Rd, Vollmer Rd, E Wood, Wolf Ridge Rd, Vista Ridge High School, Tempson Gale Rd, Dubbin Blvd, Paterston Rd, Windom Peak Blvd, and Snowy River Dr. The map also shows a north arrow and a scale bar.

A&E FIRM: KIMLEY-HORN & ASSOCIATES, INC.  
3875 EMBASSY PKWY, SUITE 280  
AKRON, OH 44333  
MICHAEL.KRIEG@KIMLEY-HORN.COM

CROWN CASTLE 8020 KATY FREEWAY  
USA INC. DISTRICT HOUSTON, TX 77024  
CONTACTS: ZACHARY KELLY - AES  
ZACHARY.KELLY@CROWNCASTLE.COM

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 22X34.  
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.



CALL COLORADO ONE CALL  
(800) 922-1987  
CALL 3 WORKING DAYS  
BEFORE YOU DIG!



THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:

- NONE

GROUND SCOPE OF WORK:

- INSTALL (1) 4'-0"x9'-0" CONCRETE PAD
- INSTALL (1) 48KW GENERATOR
- INSTALL (1) ATS
- INSTALL (1) FIRE EXTINGUISHER
- INSTALL (1) EMERGENCY SHUTOFF SWITCH
- REMOVE (1) H-FRAME
- REMOVE (1) CONCRETE PAD

PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.

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:

<u>CODE TYPE</u>	<u>CODE</u>
BUILDING	2023 PIKES PEAK REGIONAL BUILDING CODE (2021 IBC)
MECHANICAL	2023 PIKES PEAK REGIONAL BUILDING CODE (2021 IMC)
ELECTRICAL	2023 PIKES PEAK REGIONAL BUILDING CODE (2020 NEC)

REFERENCE DOCUMENTS:

ORDER ID: 667522  
REVISION: 0

7/1/25  
Exp. 10/31/25

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:

3



CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED– NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800-788-7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
2. "LOOK UP" – CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT:  
THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE BUT NOT BE LIMITED TO PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. 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/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED–STD–10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH QAS–STD–10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED–STD–10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS." IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR 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.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. 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 CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR 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 E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. 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, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. 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 CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR 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.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR 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.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. 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.

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 CONTRACTOR SHALL PERFORM IEEE FALL–OF–POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR 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 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 CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE 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 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 RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING 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 CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (I.E., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD–WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION  
CARRIER: T–MOBILE  
TOWER OWNER: CROWN CASTLE USA INC.
2. 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 WORKPEOPLE 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.
3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE 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 OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL 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 NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR 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 CROWN CASTLE.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR 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.
8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC.
13. CONTRACTOR 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.
14. CONTRACTOR 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. CONTRACTOR 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.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- 4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
- 4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR 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.
6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E. PANEL BOARD AND CIRCUIT ID'S).
7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
8. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI–CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION 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 NOT 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), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT) OR METAL–CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC ON STRAIGHTS AND SCHEDULE 80 PVC UNDER ALL TRAFFIC EASEMENTS AND ALL ELBOWS/90s. ABOVE GRADE CONDUIT TO BE SCH 80 PVC OR IMC/RMC CONDUIT. EMT IS ALLOWED AT STUB UP LOCATIONS AND INDOORS ONLY.
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 TUB 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 THE NEC.
21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON–PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (I.E. POWDER–ACTUATED) 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 BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
25. 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 BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "T–MOBILE".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

CONDUCTOR COLOR CODE		
SYSTEM	CONDUCTOR	COLOR
120/240V, 1Ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
	GROUND	GREEN
120/208V, 3Ø	A PHASE	BLACK
	B PHASE	RED
	C PHASE	BLUE
	NEUTRAL	WHITE
277/480V, 3Ø	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
DC VOLTAGE	GROUND	GREEN
	POS (+)	RED**
	NEG (–)	BLACK**

\* SEE NEC 210.5(C)(1) AND (2)  
\*\* POLARITY MARKED AT TERMINATION

ABBREVIATIONS:

ANT	ANTENNA
(E)	EXISTING
FIF	FACILITY INTERFACE FRAME
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
GSM	GLOBAL SYSTEM FOR MOBILE
LTE	LONG TERM EVOLUTION
MGB	MASTER GROUND BAR
MW	MACROWAVE
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
(P)	PROPOSED
PP	POWER PLANT
QTY	QUANTITY
RECT	RECTIFIER
RBS	RADIO BASE STATION
RET	REMOTE ELECTRIC TILT
RFDS	RADIO FREQUENCY DATA SHEET
RRH	REMOTE RADIO HEAD
RUU	REMOTE RADIO UNIT
SIAD	SMART INTEGRATED DEVICE
TMA	TOWER MOUNTED AMPLIFIER
TYP	TYPICAL
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
W.P.	WORK POINT

APWA UNIFORM COLOR CODE:

WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
YELLOW	GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES, OR CONDUIT AND TRAFFIC LOOPS
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
GREEN	SEWERS AND DRAIN LINES

T Mobile

CROWN CASTLE

Kimley»Horn

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK



7/1/25  
Exp. 10/31/25

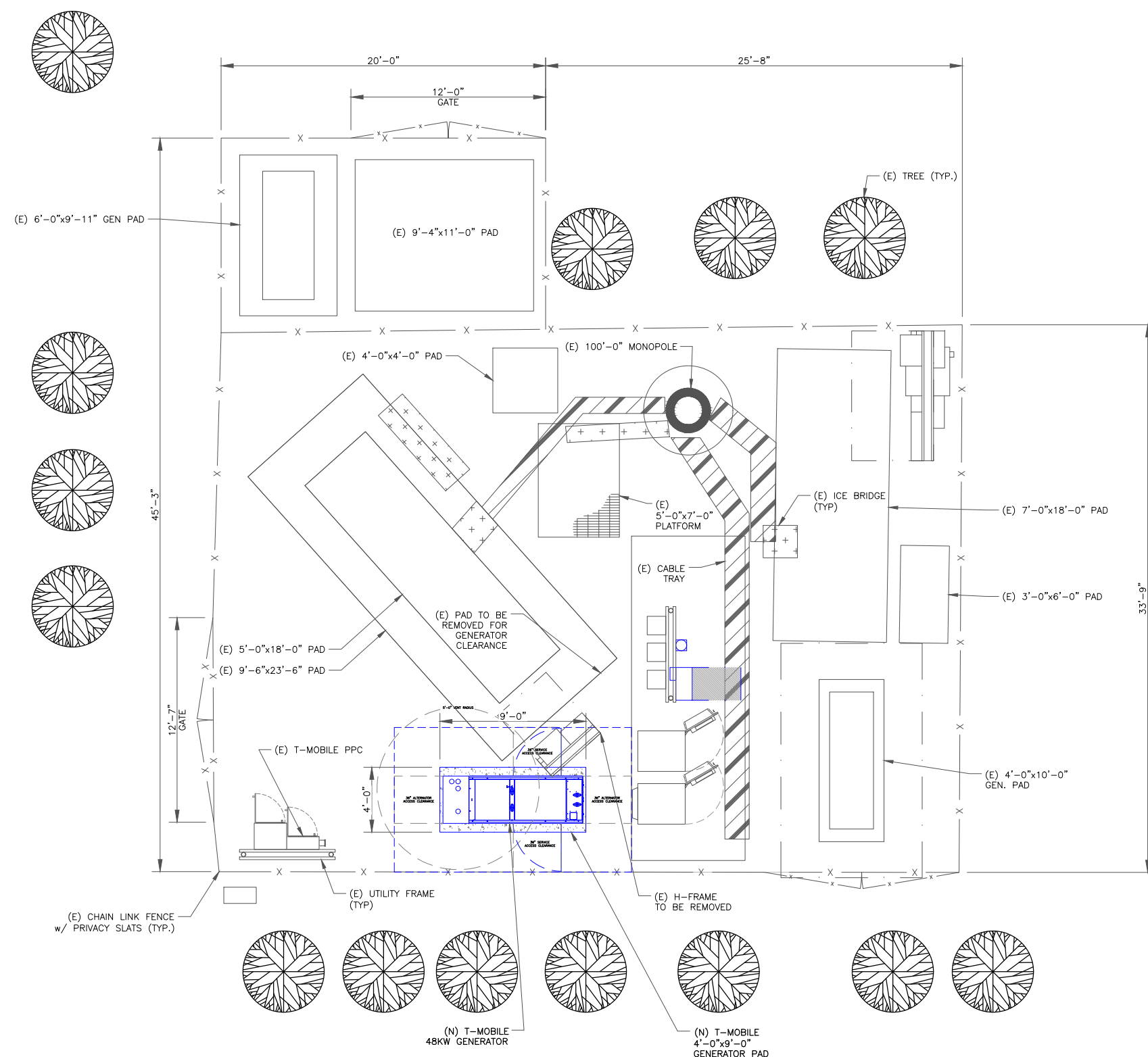
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER:

T-2

REVISION:

3



1 OVERALL SITE PLAN  
SCALE: 1/4"=1'-0" (FULL SIZE)  
1/8"=1'-0" (11x17)



421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
**SCHUBERT PROPERTY**

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK

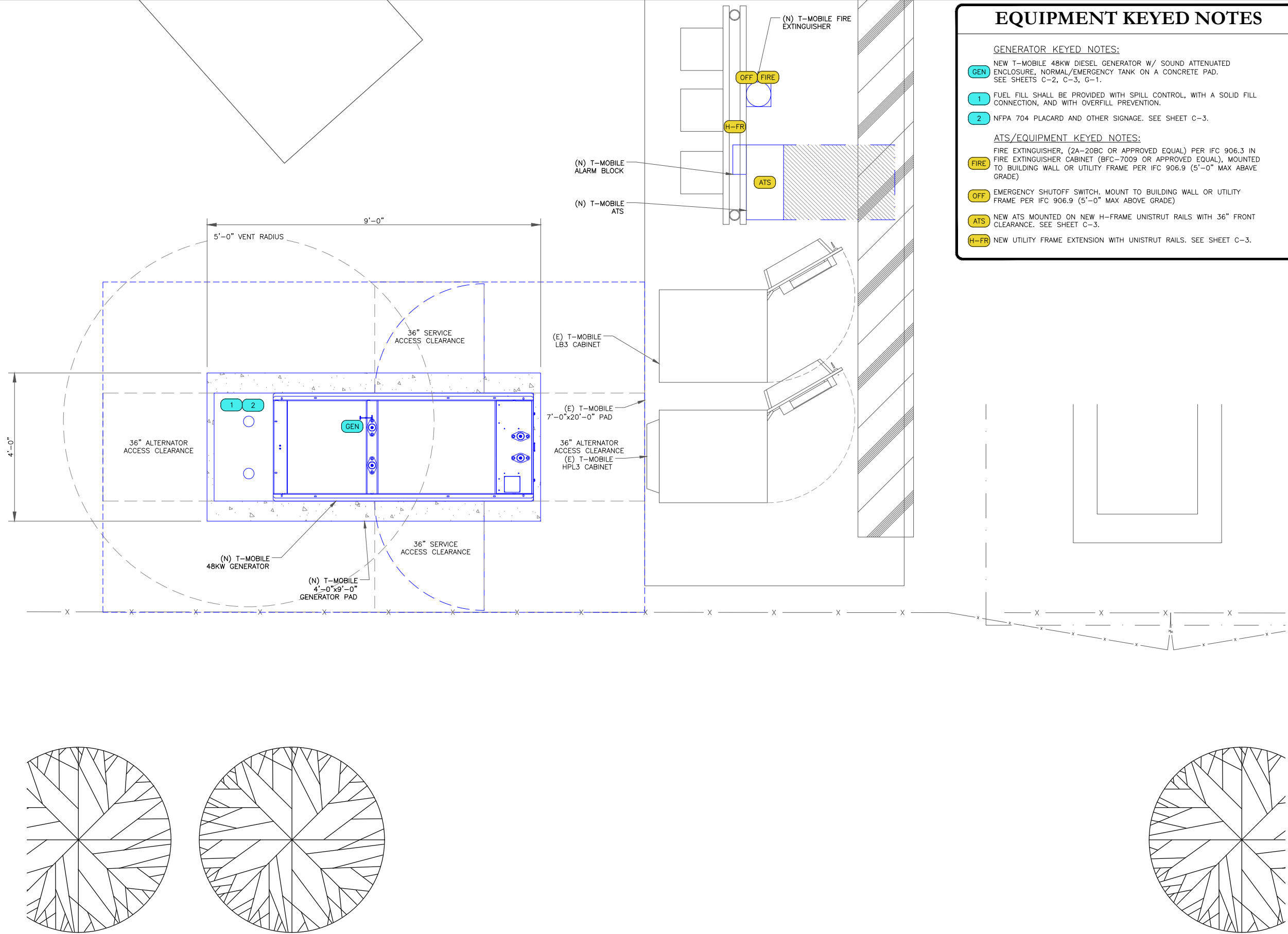
7/1/25  
Exp. 10/31/25

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-1.1**

REVISION:  
**3**





# EQUIPMENT KEYED NOTES

- GENERATOR KEYED NOTES:**
- GEN** NEW T-MOBILE 48KW DIESEL GENERATOR W/ SOUND ATTENUATED ENCLOSURE, NORMAL/EMERGENCY TANK ON A CONCRETE PAD. SEE SHEETS C-2, C-3, G-1.
  - 1** FUEL FILL SHALL BE PROVIDED WITH SPILL CONTROL, WITH A SOLID FILL CONNECTION, AND WITH OVERFILL PREVENTION.
  - 2** NFPA 704 PLACARD AND OTHER SIGNAGE. SEE SHEET C-3.
- ATS/EQUIPMENT KEYED NOTES:**
- FIRE** FIRE EXTINGUISHER, (2A-20BC OR APPROVED EQUAL) PER IFC 906.3 IN FIRE EXTINGUISHER CABINET (BFC-7009 OR APPROVED EQUAL), MOUNTED TO BUILDING WALL OR UTILITY FRAME PER IFC 906.9 (5'-0" MAX ABOVE GRADE)
  - OFF** EMERGENCY SHUTOFF SWITCH. MOUNT TO BUILDING WALL OR UTILITY FRAME PER IFC 906.9 (5'-0" MAX ABOVE GRADE)
  - ATS** NEW ATS MOUNTED ON NEW H-FRAME UNISTRUT RAILS WITH 36" FRONT CLEARANCE. SEE SHEET C-3.
  - H-FR** NEW UTILITY FRAME EXTENSION WITH UNISTRUT RAILS. SEE SHEET C-3.



