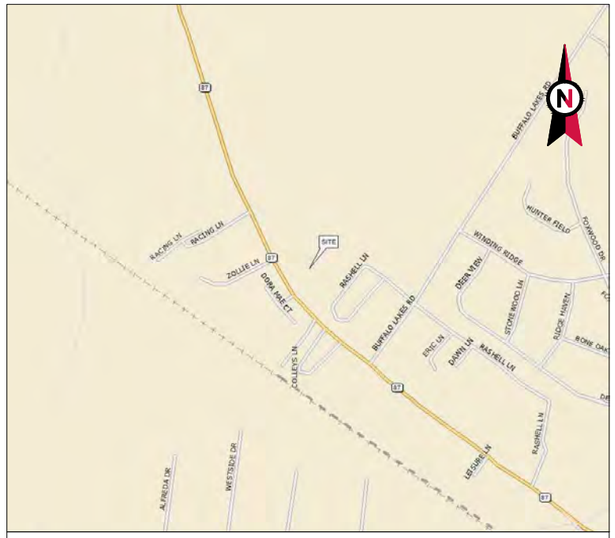


VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: SPOUT SPRINGS NC1
ATC SITE NUMBER: 21274
AT&T MOBILITY SITE ID: SINC006548
AT&T MOBILITY FA LOCATION CODE: 10017390
AT&T MOBILITY SITE NAME: 368-218
AT&T MOBILITY USID: 71630
SITE ADDRESS: 2305 NC 87 S
SANFORD, NC 27332

LOCATION MAP

AT&T MOBILITY ANTENNA AMENDMENT PLAN

AT&T MOBILITY IWM JOB NUMBER(S): **WSVWN0055007,** WSVWN0057294, WSVWN0055910, WSVWN0055342, WSVWN0056618, WSVWN0056173, WSVWN0056310.
AT&T MOBILITY PACE JOB NUMBER(S): **MRVWN043897**, MRVWN043436, MRVWN043016, MRVWN043414, MRVWN043774, MRVWN042959, MRVWN043577.

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
Reviewed for Code Compliance
05/21/2025
Harnett COUNTY NORTH CAROLINA

Electrical only

COMPLIANCE CODE

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

1. 2018 NORTH CAROLINA BUILDING CODE (NCBC)
2. 2020 NATIONAL ELECTRIC CODE (NEC) WITH NC AMENDMENTS
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: CENTRAL EMC
PHONE: (919) 774-4900

TELEPHONE COMPANY: VERIZON
PHONE: (800) 837-4966

811 Know what's below. Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

2305 NC 87 S

SANFORD, NC 27332

COUNTY: HARNETT

GEOGRAPHIC COORDINATES:

LATITUDE: 35.27725

LONGITUDE: -79.07085

GROUND ELEVATION: 380' AMSL

ZONING INFORMATION:

JURISDICTION: HARNETT COUNTY

PARCEL ID: 9575-86-9090.000

PROJECT TEAM

TOWER OWNER:
AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:
AT&T MOBILITY

ENGINEER:
TEP ENGINEERING, PLLC
326 TRYON RD
RALEIGH, NC 27603

PROPERTY OWNER:
RAGLAND JOHN T
1575 MINTER SCHOOL RD
SANFORD, NC 27332-2486

PROJECT LOCATION DIRECTIONS

FROM RALEIGH: TAKE I-440 (OUTER BELTLINE) TO HWY US 1 SOUTH. TAKE EXIT 421/87 SOUTH (DUNN/GREENSBORO). TAKE A RIGHT OFF THE EXIT AND TRAVEL APPROX. 4.8 MILES. BEAR RIGHT AT THE FORK (HWY 87 SOUTH FAYETTEVILLE). TRAVEL FOR ABOUT 7 MILES AND MAKE A LEFT ONTO BUFFALO LAKE ROAD (CAROLINA TRACE ENTRANCE). TAKE ANOTHER LEFT BEFORE THE FIRE STATION. DRIVE PAST THE TRAILER PARK AND ENTER THROUGH DIRT ROAD.

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:
TOWER WORK:
REMOVE (6) ANTENNA(S), (3) RRU(s), (6) TMA(s), AND (1) 2-1/4" COAX CABLE(S).

INSTALL (9) MOUNT PIPE(S), (18) CROSSOVER PLATE KIT(S), (3) BACK TO BACK RRU BRACKET(S), (2) HOISTING ANCHOR GRIP(S), (2) CABLE HOISTING ANCHOR(S), (9) ANTENNA(S), (6) RRU(s), (1) SQUID(S), (1) 0.96" 6 AWG 6 DC POWER TRUNK(S), AND (1) 0.41" FIBER TRUNK(S).

EXISTING (3) RRU(s), (2) SQUID(S), (1) 0.39" FIBER TRUNK(S), (2) 0.78" 8 AWG 6 DC POWER TRUNK(S), (2) 1.24" 4 AWG 6 DC POWER TRUNK(S), (5) 2-1/4" COAX CABLE(S), AND (1) 3/8" RET CONTROL CABLE(S) TO REMAIN.

GROUND WORK:
REMOVE (1) ALPHA TE45V2 POWER PLANT(S).

INSTALL (1) ODN512 POWER PLANT(S), (1) FLX16 DOOR UPGRADE(S), (9) -48V RECTIFIER(S), (7) -58V CONVERTER(S), (4) POWERSAFE SBS 170F BATTERY(IES), (1) DC12-48-60-0-25E-SS(s), (1) -58V CONVERTER SHELF(VES), (1) #6 TELCOFLEX CABLE(S), (1) 6672 BBU(s), (6) VERTIV 50A DC BREAKER(S), (3) 35A 4494 B14/B29 DC BREAKER(S), (1) VERTIV 80A DC BREAKER(S), AND (6) VERTIV 30A DC BREAKER(S).

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	1	05/14/25	SSP
G-002	GENERAL NOTES	0	05/02/25	ANM
G-003 - G-007	APPENDIX B	1	05/14/25	SSP
C-001	OVERALL SITE PLAN	0	05/02/25	ANM
C-101	DETAILED SITE PLAN	1	05/14/25	SSP
C-102	DETAILED EQUIPMENT LAYOUT	0	05/02/25	ANM
C-201	TOWER ELEVATION	0	05/02/25	ANM
C-401	ANTENNA INSTALLATION	0	05/02/25	ANM
C-402	ANTENNA SCHEDULE	0	05/02/25	ANM
C-501	CONSTRUCTION DETAILS	0	05/02/25	ANM
E-101	ELECTRICAL DETAILS	1	05/14/25	SSP
E-102	ELECTRICAL DETAILS	1	05/14/25	SSP
E-103	GROUNDING PLAN	1	05/14/25	SSP
E-501	GROUNDING DETAILS	1	05/14/25	SSP
R-601 - R-614	SUPPLEMENTAL			

AMERICAN TOWER®

PLANS PREPARED BY:

TEP
TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25
1	100% CONSTRUCTION	SSP	05/14/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

SEAL: 05/14/25

AT&T

DATE DRAWN:	05/14/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	1

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, AT&T MOBILITY "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF AT&T MOBILITY TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE AT&T MOBILITY REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE AT&T MOBILITY REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE AT&T MOBILITY REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE AT&T MOBILITY CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH AT&T MOBILITY AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY AT&T MOBILITY MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T MOBILITY SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO AT&T MOBILITY FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T MOBILITY SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY AT&T MOBILITY REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. WHEN THE PROJECT SCOPE REQUIRES THE USE OF THE SAFETY CLIMB, THE GENERAL CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS FREE OF OBSTRUCTIONS, NOT RUBBING ON OR TRAPPED BY ANY INSTALLED CUSTOMER EQUIPMENT, IS VISUALLY TAUT, MEETS MANUFACTURER INSTALLATION SPECIFICATIONS, AND IS FIRMLY SECURED AT ALL CABLE GUIDE LOCATIONS UPON PROJECT COMPLETION.
29. COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.
30. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
31. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
32. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE AT&T MOBILITY REP. ANY WORK FOUND BY THE AT&T MOBILITY REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
33. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
34. AT&T MOBILITY FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE AT&T MOBILITY WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
35. AT&T MOBILITY OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO AT&T MOBILITY OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:

A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY AT&T MOBILITY UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.

B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND AT&T MOBILITY SPECIFICATIONS.

C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.

D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.

E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.

F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.

G. ANTENNA AND COAXIAL CABLE GROUNDING:

2. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

AMERICAN TOWER®

PLANS PREPARED BY:

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

SEAL: 05/02/25

AT&T

DATE DRAWN:	05/02/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: SPOUT SPRINGS NC1

Address: 2305 NC 87 S, SANFORD, NC Zip Code 27332

Owner/Authorized Agent: AARON DIAL Phone # (919) 466 - 5383 E-Mail AaronDial@AmericanTower.com

Owned By: ☐ City/County ☒ Private ☐ State

Code Enforcement Jurisdiction: ☐ City_____ ☒ County HARNETT ☐ State

CONTACT: _____

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural				(___)___	
Civil	TEP ENGINEERING, PLLC	Joshua H. Carden	048226	(919) 661-6351	jcarden@tepgroup.net
Electrical	TEP ENGINEERING, PLLC	Mark S. Quakenbush	042109	(919) 661-6351	mquakenbush@tepgroup.net
Fire Alarm				(___)___	
Plumbing				(___)___	
Mechanical				(___)___	
Sprinkler-Standpipe				(___)___	
Structural				(___)___	
Retaining Walls >5' High				(___)___	
Other				(___)___	

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: ☐ New Building ☐ Addition ☒ Renovation
☐ 1st Time Interior Completion
☐ Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements
☐ Phased Construction - Shell/Core- Contact the local inspection jurisdiction for possible additional procedures and requirements

2018 NC EXISTING BUILDING CODE: EXISTING: ☐ Prescriptive ☐ Repair ☐ Chapter 14
Alteration: ☐ Level I ☐ Level II ☐ Level III
☐ Historic Property ☐ Change of Use

CONSTRUCTED: (date) _____ **CURRENT OCCUPANCY(S)** (Ch. 3): _____

RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S)** (Ch. 3): _____

OCCUPANCY CATEGORY (Table 1604.5): **Current:** ☐ I ☐ II ☐ III ☐ IV
Proposed: ☐ I ☐ II ☐ III ☐ IV

BASIC BUILDING DATA

Construction Type: ☒ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A
(check all that apply) ☐ I-B ☐ II-B ☐ III-B ☐ V-B

Sprinklers: ☒ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

Standpipes: ☒ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry

Fire District: ☒ No ☐ Yes **Flood Hazard Area:** ☒ No ☐ Yes

Special Inspections Required: ☒ No ☐ Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3rd Floor	N/A		
2nd Floor	N/A		
Mezzanine	N/A		
1st Floor	225 SQ FT EQUIPMENT PAD		
Basement	N/A		
TOTAL	225 SQ FT EQUIPMENT PAD		

ALLOWABLE AREA

Primary Occupancy Classification(s): Select one | Select one | Select one | Select one | Select one | Select one

Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☐
Educational ☐
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 Condition ☐ 1 ☐ 2
☐ I-2 Condition ☐ 1 ☐ 2
☐ I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ I-4
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☒

Accessory Occupancy Classification(s): N/A

Incidental Uses (Table 509): N/A

Special Uses (Chapter 4 – List Code Sections): N/A

Special Provisions: (Chapter 5 – List Code Sections): N/A

Mixed Occupancy: ☐ No ☐ Yes Separation: _____ Hr. Exception: _____

☐ Non-Separated Use (508.3) - The required type of construction for the building shall be determined by applying the height and area l[illegible]tions for each of the applicable occupancies to the entire b[illegible]he most restrictive type of construction, so determi[illegible]to the entire building.

☐ Separated Use (508.4) - See below for area calcul[illegible]y, the area of the occupancy shall be such that the sum o[illegible]ctual floor area of each use divided by the allowable floor[illegible]hall not exceed 1.

Actual Area of Occupancy A / *Allowable Area of Occupancy A* + *[illegible]upancy B* / *Occupancy B* ≤ 1

_____ + _____ + ... = _____ ≤ 1.00

N/A NOT A BUILDING

AMERICAN TOWER®

PLANS PREPARED BY:

TEP

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25
1	100% CONSTRUCTION	SSP	05/14/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

SEAL: 05/14/25

AT&T

DATE DRAWN:	05/14/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

APPENDIX B

SHEET NUMBER:	REVISION:
G-003	1

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 5	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]

N/A
NOT A BUILDING

[1] Frontage area increases from Section 50 ...us:
- a. Perimeter which fronts a publ... having 20 feet minimum width = _____ (F)
- b. Total Building Perimeter ... (P)
- c. Ratio (F/P) = _____ (F/...
- d. W = Minimum width of public wa... (W)
- e. Percent of frontage increase $I_f = 100[F/P - 0.25]$ x $W/30$ = _____ (%)

[2] Unlimited area applicable under conditions of Section 507.

[3] Maximum Building Area = total number of stories in the building x D (maximum3 stories) (506.2).

[4] The maximum area of open parking garages must comply with Tab... 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.

[5] Frontage increase is based on the unsprinklered area value in ...

N/A
NOT A BUILDING

ALLOW...

		SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)			
Building Height in Stories (Table 504.4)			

[1] Provide code reference if the "Shown on Plans" qu... on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVID... (W/... REP...	DETAIL # AND ...T #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses							
Bearing Walls							
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions							
Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction Including supporting beams and joists							
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof Construction, including supporting beams and joists							
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy/Fire Barrier Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation							
Incidental Use Separation							

N/A
NOT A BUILDING

N/A
NOT A BUILDING

* Indicate section number permitting reduction

2018 NC Administrative Code and Policies

AMERICAN TOWER®

PLANS PREPARED BY:

TEP

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25
1	100% CONSTRUCTION	SSP	05/14/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

SEAL: 05/14/25

AT&T

DATE DRAWN:	05/14/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

APPENDIX B

SHEET NUMBER:	REVISION:
G-004	1

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	E AREA	ACTUAL SHOWN ON PLANS (%)

N/A
NOT A BUILDING

LIFE SA STEM REQUIREMENTS

Emergency Lighting: ☐ No ☐
Exit Signs: ☐ No ☐ Yes
Fire Alarm: ☐ No ☐ Yes
Smoke Detection Systems: ☐ No ☐ Yes ☐ Partial _____
Panic Hardware: ☐ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: _____

- ☐ Fire and/or smoke rated wall locations (Chapter 7)
- ☐ Assumed and real property line locations (if not on the site plan)
- ☐ Exterior wall opening area with respect to distance to assumed p rty lines (705.8)
- ☐ Occupancy Use for each area as it relates to occupant load ca Table 1004.1.2)
- ☐ Occupant loads for each area
- ☐ Exit access travel distances (1017)
- ☐ Common path of travel distances (Tables 1006.2.1
- ☐ Dead end lengths (1020.4)
- ☐ Clear exit widths for each exit door
- ☐ Maximum calculated occupant load cap an accommodate based on egress width (1005.3)
- ☐ Actual occupant load for each exit do
- ☐ A separate schematic plan indicating floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- ☐ Location of doors with panic hardware (101 10)
- ☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- ☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
- ☐ Location of doors equipped with hold-open devices
- ☐ Location of emergency escape windows (1030)
- ☐ The square footage of each fire area (202)
- ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- ☐ Note any code exceptions or table notes that may have been utilized regarding the items above

N/A
NOT A BUILDING

ACCESSIBLE DWELLING UNITS
(SECTION 1

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	B TS QUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

N/A
NOT A BUILDING

E PARKING
ION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING S		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDE	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
TOTAL						

PLUMBING FIXTURE R IREMENTS
(TABLE

USE		WATERCLOSETS			URINAL	S		SHOWERS /TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		LE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXIST'G									
	NEW									
	REQ'D									

N/A
NOT A BUILDING

IAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

_____

_____

AMERICAN TOWER®

PLANS PREPARED BY:

TEP

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25
1	100% CONSTRUCTION	SSP	05/14/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

SEAL: 05/14/25

AT&T

DATE DRAWN:	05/14/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

APPENDIX B

SHEET NUMBER:	REVISION:
G-005	1

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required project information for the plan data sheet. If performance method, state the annual energy cost for reference design vs annual energy cost for the proposed design.

N/A
NOT A BUILDING

Existing building envelope complies with ☐ Yes (The remainder of this section is not applicable)

Exempt Building: ☐ No ☐ Yes (Statutory reference): _____

Climate Zone: ☐ 3A

Method of Compliance: Energy Code ☐ Performance ☐ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive
(If "Other" specify source here)_____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Skylights in each assembly: _____
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Openings (windows or doors
U-Value of assem
Solar heat gain
projection f
Door R-Va

N/A
NOT A BUILDING

Walls below grade (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors over unconditioned space (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors slab on grade
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Horizontal/vertical requirement: _____
slab heated: _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Snow (I_S) _____
Seismic (I_E) _____

Live Loads: Roof _____ psf
Mezzanine _____ psf
Floor _____ psf

Ground Snow Load: _____ psf

Wind Load: Basic Wind Speed (ASCE-7)
Exposure Category

N/A
NOT A BUILDING

SEISMIC DESIGN CATEGORY: ☐ D

Provide the following Seismic Design P
Risk Category (Table 1604 ☐ III ☐ IV
Spectral Response Accel _____ %g S_1_____ %g
Site Classification (ASCE 7) ☐ B ☐ C ☐ D ☐ E ☐ F
Data Source: ☐ Field Test ☐ Presumptive ☐ Historical Data
Basic structural system ☐ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
Analysis Procedure: ☐ Simplified ☐ Equivalent Lateral Force ☐ Dynamic
Architectural, Mechanical, Components anchored? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: Earthquake ☐ Wind ☐

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity _____ psf
Pile size, type, and capacity _____

AMERICAN TOWER®

PLANS PREPARED BY:
TEP
TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25
1	100% CONSTRUCTION	SSP	05/14/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:
SINC006548

AT&T MOBILITY SITE NAME:
368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

SEAL: 05/14/25

AT&T

DATE DRAWN:	05/14/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

APPENDIX B

SHEET NUMBER:	REVISION:
G-006	1

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: ☐ No ☐ Yes (The remainder of this section is not applicable)

Exempt Building: ☐ No ☐ Yes (Provide code or statutory ref: _____

Climate Zone: ☐ 3A ☐ 4A ☐ 5A

Method of Compliance: Energy Code ☐ ☐ Prescriptive
ASHRAE 90.1 ☐ Prescriptive
(If "Other" e)_____

N/A NOT A BUILDING

THERMAL ENVELOPE (Prescriptive

Roof/ceiling Assembly (eac
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Skylights in each assembly: _____
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Openings (windows or doors with glazing)
U-Value of assembly: _____
Solar heat gain coefficient: _____
projection factor: _____
Door R-Values: _____

Walls below grade (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors over unconditioned space (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors slab on grade
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Horizontal/vertical requirement: _____
slab heated: _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Snow (I_S) _____
Seismic (I_E) _____

Live Loads: Roof _____ psf
Mezzanine _____
Floor _____

Ground Snow Load: _____ psf

Wind Load: Basic Wind S_____ mph (ASCE-7)
Exposure C_____

N/A NOT A BUILDING

SEISMIC DESIGN CATEGOR ☐ A ☐ B ☐ C ☐ D
Provide the following Seismic Design
Risk Category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV
Spectral Response Acceleration S_S_____ %g S_1_____ %g
Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
Data Source: ☐ Field Test ☐ Presumptive ☐ Historical Data
Basic structural system ☐ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
Analysis Procedure: ☐ Simplified ☐ Equivalent Lateral Force ☐ Dynamic
Architectural, Mechanical, Components anchored? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: Earthquake ☐ Wind ☐

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity _____ psf
Pile size, type, and capacity _____

2018 NC Administrative Code and Policies

AMERICAN TOWER®

PLANS PREPARED BY:
TEP
TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25
1	100% CONSTRUCTION	SSP	05/14/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:
SINC006548

AT&T MOBILITY SITE NAME:
368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

SEAL: 05/14/25

AT&T

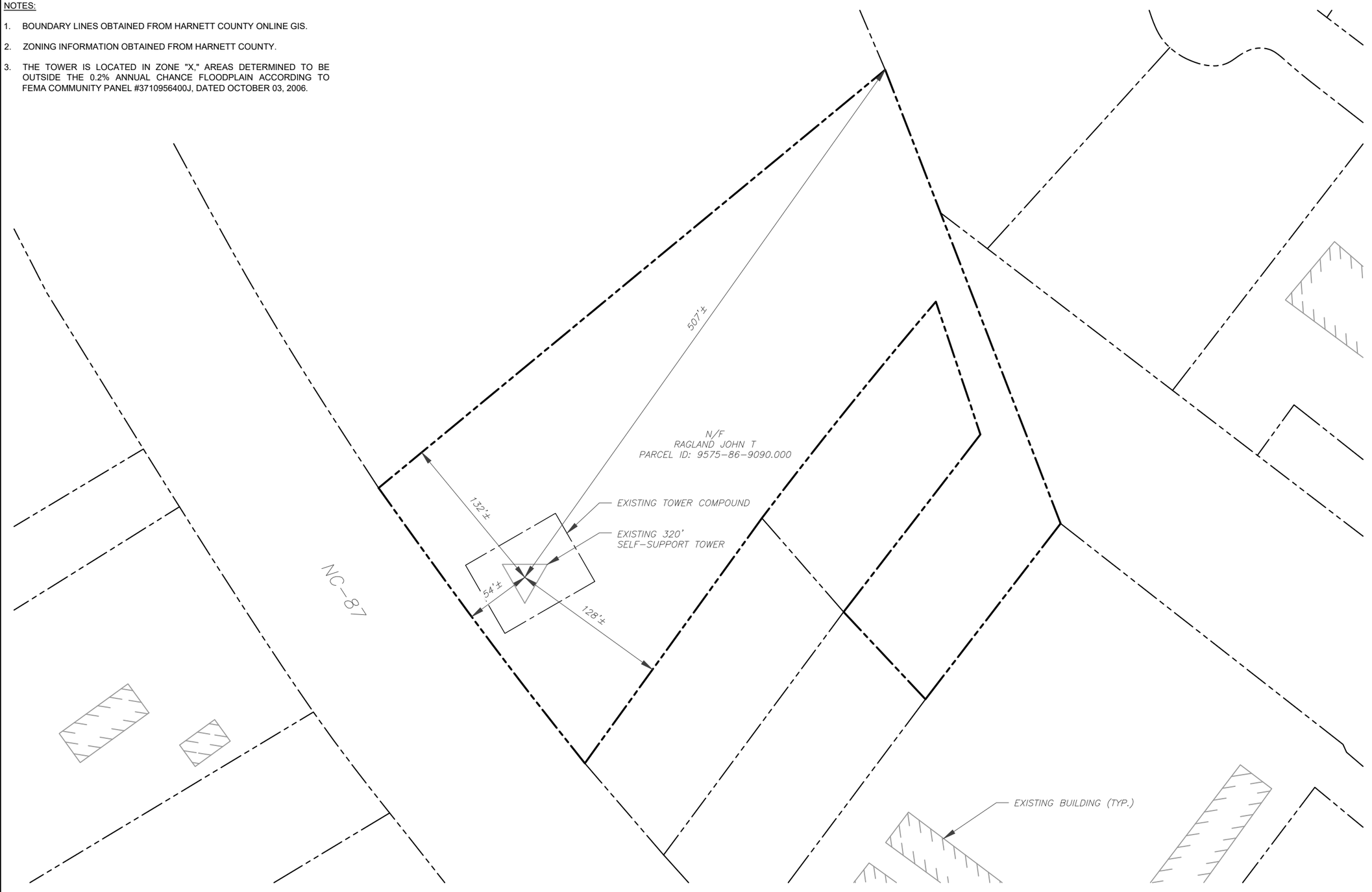
DATE DRAWN:	05/14/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

APPENDIX B

SHEET NUMBER:	REVISION:
G-007	1

NOTES:

1. BOUNDARY LINES OBTAINED FROM HARNETT COUNTY ONLINE GIS.
2. ZONING INFORMATION OBTAINED FROM HARNETT COUNTY.
3. THE TOWER IS LOCATED IN ZONE "X," AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #3710956400J, DATED OCTOBER 03, 2006.



LEGEND

- EXISTING PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE
- EXISTING LEASE AREA

1 OVERALL SITE PLAN
SCALE: 1" = 80'

0 80' 160'

SCALE: 1"=80' (11X17)
1"=40' (22X34)

AMERICAN TOWER®

PLANS PREPARED BY:

TEP

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

SEAL: 05/02/25

AT&T

DATE DRAWN:	05/02/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

OVERALL SITE PLAN

SHEET NUMBER:	REVISION:
C-001	0

SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

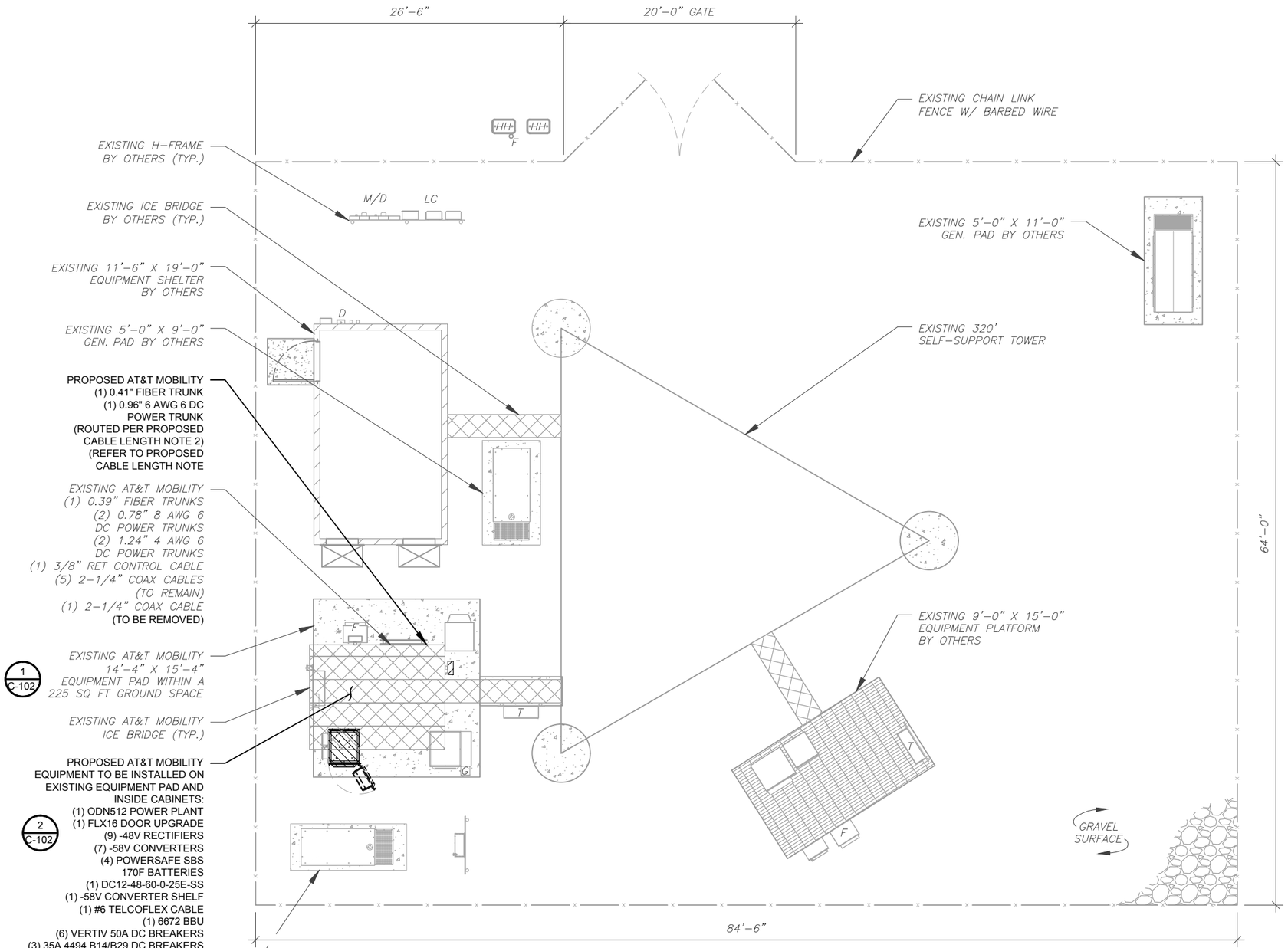
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
——x——	CHAINLINK FENCE

PROPOSED CABLE NOTES:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **380'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).



