



Approved  
 By: Kevin Mastin  
 Date: 07/21/2022  
 El Paso County Planning & Community Development

**verizon**  
 3245 158TH AVENUE MS 231  
 BELLEVUE, WA 98008

**VERIZON SITE NUMBER:** 290438  
**VERIZON SITE NAME:** CS\_GOODman\_AND\_SONS  
**SITE TYPE:** MONOPINE  
**TOWER HEIGHT:** 69'-0"

**BUSINESS UNIT #:** 823520  
**SITE ADDRESS:** 17997 SIERRA WAY  
 MONUMENT, CO 80132  
**COUNTY:** EL PASO  
**JURISDICTION:** COUNTY OF EL PASO

**CROWN CASTLE**  
 2055 S. STEARMAN DRIVE  
 CHANDLER, AZ 85286

**TOWER ENGINEERING PROFESSIONALS**  
 4710 E ELWOOD ST, STE 9  
 PHOENIX, AZ 85040  
 OFFICE: (480) 285-0036  
 www.tepgroup.net

**VERIZON PROJECT - 16585177**

**SITE INFORMATION**

CROWN CASTLE USA INC. CS\_GOODman\_AND\_SONS  
 SITE NAME:  
 SITE ADDRESS: 17997 SIERRA WAY  
 MONUMENT, CO 80132  
 COUNTY: EL PASO  
 MAP/PARCEL #: 6118009003  
 AREA OF CONSTRUCTION: EXISTING  
 LATITUDE: 39° 49' 40.52"  
 LONGITUDE: -105° 07' 02.92"  
 LAT/LONG TYPE: NAD83  
 GROUND ELEVATION: 7490 FT ±  
 CURRENT ZONING: RR-2.5  
 JURISDICTION: CITY OF ARVADA  
 OCCUPANCY CLASSIFICATION: U  
 TYPE OF CONSTRUCTION: IIC  
 A.D.A. COMPLIANCE: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION  
 PROPERTY OWNER: BOILEAU ROBERT J III  
 2700 YOUNGFIELD STE 280  
 LAKEWOOD, CO 80215  
 TOWER OWNER: CROWN CASTLE  
 17995 SIERRA  
 MONUMENT, CO 80132-8424  
 CARRIER/APPLICANT: VERIZON WIRELESS  
 3245 158TH AVENUE MS 231  
 BELLEVUE, WA 98008  
 ELECTRIC PROVIDER: MOUNTAIN VIEW ELECTRIC  
 (800) 388-9881  
 TELCO PROVIDER: CENTURYLINK  
 (866) 642-0444

**DRAWING INDEX**

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

**APPROVALS**

SIGNATURE	DATE
_____	_____
_____	_____
_____	_____
_____	_____

**LOCATION MAP**



DRIVING DIRECTIONS: FROM DENVER INTERNATIONAL AIRPORT. HEAD NORTH ON PEÑA BLVD. SLIGHT LEFT ONTO TERMINAL W (SIGNS FOR AIRPORT TERMINAL W). USE THE 2ND FROM THE LEFT LANE TO TURN SLIGHTLY LEFT ONTO PARKING - TERMINAL W. SLIGHT RIGHT. KEEP LEFT. KEEP LEFT TO CONTINUE ON NEW CASTLE ST. CONTINUE ONTO 8599- NEW CASTLE STREET -8101. 8599- NEW CASTLE STREET -8101 TURNS SLIGHTLY RIGHT AND BECOMES PEÑA BLVD (SIGNS FOR I-70/AIRPORT EXIT/AIRPORT RETURN TO TERMINAL). TAKE EXIT 6A TOWARD I-70 S. KEEP LEFT AT THE Y JUNCTION AND MERGE WITH E-470 S. TAKE EXIT 1A FOR INTERSTATE 25 S TOWARD COLO SPGS. MERGE WITH I-25 S. TAKE EXIT 161 FOR CO-105 TOWARD MONUMENT/PALMER LAKE. TURN RIGHT ONTO CO-105 E.

**VERIZON SITE NUMBER:** 290438

**BU #:** 823520  
**CS\_GOODman\_AND\_SONS**

17997 SIERRA WAY  
 MONUMENT, CO 80132

EXISTING 69'-0" MONOPINE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	01/19/22	ORG	CONSTRUCTION	HMM

**PROJECT TEAM**

A&E FIRM: TOWER ENGINEERING PROFESSIONALS  
 4710 E ELWOOD ST, STE 9  
 PHOENIX, AZ 85040  
 OFFICE: (480) 285-0036  
 CROWN CASTLE USA INC. DISTRICT CONTACTS:  
 2055 S. STEARMAN DRIVE  
 CHANDLER, AZ 85286  
 --- - PROJECT MANAGER  
 ---  
 --- - CONSTRUCTION MANAGER  
 ---  
 SABRINA LANCASTER  
 SABRINA.LANCASTER@CROWN CASTLE.COM

**CONTRACTOR PMI REQUIREMENTS**

PMI ACCESSED AT <https://pmi.vxwsmart.com>  
 SMART TOOL VENDOR  
 PROJECT NUMBER -  
 VzW LOCATION CODE (PSLC) 280313

\*\*\* PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT

**MOUNT MODIFICATION REQUIRED** N

**VzW APPROVED SMART KIT VENDORS**

REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VzW SMART KIT APPROVED VENDORS

**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	2018 IBC
MECHANICAL	2018 IMC
ELECTRICAL	2020 NEC

**REFERENCE DOCUMENTS:**

STRUCTURAL ANALYSIS: PENDING  
 DATED: PENDING  
 MOUNT ANALYSIS: MASER CONSULTING  
 DATED: 12/14/2021  
 RFDS REVISION: 1  
 DATED: 06/24/2021  
 ORDER ID: 597820  
 REVISION: 0



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



**PROJECT DESCRIPTION**

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

- TOWER SCOPE OF WORK:
- INSTALL (6) ANTENNAS
  - INSTALL (6) RRHS
  - INSTALL (2) OVP BOX
  - INSTALL (2) HYBRID
  - INSTALL (3) DUAL ANTENNA BRACKETS

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



Andrew R. Berglund, P.E.  
 Professional Engineer License: #58252

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:**

**0**



**CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:**

- 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.
- "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.
- 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.
- 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).
- 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.
- 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.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- 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.
- ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS. LATEST APPROVED REVISION.
- 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.
- 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.
- 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.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 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.
- 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.
- 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.
- 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.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
- 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:**

- 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.
- 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.
- 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.
- METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- 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.
- 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.
- 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.
- ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- APPROVED ANTI-OXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- BOND ALL METALLIC OBJECTS WITHIN 6 FT. OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
- 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.
- 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).
- 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:**

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION  
CARRIER: VERIZON  
TOWER OWNER: CROWN CASTLE USA INC.
- 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.
- 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. 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.
- 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.
- 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.
- ALL MATERIALS 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.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 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.
- 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.
- 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.
- 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.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

**CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:**

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°F AT TIME OF PLACEMENT.
- CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL 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 A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
- ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:  
#4 BARS AND SMALLER.....40 ksi  
#5 BARS AND LARGER.....60 ksi
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:  
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3"  
CONCRETE EXPOSED TO EARTH OR WEATHER:  
#6 BARS AND LARGER.....2"  
#5 BARS AND SMALLER.....1-1/2"  
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:  
SLAB AND WALLS.....3/4"  
BEAMS AND COLUMNS.....1-1/2"
- A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

**ELECTRICAL INSTALLATION NOTES:**

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- 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.
- 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.
- 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).
- PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- 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.
- 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.
- POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
- 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.
- 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).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SNEW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
- WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREFOLD SPECMATE WIREWAY).
- SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "VERIZON".
- 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
120/208V, 3Ø	GROUND	GREEN
	A PHASE	BLACK
	B PHASE	RED
277/480V, 3Ø	C PHASE	BLUE
	NEUTRAL	WHITE
	GROUND	GREEN
DC VOLTAGE	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
	GROUND	GREEN
	POS (+)	RED**
	NEG (-)	BLACK**

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

**APWA UNIFORM COLOR CODE:**

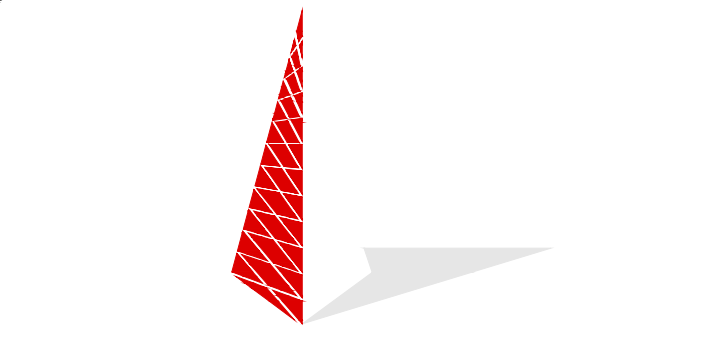
- WHITE PROPOSED EXCAVATION
- PINK TEMPORARY SURVEY MARKINGS
- RED ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
- YELLOW GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
- ORANGE COMMUNICATION, ALARM OR SIGNAL LINES, CABLES, OR CONDUIT AND TRAFFIC LOOPS
- BLUE POTABLE WATER
- PURPLE RECLAIMED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



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**VERIZON SITE NUMBER:**  
**290438**


**BU #: 823520**  
**CS\_GOODMAN\_AND\_SONS**

17997 SIERRA WAY  
MONUMENT, CO 80132

EXISTING 69'-0" MONOPINE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	01/19/22	ORG	CONSTRUCTION	HMM



01/19/22

Andrew R. Berglund, P.E.  
Professional Engineer License: #58252

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**SHEET NUMBER:** T-2      **REVISION:** 0



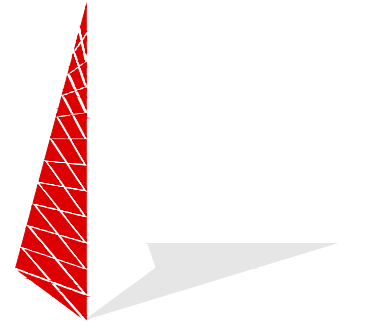
FLOODPLAIN NOTE:  
 THE TOWER IS LOCATED IN ZONE "X" AREAS  
 DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL  
 CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY  
 PANEL #08041C0279G, EFFECTIVE ON 12/07/2018.

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**CROWN  
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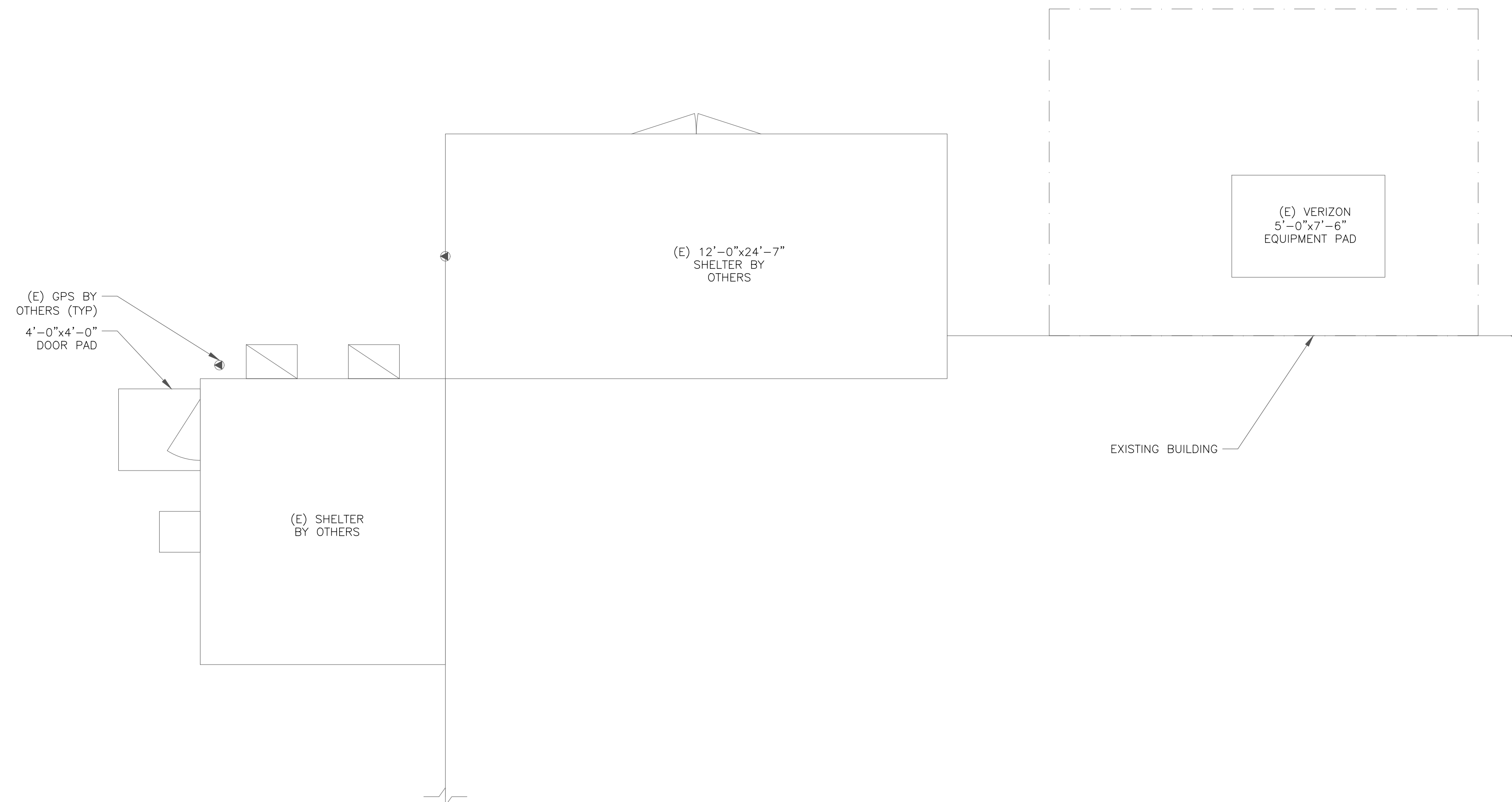
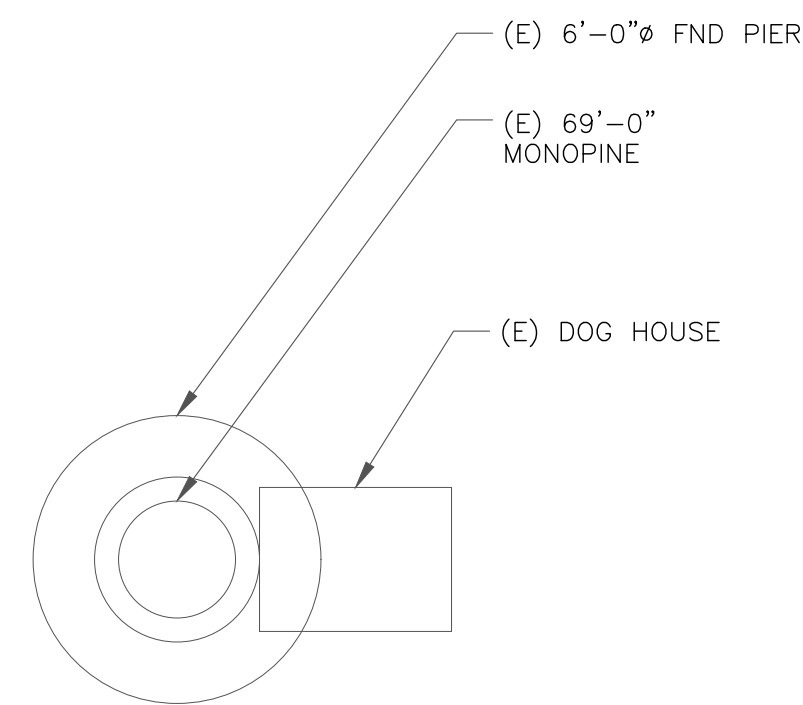
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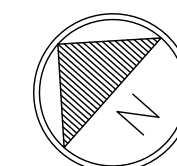
**C-1**

REVISION:

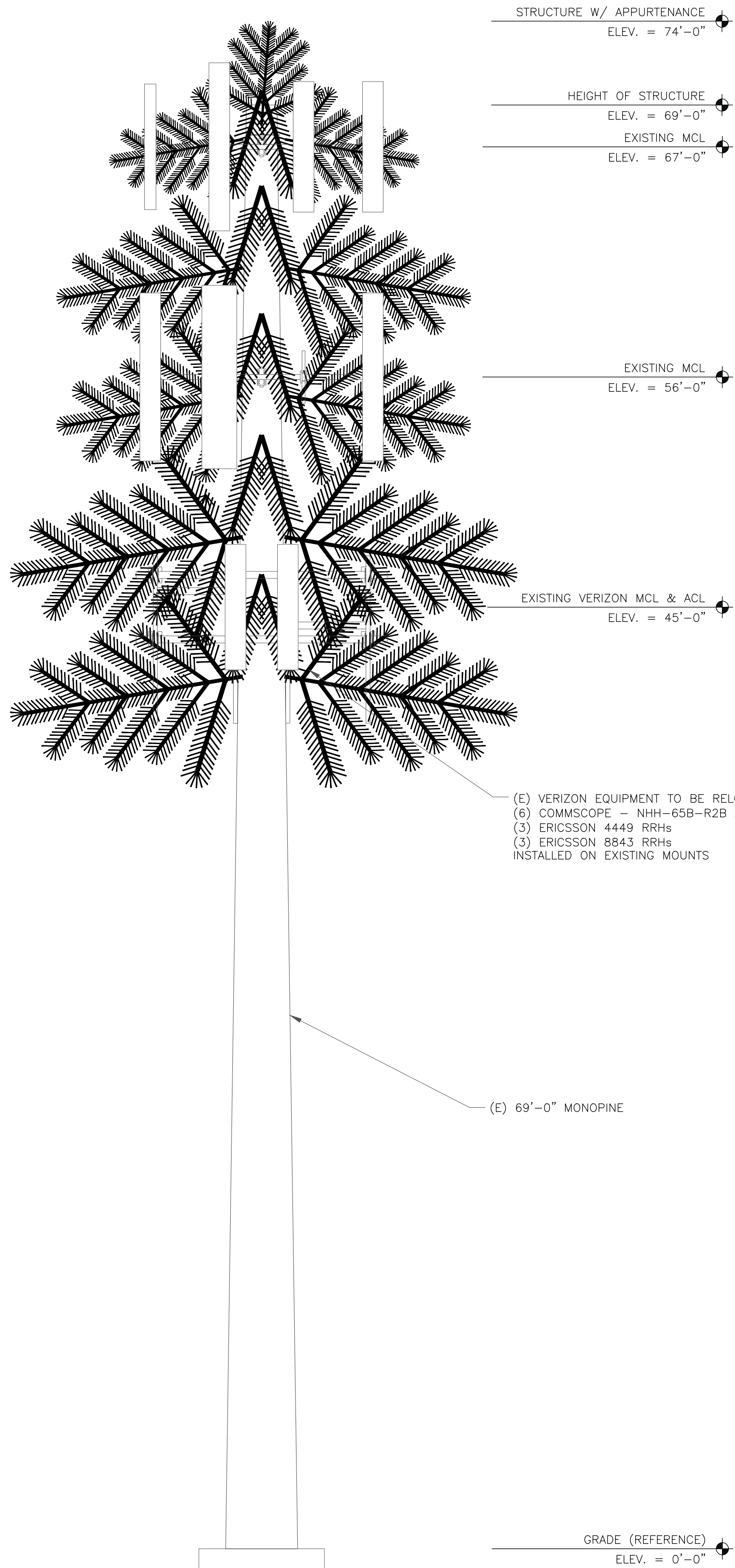
**0**



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







1 EXISTING TOWER ELEVATION  
SCALE: 1/4"=1'-0" (FULL SIZE)  
1/8"=1'-0" (11x17)

**INSTALLER NOTE:**

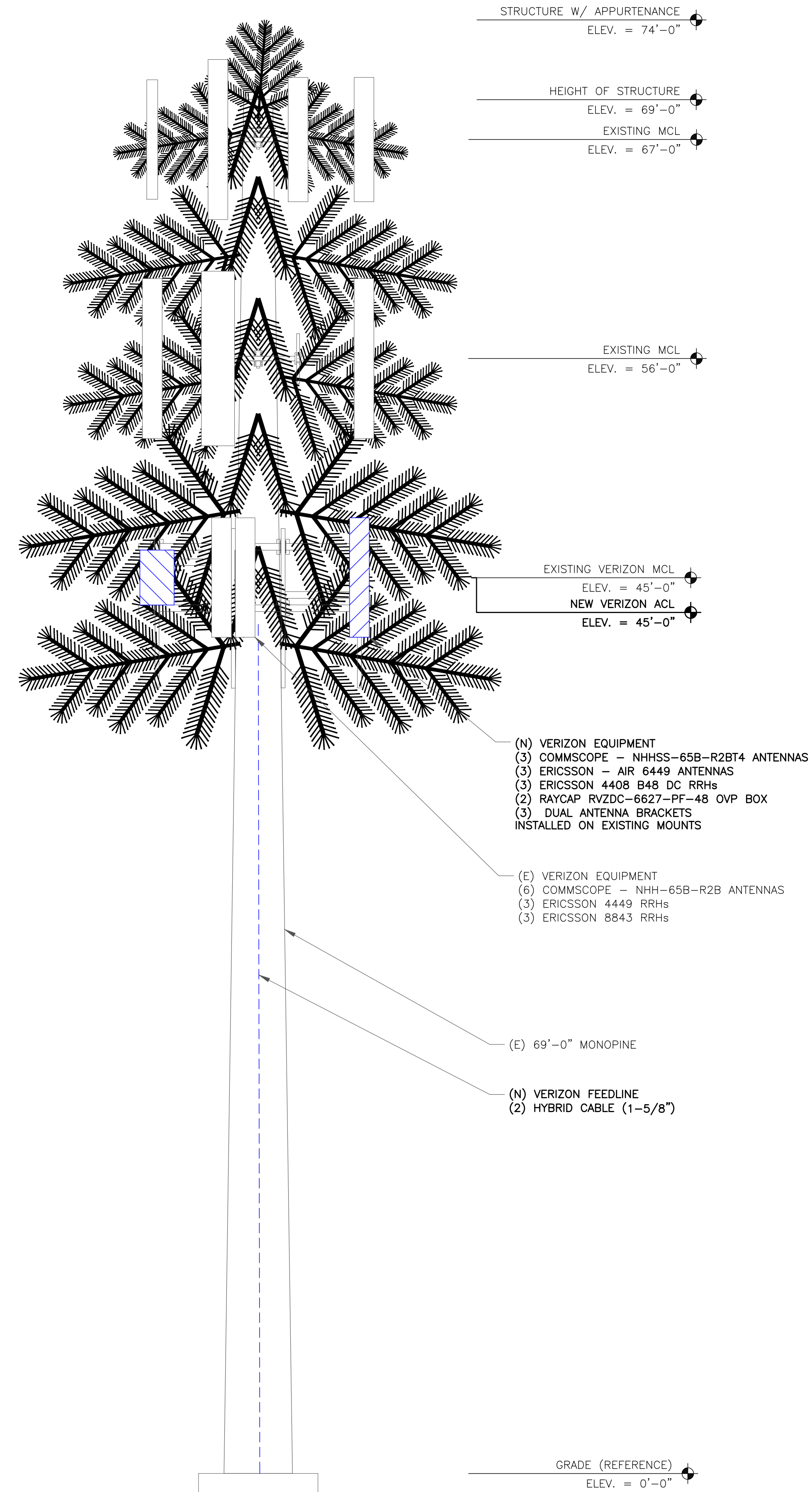
- EXISTING AND PROPOSED ANTENNA/EQUIPMENT POSITIONING SHOWN PER RFDS. FIELD CONDITIONS MAY VARY.
- GC IS TO CAMOUFLAGE PROPOSED ANTENNAS AS REQUIRED BY AUTHORITY HAVING JURISDICTION. GC TO COORDINATE WITH VERIZON CM TO CONFIRM CAMOUFLAGE METHOD DOES NOT OBSTRUCT SUB6 ANTENNA RF SIGNAL.

**TOWER ANALYSIS NOTES:**

- THE DESIGN DEPICTED IN THESE DRAWINGS IS VALID WHEN ACCOMPANIED BY A CORRESPONDING PASSING TOWER ANALYSIS.
- CONSTRUCTION MANAGER / GENERAL CONTRACTOR SHALL REVIEW THE TOWER ANALYSIS FOR ANY CONDITIONS PRIOR TO INSTALLATION.
- ANY REQUIRED TOWER MODIFICATION DESIGN OR TOWER REPLACEMENT SHALL BE APPROVED BY EOR.

**MOUNT ANALYSIS NOTES:**

- THE DESIGN DEPICTED IN THESE DRAWINGS IS VALID WHEN ACCOMPANIED BY A CORRESPONDING PASSING MOUNT ANALYSIS.
- CONSTRUCTION MANAGER / GENERAL CONTRACTOR SHALL REVIEW THE MOUNT ANALYSIS FOR ANY CONDITIONS PRIOR TO INSTALLATION.
- ANY REQUIRED MOUNT MODIFICATION DESIGN OR MOUNT REPLACEMENT SHALL BE APPROVED BY EOR.



2 NEW TOWER ELEVATION  
SCALE: 1/4"=1'-0" (FULL SIZE)  
1/8"=1'-0" (11x17)

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EXISTING 69'-0" MONOPINE

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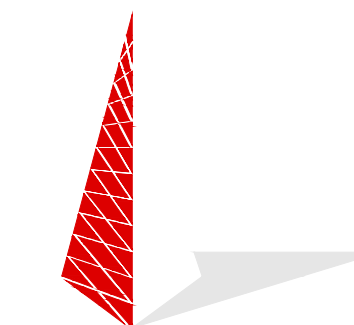


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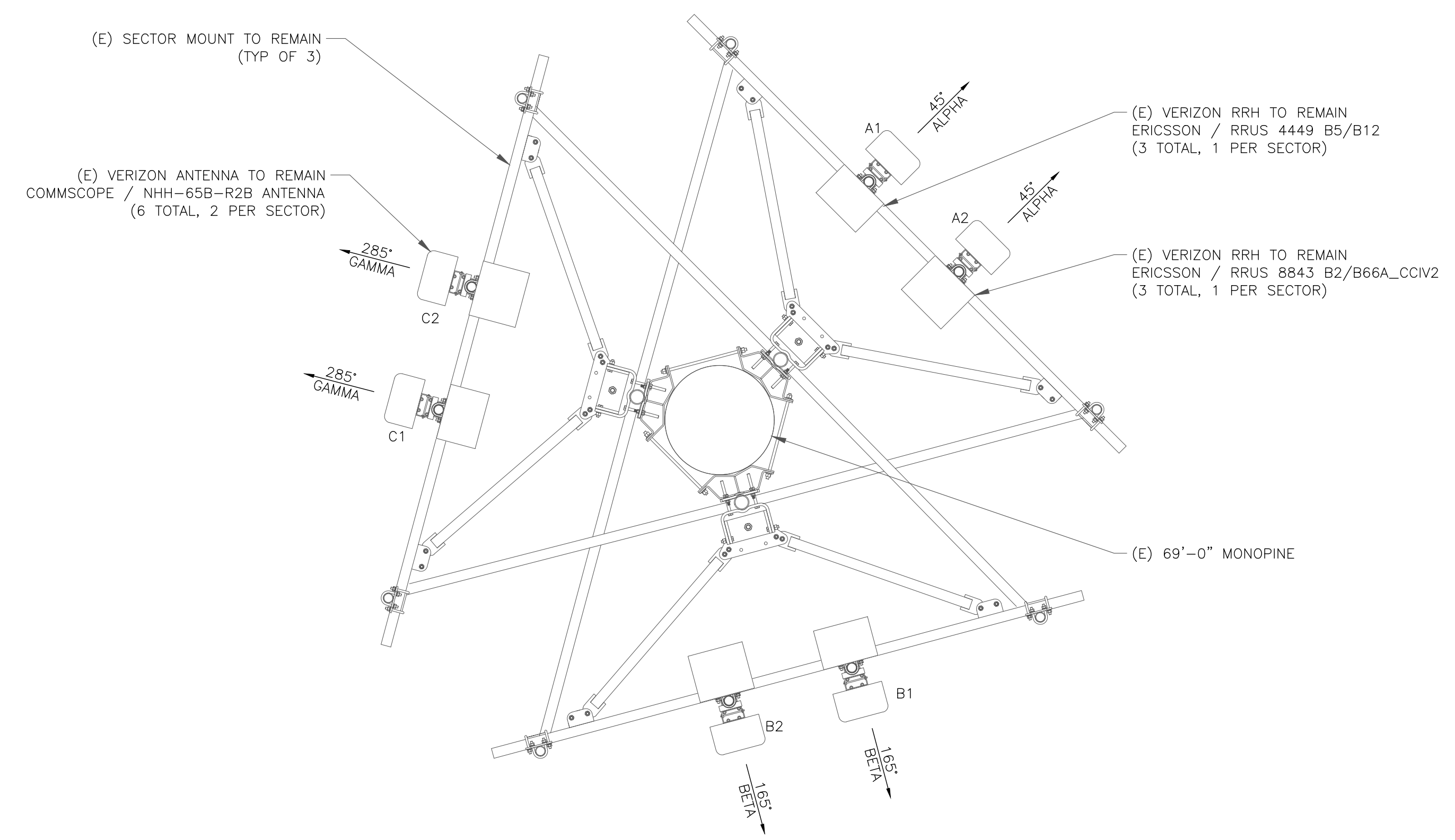
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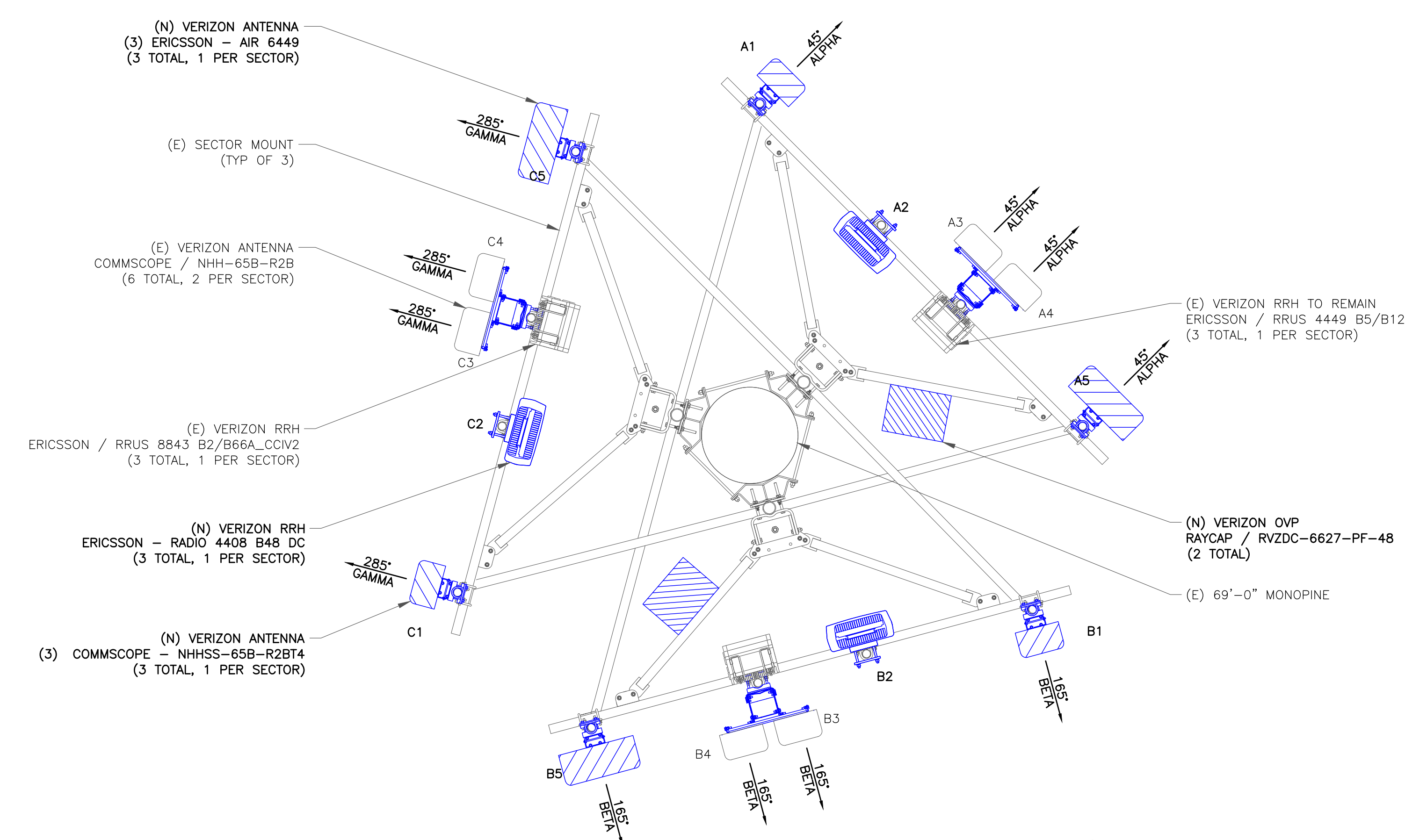
**C-3**

**0**



**1** EXISTING ANTENNA PLAN  
SCALE: 1/2"=1'-0" (FULL SIZE)  
1/4"=1'-0" (11x17)

**INSTALLER NOTE:**  
EXISTING AND PROPOSED ANTENNA/  
EQUIPMENT POSITIONING SHOWN PER RFDS.  
FIELD CONDITIONS MAY VARY.



**2** NEW ANTENNA PLAN  
SCALE: 1/2"=1'-0" (FULL SIZE)  
1/4"=1'-0" (11x17)

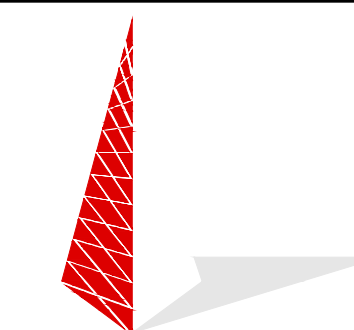


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SHEET NUMBER: **C-4** REVISION: **0**

ANTENNA/RRH SCHEDULE

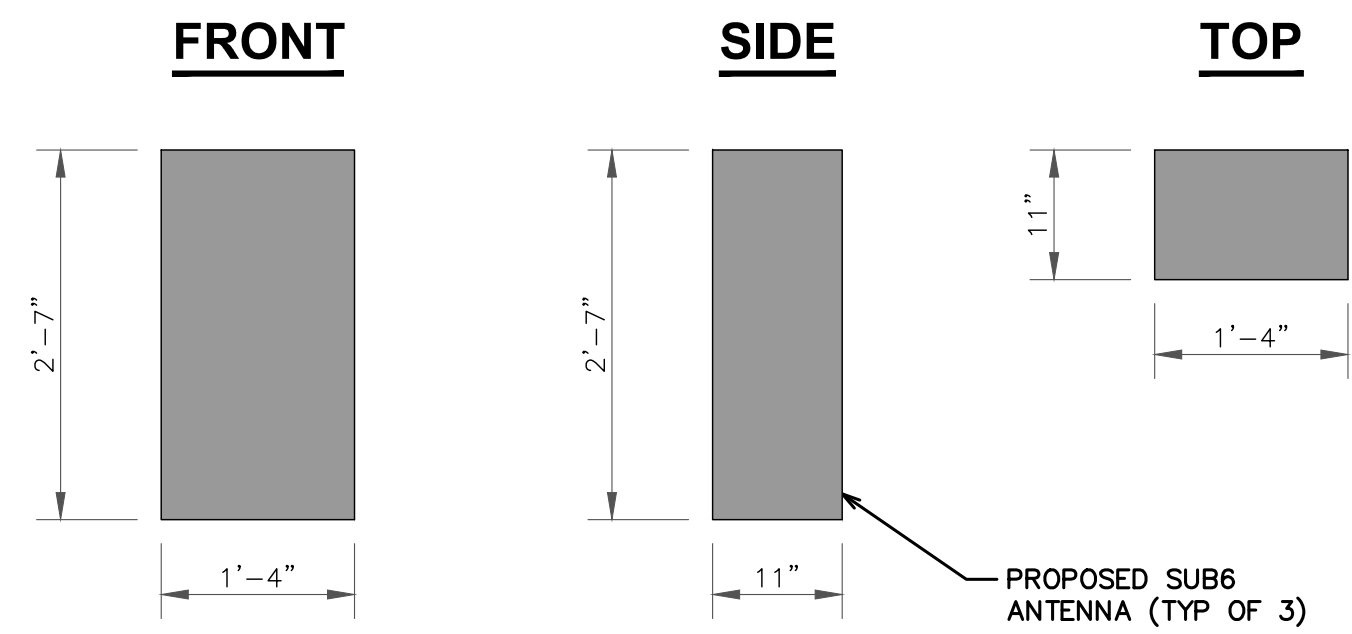
SECTOR	STATUS	ANTENNA MANUFACTURER	ANTENNA MODEL	ANTENNA CENTERLINE	AZIMUTH	MECHANICAL DOWNTILTS	ELECTRICAL DOWNTILTS	TOWER EQUIPMENT MANUFACTURER	TOWER EQUIPMENT QTY/MODEL
A1	NEW	COMMSCOPE	NHHSS-65B-R2BT4	45'-0"	45°	0°	0°	-	-
A2	-	-	-	45'-0"	45°	0°	0°	ERICSSON	(1) 4408 B48 DC RADIO
A3	EXISTING	COMMSCOPE	NHH-65B-R2B	45'-0"	45°	0°	0°	ERICSSON	(1) RADIO 4449
A4	EXISTING	COMMSCOPE	NHH-65B-R2B	45'-0"	45°	0°	0°	RAYCAP ERICSSON	(1) RVZDC-6627-PF-48 (1) RRUS 8843
A5	NEW	ERICSSON	AIR 6449	45'-0"	45°	0°	0°	-	-
B1	NEW	COMMSCOPE	NHHSS-65B-R2B	45'-0"	165°	0°	0°	ERICSSON	(1) 4408 B48 DC RADIO
B2	-	-	-	45'-0"	165°	0°	0°	ERICSSON	(1) 4408 B48 DC RADIO
B3	EXISTING	COMMSCOPE	NHH-65B-R2B	45'-0"	165°	0°	0°	ERICSSON	(1) RADIO 4449
B4	EXISTING	COMMSCOPE	NHH-65B-R2B	45'-0"	165°	0°	0°	RAYCAP ERICSSON	(1) RVZDC-6627-PF-48 (1) RRUS 8843
B5	NEW	ERICSSON	AIR 6449	45'-0"	165°	0°	0°	-	-
C1	NEW	COMMSCOPE	NHHSS-65B-R2B	45'-0"	285°	0°	0°	-	-
C2	-	-	-	45'-0"	285°	0°	0°	ERICSSON	(1) 4408 B48 DC RADIO
C3	EXISTING	COMMSCOPE	NHH-65B-R2B	45'-0"	285°	0°	0°	ERICSSON	(1) RADIO 4449
C4	EXISTING	COMMSCOPE	NHH-65B-R2B	45'-0"	285°	0°	0°	ERICSSON	(1) RRUS 8843
C5	NEW	ERICSSON	AIR 6449	45'-0"	285°	0°	0°	-	-

CABLE SCHEDULE

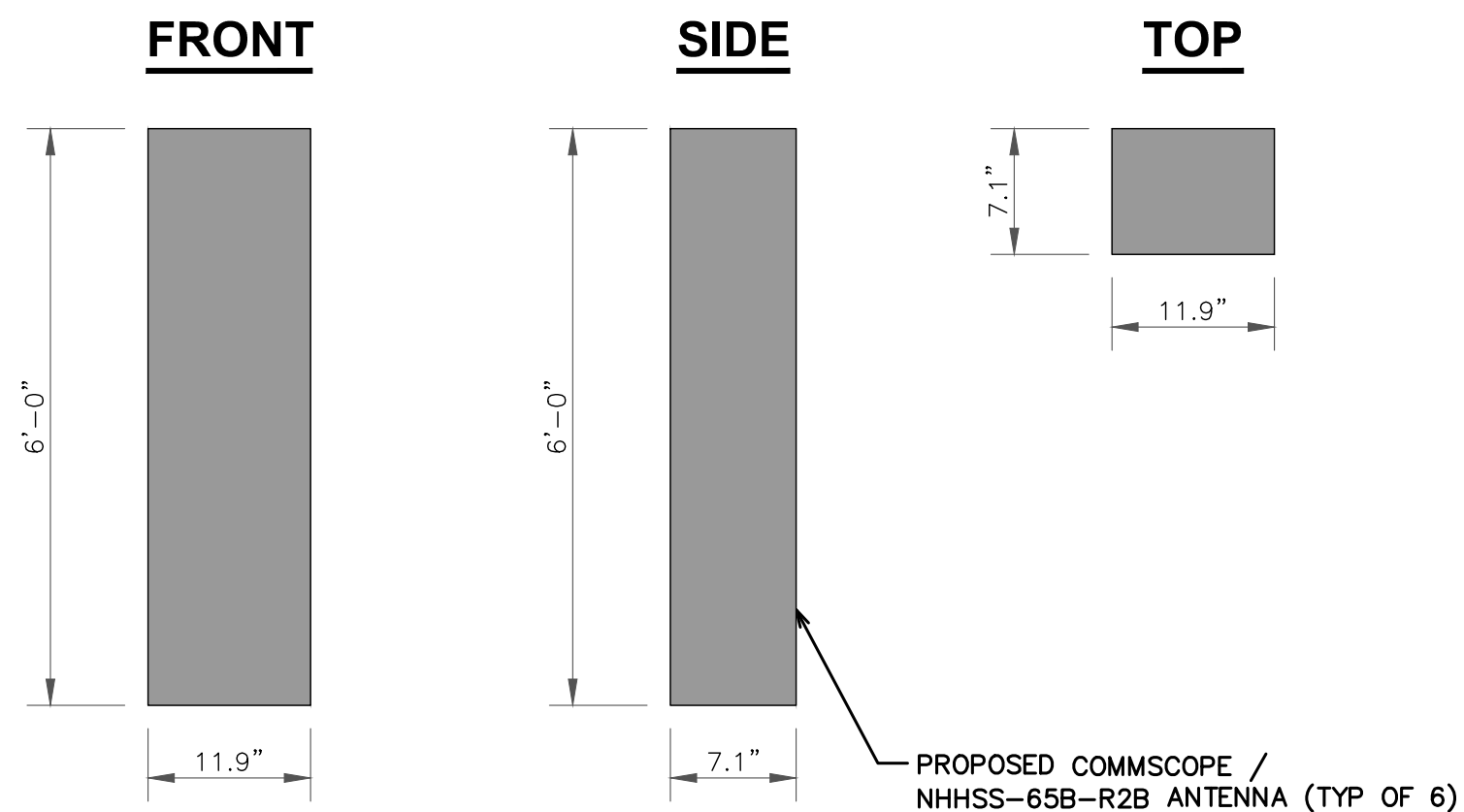
STATUS	CABLE TYPE	SIZE	LENGTH	QTY
NEW	HYBRID	1-5/8"	95'-0"±	2
TOTAL CABLE QTY:				1

