



PROJECT: 2.5 EQUIPMENT DEPLOYMENT

SITE NAME: LOCK IT UP STORAGE

SITE CASCADE: FS04XC176

SITE ADDRESS: 15 DIXON LANDING RD.
MILPITAS, CA 95035

SITE TYPE: ROOFTOP

PLANS PREPARED FOR:

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 Rancho Pkwy, South, Lake Forest CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

EQUIPMENT MANUFACTURER:

MLA PARTNER:

ENGINEERING LICENSE:

DRAWING NOTICE:

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REVISIONS:	DESCRIPTION	DATE	BY	REV
	PRELIMINARY CD's	01/29/14	JR	0
	100% CD's	03/13/14	DC	1

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SITE CASCADE:

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SITE ADDRESS:

15 DIXON LANDING ROAD
MILPITAS, CA
95035

SHEET DESCRIPTION:

TITLE SHEET

SHEET NUMBER:

T-1

SITE INFORMATION	AREA MAP	PROJECT DESCRIPTION	DRAWING INDEX																								
<p>PROPERTY OWNER: D/M ASSOCIATES 275 SARATOGA AVE #105 SANTA CLARA, CA 95050</p> <p>LATITUDE (NAD83): 37° 27' 28.335" N -121.912051"</p> <p>LONGITUDE (NAD83): 121° 54' 28.335" N -121.912051"</p> <p>COUNTY: SANTA CLARA</p> <p>ZONING JURISDICTION: CITY OF MILPITAS</p> <p>ZONING DISTRICT: HS (HIGHWAY SERVICES)</p> <p>APN: 022-01-011</p> <p>POWER COMPANY: PG&E</p> <p>AAV PROVIDER: TBD</p> <p>SPRINT AGENT: ALEX ORNER PHONE: (415) 601-3194 alex.ornier@cortel-llc.com</p> <p>SPRINT CM: JONATHAN FULK PHONE: (925) 380-2229 jonathan.fulk@sprint.com</p>		<ul style="list-style-type: none"> INSTALL (3) NEW ANTENNAS INSIDE A (N) 3' DIAMETER RADOME INSTALL (3) RRU'S ON (N) STEEL PLATFORM INSTALL 2.5 COMPONENTS INSIDE THE EXISTING MMBTS CABINET REUSE OR INSTALL NEW HYBRID CABLES AS NEEDED 	<table border="1"> <thead> <tr> <th>SHEET NO:</th> <th>SHEET TITLE</th> </tr> </thead> <tbody> <tr> <td>T-1</td> <td>TITLE SHEET & PROJECT DATA</td> </tr> <tr> <td>SP-1</td> <td>SPRINT SPECIFICATIONS</td> </tr> <tr> <td>SP-2</td> <td>SPRINT SPECIFICATIONS</td> </tr> <tr> <td>A-1</td> <td>SITE PLAN AND EQUIPMENT ROOM PLAN</td> </tr> <tr> <td>A-2</td> <td>ENLARGED ROOF PLAN</td> </tr> <tr> <td>A-3</td> <td>ANTENNA LAYOUTS</td> </tr> <tr> <td>A-4</td> <td>SOUTH ELEVATIONS</td> </tr> <tr> <td>A-5</td> <td>WEST ELEVATIONS</td> </tr> <tr> <td>A-6</td> <td>EQUIPMENT DETAILS</td> </tr> <tr> <td>A-7</td> <td>EQUIPMENT DETAILS</td> </tr> <tr> <td>E-1</td> <td>GRND PLAN AND DETAILS</td> </tr> </tbody> </table>	SHEET NO:	SHEET TITLE	T-1	TITLE SHEET & PROJECT DATA	SP-1	SPRINT SPECIFICATIONS	SP-2	SPRINT SPECIFICATIONS	A-1	SITE PLAN AND EQUIPMENT ROOM PLAN	A-2	ENLARGED ROOF PLAN	A-3	ANTENNA LAYOUTS	A-4	SOUTH ELEVATIONS	A-5	WEST ELEVATIONS	A-6	EQUIPMENT DETAILS	A-7	EQUIPMENT DETAILS	E-1	GRND PLAN AND DETAILS
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	<p>LOCATION MAP</p>	<p>APPLICABLE CODES</p> <p>ALL WORK AND MATERIALS SHALL BE PERFORMED AND 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:</p> <ul style="list-style-type: none"> 2013 CALIF. ADMINISTRATIVE CODE (INCL. TITLES 24 & 25) 2013 CALIFORNIA BUILDING CODES 2013 CALIFORNIA ELECTRICAL CODES 2013 CALIFORNIA MECHANICAL CODES 2013 CALIFORNIA PLUMBING CODES 2013 CALIFORNIA FIRE CODES 2013 CALIFORNIA ENERGY CODES TIA-222-G STANDARD LOCAL BUILDING CODES CITY/COUNTY ORDINANCES 																									

THESE OUTLINE SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS, INCLUDING CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

CONTRACTOR SUPPLIED:

- SUPPLIER WILL SUPPLY ALL MINOR MATERIALS NECESSARY FOR PERFORMANCE OF SERVICES. MINOR MATERIALS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING ("MINOR MATERIALS"):
- A. CONDUIT IN LENGTHS LESS THAN OR EQUAL TO 5 FEET;
 - B. WIRE;
 - C. BREAKERS;
 - D. GROUNDING CABLE;
 - E. ANTENNA AND LINE INSTALLATION HARDWARE;
 - F. CONDUIT CLAMPS;
 - G. CONDUIT CONNECTORS;
 - H. WEATHERPROOFING MATERIALS;
 - I. GROUNDING KITS;
 - J. HOISTING GRIPS;
 - K. SNAP-IN HANGERS WITH GROMMETS;
 - L. BUTTERFLY HANGER KITS;
 - M. COAX BLOCKS AND HARDWARE;
 - N. ANGLE ADAPTERS, U BOLTS, AND OTHER MISCELLANEOUS HARDWARE;
 - O. CROSSOVER PLATES;
 - P. RET CABLES
 - Q. PIPE MOUNTS, PIPE TO PIPE MOUNTS;
 - R. ICE BRIDGES IN LENGTHS LESS THAN OR EQUAL TO 5 FEET;
 - S. LIQUID TIGHT;
 - T. COMMON CONSUMABLES, INCLUDING BUT NOT LIMITED TO TAPES, SOLVENTS, ADHESIVES, LUGS, NUTS, BOLTS, WASHERS, ETC.; AND
 - U. SUCH OTHER MINOR MATERIALS NOT SPECIFICALLY MENTIONED IN THIS SECTION BUT WHICH ARE REASONABLE NECESSARY TO COMPLETE THE SERVICES.

SPRINT SUPPLIED:

- A. BBUS;
- B. BATTERY CABINETS;
- C. MMBTS CABINETS;
- D. RRU'S;
- E. RETS;
- F. ANTENNAS AND BRACKETS;
- G. HFCS;
- H. BATTERIES;
- I. JUMPERS; AND
- J. ANY OEM SPECIFIC EQUIPMENT(CARD, SHELF, OR CABINET) THAT NEEDS TO BE INSTALLED IN OR NEXT TO MMBTS.

SECTION 01 100 – SCOPE OF WORK

THE WORK:

SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF.

PRECEDENCE:

SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS, INFORMATION ON THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE.

SITE FAMILIARITY:

CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.

ON-SITE SUPERVISION:

THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE:

THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.

- A. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. PROVIDE ALL MATERIALS AND LABOR AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- B. CONTRACTOR SHALL NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY VARIATIONS PRIOR TO PROCEEDING WITH THE WORK. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- C. MARK THE FIELD SET OF DRAWINGS IN RED, DOCUMENTING ANY CHANGES FROM THE CONSTRUCTION DOCUMENTS.

METHODS OF PROCEDURE (MOPS) FOR CONSTRUCTION:

CONTRACTOR SHALL PERFORM WORK AS DESCRIBED IN THE FOLLOWING INSTALLATION AND COMMISSIONING MOPS.

- A. TOP HAT
- B. HOW TO INSTALL A NEW CABINET
- C. BASE BAND UNIT IN EXISTING UNIT
- D. INSTALLATION OF BATTERIES
- E. INSTALLATION OF HYBRID CABLE
- F. INSTALLATION OF RRU'S
- G. CABLING
- H. TS-0200 REV 4 – ANTENNA LINE ACCEPTANCE STANDARDS
- I. SPRINT CELL SITE ENGINEERING NOTICE – EN 2012-001, REV 1.
- J. COMMISSIONING MOPS

SECTION 01 200 – COMPANY FURNISHED MATERIAL AND EQUIPMENT

COMPANY FURNISHED MATERIAL AND EQUIPMENT IS IDENTIFIED ON THE RF DATA SHEET IN THE CONSTRUCTION DRAWINGS.

CONTRACTOR IS RESPONSIBLE FOR SPRINT PROVIDED MATERIAL AND EQUIPMENT TO ENSURE IT IS PROTECTED AND HANDLED PROPERLY THROUGHOUT THE CONSTRUCTION DURATION.

CONTRACTOR RESPONSIBLE FOR RECEIPT OF SPRINT FURNISHED EQUIPMENT AT CELL SITE OR CONTRACTORS LOCATION. CONTRACTOR TO COMPLETE SHIPPING AND RECEIPT DOCUMENTATION IN ACCORDANCE WITH COMPANY PRACTICE.

SECTION 01 300 – CELL SITE CONSTRUCTION

NOTICE TO PROCEED:

NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF WORK ORDER.

SITE CLEANLINESS:

CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.

SECTION 01 400 – SUBMITTALS & TESTS

ALTERNATES:

AT THE COMPANY'S REQUEST, ANY ALTERNATIVES TO THE MATERIALS OR METHODS SPECIFIED SHALL BE SUBMITTED TO SPRINTS CONSTRUCTION MANAGER FOR APPROVAL. SPRINT WILL REVIEW AND APPROVE ONLY THOSE REQUESTS MADE IN WRITING. NO VERBAL APPROVALS WILL BE CONSIDERED.

TESTS AND INSPECTIONS:

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.
- B. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - 1. COAX SWEEPS AND FIBER TESTS PER TS-0200 REV 4 ANTENNA LINE ACCEPTANCE STANDARDS.
 - 2. AGL, AZIMUTH AND DOWNTILT PROVIDE AN AUTOMATED REPORT UPLOADED TO SITERRA USING A COMMERCIAL MADE-FOR THE PURPOSE ELECTRONIC ANTENNA ALIGNMENT TOOL (AAT). INSTALLED AZIMUTH, CENTERLINE AND DOWNTILT MUST CONFORM WITH RF CONFIGURATION DATA
 - 3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.
 - 4. ALL TESTING REQUIRED BY APPLICABLE INSTALLATION MOPS.

C. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING;

- 1. AZIMUTH, DOWNTILT, AGL FROM SUNSIGHT INSTRUMENTS – ANTENNALIGN ALIGNMENT TOOL (AAT)
- 2. SWEEP AND FIBER TESTS
- 3. SCANABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
- 4. ALL AVAILABLE JURISDICTIONAL INFORMATION
- 5. PDF SCAN OF REDLINES PRODUCED IN FIELD
- 6. A PDF SCAN OF REDLINE MARK-UPS SUITABLE FOR USE IN ELECTRONIC AS-BUILT DRAWING PRODUCTION
- 7. LIEN WAIVERS
- 8. FINAL PAYMENT APPLICATION
- 9. REQUIRED FINAL CONSTRUCTION PHOTOS
- 10. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE WITH NO DEFICIENT ITEMS
- 11. ALL POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).
- 12. CLOSEOUT PHOTOGRAPHS:
 - o PROVIDE PHOTOGRAPHS OF FINAL PROJECT PER THE FOLLOWING LIST. ADDITIONAL PHOTOGRAPHS MAY BE REQUIRED TO SUPPORT ACCEPTANCE PROCESSES
 - (i) MAIN HYBRID CABLE ROUTE (MINIMUM TWO PHOTOS)
 - (ii) PHOTOS OF EACH ANTENNA AND RRU
 - (iii) MANUFACTURERS NAME TAG FOR ALL SERIALIZED EQUIPMENT
 - (iv) PULL AND DISTRIBUTION BOXES INTERMEDIATE BETWEEN RRU'S AND MMBS (DOOR OPEN)
 - (v) MMBS CABINET WITH DOOR OPEN SHOWING MODIFICATIONS
 - (vi) POWER CABINET, DOORS OPEN, BATTERIES INSTALLED
 - (vii) BREAK OUT CYLINDERS
 - (viii) ASR SIGNAGE FOR SPRINT OWNED TOWERS
 - (ix) RADIATION EXPOSURE WARNING SIGNS
 - (x) PHOTOGRAPH FROM EACH SECTOR FROM APPROXIMATELY RAD CENTER OF ANY NEW ANTENNA AT HORIZON.
 - b LOAD PHOTOS TO SITERRA PROJECT LIBRARY 15. IN 15 CREATE NEW CATEGORY; 2.5 DEPLOYMENT, AND SECTION; PERMANENT CONSTRUCTION. LABEL PHOTOS WITH SITE CASCADE AND VIEW BEING DEPICTED. CAMERAS USED TO TAKE PHOTOGRAPHS SHALL GPS ENABLED SUCH THAT THE GPS COORDINATES ARE INCLUDED IN THE PHOTO MEDIA-FILE INFORMATION.

COMMISSIONING:

PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPS

INTEGRATION:

PERFORM ALL INTEGRATION ACTIVITIES AS REQUIRED BY APPLICABLE MOPS

SECTION 07 500 – ROOF CUTTING, PATCHING AND REPAIR

SUMMARY:

THIS SECTION SPECIFIES CUTTING AND PATCHING EXISTING ROOFING SYSTEMS WHERE CONDUIT OR CABLES EXIT THE BUILDING ONTO THE ROOF OR BUILDING-MOUNTED ANTENNAS, AND AS REQUIRED FOR WATERTIGHT PERFORMANCE. ROOFTOP ENTRY OPENINGS IN MEMBRANE ROOFTOPS SHALL BE CONSTRUCTED TO COMPLY WITH LANDLORD, ANY EXISTING WARRANTY, AND LOCAL JURISDICTIONAL STANDARDS.

1.4 SUBMITTALS:

- A. **PRE-CONSTRUCTION ROOF PHOTOS:** COMPLETE A ROOF INSPECTION PRIOR TO THE INSTALLATION OF SPRINT EQUIPMENT ON ANY ROOFTOP BUILD. AT A MINIMUM INSPECT AND PHOTOGRAPH (MINIMUM 3 EA.) ALL AREAS IMPACTED BY THE ADDITION OF THE SPRINT EQUIPMENT.
- B. PROVIDE SIMILAR PHOTOGRAPHS SHOWING ROOF CONDITIONS AFTER CONSTRUCTION (MINIMUM 3 EA.)
- C. ROOF INSPECTION PHOTOGRAPHS SHOULD BE UPLOADED WITH CLOSEOUT PHOTOGRAPHS.

SECTION 09 900 – PAINTING

QUALITY ASSURANCE:

- A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. COMPLY WITH ALL ENVIRONMENTAL REGULATIONS FOR VOLATILE ORGANIC COMPOUNDS.

MATERIALS:

- A. MANUFACTURERS: BENJAMIN MOORE, ICI DEVOE COATINGS, PPG, SHERWIN WILLIAMS OR APPROVED EQUAL. PROVIDE PREMIUM GRADE, PROFESSIONAL-QUALITY PRODUCTS FOR COATING SYSTEMS.

PAINT SCHEDULE:

- A. EXTERIOR ANTENNAE AND ANTENNA MOUNTING HARDWARE: ONE COAT OF PRIMER AND TWO FINISH COATS. PAINT FOR ANTENNAE SHALL BE NON-METALLIC BASED AND CONTAIN NO METALLIC PARTICLES. PROVIDE COLORS AND PATTERNS AS REQUIRED TO MASK APPEARANCE OF ANTENNAE ON ADJACENT BUILDING SURFACES AND AS ACCEPTABLE TO THE OWNER. REFER TO ANTENNA MANUFACTURER'S INSTRUCTIONS WHENEVER POSSIBLE.

- B. **ROOF TOP CONSTRUCTION:** TOUCH UP – PREPARE SURFACES TO BE REPAIRED. FOLLOW INDUSTRY STANDARDS AND REQUIREMENTS OF OWNER TO MATCH EXISTING COATING AND FINISH.

PAINTING APPLICATION:

- 1. INSPECT SURFACES, REPORT UNSATISFACTORY CONDITIONS IN WRITING; BEGINNING WORK MEANS ACCEPTANCE OF SUBSTRATE.
- 2. COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR PREPARATION, PRIMING AND COATING WORK. COORDINATE WITH WORK OF OTHER SECTIONS.
- 3. MATCH APPROVED MOCK-UPS FOR COLOR, TEXTURE, AND PATTERN. RE-COAT OR REMOVE AND REPLACE WORK WHICH DOES NOT MATCH OR SHOWS LOSS OF ADHESION.
- 4. CLEAN UP, TOUCH UP AND PROTECT WORK.

TOUCHUP PAINTING:

- 1. GALVANIZING DAMAGE AND ALL BOLTS AND NUTS SHALL BE TOUCHED UP AFTER TOWER ERECTION WITH "GALVANOX," "DRY GALV," OR "ZINC-IT."
- 2. FIELD TOUCHUP PAINT SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 3. ALL METAL COMPONENTS SHALL BE HANDLED WITH CARE TO PREVENT DAMAGE TO THE COMPONENTS, THEIR PRESERVATIVE TREATMENT, OR THEIR PROTECTIVE COATINGS.

SECTION 11 700 – ANTENNA ASSEMBLY, REMOTE RADIO UNITS AND CABLE INSTALLATION

SUMMARY:

THIS SECTION SPECIFIES INSTALLATION OF ANTENNAS, RRU'S, AND CABLE EQUIPMENT, INSTALLATION, AND TESTING OF COAXIAL FIBER CABLE.

ANTENNAS AND RRU'S:

THE NUMBER AND TYPE OF ANTENNAS AND RRU'S TO BE INSTALLED IS DETAILED ON THE CONSTRUCTION DRAWINGS.

HYBRID CABLE:

HYBRID CABLE WILL BE DC/FIBER AND FURNISHED FOR INSTALLATION AT EACH SITE. CABLE SHALL BE INSTALLED PER THE CONSTRUCTION DRAWINGS AND THE APPLICABLE MANUFACTURER'S REQUIREMENTS.

JUMPERS AND CONNECTORS:

FURNISH AND INSTALL 1/2" COAX JUMPER CABLES BETWEEN THE RRU'S AND ANTENNAS. JUMPERS SHALL BE TYPE LDF 4, FLC 12-50, CR 540, OR FXL 540. SUPER-FLEX CABLES ARE NOT ACCEPTABLE. JUMPERS BETWEEN THE RRU'S AND ANTENNAS OR TOWER TOP AMPLIFIERS SHALL CONSIST OF 1/2 INCH FOAM DIELECTRIC, OUTDOOR RATED COAXIAL CABLE. DO NOT USE SUPERFLEX OUTDOORS. JUMPERS SHALL BE FACTORY FABRICATED IN APPROPRIATE LENGTHS WITH A MAXIMUM OF 4 FEET EXCESS PER JUMPER AND HAVE CONNECTORS AT EACH END. MANUFACTURED BY SUPPLIER. IF JUMPERS ARE FIELD FABRICATED, FOLLOW MANUFACTURER'S REQUIREMENTS FOR INSTALLATION OF CONNECTORS

REMOTE ELECTRICAL TILT (RET) CABLES:

MISCELLANEOUS:

INSTALL SPLITTERS, COMBINERS, FILTERS PER RF DATA SHEET, FURNISHED BY SPRINT.

ANTENNA INSTALLATION:

THE CONTRACTOR SHALL ASSEMBLE ALL ANTENNAS ONSITE IN ACCORDANCE WITH THE INSTRUCTIONS SUPPLIED BY THE MANUFACTURER. ANTENNA HEIGHT, AZIMUTH, AND FEED ORIENTATION INFORMATION SHALL BE A DESIGNATED ON THE CONSTRUCTION DRAWINGS.

CONTINUE SHEET SP-2

PLANS PREPARED FOR:

PLANS PREPARED BY:

EQUIPMENT MANUFACTURER:

MLA PARTNER:

Blank area for MLA partner information.

ENGINEERING LICENSE:

Blank area for engineering license information.

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MILPITAS, CA
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SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-1

- A. THE CONTRACTOR SHALL POSITION THE ANTENNA ON TOWER PIPE MOUNTS SO THAT THE BOTTOM STRUT IS LEVEL. THE PIPE MOUNTS SHALL BE PLUMB TO WITHIN 1 DEGREE.
- B. ANTENNA MOUNTING REQUIREMENTS: PROVIDE ANTENNA MOUNTING HARDWARE AS INDICATED ON THE DRAWINGS.

HYBRID CABLES INSTALLATION:

- A. THE CONTRACTOR SHALL ROUTE, TEST, AND INSTALL ALL CABLES AS INDICATED ON THE CONSTRUCTION DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- B. THE INSTALLED RADIUS OF THE CABLES SHALL NOT BE LESS THAN THE MANUFACTURER'S SPECIFICATIONS FOR BENDING RADII.
- C. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE CABLES DURING HANDLING AND INSTALLATION.
 - 1. FASTENING MAIN HYBRID CABLES: ALL CABLES SHALL BE PERMANENTLY FASTENED TO THE COAX LADDER AT 4'-0" OC USING NON-MAGNETIC STAINLESS STEEL CLIPS.
 - 2. FASTENING INDIVIDUAL FIBER AND DC CABLES ABOVE BREAKOUT ENCLOSURE (MEDUSA), WITHIN THE MMBS CABINET AND ANY INTERMEDIATE DISTRIBUTION BOXES:
 - a. FIBER: SUPPORT FIBER BUNDLES USING ½" VELCRO STRAPS OF THE REQUIRED LENGTH @ 18" OC. STRAPS SHALL BE UV, OIL AND WATER RESISTANT AND SUITABLE FOR INDUSTRIAL INSTALLATIONS AS MANUFACTURED BY TEXTOL OR APPROVED EQUAL.
 - b. DC: SUPPORT DC BUNDLES WITH ZIP TIES OF THE ADEQUATE LENGTH. ZIP TIES TO BE UV STABILIZED, BLACK NYLON, WITH TENSILE STRENGTH AT 12,000 PSI AS MANUFACTURED BY NELCO PRODUCTS OR EQUAL.
 - 3. FASTENING JUMPERS: SECURE JUMPERS TO THE SIDE ARMS OR HEAD FRAMES USING STAINLESS STEEL TIE WRAPS OR STAINLESS STEEL BUTTERFLY CLIPS.
 - 4. CABLE INSTALLATION:
 - a. INSPECT CABLE PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE CONSTRUCTION MANAGER.
 - b. CABLE ROUTING: CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOP AS INDICATED ON THE DRAWINGS. AVOID TWISTING AND CROSSEOVERS.
 - c. HOIST CABLE USING PROPER HOISTING GRIPS. DO NOT EXCEED MANUFACTURER'S RECOMMENDED MAXIMUM BEND RADIUS.
 - 5. GROUNDING OF TRANSMISSION LINES: ALL TRANSMISSION LINES SHALL BE GROUNDED AS INDICATED ON DRAWINGS.
 - 6. HYBRID CABLE COLOR CODING: ALL COLOR CODING SHALL BE AS REQUIRED IN TS 0200 REV 4.
 - 7. HYBRID CABLE LABELING: INDIVIDUAL HYBRID AND DC BUNDLES SHALL BE LABELED ALPHA-NUMERICALLY ACCORDING TO SPRINT CELL SITE ENGINEERING NOTICE – EN 2012-001, REV 1