421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

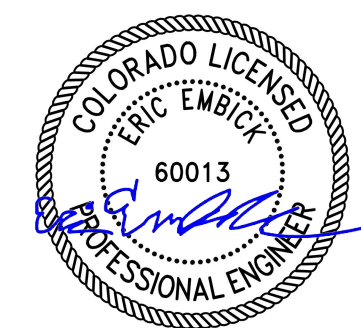
BU #: 877055  
**SCHUBERT PROPERTY**

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

## ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK



7/1/25  
Exp. 10/31/25

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.

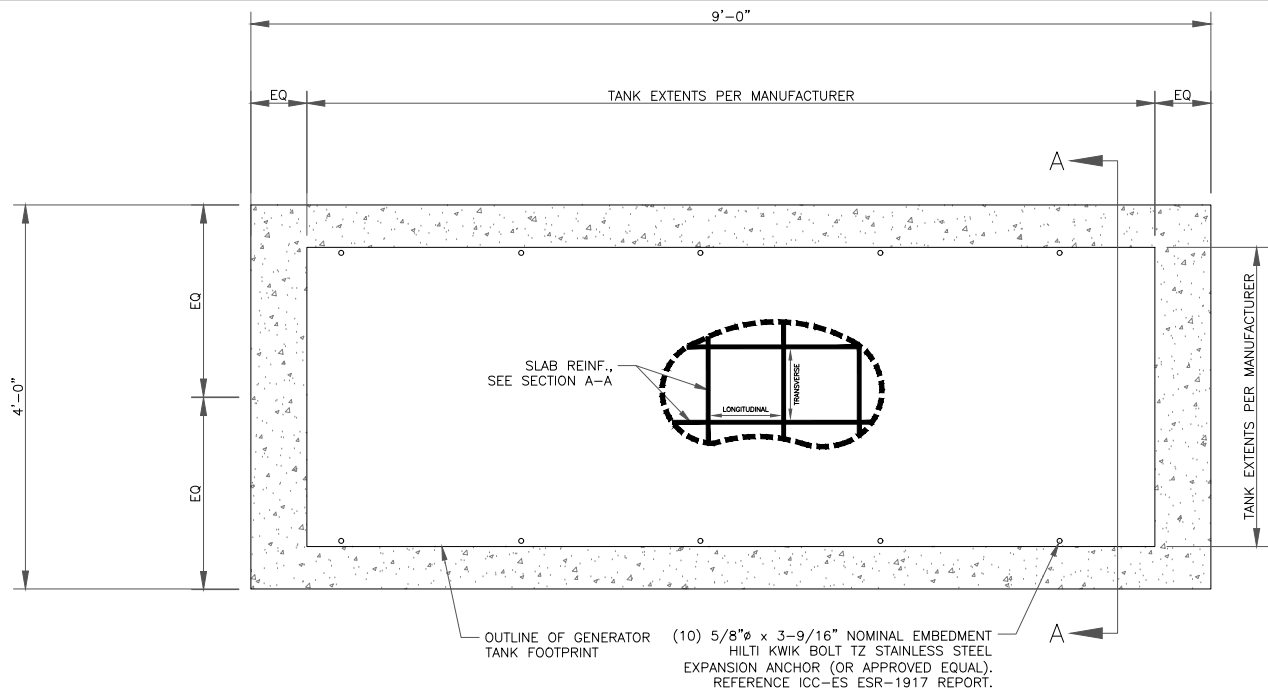
SHEET NUMBER:  
**C-1.2**

REVISION:  
**3**

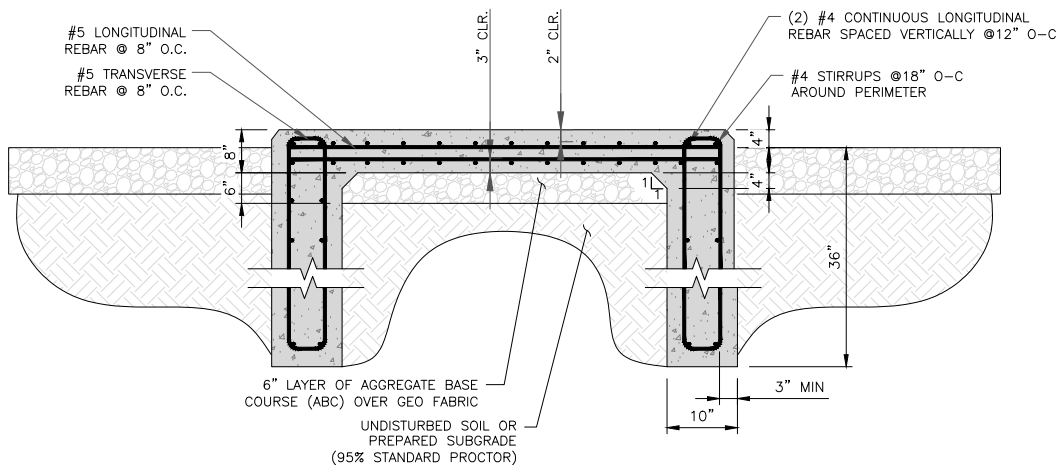
1 FINAL EQUIPMENT PLAN  
SCALE: 1" = 6'-0" 3/4"=1'-0" (FULL SIZE)  
3/8"=1'-0" (11x17)





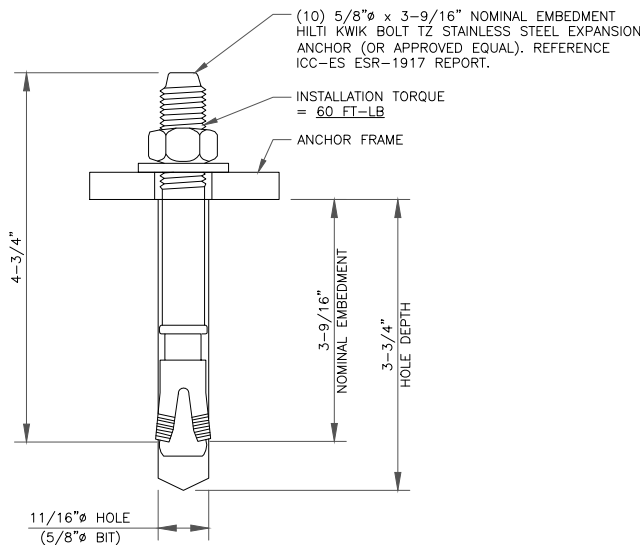


1 GENERATOR PAD DETAIL  
SCALE: NOT TO SCALE



2 GENERATOR PAD DETAIL – SECTION A-A  
SCALE: NOT TO SCALE

INSTALLER NOTE:  
PER IBC 1705.12.6, PERIODIC SPECIAL  
INSPECTION OF ANCHORAGE FOR  
STANDBY POWER SYSTEMS IS REQUIRED



3 TYPICAL ANCHOR DETAIL  
SCALE: NOT TO SCALE

#### STRUCTURAL DESIGN NOTES:

ALL LOADS DERIVED FROM REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, ASCE 7.

#### BUILDING & COMMUNICATION STRUCTURES:

- WIND LOADS: IBC 2021 & ASCE 7-16  
V = 130 MPH ULTIMATE WIND SPEED  
EXPOSURE CATEGORY = C; TOPOGRAPHIC CATEGORY = 1.  
IMPORTANCE FACTOR = 1.0.
- SEISMIC LOADS: IBC 2021 & ASCE 7-16  
STRUCTURE CLASS = II; SITE CLASS = D.  
SS = 0.172 ; S1 = 0.059 ; SDS = 0.187

#### CONCRETE NOTES:

- PRIOR TO EXCAVATION, CHECK THE AREA FOR UNDERGROUND FACILITIES.
- ALL CONCRETE SHALL BE IN ACCORDANCE WITH CHAPTER 19 OF THE IBC & ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", LATEST EDITION & HAVE THE FOLLOWING PROPERTIES:
  - MINIMUM 7-DAY COMPRESSIVE STRENGTH (f'c) OF 4,500 PSI.
  - CEMENT SHALL BE "LOW-ALKALI" TYPE IIA (MODERATE SULFATE RESISTANCE, AIR ENTRAINING) CONFORMING TO ASTM C150.
  - MAXIMUM WATER/CEMENT RATIO OF 0.45 AND AIR-ENTRAINED 4% TO 7%.
  - CONCRETE PROPORTIONING SHALL BE DESIGNED BY AN APPROVED LABORATORY. TOLERANCES IN ACCORDANCE WITH ACI 117. COPIES OF CONCRETE MIX SHALL BE SUBMITTED TO THE CROWN CASTLE CONSTRUCTION MANAGER FOR REVIEW PRIOR TO PLACEMENT.
  - ALL AGGREGATE USED IN CONCRETE SHALL CONFORM TO ASTM C33. USE ONLY AGGREGATES KNOWN NOT TO CAUSE EXCESSIVE SHRINKAGE. MAXIMUM AGGREGATE SIZE TO BE 3/4".
  - MAXIMUM SLUMP: REFER TO GEOTECHNICAL REPORT FOR CONFIRMATION OF ANY ASSUMPTIONS MADE DURING DESIGN.
- FORMWORK FOR CONCRETE SHALL CONFORM TO ACI 347. TOLERANCES FOR FINISHED CONCRETE SURFACES SHALL MEET CLASS-C REQUIREMENTS. IN NO CASE SHALL FINISHED CONCRETE SURFACES EXCEED THE FOLLOWING VALUES AS MEASURED FROM NEAT PLAN LINES AND FINISHED GRADES:  $\pm 1/4"$  VERTICAL,  $\pm 1"$  HORIZONTAL.
- CHAMFER ALL EXPOSED CORNERS AND FILLET ENTRANT ANGLES  $3/4"$  U.N.O.
- CONCRETE FINISHING: CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH ACI. PROVIDE ROUGH FINISH FOR ALL SURFACES NOT EXPOSED TO VIEW AND SMOOTH FINISH FOR ALL OTHERS, U.N.O.
- STEEL REINFORCEMENT AND CONCRETE SHOULD BE PLACED IMMEDIATELY UPON COMPLETION OF THE FOUNDATION EXCAVATION. CONTRACTOR SHALL NOT ALLOW A COLD JOINT TO FORM IN THE CONCRETE. PORTION AT GRADE SHOULD BE FORMED. TEMPORARY CASING MAY BE REQUIRED TO PREVENT CAVING PRIOR TO CONCRETE PLACEMENT.

#### REINFORCING STEEL NOTES:

- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615. VERTICAL/HORIZONTAL BARS SHALL BE GRADE 60; TIES OR STIRRUPS SHALL BE A MINIMUM OF GRADE 40. ALL REINFORCING STEEL SHALL HAVE  $3"$  ( $\pm 3/8"$ ) OF CONCRETE COVER, U.N.O.
- ALL BAR BENDS, HOOKS, SPLICES AND OTHER REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ACI 315.
- ALL BARS SHALL BE SPLICED WITH A MINIMUM LAP OF 48 BAR DIAMETERS. LAP SPLICES OF DEFORMED BARS IN TENSION ZONES SHALL BE CLASS-B SPLICES. WELDING OF BARS IS NOT PERMITTED.
- AT ALL CORNERS AND WALL INTERSECTIONS, PROVIDE BENT HORIZONTAL BARS TO MATCH THE HORIZONTAL REINFORCING STEEL.
- PROVIDE VERTICAL DOWELS IN FOOTINGS AND AT CONSTRUCTION JOINTS TO MATCH VERTICAL REINFORCING BAR SIZE AND SPACING.
- ACI-APPROVED PLASTIC-COATED BAR CHAIRS OR PRECAST CONCRETE BLOCKS SHALL BE PROVIDED FOR SUPPORT OF ALL GRADE-CAST REINFORCING STEEL & SHALL BE SUFFICIENT IN NUMBER TO PREVENT SAGGING. METAL CLIPS OR SUPPORTS SHALL NOT BE PLACED IN CONTACT WITH THE FORMS OR THE SUB-GRADE.
- DOWELS AND ANCHOR BOLTS SHALL BE WIRED OR OTHERWISE HELD IN CORRECT POSITION PRIOR TO PLACING CONCRETE. IN NO CASE SHALL DOWELS OR ANCHOR BOLTS BE "STABBED" INTO FRESHLY-POURED CONCRETE.

#### FOUNDATION NOTES:

- A GEOTECHNICAL ENGINEER (OR INSPECTOR), HIRED BY OWNER, SHALL INSPECT THE EXCAVATION PRIOR TO THE PLACEMENT OF CONCRETE AND SHALL PROVIDE A NOTICE OF INSPECTION FOR THE BUILDING INSPECTOR FOR REVIEW AND RECORDS PURPOSES.
- THE CONTRACTOR SHALL DETERMINE THE MEANS AND METHODS NECESSARY TO SUPPORT THE EXCAVATION DURING CONSTRUCTION.
- REBAR AT BOTTOM OF FOUNDATIONS SHALL BE BONDED TO SITE GROUNDING SYSTEM (WHEN APPLICABLE). SEE ADDITIONAL DETAILS ON APPROVED A&E CONSTRUCTION DRAWINGS.

#### SOIL NOTES:

- FOUNDATION DESIGN BASED ON THE PRESUMPTIVE MINIMUM SOIL PARAMETERS IN ACCORDANCE WITH THE IBC, CBC AND TIA. WHEN A SITE SPECIFIC GEOTECHNICAL REPORT IS AVAILABLE ON CCISITES AND THE ENGINEER AND THE CONTRACTOR SHALL ADHERE TO ALL RECOMMENDATIONS PROVIDED THEREIN.
- ALL FOUNDATIONS TO BE PLACED ON FIRM, UNDISTURBED, INORGANIC MATERIAL. PROOF ROLL SUB-GRADE PRIOR TO PLACING CONCRETE WHERE THE MATERIAL HAS BEEN DISTURBED BY EQUIPMENT. UNACCEPTABLE/DISTURBED MATERIAL SHALL BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL BACKFILL.
- STRUCTURAL BACKFILL SHALL BE GRANULAR FREE-DRAINING MATERIAL FREE OF DEBRIS, ORGANICS, REFUSE AND OTHERWISE DELETERIOUS MATERIALS. MATERIAL SHALL BE PLACED IN LIFTS NO GREATER THAN 6" IN DEPTH AND COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED PER ASTM D1557 (MODIFIED PROCTOR). THE GEOTECHNICAL REPORT SHALL BE REVIEWED AND ADHERED TO FOR SPECIFIC RECOMMENDATIONS.