1 FINAL TOWER EQUIPMENT SCHEDULE  
SCALE: NOT TO SCALE

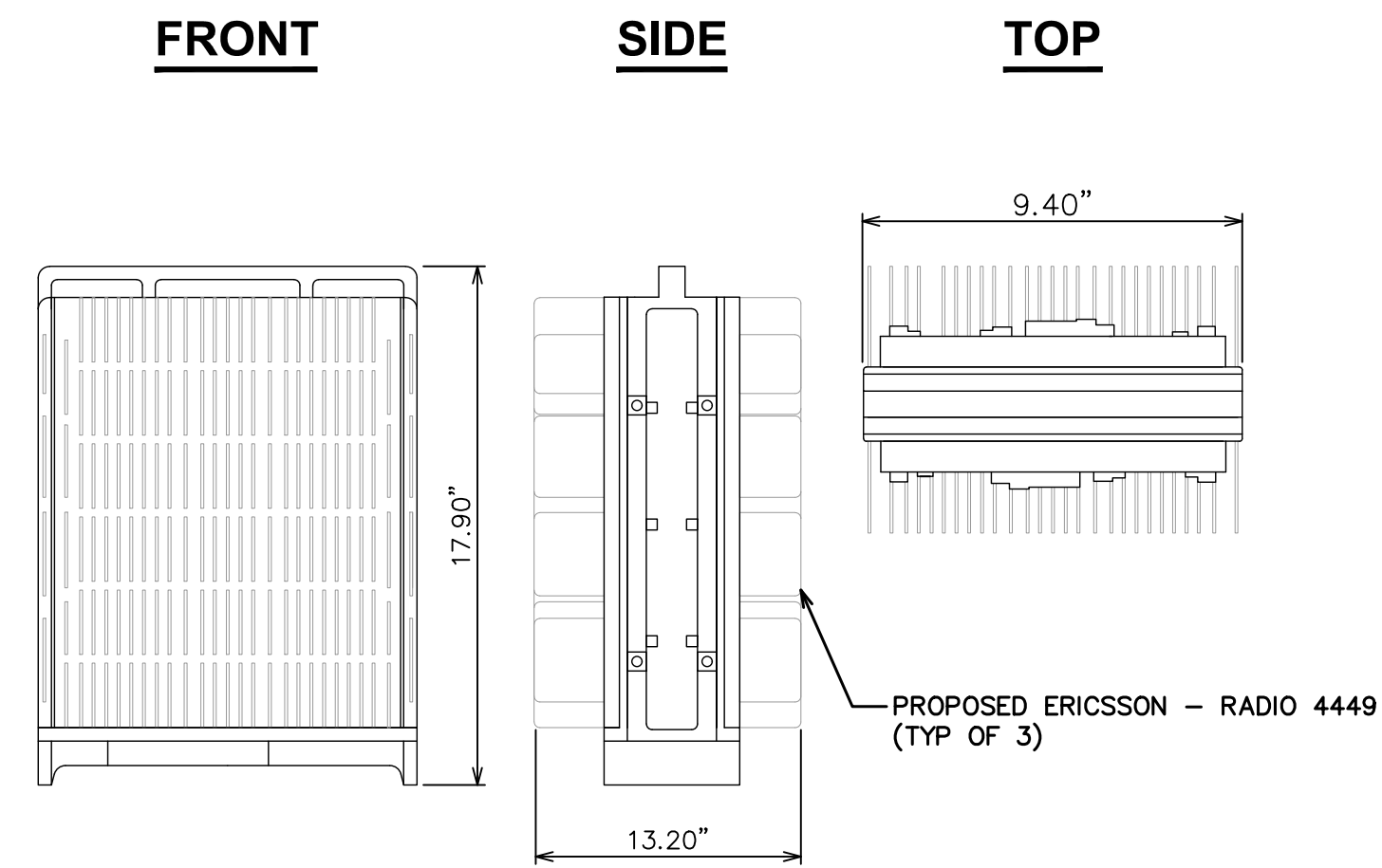




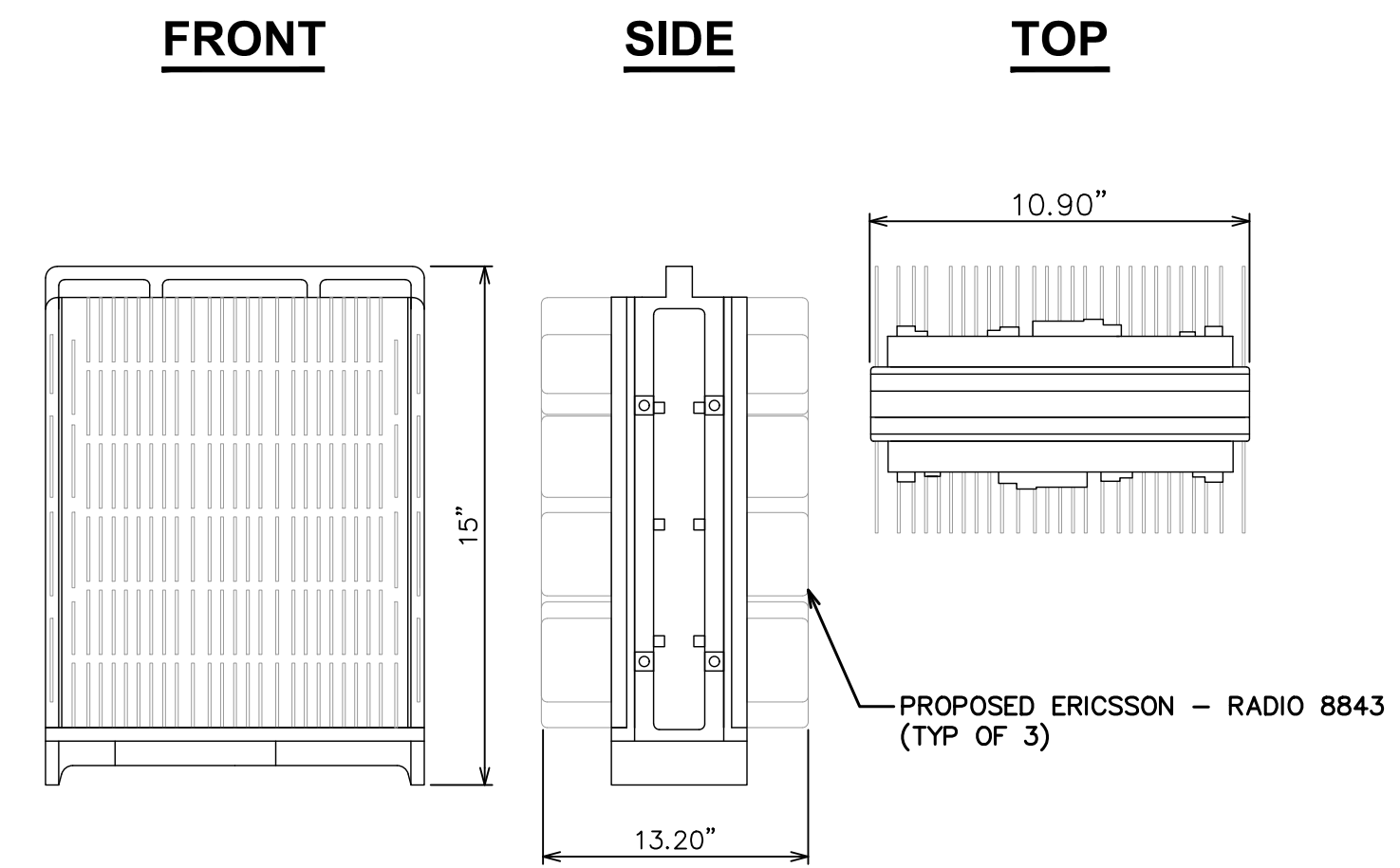
1 VERIZON SUB6 ANTENNA  
SCALE: NOT TO SCALE



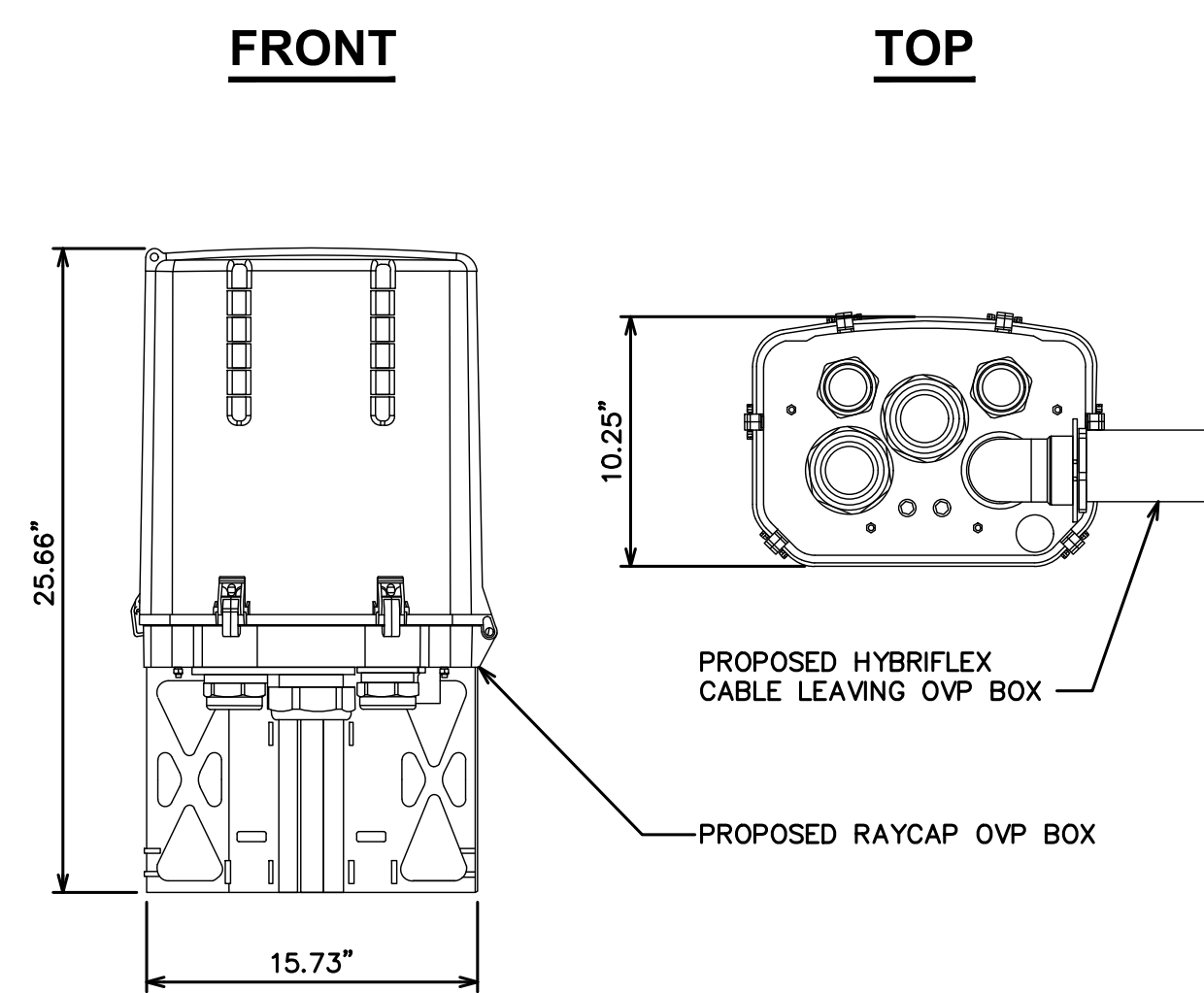
2 COMMSCOPE - NHHSS-65B-R2B  
SCALE: NOT TO SCALE



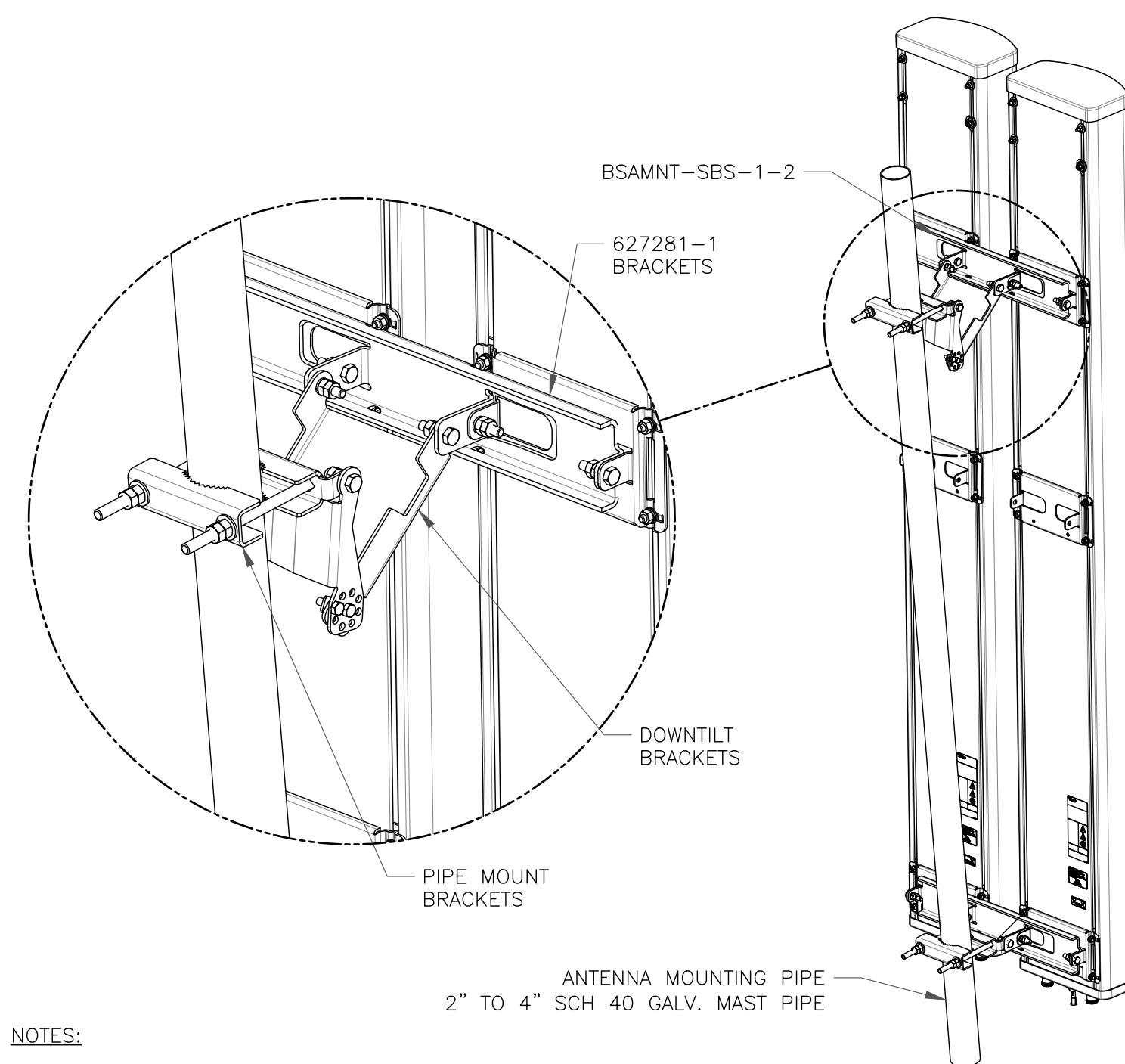
3 ERICSSON - RADIO 4449  
SCALE: NOT TO SCALE



4 ERICSSON - RADIO 8843  
SCALE: NOT TO SCALE

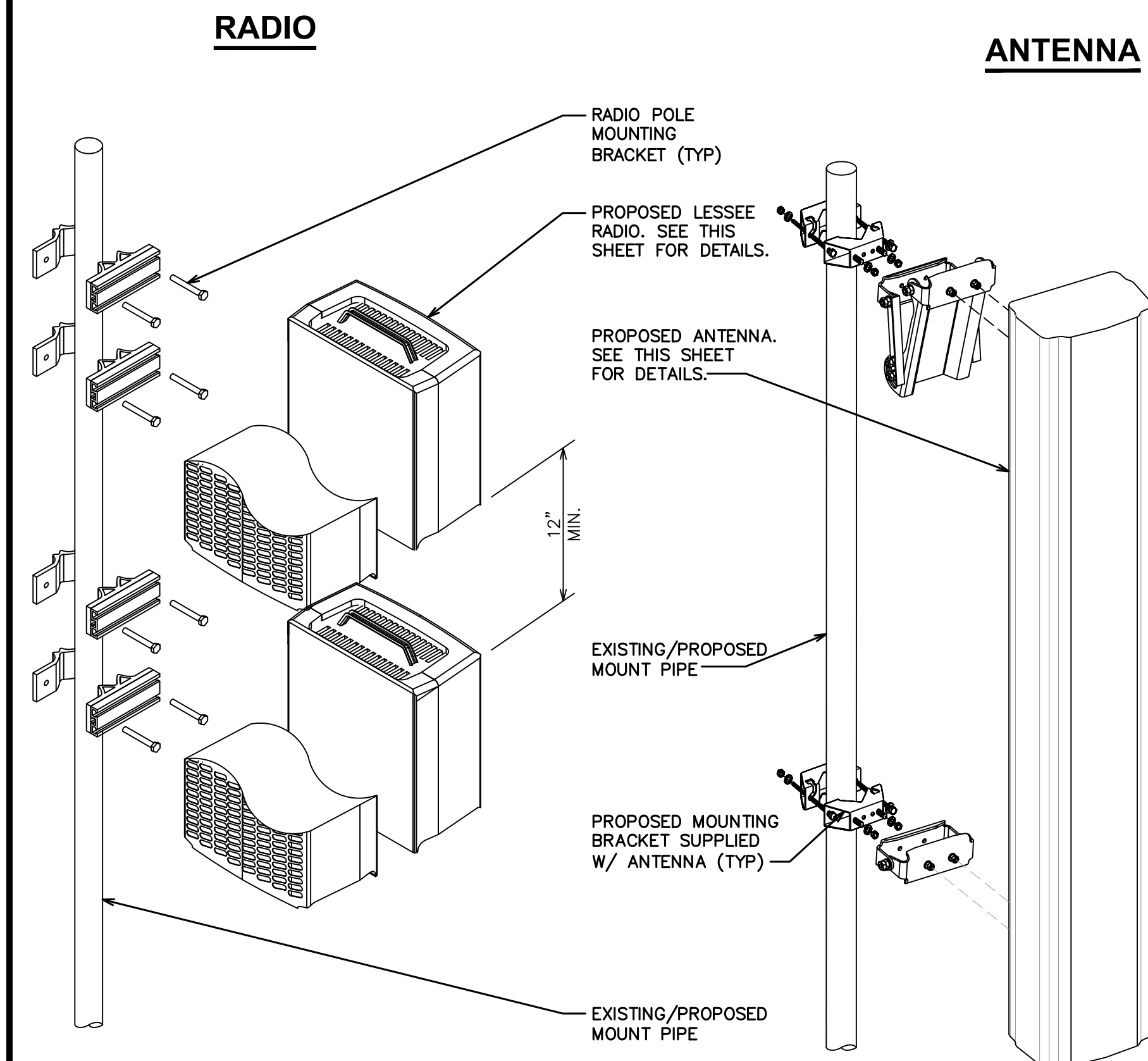


5 RAYCAP RHSDC-3315-PF-48  
SCALE: NOT TO SCALE



NOTES:  
- BSAMNT-SBS-1-2 KIT CONTAINS (2) 627281 MOUNTING BRACKETS.  
- TORQUE THE M10 BOLT ASSEMBLY TO 37 N.m. PER MANUFACTURE'S RECOMMENDATIONS.