WEATHERPROOFING EXTERIOR CONNECTORS AND HYBRID CABLE GROUND KITS:

- A. ALL FIBER & COAX CONNECTORS AND GROUND KITS SHALL BE WEATHERPROOFED.
- B. WEATHERPROOFED USING ONE OF THE FOLLOWING METHODS. ALL INSTALLATIONS MUST BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INDUSTRY BEST PRACTICES.
 - 1. COLD SHRINK: ENCOMPASS CONNECTOR IN COLD SHRINK TUBING AND PROVIDE A DOUBLE WRAP OF 2" ELECTRICAL TAPE EXTENDING 2" BEYOND TUBING. PROVIDE 3M COLD SHRINK CXS SERIES OR EQUAL.
 - 2. SELF-AMALGAMATING TAPE: CLEAN SURFACES. APPLY A DOUBLE WRAP OF SELF-AMALGAMATING TAPE 2" BEYOND CONNECTOR. APPLY A SECOND WRAP OF SELF-AMALGAMATING TAPE IN OPPOSITE DIRECTION. APPLY DOUBLE WRAP OF 2" WIDE ELECTRICAL TAPE EXTENDING 2" BEYOND THE SELF-AMALGAMATING TAPE.
 - 3. 3M SLIM LOCK CLOSURE 716: SUBSTITUTIONS WILL NOT BE ALLOWED.
 - 4. OPEN FLAME ON JOB SITE IS NOT ACCEPTABLE

SECTION 11 800 – INSTALLATION OF MULTIMODAL BASE STATIONS (MMBS) AND RELATED EQUIPMENT

SUMMARY:

- A. THIS SECTION SPECIFIES MMBS CABINETS, POWER CABINETS, AND INTERNAL EQUIPMENT INCLUDING BY NOT LIMITED TO RECTIFIERS, POWER DISTRIBUTION UNITS, BASE BAND UNITS, SURGE ARRESTORS, BATTERIES, AND SIMILAR EQUIPMENT FURNISHED BY THE COMPANY FOR INSTALLATION BY THE CONTRACTOR (OFCI).
- B. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MISCELLANEOUS MATERIALS AND PROVIDE ALL LABOR REQUIRED FOR INSTALLATION EQUIPMENT IN EXISTING CABINET OR NEW CABINET AS SHOWN ON DRAWINGS AND AS REQUIRE BY THE APPLICABLE INSTALLATION MOPS.
- C. COMPLY WITH MANUFACTURERS INSTALLATION AND START-UP REQUIREMENTS

DC CIRCUIT BREAKER LABELING

- A. LABEL CIRCUIT BREAKERS ACCORDING TO SPRINT CELL SITE ENGINEERING NOTICE – EN 2012-001, REV 1.

SECTION 11 800 – INSTALLATION OF MULTIMODAL BASE STATIONS (MMBS) AND RELATED EQUIPMENT

SUMMARY:

- A. THIS SECTION SPECIFIES MMBS CABINETS, POWER CABINETS, AND INTERNAL EQUIPMENT INCLUDING BY NOT LIMITED TO RECTIFIERS, POWER DISTRIBUTION UNITS, BASE BAND UNITS, SURGE ARRESTORS, BATTERIES, AND SIMILAR EQUIPMENT FURNISHED BY THE COMPANY FOR INSTALLATION BY THE CONTRACTOR (OFCI).
- B. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MISCELLANEOUS MATERIALS AND PROVIDE ALL LABOR REQUIRED FOR INSTALLATION EQUIPMENT IN EXISTING CABINET OR NEW CABINET AS SHOWN ON DRAWINGS AND AS REQUIRE BY THE APPLICABLE INSTALLATION MOPS.
- C. COMPLY WITH MANUFACTURERS INSTALLATION AND START-UP REQUIREMENTS

SUPPORTING DEVICES:

- A. MANUFACTURED STRUCTURAL SUPPORT MATERIALS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY THE FOLLOWING:
 - 1. ALLIED TUBE AND CONDUIT
 - 2. B-LINE SYSTEM
 - 3. SUNISTRUT DIVERSIFIED PRODUCTS
 - 4. THOMAS & BETTS
- B. FASTENERS: TYPES, MATERIALS, AND CONSTRUCTION FEATURES AS FOLLOWS:
 - 1. EXPANSION ANCHORS: CARBON STEEL WEDGE OR SLEEVE TYPE.
 - 2. POWER-DRIVEN THREADED STUDS: HEAT-TREATED STEEL, DESIGNED SPECIFICALLY FOR THE INTENDED SERVICE.
 - 3. FASTEN BY MEANS OF WOOD SCREWS ON WOOD.
 - 4. TOGGLE BOLTS ON HOLLOW MASONRY UNITS.
 - 5. CONCRETE INSERTS OR EXPANSION BOLTS ON CONCRETE OR SOLID MASONRY.
 - 6. MACHINE SCREWS, WELDED THREADED STUDS, OR SPRING-TENSION CLAMPS ON STEEL.
 - 7. EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE SHALL NOT BE PERMITTED.
 - 8. DO NOT WELD CONDUIT, PIPE STRAPS, OR ITEMS OTHER THAN THREADED STUDS TO STEEL STRUCTURES.
 - 9. IN PARTITIONS OF LIGHT STEEL CONSTRUCTION, USE SHEET METAL SCREWS.

SUPPORTING DEVICES:

- A. INSTALL SUPPORTING DEVICES TO FASTEN ELECTRICAL COMPONENTS SECURELY AND PERMANENTLY IN ACCORDANCE WITH NEC.
- B. COORDINATE WITH THE BUILDING STRUCTURAL SYSTEM AND WITH OTHER TRADES.
- C. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, FASTEN ELECTRICAL ITEMS AND THEIR SUPPORTING HARDWARE SECURELY TO THE STRUCTURE IN ACCORDANCE WITH THE FOLLOWING:
- D. ENSURE THAT THE LOAD APPLIED BY ANY FASTENER DOES NOT EXCEED 25 PERCENT OF THE PROOF TEST LOAD.
- E. USE VIBRATION AND SHOCK-RESISTANT FASTENERS FOR ATTACHMENTS TO CONCRETE SLABS.

ELECTRICAL IDENTIFICATION:

- A. UPDATE AND PROVIDE TYPED CIRCUIT BREAKER SCHEDULES IN THE MOUNTING BRACKET, INSIDE DOORS OF AC PANEL BOARDS WITH ANY CHANGES MADE TO THE AC SYSTEM.
- B. BRANCH CIRCUITS FEEDING AVIATION OBSTRUCTION LIGHTING EQUIPMENT SHALL BE CLEARLY IDENTIFIED AS SUCH AT THE BRANCH CIRCUIT PANELBOARD.

SECTION 26 200 – ELECTRICAL MATERIALS AND EQUIPMENT

CONDUIT:

- A. RIGID GALVANIZED STEEL (RGS) CONDUIT SHALL BE USED FOR EXTERIOR LOCATIONS ABOVE GROUND AND IN UNFINISHED INTERIOR LOCATIONS AND FOR ENCASED RUNS IN CONCRETE. RIGID CONDUIT AND FITTINGS SHALL BE STEEL, COATED WITH ZINC EXTERIOR AND INTERIOR BY THE HOT DIP GALVANIZING PROCESS. CONDUIT SHALL BE PRODUCED TO ANSI SPECIFICATIONS C80.1, FEDERAL SPECIFICATION WW-C-581 AND SHALL BE LISTED WITH THE UNDERWRITERS' LABORATORIES. FITTINGS SHALL BE THREADED – SET SCREW OR COMPRESSION FITTINGS WILL NOT BE ACCEPTABLE. RGS CONDUITS SHALL BE MANUFACTURED BY ALLIED, REPUBLIC OR WHEATLAND.
- B. UNDERGROUND CONDUIT IN CONCRETE SHALL BE POLYVINYLCHLORIDE (PVC) SUITABLE FOR DIRECT BURIAL AS APPLICABLE. JOINTS SHALL BE BELLED, AND FLUSH SOLVENT WELDED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CONDUIT SHALL BE CARLON ELECTRICAL PRODUCTS OR APPROVED EQUAL.
- C. TRANSITIONS BETWEEN PVC AND RIGID (RGS) SHALL BE MADE WITH PVC COATED METALLIC LONG SWEEP RADIUS ELBOWS.

- D. EMT OR RIGID GALVANIZED STEEL CONDUIT MAY BE USED IN FINISHED SPACES CONCEALED IN WALLS AND CEILINGS. EMT SHALL BE MILD STEEL, ELECTRICALLY WELDED, ELECTRO-GALVANIZED OR HOT-DIPPED GALVANIZED AND PRODUCED TO ANSI SPECIFICATION C80.3, FEDERAL SPECIFICATION WW-C-563, AND SHALL BE UL LISTED. EMT SHALL BE MANUFACTURED BY ALLIED, REPUBLIC OR WHEATLAND, OR APPROVED EQUAL. FITTINGS SHALL BE METALLIC COMPRESSION. SET SCREW CONNECTIONS SHALL NOT BE ACCEPTABLE.
- E. LIQUID TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR FINAL CONNECTION TO EQUIPMENT. FITTINGS SHALL BE METALLIC GLAND TYPE COMPRESSION FITTINGS, MAINTAINING THE INTEGRITY OF CONDUIT SYSTEM. SET SCREW CONNECTIONS SHALL NOT BE ACCEPTABLE. MAXIMUM LENGTH OF FLEXIBLE CONDUIT SHALL NOT EXCEED 6- FEET. LFMC SHALL BE PROTECTED AND SUPPORTED AS REQUIRE BY NEC. MANUFACTURERS OF FLEXIBLE CONDUITS SHALL BE CAROL, ANACONDA METAL HOSE OR UNIVERSAL METAL HOSE, OR APPROVED EQUAL.
- F. MINIMUM SIZE CONDUIT SHALL BE 3/4 INCH (21MM).

HUBS AND BOXES:

- A. AT ENTRANCES TO CABINETS OR OTHER EQUIPMENT NOT HAVING INTEGRAL THREADED HUBS PROVIDE METALLIC THREADED HUBS OF THE SIZE AND CONFIGURATION REQUIRED. HUB SHALL INCLUDE LOCKNUT AND NEOPRENE O-RING SEAL. PROVIDE IMPACT RESISTANT 105 DEGREE C PLASTIC BUSHINGS TO PROTECT CABLE INSULATION.
- B. CABLE TERMINATION FITTINGS FOR CONDUIT
 - 1. CABLE TERMINATORS FOR RGS CONDUITS SHALL BE TYPE CRC BY O-Z/GEDNEY OR EQUAL.
 - 2. CABLE TERMINATORS FOR LFMC SHALL BE ETCO – CL2075; OR MADE FOR THE PURPOSE PRODUCTS BY ROXTEC.
- C. EXTERIOR PULL BOXES AND PULL BOXES IN INTERIOR INDUSTRIAL AREAS SHALL BE PLATED CAST ALLOY, HEAVY DUTY, WEATHERPROOF, DUST PROOF, WITH GASKET, PLATED IRON ALLOY COVER AND STAINLESS STEEL COVER SCREWS, CROUSE-HINDS WAB SERIES OR EQUAL.
- D. CONDUIT OUTLET BODIES SHALL BE PLATED CAST ALLOY WITH SIMILAR GASKETED COVERS. OUTLET BODIES SHALL BE OF THE CONFIGURATION AND SIZE SUITABLE FOR THE APPLICATION. PROVIDE CROUSE-HINDS FORM 8 OR EQUAL.
- E. MANUFACTURER FOR BOXES AND COVERS SHALL BE HOFFMAN, SQUARE "D", CROUSE-HINDS, COOPER, ADALET, APPLETON, O-Z GEDNEY, RACO, OR APPROVED EQUAL.