#### MECHANICAL ANCHOR NOTES:

- HILTI PRODUCTS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, AS INCLUDED IN THE ADHESIVE PACKAGING.
- CONTRACTOR SHALL AVOID DRILLING HOLES IN VERTICAL/HORIZONTAL REINFORCING BARS.
- HOLES MUST BE WIRE BRUSHED AND BLASTED WITH COMPRESSED AIR PRIOR TO INSTALLATION.
- TEMPERATURES/METHODS/WORKING TIME/ETC. ARE TO BE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
- REFERENCE ICC-ES ESR-1917 REPORT.

T Mobile

CROWN  
CASTLE

Kimley»Horn

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

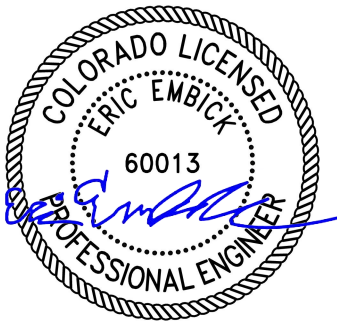
BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

#### ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK



7/1/25  
Exp. 10/31/25

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-2

REVISION:

3

NOTE:  
CONTRACTOR TO PROVIDE REQUIRED SIGNAGE  
FOR ELECTRICAL PANELS, DISCONNECTS,  
TRANSFER SWITCHES, ETC. PER NATIONAL  
ELECTRICAL CODE ARTICLE 700.7



PLACE ON VISIBLE SIDE OF  
NEW GENERATOR TANK  
10" x 7" SIGN



PLACE ON (2) VISIBLE SIDES OF  
NEW GENERATOR TANK  
18" x 18" SIGN

CAUTION: THIS TANK TO CONTAIN  
PETROLEUM PRODUCTS ONLY

(BLACK LETTERING W/  
WHITE BACKGROUND)

NO SMOKING

(RED LETTERING W/  
WHITE BACKGROUND)

COMBUSTIBLE

(RED LETTERING W/  
WHITE BACKGROUND)

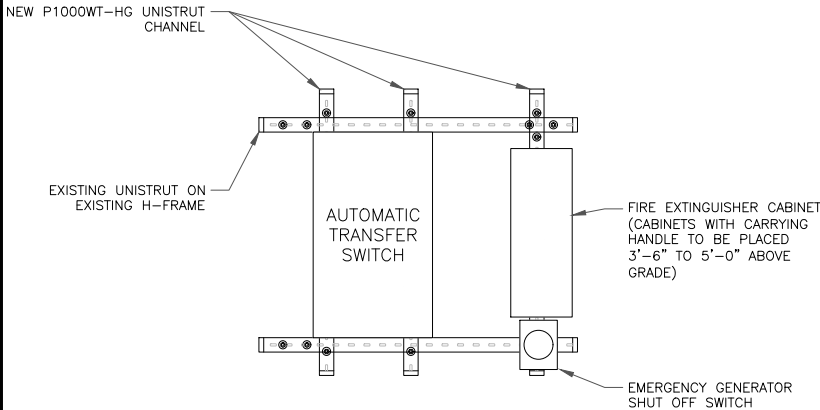
FLAMMABLE

(RED LETTERING W/  
WHITE BACKGROUND)

DIESEL FUEL

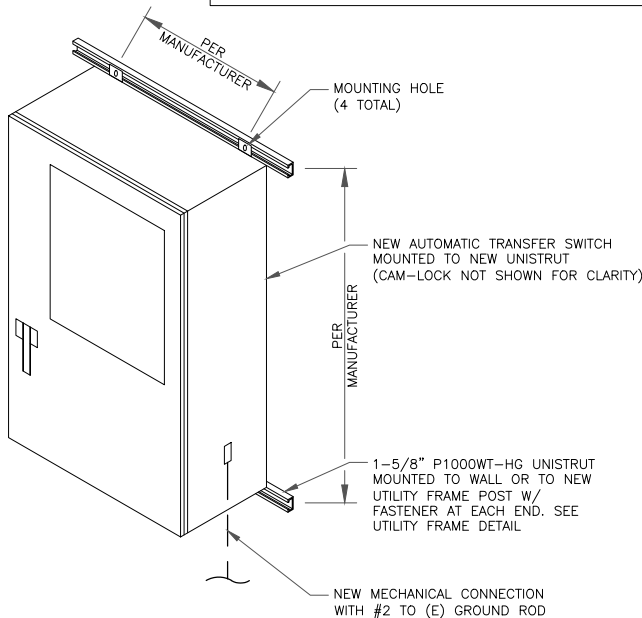
(RED LETTERING W/  
WHITE BACKGROUND)

1 SIGNAGE REQUIREMENTS  
SCALE: NOT TO SCALE



2 UTILITY FRAME ELEVATION  
SCALE: NOT TO SCALE

UNISTRUT WALL ATTACHMENT:		
WALL CONSTRUCTION TYPE	FASTENER	ANCHOR SPACING
WOOD STUD	3/8" DIA. LAG SCREW	16"
CONCRETE BLOCK (HOLLOW)	-	8"
CONCRETE BLOCK (SOLID)	3/8"Ø SIMPSON TITEN HD ANCHOR MINIMUM EMBEDMENT 2-3/4"	24"
NOTES: 1. USE GALVANIZED OR STAINLESS STEEL HARDWARE FOR WALL MOUNT AND CONNECTION OF CHANNELS. 2. GC SHALL USE NON-SHRINKING CAULK TO WEATHER SEAL ALL PENETRATIONS INTO OR THROUGH SHELTER WALL. 3. MINIMUM (3) ANCHORS TO BE USED FOR EACH CHANNEL.		



3 ATS MOUNTING DETAIL  
SCALE: NOT TO SCALE

DIESEL TANK CHECKLIST:

READILY ACCESSIBLE MANUAL SHUTOFF VALVES SHALL BE INSTALLED ON SUPPLY PIPING AT THE POINT OF USE AND THE TANK (IFC 5003.2.2.1)  
SECONDARY CONTAINMENT-TYPE TANKS SHALL BE UL LISTED, UL-142, AND COMPLY WITH ALL OF THE FOLLOWING REQUIREMENTS; OTHERWISE TRADITIONAL SPILL CONTROL OR SECONDARY CONTAINMENT MEASURES, SUCH AS DIKING, SHALL BE UTILIZED (NFPA 30 22.11.4)  
+ CAPACITY OF DIESEL TANK SHALL NOT EXCEED 50,000 GAL.  
+ PIPING CONNECTIONS SHALL BE ABOVE THE LIQUID LEVEL.  
+ MEANS SHALL BE PROVIDED TO PROTECT RELEASE OF LIQUID BY SIPHON FLOW.  
+ MEANS TO DETERMINE LIQUID LEVEL IN TANK SHALL BE PROVIDED TO DRIVER. MEANS TO PREVENT OVERFILLING BY AN ALARM AT 90% CAPACITY AND AUTOMATICALLY STOPPING DELIVERY OF LIQUID TO THE TANK AT 95% CAPACITY.  
+ SPACING BETWEEN ADJACENT TANKS SHALL NOT BE LESS THAN 3'.  
+ TANK SHALL BE PROTECTED AGAINST DAMAGE FROM VEHICLES.  
+ INTERSTITIAL SPACE SHALL HAVE EMERGENCY VENTING.  
+ INTEGRITY OF SECONDARY CONTAINMENT SHALL BE ESTABLISHED. THE SECONDARY CONTAINMENT SHALL WITHSTAND THE HYDROSTATIC HEAD OF THE MAXIMUM  
+ AMOUNT OF LIQUID STORED IN THE PRIMARY TANK.

TANK LABELING AND PROTECTIONS:

THE FOLLOWING SIGNS AND LABELS SHALL BE AFFIXED TO THE TANK.  
+ "DANGER-FLAMMABLE LIQUIDS" (IFC 5703.5)  
+ NFPA 704 PLACARD (IFC 5003.5)  
+ "NO SMOKING" (IFC 5003.7.1)  
CRASH PROTECTION COMPLYING WITH FC 312 SHALL BE PROVIDED (IFC 5003.9.3) (IF APPLICABLE)

GENERATOR FEATURES:

GENERATORS SHALL BE UL 2200 LISTED AND COMPLY WITH NFPA 37 AND NFPA 110. (IFC 604.1 AND 604.1.1)  
INSTALLATIONS SHALL HAVE A LABELED REMOTE MANUAL STOP (NFPA 110 5.6.5.6 & 5.6.5.6.1 AND NFPA 37 9.2.1.1)

DOUBLE WALL FUEL TANK BASE SPECIFICATION:

REF: T-MOBILE 48kW GENERATOR PACKAGE  
UL 142 DOUBLE WALL FUEL TANK BASE SPECIFICATION  
FUEL TANK BASE CONSTRUCTION:  
+ BE CONSTRUCTED IN ACCORDANCE WITH UNDERWRITERS LABORATORIES STANDARD UL-142. BE CONSTRUCTED IN ACCORDANCE WITH FLAMMABLE COMBUSTIBLE LIQUIDS CODE, NFPA 30; THE STANDARD FOR INSTALLATION USE OF STATIONARY COMBUSTIBLE ENGINE GAS TURBINES, NFPA 37; AND THE STANDARD FOR EMERGENCY STANDBY POWER SYSTEMS, NFPA 110.  
+ MINIMUM ANCHOR QUANTITY PER MANUFACTURER OR THIS PLAN SET; WHICHEVER IS LARGER.  
SUB BASE TANK TESTING:  
+ PRIMARY TANK & SECONDARY CONTAINMENT BASIN SECTIONS SHALL BE PRESSURIZED AT 3-5 PSI AND LEAK-CHECKED TO ENSURE INTEGRITY OF SUB BASE WELD SEAMS PER UL-142 STANDARDS  
FUEL FILL: 2.5 - 5 GALLON SPILL CONTAINMENT WITH ALARM  
+ 40% REMAINING FOR ALARM  
+ 20% REMAINING FOR SHUT-DOWN  
FACTORY PRE-SET AT 95% FULL FOR ALARM  
FUEL CONTAINMENT BASIN:  
+ SUB BASE TANK SHALL INCLUDE A WELDED STEEL CONTAINMENT BASIN, SIZED AT A MINIMUM OF 110% OF THE TANK. CAPACITY TO PREVENT ESCAPE OF FUEL INTO THE ENVIRONMENT IN THE EVENT OF A TANK RUPTURE. A FUEL CONTAINMENT BASIN LEAK DETECTOR SWITCH SHALL BE PROVIDED.

NEPA NOTES:

1. CONSTRUCTION, INSTALLATION, MAINTENANCE, & OPERATIONAL TESTING OF EPSS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF NFPA 110.  
2. ALL ELECTRICAL WORK SHALL COMPLY WITH LATEST ADOPTED EDITION OF NFPA 70 - NATIONAL ELECTRICAL CODE.

FUEL TANK NOTES:

THE TANK SHALL BE MANUFACTURED WITH THE FOLLOWING:  
- INTERSTITIAL ELECTRONICALLY MONITORED RUPTURE BASIN  
- ALARM TO MONITOR THE SPACE BETWEEN THE PRIMARY AND SECONDARY TANK.  
- OVERFILL ALERT TO VISUALLY WARN WHEN THE TANK IS FILLED UPON CAPACITY.  
- OVERSPILL CONTAINMENT AT FILL PORT TO PREVENT SPILL OF FUEL DURING FILLING OPERATIONS.  
- 5 GALLON OVERSPILL CONTAINMENT W/ LOCKABLE CAP.

T Mobile

CROWN  
CASTLE

Kimley»Horn

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES/QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK



7/1/25  
Exp. 10/31/25

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-3

REVISION:

3





1 CHAIN LINK FENCE DETAIL  
SCALE: NOT TO SCALE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK

FOR  
REFERENCE  
ONLY

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-5

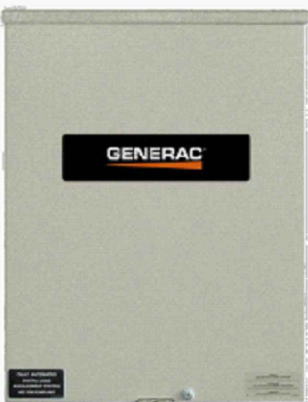
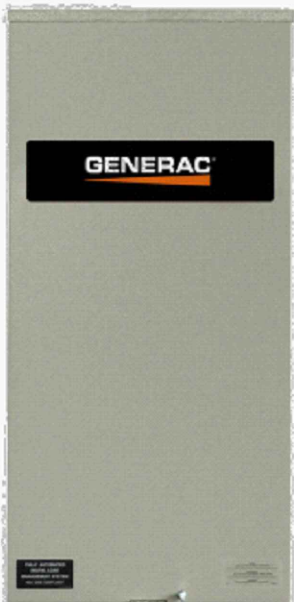
REVISION:

3

GENERAC®

Service and Non-Service Rated  
Automatic Transfer Switches

Automatic  
Transfer Switches



Models: RXSC100A3  
RXSW100A3  
RXSW150A3  
**RXSC200A3**  
RXSW200A3



Description

This series of Generac Automatic Transfer Switches is designed for use with single phase generators that utilize an Evolution™ or Nexus™ Controller. The 100 and 200 Amp open transition switches are available in single phase in both service equipment rated and non-service equipment rated configurations.

Automatic Transfer Switches

Automatic Transfer Switches

1 of 3 2 of 3

GENERAC®

Automatic Transfer Switches

100-200 Amps, Single Phase

Functions

All timing and sensing functions originate in the generator controller.