6 COMMSCOPE - BSAMNT-SBS-1-2  
SCALE: NOT TO SCALE



7 EQUIPMENT MOUNTING DETAIL  
SCALE: NOT TO SCALE

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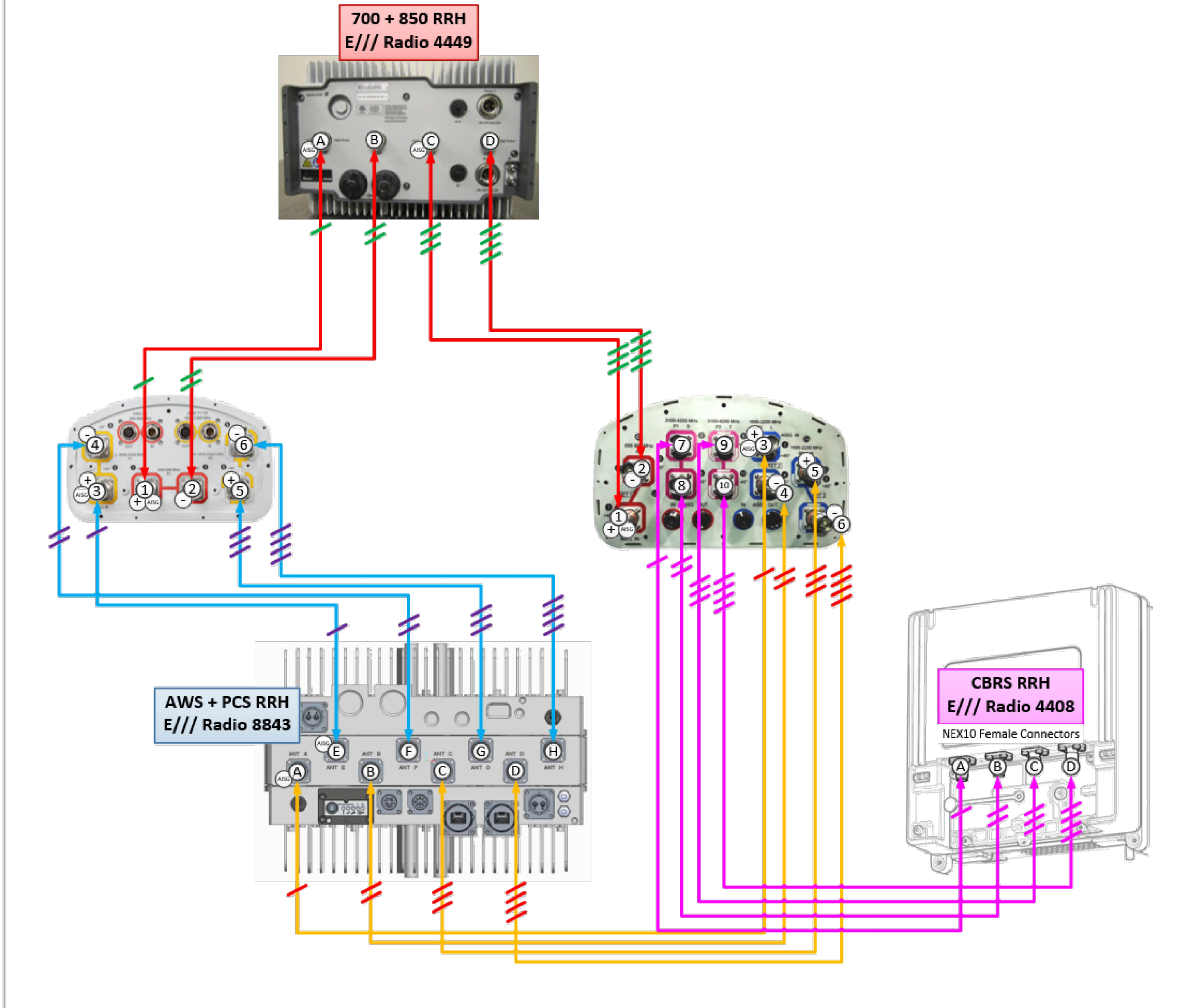
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SHEET NUMBER: **C-5** REVISION: **0**



**Commscope NHH + NHHSS -65A/B/C  
per sector**



**FOR REFERENCE ONLY**

1 PLUMBING DIAGRAM  
SCALE: NOT TO SCALE

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**290438**

BU #: **823520**  
**CS\_GOODMAN\_AND\_SONS**

17997 SIERRA WAY  
MONUMENT, CO 80132

EXISTING 69'-0" MONOPINE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	01/19/22	ORG	CONSTRUCTION	HMM

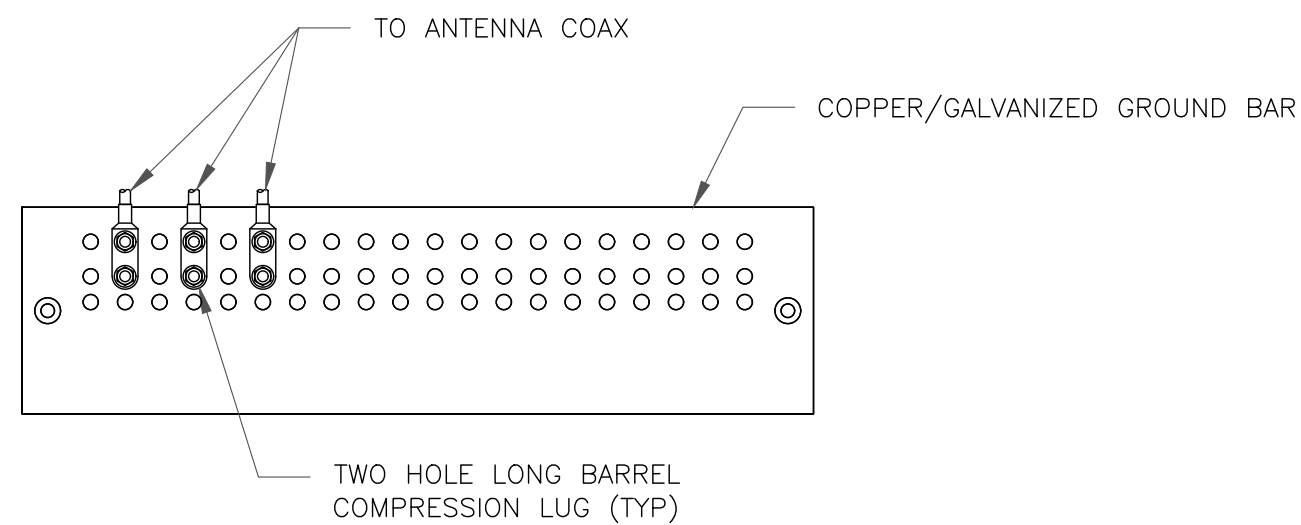
*Andrew R. Berglund*  
58272  
PROFESSIONAL ENGINEER  
01/19/22

Andrew R. Berglund, P.E.  
Professional Engineer License: #58252

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: **0**

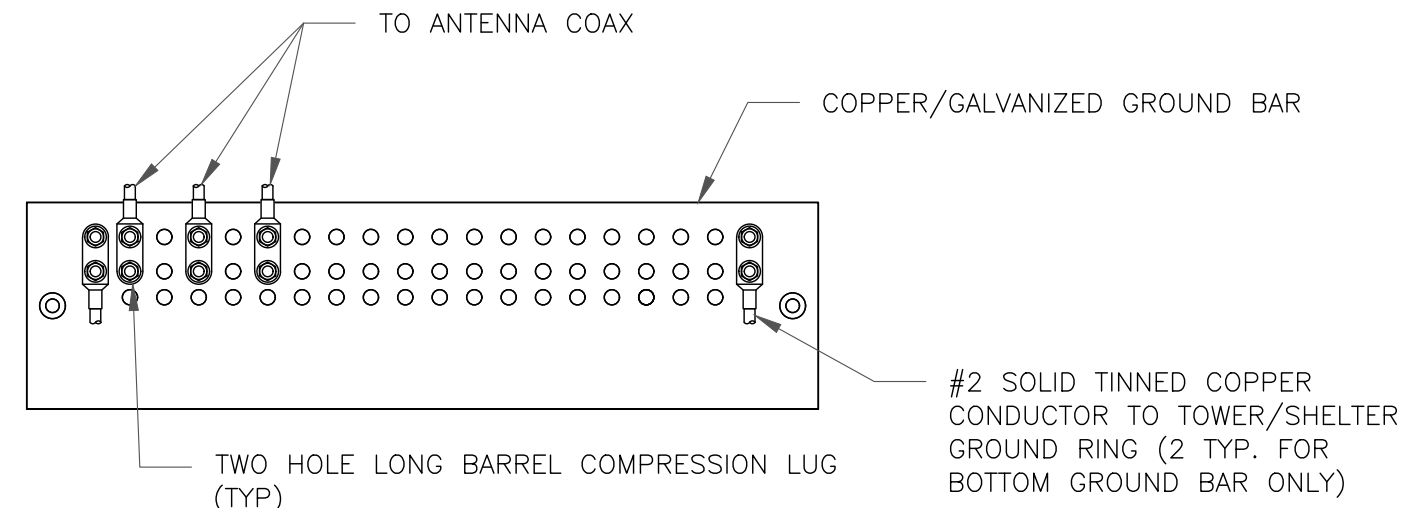




NOTES:

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

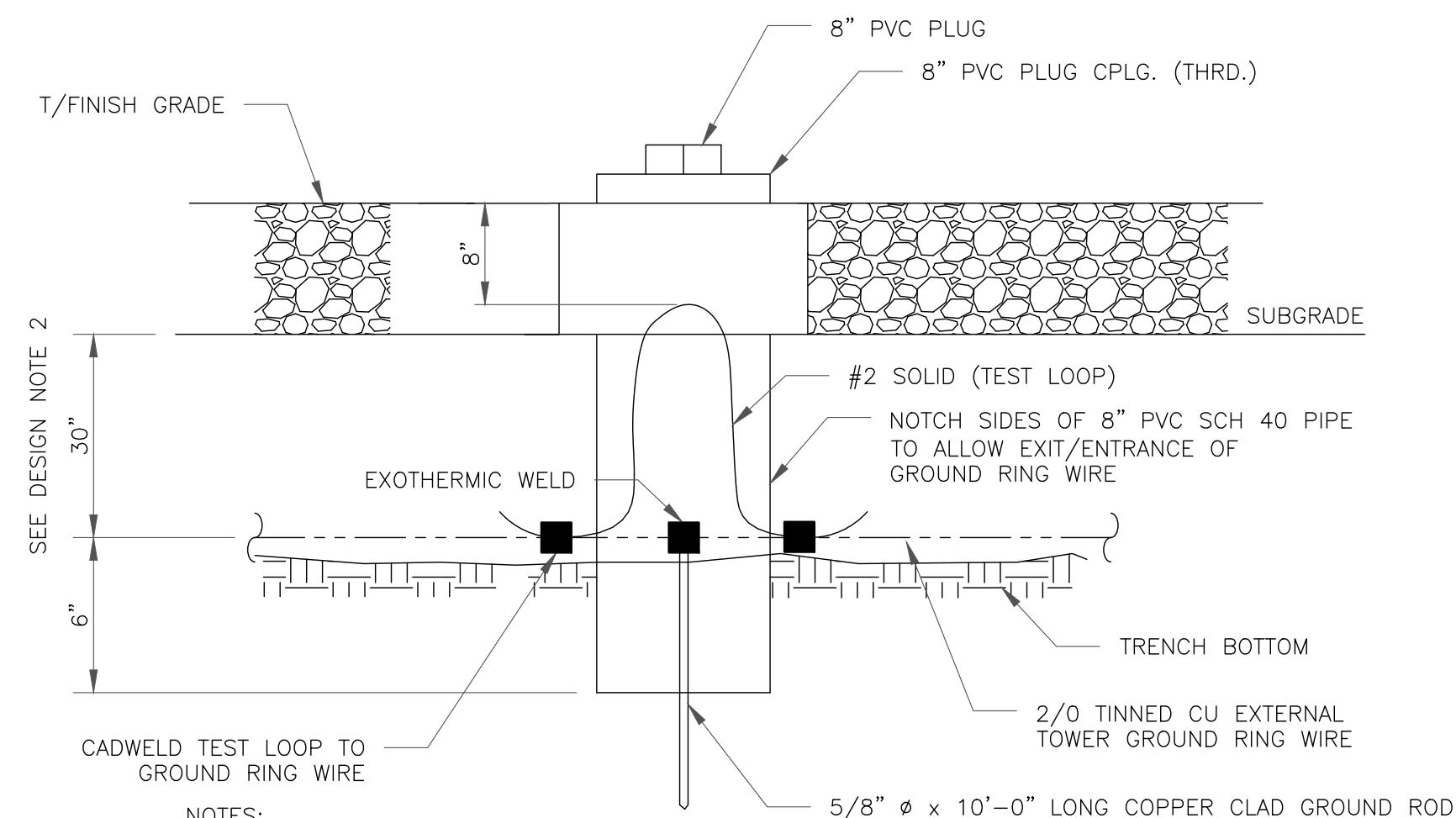
1 ANTENNA SECTOR GROUND BAR DETAIL  
SCALE: NOT TO SCALE



NOTES:

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

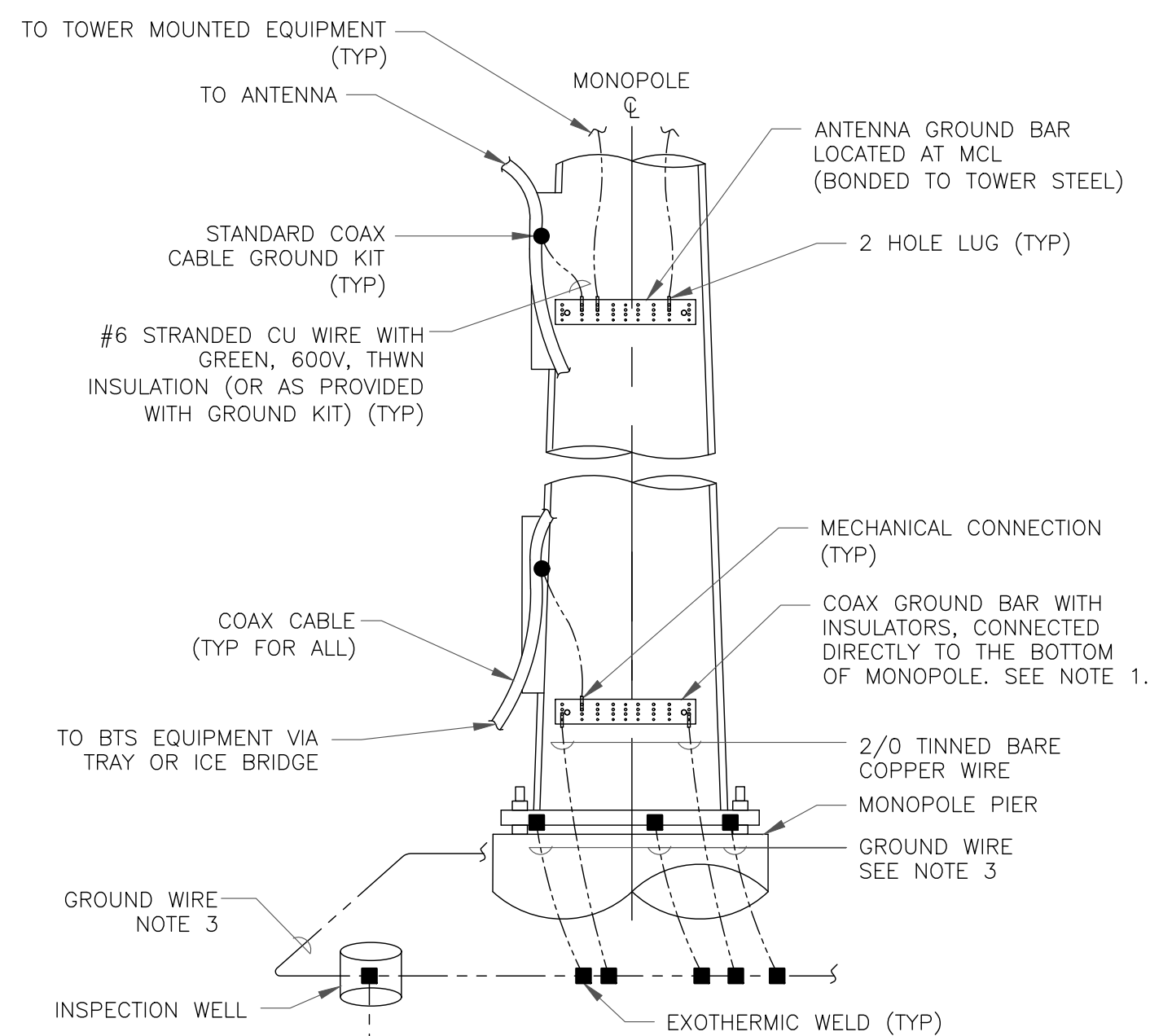
2 TOWER/SHELTER GROUND BAR DETAIL  
SCALE: NOT TO SCALE



NOTES:

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

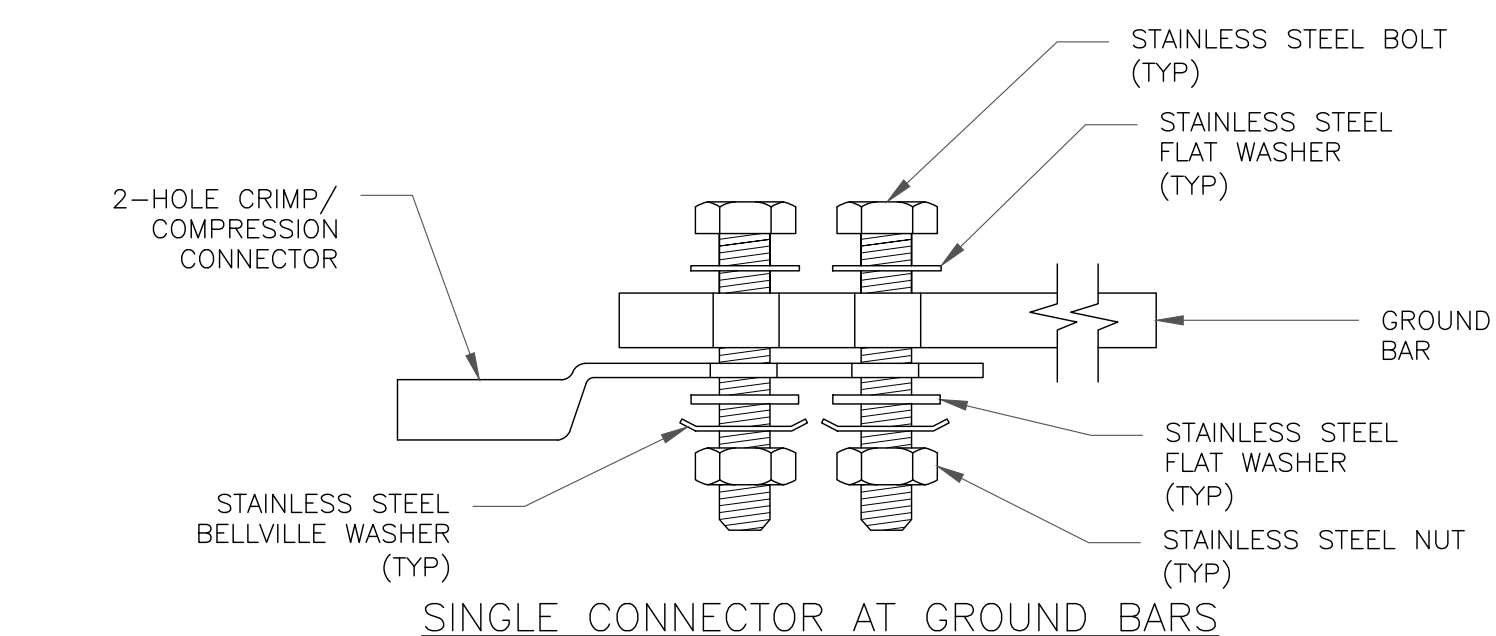
3 INSPECTION WELL DETAIL  
SCALE: NOT TO SCALE



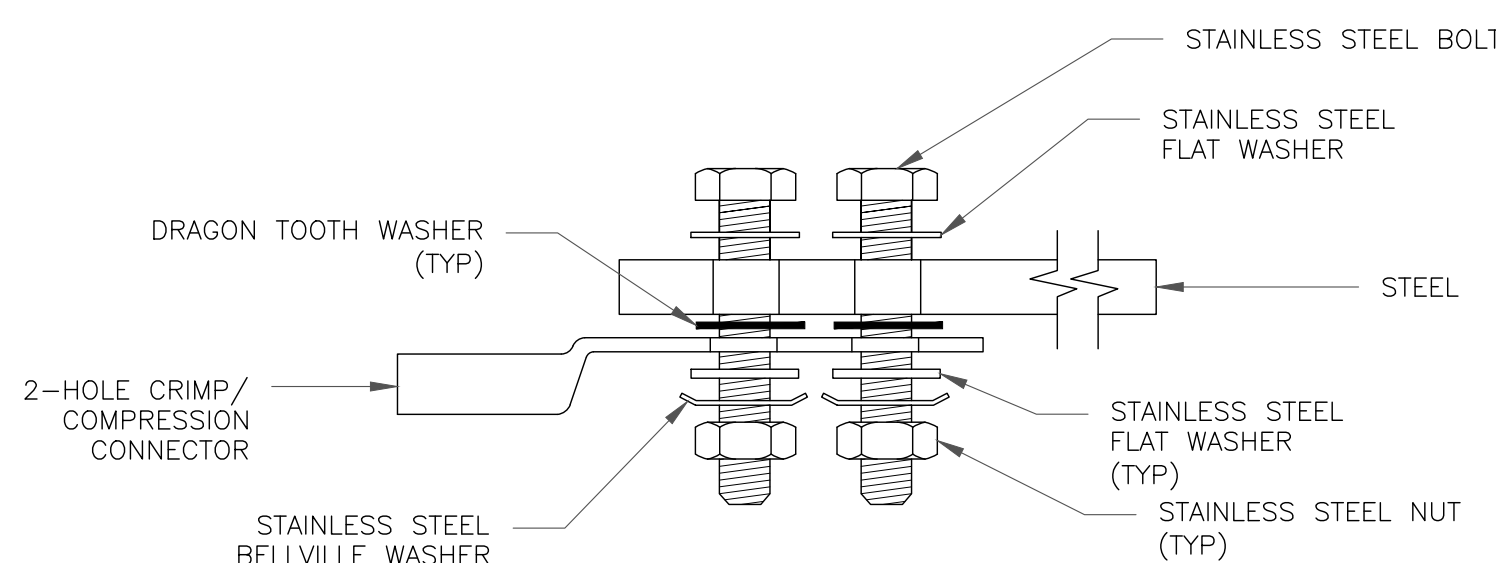
NOTES:

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

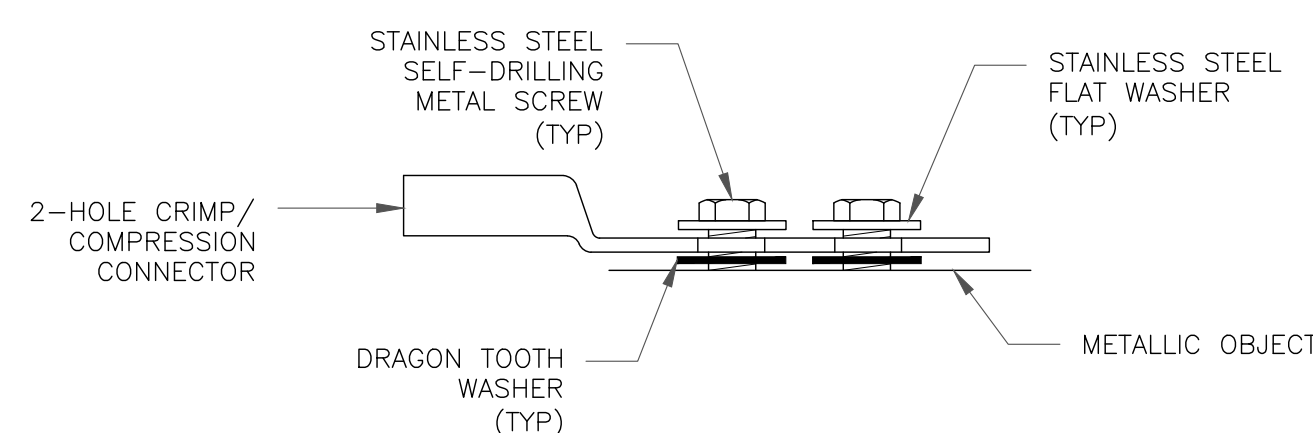
4 TYPICAL ANTENNA CABLE GROUNDING  
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS

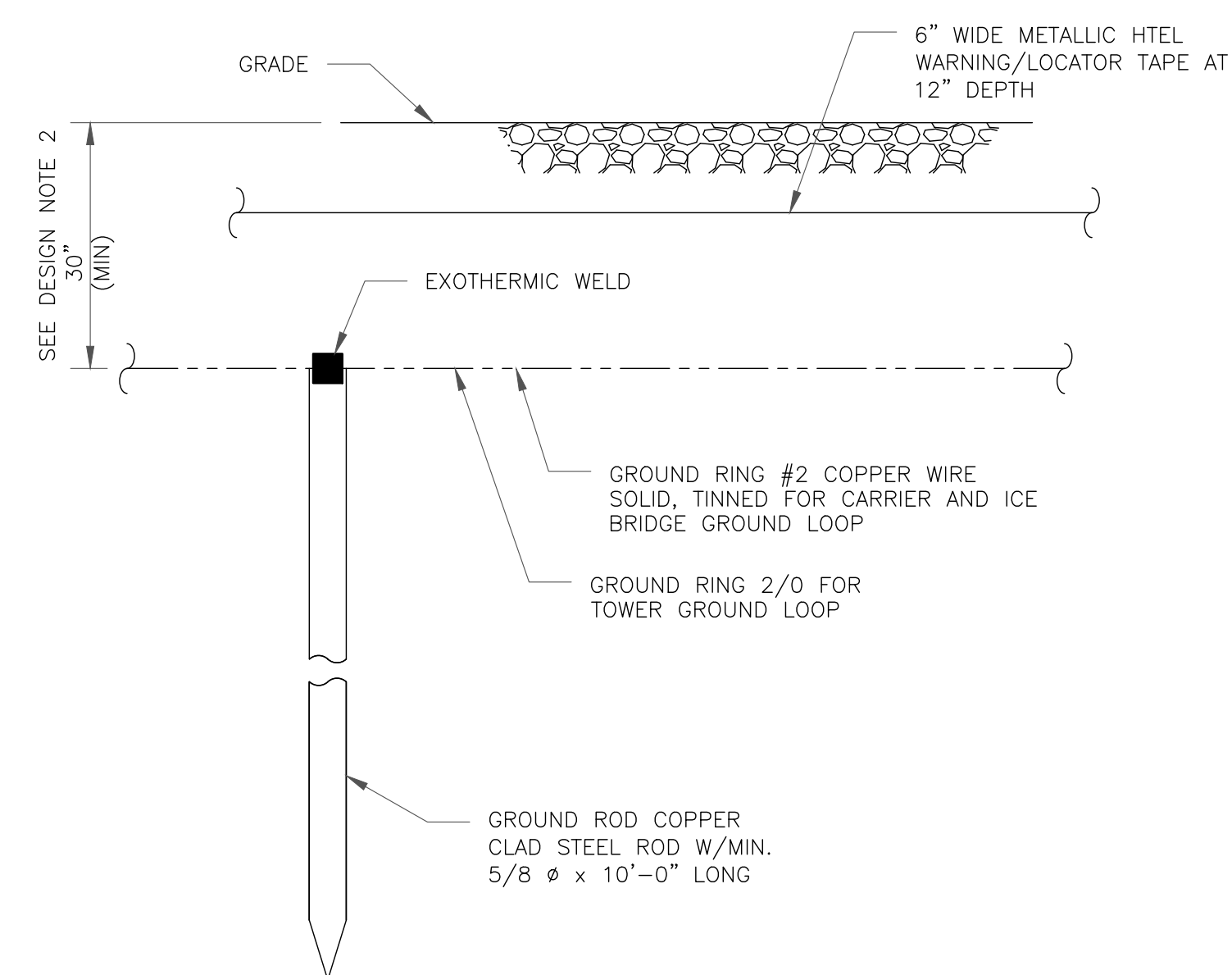


SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS  
SCALE: NOT TO SCALE



NOTES:

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

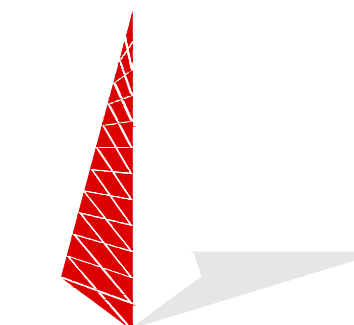
6 GROUND ROD DETAIL  
SCALE: NOT TO SCALE

**verizon**

3245 158TH AVENUE MS 231  
BELLEVUE, WA 98008

**CROWN CASTLE**

2055 S. STEARMAN DRIVE  
CHANDLER, AZ 85286



TOWER ENGINEERING PROFESSIONALS  
4710 E ELWOOD ST, STE 9  
PHOENIX, AZ 85040  
OFFICE: (480) 285-0036  
www.tepgroup.net

VERIZON SITE NUMBER:  
**290438**

BU #: **823520**  
**CS\_GOODMAN\_AND\_SONS**

17997 SIERRA WAY  
MONUMENT, CO 80132

EXISTING 69'-0" MONOPINE

ISSUED FOR:

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01/19/22

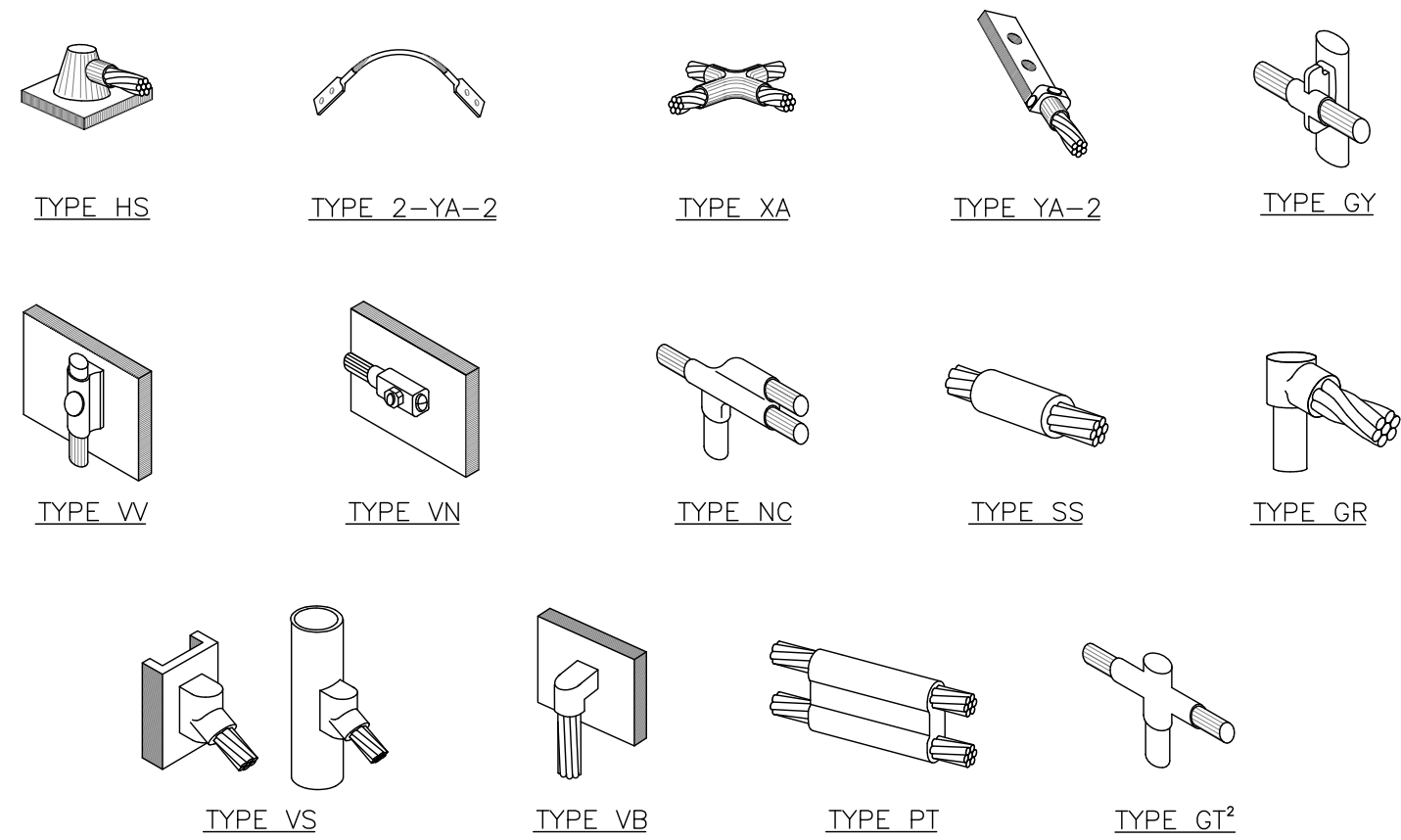
Andrew R. Berglund, P.E.  
Professional Engineer License: #58252

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SHEET NUMBER: REVISION:

**G-1** **0**

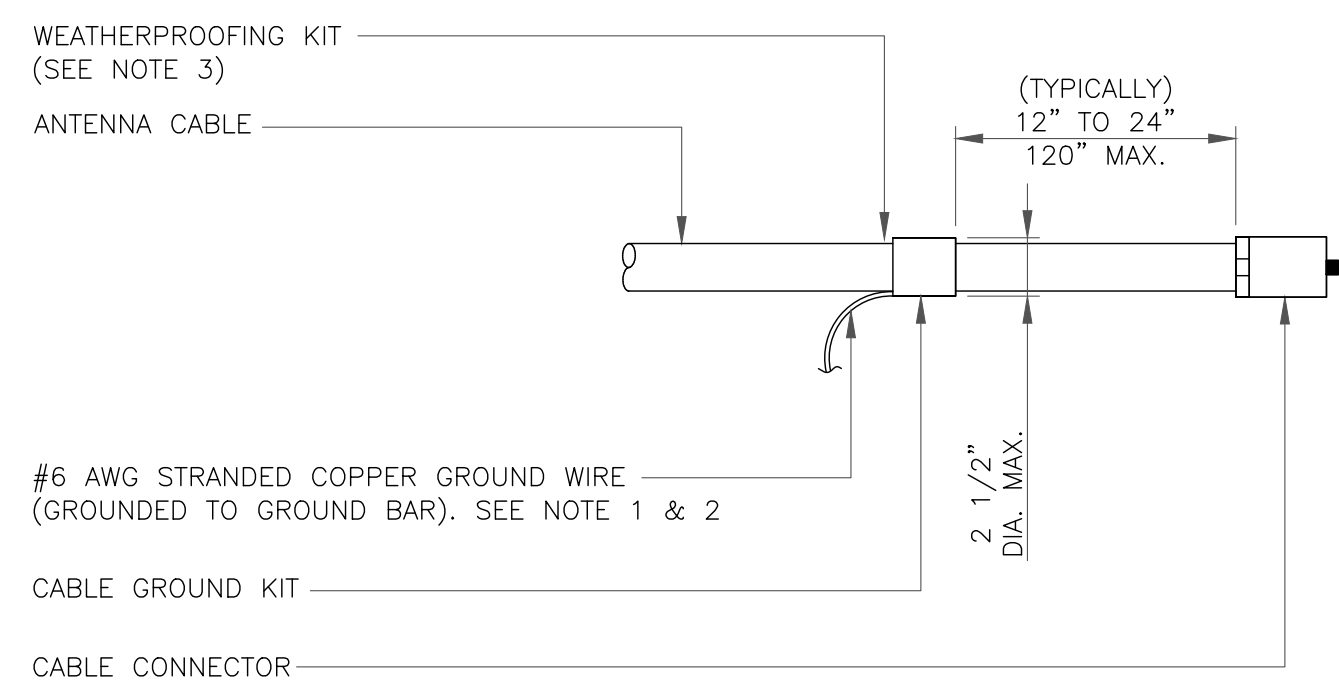




**NOTE:**

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

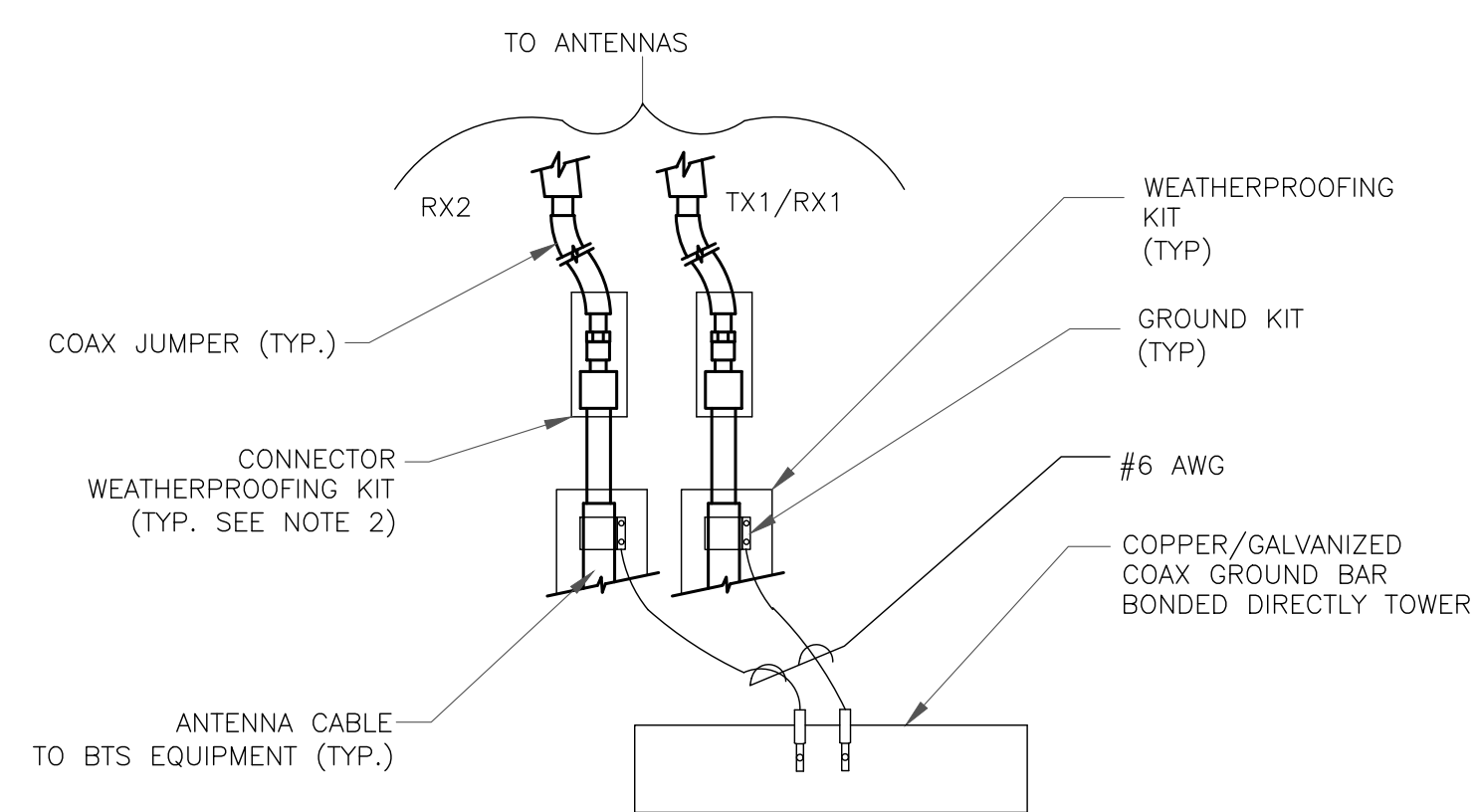
**1 CADWELD GROUNDING CONNECTIONS**  
SCALE: NOT TO SCALE



**NOTES:**

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

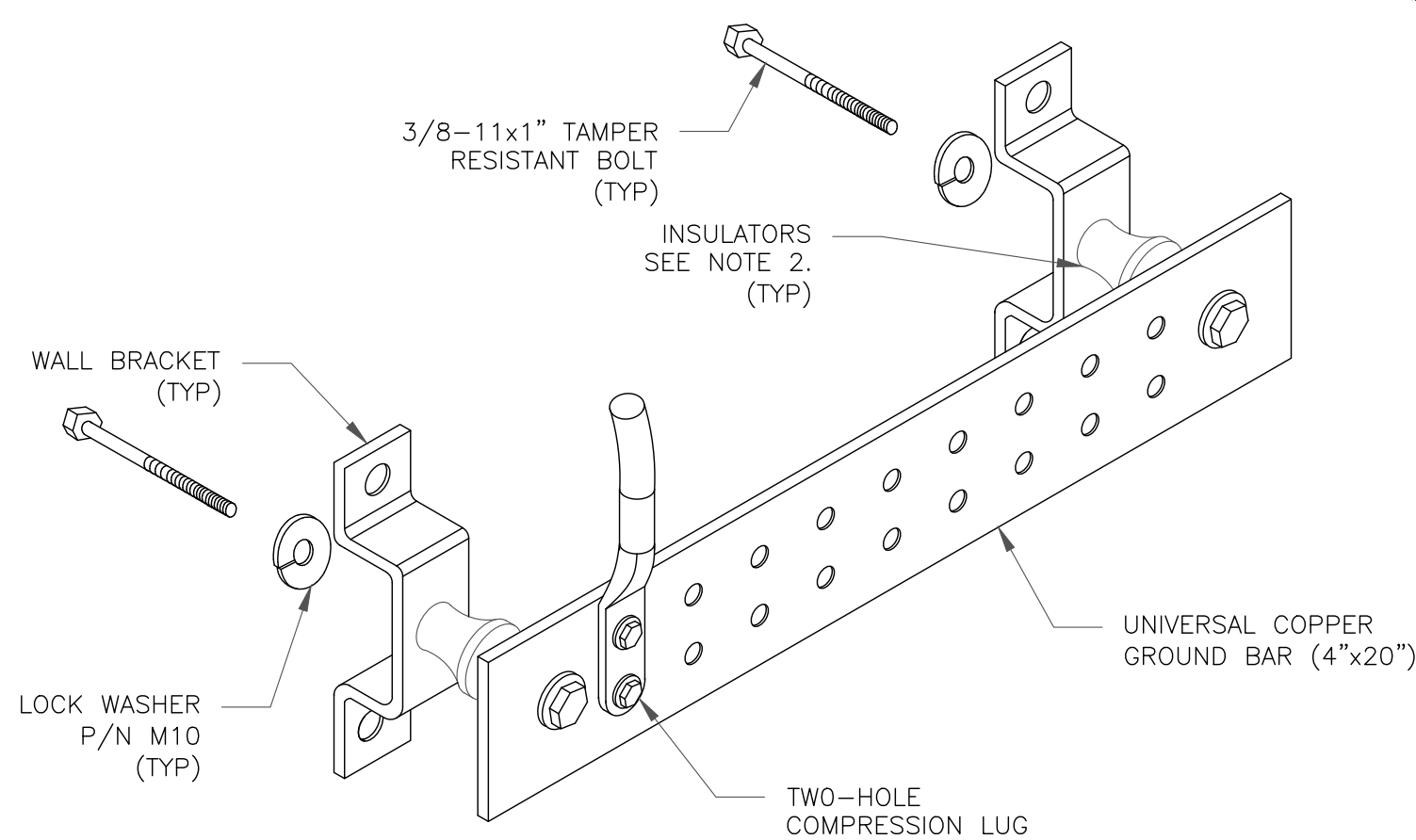
**3 CABLE GROUND KIT CONNECTION**  
SCALE: NOT TO SCALE



**NOTES:**

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

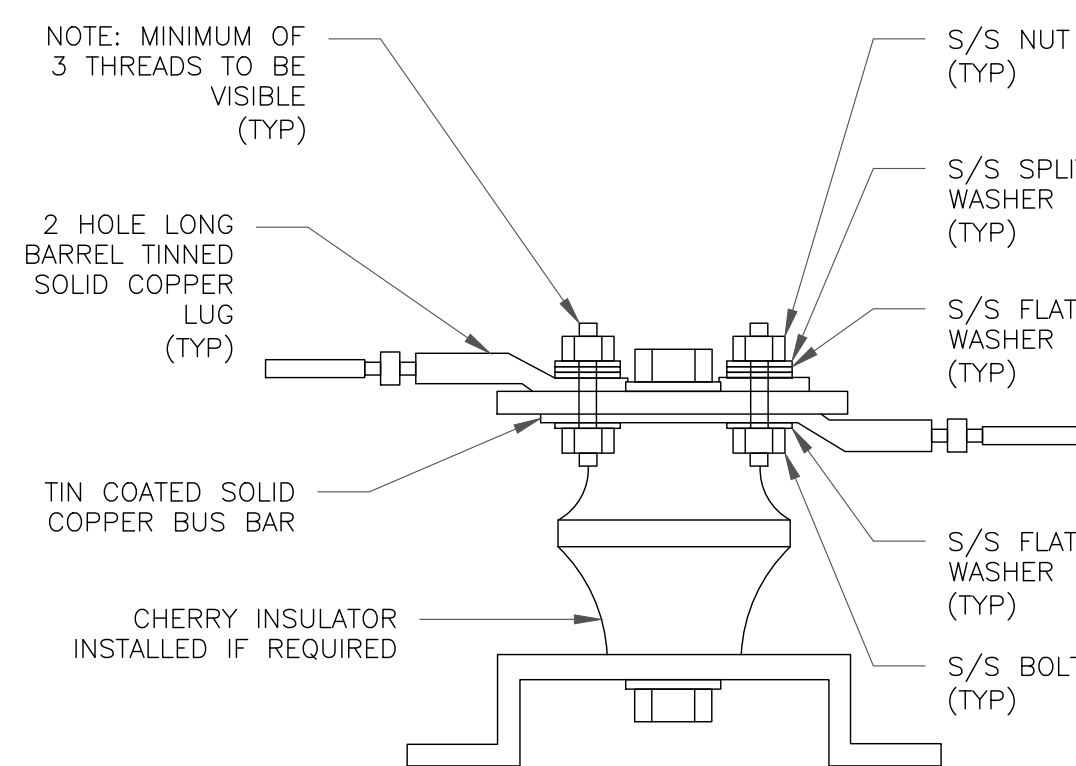
**4 GROUND CABLE CONNECTION**  
SCALE: NOT TO SCALE



**NOTES:**

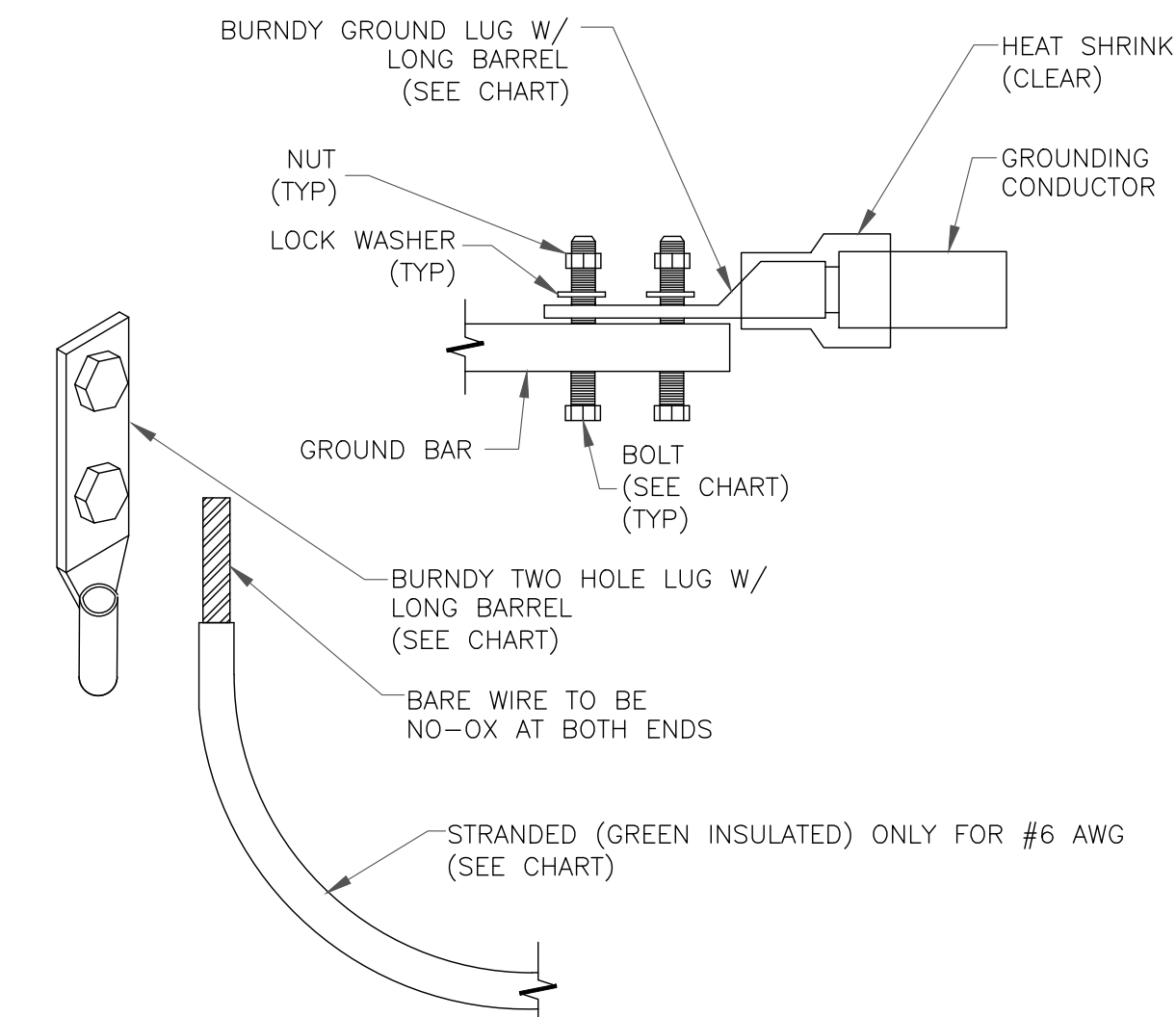
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION. CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
2. OMIT INSULATOR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

**6 GROUND BAR DETAIL**  
SCALE: NOT TO SCALE



**7 LUG DETAIL**  
SCALE: NOT TO SCALE

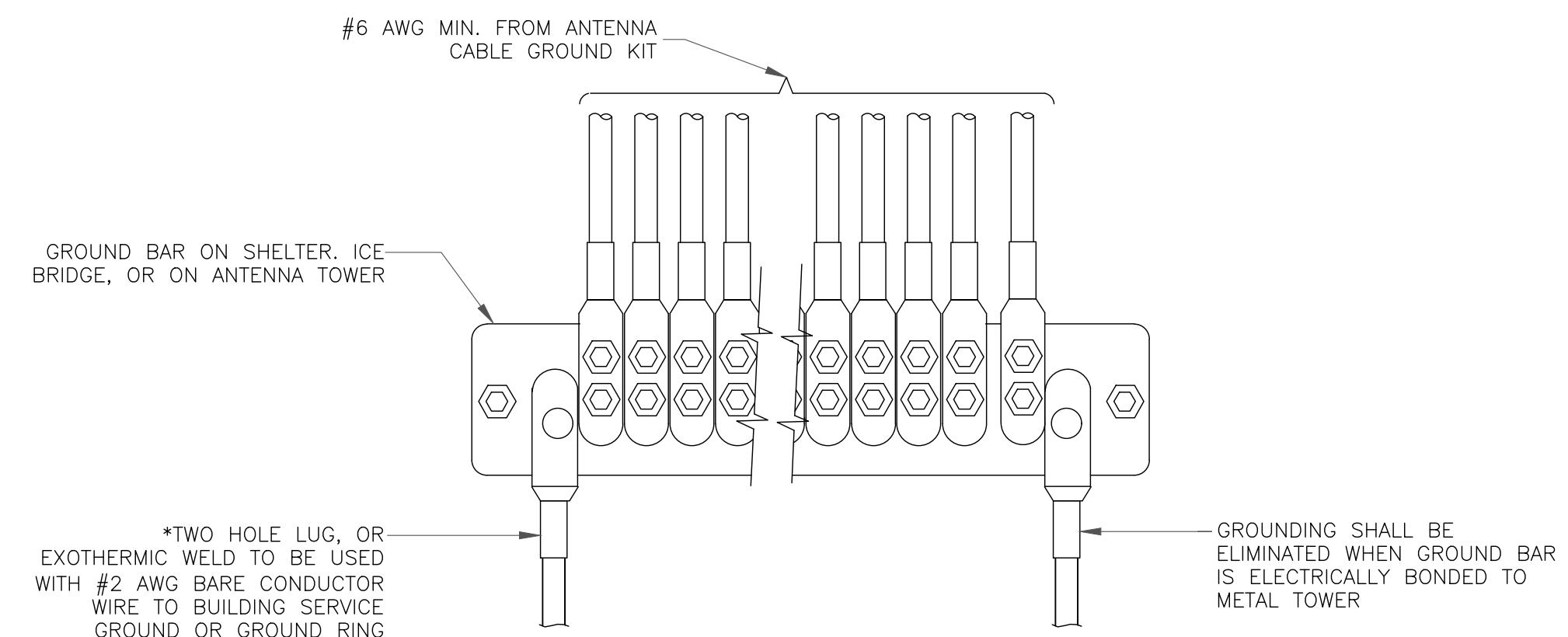
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



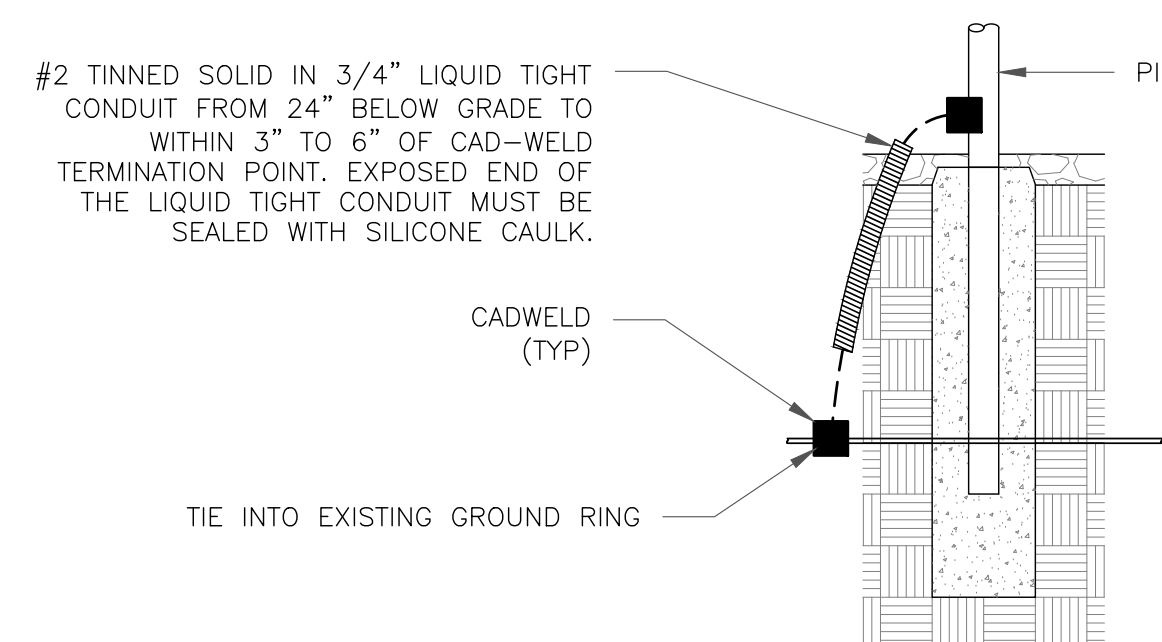
**NOTES:**

1. ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

**2 MECHANICAL LUG CONNECTION**  
SCALE: NOT TO SCALE



**5 GROUNDWIRE INSTALLATION**  
SCALE: NOT TO SCALE



**8 TRANSITIONING GROUND DETAIL**  
SCALE: NOT TO SCALE



VERIZON SITE NUMBER:  
**290438**

BU #: **823520**  
**CS\_GOODMAN\_AND\_SONS**

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EXISTING 69'-0" MONOPINE

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SHEET NUMBER: <b>G-2</b>	REVISION: <b>0</b>
-----------------------------	-----------------------



Reference

**PARCEL OWNERSHIP**

OWNER: ROBERT J BOILEAU III  
KIMBERLY L BOILEAU  
PARCEL NO. 6118009003

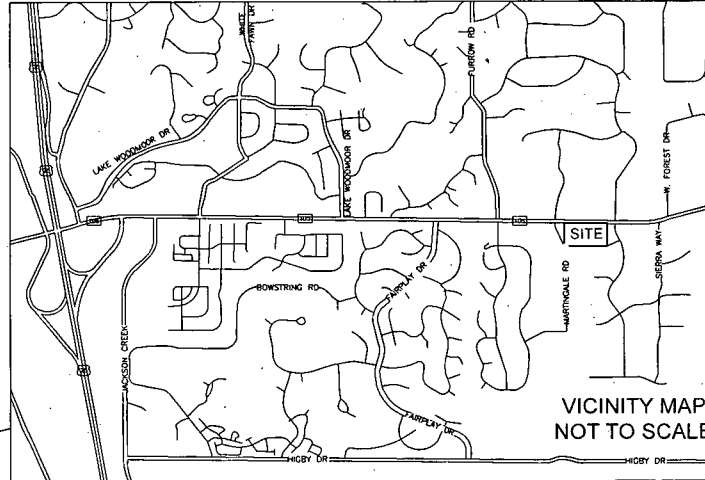
**ZONING DESIGNATION**

PER EL PASO COUNTY WEBSITE PARENT PARCEL IS ZONED AS RR-2.5 "RESIDENTIAL RURAL"

**FEMA FLOOD ZONE**

PER FEMA F.I.R.M. MAP PARENT PARCEL IS ZONED AS ZONE "X", FLOOD MAP NUMBER 08041C0279F, DATED 03/17/1997

AREA TABLE	SQUARE FEET	ACRE
(A) PARENT PARCEL	±1,214,177	±27.874
(B) TOWER EASEMENT	±100	±0.002
(C) LEASE AREA #1	±335	±0.008
(D) LEASE AREA #2	±350	±0.008
(E) 5' UTILITY EASEMENT	±446	±0.010
(F) ACCESS EASEMENT	±5893	±0.135



**ASBUILT PLAN**

IN SECTION 18,  
TOWNSHIP 11 SOUTH, RANGE 66 WEST

SITE: CS GOODMAN AND SONS  
BUN: 823520  
ADDRESS: 17997 SIERRA WAY  
MONUMENT, CO 80132  
EL PASO COUNTY



NATIONAL SURVEY SERVICES COORDINATION BY:



13430 NW 104th Terrace, Suite A, Alachua, FL 32615  
Office (386) 418-0500 Fax (386) 452-9888  
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:



730 W. 40th Avenue, Suite 240, Thornton, Colorado 80229  
PH: 303-702-1617 FAX: 303-702-1618  
WWW.POWERSURVEYING.COM

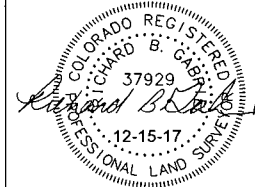
DRAWN BY: JCB CHECKED BY: RBC JOB #: 501-17-268

**SURVEYOR'S NOTES**

1. BASIS OF BEARINGS: BEARINGS ARE BASED UPON THE NORTH LINE OF TRACT 78 ARROWWOOD SUBDIVISION, SAID LINE IS ASSUMED TO BEAR NORTH 75°37'40" EAST, A DISTANCE OF 485.00 FEET.
2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.
3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.
4. THIS SURVEY PLAT WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES AS NAMED IN THE CERTIFICATE AS SHOWN HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED ENTITY OR PERSON WITHOUT AN EXPRESS RE-CERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.

SURVEYOR'S CERTIFICATION  
I HEREBY CERTIFY TO CROWN CASTLE AND OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY.

