



PROJECT: 2.5 EQUIPMENT DEPLOYMENT
 SITE NAME: (LB-FUNDED) METRO PLACE
 SITE CASCADE: CB33XC147
 SITE NUMBER:
 SITE ADDRESS: 425 METRO PLACE SOUTH
 BUBLIN, OH 43017
 FRANKLIN COUNTY
 SITE TYPE: 89'-10" ROOFTOP

ENGINEER:



PREPARED FOR:



6391 SPRINT PARKWAY
 OVERLAND PARK, KS 66251



CONSULTANT:



CASCADE NUMBER:

CB33XC147

SITE NAME:
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 SITE ADDRESS:
 425 METRO PLACE SOUTH
 DUBLIN, OH 43017
 FRANKLIN COUNTY

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CLIENT PROJECT NO: TBD

0 03/17/14 CONSTRUCTION PLANS

NO. DATE SUBJECT

REVISION OR ISSUE

SSOE, Inc.
 320 Seven Springs Way, Suite 350
 Brentwood, TN 37027
 T 615-661-7585

PROJECT NO: 014-00618-00

PROJECT MANAGER: Floyd White

DESIGNED: Brian Gilbert

CHECKED: Greg Dulnik

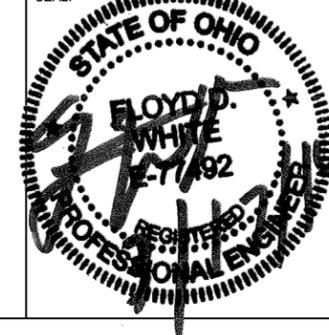
DRAWING TITLE:

TITLE SHEET &
 PROJECT DATA

DRAWING NO:

T-1

SEAL:



SITE INFORMATION

PROPERTY OWNER: GENERAL ELECTRIC CREDIT EQUITIES INC.
 500 WEST MONROE STREET
 CHICAGO, IL 60661

LATITUDE (NAD83): 40° 5' 41.6832" N
 40.094912°

LONGITUDE (NAD83): 83° 7' 38.2326" W
 -83.127287°

COUNTY: FRANKLIN COUNTY

ZONING JURISDICTION: CITY OF DUBLIN

ZONING DISTRICT: OS (OPEN SPACE)

POWER COMPANY: AEP

AAV PROVIDER: AMERITECH

CONSTRUCTION TYPE: 2B(NON-COMBUSTIBLE)USE GROUP "U"
 CURRENT USE: UNMANNED WIRELESS TELECOMMUNICATIONS FACILITY
 NEW USE: UNMANNED WIRELESS TELECOMMUNICATIONS FACILITY

CODE COMPLIANCE

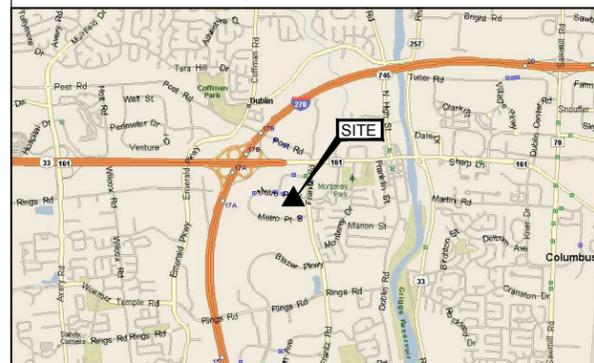
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

- 2011 OHIO BUILDING CODE WITH CURRENT AND LOCAL AMENDMENTS
- 2011 OHIO MECHANICAL CODE WITH CURRENT AND LOCAL AMENDMENTS
- 2011 NATIONAL ELECTRIC CODE WITH CURRENT AND LOCAL AMENDMENTS
- 2009 INTERNATIONAL FUEL GAS CODE WITH CURRENT AND LOCAL AMENDMENTS
- 2009 INTERNATIONAL ENERGY CONSERVATION CODE
- 2006 OHIO RESIDENTIAL CODE WITH CURRENT AND LOCAL AMENDMENTS
- 2009 ICC/ANSI A-117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
- 2009 LIFE SAFETY CODE (NFPA 101)



Know what's below.
 Call before you dig.

AREA MAP



SCALE: N.T.S.

LOCATION MAP



SCALE: N.T.S.

DRIVING DIRECTIONS

FROM COLUMBUS; HEAD WEST ON EAKIN RD TOWARD SALISBURY RD. TURN RIGHT ONTO DEMOREST RD. TAKE THE 2ND LEFT ONTO SULLIVANT AVE. TURN RIGHT ONTO GEORGESVILLE RD. TURN LEFT ONTO US-40 W. TAKE THE I-70 RAMP TO I-270N. TAKE EXIT 17A TO MERGE ONTO OH-161E. TURN RIGHT ONTO FRANTZ RD. TURN RIGHT ONTO METRO PL S. SITE IS LOCATED ON THE RIGHT

SCOPE OF WORK

SPRINT PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY

- INSTALL (3) NEW PANEL ANTENNA(S)
- INSTALL (3) NEW RRH(S)
- INSTALL (4) NEW BATTERIES
- INSTALL (3) NEW FIBER JUNCTION CYLINDERS
- INSTALL (3) NEW POWER JUNCTION CYLINDERS
- INSTALL (27) NEW JUMPERS
- INSTALL (3) AISG CABLES

- THE WIRELESS COMMUNICATIONS FACILITY IS NOT INTENDED FOR HUMAN OCCUPANCY.
- THIS FACILITY DOES NOT REQUIRE POTABLE WATER AND WILL NOT PRODUCE ANY SEWAGE.
- THE SCOPE OF WORK CONSISTS OF MODIFYING THE EXISTING WIRELESS INSTALLATION.

LIST OF DRAWINGS

SHEET #	SHEET DESCRIPTION	REV
T-1	TITLE SHEET & PROJECT DATA	0
SP-1	SPRINT SPECIFICATIONS	0
SP-2	SPRINT SPECIFICATIONS	0
A-1	SITE PLAN	0
A-2	TOWER ELEVATION & ANTENNA DETAILS	0
A-3	ANTENNA & HYBRID CABLE DETAILS	0
A-4	BREAKOUT & EQUIPMENT DETAILS	0
A-5	COLOR CODING	0
E-1	GROUNDING DETAILS	0
E-2	DC POWER DETAILS & PANEL SCHEDULES	0

CONTACTS

APPLICANT:
 FMHC CORPORATION
 1700 SHERWIN AVENUE
 DES PLAINES, IL 60018
 CONTACT NAME: ANDRE MALLORY
 CONTACT NUMBER: (773) 332-2391 AMALLORY@FMHC.COM

TOWER OWNER:
 GENERAL ELECTRIC CREDIT EQUITIES INC.
 500 WEST MONROE STREET
 CHICAGO, IL 60661
 SITE NUMBER: CB33XC147
 SITE NAME: (LB-FUNDED) METRO PLACE
 CONTACT NAME: GENERAL ELECTRIC CREDIT EQUITIES INC.
 CONTACT NUMBER: 312-441-7000

LEASING PM:
 FMHC CORPORATION
 1700 SHERWIN AVENUE
 DES PLAINES, IL 60018
 CONTACT NAME: ANDRE MALLORY
 CONTACT NUMBER: (773) 332-2391 AMALLORY@FMHC.COM

ZONING PM:
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 1700 SHERWIN AVENUE
 DES PLAINES, IL 60018
 CONTACT NAME: ANDRE MALLORY
 CONTACT NUMBER: (773) 332-2391 AMALLORY@FMHC.COM

SITE ACQ. PM:
 FMHC CORPORATION
 1700 SHERWIN AVENUE
 DES PLAINES, IL 60018
 CONTACT NAME: ANDRE MALLORY
 CONTACT NUMBER: (773) 332-2391 AMALLORY@FMHC.COM

SPRINT CONSTRUCTION MANAGER:
 MIKE LIGHTLE
 6595 PROPRIETORS RD.
 WORTHINGTON, OH 43085
 (614) 603-8295
 MIKE.X.LIGHTLE@SPRINT.COM

SPRINT RF ENGINEER:
 ANAND ARUMUGAM
 2 EASTON OVAL
 SUITE 400
 COLUMBUS, OH 43219
 ANAND.ARUMUGAM@SPRINT.COM

ENGINEER:
 SSOE, INC.
 320 SEVEN SPRINGS WAY, SUITE 350
 BRENTWOOD, TN 37027
 FLOYD WHITE
 (615) 661-7585

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

- A. COAX COLOR CODING SWEEPS AND FIBER TESTING TS-0200 AND EL-0568
- B. CABLE LABELING TS-0200
- C. APPLICABLE INSTALLATION MOPS IDENTIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS

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 5 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. SCALABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
 - 4. ALL AVAILABLE JURISDICTIONAL PERMIT AND OCCUPANCY 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. APPLICABLE POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).
 - 12. CLOSEOUT PHOTOGRAPHS AND CLOSEOUT CHECKLIST: SPRINT WILL PROVIDE SEPARATE GUIDANCE

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, MIN LENGTH FOR JUMPER SHALL BE 10'-0".

REMOTE ELECTRICAL TILT (RET) CABLES: A/E TO INSERT SPECIFICATION

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

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

- 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 CABLE 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 INSTALLED INSIDE MONOPOLE WITH CABLE SUPPORT GRIPS AS REQUIRED BY THE MANUFACTURER.
- 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 1/2" 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 CROSSOVERS.
 - c. HOIST CABLE USING PROPER HOISTING GRIPS. DO NOT EXCEED MANUFACTURERS RECOMMENDED MAXIMUM BEND RADIUS.