1 DETAILED SITE PLAN

SCALE: 1" = 10'

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

AMERICAN TOWER®

PLANS PREPARED BY:

TEP

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25
1	100% CONSTRUCTION	SSP	05/14/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

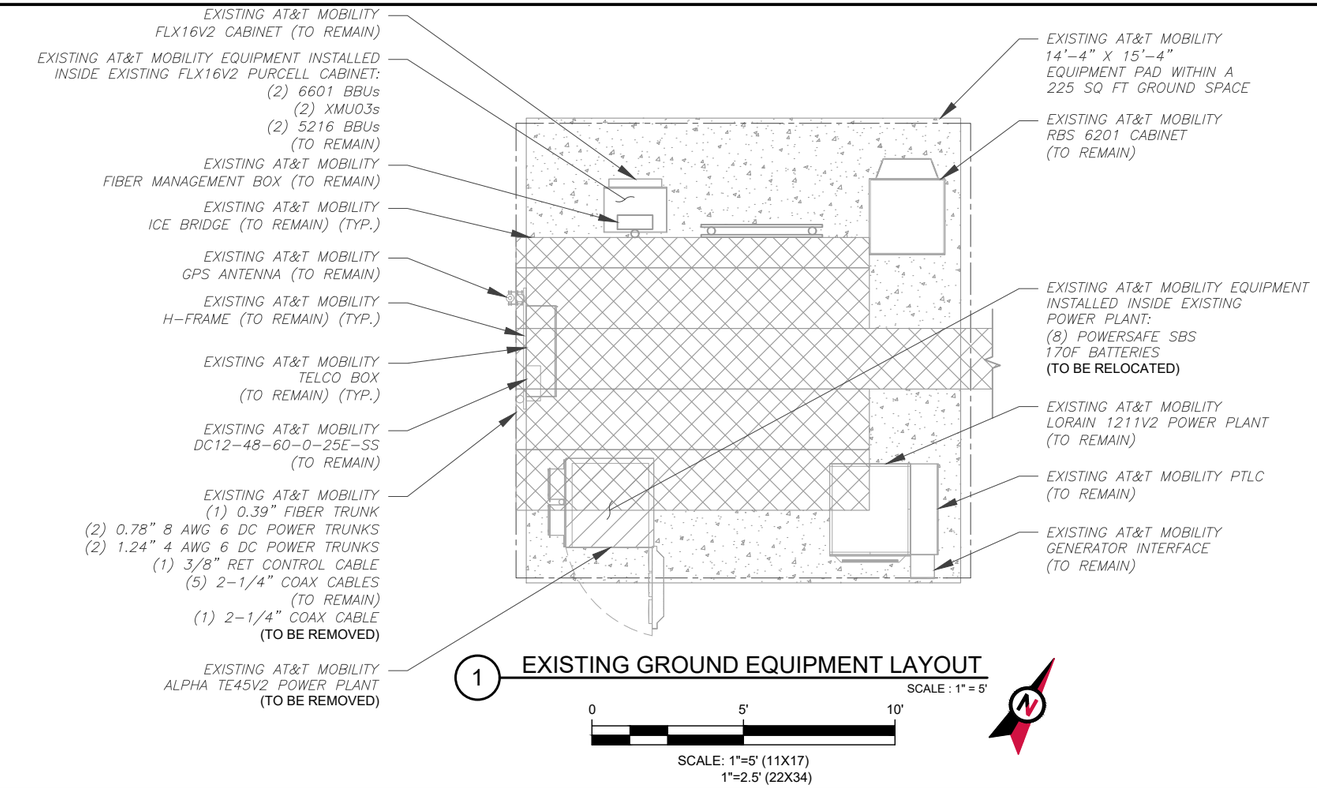
SEAL: 05/14/25

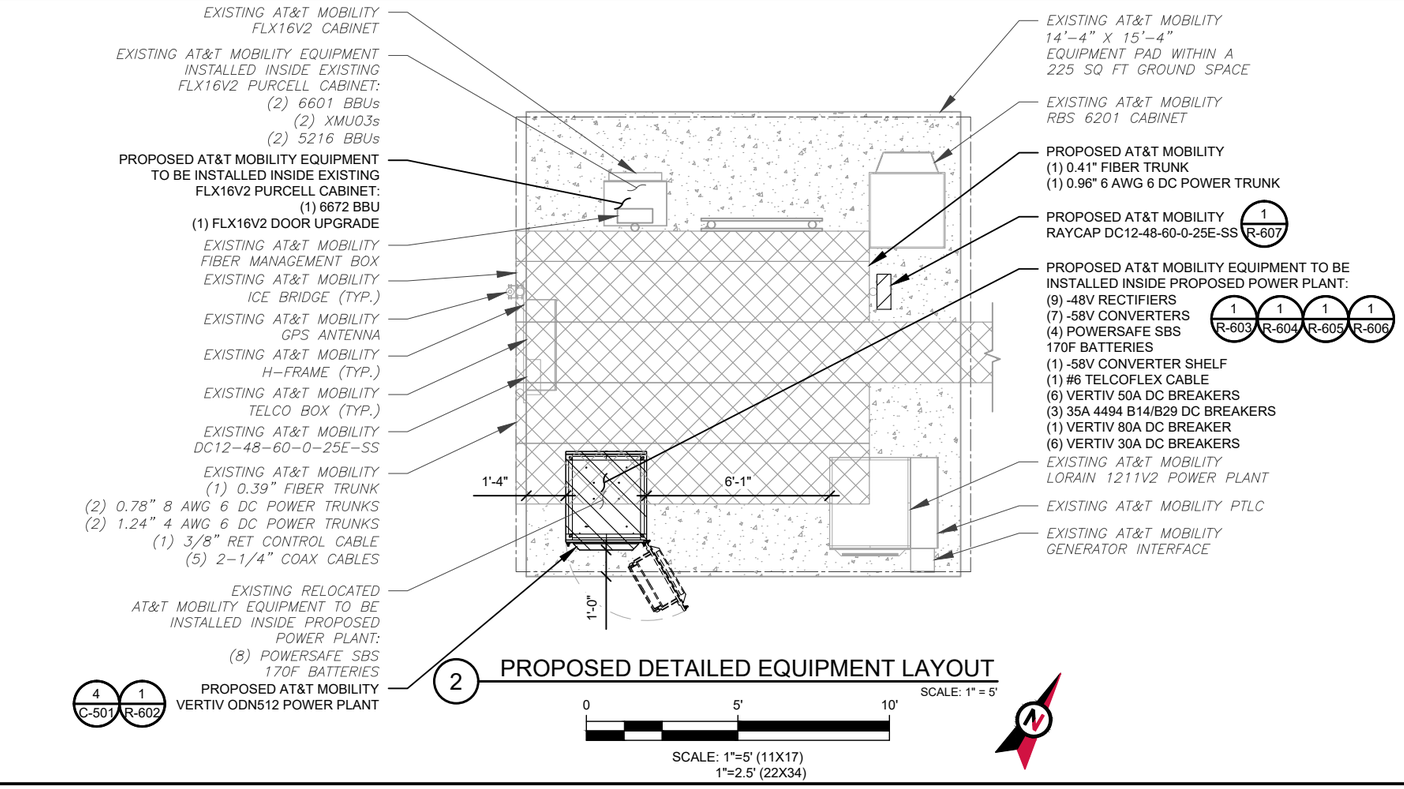
AT&T

DATE DRAWN:	05/14/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	1





AMERICAN TOWER®

PLANS PREPARED BY:

TEP

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

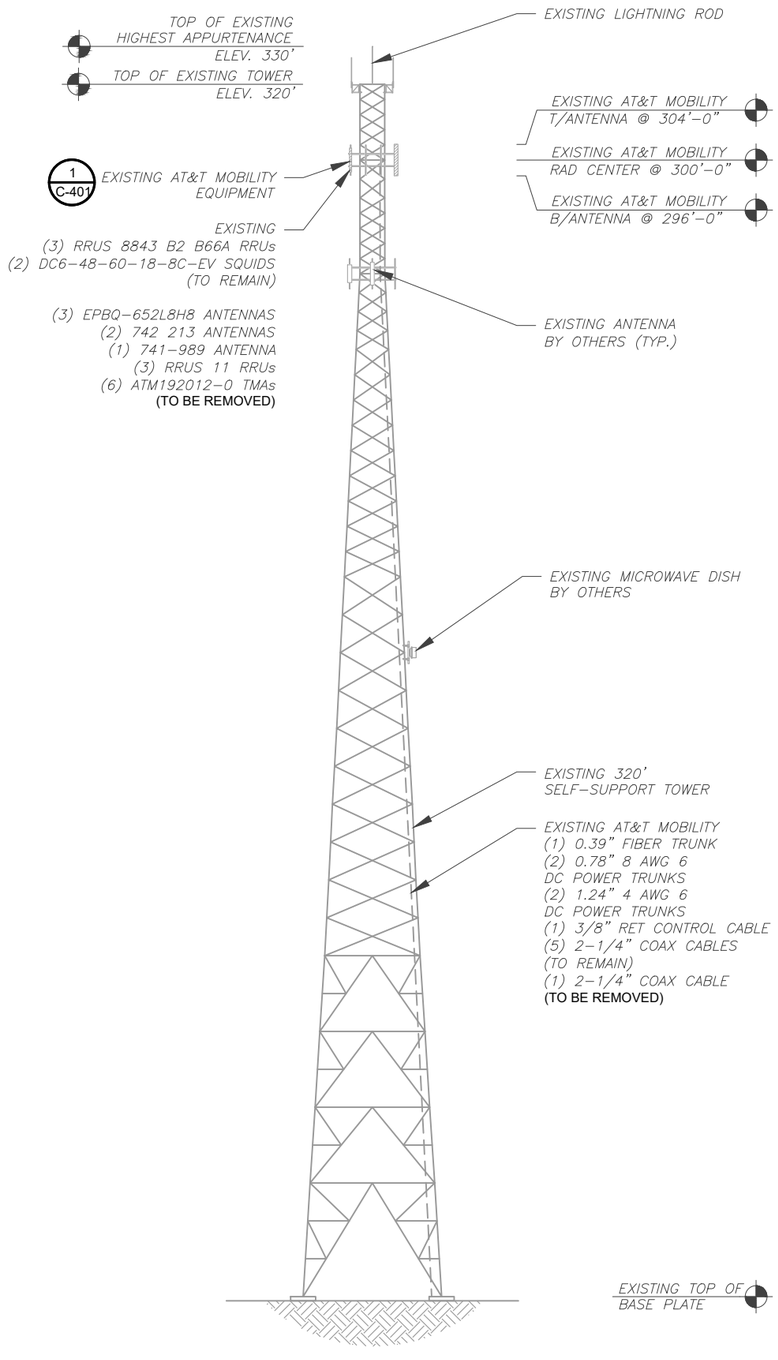
SEAL: 05/02/25

AT&T

DATE DRAWN:	05/02/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

DETAILED EQUIPMENT LAYOUT

SHEET NUMBER:	REVISION:
C-102	0

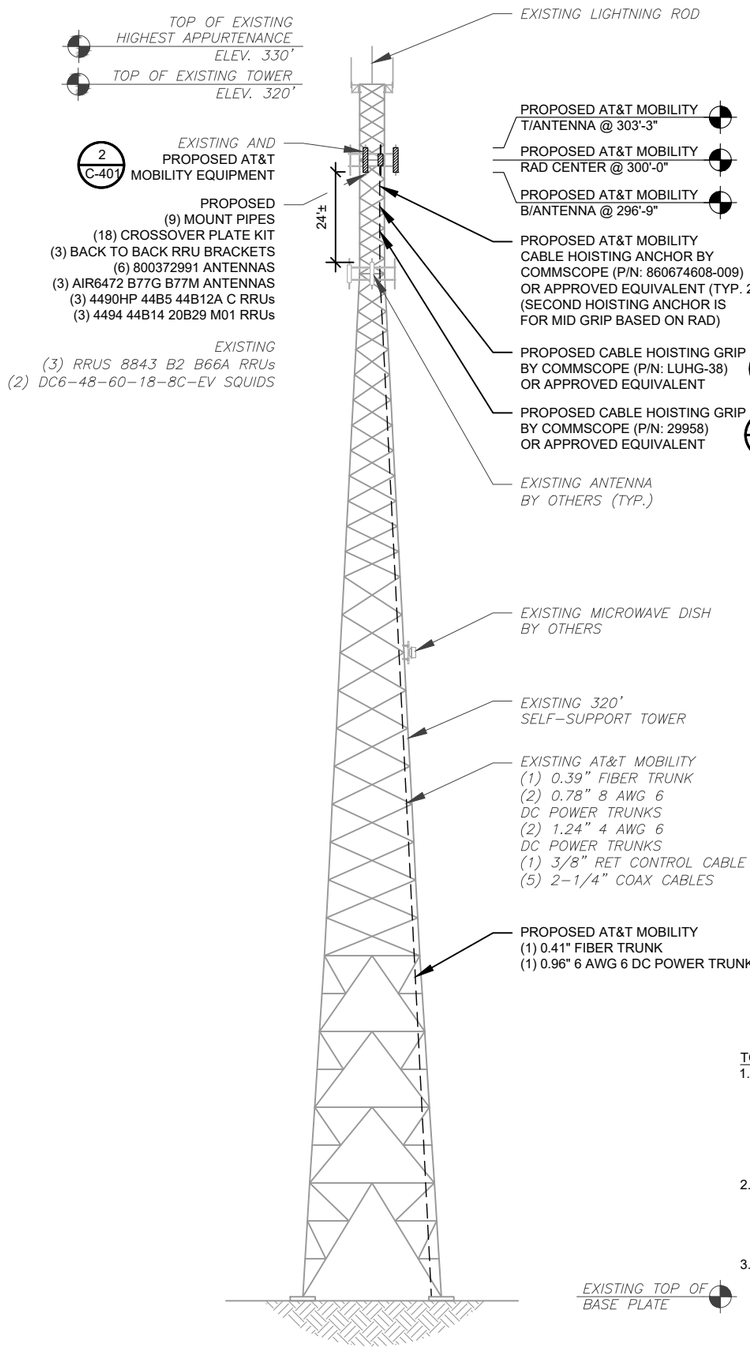


1 EXISTING TOWER ELEVATION

SCALE: 1" = 40'

0 40' 80'

SCALE: 1"=40' (11X17)
1"=20' (22X34)



2 PROPOSED TOWER ELEVATION

SCALE: 1" = 40'

0 40' 80'

SCALE: 1"=40' (11X17)
1"=20' (22X34)

PER MOUNT ANALYSIS COMPLETED BY ENGINEERED TOWER SOLUTIONS, DATED APRIL 14, 2025. THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.