SUPPLEMENTAL GROUNDING SYSTEM

- A. FURNISH AND INSTALL A SUPPLEMENTAL GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS. SUPPORT SYSTEM WITH NON-MAGNETIC STAINLESS STEEL CLIPS WITH RUBBER GROMMETS. GROUNDING CONNECTORS SHALL BE TINNED COPPER WIRE, SIZES AS INDICATED ON THE DRAWINGS. PROVIDE STRANDED BARE OR INSULATED CONDUCTORS AS INDICATED.
- B. SUPPLEMENTAL GROUNDING SYSTEM: ALL CONNECTIONS TO BE MADE WITH CAD WELDS, EXCEPT AT EQUIPMENT USE LUGS OR OTHER AVAILABLE GROUNDING MEANS AS REQUIRED BY MANUFACTURER; AT GROUND BARS USE TWO HOLE SPADES WITH NO OX.
- C. STOLEN GROUND-BARS: IN THE EVENT OF STOLEN GROUND BARS, CONTACT SPRINT CM FOR REPLACEMENT INSTRUCTION USING THREADED ROD KITS.

EXISTING STRUCTURE:

- A. EXISTING EXPOSED WIRING AND ALL EXPOSED OUTLETS, RECEPTACLES, SWITCHES, DEVICES, BOXES, AND OTHER EQUIPMENT THAT ARE NOT TO BE UTILIZED IN THE COMPLETED PROJECT SHALL BE REMOVED OR DE-ENERGIZED AND CAPPED IN THE WALL, CEILING, OR FLOOR SO THAT THEY ARE CONCEALED AND SAFE. WALL, CEILING, OR FLOOR SHALL BE PATCHED TO MATCH THE ADJACENT CONSTRUCTION.

CONDUIT AND CONDUCTOR INSTALLATION:

- A. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED 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.
- B. CONDUCTORS SHALL BE PULLED IN ACCORDANCE WITH ACCEPTED GOOD PRACTICE.

SPRINT SUPPLIED MATERIALS.

(A) BBUS; (B) BATTERY CABINETS; (C) MMBTS CABINETS; (D) RRUS; (E) RETS; (F) ANTENNAS AND BRACKETS; (G) HFCS; (H) BATTERIES; (I) JUMPERS; AND (J) OEM SPECIFIC EQUIPMENT (CARD, SHELF, OR CABINET) THAT NEEDS TO BE INSTALLED IN OR NEXT TO MMBTS
CONTRACTOR SUPPLIED MATERIALS:
 (A) CONDUIT IN LENGTHS LESS THAN OR EQUAL TO 5 FEET; (B) WIRE; (C) BREAKERS; (D) GROUNDING CABLE; (E) ANTENNA AND LINE INSTALLATION HARDWARE; (F) CONDUIT CLAMPS; (G) CONDUIT CONNECTORS; (H) WEATHERPROOFING MATERIALS; (I) GROUNDING KITS; (J) HOISTING GRIPS; (K) SNAP-IN HANGERS WITH GROMMETS; (L) BUTTERFLY HANGER KITS; (M) COAX BLOCKS AND HARDWARE; (N) ANGLE ADAPTERS, U BOLTS, AND OTHER MISCELLANEOUS HARDWARE; (O) CROSSOVER PLATES; (P) RET CABLES; (Q) PIPE MOUNTS, PIPE TO PIPE MOUNTS; (R) ICE BRIDGES IN LENGTHS LESS THAN OR EQUAL TO 5 FEET; (S) LIQUID TIGHT; (T) COMMON CONSUMABLES, INCLUDING BUT NOT LIMITED TO TAPES, SOLVENTS, ADHESIVES, LUGS, NUTS, BOLTS, WASHERS, ETC.; AND (U) SUCH OTHER MINOR MATERIALS NOT SPECIFICALLY MENTIONED IN THIS SECTION BUT WHICH ARE REASONABLE NECESSARY TO COMPLETE THE SERVICES.

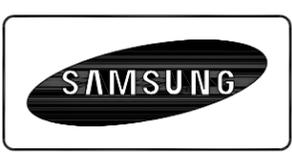
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PLANS PREPARED BY:



EQUIPMENT MANUFACTURER:



MLA PARTNER:

ENGINEERING LICENSE:

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SITE ADDRESS:

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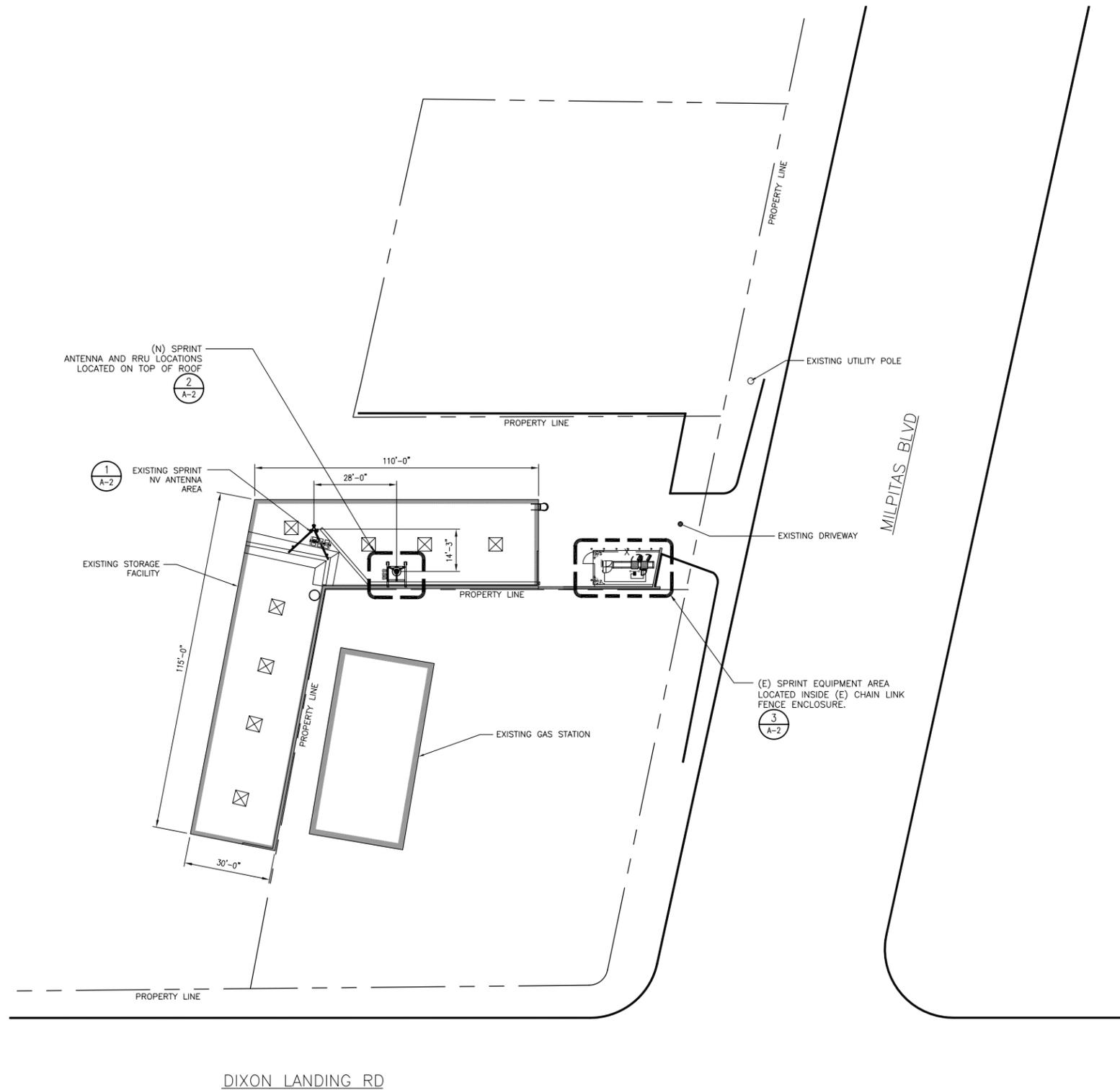
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SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-2

NOTE:
THE NEW RADOME LOCATION IS AN APPROXIMATION AND WILL NEED TO BE VERIFIED WITH THE EXISTING BUILDINGS ROOF FRAMING PLAN.



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Sprint
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Overland Park, Kansas 66251

PLANS PREPARED BY:

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CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
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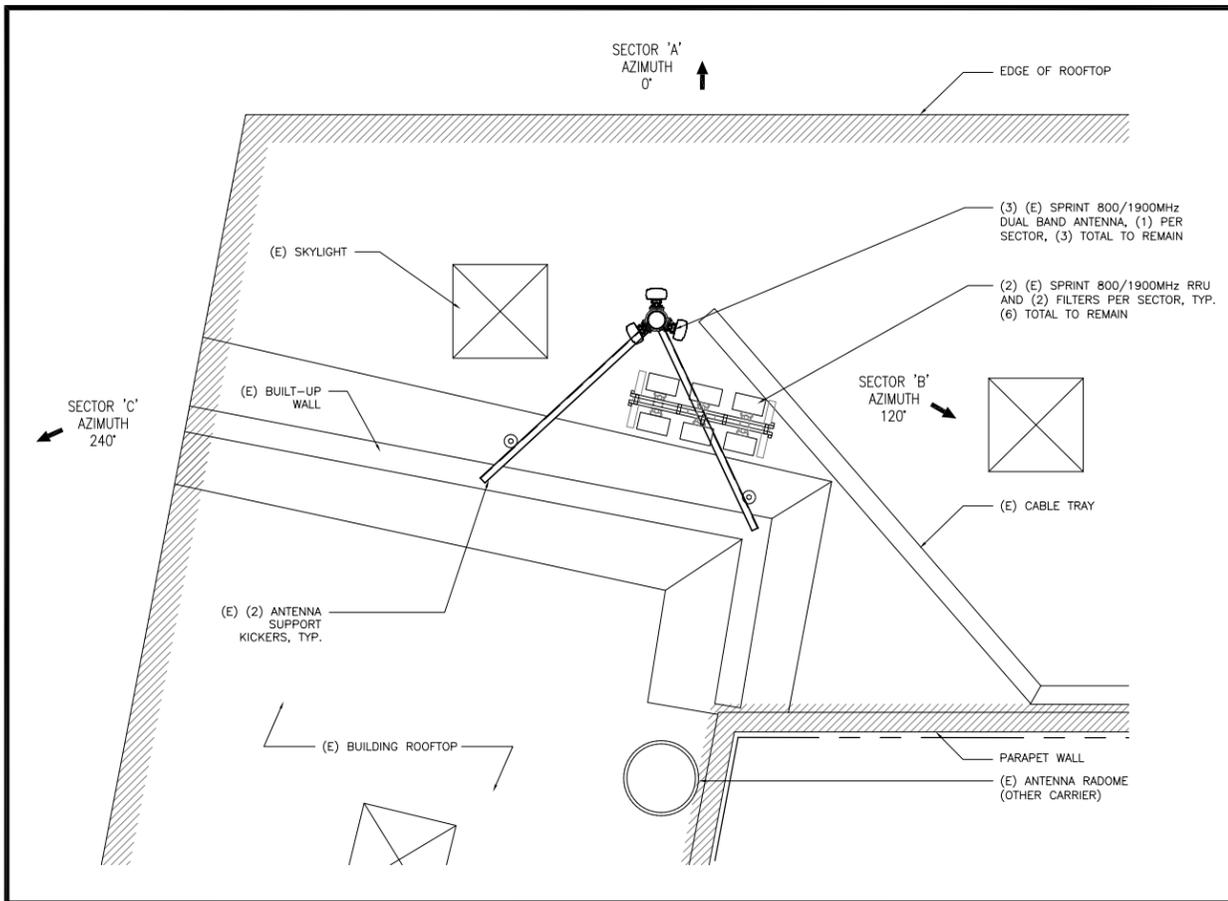
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SITE PLAN