CONTINUE FROM SP-1

- 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 5.
- 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.

ENGINEER:



PREPARED FOR:



6391 SPRINT PARKWAY
OVERLAND PARK, KS 66251



CONSULTANT:



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REVISION OR ISSUE

SSOE, Inc.
320 Seven Springs Way, Suite 350
Brentwood, TN 37027
T 615-661-7565

PROJECT NO: **014-00618-00**

PROJECT MANAGER: **Floyd White**

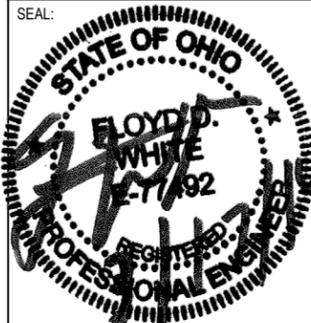
DESIGNED: **Brian Gilbert**

CHECKED: **Greg Dulnik**

DRAWING TITLE:
GENERAL NOTES

DRAWING NO:
SP-1

SEAL:



C:\dgn\0797418\CB33XC147 Site Construction Drawing Rev0.dwg
DATE: 03/17/14 11:00 AM
USER: b.gilbert

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 BUT 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 REQUIRED BY THE APPLICABLE INSTALLATION MOPS.
- C. COMPLY WITH MANUFACTURERS INSTALLATION AND START-UP REQUIREMENTS.

DC CIRCUIT BREAKER LABELING

- A. NEW DC CIRCUIT IS REQUIRED IN MMBS CABINET SHALL BE CLEARLY IDENTIFIED AS TO RRU BEING SERVICED.

SECTION 26 100 - BASIC ELECTRICAL REQUIREMENTS

SUMMARY:
THIS SECTION SPECIFIES BASIC ELECTRICAL REQUIREMENTS FOR SYSTEMS AND COMPONENTS.

QUALITY ASSURANCE:

- A. ALL EQUIPMENT FURNISHED UNDER DIVISION 26 SHALL CARRY UL LABELS AND LISTINGS WHERE SUCH LABELS AND LISTINGS ARE AVAILABLE IN THE INDUSTRY.
- B. MANUFACTURERS OF EQUIPMENT SHALL HAVE A MINIMUM OF THREE YEARS EXPERIENCE WITH THEIR EQUIPMENT INSTALLED AND OPERATING IN THE FIELD IN A USE SIMILAR TO THE PROPOSED USE FOR THIS PROJECT.
- C. **MATERIALS AND EQUIPMENT:** ALL MATERIALS AND EQUIPMENT SPECIFIED IN DIVISION 26 OF THE SAME TYPE SHALL BE OF THE SAME MANUFACTURER AND SHALL BE NEW, OF THE BEST QUALITY AND DESIGN, AND FREE FROM DEFECTS.

SUPPORTING DEVICES:

- A. ALL EQUIPMENT FURNISHED UNDER DIVISION 26 SHALL CARRY UL LABELS AND LISTINGS WHERE SUCH LABELS AND LISTINGS ARE AVAILABLE IN THE INDUSTRY.
- B. MANUFACTURERS OF EQUIPMENT SHALL HAVE A MINIMUM OF THREE YEARS EXPERIENCE WITH THEIR EQUIPMENT INSTALLED AND OPERATING IN THE FIELD IN A USE SIMILAR TO THE PROPOSED USE FOR THIS PROJECT.
- C. **MATERIALS AND EQUIPMENT:** ALL MATERIALS AND EQUIPMENT SPECIFIED IN DIVISION 26 OF THE SAME TYPE SHALL BE OF THE SAME MANUFACTURER AND SHALL BE NEW, OF THE BEST QUALITY AND DESIGN, AND FREE FROM DEFECTS.

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. ALL UNDERGROUND CONDUIT OR CONDUIT IN CONCRETE SHALL BE PVC.
- 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 REQUIRED 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 BY ROX TEC.
 - 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 TO THE EXTENT 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 OR SOLID BARE OR INSULATED CONDUCTORS EXCEPTED AS OTHERWISE NOTED.
- 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.

ENGINEER:



PREPARED FOR:



CONSULTANT:



CASCADE NUMBER:

CB33XC147
SITE NAME:
(LB-FUNDED) METRO PLACE
SITE ADDRESS:
**425 METRO PLACE SOUTH
DUBLIN, OH 43017
FRANKLIN COUNTY**

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CLIENT PROJECT NO: TBD

0	03/17/14	CONSTRUCTION PLANS
---	----------	--------------------

NO.	DATE	SUBJECT
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REVISION OR ISSUE

SSOE, Inc.
320 Seven Springs Way, Suite 350
Brentwood, TN 37027
T 615-861-7585

PROJECT NO: **014-00618-00**

PROJECT MANAGER: **Floyd White**

DESIGNED: **Brian Gilbert**

CHECKED: **Greg Dulnik**

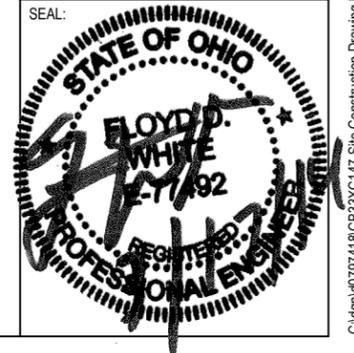
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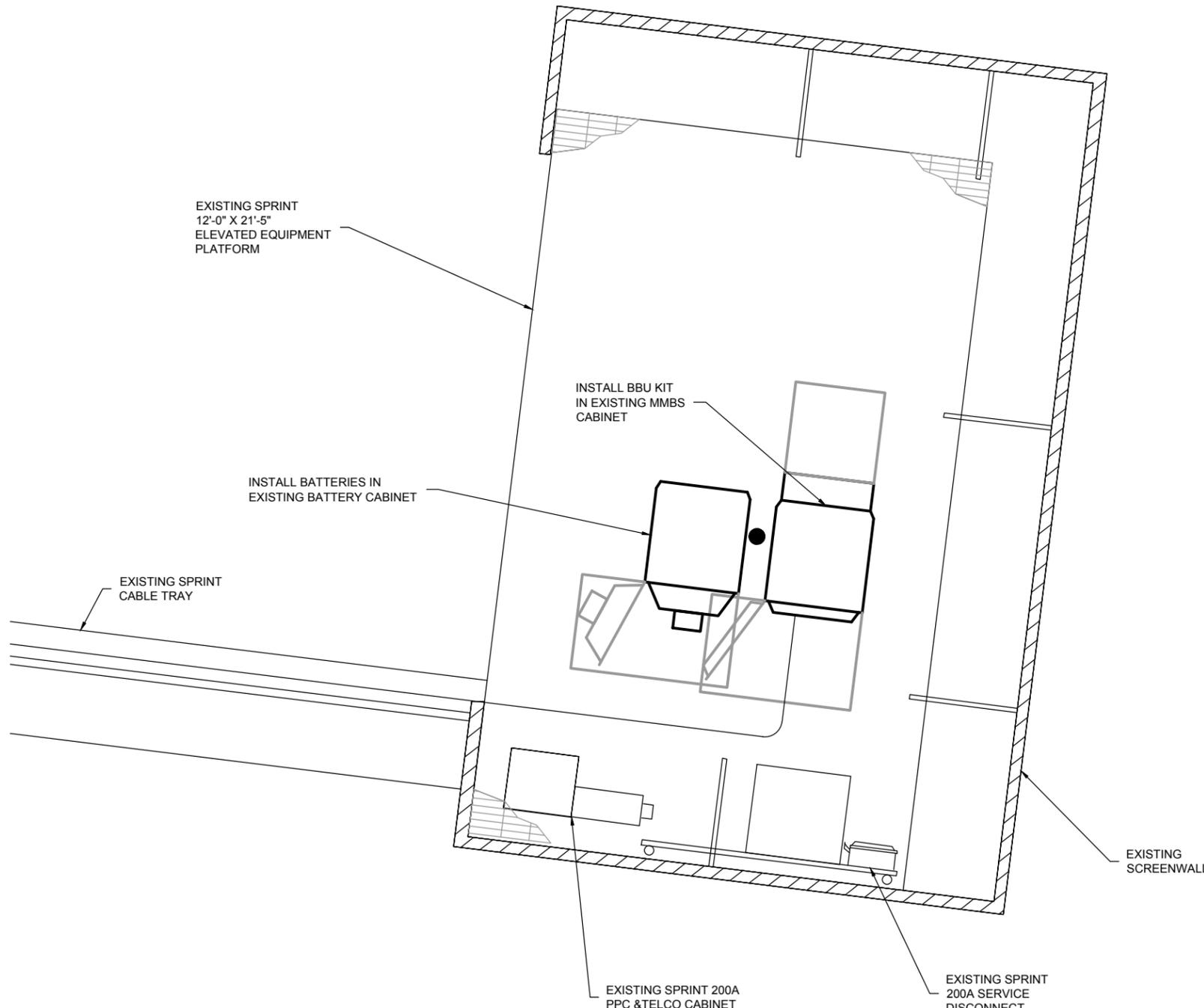
**SPRINT
SPECIFICATIONS**

DRAWING NO:

SP-2

SEAL:



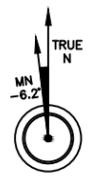


NOTE:
 CONTRACTOR TO OBTAIN A STRUCTURAL ANALYSIS
 AND SIGNED AND SEALED CONSTRUCTION
 DRAWINGS PRIOR TO CONSTRUCTION.
 CONTRACTOR TO REPLACE ALL MISSING GROUND
 BARS AND GROUNDING CONNECTIONS AS
 REQUIRED.