TOWER NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
4. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

AMERICAN TOWER®

PLANS PREPARED BY:

TEP

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

SEAL: 05/02/25

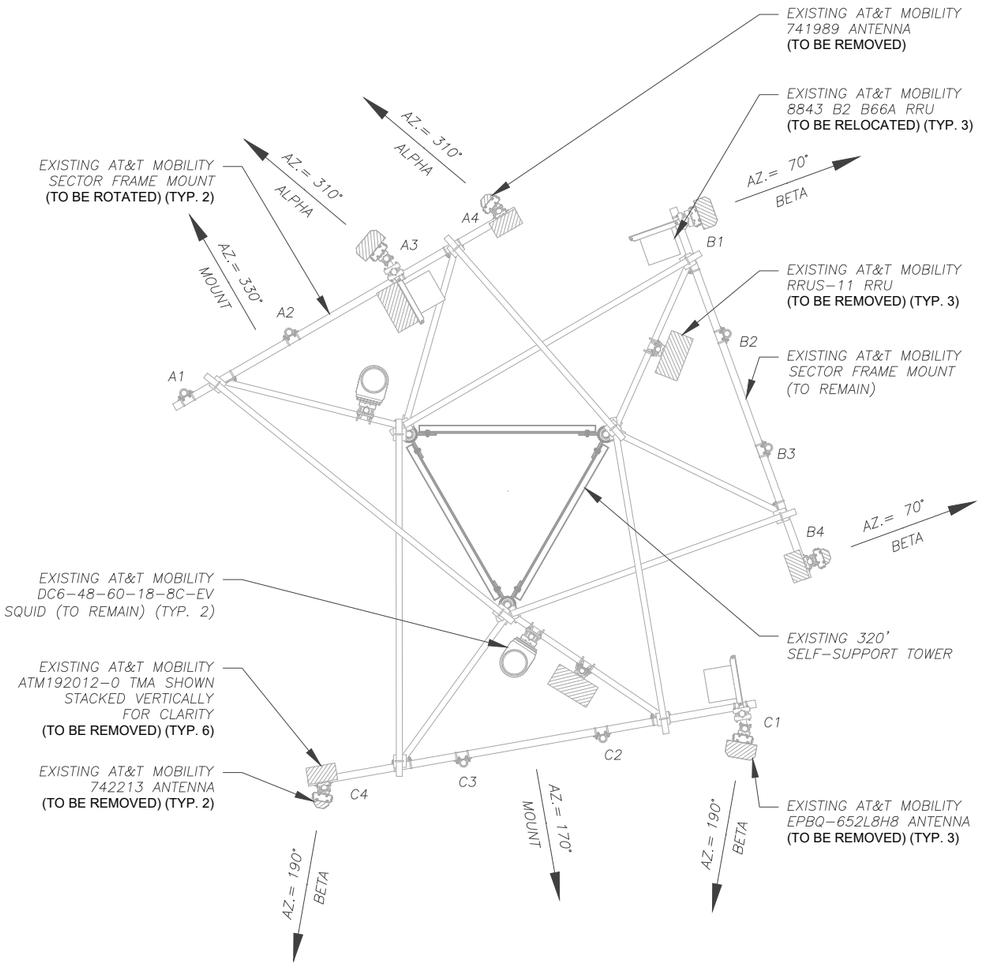
AT&T

DATE DRAWN:	05/02/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0

EXISTING CONFIGURATIONS ARE BASED ON RFDS.
CONTRACTOR TO VERIFY EXISTING CONDITIONS.

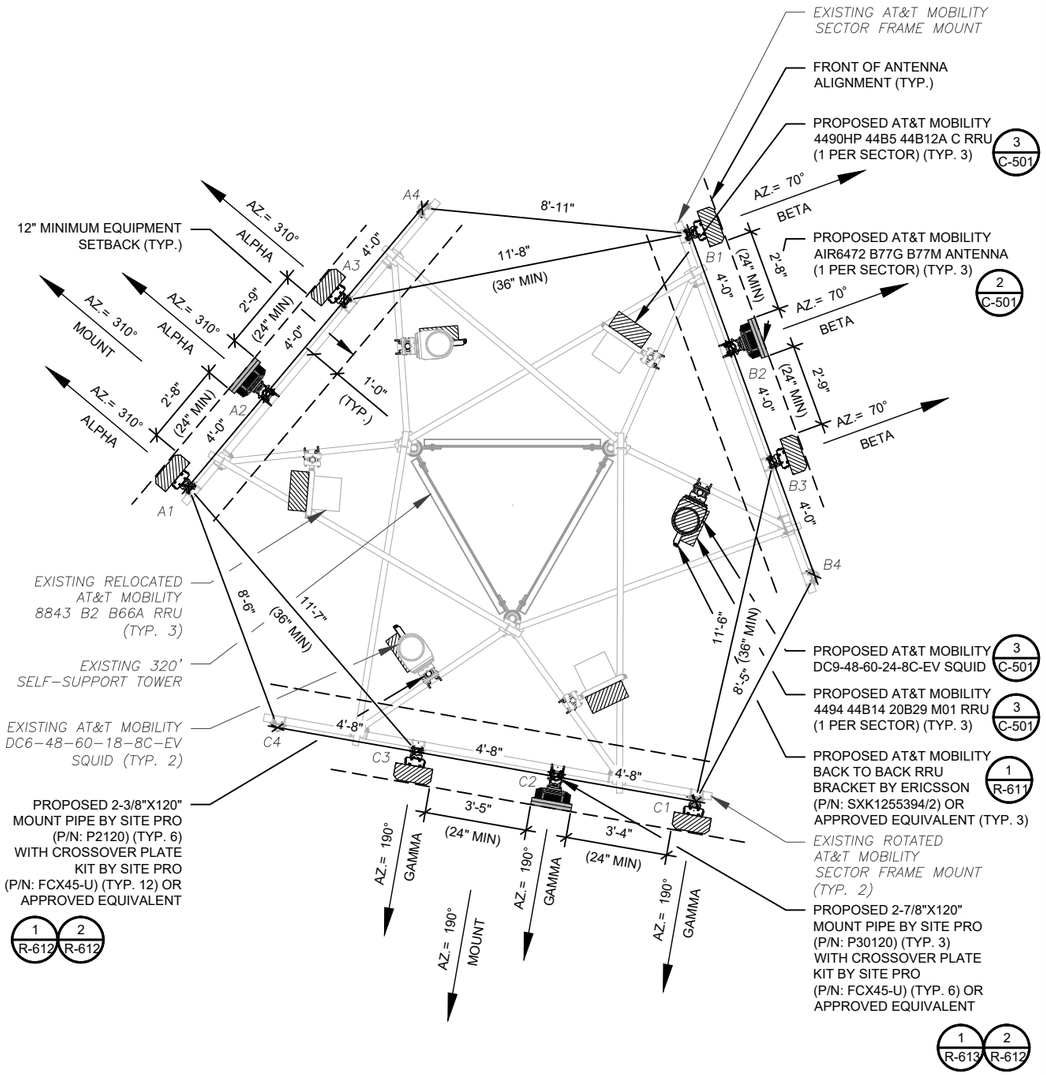


1 EXISTING ANTENNA PLAN
SCALE: 1" = 5'

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

PER MOUNT ANALYSIS COMPLETED BY ENGINEERED TOWER SOLUTIONS, DATED APRIL 14, 2025. THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



2 FINAL ANTENNA PLAN
SCALE: 1" = 5'

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

PROPOSED RRUs MUST BE INSTALLED A MINIMUM OF 12" AWAY FROM HORIZONTAL MOUNTING PIPE

AMERICAN TOWER®

PLANS PREPARED BY:

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

SEAL: 05/02/25

AT&T

DATE DRAWN:	05/02/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

ANTENNA INSTALLATION

SHEET NUMBER:	REVISION:
C-401	0

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	*300'*	*310°*	*A1*	–	–	–	–	–
			A2	–	–	–	–	–
			A3	EPBQ-652L8H8	–	RMV	(1) RRUS 11 (1) 8843 B2 B66A	RMV REL
			A4	741989	–	RMV	(2) ATM192012-0	RMV
BETA	*300'*	*70°*	*B1*	EPBQ-652L8H8	–	REL	(1) RRUS 11 (1) 8843 B2 B66A	RMV REL
			B2	–	–	–	–	–
			B3	–	–	–	–	–
			B4	742213	–	RMV	(2) ATM192012-0	RMV
GAMMA	*300'*	*190°*	*C1*	EPBQ-652L8H8	–	REL	(1) RRUS 11 (1) 8843 B2 B66A	RMV REL
			C2	–	–	–	–	–
			C3	–	–	–	–	–
			C4	742213	–	RMV	(2) ATM192012-0	RMV

NOTES

1. GC TO VERIFY THE FINAL RFDS MATCHES THE FINAL CONSTRUCTION DRAWINGS. GC TO NOTIFY ATC PM OF ANY DISCREPANCY PRIOR TO INSTALLING THE EQUIPMENT.
2. GC TO CAP ALL UNUSED PORTS.
3. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
4. THE ANTENNA ORIENTATION PLAN IS A SCHEMATIC. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA AZIMUTHS, MOUNT CONFIGURATIONS AND TOWER ORIENTATION. SCALES SHOWN ARE FOR REFERENCE ONLY AND EXISTING DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION AND NOTIFY ATC OF ANY DISCREPANCIES.
5. CONTRACTOR TO ENSURE PROPER SEPARATION IN ACCORDANCE WITH AT&T'S FIRSTNET REQUIREMENTS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	300'	310°	A1	800372991	LTE 700/LTE 850/LTE AWS/ LTE 1900	ADD	*(1) 8843 B2 B66A* (1) 4490HP 44B5 44B12A C	*RMN* ADD
			A2	AIR6472 B77G B77M	5G CBAND/5G DOD	ADD	-	-
			A3	800372991	LTE 700 (FNET)	ADD	(1) 4494 44B14 20B29 M01	ADD
			A4	-	-	-	-	-
BETA	300'	70°	B1	800372991	LTE 700/LTE 850/LTE AWS/ LTE 1900	ADD	*(1) 8843 B2 B66A* (1) 4490HP 44B5 44B12A C	*RMN* ADD
			B2	AIR6472 B77G B77M	5G CBAND/5G DOD	ADD	-	-
			B3	800372991	LTE 700 (FNET)	ADD	(1) 4494 44B14 20B29 M01	ADD
			B4	-	-	-	-	-
GAMMA	300'	190°	C1	800372991	LTE 700/LTE 850/LTE AWS/ LTE 1900	ADD	*(1) 8843 B2 B66A* (1) 4490HP 44B5 44B12A C	*RMN* ADD
			C2	AIR6472 B77G B77M	5G CBAND/5G DOD	ADD	-	-
			C3	800372991	LTE 700 (FNET)	ADD	(1) 4494 44B14 20B29 M01	ADD
			C4	-	-	-	-	-

EXISTING FIBER DISTRIBUTION/SQUID

MODEL NUMBER	STATUS
(2) DC6-48-60-18-8C-EV	*RMN*
–	–
–	–
–	–

EXISTING CABLING SUMMARY

COAX	DC / RET	FIBER	STATUS
(5) 2-1/4"	*(2) 0.78" 8 AWG 6*	*(1) 0.39"*	*RMN*
–	*(2) 1.24" 4 AWG 6*	–	*RMN*
–	*(1) 3/8" RET*	–	*RMN*
(1) 2-1/4"	–	–	RMV

FINAL FIBER DISTRIBUTION/SQUID

MODEL NUMBER	STATUS
(2) DC6-48-60-18-8C-EV	*RMN*
-	-
-	-
(1) DC9-48-60-24-8C-EV	ADD

FINAL CABLING SUMMARY

COAX	DC	FIBER	STATUS
(5) 2-1/4"	*(2) 0.78" 8 AWG 6*	*(1) 0.39"*	*RMN*
-	*(2) 1.24" 4 AWG 6*	-	*RMN*
-	*(1) 3/8" RET*	-	*RMN*
-	(1) 0.96" 6 AWG 6	(1) 0.41"	ADD

1 EQUIPMENT SCHEDULES

AMERICAN TOWER®

PLANS PREPARED BY:

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

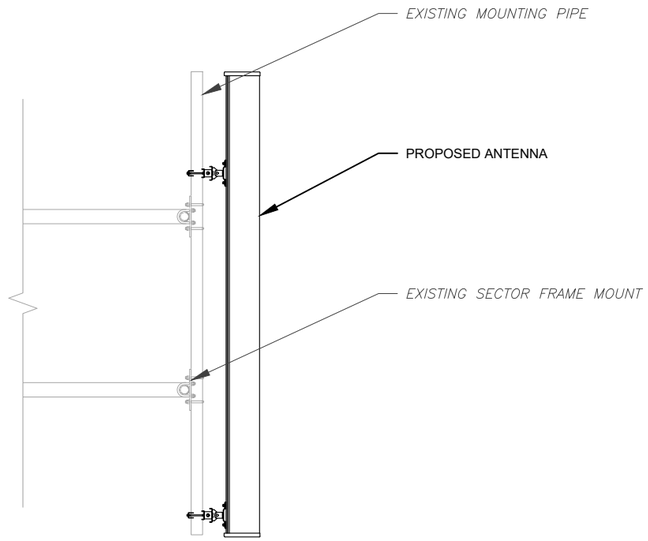
SEAL: 05/02/25

AT&T

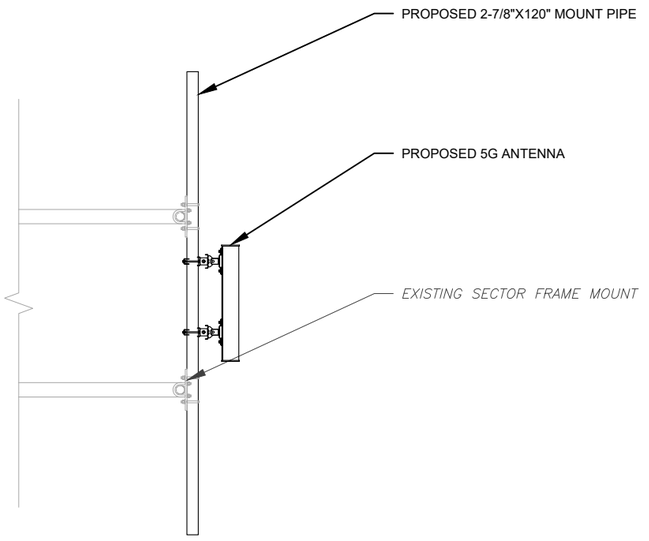
DATE DRAWN:	05/02/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

ANTENNA SCHEDULE

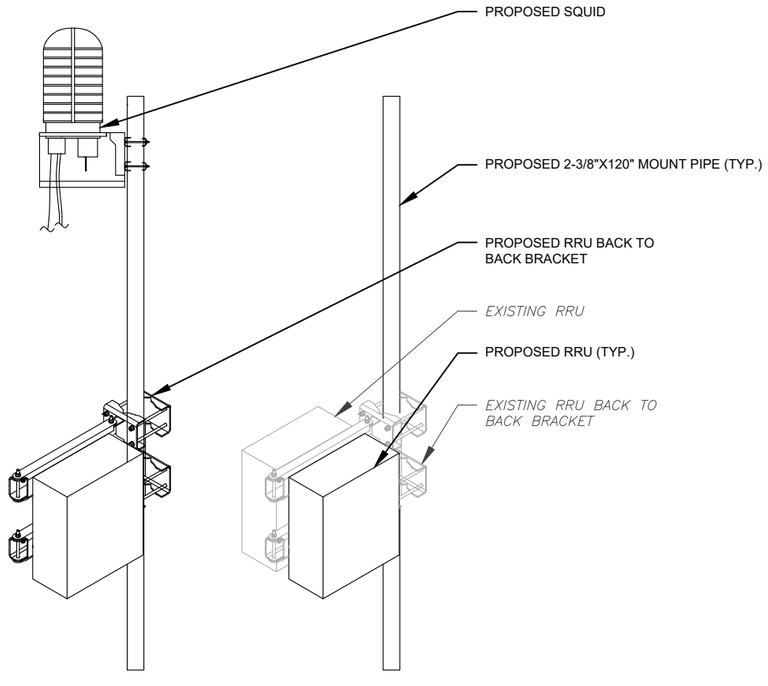
SHEET NUMBER:	REVISION:
C-402	0



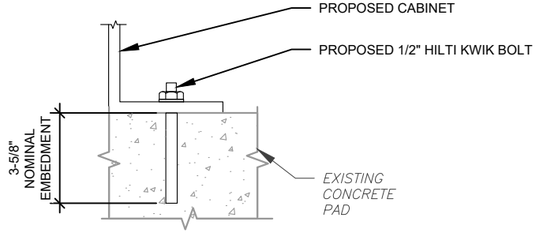
1 PROPOSED ANTENNA MOUNTING DETAIL
SCALE: N.T.S.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL
SCALE: N.T.S.



3 PROPOSED RRU AND SQUID MOUNTING DETAIL
SCALE: N.T.S.



NOTE:

INSTALL HILTI KWIK BOLT ANCHORS STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.US.HILTI.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

4 CABINET ATTACHMENT DETAIL
SCALE: N.T.S.

AMERICAN TOWER®

PLANS PREPARED BY:

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

TEP Engineering, PLLC P-1403

NORTH CAROLINA PROFESSIONAL SEAL 043134 ENGINEER JOSHUA H. CARDEN

SEAL: 05/02/25

AT&T

DATE DRAWN:	05/02/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

AC POWER PANEL A (EXISTING)
120/240 VOLTS, 1-PHASE, 3-WIRE, 200A

MAIN BREAKER RATING (A) :					200		SYSTEM VOLTAGE (V) :			240	
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
PCU #1 / OFF	0	nc	40/2	1	720		2	15/2	nc	720	PRI HETA
	0	nc		3		720	4		nc	720	
PCU #2 / OFF	0	nc	40/2	5	0		6	15/2	nc	0	GRW1 HETA / OFF
	0	nc		7		0	8		nc	0	
PCU #3 / OFF	0	nc	40/2	9	0		10	15/2	nc	0	GRW2 HETA / OFF
	0	nc		11		0	12		nc	0	
PCU #4 / OFF	0	nc	40/2	13	960		14	20/2	c	960	A/C
	0	nc		15		960	16		c	960	
PCU #5	972	c	40/2	17	972		18	20/1	nc	0	RECEPTS / OFF
	972	c		19		972	20	15/2	nc	0	BBU HVAC / OFF
PCU #6 / OFF	0	nc	40/2	21	0		22		nc	0	
	0	nc		23		180	24	20/1	nc	180	AUX UPC GFI
GFI	180	nc	15/1	25	2100		26	20/1	nc	1920	A.T.S.
TE45	6000	c	125/2	27		7000	28	20/1	nc	1000	BLOCK HEATER
	6000	c		29	6650		30	20/1	nc	650	BATT CHARGER
PHASE TOTALS (VA):					11402	9832					
PHASE TOTALS (A):					95	82					
CURRENT PER PHASE W/ 125% Continuous Loads(A):					112	98	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					21234		Legend: c = continuous, nc = non-continuous				
PANEL TOTAL W/ 125% Continuous Loads (VA):					25200						

1 EXISTING AC PANEL SCHEDULE
SCALE: N.T.S.

AC POWER PANEL A **(PROPOSED)**
120/240 VOLTS, 1-PHASE, 3-WIRE, 200A

MAIN BREAKER RATING (A) :					200		SYSTEM VOLTAGE (V) :			240	
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
VERTIV RECTIFIER #1 & #2	**1380**	nc	**40/2**	1	2100		2	15/2	nc	720	PRI HETA
	1380	nc		3		2100	4		nc	720	
VERTIV RECTIFIER #3 & #4	**1380**	nc	**40/2**	5	1380		6	15/2	nc	**0**	**SPARE / OFF**
	1380	nc		7		1380	8		nc	**0**	
VERTIV RECTIFIER #5 & #6	**1380**	nc	**40/2**	9	1380		10	15/2	nc	**0**	**SPARE / OFF**
	1380	nc		11		1380	12		nc	**0**	
VERTIV RECTIFIER #7 & #8	**1380**	nc	**40/2**	13	2340		14	20/2	c	960	A/C
	1380	nc		15		2340	16		c	960	
VERTIV RECTIFIER #9	**690**	c	**40/2**	17	690		18	20/1	nc	**0**	**SPARE / OFF**
	690	c		19		690	20	15/2	nc	**0**	**SPARE / OFF**
SPARE / OFF	**0**	nc	**40/2**	21	0		22		nc	**0**	
	0	nc		23		180	24	20/1	nc	180	AUX UPC GFI
GFI	180	nc	15/1	25	2100		26	20/1	nc	1920	A.T.S.
SPARE / OFF	**0**	c	**125/2**	27		1000	28	20/1	nc	1000	BLOCK HEATER
	0	c		29	650		30	20/1	nc	650	BATT CHARGER
PHASE TOTALS (VA):					10640	9070					
PHASE TOTALS (A):					89	76					
CURRENT PER PHASE W/ 125% Continuous Loads(A):					92	79	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					19710		Legend: c = continuous, nc = non-continuous				
PANEL TOTAL W/ 125% Continuous Loads (VA):					20535						

2 PROPOSED AC PANEL SCHEDULE
SCALE: N.T.S.

AMERICAN TOWER®

PLANS PREPARED BY:

TEP

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25
1	100% CONSTRUCTION	SSP	05/14/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042109 MARK S. QUAKENBUSH

SEAL: 05/14/25

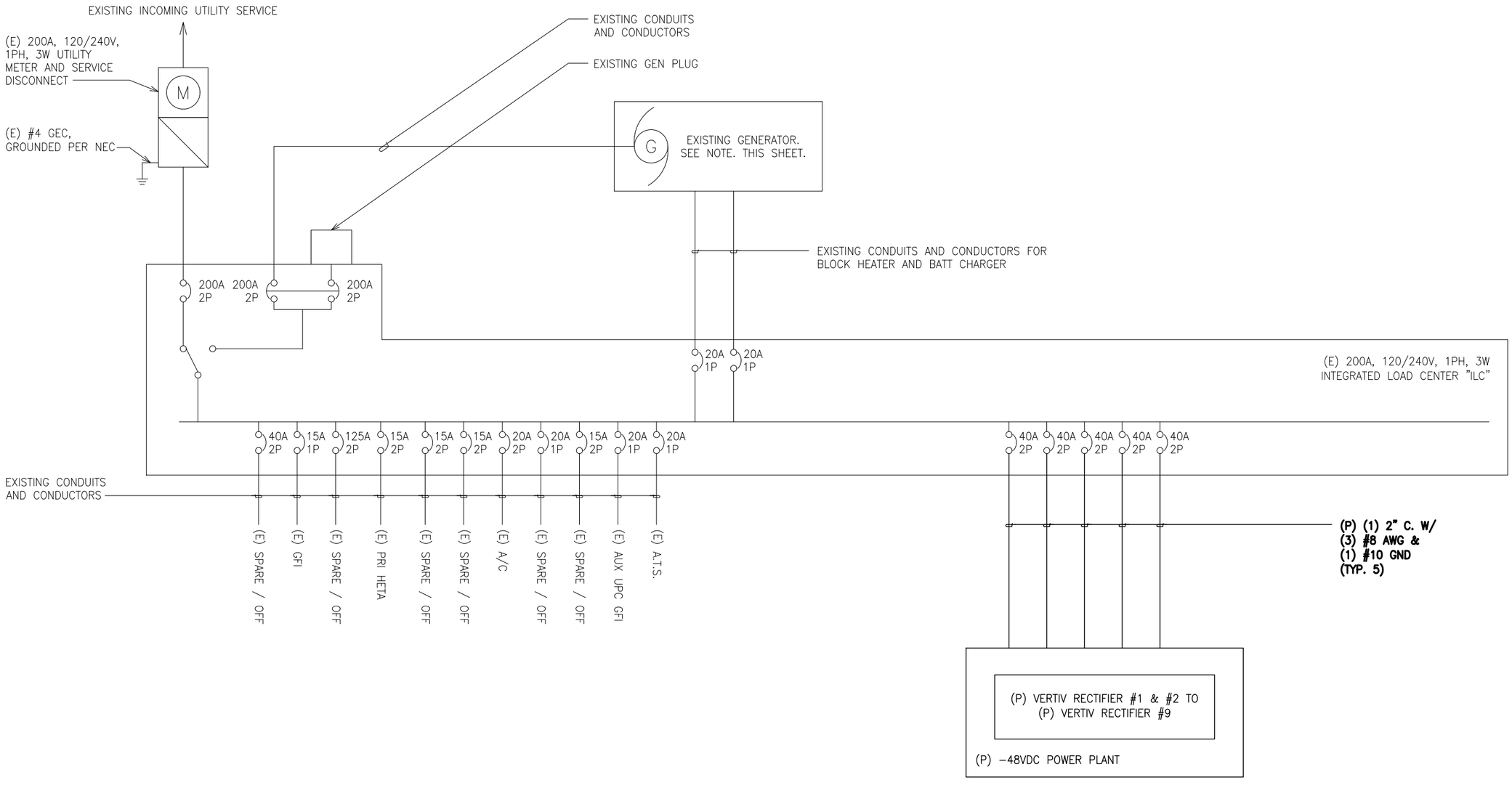
AT&T

DATE DRAWN:	05/14/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

ELECTRICAL DETAILS

SHEET NUMBER:	REVISION:
E-101	1

NOTE:
EXISTING GENERATOR CAPACITY HAS NOT BEEN VERIFIED BY TEP. CONTRACTOR TO VERIFY EXISTING GENERATOR HAS SUFFICIENT CAPACITY FOR PROPOSED LOADING. CONTACT TEP FOR CORRECTIVE ACTION IF THE PROPOSED LOADING EXCEEDS THE GENERATOR'S CAPACITY.