SHEET NUMBER:

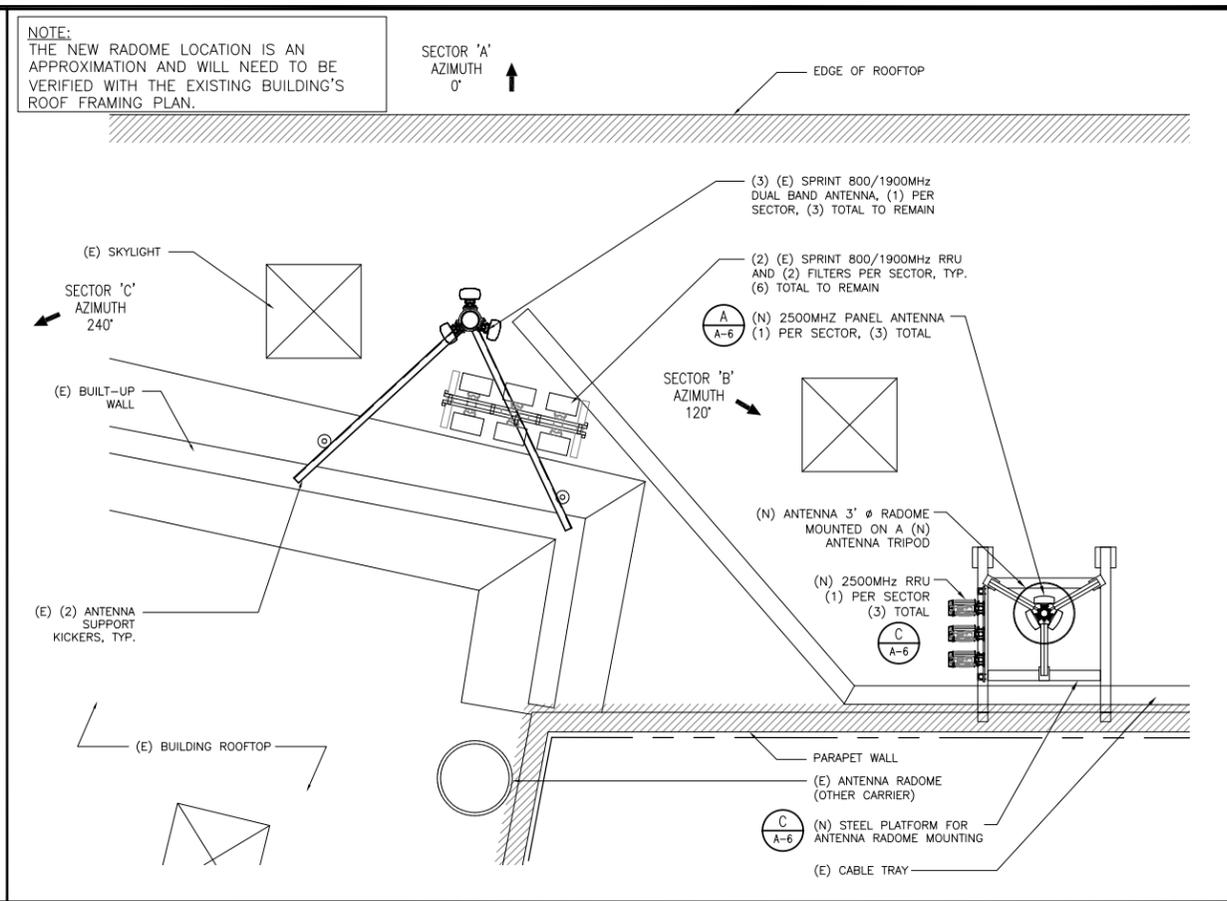
A-1





EXISTING ANTENNA LAYOUT SECTOR 'A' 'B' & 'C'

SCALE: 1/4"=1'-0" 0 2 4 1



PROPOSED ANTENNA LAYOUT SECTOR 'A' 'B' & 'C'

SCALE: 1/4"=1'-0" 0 2 4 2

NOTE:
THE NEW RADOME LOCATION IS AN APPROXIMATION AND WILL NEED TO BE VERIFIED WITH THE EXISTING BUILDING'S ROOF FRAMING PLAN.

PLANS PREPARED FOR:

NOTE:
THE NEW RADOME LOCATION IS AN APPROXIMATION AND WILL NEED TO BE VERIFIED WITH THE EXISTING BUILDING'S ROOF FRAMING PLAN.

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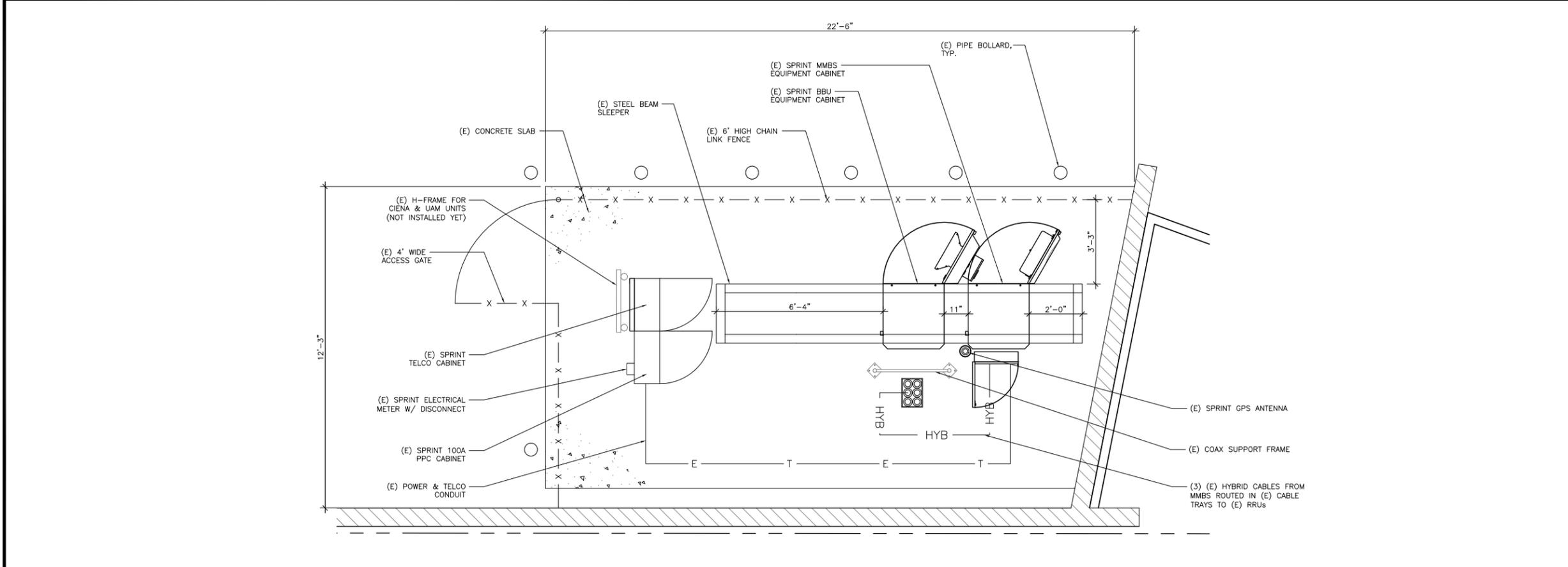
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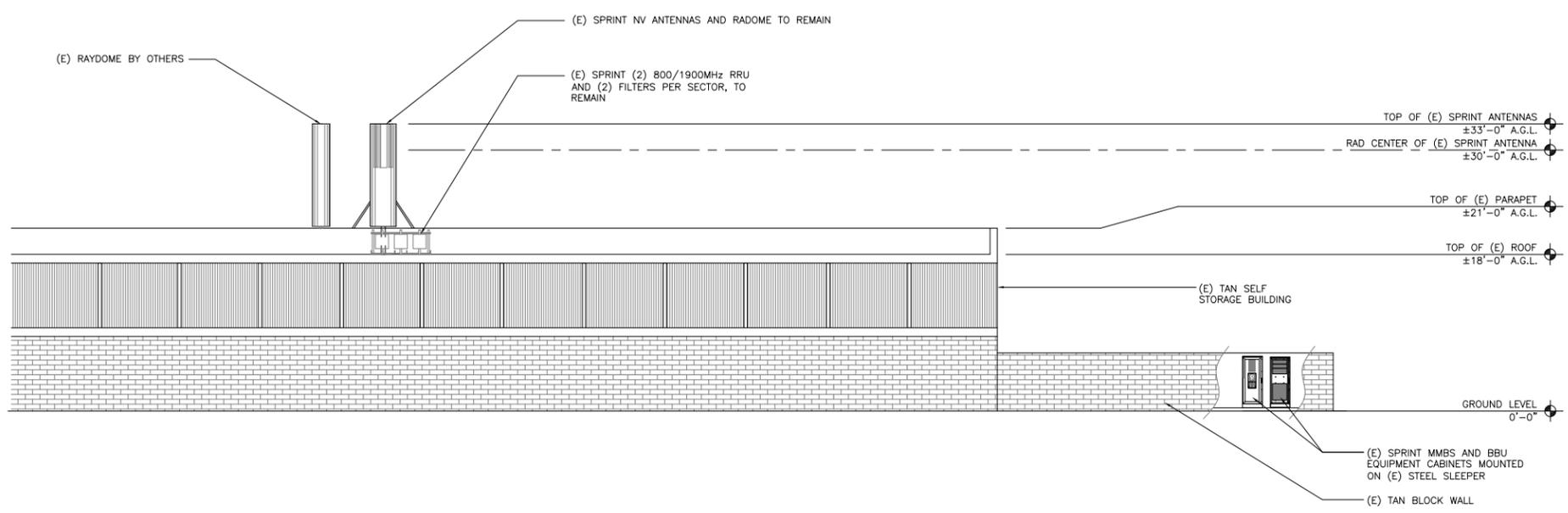
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ANTENNA AND EQUIPMENT LAYOUTS