Utility Voltage Drop-out	<65%
Timer to Generator Start	10 Second Factory Set, Adjustable Between 2 - 1,500 Seconds by a Qualified Dealer*
Engine Warmup Delay	5 Seconds
Standby Voltage Sensor	65% for 5 Seconds
Utility Voltage Pickup	>80%
Re-transfer Time Delay	15 Seconds
Engine Cooldown Timer	60 Seconds
Exerciser	Nexus™: 12 Minutes Weekly Evolution™: 5 to 12 Minutes Adjustable, Weekly/BI-weekly/Monthly
The Transfer Switch can be Operated Manually Without Power Applied	

\* When used in conjunction with units utilizing Evolution™ controls

Specifications

Model	RXSC100A3	RXSW100A3	RXSW150A3	<b>RXSC200A3</b>	RXSW200A3
Amps	100	100	150	200	200
Voltage	120/240, 1ø	120/240, 1ø	120/240, 1ø	120/240, 1ø	120/240, 1ø
Load Transition Type (Automatic)	Open Transition	Open Transition Service Rated	Open Transition Service Rated	Open Transition	Open Transition Service Rated
Enclosure Type	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R
ETL Rating	cETLus	ETLus	ETLus	cETLus	ETLus
Withstand Rating (Amps)	10,000	10,000	22,000	10,000	22,000
Lug Range	2/0 - #14			250 MCM - #6	



RD048 | 3.4L | 48kW

INDUSTRIAL DIESEL GENERATOR SET  
EPA Certified Stationary Emergency

GENERAC INDUSTRIAL POWER

Model Number  
48kW: G0071940

Standby Power Rating  
48 kW, 60 Hz

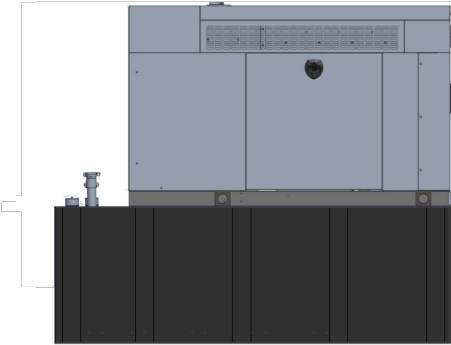


Image used for illustration purposes only

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
- ISO 3046, 8528, 9001
- NEMA ICS1, ICS10, MG1, 250, ICS6, AB1
- ANSI/IEEE C82.41

POWERING AHEAD

For over 50 years, Generac has led the industry with 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's 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 application under adverse conditions.

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

RD048 | 3.4L | 48kW

INDUSTRIAL DIESEL GENERATOR SET  
EPA Certified Stationary Emergency

STANDARD FEATURES

ENGINE SYSTEM

- Block Heater
- Oil Drain Extension
- Fan Guard
- Factory Filled Oil & Coolant

GENERATOR SET

- Sound Attenuated Aluminum Enclosure
- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Wrapped Exhaust Piping
- Standard Factory Testing
- Ready to Accept Full Load in <10 Seconds
- External Emergency Stop Push Button

ENCLOSURE

- Lockable Doors- Keyed Lock with Padlock Hasp
- Rust Proof Hardware
- RhinoCoat™ Textured Polyester Powder Coat

Electrical System

- Battery
- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor
- Smart Battery Charger
- Battery Disconnect

ALTERNATOR SYSTEM

- 2/3 Pitch
- Skewed Stator
- Sealed Bearings
- Low Temperature Rise (<120°C)
- Low THD (<5%)

Cooling System

- Closed Coolant Recovery System
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension
- Can Operate at up to 122°F (50°C) Ambient Temperature

Fuel System

- Primary Fuel Filter
- Stainless Steel Fuel Lines

FUEL TANKS

- 48 Minimum Hour Run Time
- UL142 Listed
- Lockable Fuel Cap

CONTROL SYSTEM



Evolution™ Controller

- Two-Line Plain Text LCD Display
- Programmable Start Delay Between 10-30 seconds
- 10 second Engine Start Sequence
- 5 second Engine Warm Up
- 1 minute Engine Cool-Down
- Starter Lock-Out
- Smart Battery Charger
- Automatic Voltage Regulation with Over and Under Protection
- Automatic Low Oil Pressure Shutdown
- Overspeed Shutdown
- High Temperature Shutdown
- Overcrank Protection
- Safety Fused
- Failure to Transfer Protection
- Low Battery Protection
- 50 Event Run Log
- Future Set Capable Exerciser
- Incorrect Wiring Protection
- Internal Fault Protection

- Common External Fault Capability
- Governor Failure Protection
- OBD2 Diagnostic Port

Alarms

- Door Open
- Fuel Level
  - 90% Full
  - 50% Low Fuel
  - 10% Shutdown
- Generator Running
- Not in Auto
- Common Shutdown

OPTIONAL SHIPPED LOOSE AND FIELD INSTALL KITS

GENERATOR SET

- Paint Kit
- Scheduled Maintenance Kit

FUEL TANK

- Fuel Fill Drop Tube
- Spill Box
- 90% Fuel Audible Alarm
- Tank Risers
- Spill Box Drainback Kit
- Vent Extension Support Kit
- Overfill Prevention Valve

GENERAC INDUSTRIAL POWER

RD048 | 3.4L | 48kW

INDUSTRIAL DIESEL GENERATOR SET  
EPA Certified Stationary Emergency

GENERAC INDUSTRIAL POWER

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General		Cooling System	
Make	Generac	Cooling System Type	Pressurized Closed Recovery
Cylinder #	4	Fan Type	Pusher
Type	In-Line	Fan Speed (rpm)	2,029
Displacement - in³ (L)	207.48 (3.4)	Fan Diameter - mm (in)	22 (559)
Bore - in (mm)	3.86 (98)	Fuel System	
Stroke - in (mm)	4.45 (113)	Fuel Type	Ultra Low Sulfur Diesel Fuel
Compression Ratio	18.5:1	Fuel Specification	ASTM
Intake Air Method	Turbocharged/Aftercooled	Fuel Pump Type	Mechanical Engine Driven Gear
Cylinder Head	Cast Iron OHV	Injector Type	Mechanical
Piston Type	Aluminum	Fuel Supply Line (mm/in)	7.94 (0.31) ID
Engine Governing		Fuel Return Line (mm/in)	7.94 (0.31) ID
Governor	Electronic	Fuel Filtering (microns)	10
Frequency Regulation (Steady State)	±0.25%	Engine Electrical System	
Lubrication System		System Voltage	12 VDC
Oil Pump Type	Gear	Battery Charger Alternator	Standard
Oil Filter Type	Full Flow Spin-On Canister	Battery Size	Group 27F
Crankcase Capacity - L (qts)	7.0 (7.4)	Battery Voltage	12 VDC
ALTERNATOR SPECIFICATIONS		Ground Polarity	Negative
Standard Model	Generac	Standard Excitation	Direct
Poles	4	Bearings	Sealed Ball
Field Type	Rotating	Coupling	Flexible Disc
Insulation Class - Rotor	F	Prototype Short Circuit Test	Yes
Insulation Class - Stator	H	Voltage Regulator Type	Full Digital
Total Harmonic Distortion	<5%	Regulation Accuracy (Steady State)	±1.0%
Telephone Interference Factor (TIF)	<50		

SPEC SHEET  
2 OF 6

T Mobile

CROWN CASTLE

Kimley»Horn

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK

FOR  
REFERENCE  
ONLY

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-6

REVISION:

3

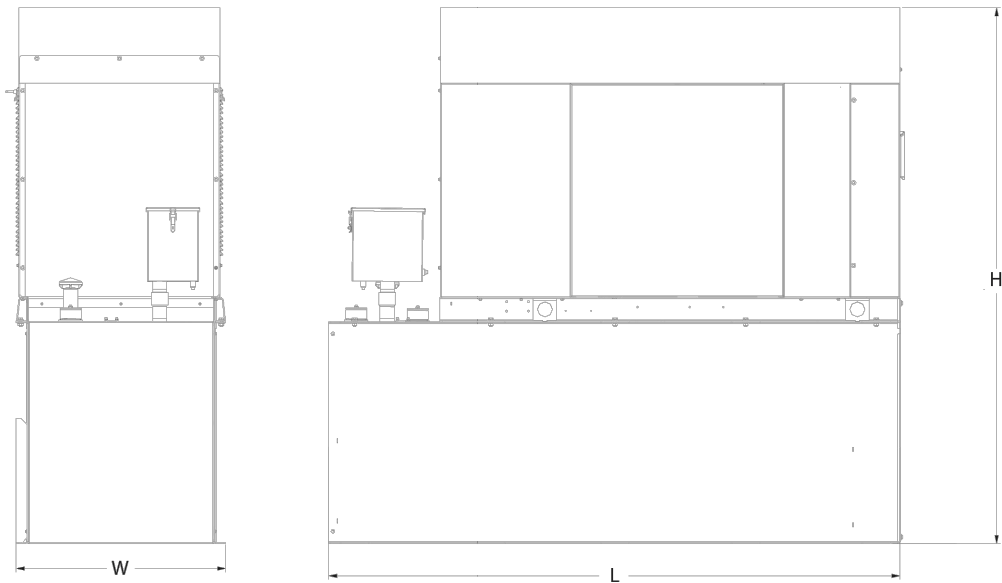
RD048 | 3.4L | 48kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



DIMENSIONS AND WEIGHTS\*



Weights and Dimensions

Unit Weight - lbs	Unit Weight with Skid - lbs	Dimensions (L x W x H) - in
2,915	2,954	103.4 (2,625) x 35.0 (888) x 90.0 (2,286)

48kW Fuel Consumption

Fuel Tank Gross Total Capacity	240
Fuel Tank Gross Usable Capacity	229
Fuel Tank Net Usable Capacity (Run Hours Based on Net Usable Capacity)	206
Run Hours 100% Load	52
Run Hours 75% Load	67
Run Hours 50% Load	96

\* All measurements are approximate and for estimation purposes only.

Sound Emission Data	
Rated Load Sound Output at 23ft - dB(A)	65

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

SPEC SHEET

5 OF 6

Generac Power Systems, Inc. | P.O.Box 8 | Waukesha, WI 53189  
P: (262) 544-4811 ©2018Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

Part No 1000032700  
Rev. 3 08/30/18

RD048 | 3.4L | 48kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



OPERATING DATA

POWER RATINGS

Standby			
Single-Phase 120/240 VAC @1.0pf	48 kW	Amps: 200	Circuit Breaker Size Amps: 200

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip at 30%	
120/240 V, Single-Phase at 0.4pf	189

FUEL CONSUMPTION RATES\*

Percent Load	Diesel gal/hr (L/hr)
25%	1.35 (5.11)
50%	2.15 (8.14)
75%	3.06 (11.58)
100%	3.98 (15.07)

\* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

Standby		
Air Flow (Radiator and Alternator)	cfm (m³/min)	2824 (80)
Coolant System Capacity	gal (l)	2.8 (10.6)
Heat Rejection to Coolant	BTU/hr (MJ/hr)	135,900 (143.4)
Temperature Deration	3% for every 5°C above 25°C or 1.7% for every 5°F over 77°F	
Altitude Deration	1% for every 100 m above 915 or 3% for every 1000 ft over 3000 ft	
Maximum Ambient Temperature Operating Range	°F (°C)	-20 - 122 (-28 - 50)
Maximum Radiator Backpressure	in H <sub>2</sub> O	0.5

COMBUSTION AIR REQUIREMENTS

Standby	
Flow at Rated Power cfm (m³/min)	190 (5.38)

ENGINE

Standby		
Rated Engine Speed	rpm	1800

EXHAUST

Standby		
Exhaust Flow (Rated Output)	cfm (m³/min)	448 (12.7)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1120 (604.4)

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.  
Please consult a Generac Power Systems Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

SPEC SHEET

4 OF 6

T Mobile



Kimley»Horn

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK

FOR  
REFERENCE  
ONLY

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:

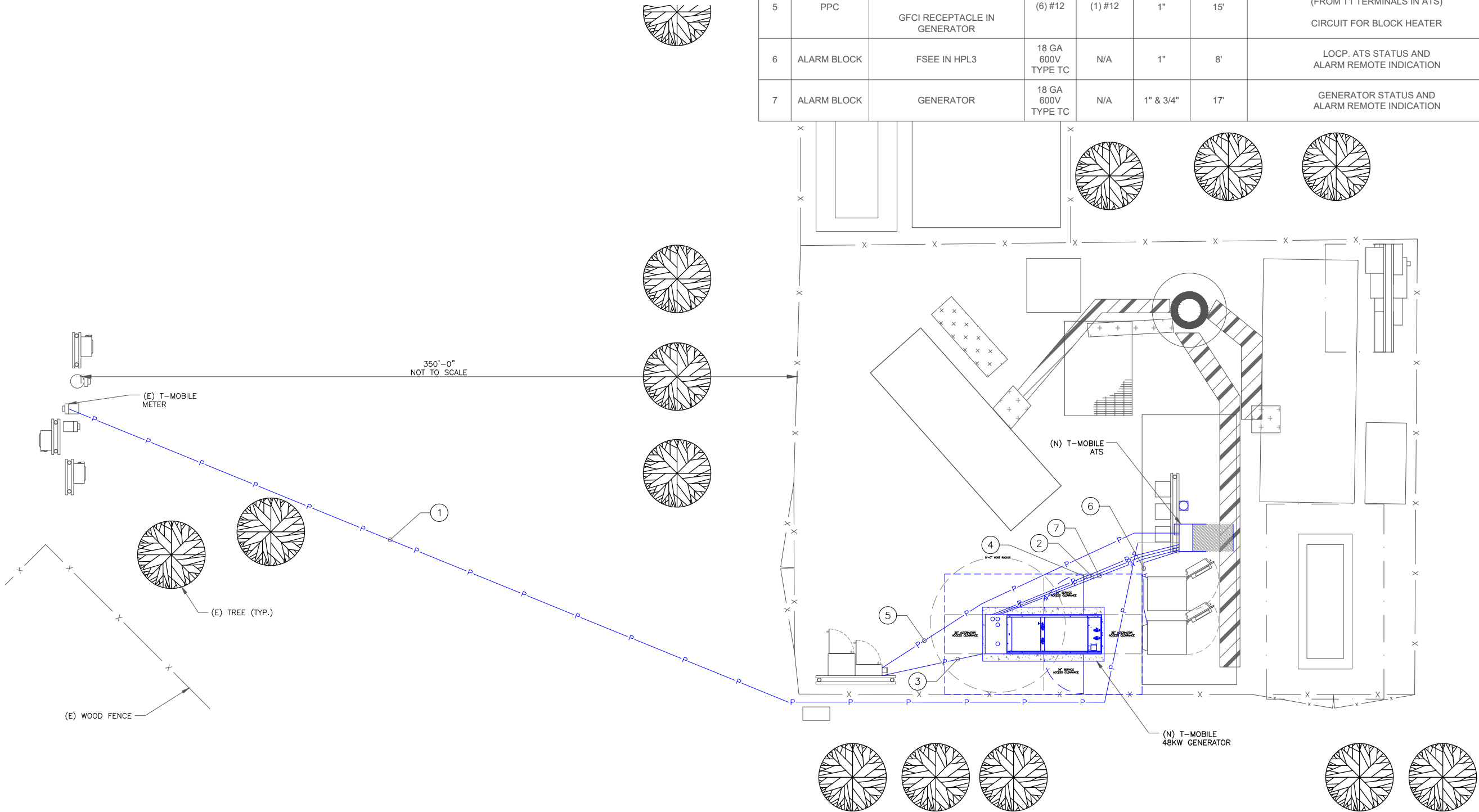
C-7

REVISION:

3



NOTES:  
SEE MANUFACTURER INSTALLATION  
DRAWINGS FOR RECOMMENDED STUB  
UP LOCATIONS (GC TO VERIFY STUB  
LOCATION IN FIRD PRIOR TO  
CONSTRUCTION)



CONDUIT SCHEDULE							
NO.	FROM	TO	WIRES	GROUND	CONDUIT SIZE	CONDUIT LENGTH	ROUTING/LOCATION
1	METER / DISCONNECT	ATS	(3) 3/0	(1) #6	2"	370'	NORMAL POWER FEEDER TO ATS
2	GENERATOR	ATS	(3) 3/0	(1) #6	2"	17'	EMERGENCY POWER FEEDER TO ATS
3	ATS	PPC	(3) 3/0	(1) #6	2"	20'	EMERGENCY POWER FEEDER TO PPC
4	ATS	GENERATOR CONTROL PANEL	(12) #18	(1) #10	1"	17'	GENERATOR START CIRCUIT
5	PPC	GENERATOR TERMINAL BLOCK FOR BATTERY CHARGE INPUT GFCI RECEPTACLE IN GENERATOR	(6) #12	(1) #12	1"	15'	BATTERY CHARGER CIRCUIT (FROM T1 TERMINALS IN ATS) CIRCUIT FOR BLOCK HEATER
6	ALARM BLOCK	FSEE IN HPL3	18 GA 600V TYPE TC	N/A	1"	8'	LOCP. ATS STATUS AND ALARM REMOTE INDICATION
7	ALARM BLOCK	GENERATOR	18 GA 600V TYPE TC	N/A	1" & 3/4"	17'	GENERATOR STATUS AND ALARM REMOTE INDICATION

1 ELECTRICAL PLAN  
SCALE: 1/4"=1'-0" (FULL SIZE)  
1/8"=1'-0" (11x17)

T Mobile

CROWN CASTLE

Kimley»Horn

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK



7/1/25  
Exp. 10/31/25

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:

E-1

REVISION:

3

OVERALL LOAD SUMMARY	
TOTAL SERVICE LOAD kVA	49.10
AMPS	204.58

1 EXISTING PANEL SCHEDULE  
SCALE: NOT TO SCALE

OVERALL LOAD SUMMARY	
TOTAL SERVICE LOAD kVA	36.95
AMPS	153.96

\*\* = New 20A Breaker

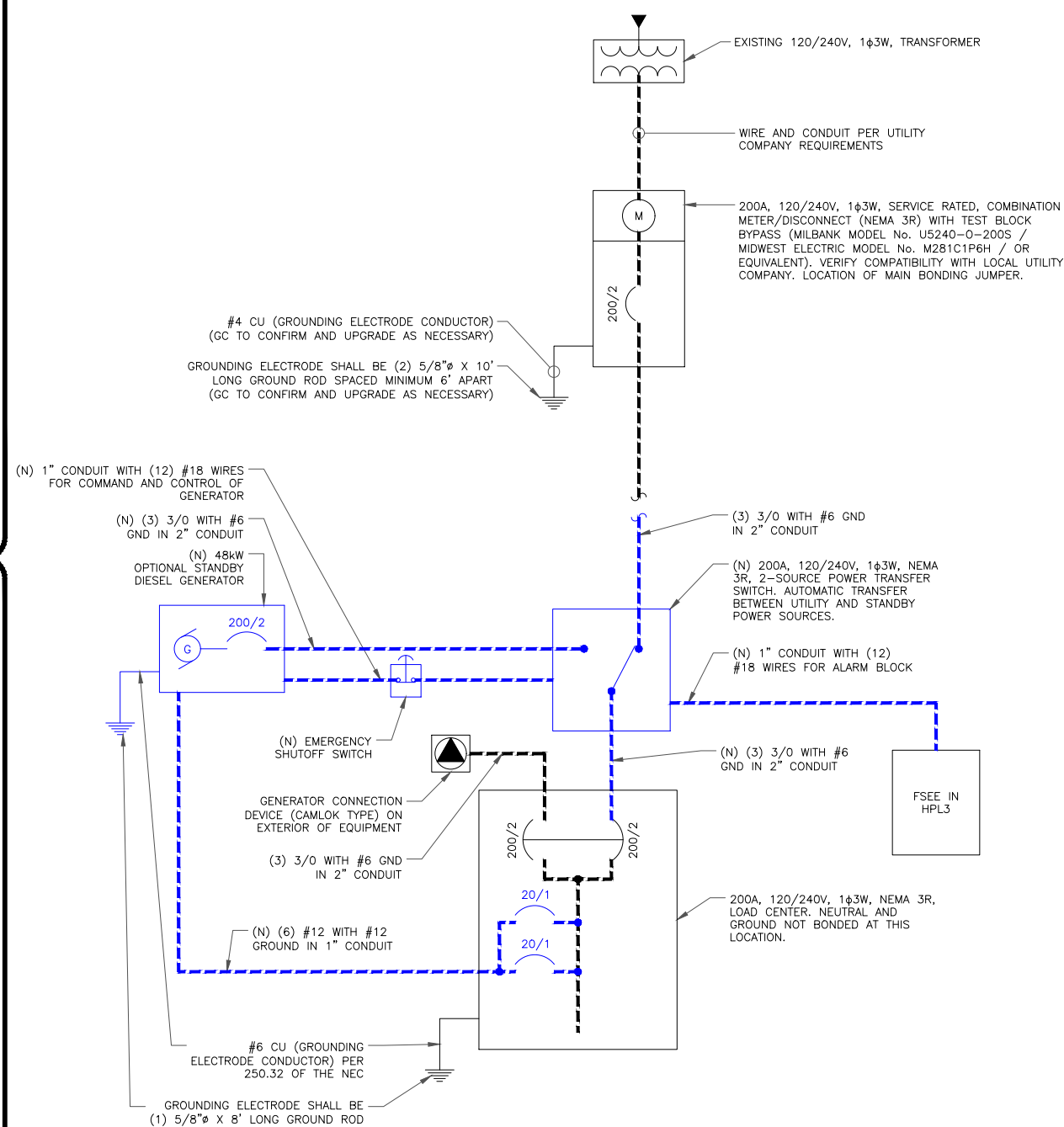
2 FINAL PANEL SCHEDULE  
SCALE: NOT TO SCALE

NOTES:

1. ALL NEW CONDUCTORS TO BE INSTALLED SHALL BE COPPER.  
ALL CONDUCTORS SHALL BE THHW, THWN, THWN-2, XHHW,  
OR XHHW-2 UNLESS NOTED OTHERWISE.
2. CONTRACTOR IS TO FIELD VERIFY ALL EXISTING ITEMS SHOWN  
ON THE ELECTRICAL ONE-LINE DIAGRAM AND NOTIFY THE  
ENGINEER OF ANY DISCREPANCIES.
3. ALL GROUNDING AND BONDING PER THE NEC.

### INSTALLER NOTE:

1. THE GENERATOR SIZE HAS BEEN DETERMINED BY T-MOBILE BASED ON AN INTERNAL LOAD ANALYSIS OF THEIR EQUIPMENT. THE GENERATOR SIZE WAS PROVIDED AS PART OF THE SCOPING ANALYSIS. T-MOBILE SHALL BE RESPONSIBLE FOR ENSURING THAT THEIR SYSTEM CONFIGURATION DOES NOT EXCEED THE MANUFACTURER POWER RATING OF THE SPECIFIED GENERATOR.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING A SPOT READING OF THE PANEL AT PEAK OPERATING HOURS TO VERIFY THE T-MOBILE PANEL SCHEDULE CALCULATIONS. CONTRACTOR SHALL PROVIDE THE READING TO THE ENDS OF THE CALCULATED PANEL SCHEDULE LOADS. RECORD THE READING AND CONSULT T-MOBILE ENGINEERING MANAGER PRIOR TO PROCEEDING WITH GENERATOR INSTALLATION.



3 ONE LINE DIAGRAM  
SCALE: NOT TO SCALE

# T-Mobile



**Kimley»Horn**

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QTY
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK



7/1/25  
Exp. 10/31/25

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:

E-2

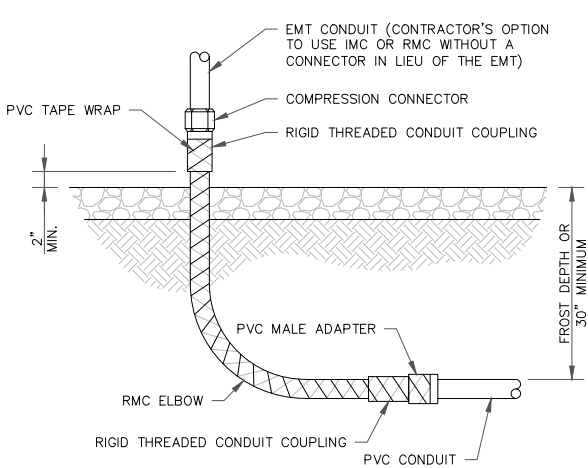
REVISION:

3

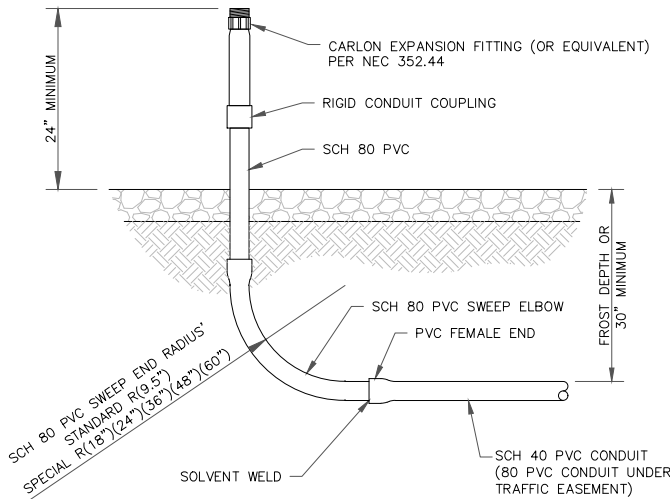


INSTALLER NOTES:

ALL METAL CONDUIT INSTALLED IN DIRECT CONTACT WITH THE EARTH SHALL BE CONSIDERED TO BE INSTALLED IN A SEVERELY CORROSIVE ENVIRONMENT AND IS REQUIRED TO HAVE SUPPLEMENTAL PROTECTION AGAINST CORROSION (NEC ARTICLE 342.10(B) & 344.10(B)(1)). THIS PROTECTION SHALL EITHER BE AN APPROVED MANUFACTURER INSTALLED PROTECTIVE COATING ON THE CONDUIT OR SHALL BE (2) LAYERS OF 10 MIL PVC PIPE WRAP TAPE INSTALLED USING OPPOSING SPIRAL WRAPS. ON VERTICAL PIPE THE OUTSIDE LAYER OF TAPE SHALL BE WRAPPED SO AS TO PROVIDE SHEDDING OF WATER (i.e. TAPE SHOULD WRAP IN AN UPWARD DIRECTION WITH LOWER WRAP BEING BENEATH THE WRAP ABOVE). SPIRAL WRAPS SHALL HAVE A MINIMUM OF 1/4" OVERLAP WITH THE PRECEDING TAPE WRAP. ANY OTHER METHODS OF CORROSION PROTECTION SHALL REQUIRE APPROVAL BY THE ENGINEER OF RECORD PRIOR TO BEING USED.



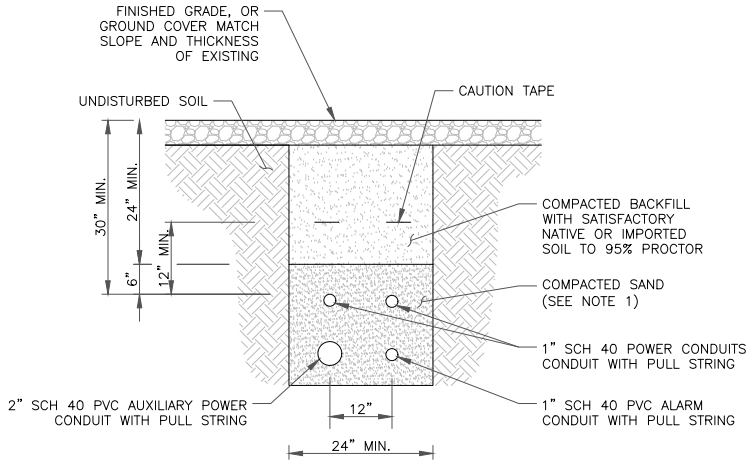
1 CONDUIT STUB UP DETAILS  
SCALE: NOT TO SCALE



2 DETAIL NOT USED  
SCALE: NOT TO SCALE

INSTALLER NOTE:

1. LEAN CONCRETE, RED-COLORED TOP, MAY BE USED IN PLACE OF COMPACTED SAND



3 TRENCH DETAIL  
SCALE: NOT TO SCALE

4 DETAIL NOT USED  
SCALE: NOT TO SCALE

T Mobile

CROWN  
CASTLE

Kimley»Horn

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK



7/1/25  
Exp. 10/31/25

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:

E-3

REVISION:

3

INSTALLATION NOTES:

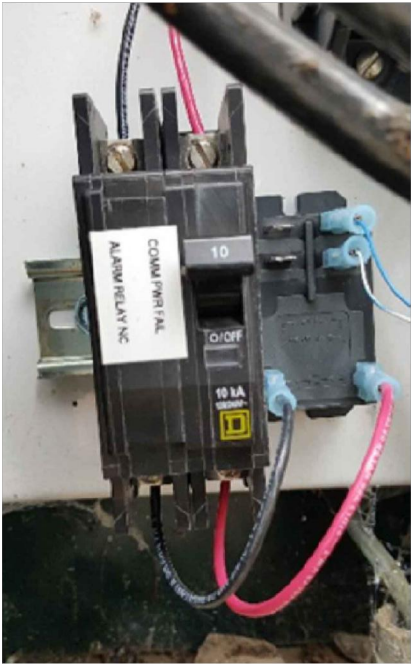
1. GENERAL CONTRACTOR SHALL COMPLETE ENTIRE SCOPE OF WORK DETAILED BELOW AND PROVIDE REQUIRED DELIVERABLES.
2. IF SITE HAS EXISTING LOCP ALARM RELAY IT SHALL BE DECOMMISSIONED AND THE PARTS SHALL BE USED FOR THE AUTOMATIC TRANSFER SWITCH INSTALLATION.
3. PRIOR TO HUTTING DOWN POWER, NOC MUST BE NOTIFIES. STE PLACED IN MAINTENANCE VIA NEST AND DC BATTERIES AND BREAKERS MUST BE CHECKED TO ENSURE THEY ARE IN THE ON POSITION SO THE SITE WILL BE MAINTAINED AND ON AIR.
4. PPC EQUIPPED WITH LOCP RELAY - CONTRACTOR TO MOVE INPUT TO RELAY FROM UTILITY MAINS TO PORTABLE GENERATOR MAINS ON MANUAL TRANSFER SWITCH.