EXISTING BUILDING

EXISTING SCREENWALL

1 SITE PLAN
 SCALE: 1/4"=1'-0"



ENGINEER:
SSOE™

PREPARED FOR:
Sprint
 6391 SPRINT PARKWAY
 OVERLAND PARK, KS 66251

SAMSUNG

CONSULTANT:
fmhc

CASCADE NUMBER:
CB33XC147
 SITE NAME:
 (LB-FUNDED) METRO PLACE
 SITE ADDRESS:
 425 METRO PLACE SOUTH
 DUBLIN, OH 43017
 FRANKLIN COUNTY

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CLIENT PROJECT NO: TBD

NO.	DATE	SUBJECT
0	03/17/14	CONSTRUCTION PLANS

REVISION OR ISSUE

SSOE, Inc.
 320 Seven Springs Way, Suite 350
 Brentwood, TN 37027
 T 615-661-7565

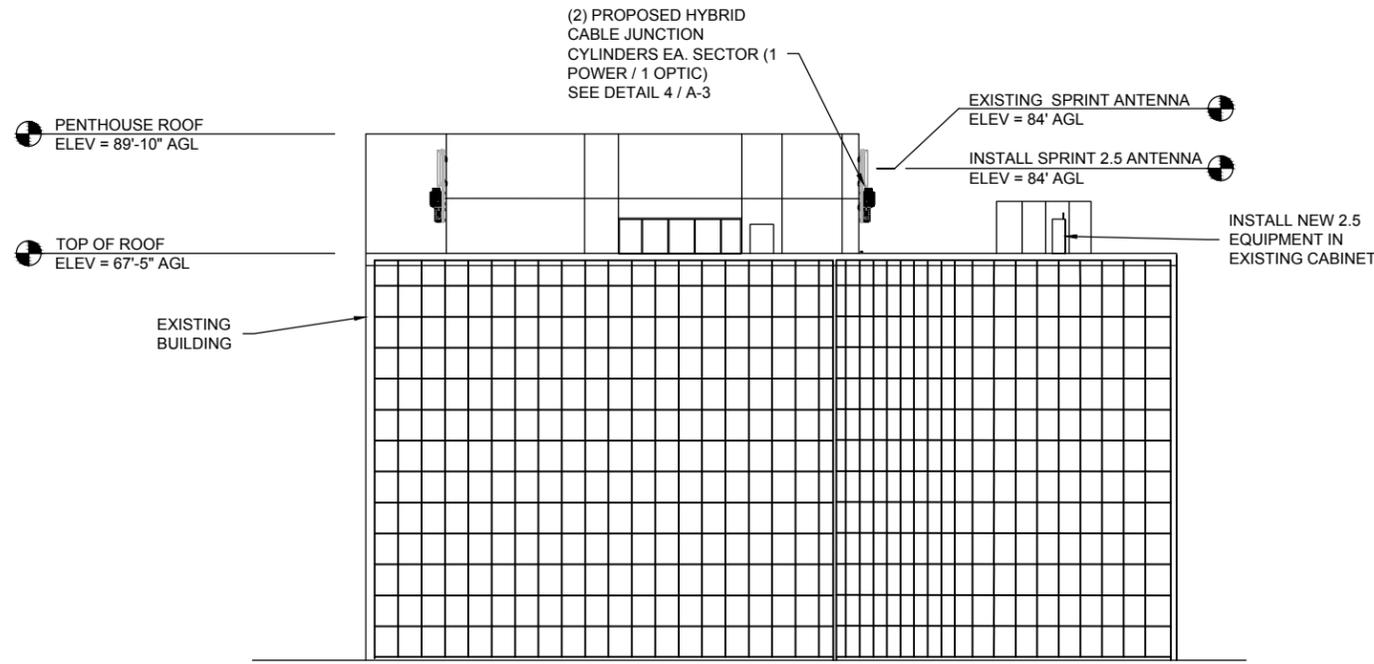
PROJECT NO: 014-00618-00
 PROJECT MANAGER: Floyd White
 DESIGNED: Brian Gilbert
 CHECKED: Greg Dulnik

DRAWING TITLE:
SITE PLAN

DRAWING NO:
A-1

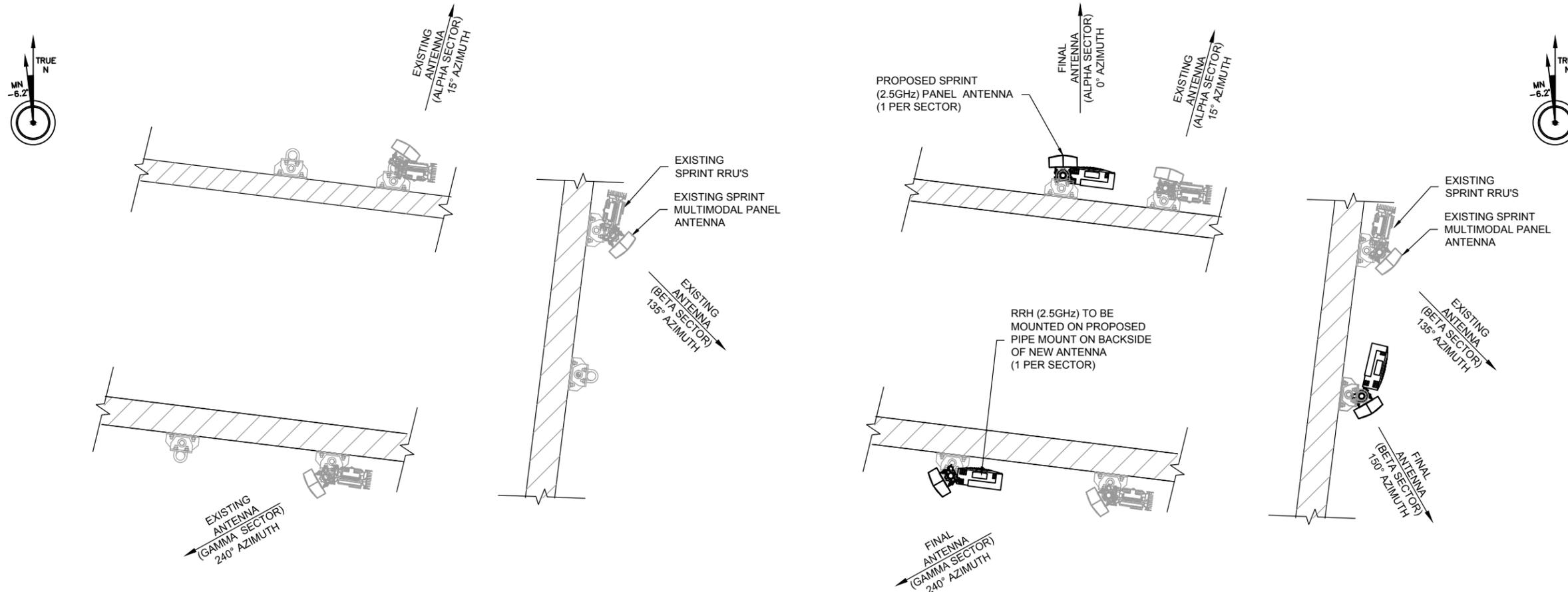
SEAL:

C:\dgn\0797418\CB33XC147 Site Construction Drawing Rev0.dwg
 DATE: 03/17/14 11:00 AM
 PLOT: 03/17/14 11:00 AM



NOTE:
 CONTRACTOR TO OBTAIN A STRUCTURAL ANALYSIS
 AND SIGNED AND SEALED CONSTRUCTION
 DRAWINGS PRIOR TO CONSTRUCTION.
 CONTRACTOR TO REPLACE ALL MISSING GROUND
 BARS AND GROUNDING CONNECTIONS AS
 REQUIRED.

1 TOWER ELEVATION
 SCALE: N.T.S.



2 ANTENNA PLAN (EXISTING)
 SCALE: N.T.S.

3 ANTENNA PLAN (FINAL)
 SCALE: N.T.S.

ENGINEER:

PREPARED FOR:

 6391 SPRINT PARKWAY
 OVERLAND PARK, KS 66251

CONSULTANT:

CASCADE NUMBER:
CB33XC147
 SITE NAME:
 (LB-FUNDED) METRO PLACE
 SITE ADDRESS:
 425 METRO PLACE SOUTH
 DUBLIN, OH 43017
 FRANKLIN COUNTY

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NO.	DATE	SUBJECT
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REVISION OR ISSUE