SHEET NUMBER:
A-2



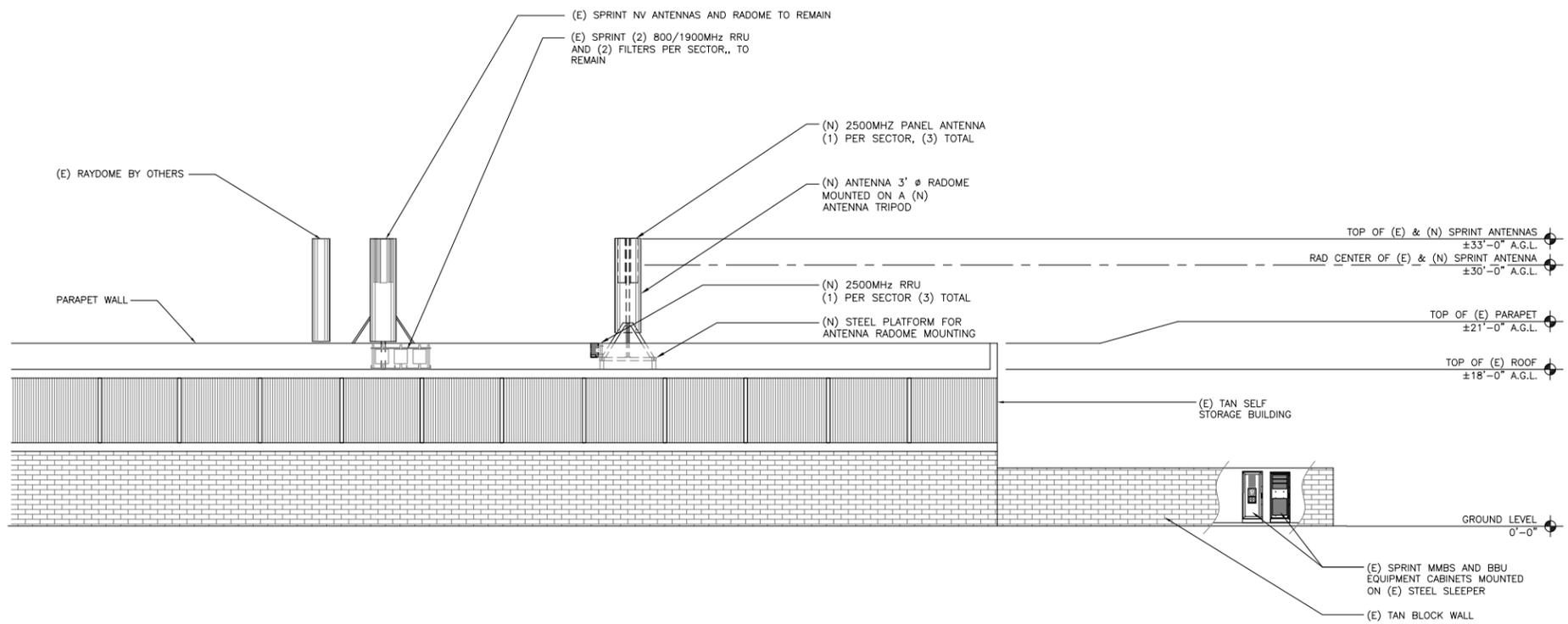
EQUIPMENT LAYOUT

SCALE: 1/2"=1'-0" 0 1 2 3



EXISTING SOUTH ELEVATION

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



PROPOSED SOUTH ELEVATION

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

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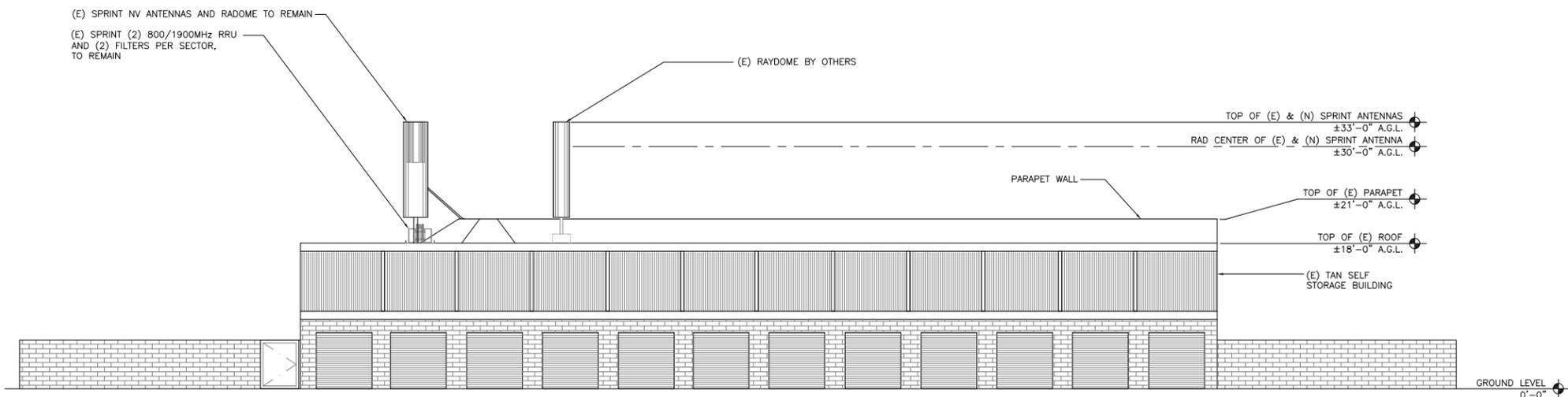
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SOUTH ELEVATIONS

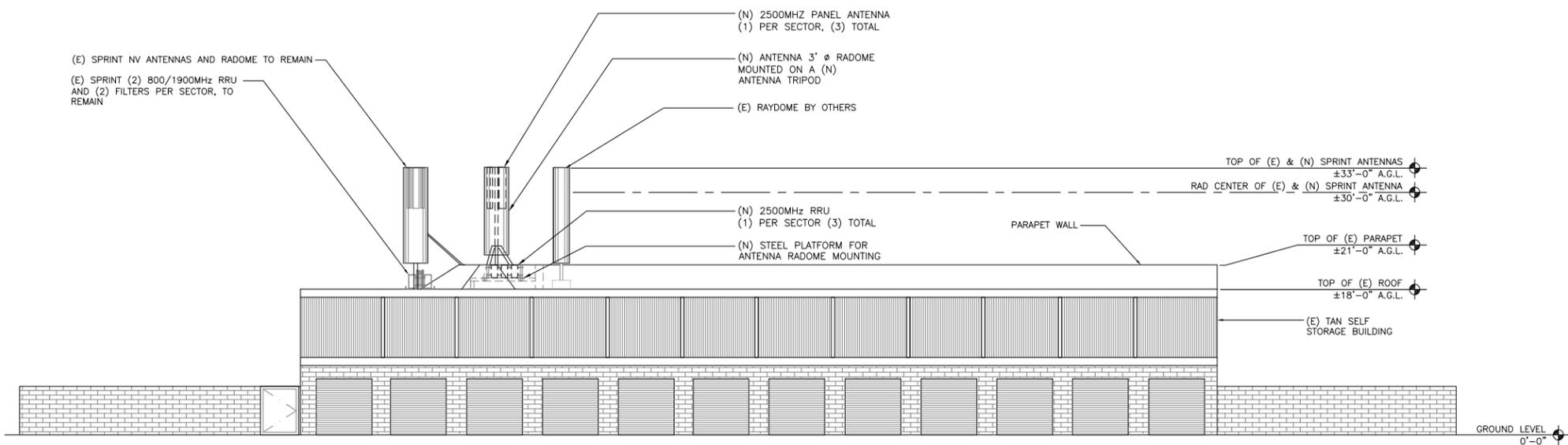
SHEET NUMBER:
A-3



EXISTING WEST ELEVATION

SCALE: 1/8"=1'-0"
0 4 8

2



PROPOSED WEST ELEVATION

SCALE: 1/8"=1'-0"
0 4 8

2

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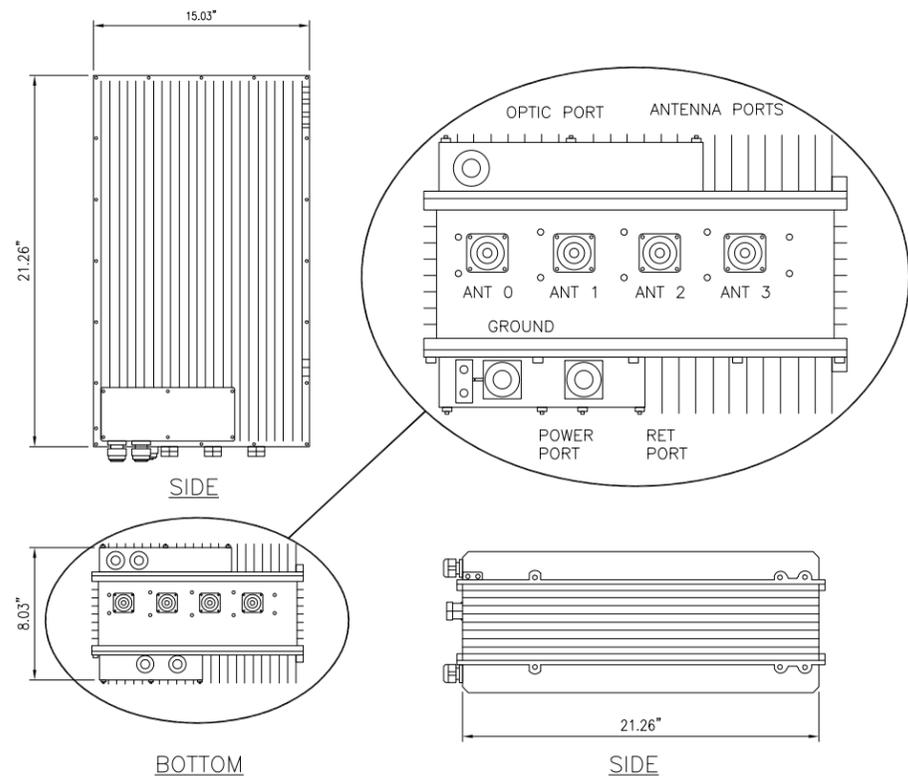
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WEST ELEVATIONS

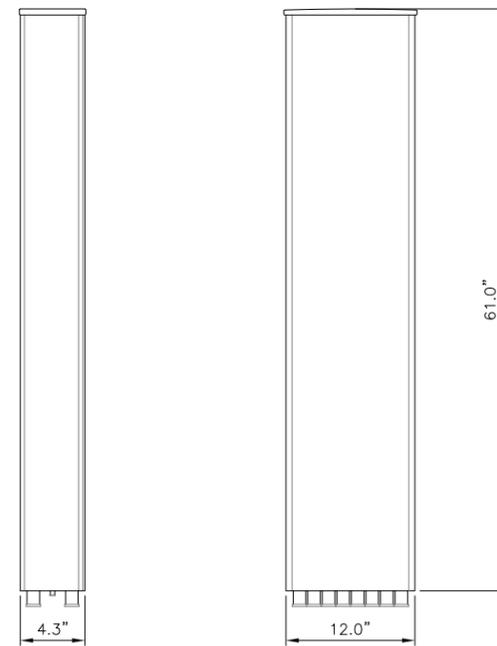
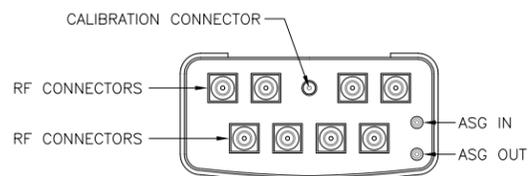
SHEET NUMBER:

A-3



ANTENNA MAKE AND MODEL

MANUFACTURER: KMW
 MODEL: ET-X-WM-18-65-8P
 DIMENSIONS, HxWxD.in(mim): 61.0" X 12" X 4.3"
 ANTENNA WEIGHT: 36.4 lbs
 MOUNTING BRACKET WEIGHT: 13.2 lbs
 TOTAL WEIGHT: 49.6 lbs