LEGEND:
(E) – EXISTING
(P) – PROPOSED
(F) – FUTURE

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

AMERICAN TOWER®

PLANS PREPARED BY:

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25
1	100% CONSTRUCTION	SSP	05/14/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

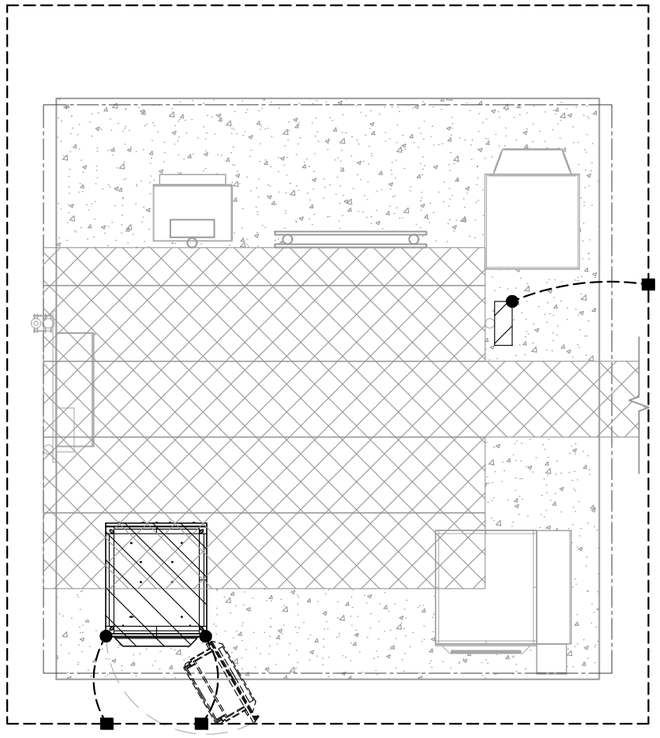
SEAL: 05/14/25

AT&T

DATE DRAWN:	05/14/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

ELECTRICAL DETAILS

SHEET NUMBER:	REVISION:
E-102	1

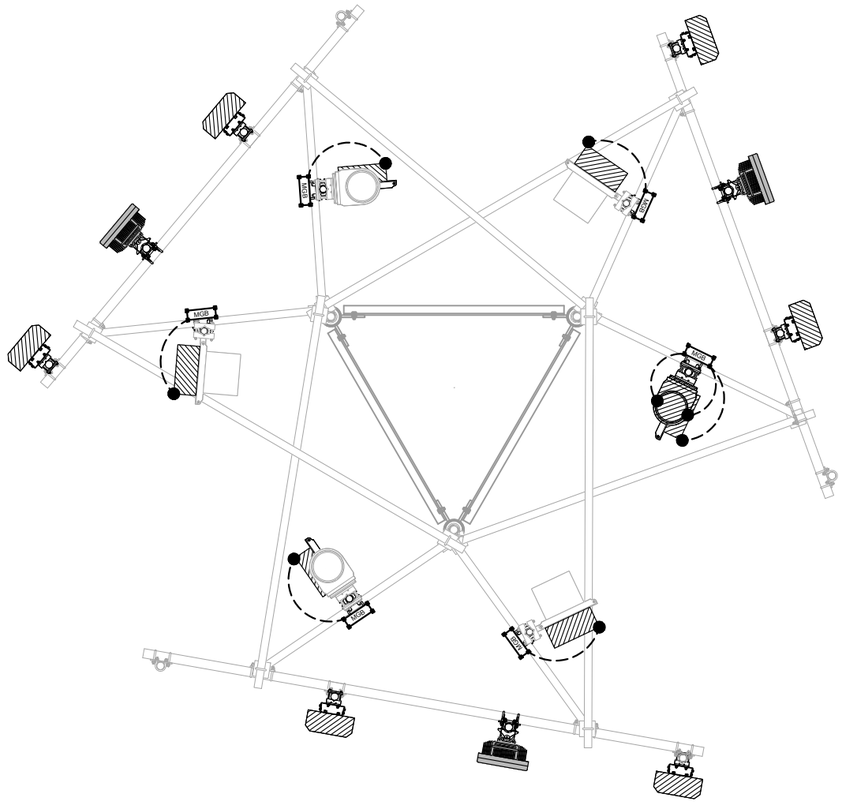


LEGEND

- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- ANTENNA GROUND BAR
- MASTER GROUND BAR (MGB)

1 EQUIPMENT GROUNDING PLAN

SCALE: N.T.S.



LEGEND

- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- ANTENNA GROUND BAR
- MASTER GROUND BAR (MGB)

2 ANTENNA GROUNDING PLAN

SCALE: N.T.S.

AMERICAN TOWER®

PLANS PREPARED BY:

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25
1	100% CONSTRUCTION	SSP	05/14/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

NORTH CAROLINA PROFESSIONAL SEAL 042109 ENGINEER MARK S. QUAKENBUSH

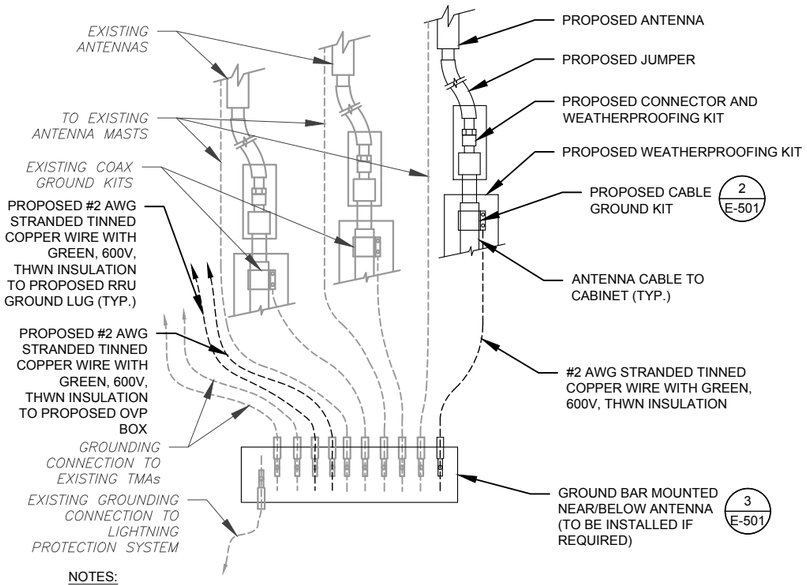
SEAL: 05/14/25

AT&T

DATE DRAWN:	05/14/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

ELECTRICAL DETAILS

SHEET NUMBER:	REVISION:
E-103	1

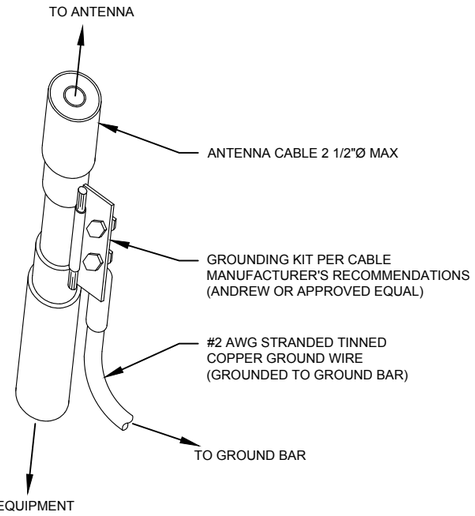


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH AT&T MOBILITY GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH AT&T MOBILITY GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

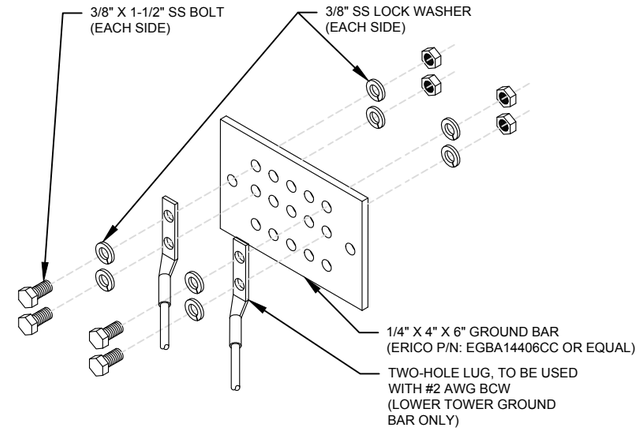


GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.

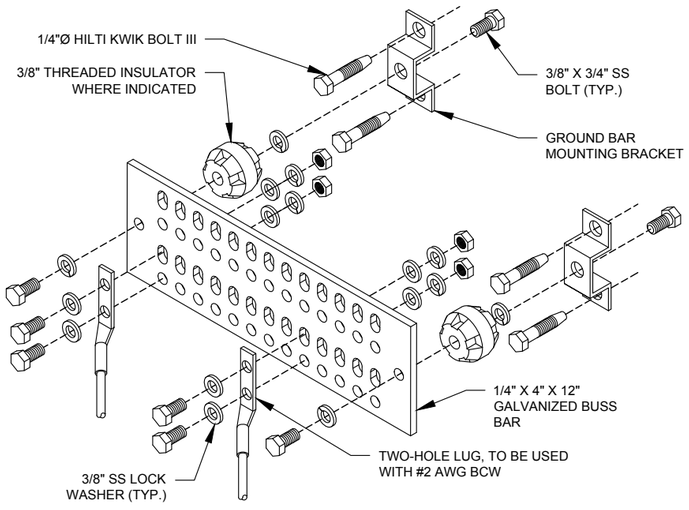


GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

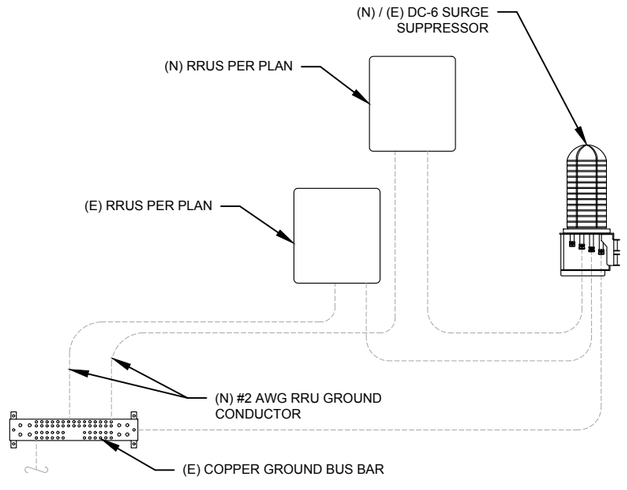


GROUND BAR NOTES

1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

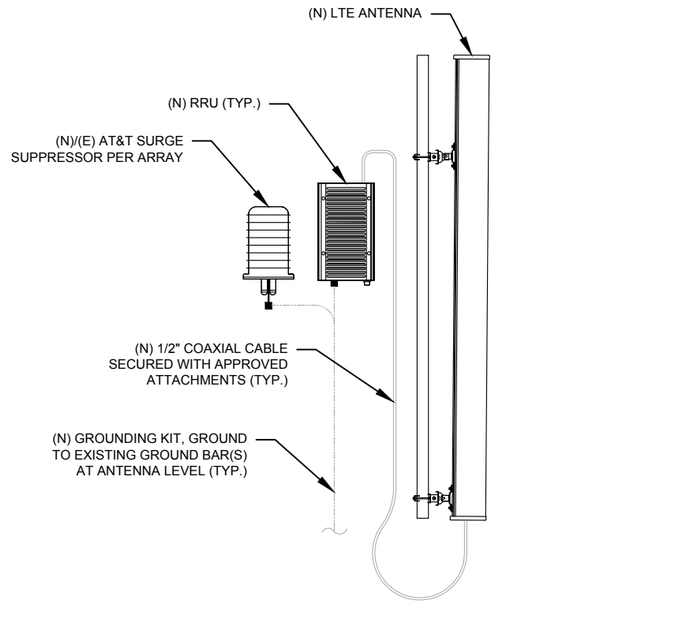
4 MAIN GROUND BAR DETAIL

SCALE: N.T.S.



5 RRU GROUNDING

SCALE: N.T.S.



6 ANTENNA/RRU GROUNDING

SCALE: N.T.S.

AMERICAN TOWER®

PLANS PREPARED BY:

TEP ENGINEERING, PLLC
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
N.C. LICENSE #P-1403

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	ANM	04/21/25
0	100% CONSTRUCTION	ANM	05/02/25
1	100% CONSTRUCTION	SSP	05/14/25

ATC SITE NUMBER: 21274

ATC SITE NAME: SPOUT SPRINGS NC1

AT&T MOBILITY SITE NUMBER:

SINC006548

AT&T MOBILITY SITE NAME:

368-218

SITE ADDRESS:
2305 NC 87 S
SANFORD, NC 27332

NORTH CAROLINA PROFESSIONAL SEAL 042109 ENGINEER MARK S. QUAKENBUSH

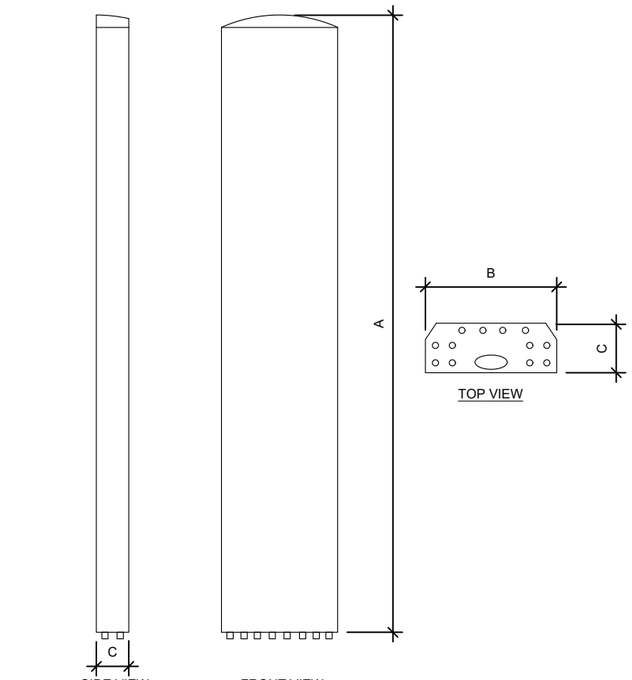
SEAL: 05/14/25

AT&T

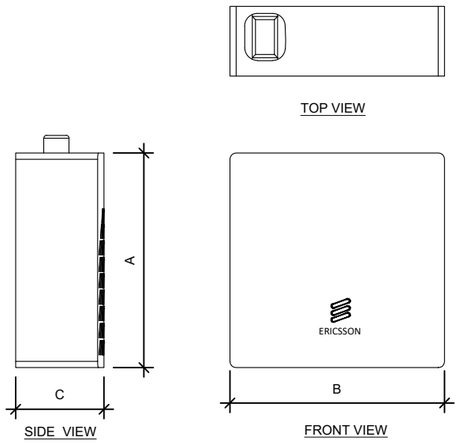
DATE DRAWN:	05/14/25
ATC JOB NO:	14884053
CUSTOMER NAME:	368-218
CUSTOMER ID:	SINC006548

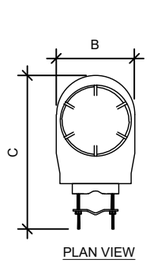
GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	1

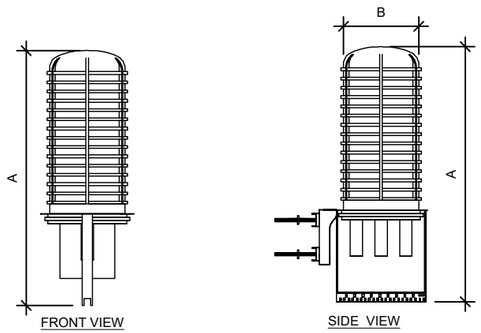


ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
800372991	77.9"	14.9"	6.5"	74.9
AIR 6472 B77G B77M	36.3"	15.8"	7.4"	67.2





RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RADIO 4490HP 44B5 44B12A C	20.6"	15.6"	7.0"	65.0
RADIO 4494 44B14 20B29 M01	17.5"	15.1"	5.6"	57.3



RAYCAP SPECIFICATIONS				
RAYCAP MODEL	A	B	C	WEIGHT (LBS)
DC9-48-60-24-8C-EV	25.9"	12.4"	9.7"	18.5

- EQUIPMENT SPECIFICATIONS

SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: -

VERTIV™ XTE 601P ENCLOSURE, NETSURE 512 POWER SYSTEM

Description

This outdoor power solution includes a NetSure™ 512 DC Power System and an environmentally controlled Vertiv XTE 601P enclosure that offers separate individually-cooled chambers for power equipment and batteries. Temperature is monitored with an Environmental Control Unit (ECU) that adjusts thermal settings to maintain ideal conditions within each chamber, while simultaneously decreasing system power consumption and noise. All DC power-feed cables to customer equipment are surge protected at the distribution bus. The battery chamber houses 3 shelves of front-post VRLA batteries and SAFT batteries up to 180 Ah in size.