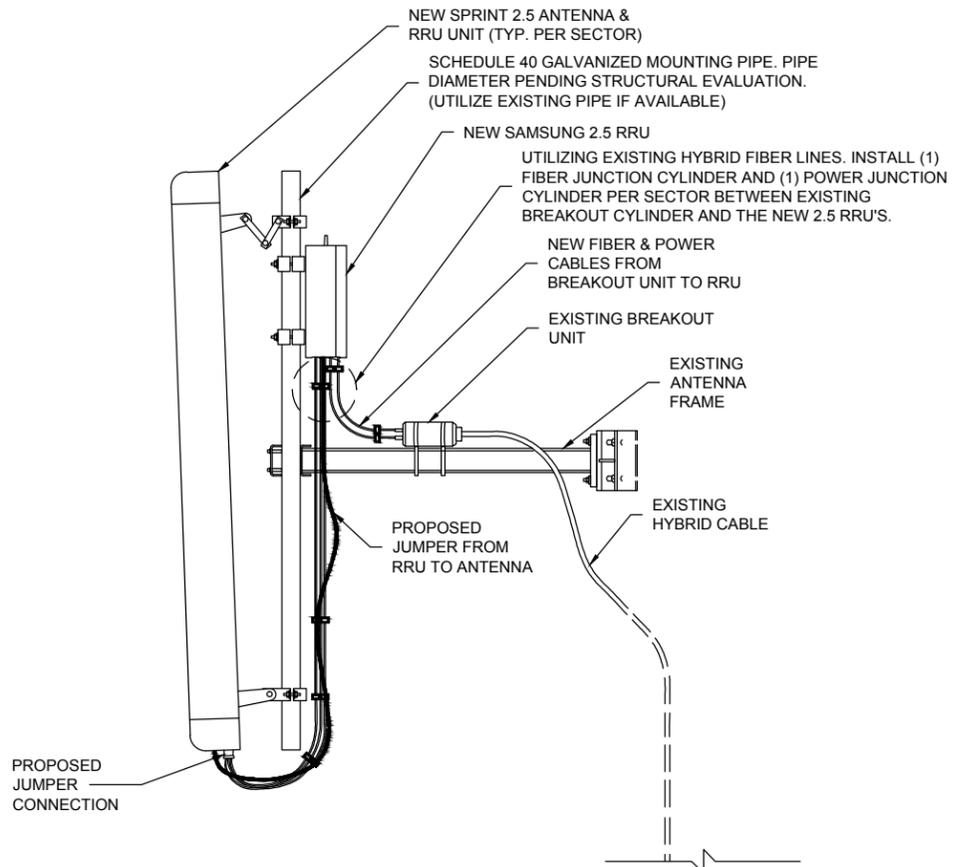
SSOE, Inc.
 320 Seven Springs Way, Suite 350
 Brentwood, TN 37027
 T 615-661-7565

PROJECT NO: 014-00618-00
 PROJECT MANAGER: Floyd White
 DESIGNED: Brian Gilbert
 CHECKED: Greg Dulnik

DRAWING TITLE:
TOWER ELEVATION & ANTENNA DETAILS

DRAWING NO:
A-2

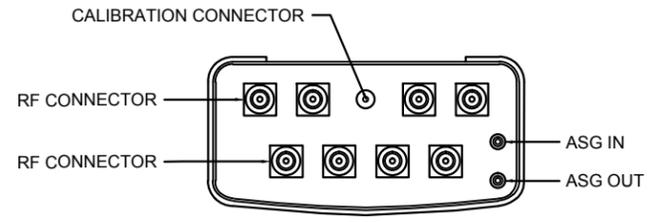
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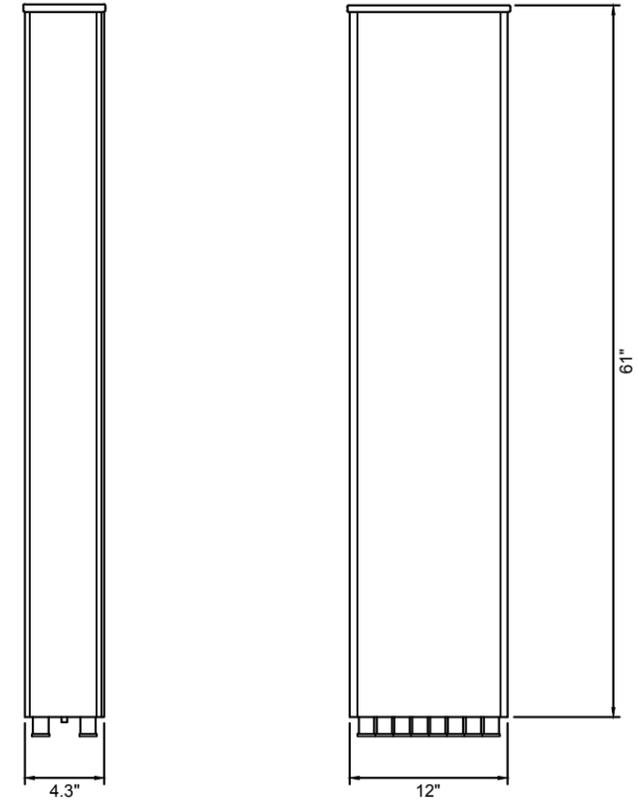
1 ANTENNA MOUNT DETAIL
SCALE: N.T.S.

KMW ET-X-WM-18-65-8P ANTENNA

RADOME COLOR: LIGHT GRAY
 DIMENSIONS, HxWxD.in: 61"x12"x4.3"
 WEIGHT: 36.4 lbs
 CONNECTORS: 8 x MINI DIN (FEMALE), 1 CALIBRATION PORT (N TYPE, FEMALE) / BOTTOM

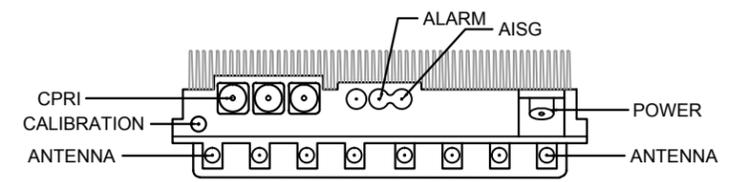


PLAN VIEW

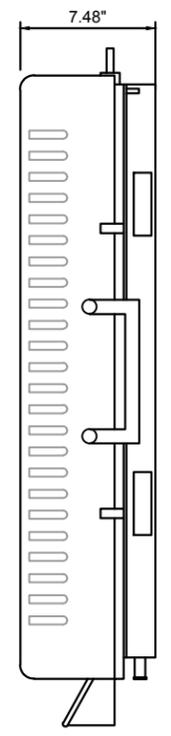


2 2.5 ANTENNA DETAIL
SCALE: N.T.S.

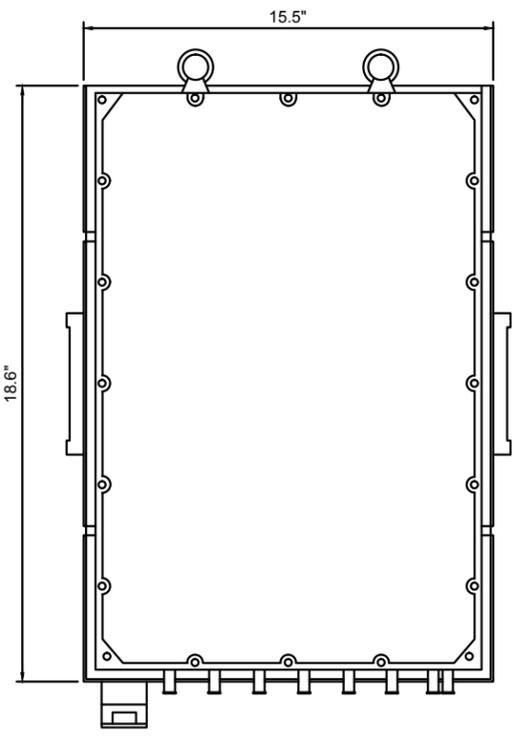
NOTES
 COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRU'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING DO NOT OPEN RRU PACKAGES IN THE RAIN



PLAN VIEW

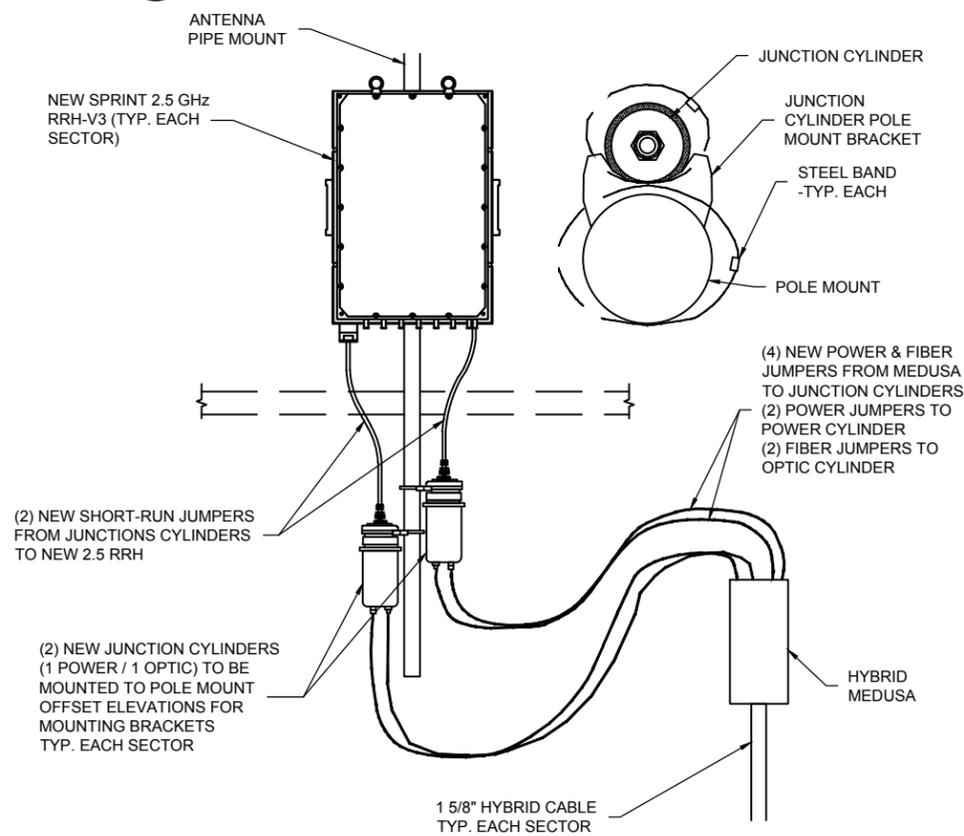


SIDE VIEW



FRONT VIEW

3 2.5 RRU DETAIL
SCALE: N.T.S.