NOTES

GENERAL CONTRACTOR TO ENSURE THAT ALL RRU'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRU PACKAGES IN THE RAIN

MODEL#: SAMSUNG RRH-V3
 2.5 RRU WEIGHT = 59.5 LBS
 MOUNTING BRACKET = 12.32 LBS
 TOTAL = 71.82 LBS

2.5 RRU'S

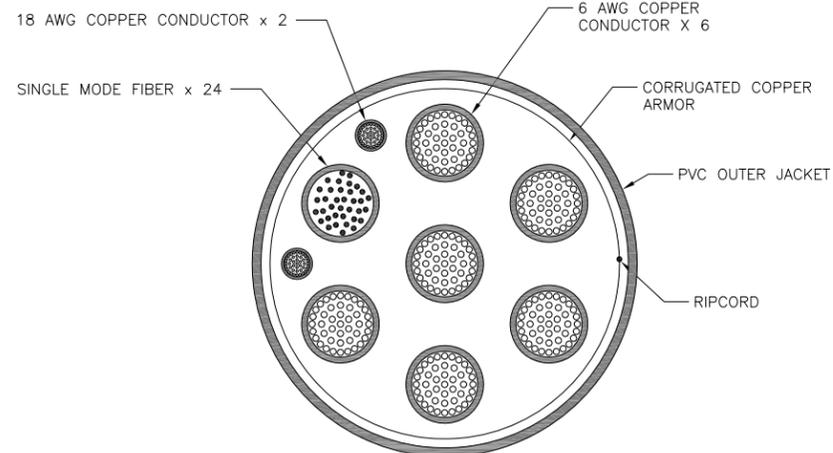
NO SCALE

C

2.5 ANTENNA

NO SCALE

A

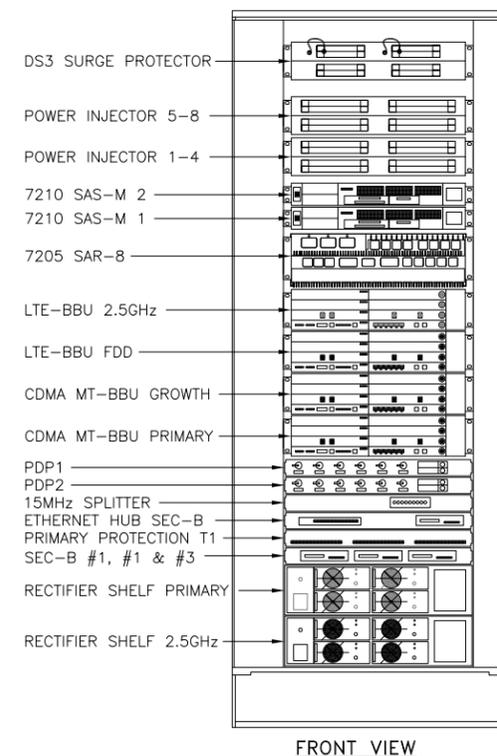
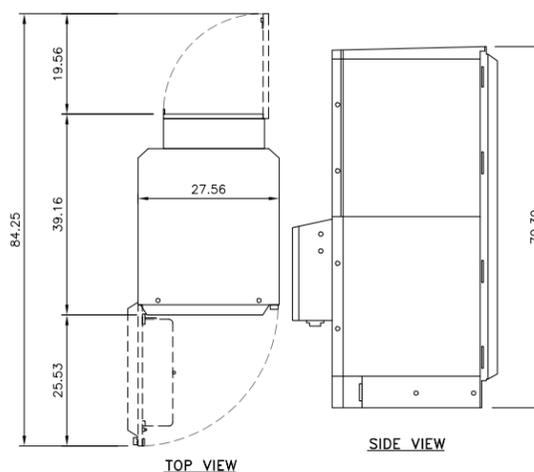


NOTE: CABLE CROSS-SECTION NOT DRAWN TO SCALE

HYBRID CABLE X-SECTION

NO SCALE

D



- DS3 SURGE PROTECTOR
- POWER INJECTOR 5-8
- POWER INJECTOR 1-4
- 7210 SAS-M 2
- 7210 SAS-M 1
- 7205 SAR-8
- LTE-BBU 2.5GHz
- LTE-BBU FDD
- CDMA MT-BBU GROWTH
- CDMA MT-BBU PRIMARY
- PDP1
- PDP2
- 15MHz SPLITTER
- ETHERNET HUB SEC-B
- PRIMARY PROTECTION T1
- SEC-B #1, #1 & #3
- RECTIFIER SHELF PRIMARY
- RECTIFIER SHELF 2.5GHz

FRONT VIEW

EXISTING MMBS BBU WITH 2.5 EQUIPMENT

NO SCALE

B

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EQUIPMENT MANUFACTURER:

SAMSUNG

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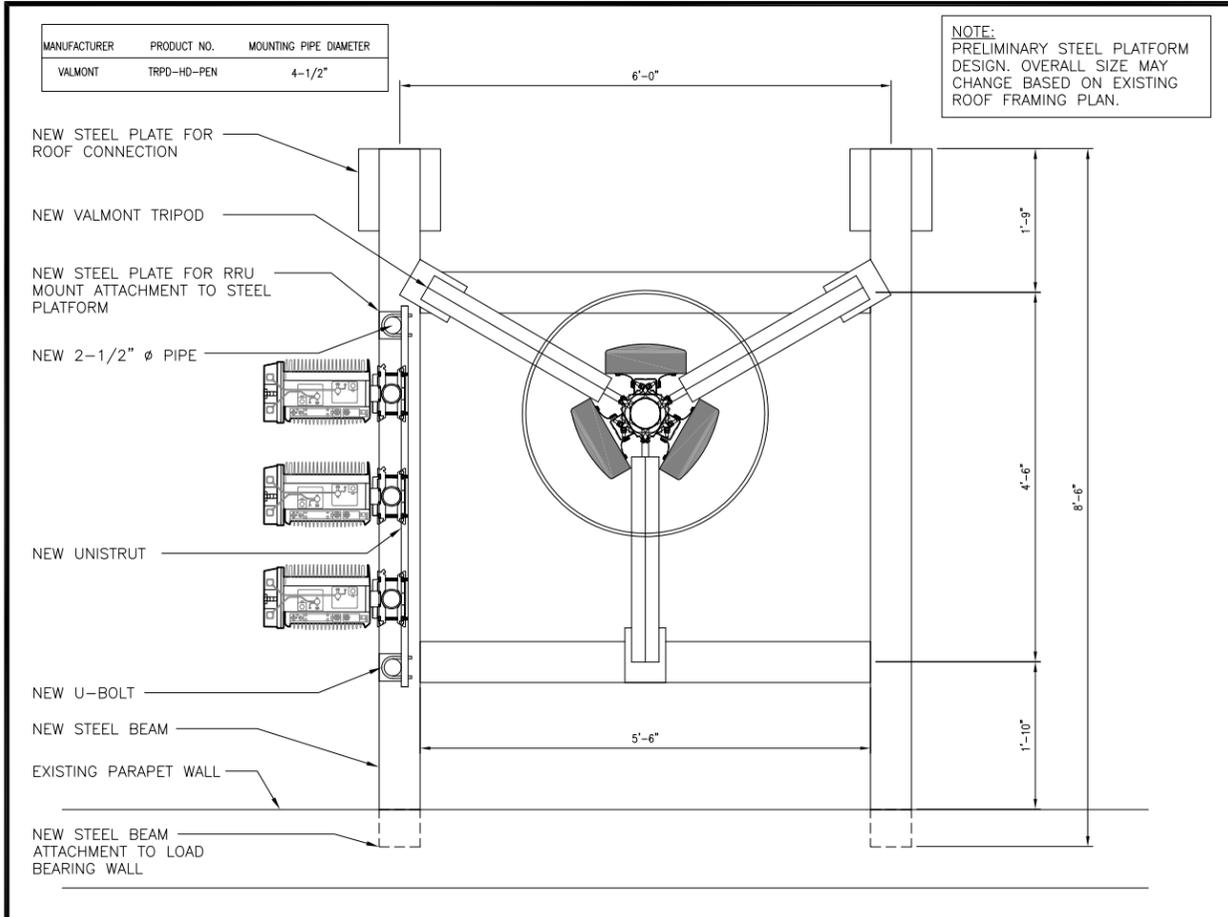
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SHEET DESCRIPTION:

EQUIPMENT DETAILS

SHEET NUMBER:

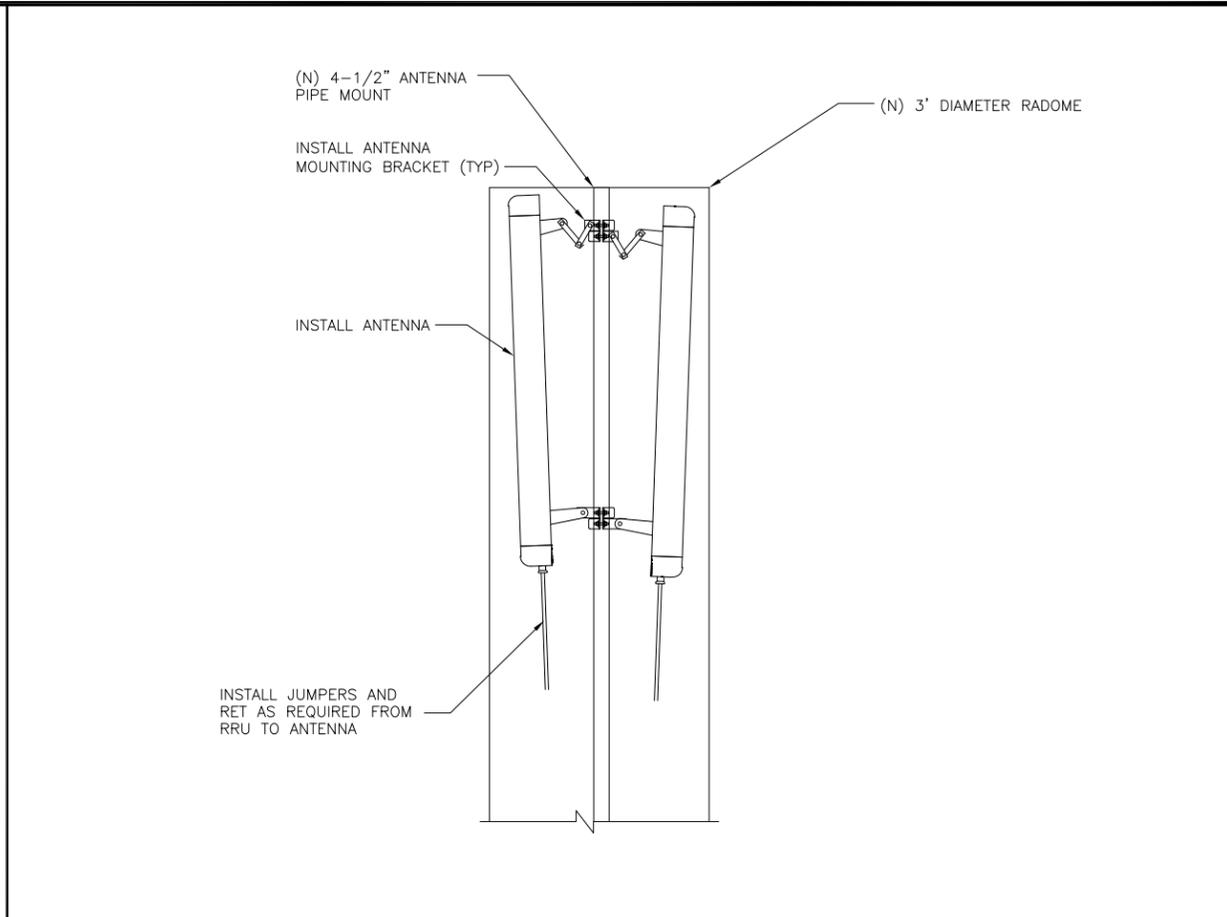
A-5



NEW STEEL PLATFORM FOR ANTENNA RADOME PLAN

NO SCALE

C



ANTENNA MOUNTING DETAIL

NO SCALE

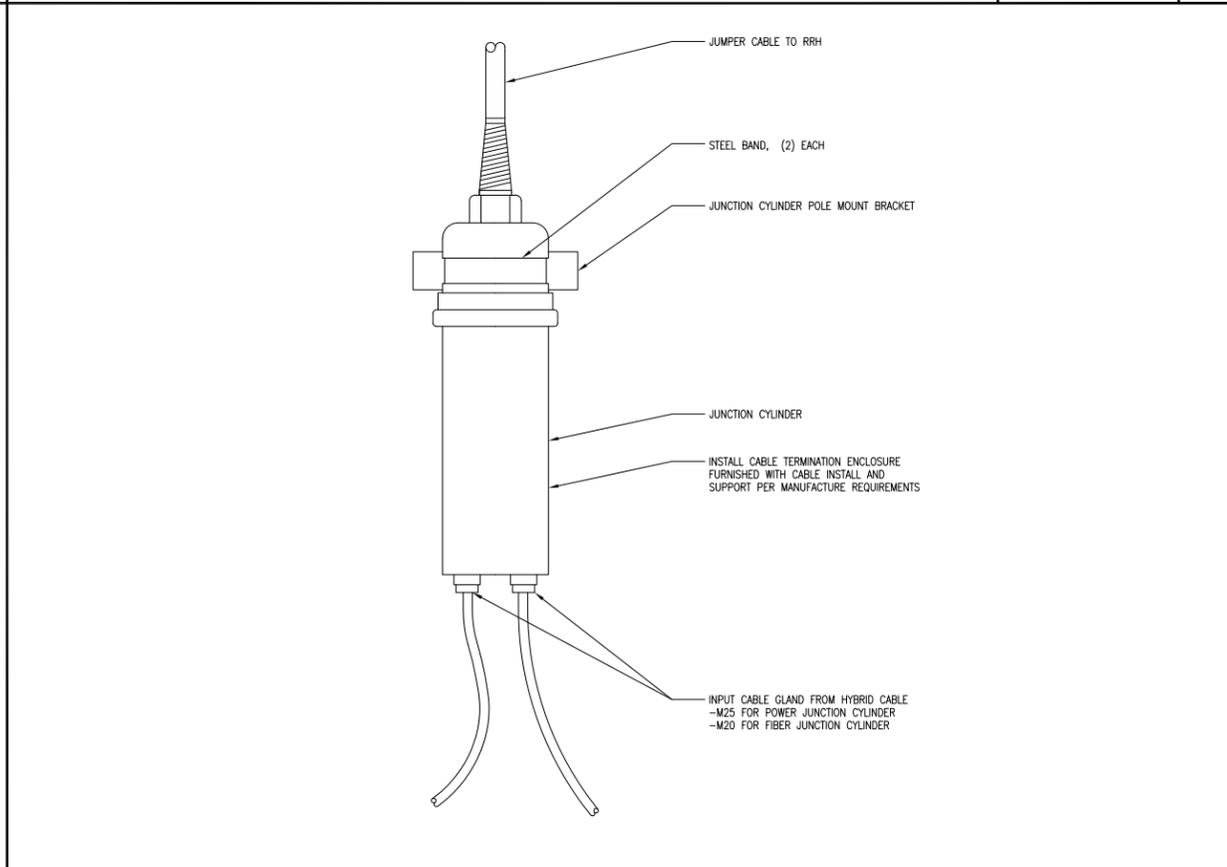
A



NOT USED

NO SCALE

D



POWER & FIBER JUNCTION CYLINDER

NO SCALE

B

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EQUIPMENT DETAILS

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DESCRIPTION	DATE	BY	REV
PRELIMINARY CD's	01/29/14	JR	0
100% CD's	03/13/14	DC	1

SITE NAME:

LOCK IT UP STORAGE

SITE CASCADE:

FS04XC176

SITE ADDRESS:

15 DIXON LANDING ROAD
MILPITAS, CA
95035

SHEET DESCRIPTION:

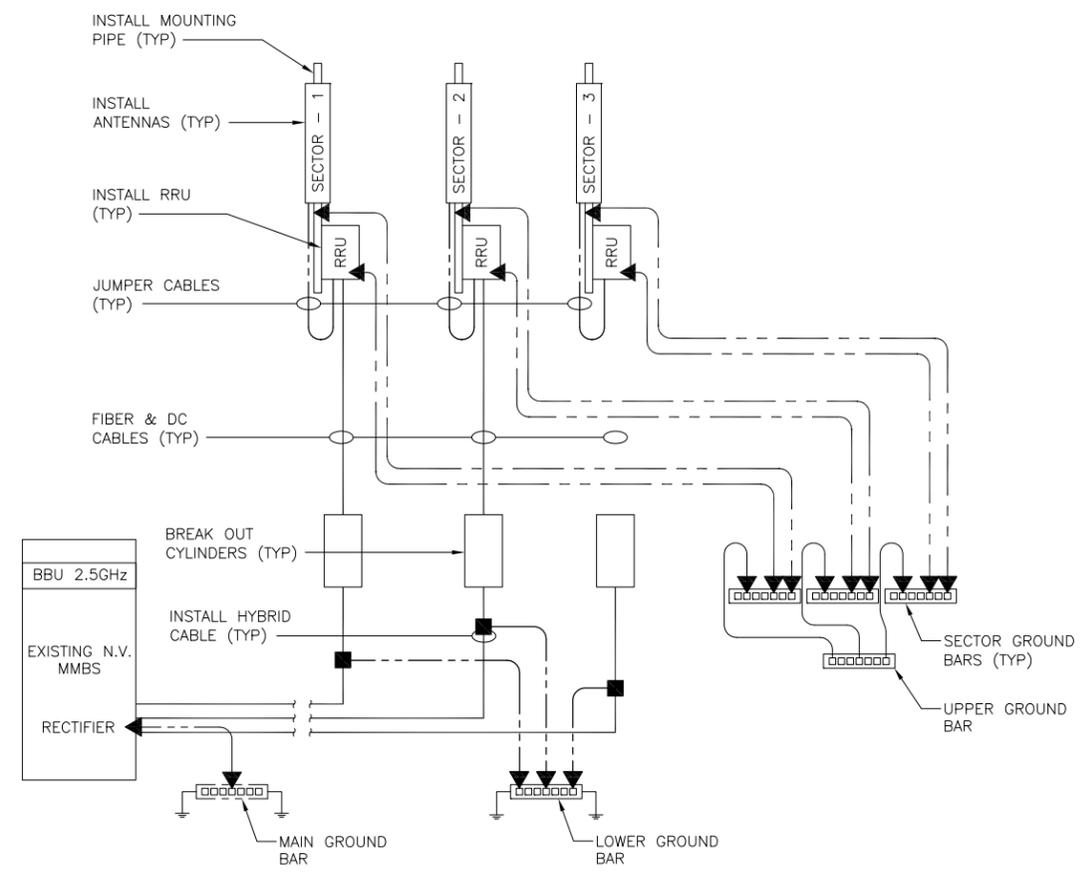
GRND PLAN AND DETAILS

SHEET NUMBER:

E-1

SYMBOL LEGEND

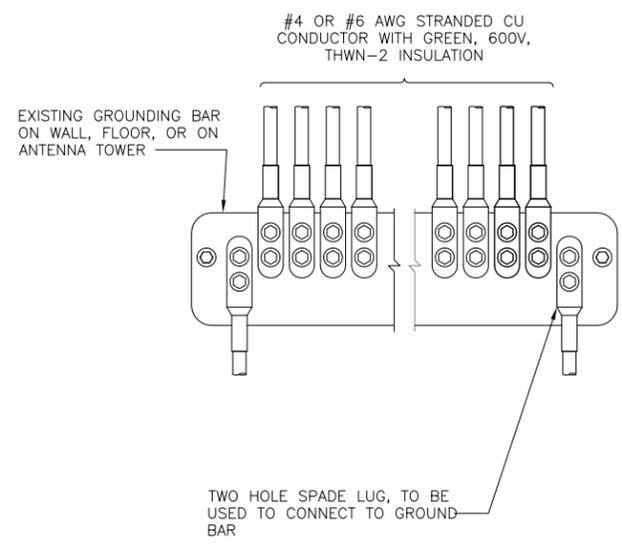
■ EXOTHERMIC CONNECTION
▲ MECHANICAL CONNECTION



GROUNDING RISER DIAGRAM

NO SCALE

C



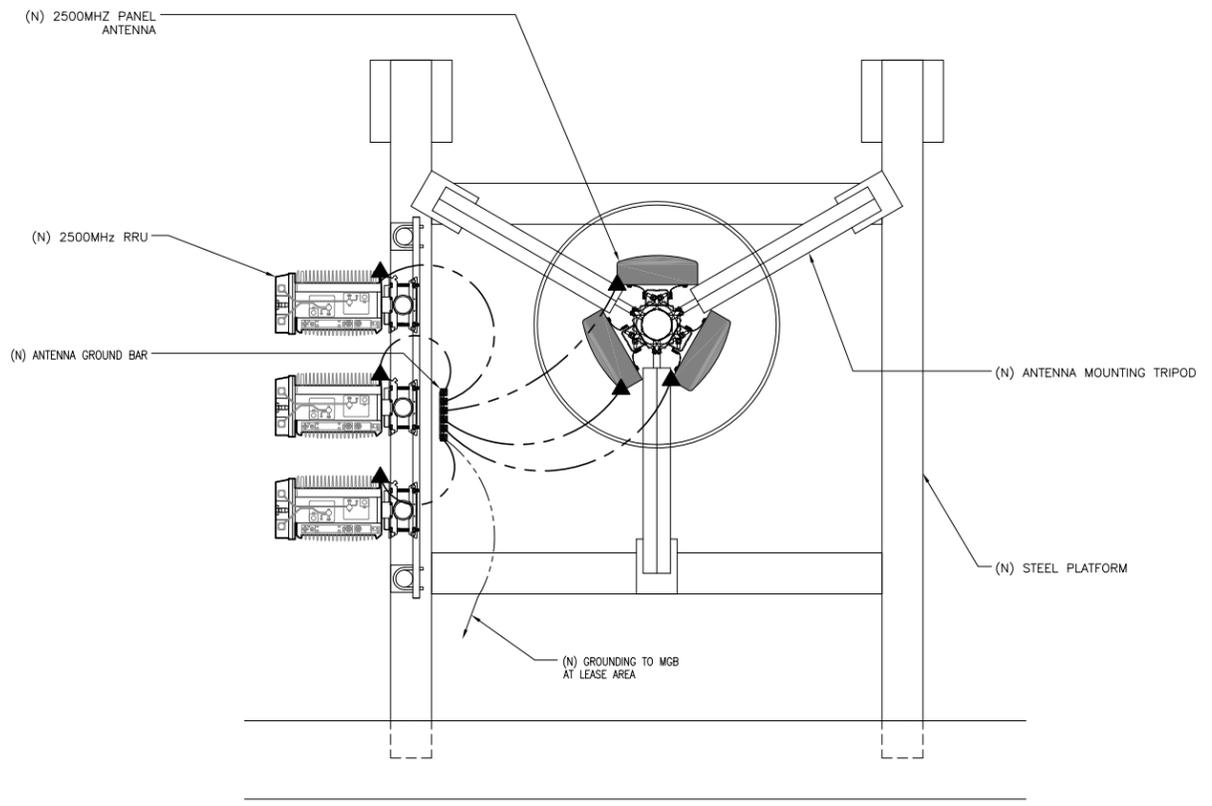
NOTES

1. APPLY NO-OX TO LUG AND BAR CONTACT SURFACE. DO NOT COAT INLINE LUG.
2. IF STOLEN GROUND BARS ARE ENCOUNTERED, CONTACT SPRINT CM FOR REPLACEMENT THREADED ROD KIT.

INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR

NO SCALE

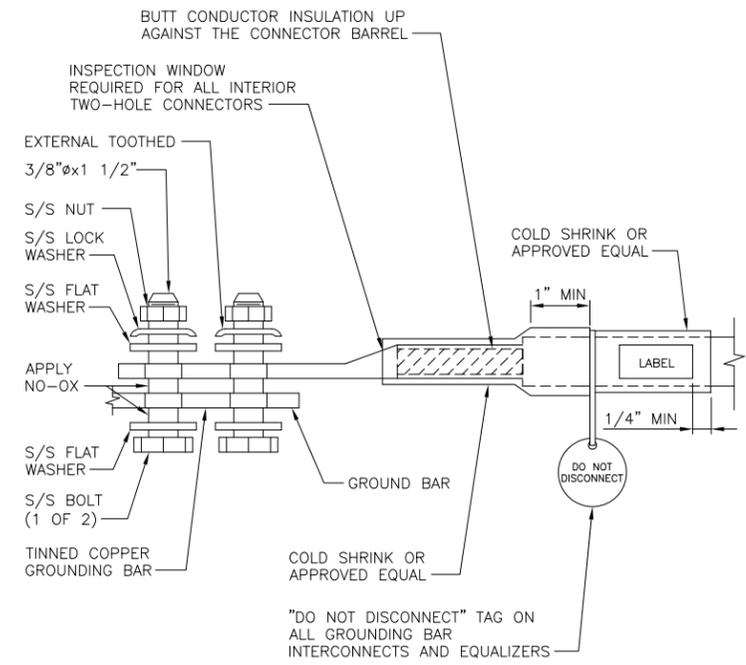
A



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE

D



TWO HOLE LUG

NO SCALE

B