SCOPE OF WORK:

1. INSTALL DIN RAIL INSIDE ATS.
2. INSTALL CIRCUIT BREAKER AND RELAY ON DIN RAIL.
3. WIRE CIRCUIT BREAKER INPUT TO COMMERCIAL SERVICE FEED CONNECTION AT TOP OF ATS.
4. WIRE OUTPUT OF CIRCUIT BREAKER TO THE 240V AC RELAY.
5. WIRE RELAY OUTPUT TO TRAY CABLE PAIRS THAT WILL ROUTED FROM THE ATS TO THE BTS ALARM BLOCK.
6. WORK WILL BE PERFORMED AS PART OF THE GENERATOR HARDENING INSTALLATION.

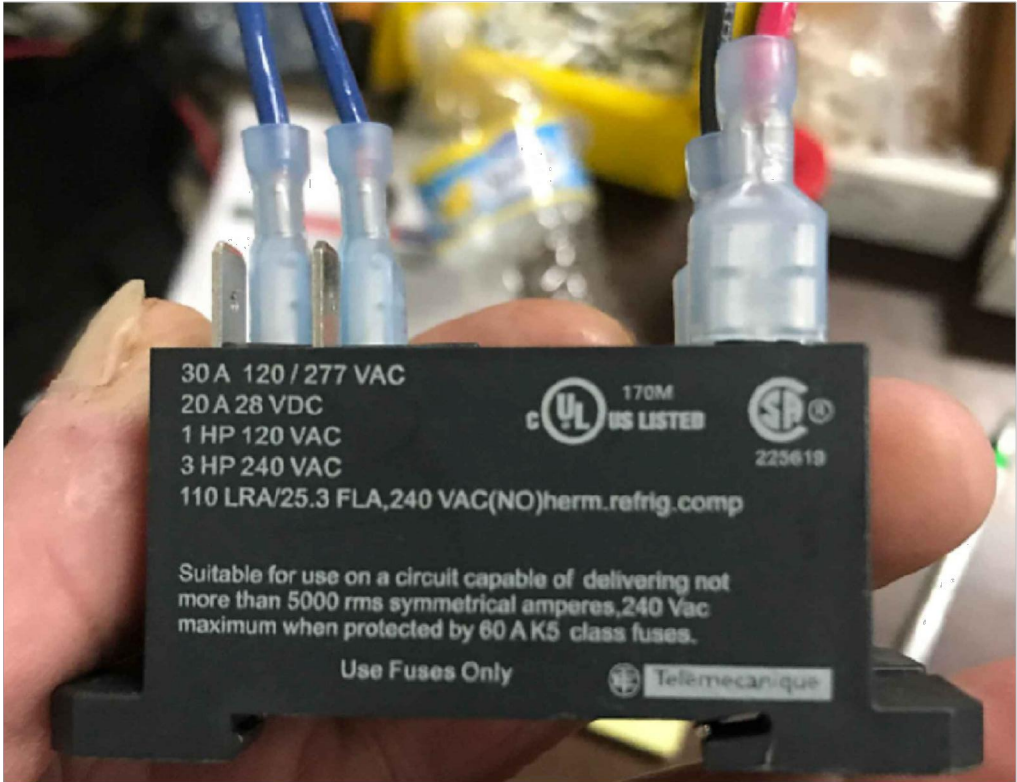
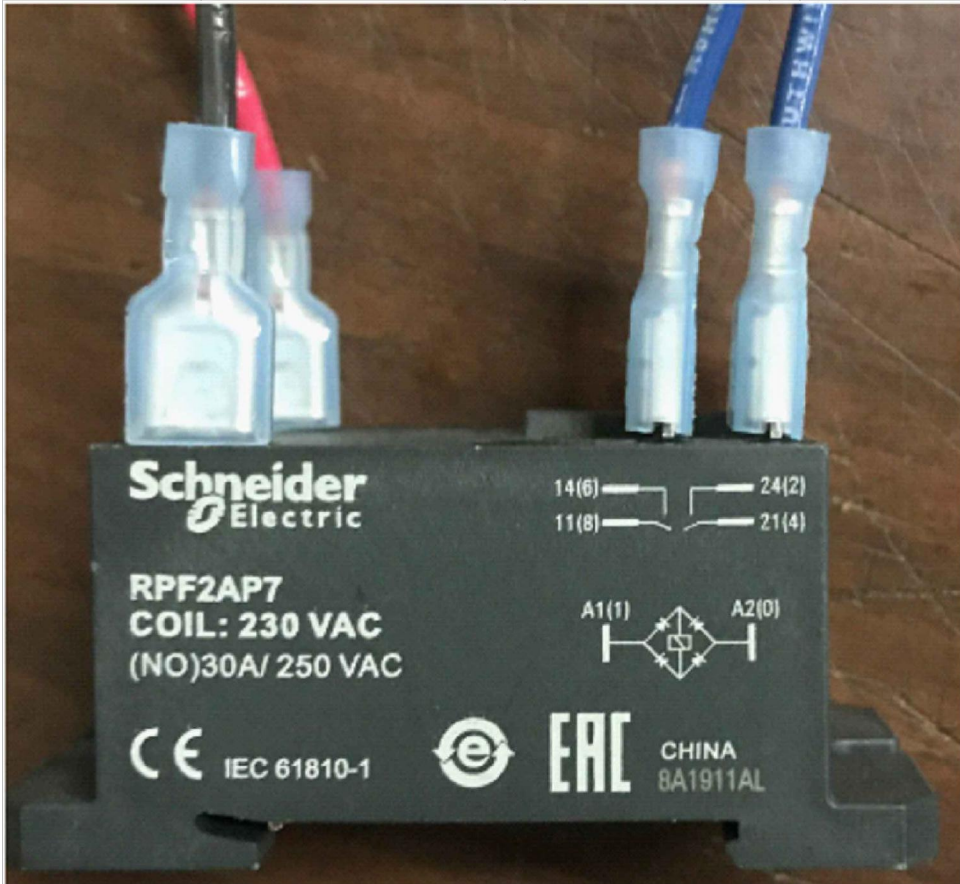
POWER RELAY MATERIALS PROVIDED BY GC:

1. 240 VAC COIL RELAY WITH FORM C OUTPUT - EACH.
2. 240 VAC BREAKER 5 AMP - 1 EACH.
3. DIN RAIL TO MOUNT BREAKER AND RELAY - 1 EACH.
4. #14 OR LARGER THHN 600V WIRES IN AC AREA OF THE ATS (RED AND BLACK).
5. FULLY INSULATED FASTEN TABS TO CONNECT TO RELAY.
6. SINGLE PAIR 18 AUG, 600V, TYPE TC RAN WITH OTHER ALARM PAIR FROM ATS TO ALARM BLOCK.



TRAY CABLE ONLY - NO CAT 5/6

**NOTES:**  
INSTALL DIN RAIL, AC BREAKER, AND AC RELAY IN THE TOP PORTION OF THE ATS - MAKE CONNECTIONS TO COMMERCIAL SERVICE AND ROUTE ALARM WIRE TO BTS ALARM BLOCK. (SEE DETAIL #1 FOR SCOPE OF WORK)



T Mobile

CROWN CASTLE

Kimley»Horn

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES/QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK

FOR  
REFERENCE  
ONLY

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.

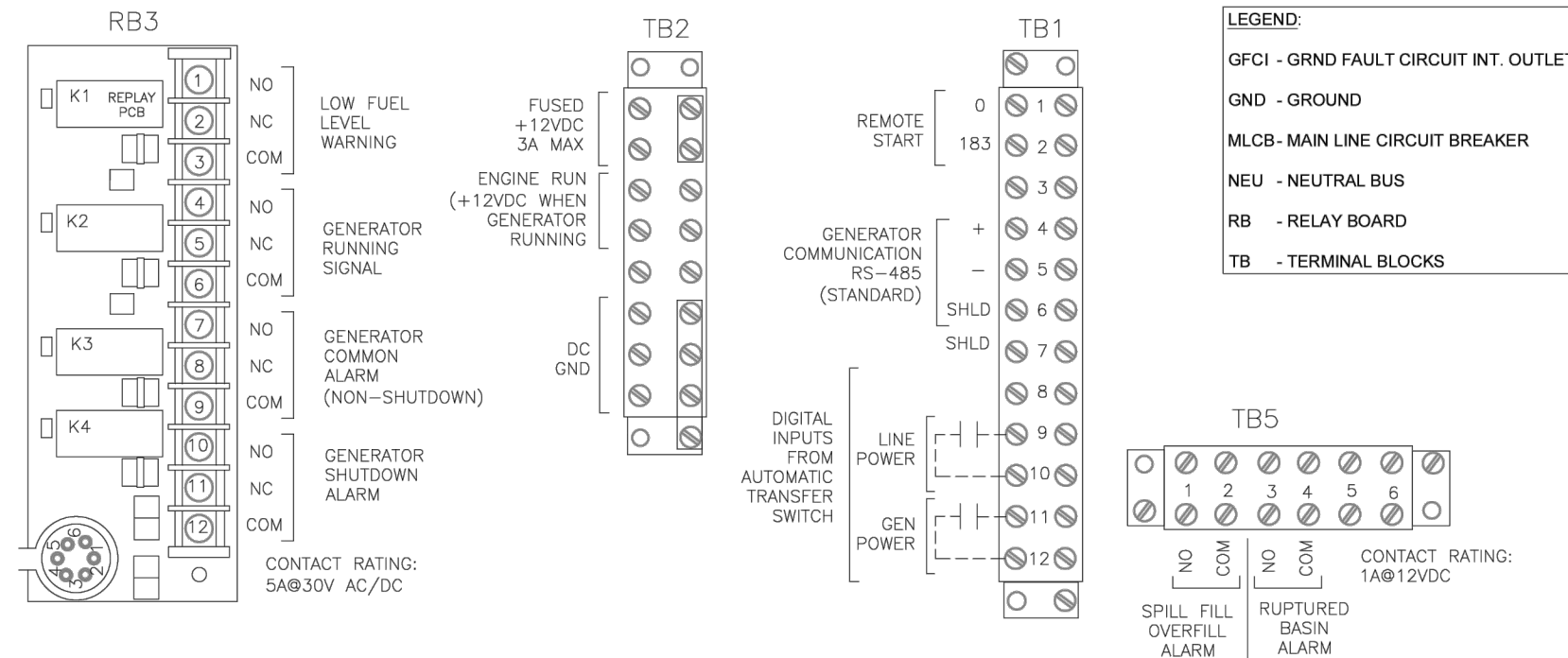
SHEET NUMBER:

E-4

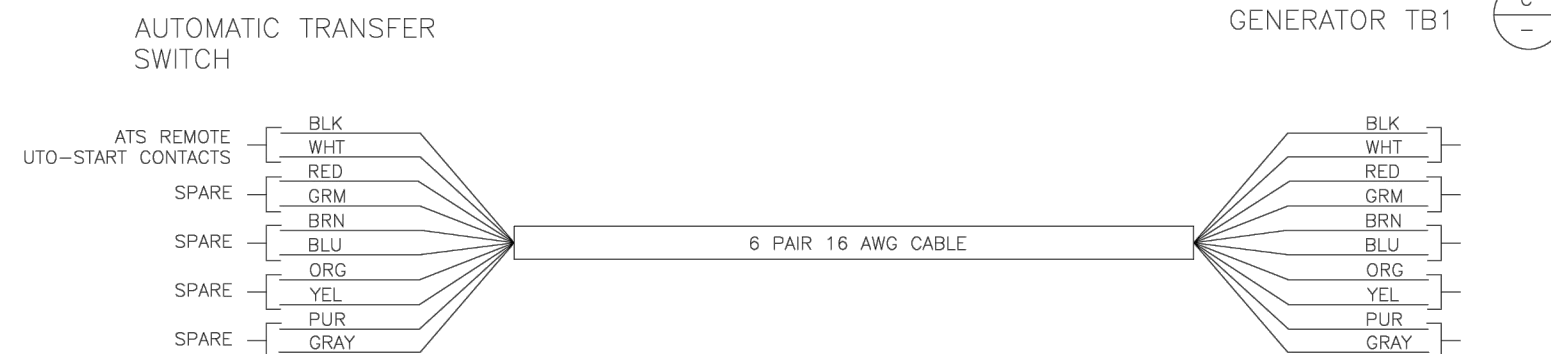
REVISION:

3

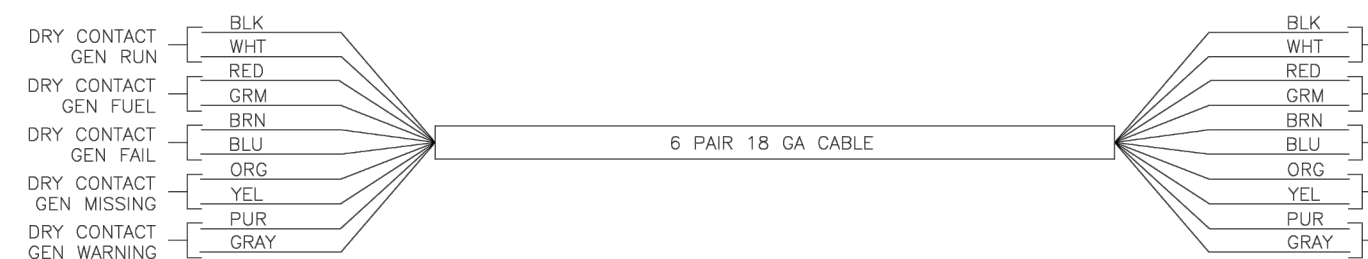




1 GENERATOR LOW VOLTAGE WIRING TERMINALS  
SCALE:



GENERATOR ALARM  
TERMINAL BLOCK RB3



2 ALARM WIRING COLOR CODING  
SCALE:

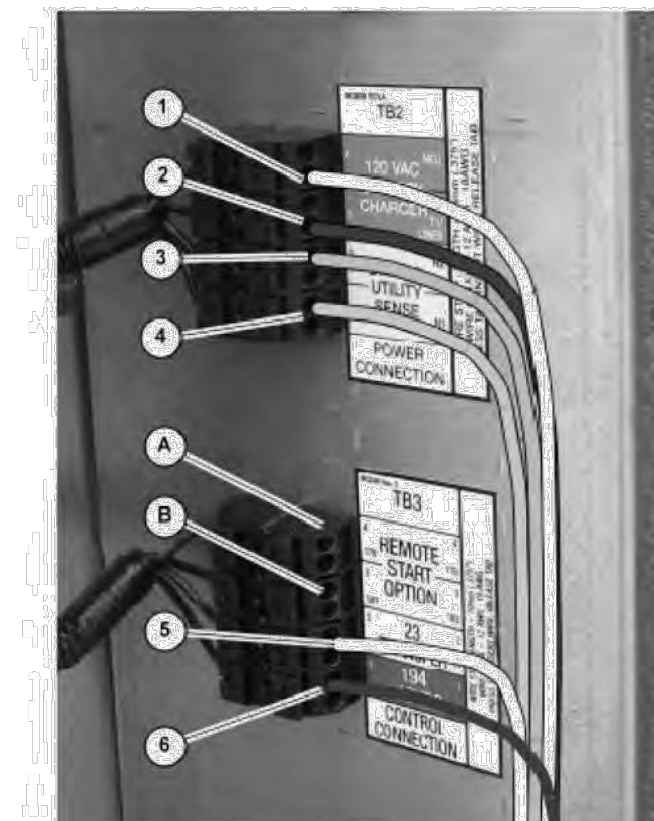


Figure 5-4. Control Wiring Connections (Typical)