4 HYBRID BREAKOUT DETAIL
SCALE: N.T.S.

ENGINEER:
SSOE
 PREPARED FOR:
Sprint
 6391 SPRINT PARKWAY
 OVERLAND PARK, KS 66251
 CONSULTANT:
fmhc
 CASCADE NUMBER:
CB33XC147
 SITE NAME:
 (LB-FUNDED) METRO PLACE
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 425 METRO PLACE SOUTH
 DUBLIN, OH 43017
 FRANKLIN COUNTY
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 CLIENT PROJECT NO: TBD

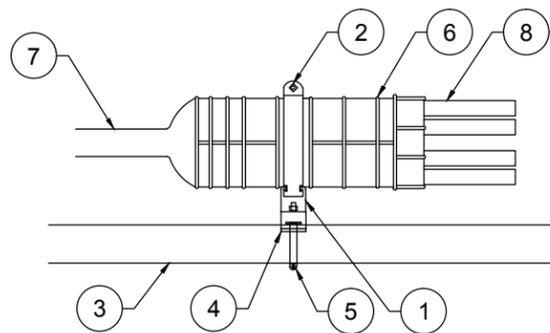
NO.	DATE	SUBJECT
0	03/17/14	CONSTRUCTION PLANS

REVISION OR ISSUE
SSOE, Inc.
 320 Seven Springs Way, Suite 350
 Brentwood, TN 37027
 T 615-661-7565
 PROJECT NO: 014-00618-00
 PROJECT MANAGER: Floyd White
 DESIGNED: Brian Gilbert
 CHECKED: Greg Dulnik

ANTENNA & HYBRID CABLE DETAILS

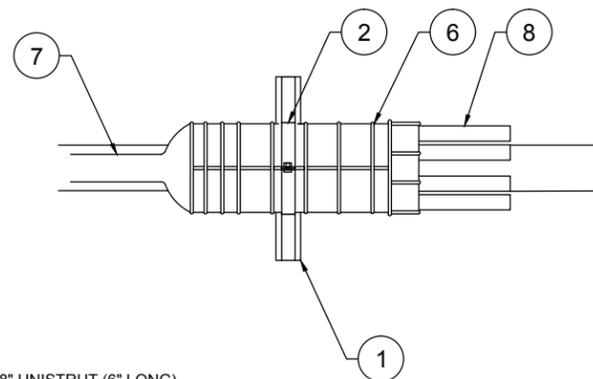
DRAWING NO: **A-3**

SEAL:
 STATE OF OHIO
 FLOYD D. WHITE
 2/11/92
 REGISTERED PROFESSIONAL ENGINEER

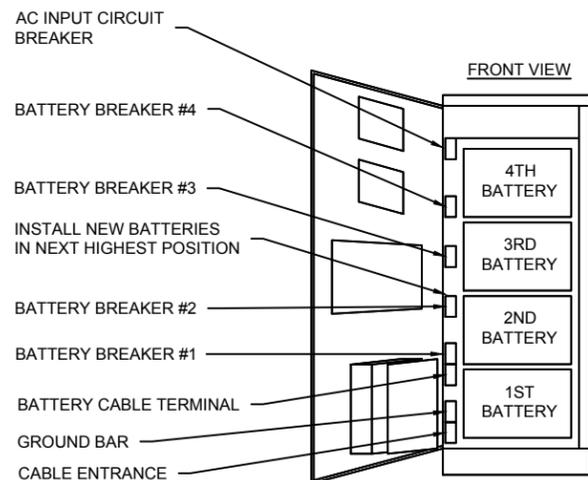
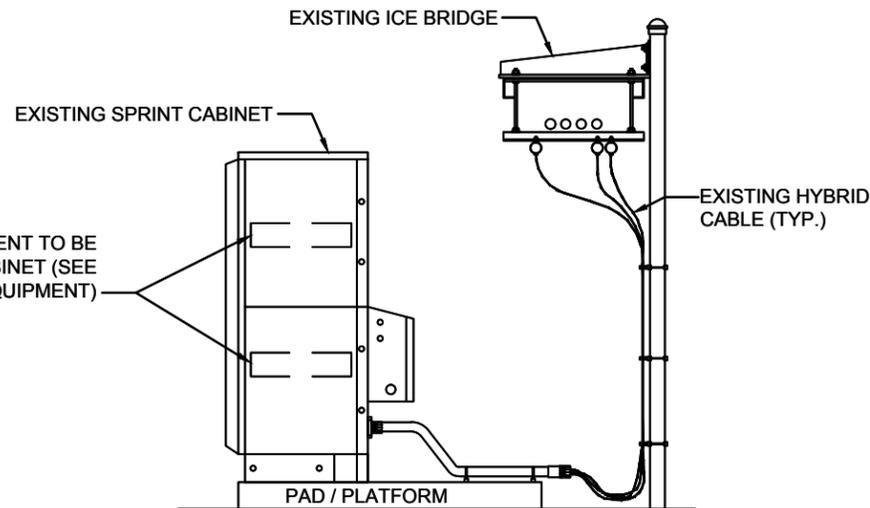


- NOTES:
- 1-5/8" x 1-5/8" UNISTRUT (6" LONG)
 - 4" PIPE HANGER
 - EXISTING SUPPORT PIPE
 - STANDOFF BRACKET ANDREW PART NO. 30848-4. CONTRACTOR TO SUPPLY 3/8" CONNECTION HARDWARE
 - ROUND MEMBER ADAPTER SIZED FOR PIPE SUPPORT
 - CABLE BREAKOUT UNIT
 - NEW OR EXISTING HYBRID CABLE (SEE PLANS)
 - NEW FIBER & POWER CABLES FROM BREAKOUT

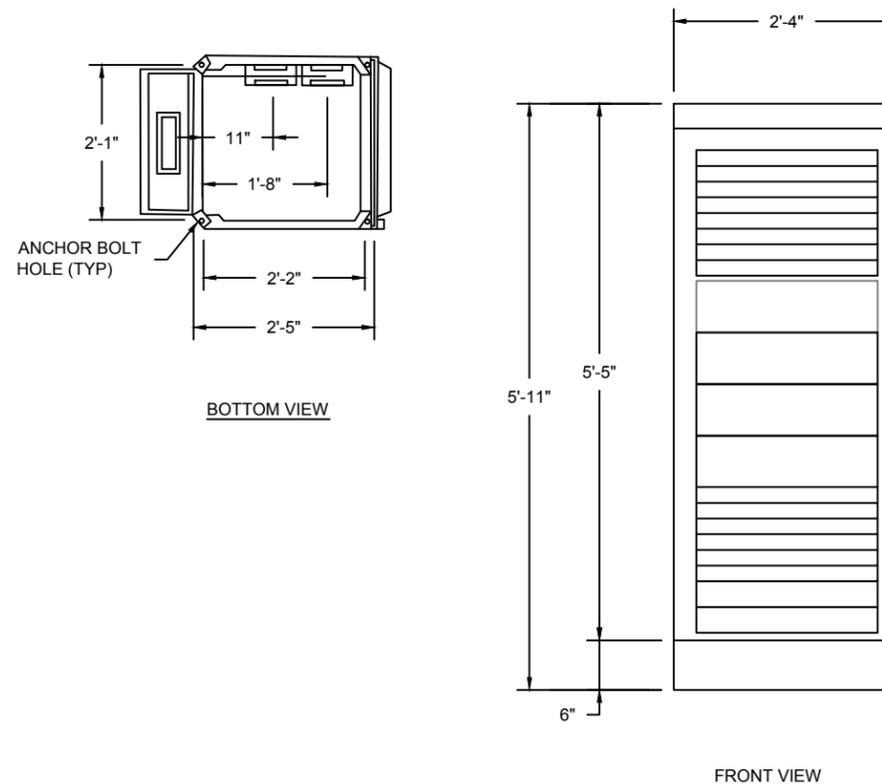
1 HYBRID BREAKOUT DETAIL
SCALE: N.T.S.



PROPOSED 2.5 EQUIPMENT TO BE INSTALLED IN MMBS CABINET (SEE PLANS FOR REQUIRED EQUIPMENT)



2 TYPICAL CABLE ROUTE
SCALE: N.T.S.



3 EXISTING OUTDOOR BATTERY CABINET
SCALE: N.T.S.

4 EXISTING OUTDOOR MMBS CABINET
SCALE: N.T.S.

ENGINEER:



PREPARED FOR:



6391 SPRINT PARKWAY
OVERLAND PARK, KS 66251



CONSULTANT:



CASCADE NUMBER:

CB33XC147

SITE NAME:
(LB-FUNDED) METRO PLACE
SITE ADDRESS:
425 METRO PLACE SOUTH
DUBLIN, OH 43017
FRANKLIN COUNTY

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0 03/17/14 CONSTRUCTION PLANS

NO. DATE SUBJECT

REVISION OR ISSUE

SSOE, Inc.
320 Seven Springs Way, Suite 350
Brentwood, TN 37027
T 615-661-7585

PROJECT NO: 014-00618-00

PROJECT MANAGER: Floyd White

DESIGNED: Brian Gilbert

CHECKED: Greg Dulnik

DRAWING TITLE:

BREAKOUT & EQUIPMENT DETAILS

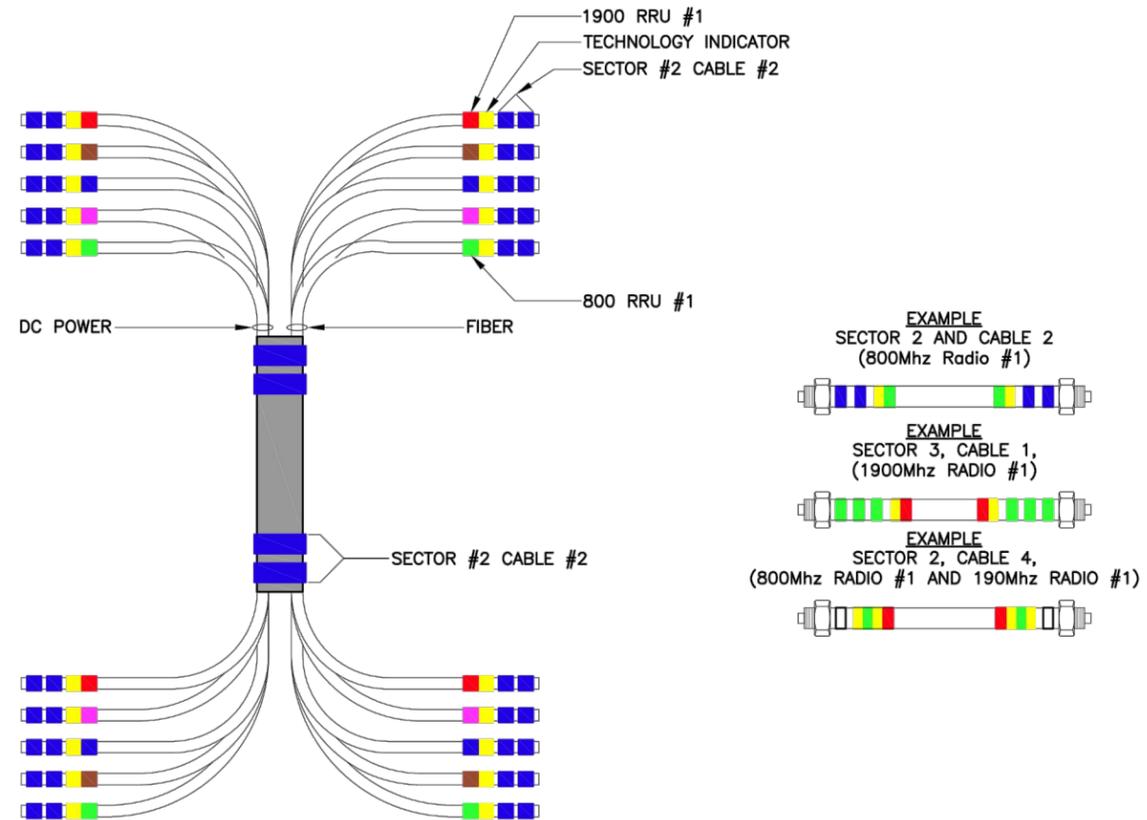
DRAWING NO:

A-4

SEAL:



TECHNOLOGY COLOR CODE	FIRST RING	SECOND RING
800 #1	YELLOW	GREEN
1900 #1	YELLOW	RED
1900 #2	YELLOW	BROWN
1900 #3	YELLOW	BLUE
1900 #4	YELLOW	GREY
800 #2	YELLOW	ORANGE
2500 #1	YELLOW	WHITE
2500 #2	YELLOW	PURPLE



2500MHz RADIO CALIBRATION CABLE COLOR CODE

2500MHz #1 CAL CABLE - SECTOR	CABLE	FIRST RING	SECOND RING	THIRD RING	FOURTH RING	FIFTH RING	SIXTH RING
1 ALPHA	1	YELLOW		YELLOW	WHITE		
2 BETA	2	YELLOW	YELLOW		YELLOW	WHITE	
3 GAMMA	3	YELLOW	YELLOW	YELLOW		YELLOW	WHITE

2500MHz #2 CAL CABLE - SECTOR	CABLE	FIRST RING	SECOND RING	THIRD RING	FOURTH RING	FIFTH RING	SIXTH RING
1 ALPHA	1	YELLOW		YELLOW	PURPLE		
2 BETA	2	YELLOW	YELLOW		YELLOW	PURPLE	
3 GAMMA	3	YELLOW	YELLOW	YELLOW		YELLOW	PURPLE

INFORMATION TAKEN FROM SPRINT'S TECHNICAL SPECIFICATIONS "ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS, TS-0200 ISSUE 5, OCTOBER 2013, COPYRIGHT© 2013 SPRINT CORPORATION

COLOR CODING

SCALE: N.T.S. 4

ENGINEER:



PREPARED FOR:



CONSULTANT:



CASCADE NUMBER:

CB33XC147
 SITE NAME:
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0 03/17/14 CONSTRUCTION PLANS

NO. DATE SUBJECT

REVISION OR ISSUE

SSOE, Inc.
 320 Seven Springs Way, Suite 350
 Brentwood, TN 37027
 T 615-661-7565

PROJECT NO: 014-00618-00

PROJECT MANAGER: Floyd White

DESIGNED: Brian Gilbert

CHECKED: Greg Dulnik

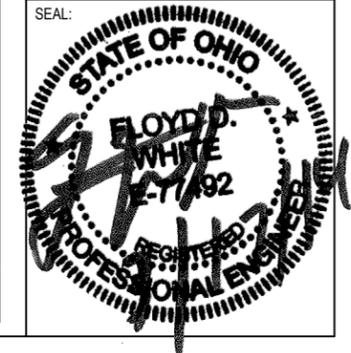
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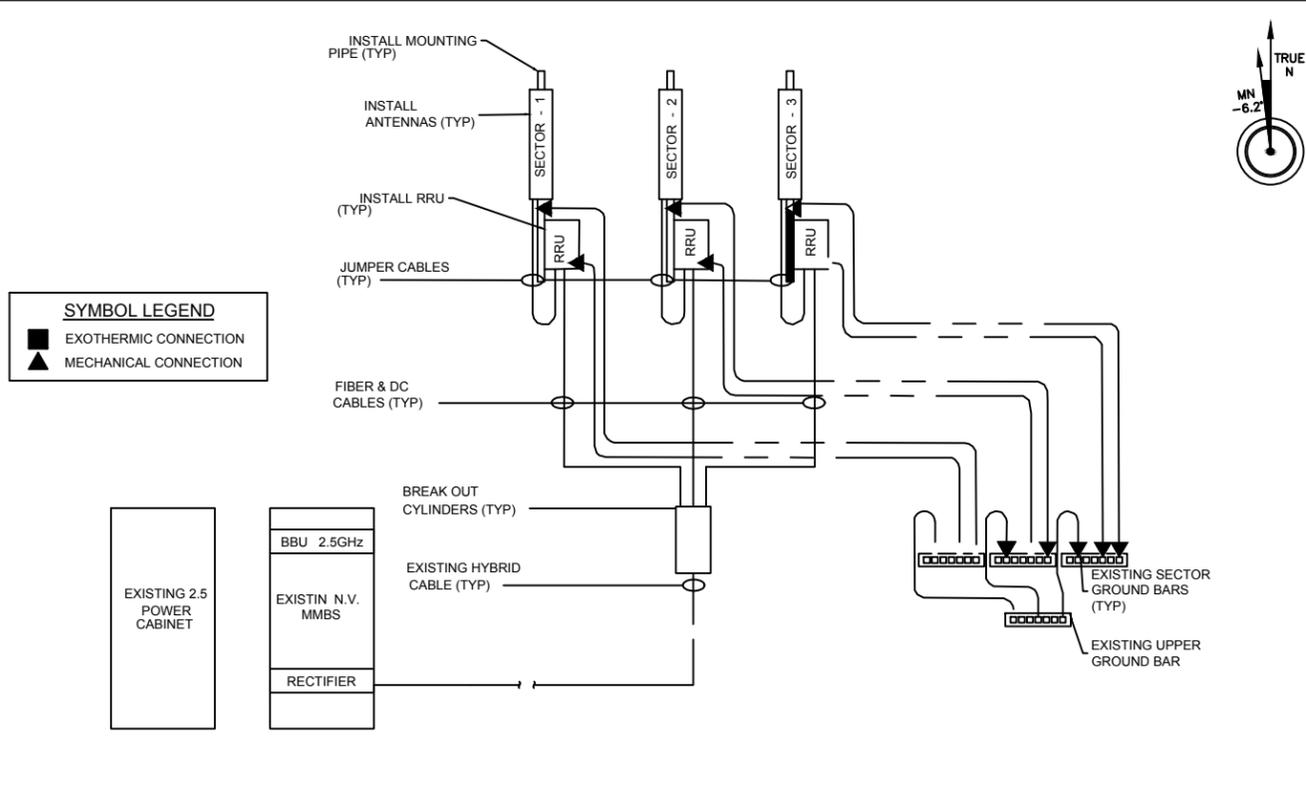
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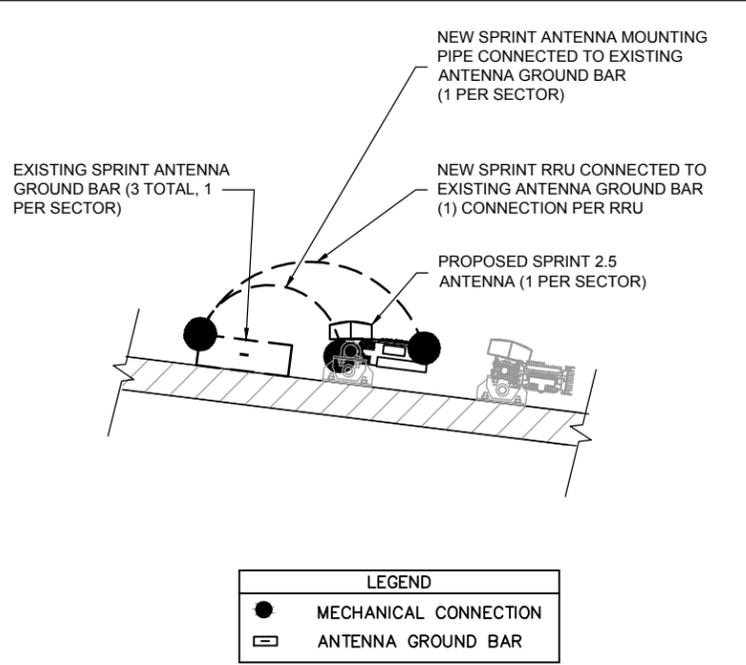
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SEAL:



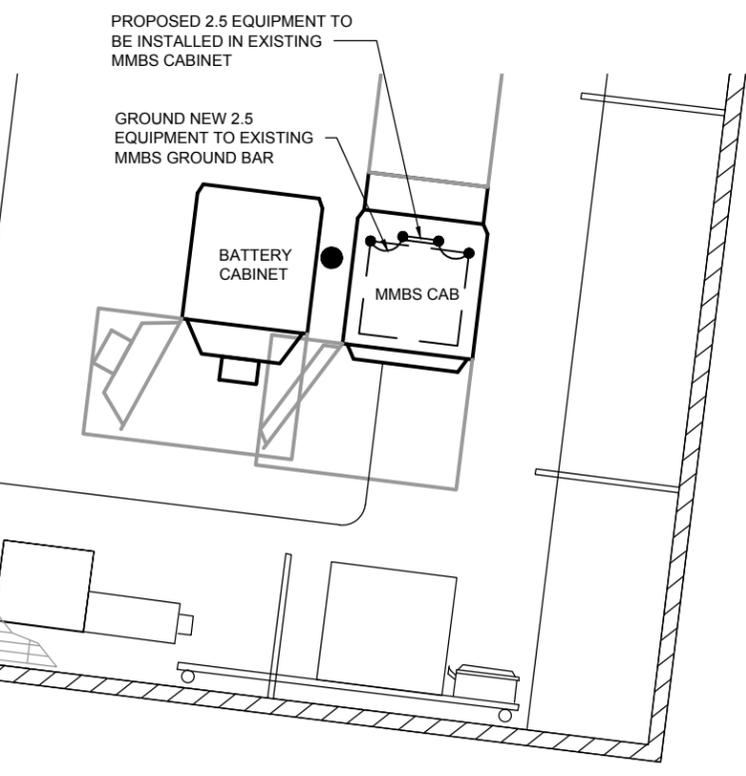


1 EQUIPMENT GROUNDING PLAN
SCALE: N.T.S.

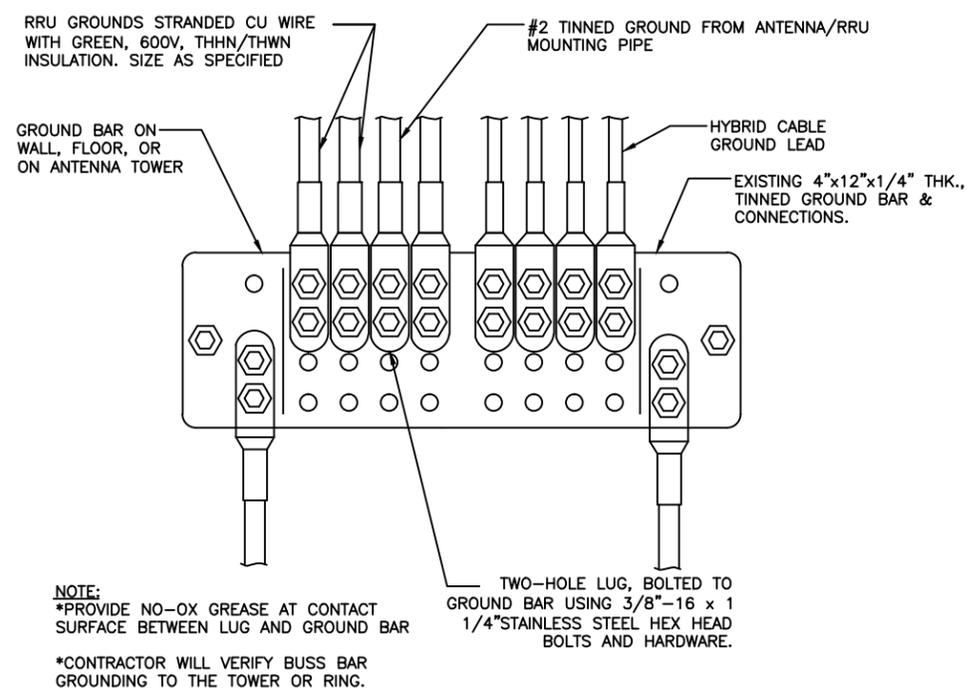


2 ANTENNA GROUNDING PLAN
SCALE: N.T.S.

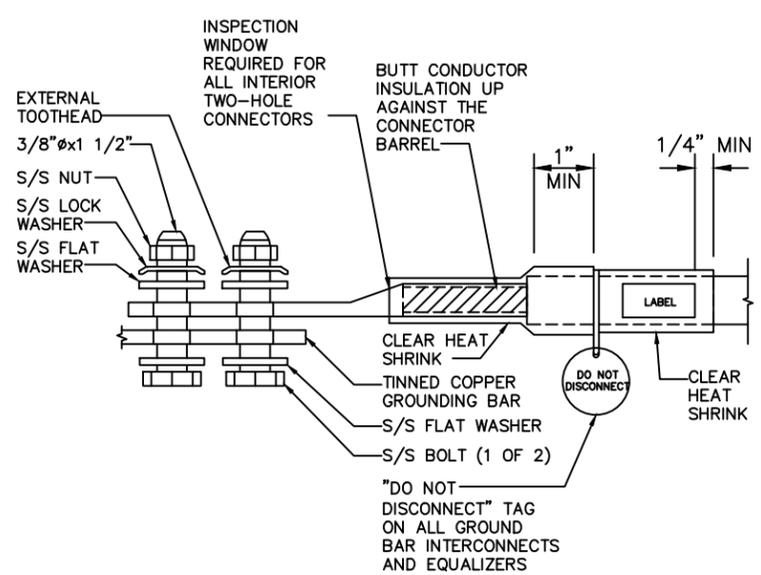
- NOTE:
1. PROVIDE 2-HOLE, LONG BARREL, TINNED SOLID COPPER LUGS WHEREVER LUGS ARE SHOWN. ERICO B-122-CE PREFERRED WITH CADWELD TYPE GL CONNECTION. THOMAS AND BETTS 54800BE SERIES WHERE CRIMP CONNECTOR IS REQUIRED.
 2. ALL CRIMP CONNECTIONS MUST BE MADE USING HYDRAULIC TOOLS AND THREE POINT HEXAGONAL COMPRESSION MOLDS ON LONG BARREL LUGS.
 3. ALL MECHANICAL CONNECTIONS MUST BE MADE USING THOMAS AND BETTS "KOPR-SHIELD". COAT ALL WIRES BEFORE LUGGING. COAT ALL SURFACES BEFORE CONNECTING.
 4. ALL HARDWARE 18/8 STAINLESS STEEL INCLUDING BELLEVILLE, COAT ALL SURFACES WITH "KOPR-SHIELD" BEFORE MATING.
 5. FOR GROUNDING BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH "KOPR-SHIELD".
 6. NO SLOTTED HOLES ON BUS BAR OR LUGS ARE PERMITTED.
 7. ALL LUG SHANKS AND LEAD JOINTS SHALL HAVE HEAT SHRINK MATERIAL.



3 EQUIPMENT GROUNDING PLAN
SCALE: 1/4" = 1'



4 GROUNDING CONDUCTOR INSTALLATION
SCALE: N.T.S.



5 TWO HOLE LUG
SCALE: N.T.S.

ENGINEER:
SSOE

PREPARED FOR:
Sprint
6391 SPRINT PARKWAY
OVERLAND PARK, KS 66251

SAMSUNG

CONSULTANT:
fmhc

CASCADE NUMBER:
CB33XC147

SITE NAME:
(LB-FUNDED) METRO PLACE

SITE ADDRESS:
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DUBLIN, OH 43017
FRANKLIN COUNTY**

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SSOE, Inc.
320 Seven Springs Way, Suite 350
Brentwood, TN 37027
T 615-661-7555