NetSure 512 DC Power System

- eSure™ rectifiers provide high energy efficiency
- Great output power at high temperatures
- Advanced remote monitoring with NCU controller

Vertiv™ XTE Enclosure

- Separate temperature-controlled zones for power and batteries
- Door-mounted cooling system & rear cable-entry compartment

Technical Specifications

DC POWER SYSTEM FEATURES	
Nominal System Voltage	-48 VDC or +24 VDC
Control	NCU controller
RATED OUTPUT CAPACITY – MAXIMUM CONFIGURATION	
System	525 amps at -48 VDC plus redundancy 400 amps at +24 VDC plus redundancy
Distribution Panel	Top: Wired for (16) +24 V and (13) -48 V bullet positions Bottom: (30) -48 V bullet positions
ENVIRONMENTAL	
Operating Temperature	-40 °F to 115 °F (-40 °C to 46 °C) continuous operation
Humidity	0 to 95%, non-condensing
THERMAL SOLUTIONS	
Power Chamber	2500 watt door-mounted heat exchanger, 2 RU available space for surge protection
Battery Chamber	Fan cooled, fresh air ventilation; holds up to (3) battery strings
EQUIPMENT	
Ground Bar	10 positions
Terminal Block	12-position Phoenix alarm block, 32-position Phoenix alarm bunching block
SAFETY	
DC Power System	UL 1801 Listed (US & Canada), NEBS Level 3
Enclosure	GR-487, UL 60950, and Seismic Zone 4 compliant

Ordering Process

Follow the steps below for each DC power system required.

1. Order -48VDC 2000 watt rectifiers, quantity as required, NEQ.15930 (1R482000E3).
2. Order -48VDC to +24VDC 1500 watt converters, quantity as required, NEQ.15929 (1C48241500).
3. Order load circuit breakers and GMT fuse module NEQ.15981 (549017) as required per Bullet Nose Type Circuit Breakers on **page 17** and GMT Fuse Modules on **page 18**.

If required, for each single pole load circuit breaker ordered, order single pole 90 degree lug adapter kit NEQ.15152 (545405).

If required, for each two-pole load circuit breaker ordered, order two-pole 90 degree lug adapter kit NEQ.15982 (545404).

If required, for each three-pole load circuit breaker ordered, order three-pole 90 degree lug adapter kit NEQ.15983 (545571).

4. Order additional temperature probes as desired. The base power plant includes (4) temperature probes.

   If more than (4) temperature probes are desired, order NEQ.15984 (547490) SMTEMP Module. Each module can accommodate (8) temperature probes. A maximum of (8) SMTEMP modules can be accommodated per system.

   Order temperature probes, quantity as required.

   Choose:
   NEQ.15985 (552992), 10.3 meter length
   NEQ.15986 (556155), 3.3 meter length

   Example: If (20) total temperature probes are desired, order (2) SMTEMP modules and (16) temperature probes.

   Order temperature probe extensions if initial length is not adequate, 10 meter length. Quantity as required, NEQ.15987 (04119122).

5. If DC generator disconnect breaker is required, order DC generator input connection kit, NEQ.20070 (564898) and 400 A bullet breaker NEQ.20063 (150860).

Vertiv™ XTE 601P Ordering Information

AT&T NUMBER	VERTIV™ NUMBER	DESCRIPTION
Outdoor DC Power System		
NEQ.19918*	F2016064	Vertiv XTE 601P, 512, 752 lbs.
Equipped with:	F1011032	Enclosure (72"H x 32"W x 39"D)
	582137000ZZ007	NetSure 512, -48 VDC/+24 VDC, (43) -48 V load breaker positions, (16) +24 V load breaker positions, LVBD capability
	58213700027	*(1) Two row distribution cabinet*
	58213700030	*(4) Rectifier shelves 3 right positions can be used for -48V to +24V converters*
	582137000AC	*(1) (30) position -48 VDC distribution panel*
	582137000DJ	*(1) (13) -48 V & (16) +24 V position dist. panel*
	1M830DNA559478	*(1) NCU controller*
	552992	*(2) Temperature probes*
	556155	*(2) Temperature probes*
	541308	*(2) Alarm cables*
	58213700070	*(1) Extended interface board*
	549017	(1) GMT fuse option board 2500 watt door-mounted heat exchanger 12-pair Phoenix alarm block 32-pair Phoenix alarm bunching block Strikesorb DC surge protection (3) 100 amp DC battery disconnects Battery heater pads included Duplex AC convenience outlet 10-position ground bar

AT&T NUMBER	VERTIV NUMBER	DESCRIPTION
Accessories		
NEQ.15998	F1010598	4" mounting plinth
NEQ.15930	1R482000E3	Rectifier, NetSure 512, -48 VDC, 40 A/2000 W
NEQ.15929	1C48241500	(1) Converter, high efficiency, -48 VDC to +24 VDC, 62.5 A/1500 W, 4.4 lbs.*
NEQ.15984	547490	SM-TEMP, 8-input temperature module
NEQ.15985	552992	Temperature probe, 10.3 meters
NEQ.15986	556155	Temperature probe, 3.3 meters
NEQ.15987	04119122	Temp probe extension, 10 meters
NEQ.15988	552822	Temp probe sensor, 0.3 meter
NEQ.19291	1M830DNA560273	NCU controller field retrofit
NEQ.15992	MA4C5U31	IB2, Customer Interface Board
NEQ.15993	548120	EIB, Extended Interface Board
NEQ.20070	564898	DC generator disconnect breaker kit **NOTE:** 400 A bullet breaker is sold separately.
NEQ.20063	150860	400 A bullet breaker, 4-pole
NEQ.TBD	564354	Distribution position conversion kit for top row. All -48VDC positions.
NEQ.TBD	564997	DC generator wrap around Kit
		Bullet nose type circuit breakers - **page 17**
Batteries		
NEQ.12090	N/A	155 Ah GNB battery (not supplied by Vertiv; sourced through EPL)
NEQ.14983	N/A	48 V SAFT battery string, 80-94743-01, 38 X TelX 180 NiCd (not supplied by Vertiv; sourced through EPL)

* 1200 watts at 65°C

1 PROPOSED NETSURE 512 POWER PLANT DETAIL
SCALE : N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-602

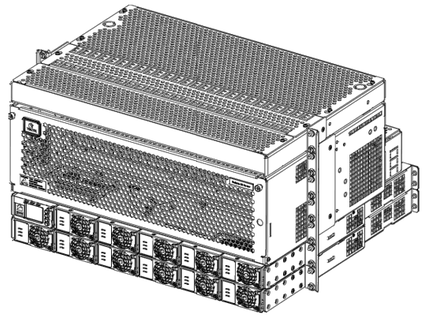
REVISION: -

SYSTEM OVERVIEW

Description: -48 VDC to -58 VDC @ up to 600 Amperes Converter System

The Vertiv™ NetSure™ DCS48/58-600 Converter System is a complete integrated converter system containing -48 VDC to -58 VDC converters, intelligent control, metering, monitoring, and distribution.

The converter system is designed for operation with the positive output grounded.



This system consists of the following components.

- **DC Distribution Cabinet**

  The base system includes one (1) distribution cabinet, which provides DC distribution through fuses and/or circuit breakers. The distribution cabinet can be equipped either with a 1-row, 26-position bullet nose type circuit breaker and TPS/TLS fuseholder distribution panel or a distribution panel equipped with four (4) GJ/218 type circuit breaker positions. The distribution cabinet may be equipped with a load disconnect contactor.

  A field installed only expansion distribution cabinet is available which provides DC distribution through fuses and/or circuit breakers. The expansion distribution cabinet is equipped with a 1-row, 26-position bullet nose type circuit breaker and TPS/TLS fuseholder distribution panel. The expansion distribution cabinet may be equipped with a load disconnect contactor.

- **Controller**

  NCU (NetSure™ Control Unit) Controller: The NCU controller provides power system control, converter module control, metering functions, monitoring functions, local/remote alarm functions, and connections for binary inputs and programmable relay outputs. The system also accepts up to two (2) temperature probes to monitor ambient and/or battery temperature. The controller also provides data acquisition and system alarm management. The controller contains a color TFT display and keypad for local access. The controller provides an Ethernet port and comes with comprehensive webpages for local/remote access. The controller has SNMP V3 capability for remote system management. The controller supports software upgrade via its USB port. Refer to the NCU Controller Instructions (UM1M830BNA) for more information.

- **Converter Module Mounting Shelf (Spec. No. 588705300)**

  The system contains two (2) Spec. No. 588705300 converter module mounting shelves, each of which houses the converter modules. The top converter module mounting shelf also houses the NCU controller.

  A field installed only expansion converter module mounting shelf is available. Up to two (2) expansion converter module mounting shelves can be installed in an existing system.

- **-48 VDC to -58 VDC Converter Modules**

  The system accepts 2000 watt peak, 1600 watt average converter modules to provide -58 VDC load power. Refer to the Converter Instructions (UM1C48582000P3) for more information.

Vertiv™ NetSure™ DCS48/58-600 Converter System
System Application Guide

General Converter Systems Specifications

See detailed specifications on page 41.

Family:	NetSure™
Spec. No.:	584641000
Model:	DCS48/58-600
DC Input Voltage:	Nominal -48 VDC (-41 VDC to -58.5 VDC).
DC Output Voltage:	Nominal -57 VDC, positive ground. Output voltage is adjustable from -56.0 VDC to -58.0 VDC via the system controller.
DC Output Capacity:	600 A, maximum
1C48582000P3 Converter Rating:	See UM1C48582000P3.
Agency Approval:	UL Listed to UL/CSA 62368-1 (cULus), Meets NEBS Level 1
Mounting Type:	Nominal 23” Relay Rack or Equipment Rack Mounting
Mounting Depth:	See “Overall Dimensions” on page 43.
Mounting Height:	See “Overall Dimensions” on page 43.
Access:	Front and Rear for Installation, Expansion, and Maintenance. Front for Operation.
Control:	Microprocessor
Color:	Faceplates: Textured Gray Other Surfaces: Bright Zinc
Environment:	-40 °C to +65 °C (-40 °F to +149 °F)

1 PROPOSED -58V CONVERTER SHELF DETAIL
SCALE : N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-603

REVISION: -

eSure™ Rectifier

R48-2000e3

VERTIV.

Benefits

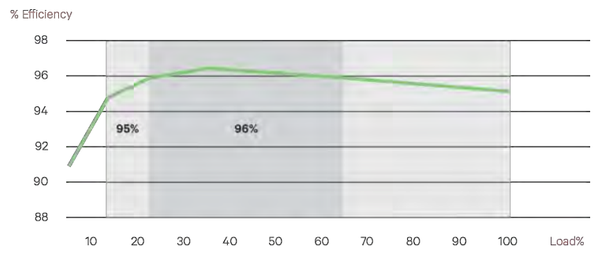
- Optimize the amount of energy delivered and reduce power consumption with over 96% efficiency.
- Increase space for revenue generating equipment with modules that pack more power in a small space with high power density.
- Facilitate easy maintenance, expansion and system changes with hot swappable capabilities.
- Enjoy increased reliability and active load sharing with Digital Signal Processing (DSP) which translates into fewer components and optimized operation.
- Appreciate the flexibility to utilize in a variety of applications with a wide input voltage range of 85 VAC to 300 VAC and full power output at temperatures from -40˚C to +65˚C.

In addition to reducing power consumption and lowering operating cost, eSure™ high-efficiency rectifiers offer superior performance and uncompromised reliability.

Description

The 2000 watt high-efficiency eSure rectifier (model R48-2000e3) converts standard AC supply voltages into stable nominal -48 VDC voltage that is adjustable to application needs. This constant power rectifier designed with the latest patented switch-mode technology, uses DSP (Digital Signal Processing) for efficient operation.

The R48-2000e3 can be connected in parallel with other rectifiers and converters to support a variety of telecom applications. Unified remote management and control of the power system is enabled when combined with a Vertiv™ controller.



R48-2000e3 Efficiency Curve at 250 VAC Nominal

eSure™ Rectifier

VERTIV.