TB2 Terminal Block			
Terminal		Function	Voltages
1	Neutral	Neutral for T1 Battery Charger	Neutral
2	T1	Power for T1 Battery Charger	120 VAC
3	N2	Utility Sensing from Transfer Switch	208-277 VAC
4	N1	Utility Sensing from Transfer Switch	208-277 VAC
TB3 Terminal Block			
Terminal		Function	Voltages
A	178	Two Wire Start Control [GTS]	5-12 VDC
B	183	Two Wire Start Control [GTS]	5-12 VDC
5	23	Transfer Relay Control Wire	12-0 VDC
6	194	Power for Transfer Relay	12 VDC

NOTES:

- FOR FIELD WIRING TO CUSTOMER CONNECTIONS (TERMINAL STRIP)
- MAXIMUM WIRE SIZE: #18 GA
- RECOMMENDED TIGHTENING TORQUE: 14 LB-IN.
- KNOCKOUTS FOR 1/2" AND 3/4" CONDUIT FILLINGS ON BOTTOM OF BOX.
- CONTRACTOR SHALL VERIFY EXISTING COLOR CODING, TERMINATIONS, AND CONNECTION. IN THE EVENT THAT EXISTING COLOR CODING OR TERMINATIONS DO NOT MATCH OR CORRELATE WITH THIS DRAWING OR T-MOBILE STANDARDS, CONTRACTOR SHALL NOTIFY T-MOBILE AND THE ENGINEER.

T Mobile

CROWN  
CASTLE

Kimley»Horn

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES/QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK

FOR  
REFERENCE  
ONLY

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:

E-5

REVISION:

3





421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK

FOR  
REFERENCE  
ONLY

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:

E-6

REVISION:

3

NAME	LINE #	EXTERNAL from	Description	Polarity	REQUIRED OR OPTIONAL	Priority	Commscope SSC	EAC Cable	Termination to FSEB				Termination to Other End			
									Wires	Terminal Block	Wires	Terminal Block	Wires	Termination	Wires	Termination
AC SURGE SUPPRESSOR FAIL	1	PPC Cabinet	PPC Surge Fail	NC	Optional:	Major	AL7 - TB1-8	Cat6 #3	white/orange	X4107 pin 1	orange	X4106 pin 1	white/orange	PPC surge suppressor	orange	PPC surge suppressor
DOOR OPEN (NSI/CRI)	2	Generator	Generator	NC	Required	Major		Cat6 to generator relay		X4107 pin 2	white	X4106 pin 2	white	FCOA pre terminated	white	FCOA pre terminated
DOOR OPEN (NSI/CRI)	3	SSC cabinet	SSC Door and or Battery cabinet	NC	Required	Critical	AL6 - TB1-7	Cat6 #1	white/blue	X4107 pin 3	blue	X4106 pin 3	white/blue	Purcell AL8	blue	Purcell AL8
RECTIFIER FAIL NSI	4	SSC cabinet	SSC Rectifier failed =1	NC	Required	Critical	AL0 - TB1-1	Cat6 #1	white/orange	X4107 pin 4	orange	X4106 pin 4	white/orange	Purcell AL0	orange	Purcell AL0
RECTIFIER FAIL CRITICAL	5	SSC cabinet	SSC Rectifier failed >1	NC	Required	Major	AL1 - TB1-2	Cat6 #1	white/green	X4107 pin 5	green	X4106 pin 5	white/green	Purcell AL1	green	Purcell AL1
CIRCUIT BREAKER ALARM	6	SSC cabinet	CB OPEN	NC	Required	Major	AL4 - TB1-5	Cat6 #2	white/blue	X4107 pin 6	blue	X4106 pin 6	white/blue	Purcell AL3	blue	Purcell AL3
DC FAULT	7	SSC cabinet	SSC Low/high DC voltage	NC	Required	Critical	AL3 - TB1-4	Cat6 #2	white/orange	X4108 pin 7	orange	X4108 pin 7	white/orange	Purcell AL4/AL5	orange	Purcell AL4/AL5
HIGH TEMP CRITICAL	8	SSC cabinet	HIGH TEMP, BATTERY HIGH TEMP, FAN/FILTER/HEAT Fail	NC	Required	Critical	AL5/8- TB1-6/9	Cat6 #2	white/green	X4108 pin 8	green	X4108 pin 8	white/green	Purcell AL6/AL7/AL9	green	Purcell AL6/AL7/AL9
VANDALISM (NSI/DEG/CRI)	9	Battery theft cable	Battery theft cable daisy chain	NC	Required	Critical		Cat6 #x	white/blue	X4109 pin 9	blue	X4108 pin 9	white/blue	Battery theft cable	blue	battery theft cable
GROUND BAR	10	Ground bar cable	Ground Bar stolen	NC	Required	Critical		Cat6 #x	white/blue	X4109 pin 10	blue	X4108 pin 10	white/blue	Ground bar left side	blue	Ground bar right side
DC FAULT	11	RBA72 cabinet	RBA72- Battery fuse and HVAC	NO	Optional:	Major		Cat6 #x	white/blue	X4108 pin 11	blue	X4108 pin 11	white/blue	Battery cabinet	blue	Battery cabinet
LOSS OF COMMERCIAL POWER	12	PPC Relay	PPC LOCP Relay	NC	Required	Critical		Cat6 #3	white/blue	X4108 pin 12	blue	X4108 pin 12	white/blue	PPC relay	blue	PPC relay
FAN FAILURE	15	FCOA cabinet	FCOA Fan Pressure fault	NC	Optional:	Major		Brown FCOA	n/a	X4111 pin 13	n/a	X4110 pin 13	n/a	FCOA pre terminated	n/a	FCOA pre terminated
GENERATOR RUNNING	16	Generator	Generator Running	NC	Required	Major		Cat6 to generator relay		X4111 pin 14		X4110 pin 14	white/blue	or Running Relay on APU	blue	or Running Relay on APU
GENERATOR NOT IN AUTO	17	Generator	Not in Auto	NC	Required	Major		Cat6 to generator relay		X4111 pin 15		X4110 pin 15	white/orange	Generator	orange	Generator
GENERATOR ALARM CRITICAL	18	Generator	10% Shutdown	NC	Required	Critical		Cat6 to generator relay		X4111 pin 16		X4110 pin 16	white/green	Generator	green	Generator
GENERATOR ALARM NSI	19	Generator	Common Shutdown	NC	Required	Major		Cat6 to generator relay		X4111 pin 17		X4110 pin 17	white/brown	Generator	blue	Generator
GENERATOR LOW FUEL	20	Generator	Low Fuel 50%	NC	Required	Major		Cat6 to generator relay		X4111 pin 18		X4110 pin 18	white/blue	Generator		Generator
ATS IN EMERGENCY POSITION	21	Automatic Transfer Switch	Generator Transfer Switch failure	NC	Optional:	Major		Cat6 #x	white/blue	X4113 pin 19	n/a	X4112 pin 19	white/blue	Fuel Tank	blue	Fuel Tank
EXTERNAL (NSI/DEG/CRI)	22	Optional External Alarm	Optional External Alarm	NC	Optional:	Critical		Cat6 #x	white/blue	X4113 pin 20	blue	X4112 pin 20	white/blue	Optional External Alarm	blue	Optional External Alarm
VANDALISM (NSI/DEG/CRI)	23	Optional External Alarm	Optional External Alarm	NC	Optional:	Critical		Cat6 #x	white/blue	X4113 pin 21	blue	X4112 pin 21	white/blue	Optional External Alarm	blue	Optional External Alarm
TOWER LIGHT CRITICAL	24	Tower Beacon	Tower Beacon fail	NC	Optional:	Critical		Cat6 #x	white/blue	X4113 pin 22	blue	X4112 pin 22	white/blue	Tower Beacon	blue	Tower Beacon
TOWER LIGHT NSI	25	Tower side light	Tower side light Fail	NC	Optional:	Major		Cat6 #x	white/blue	X4113 pin 23	blue	X4112 pin 23	white/blue	Tower side light	blue	Tower side light
GROUND BAR	26	GROUND BAR	Ground Bar stolen	NC	Optional:	Critical		Cat6 #x	white/blue	X4113 pin 24	blue	X4112 pin 24	white/blue	GROUND BAR	blue	GROUND BAR

For FSEB with 24 Alarms with Delta Generator 471424A

NAME	LINE #	EXTERNAL from	Description	Polarity	REQUIRED OR OPTIONAL	Priority	Commscope SSC	EAC Cable	Termination to FSEB				Termination to Other End			
									Wires	Terminal Block	Wires	Terminal Block	Wires	Termination	Wires	Termination
AC SURGE SUPPRESSOR FAIL	1	PPC Cabinet	PPC Surge Fail	NC	Optional:	Major	AL7 - TB1-8	Cat6 #3	white/orange	X4107 pin 1	orange	X4106 pin 1	white/orange	PPC surge suppressor	orange	PPC surge suppressor
DOOR OPEN (NSI/CRI)	2	Generator	Generator	NC	Required	Major		Cat6 to generator relay		X4107 pin 2	white	X4106 pin 2	white	FCOA pre terminated	white	FCOA pre terminated
DOOR OPEN (NSI/CRI)	3	SSC cabinet	SSC Door and or Battery cabinet	NC	Required	Critical	AL6 - TB1-7	Cat6 #1	white/blue	X4107 pin 3	blue	X4106 pin 3	white/blue	Purcell AL8	blue	Purcell AL8
RECTIFIER FAIL NSI	4	SSC cabinet	SSC Rectifier failed =1	NC	Required	Critical	AL0 - TB1-1	Cat6 #1	white/orange	X4107 pin 4	orange	X4106 pin 4	white/orange	Purcell AL0	orange	Purcell AL0
RECTIFIER FAIL CRITICAL	5	SSC cabinet	SSC Rectifier failed >1	NC	Required	Major	AL1 - TB1-2	Cat6 #1	white/green	X4107 pin 5	green	X4106 pin 5	white/green	Purcell AL1	green	Purcell AL1
CIRCUIT BREAKER ALARM	6	SSC cabinet	CB OPEN	NC	Required	Major	AL4 - TB1-5	Cat6 #2	white/blue	X4107 pin 6	blue	X4106 pin 6	white/blue	Purcell AL3	blue	Purcell AL3
DC FAULT	7	SSC cabinet	SSC Low/high DC voltage	NC	Required	Critical	AL3 - TB1-4	Cat6 #2	white/orange	X4108 pin 7	orange	X4108 pin 7	white/orange	Purcell AL4/AL5	orange	Purcell AL4/AL5
HIGH TEMP CRITICAL	8	SSC cabinet	HIGH TEMP, BATTERY HIGH TEMP, FAN/FILTER/HEAT Fail	NC	Required	Critical	AL5/8- TB1-6/9	Cat6 #2	white/green	X4108 pin 8	green	X4108 pin 8	white/green	Purcell AL6/AL7/AL9	green	Purcell AL6/AL7/AL9
VANDALISM (NSI/DEG/CRI)	9	Battery theft cable	Battery theft cable daisy chain	NC	Required	Critical		Cat6 #x	white/blue	X4109 pin 9	blue	X4108 pin 9	white/blue	Battery theft cable	blue	battery theft cable
GROUND BAR	10	Ground bar cable	Ground Bar stolen	NC	Required	Critical		Cat6 #x	white/blue	X4109 pin 10	blue	X4108 pin 10	white/blue	Ground bar left side	blue	Ground bar right side
DC FAULT	11	RBA72 cabinet	RBA72- Battery fuse and HVAC	NO	Optional:	Major		Cat6 #x	white/blue	X4108 pin 11	blue	X4108 pin 11	white/blue	Battery cabinet	blue	Battery cabinet
LOSS OF COMMERCIAL POWER	12	PPC Relay	PPC LOCP Relay	NC	Required	Critical		Cat6 #3	white/blue	X4108 pin 12	blue	X4108 pin 12	white/blue	PPC relay	blue	PPC relay
FAN FAILURE	15	FCOA cabinet	FCOA Fan Pressure fault	NC	Optional:	Major		Brown FCOA	n/a	X4111 pin 13	n/a	X4110 pin 13	n/a	FCOA pre terminated	n/a	FCOA pre terminated
GENERATOR RUNNING	16	Generator	Generator Running	NC	Required	Major		Cat6 to generator relay		X4111 pin 14		X4110 pin 14	white/blue	or Running Relay on APU	blue	or Running Relay on APU
GENERATOR NOT IN AUTO	17	Generator	Not in Auto	NC	Required	Major		Cat6 to generator relay		X4111 pin 15		X4110 pin 15	white/orange	Generator	orange	Generator
GENERATOR ALARM CRITICAL	18	Generator	10% Shutdown	NC	Required	Critical		Cat6 to generator relay		X4111 pin 16		X4110 pin 16	white/green	Generator	green	Generator
GENERATOR ALARM CRITICAL	19	Generator	Common Shutdown	NC	Required	Major		Cat6 to generator relay		X4111 pin 17		X4110 pin 17	white/brown	Generator	blue	Generator
GENERATOR LOW FUEL	20	Generator	Low Fuel 50%	NC	Required	Major		Cat6 to generator relay		X4111 pin 18		X4110 pin 18	white/blue	Generator		Generator
ATS IN EMERGENCY POSITION	21	Automatic Transfer Switch	Generator Transfer Switch failure	NC	Optional:	Major		Cat6 #x	white/blue	X4113 pin 19	n/a	X4112 pin 19	white/blue	Fuel Tank	blue	Fuel Tank
EXTERNAL (NSI/DEG/CRI)	22	Optional External Alarm	Optional External Alarm	NC	Optional:	Critical		Cat6 #x	white/blue	X4113 pin 20	blue	X4112 pin 20	white/blue	Optional External Alarm	blue	Optional External Alarm
VANDALISM (NSI/DEG/CRI)	23	Optional External Alarm	Optional External Alarm	NC	Optional:	Critical		Cat6 #x	white/blue	X4113 pin 21	blue	X4112 pin 21	white/blue	Optional External Alarm	blue	Optional External Alarm
TOWER LIGHT CRITICAL	24	Tower Beacon	Tower Beacon fail	NC	Optional:	Critical		Cat6 #x	white/blue	X4113 pin 22	blue	X4112 pin 22	white/blue	Tower Beacon	blue	Tower Beacon
TOWER LIGHT NSI	25	Tower side light	Tower side light Fail	NC	Optional:	Major		Cat6 #x	white/blue	X4113 pin 23	blue	X4112 pin 23	white/blue	Tower side light	blue	Tower side light
GROUND BAR	26	GROUND BAR	Ground Bar stolen	NC	Optional:	Critical		Cat6 #x	white/blue	X4113 pin 24	blue	X4112 pin 24	white/blue	GROUND BAR	blue	GROUND BAR