PROJECT NO: **014-00618-00**

PROJECT MANAGER: **Floyd White**

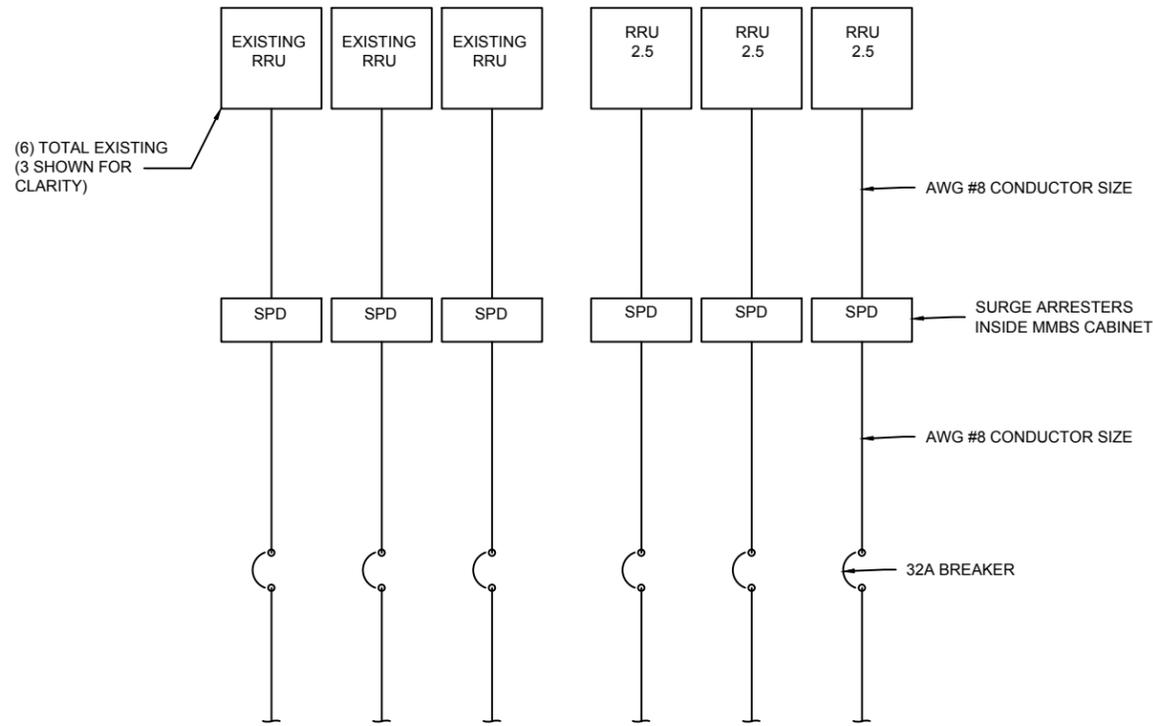
DESIGNED: **Brian Gilbert**

CHECKED: **Greg Dulnik**

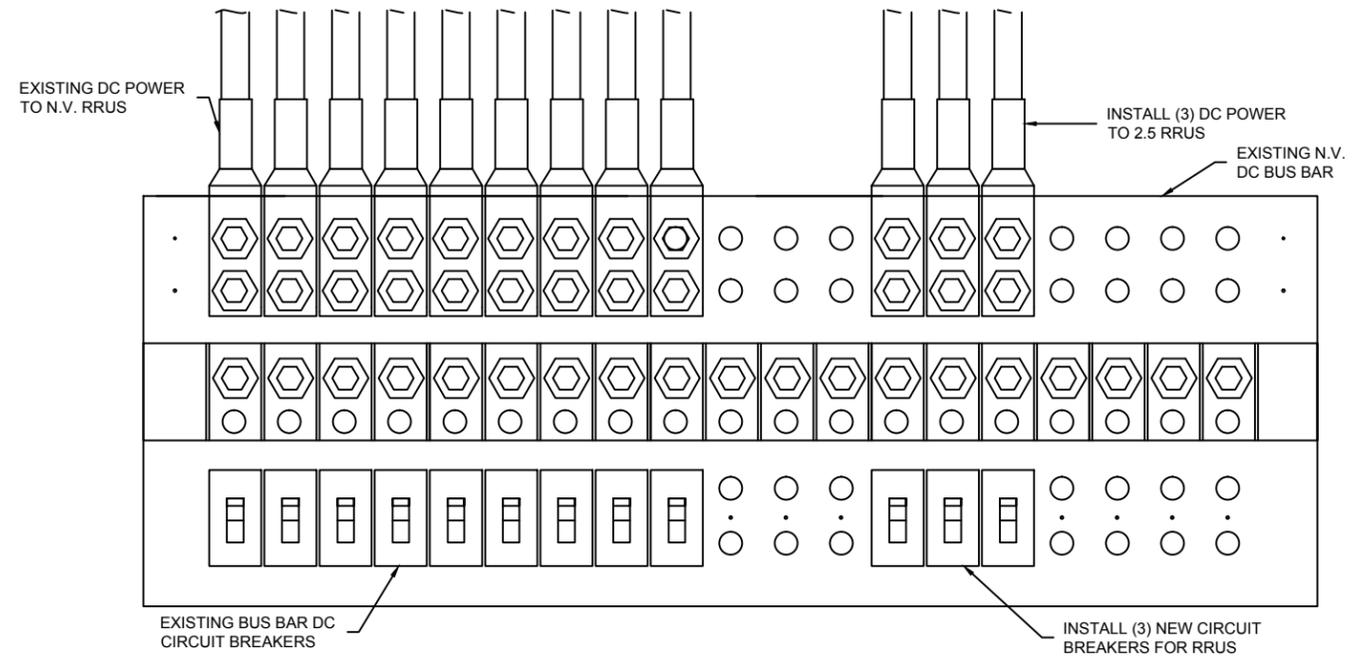
GROUNDING DETAILS

DRAWING NO: **E-1**

SEAL:

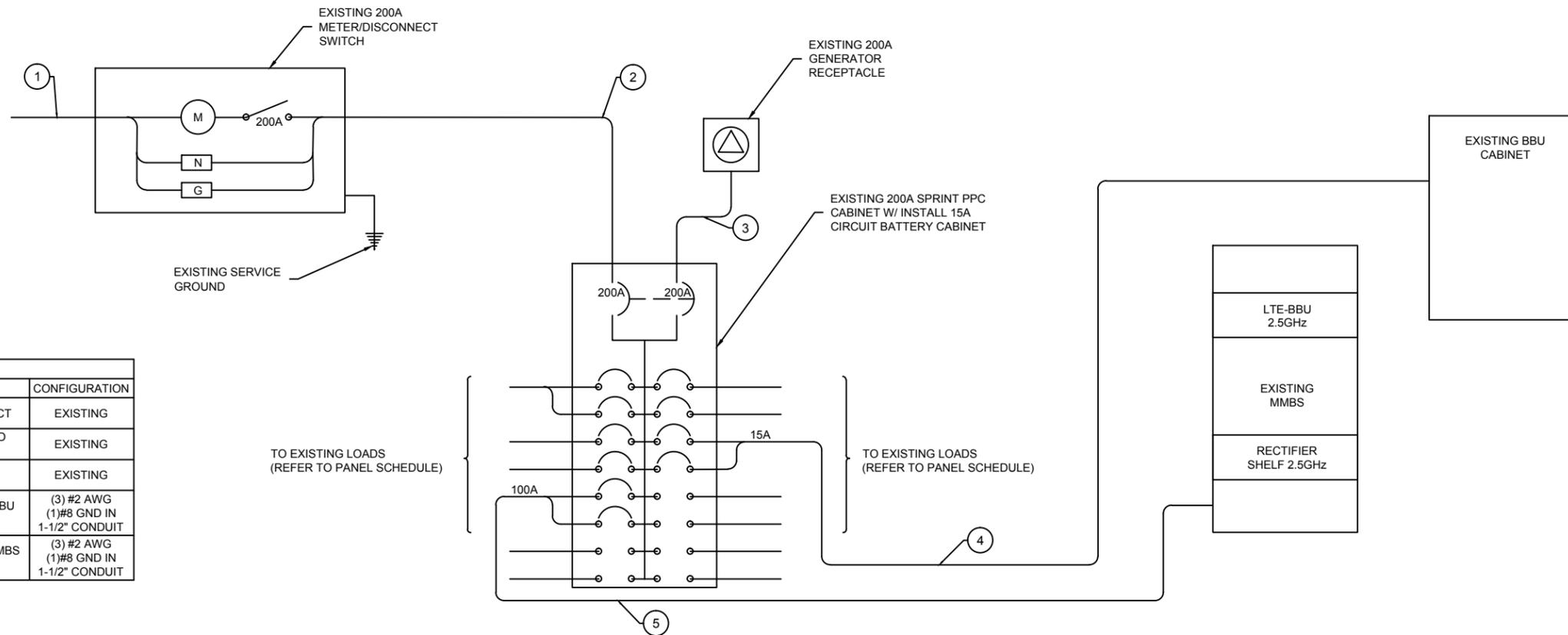


1 DC ONE LINE DIAGRAM
SCALE: N.T.S.



2 DC POWER DISTRIBUTION
SCALE: N.T.S.

NOTES
GC SHALL REFERENCE ALL SPECS FOR "CONNECTING THE POWER SUPPLY" OF THE NEW INSTALLATION DOCUMENTS, FOR ALL CONNECTION SPECIFICATIONS.



3 ELECTRICAL ONE-LINE DIAGRAM
SCALE: N.T.S.

CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
1	UTILITY SOURCE	METER/DISCONNECT	EXISTING
2	METER/DISCONNECT	TRANSFER & LOAD CENTER	EXISTING
3	TRANSFER & LOAD CENTER	GENERATOR RECEPTACLE	EXISTING
4	TRANSFER & LOAD CENTER	EXISTING SPRINT BBU CABINET	(3) #2 AWG (1)#8 GND IN 1-1/2" CONDUIT
5	TRANSFER & LOAD CENTER	EXISTING SPRINT MMBS CABINET	(3) #2 AWG (1)#8 GND IN 1-1/2" CONDUIT

ENGINEER:
SSOE

PREPARED FOR:
Sprint
6391 SPRINT PARKWAY
OVERLAND PARK, KS 66251

CONSULTANT:
fmhc

CASCADE NUMBER:
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FRANKLIN COUNTY**

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CLIENT PROJECT NO: TBD

NO.	DATE	SUBJECT
0	03/17/14	CONSTRUCTION PLANS

REVISION OR ISSUE

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PROJECT NO: **014-00618-00**
PROJECT MANAGER: **Floyd White**
DESIGNED: **Brian Gilbert**
CHECKED: **Greg Dulnik**

DRAWING TITLE:
DC POWER DETAILS & PANEL SCHEDULES

DRAWING NO:
E-2

SEAL:
STATE OF OHIO
FLOYD D. WHITE
REGISTERED PROFESSIONAL ENGINEER
2-11-92