POWER SURVEYING CO., INC  
RICHARD B. GABRIEL  
LAND SURVEYOR - COLORADO # 37929  
Date: 12/15/17  
Revision: 11/06/18



SHEET 1 OF 6

STATE HIGHWAY 105  
PUBLIC/PAVED - R.O.W VARIES

FOUND CDOT R.O.W  
MARKER 3.25"  
ALUM. CAP 515

GRAVEL TRAIL

EXISTING TOWER

N75°37'40"E 485.28'  
(BASIS OF BEARINGS)

20' U.E.  
REC. NO.  
205031926

5' U.E. (SEE SHEET 5)

TOWER ESMT  
(SEE SHEET 4)

LEASE AREA #1  
(SEE SHEET 4)

LEASE AREA #2  
(SEE SHEET 4)

ASPHALT DRIVE

ACCESS ESMT  
(SEE SHEET 3)

20' U.E.  
REC. NO.  
205031926

TRACT 78  
ARROWWOOD  
SUBDIVISION  
NO. 2

10' U.E.  
REC. NO.  
205031926

TRACT 77  
ARROWWOOD SUBDIVISION NO. 2

60.0  
R.O.W.

SIERRA WAY  
PUBLIC/PAVED - 60' R.O.W

FOUND 1" PIPE

FOUND 1" PIPE

FOUND 0.5" PIPE

TRACT 79  
ARROWWOOD SUBDIVISION NO. 2

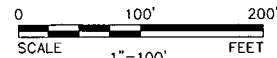
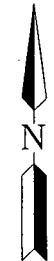
TRACT 74  
ARROWWOOD SUBDIVISION NO. 2

10' U.E.  
REC. NO.  
205031926

**LEGEND**

- P.O.B. POINT OF BEGINNING
- P.O.T. POINT OF TERMINUS
- P.O.C. POINT OF COMMENCEMENT
- ⊙ FOUND MONUMENT (AS NOTED)
- ⊕ FIBER OPTIC BOX
- ⊖ ELECTRIC BOX
- ⊗ ELECTRIC METER
- ⊘ TV PEDESTAL
- ⊙ UTILITY POLE
- ⊖ GAS METER
- U.E. UTILITY ESMT
- A/C AIR CONDITIONER
- CAB CABINET
- EB ELECTRICAL BOX
- ⊙ DECIDUOUS TREE
- ⊖ EVERGREEN TREE

- TEL — TEL — BURIED TELEPHONE
- FO — FO — BURIED FIBER OPTIC
- GAS — GAS — BURIED GAS
- E — E — BURIED ELECTRIC
- OHE — OHE — OVERHEAD UTILITY LINE
- W — W — BURIED WATER
- DIRT/GRAVEL SURFACE



OVERALL PARENT PARCEL  
SCALE 1" = 100'

PCD FILE NO. TWR183

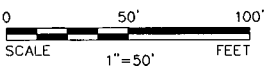
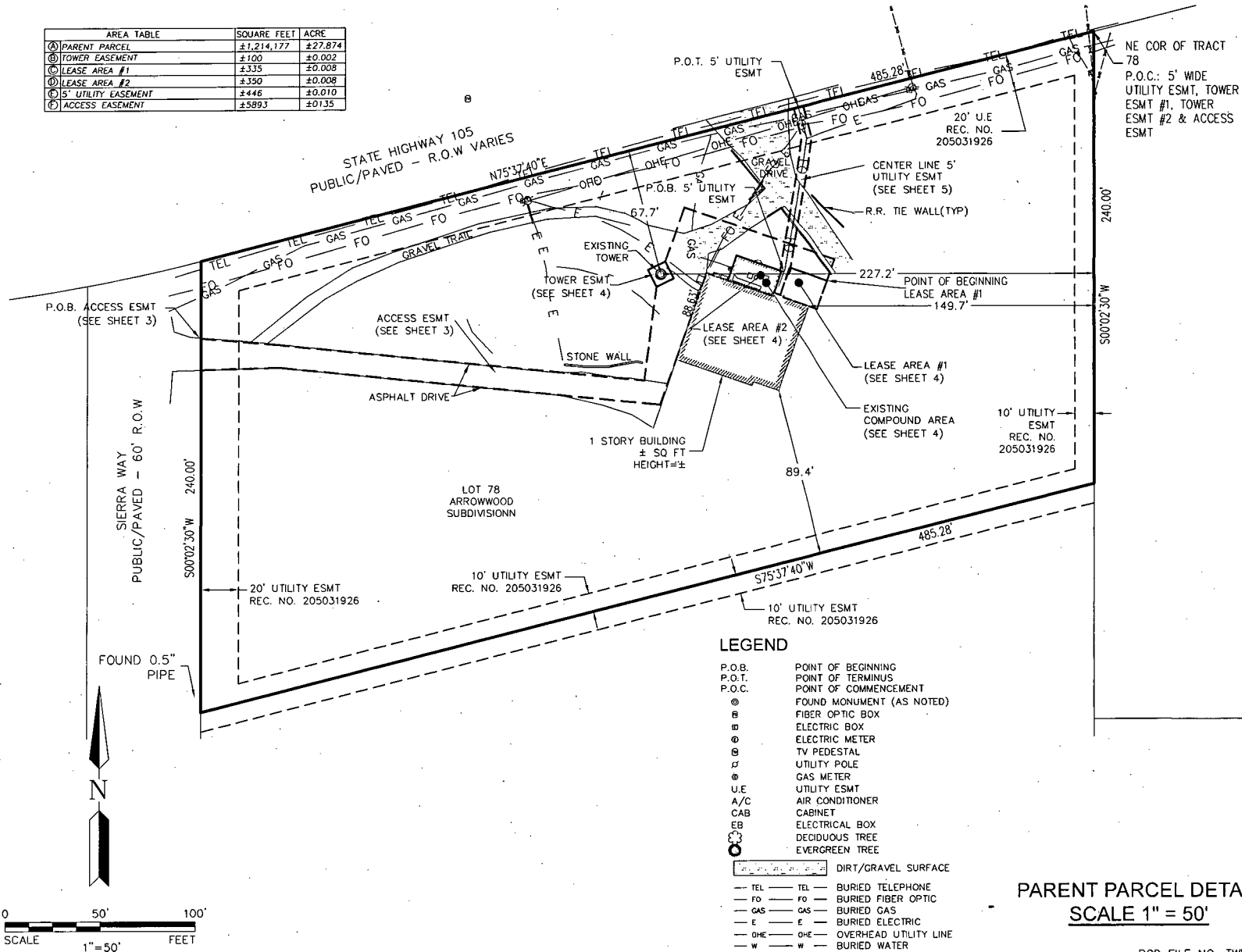
By: (Initials AR Date 2/10/19 Doc Type 6-2)

BUN: 823520 Lease/Lic —



Reference

AREA TABLE	SQWARE FEET	ACRE
(A) PARENT PARCEL	±1,214,177	±27.874
(B) TOWER EASEMENT	±100	±0.002
(C) LEASE AREA #1	±335	±0.008
(D) LEASE AREA #2	±350	±0.008
(E) 5' UTILITY EASEMENT	±446	±0.010
(F) ACCESS EASEMENT	±5893	±0.135



**LEGEND**

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- P.O.C. POINT OF COMMENCEMENT
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- ⊙ FIBER OPTIC BOX
- ⊙ ELECTRIC BOX
- ⊙ ELECTRIC METER
- ⊙ TV PEDESTAL
- ⊙ UTILITY POLE
- ⊙ GAS METER
- ⊙ U.E. UTILITY ESMT
- ⊙ A/C AIR CONDITIONER
- ⊙ CAB CABINET
- ⊙ EB ELECTRICAL BOX
- ⊙ DECIDUOUS TREE
- ⊙ EVERGREEN TREE
- ▨ DIRT/GRAVEL SURFACE
- TEL --- BURIED TELEPHONE
- FO --- BURIED FIBER OPTIC
- GAS --- BURIED GAS
- E --- BURIED ELECTRIC
- OHE --- OVERHEAD UTILITY LINE
- W --- BURIED WATER

**PARENT PARCEL DETAIL**  
**SCALE 1" = 50'**

PCD FILE NO. TWR183

**ASBULT PLAN**  
IN SECTION 18,  
TOWNSHIP 11 SOUTH, RANGE 66 WEST

SITE: CS GOODMAN AND SONS  
BUN: 823520  
ADDRESS: 17997 SIERRA WAY  
MONUMENT, CO 80132  
EL PASO COUNTY



NATIONAL SURVEY SERVICES COORDINATION BY:



13430 NW 104th Terrace, Suite A, Alachua, FL 32615  
Office: (386) 418-0500 Fax: (386) 462-9988  
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:



220 W BATHHOUSE SUITE 200 THUNDERBOLT, COLO SPRING, MISSOURI  
PH: 303-752-1917 FAX: 303-752-1468  
WWW.POWERSURVEYING.COM

DRAWN BY: JCB CHECKED BY: RBC JOB #: 501-17-268

**SURVEYOR'S NOTES**

1. BASIS OF BEARINGS: BEARINGS ARE BASED UPON THE NORTH LINE OF TRACT 78 ARROWWOOD SUBDIVISION, SAID LINE IS ASSUMED TO BEAR NORTH 75°37'40" EAST, A DISTANCE OF 485.00 FEET.
2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.
3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.
4. THIS SURVEY PLAT WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES AS NAMED IN THE CERTIFICATE AS SHOWN HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED ENTITY OR PERSON WITHOUT AN EXPRESS RE-CERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.

**SURVEYOR'S CERTIFICATION**  
I HEREBY CERTIFY TO CROWN CASTLE AND OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY.

POWER SURVEYING CO., INC  
RICHARD B. GABRIEL  
LAND SURVEYOR - COLORADO # 37929  
Date: 12/15/17  
Revision: 11/06/18



SHEET 2 OF 6



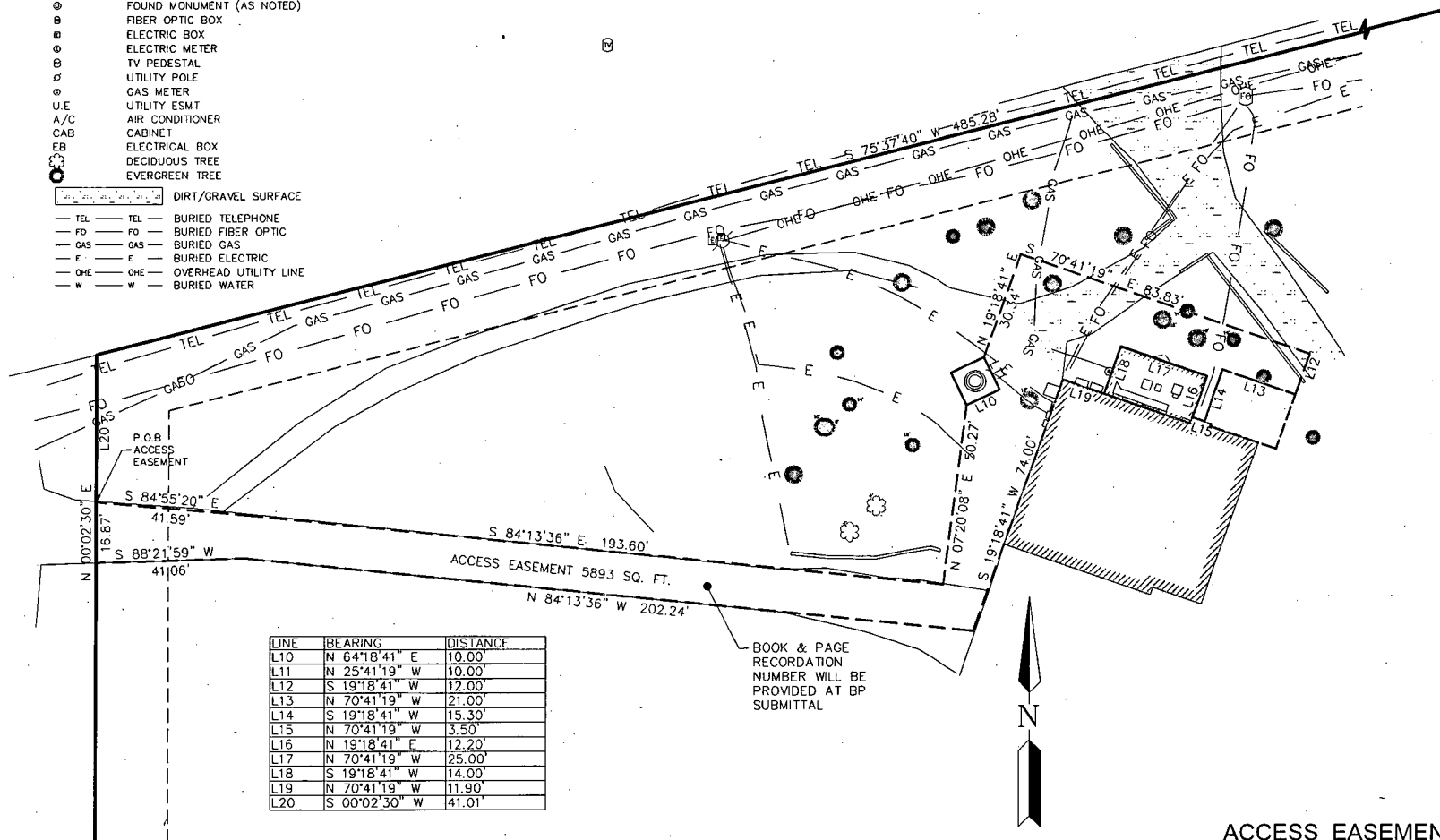
Reference

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LEGEND

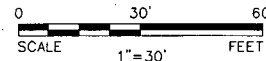
- P.O.B. POINT OF BEGINNING
  - P.O.T. POINT OF TERMINUS
  - P.O.C. POINT OF COMMENCEMENT
  - ⊙ FOUND MONUMENT (AS NOTED)
  - ⊙ FIBER OPTIC BOX
  - ⊙ ELECTRIC BOX
  - ⊙ ELECTRIC METER
  - ⊙ TV PEDESTAL
  - ⊙ UTILITY POLE
  - ⊙ GAS METER
  - ⊙ UTILITY ESMT
  - U.E. AIR CONDITIONER
  - A/C CABINET
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  - ⊙ EVERGREEN TREE
- 
- DIRT/GRAVEL SURFACE
  - TEL — TEL — BURIED TELEPHONE
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  - GAS — GAS — BURIED GAS
  - E — E — BURIED ELECTRIC
  - OHE — OHE — OVERHEAD UTILITY LINE
  - W — W — BURIED WATER

NE COR OF TRACT 78  
P.O.C.: 5' WIDE UTILITY ESMT, TOWER ESMT #1,  
TOWER ESMT #2 & ACCESS ESMT



LINE	BEARING	DISTANCE
L10	N 64°18'41\" E	10.00'
L11	N 25°41'19\" W	10.00'
L12	S 19°18'41\" W	12.00'
L13	N 70°41'19\" W	21.00'
L14	S 19°18'41\" W	15.30'
L15	N 70°41'19\" W	3.50'
L16	N 19°18'41\" E	12.20'
L17	N 70°41'19\" W	25.00'
L18	S 19°18'41\" W	14.00'
L19	N 70°41'19\" W	11.90'
L20	S 00°02'30\" W	41.01'

BOOK & PAGE  
RECORDATION  
NUMBER WILL BE  
PROVIDED AT BP  
SUBMITTAL



ACCESS EASEMENT  
SCALE 1" = 30'

PCD FILE NO. TWR183

ASBUILT PLAN  
IN SECTION 18,  
TOWNSHIP 11 SOUTH, RANGE 66 WEST

SITE: CS GOODMAN AND SONS  
BUN: 823520  
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EL PASO COUNTY



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WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:



729 W BATHWAVE SUITE 200 THEODORE, CO 80420 8000 PH: 303-762-9512 FAX: 303-762-1418 WWW.POWERSURVEYING.COM

DRAWN BY: JCB/CHECKED BY: RBC JOB # 501-17-268

SURVEYOR'S NOTES

1. BASIS OF BEARINGS: BEARINGS ARE BASED UPON THE NORTH LINE OF TRACT 78 ARROWWOOD SUBDIVISION. SAID LINE IS ASSUMED TO BEAR NORTH 75°37'40" EAST, A DISTANCE OF 485.00 FEET.
2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.
3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.
4. THIS SURVEY PLAT WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES AS NAMED IN THE CERTIFICATE AS SHOWN HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED ENTITY OR PERSON WITHOUT AN EXPRESS RE-CERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.

SURVEYOR'S CERTIFICATION  
I HEREBY CERTIFY TO CROWN CASTLE AND OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY.

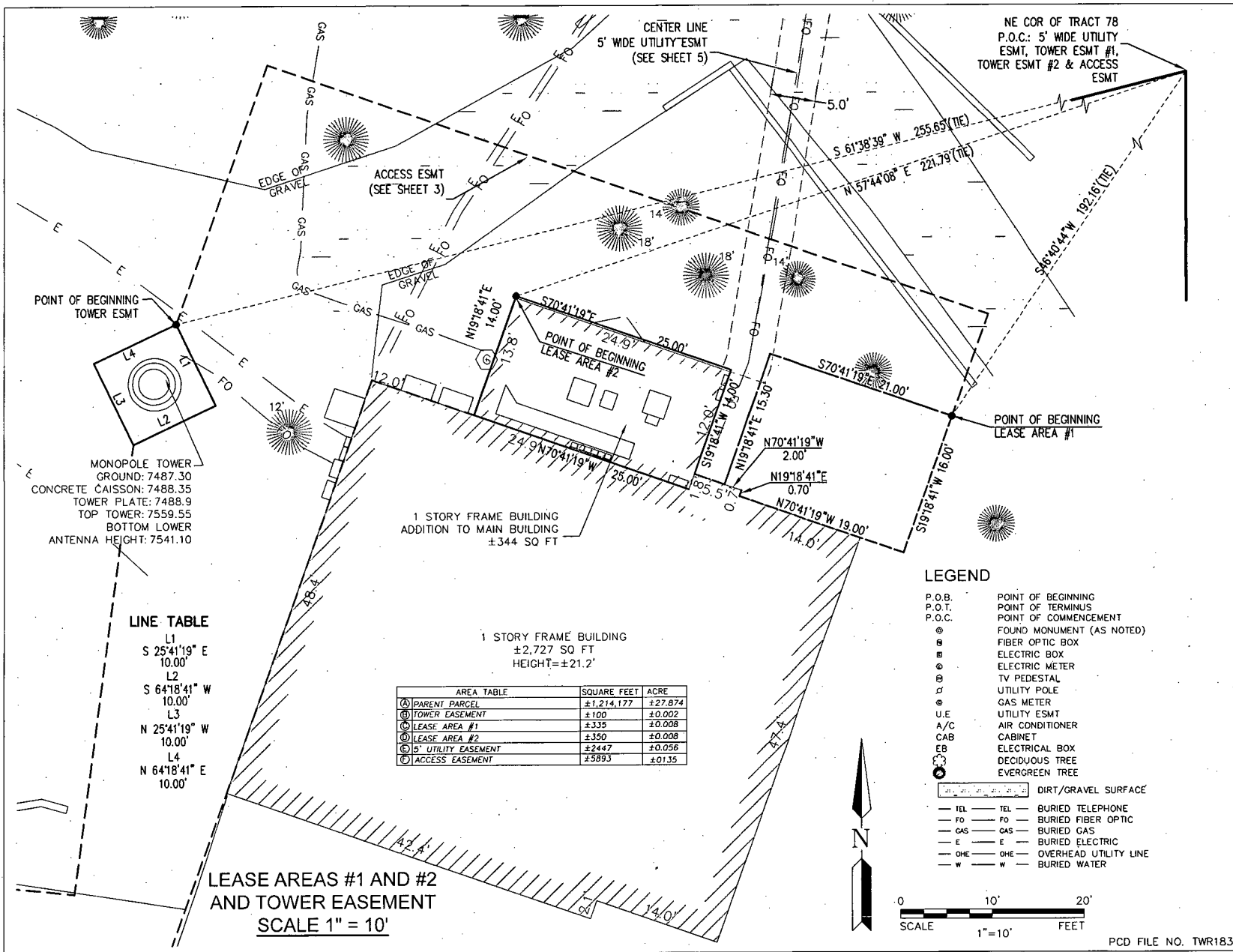
POWER SURVEYING CO., INC  
RICHARD B. GABRIEL  
LAND SURVEYOR - COLORADO # 37929  
Date: 12/15/17  
Revision: 11/06/18



SHEET 3 OF 6



Reference



**ASBUILT PLAN**  
IN SECTION 18,  
TOWNSHIP 11 SOUTH, RANGE 66 WEST

SITE: CS GOODMAN AND SONS  
BUN: 823520  
ADDRESS: 17997 SIERRA WAY  
MONUMENT, CO 80132  
EL PASO COUNTY



NATIONAL SURVEY SERVICES COORDINATION BY:



13430 NW 184th Terrace, Suite A, Alachua, FL 32816  
Office: (386) 418-0500 Fax: (386) 452-9988  
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:



728 W 84th Avenue, Suite #40  
Tucson, AZ 85710  
Phone: 520-722-1917  
Fax: 520-722-1148  
WWW.POWERSURVEYING.COM

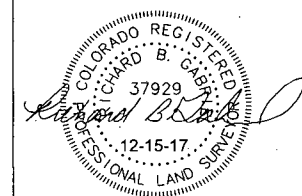
DRAWN BY: JCS CHECKED BY: RBG JOB #: 501-17-288

**SURVEYOR'S NOTES**

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POWER SURVEYING CO., INC  
RICHARD B. GABRIEL  
LAND SURVEYOR - COLORADO # 37929  
Date: 12/15/17  
Revision: 11/06/18



AREA TABLE	SQUARE FEET	ACRE
(A) PARENT PARCEL	±1,214,177	±27.874
(B) TOWER EASEMENT	±100	±0.002
(C) LEASE AREA #1	±335	±0.008
(D) LEASE AREA #2	±350	±0.008
(E) 5' UTILITY EASEMENT	±2447	±0.056
(F) ACCESS EASEMENT	±5893	±0.135

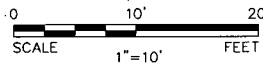
**LINE TABLE**

L1	S 25°41'19" E	10.00'
L2	S 64°18'41" W	10.00'
L3	N 25°41'19" W	10.00'
L4	N 64°18'41" E	10.00'