ALARM LABEL CODING

Generac Generator, LOCP Relay installed				TERMINATION TO FSEB					TERMINATION TO OTHER END			
NAME	LINE #	Description	Polarity	EAC Cable	WIRES	TERMINAL BLOCK	WIRES	TERMINAL BLOCK	WIRES	TERMINATION	WIRES	TERMINATION
GENERATOR LOW FUEL	13	NC#5-LOW FUEL	NC	CAT6 TO GENERATOR RELAY	WHITE/BLUE	X4111 PIN 13	BLUE	X4110 PIN 13	WHITE/BLUE	GENERAC CUSTOMER CONNECTION RB4 #3	BLUE	GENERAC CUSTOMER CONNECTION RB4 #2
GENERATOR RUNNING	14	NC#8-GEN RUNNING	NC	CAT6 TO GENERATOR RELAY	WHITE/ORANGE	X4111 PIN 14	ORANGE	X4110 PIN 14	WHITE/ORANGE	GENERAC CUSTOMER CONNECTION RB4 #9	ORANGE	GENERAC CUSTOMER CONNECTION RB4 #8
GENERATOR NOT IN AUTO	15	NC#11-NOT IN AUTO	NC	CAT6 TO GENERATOR RELAY	WHITE/GREEN	X4111 PIN 15	GREEN	X4110 PIN 15	WHITE/GREEN	GENERAC CUSTOMER CONNECTION RB4 #12	GREEN	GENERAC CUSTOMER CONNECTION RB4 #11
GENERATOR ALARM CRITICAL	16	COMMON SHUTDOWN ALARM OUTPUT	NC	CAT6 TO GENERATOR RELAY	WHITE/BROWN	X4111 PIN 16	BROWN	X4110 PIN 16	WHITE/BROWN	GENERAC CUSTOMER CONNECTION TB4 #2	BROWN	GENERAC CUSTOMER CONNECTION TB4 #1
GENERATOR ALARM NSI	17	NC#2-DOOR ALARM	NC	CAT6 TO GENERATOR RELAY	WHITE/BLUE	X4111 PIN 17	BLUE	X4110 PIN 17	WHITE/BLUE	GENERAC CUSTOMER CONNECTION RB4 #6	BLUE	GENERAC CUSTOMER CONNECTION RB4 #5
Generac Generator, LOCP Relay installed				TERMINATION TO FSEE ONLY IF STARTS ON 0					TERMINATION TO OTHER END			
NAME	LINE #	Description	Polarity	EAC Cable	Wires	Terminal Block	Wires	Terminal Block	Wires	Termination	Wires	Termination
GENERATOR LOW FUEL	12	NC#5-LOW FUEL	NC	CAT6 TO GENERATOR RELAY	WHITE/BLUE	X4111 PIN 12	BLUE	X4110 PIN 12	WHITE/BLUE	GENERAC CUSTOMER CONNECTION RB4 #3	BLUE	GENERAC CUSTOMER CONNECTION RB4 #2
GENERATOR RUNNING	13	NC#8-GEN RUNNING	NC	CAT6 TO GENERATOR RELAY	WHITE/ORANGE	X4111 PIN 13	ORANGE	X4110 PIN 13	WHITE/ORANGE	GENERAC CUSTOMER CONNECTION RB4 #9	ORANGE	GENERAC CUSTOMER CONNECTION RB4 #8
GENERATOR NOT IN AUTO	14	NC#11-NOT IN AUTO	NC	CAT6 TO GENERATOR RELAY	WHITE/GREEN	X4111 PIN 14	GREEN	X4110 PIN 14	WHITE/GREEN	GENERAC CUSTOMER CONNECTION RB4 #12	GREEN	GENERAC CUSTOMER CONNECTION RB4 #11
GENERATOR ALARM CRITICAL	15	COMMON SHUTDOWN ALARM OUTPUT	NC	CAT6 TO GENERATOR RELAY	WHITE/BROWN	X4111 PIN 15	BROWN	X4110 PIN 15	WHITE/BROWN	GENERAC CUSTOMER CONNECTION TB4 #2	BROWN	GENERAC CUSTOMER CONNECTION TB4 #1
GENERATOR ALARM NSI	16	NC#2-DOOR ALARM	NC	CAT6 TO GENERATOR RELAY	WHITE/BLUE	X4111 PIN 16	BLUE	X4110 PIN 16	WHITE/BLUE	GENERAC CUSTOMER CONNECTION RB4 #6	BLUE	GENERAC CUSTOMER CONNECTION RB4 #5

1 EXTERNAL ALARM WIRING STANDARD  
SCALE:

--- GROUND WIRE  
■ EXOTHERMIC WELD  
● MECHANICAL CONNECTION  
◎ NEW GROUND ROD  
5/8"  $\phi$  x 10'-0"



1. IF MORE THAN 20' FROM T-MOBILE GROUND RING, INSTALL GROUND ROD (5/8" x 10"). ROD SPACING: 8' MAX. TOP OF ROD AND GROUND WIRE TO BE AT GROUND RING DEPTH BELOW FROST LINE.
2. GROUND FAULT PROTECTION REQUIRED FOR UTILITY RECEPTACLES.
3. GENERATOR NEUTRAL SHALL NOT BE GROUNDED AT THE GENERATOR. REFER TO SINGLE LINE DETAIL, SHEET E-2.
4. EQUIPMENT LOCATED OUTSIDE OR EXPOSED TO MOISTURE SHALL BE NEMA 3R RATED.

# T-Mobile



**Kimley»Horn**

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

REV	DATE	DRWN	DESCRIPTION	DES./QTY
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK



7/1/25  
Exp. 10/31/25

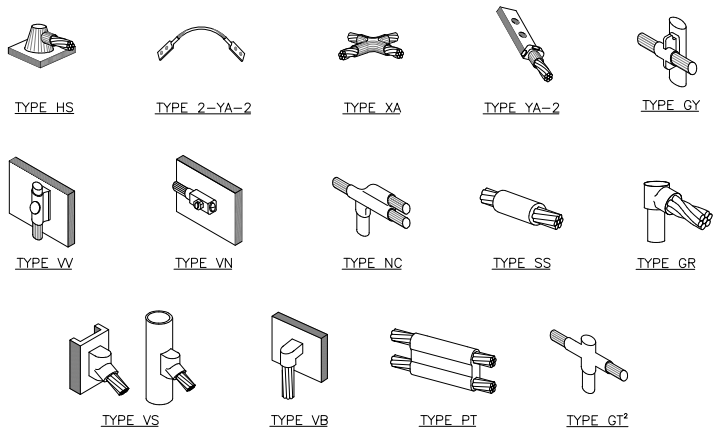
IT IS A VIOLATION OF LAW FOR ANY PERSON,  
UNLESS THEY ARE ACTING UNDER THE DIRECTION  
OF A LICENSED PROFESSIONAL ENGINEER,  
TO ALTER THIS DOCUMENT.

**SHEET NUMBER:**

G-1

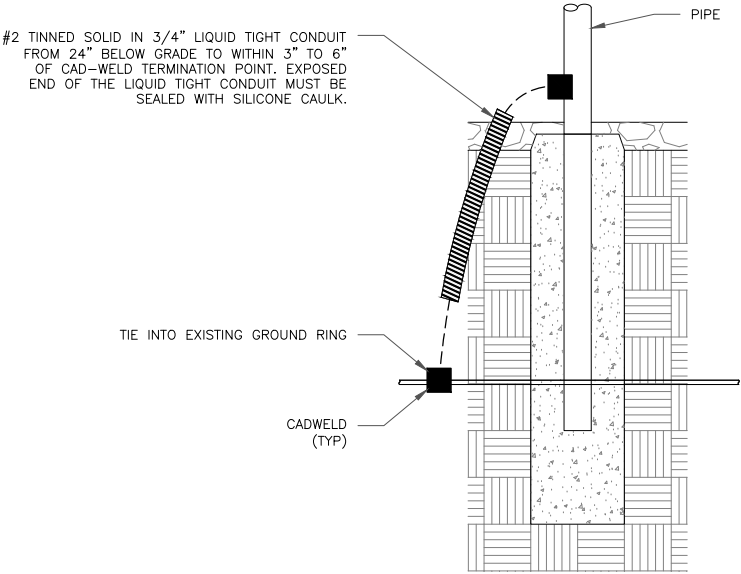
REVISION:

3

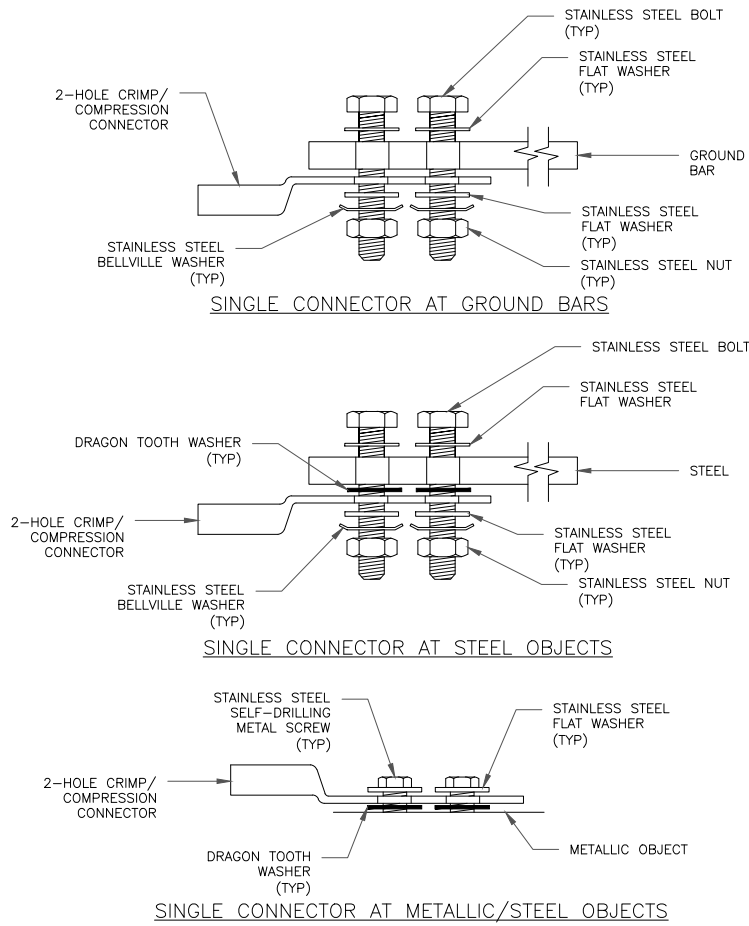


- NOTE:
1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
  2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

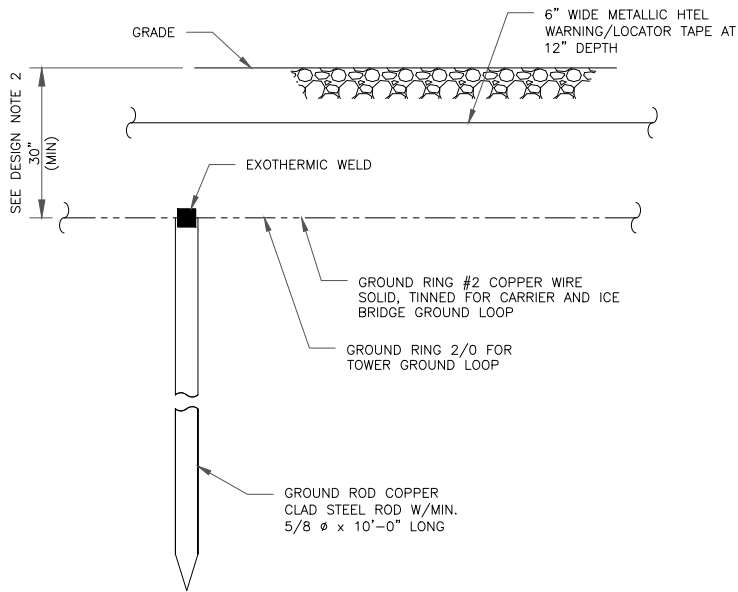
1 CADWELD GROUNDING CONNECTIONS  
SCALE: NOT TO SCALE



2 TRANSITIONING GROUND DETAIL  
SCALE: NOT TO SCALE



3 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)

4 GROUND ROD DETAIL  
SCALE: NOT TO SCALE

T Mobile

CROWN  
CASTLE

Kimley»Horn

421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

T-MOBEL SITE ID: DN03223F

BU #: 877055  
SCHUBERT PROPERTY

7421 TEMPLETON GAP  
COLORADO SPRINGS, CO 80922

EXISTING 100'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/12/24	DRD	ISSUED FOR CONSTR.	MCK
1	06/05/25	DRD	ISSUED FOR CONSTR.	MCK
2	06/12/25	DRD	ISSUED FOR CONSTR.	MCK
3	07/01/25	DMW	ISSUED FOR CONSTR.	MCK



7/1/25  
Exp. 10/31/25

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-2

REVISION:

3