LEASE AREAS #1 AND #2  
AND TOWER EASEMENT  
SCALE 1" = 10'

**LEGEND**

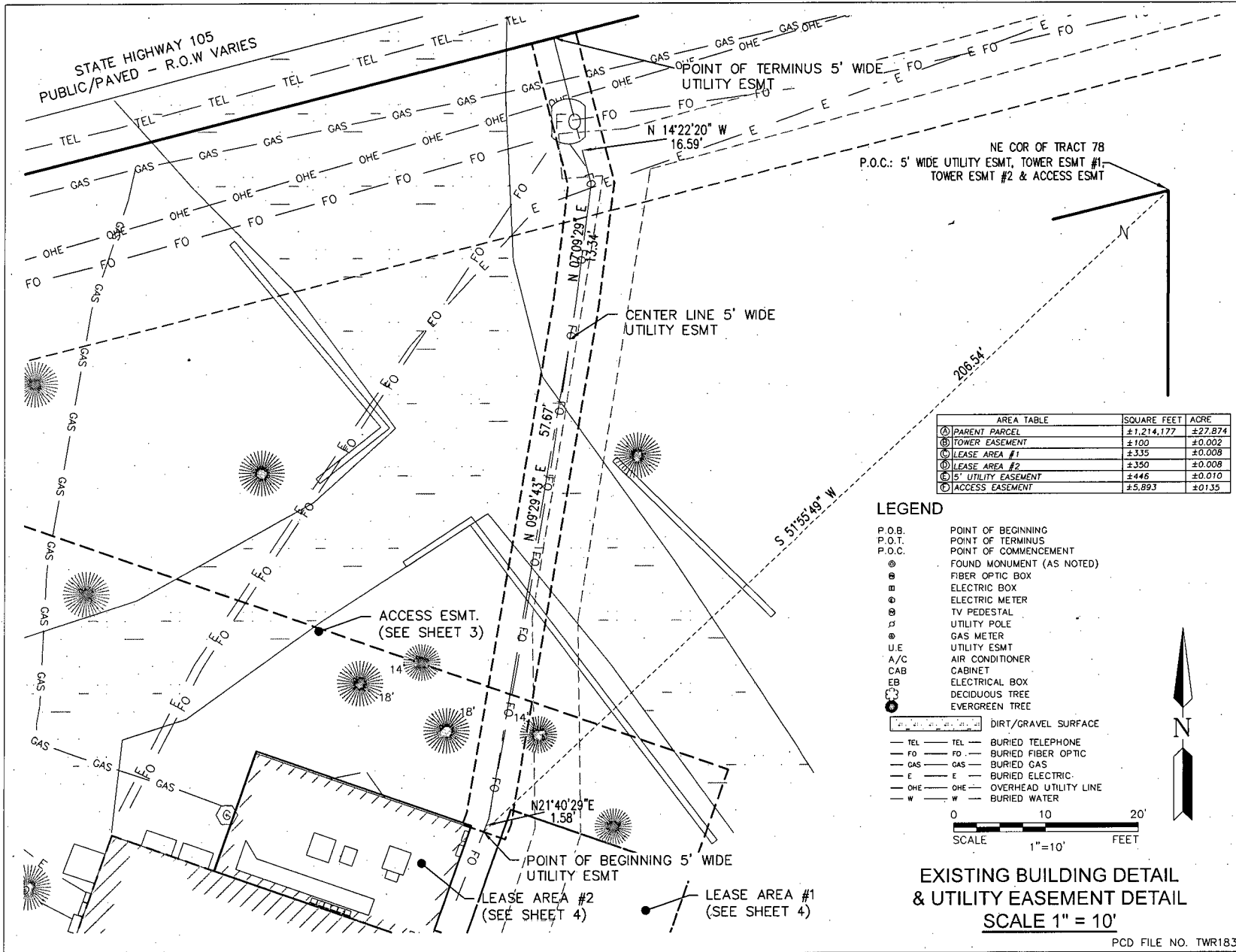
- P.O.B. POINT OF BEGINNING
- P.O.T. POINT OF TERMINUS
- P.O.C. POINT OF COMMENCEMENT
- FOUND MONUMENT (AS NOTED)
- ⊙ FIBER OPTIC BOX
- ⊙ ELECTRIC BOX
- ⊙ ELECTRIC METER
- ⊙ TV PEDESTAL
- ⊙ UTILITY POLE
- ⊙ GAS METER
- ⊙ U.E. UTILITY ESMT
- ⊙ A/C AIR CONDITIONER
- ⊙ CAB CABINET
- ⊙ EB ELECTRICAL BOX
- ⊙ DECIDUOUS TREE
- ⊙ EVERGREEN TREE
- DIRT/GRAVEL SURFACE
- TEL BURIED TELEPHONE
- FO BURIED FIBER OPTIC
- GAS BURIED GAS
- E BURIED ELECTRIC
- OHE OVERHEAD UTILITY LINE
- W BURIED WATER



PCD FILE NO. TWR183



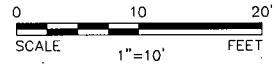
Reference



AREA TABLE	SQUARE FEET	ACRE
(A) PARENT PARCEL	±1,214,177	±27.874
(B) TOWER EASEMENT	±100	±0.002
(C) LEASE AREA #1	±335	±0.008
(D) LEASE AREA #2	±350	±0.008
(E) 5' UTILITY EASEMENT	±446	±0.010
(F) ACCESS EASEMENT	±5,893	±0.135

LEGEND

- P.O.B. POINT OF BEGINNING
- P.O.T. POINT OF TERMINUS
- P.O.C. POINT OF COMMENCEMENT
- ⊙ FOUND MONUMENT (AS NOTED)
- ⊖ FIBER OPTIC BOX
- ⊖ ELECTRIC BOX
- ⊖ ELECTRIC METER
- ⊖ TV PEDESTAL
- ⊖ UTILITY POLE
- ⊖ GAS METER
- ⊖ U.E. UTILITY ESMT
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- ⊖ CAB CABINET
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- TEL BURIED TELEPHONE
- FO BURIED FIBER OPTIC
- GAS BURIED GAS
- E BURIED ELECTRIC
- OHE OVERHEAD UTILITY LINE
- W BURIED WATER



EXISTING BUILDING DETAIL  
& UTILITY EASEMENT DETAIL  
SCALE 1" = 10'

PCD FILE NO. TWR183

ASBUILT PLAN  
IN SECTION 18,

TOWNSHIP 11 SOUTH, RANGE 66 WEST

SITE: CS GOODMAN AND SONS  
BUN: 823520  
ADDRESS: 17997 SIERRA WAY  
MONUMENT, CO 80132  
EL PASO COUNTY



NATIONAL SURVEY SERVICES COORDINATION BY:



13435 NW 124th Terrace, Suite A, Alachua, FL 32615  
Office: (386) 418-0500 Fax: (386) 482-9889  
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:



732 W 84th Avenue, Suite 240, Technicolor, Colorado 80804  
PH: 303-752-1917 FAX: 303-752-1418  
WWW.POWERSURVEYING.COM

DRAWN BY: JCB CHECKED BY: RBC JOB #: 501-17-268

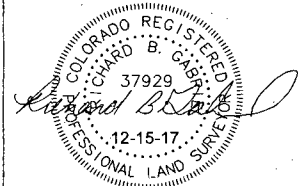
SURVEYOR'S NOTES

1. BASIS OF BEARINGS: BEARINGS ARE BASED UPON THE NORTH LINE OF TRACT 78 ARROWWOOD SUBDIVISION, SAID LINE IS ASSUMED TO BEAR NORTH 75°37'40" EAST, A DISTANCE OF 485.00 FEET.
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SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY TO CROWN CASTLE AND OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY.

POWER SURVEYING CO., INC  
RICHARD B. GABRIEL  
LAND SURVEYOR - COLORADO # 37929  
Date: 12/15/17  
Revision: 11/06/18





**PARCEL OWNERSHIP**

OWNER: ROBERT J BOLEAU III  
KIMBERLY L BOLEAU  
PARCEL NO. 6116009003

**PARENT PARCEL DESCRIPTION**

(THE FOLLOWING LEGAL DESCRIPTION IS THE SAME AS THAT IN OLD REPUBLIC TITLE INSURANCE COMPANY'S COMMITMENT NO. 01-17068604-01S, EFFECTIVE SEPTEMBER 18, 2017)

TRACT 78, ARROWWOOD SUBDIVISION NO. 2, EL PASO COUNTY, COLORADO ACCORDING TO THE PLAT THEREFORE RECORDED ON PLAT BOOK A-2 AT PAGE 66.

ALSO KNOWN AS 17995 SIERRA WAY, MONUMENT, CO 80132

**SCHEDULE B-II EXCEPTIONS**

(THE FOLLOWING SCHEDULE B-II EXCEPTIONS ARE THE SAME AS THOSE IN OLD REPUBLIC TITLE INSURANCE COMPANY'S OWNERSHIP AND ENCUMBRANCE REPORT NO. 01-17068604-01S, EFFECTIVE SEPTEMBER 18, 2017, ITEM NUMBER 1 IS NON-SURVEY RELATED AND NOT DESCRIBED HEREON)

(2) ARROWWOOD PLAT MAP, AS RECORDED IN PLAT BOOK A2, PAGE(S) 66 OF EL PASO COUNTY RECORDS.  
**AFFECTS SUBJECT PROPERTY, PLOTTED AND SHOWN HEREON.**

(3) CO-LOCATION DOCUMENT, RECORDED 10/27/2005, AS INSTRUMENT NO. 205172071 OF EL PASO COUNTY RECORDS.  
**AFFECTS SUBJECT PROPERTY, NOT PLOTTED AND SHOWN HEREON AS THE CLIENT REQUESTED ALL LEASES AND EASEMENTS BE REVISED AND RE-WRITTEN.**

(4) MEMORANDUM OF LEASE BY AND BETWEEN ROBERT J. BOLEAU, III AND KIMBERLY L. BOLEAU, LESSOR(S) AND NEW CINGULAR WIRELESS PCS, LLC, LESSEE(S), RECORDED 08/28/2012, AS INSTRUMENT NO. 212100008 OF THE EL PASO COUNTY RECORDS.  
**NO DOCUMENT PROVIDED FOR REVIEW.**

(5) MEMORANDUM OF MASTER PREPAID LEASE AND MANAGEMENT AGREEMENT BY AND BETWEEN IMMOBILE WEST TOWER LLC, A DELAWARE LIMITED LIABILITY COMPANY, LESSOR, AND CCM20 LLC, A DELAWARE LIMITED LIABILITY COMPANY, LESSEE, RECORDED 08/29/2013, AS INSTRUMENT NO. 213110878 OF THE EL PASO COUNTY RECORDS.  
**AFFECTS SUBJECT PROPERTY, PLOTTED AND SHOWN HEREON.**

(6) MEMORANDUM OF LEASE BY AND BETWEEN ROBERT J. BOLEAU, III AND KIMBERLY L. BOLEAU, LANDLORD, AND NEW CINGULAR WIRELESS PCS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, TENANT, RECORDED, 11/25/2013, AS INSTRUMENT NO. 213142285 OF THE EL PASO COUNTY RECORDS.  
**AFFECTS SUBJECT PROPERTY, NOT PLOTTED AND SHOWN HEREON AS THE CLIENT REQUESTED THE LEASES AND EASEMENTS BE REVISED AND RE-WRITTEN.**

**ACCESS EASEMENT DESCRIPTION**

(CREATED BY THIS OFFICE)

A PORTION OF TRACT 78 OF ARROWWOOD SUBDIVISION NO. 2, LYING WITHIN THE EAST HALF (E 1/2) OF SECTION 18, TOWNSHIP 11 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, AND BEING MORE DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID TRACT 78, FROM WHENCE THE NORTHWEST CORNER OF SAID TRACT 78 BEARS SOUTH 75°37'40" WEST A DISTANCE OF 485.28 FEET, WITH ALL BEARINGS HEREIN RELATED THERETO;

THENCE SOUTH 75°37'40" WEST ALONG THE NORTH LINE OF SAID TRACT 78, A DISTANCE OF 485.28 FEET;  
THENCE SOUTH 00°02'30" WEST ALONG THE WEST LINE OF SAID TRACT 78, A DISTANCE OF 41.01 FEET TO THE POINT OF BEGINNING.  
THENCE DEPARTING SAID WEST LINE, SOUTH 84°55'20" EAST A DISTANCE OF 41.59 FEET;  
THENCE SOUTH 84°13'36" EAST A DISTANCE OF 193.60 FEET;  
THENCE NORTH 07°20'08" EAST A DISTANCE OF 50.27 FEET;  
THENCE NORTH 64°18'41" EAST A DISTANCE OF 10.00 FEET;  
THENCE NORTH 25°41'19" WEST A DISTANCE OF 10.00 FEET;  
THENCE NORTH 19°18'41" EAST A DISTANCE OF 30.34 FEET;  
THENCE SOUTH 70°41'19" EAST A DISTANCE OF 83.83 FEET;  
THENCE SOUTH 19°18'41" WEST A DISTANCE OF 12.00 FEET;  
THENCE NORTH 70°41'19" WEST A DISTANCE OF 21.00 FEET;  
THENCE SOUTH 19°18'41" WEST A DISTANCE OF 15.30 FEET;  
THENCE NORTH 70°41'19" WEST A DISTANCE OF 3.50 FEET;  
THENCE NORTH 19°18'41" EAST A DISTANCE OF 12.20 FEET;  
THENCE NORTH 70°41'19" WEST A DISTANCE OF 25.00 FEET;  
THENCE SOUTH 19°18'41" WEST A DISTANCE OF 14.00 FEET;  
THENCE NORTH 70°41'19" WEST A DISTANCE OF 11.90 FEET;  
THENCE SOUTH 19°18'41" WEST A DISTANCE OF 74.00 FEET;  
THENCE NORTH 84°13'36" WEST A DISTANCE OF 202.24 FEET;  
THENCE SOUTH 88°21'59" WEST A DISTANCE OF 41.06 FEET;  
THENCE NORTH 00°02'30" EAST A DISTANCE OF 16.87 FEET TO THE POINT OF BEGINNING.

CONTAINING ±5.893 SQUARE FEET OR ±0.135 ACRES MORE OR LESS

**LEASE AREA #1 DESCRIPTION**

(CREATED BY THIS OFFICE)

A PORTION OF TRACT 78 OF ARROWWOOD SUBDIVISION NO. 2, LYING WITHIN THE EAST HALF (E 1/2) OF SECTION 18, TOWNSHIP 11 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID TRACT 78, FROM WHENCE THE NORTHWEST CORNER OF SAID TRACT 78 BEARS SOUTH 75°37'40" WEST A DISTANCE OF 485.28 FEET, WITH ALL BEARINGS HEREIN RELATED THERETO;  
THENCE SOUTH 48°42'36" WEST, 192.16 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 19°18'41" WEST, A DISTANCE OF 16.00 FEET TO A POINT;  
THENCE NORTH 70°41'19" WEST, A DISTANCE OF 19.00 FEET TO A POINT;  
THENCE NORTH 19°18'41" EAST, A DISTANCE OF 0.70 FEET TO A POINT;  
THENCE NORTH 70°41'19" WEST, A DISTANCE OF 2.00 FEET TO A POINT;  
THENCE NORTH 19°18'41" EAST, A DISTANCE OF 15.30 FEET TO A POINT;  
THENCE SOUTH 70°41'19" EAST, A DISTANCE OF 21.00 FEET TO THE POINT OF BEGINNING.

CONTAINING ±335 SQUARE FEET OR ±0.008 ACRES OF LAND, MORE OR LESS.

**LEASE AREA #2 DESCRIPTION**

(CREATED BY THIS OFFICE)

A PORTION OF TRACT 78 OF ARROWWOOD SUBDIVISION NO. 2, LYING WITHIN THE EAST HALF (E 1/2) OF SECTION 18, TOWNSHIP 11 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID TRACT 78, FROM WHENCE THE NORTHWEST CORNER OF SAID TRACT 78 BEARS SOUTH 75°37'40" WEST A DISTANCE OF 485.28 FEET, WITH ALL BEARINGS HEREIN RELATED THERETO;  
THENCE SOUTH 57°44'08" WEST, 221.79 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 70°41'19" EAST, A DISTANCE OF 25.00 FEET TO A POINT;  
THENCE SOUTH 19°18'41" WEST, A DISTANCE OF 14.00 FEET TO A POINT;  
THENCE NORTH 70°41'19" WEST, A DISTANCE OF 25.00 FEET TO A POINT;  
THENCE NORTH 19°18'41" EAST, A DISTANCE OF 14.00 FEET TO THE POINT OF BEGINNING.

CONTAINING ±350 SQUARE FEET OR ±0.008 ACRES OF LAND, MORE OR LESS.

**5' UTILITY EASEMENT DESCRIPTION**

(CREATED BY THIS OFFICE)

A PORTION OF TRACT 78 OF ARROWWOOD SUBDIVISION NO. 2, LYING WITHIN THE EAST HALF (E 1/2) OF SECTION 18, TOWNSHIP 11 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, AND BEING A 5-FOOT WIDE STRIP OF LAND LYING 2.5 FEET ON EITHER SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE NORTHEAST CORNER OF SAID TRACT 78, FROM WHENCE THE NORTHWEST CORNER OF SAID TRACT 78 BEARS SOUTH 75°37'40" WEST A DISTANCE OF 485.28 FEET, WITH ALL BEARINGS HEREIN RELATED THERETO;  
THENCE SOUTH 51°55'49" WEST, A DISTANCE OF 206.54 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 21°40'29" EAST, A DISTANCE OF 1.58 FEET TO A POINT;  
THENCE NORTH 09°23'43" EAST, A DISTANCE OF 57.67 FEET TO A POINT;  
THENCE NORTH 07°09'29" EAST, A DISTANCE OF 13.34 FEET TO A POINT;  
THENCE NORTH 14°22'20" WEST, A DISTANCE OF 16.59 FEET TO A POINT ON THE SOUTH RIGHT OR WAY LINE OF STATE HIGHWAY 50, THE NORTH LINE OF SAID TRACT 78 AND THE POINT OF TERMINUS.

THE SIDELINES OF SAID EASEMENT SHALL BE MADE TO EXTEND TO OR TRIM TO THE BOUNDARY OF SAID STATE HIGHWAY.

CONTAINING ±446 SQ. FEET OR ±0.010 ACRES OF LAND, MORE OR LESS.

**TOWER EASEMENT**

(CREATED BY THIS OFFICE)

A PORTION OF TRACT 78 OF ARROWWOOD SUBDIVISION NO. 2, LYING WITHIN THE EAST HALF (E 1/2) OF SECTION 18, TOWNSHIP 11 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID TRACT 78, FROM WHENCE THE NORTHWEST CORNER OF SAID TRACT 78 BEARS SOUTH 75°37'40" WEST A DISTANCE OF 485.28 FEET, WITH ALL BEARINGS HEREIN RELATED THERETO;  
THENCE SOUTH 61°38'59" WEST, 255.65 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 25°41'19" EAST, A DISTANCE OF 10.00 FEET TO A POINT;  
THENCE SOUTH 64°18'41" WEST, A DISTANCE OF 10.00 FEET TO A POINT;  
THENCE NORTH 25°41'19" WEST, A DISTANCE OF 10.00 FEET TO A POINT;  
THENCE NORTH 64°18'41" EAST, A DISTANCE OF 10.00 FEET TO THE POINT OF BEGINNING;

CONTAINING ±100 SQUARE FEET OR ±0.002 ACRES OF LAND, MORE OR LESS.

**ASBUILT PLAN**

IN SECTION 18,  
TOWNSHIP 11 SOUTH, RANGE 66 WEST

SITE: CS GOODMAN AND SONS  
BUN: 823520  
ADDRESS: 17997 SIERRA WAY  
MONUMENT, CO 80132  
EL PASO COUNTY



NATIONAL SURVEY SERVICES COORDINATION BY:



13430 NW 104th Terrace, Suite A, Alachua, FL 32615  
Office (386) 418-0500 Fax (386) 462-9988  
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:



725 W. MITHAMENUE  
SUITE 200  
FREDERICK, COLORADO 80502  
PH: 303-782-1817  
FAX: 303-782-1448  
WWW.POWERSURVEYING.COM

DRAWN BY: JCB/CHECKED BY: RBC JOB # 501-17-268

**SURVEYOR'S NOTES**

1. BASIS OF BEARINGS: BEARINGS ARE BASED UPON THE NORTH LINE OF TRACT 78 ARROWWOOD SUBDIVISION, SAID LINE IS ASSUMED TO BEAR NORTH 75°37'40" EAST, A DISTANCE OF 485.00 FEET.
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POWER SURVEYING CO., INC  
RICHARD B. GABRIEL  
LAND SURVEYOR - COLORADO # 37929  
Date: 12/15/17  
Revision: 11/06/18