Technical Specifications

AC Input	R48-2000E3
Voltage	85 VAC to 300 VAC (see figure 1), 187 VAC to 264 VAC (nominal)
Frequency	45 Hz to 65 Hz
Maximum Current	12 A
Power Factor	>0.99 from 50 to 100% load
Protection	High and low voltage protection, surge and lightning protection Adapts to poor quality grid (voltage dip, weak mains) Disconnection at 415 VAC Mains fuses in both lines
DC Output	
Voltage	-42 VDC to -58 VDC
Maximum Power	2000 W
Maximum Current	42 A @ -48 VDC, limit set point 0 to 42 A (see figure 2)
Peak Efficiency	96.2%
Protection	Fuse for reverse connection and back feeding protection High voltage shutdown High temperature protection
Control and Monitoring	
Converter Alarm and Signaling	Alarm and status reported via CAN bus to system controller
Visual Indications	Green LED: Normal Operation Yellow LED: Alarm Red LED: Failure
Environmental	
Operating	-40°C to 80°C / -40°F to +176°F (see figure 3 for derating)
Temperature Derating	Full output power up to +65°C at input voltage range 200 to 250 VAC (see figure 3)
Storage	-40°C to +70°C / -40°F to +158°F
Relative Humidity	0 to 95%
Altitude	Full output power up to +65°C at input voltage range @200~ 250 VAC
Standards Compliance	
Safety	60950-1 (EN, IEC and UL)
EMC	EN55022, CISPR22, ETSI EN300 286: 2005, FCC CFR 47 Part 15, Telcordia GR-1089-CORE issue 6 (Class B conducted and radiated)
Environment	REACH, RoHS, WEEE
Mechanics	
Dimensions (H x W x D)	41 x 84.5 x 252.5 (mm) / 1.61 x 3.33 x 9.94 (inches)
Weight	1.13 kg / 2.49 lbs

Ordering Information

Model Number	Description
1R482000E3	eSure™ rectifier, -48 VDC, 2000 W

Figures

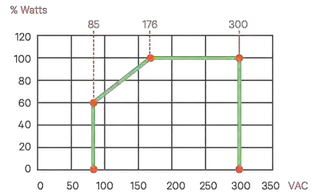


***Figure 1:** Output Power vs. Input Voltage and Vo > 48 V at Tamb <55°C*

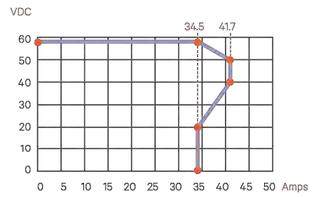


***Figure 2:** Output Voltage vs. Output Current at Maximum Output Power 2000 W*

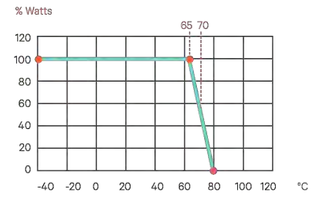


***Figure 3:** Output Power vs. Temperature at Uin > 200VAC*

Vertiv.com | **Vertiv Headquarters,** 1050 Dearborn Drive, Columbus, OH, 43085, USA

R48-2000E3 (R06/20)

1 PROPOSED -48V RECTIFIER DETAIL

SCALE : N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-604

REVISION: -

Vertiv™ eSure™ Converter

C48/58 -2000P3

Key Benefits

Converter, 48 to 58 VDC, 2000 W Peak / 1600 W Average

- Reduce power consumption and lower operating costs with 95% peak efficiency.
- Easily add capacity with hot pluggable interchangeable components.
- Ensure high availability with wide input voltage range from 41 VDC to 58 VDC.
- Power your 5G sites in the harsh environments with operation from -40°C to +65°C.
- Enjoy peace of mind with high quality UL recognized design.

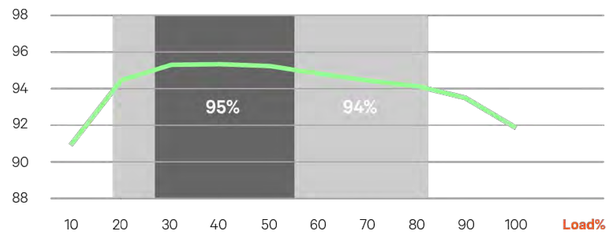
Easily support higher power 5G remote radios on cell towers with modular 2000 watt eSure™ power extend converters.

Description

The Vertiv™ eSure™ C48/58-2000P3 high-efficiency converter is designed to operate from a nominal -48 VDC source to provide nominal -58 VDC load power, which is adjustable to application needs up to 2000 watts peak, 1600 watts average. This constant power converter designed with the latest patented switchmode technology, uses digital signal processing (DSP) for efficient operation.

The eSure C48/58-2000P3 DC to DC converter is ideal for feeding high power remote radio heads (RRHs). 58 VDC is regulated over a wide input range to minimize voltage drop in the cable feeding the RRH and sustain operation to end of battery discharge. When redundancy is critical or loads are high, multiple eSure C48/58-2000P3 converters can be connected in parallel to support a variety of telecom applications. Unified remote management and control of the power system is enabled when combined with a Vertiv™ NetSure™ controller.

% Efficiency



C48/58-2000P3 Efficiency Curve at 53.5 VDC Nominal Input

Vertiv™ eSure™ Converter

Technical Specifications

DC Input	C48/58-2000P3
Voltage	41 VDC to 58.5 VDC, 48 VDC (nominal)
Maximum Current	53 A

DC Output	
Voltage	56 VDC to 58 VDC
Maximum Power	2000 W peak, 1600 W average at 40°C, 1280 W average at 65°C
Maximum Current	35.7 A at 2000 W peak *(see figure 1)*, 28.6 A at 1600 W average, 22.9 A at 1280 W average, all at 56 VDC
Peak Efficiency	>95%
Noise	< 250mV pk-pk; < 20mV rms; <38 dBrnC

Control and Monitoring	
Alarms and Signaling	Alarm and status reported via CAN bus to system controller
Visual Indications	Green LED: Normal Operation Yellow LED: Alarm Red LED: Failure Flashing Red LED: Fan Failure

Environmental	
Operating Temperature	-40°C to +80°C / -40°F to +176°F *(see figure 2)*
Storage Temperature	-40°C to +85°C / -40°F to +185°F
Relative Humidity	0 to 90%
Altitude	2000 m / 6560 ft at full power

Standards Compliance	
Safety	UL62368-1, EN62368-1, IEC62368-1
EMC	FCC CFR 47 Part 15 Class A conducted and Class B radiated
Environment	REACH, RoHS

Mechanics	
Dimensions (H x W x D)	41 x 84.5 x 252.5 mm / 1.61 x 3.33 x 9.94 inches
Weight	1.13 kg / 2.49 lbs

Ordering Information

Part Number	Description
1C48582000P3	eSure™ converter, -48 to -58 VDC, 2000 W peak / 1600 W average

Figures

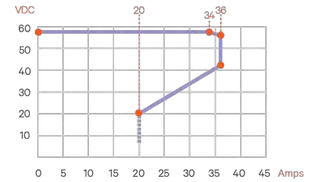


Figure 1: *Output Voltage vs. Output Current at Maximum peak Power 2000 W*

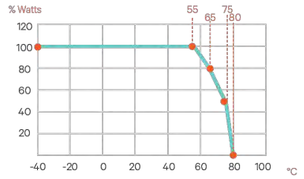


Figure 2: *Output Power vs. Temperature at -41VDC≥Vin ≥ -58VDC*

Vertiv.com | **Vertiv Headquarters,** 1050 Dearborn Drive, Columbus, OH, 43085, USA

C48/58-2000P3 (02/2024)

1 PROPOSED -48/-58V DC CONVERTER DETAIL

SCALE : N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-605

REVISION: -

connect@alpinepowersystems.com
877-993-8855

ALPINE POWER SYSTEMS

Click to view product web page

PowerSafe® SBS Front Terminal

Telecommunications *NEBS™ Certified*

Battery Range Summary

The PowerSafe® SBS® Front Terminal battery further extends the technical leadership of PowerSafe SBS battery product line: not only do PowerSafe SBS Front Terminal monoblocs retain the benefits typically associated with Thin Plate Pure Lead (TPPL) Technology such as long life, high energy density, superior shelf life, etc., they also deliver exceptional cyclic performance in both float and fast charge applications, even in the hottest and harshest operating environments.

Where conventional Valve Regulated Lead Acid (VRLA)/Absorbed Glass Mat (AGM) batteries struggle to cope with harsh conditions and frequent power outages, cutting edge (TPPL) technology makes PowerSafe 12V batteries the perfect solution for the challenging operating conditions of today's telecommunication networks.

PowerSafe SBS batteries are designed to high quality standards and a unique manufacturing methods means superior energy and power, high performance and proven reliability, there is no substitute to PowerSafe SBS Front Terminal batteries.

Features and Benefits

- Capacity range 31-190Ah
- 12V monobloc configurations
- Multiple string configurations available
- Two year shelf life
- SR4228 compliant
- Proven long service life
- High energy density and cycling capability

EnerSys® Power/Full Solutions | RESERVE POWER

Publication No: US-SBSF-RS-004 - January 2014

Construction

- Robust positive plates are designed to prolong service life and enhance corrosion resistance
- Separators are low resistance microporous (AGM). The electrolyte is absorbed within the AGM, preventing acid spills in case of accidental damage
- Container and cover in flame retardant UL94-V0 material, highly resistant to shock and vibration
- Terminals are stainless steel front access with top access copper alloy insert. Top and front access terminations provide maximum conductivity
- Self-regulating one way pressure relief valves prevents ingress of atmospheric oxygen

Installation and Operation

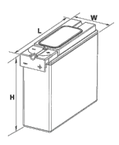
- Space efficient footprint
- VRLA design, reduces maintenance requirements
- Lifting handles for easy handling
- Greater than 10 year life expectancy in float service at 77°F (25°C)
- Increased active material surface area yields great cycling capability
- Operating temperature: -40°F (-40°C) to 122°F (50°C) Recommended temperature: 68°F (20°C) to 86°F (30°C)

Standards

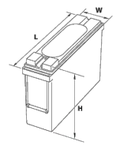
- Meets criteria for "non-spillable" batteries
- Complies with Telcordia® SR-4228, Network Equipment Building System (NEBS™) Criteria Levels
- The management systems governing the manufacture of this product are ISO 9001:2008 and ISO 14001:2004 certified

General Specifications

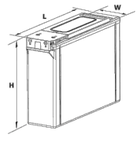
Cell Type	Nominal Capacity (Ah) 10 hr rate to 1.80Vpc @20°C	Nominal Capacity (Ah) 8 hr rate to 1.75Vpc @77°F	Nominal Dimensions Length in	Length mm	Width in	Width mm	Height in	Height mm	Weight - Volumes Unpacked lbs	Unpacked kg
SBS B8F	31	31	11.9	303	3.8	97	6.3	159	22.7	10.3
SBS B10F	38	38	11.9	303	3.8	97	7.2	184	28.2	12.8
SBS B14F	62	62	11.9	303	3.8	97	10.4	264	42.0	19.1
SBS C11F	92	91	16.4	417	4.1	105	10.1	256	61.6	28.0
SBS 100F	100	100	15.6	395	4.3	108	11.3	287	71.9	32.6
SBS 112F	112	112	22.1	561	4.9	125	9.0	228	90.4	41.1
SBS 145F	145	145	17.9	455	6.8	173	9.4	238	105.0	47.7
SBS 165F	165	165	17.9	455	6.8	173	10.8	273	117.4	53.3
SBS 170F	170	170	22.1	561	4.9	125	11.1	283	115.7	52.5
SBS 190F	190	190	22.1	561	4.9	125	12.4	316	132.3	60.0



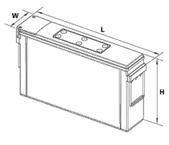
SBS B8F-B14F



SBS C11F



SBS 100F-112F



SBS 145F - 190F

ALPINE POWER SYSTEMS
A Division of TAI, Inc. est. 1963
connect@alpinepowersystems.com
877-993-8855

1 PROPOSED POWERSAFE SBS 170F BATTERY DETAIL
SCALE : N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-606

REVISION: -

DATA SHEET

DC Surge Protection Solutions for Base Station - Outdoor Rated

DC12-48-60-0-25E

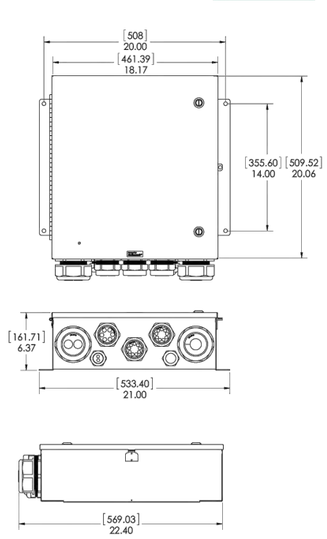
Overvoltage Protection and Power Management Junction Box

Base Protection - Outdoor

The DC12-48-60-0-25E is designed to be the most robust lightning and power surge protector available for distributed node B or e-node B applications. The flexible design provides electrical protection/cable management at the rooftop or base of sites. The solution employs the patented Strikesorb® 30-V1-HV surge protective device (SPD), capable of providing 60kA (8/20 µs) of surge capacity for up to 12 -48V DC circuits.

powered by **Strikesorb®**

DC12-48-60-0-25E
ships with Conduit Fittings installed

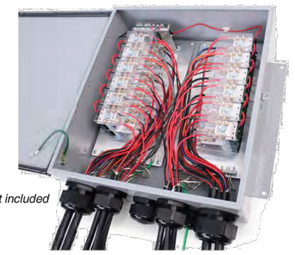


Features

- Provides protection for 12 individual -48V DC circuits at the base of sites
- Surge protection of 60kA 8/20 µs
- Maximum impulse current 5kA 10/350 µs
- Simplifies inter-connectivity and cable management for DC conductors
- UL 1449 4th Edition Type 2 protective device
- IEC 61643-11 Class I protection for DC applications
- Form C relay contacts included, allowing remote monitoring of suppressor status
- Patent pending

Benefits

- Strikesorb modules are fully recognized to UL 1449 4th Edition, and IEC 61643-11 Safety Standards, meeting all intermediate and high current fault requirements to facilitate use in original equipment manufacturers (OEM) applications
- Strikesorb offers unique maintenance-free protection against direct lightning currents
- NEMA 4 enclosure allows for indoor or outdoor installation



Cable Gland kit included

G02-00-267 150115

Raycap www.raycap.com

SPECIFICATIONS

DC Surge Protection Solutions for Base Station - Outdoor Rated

DC12-48-60-0-25E

Overvoltage Protection and Power Management Junction Box

powered by **Strikesorb®**

Electrical		
Model Number		DC12-48-60-0-25E
CEQ / ANT Number		CEQ. 12659
Number of Circuits Protected		12
Surge Protective Device (SPD) Type per UL 1449 4th Edition		Type 2
Surge Protection Class as per IEC 61643-11		Class I
Nominal Operating DC Voltage [U_n]		48 V
Nominal Discharge Current [I_n] per UL 1449 3rd Edition		20 kA 8/20 µs
Maximum Surge Current [I_{max}] per IEC 61643-11		60 kA 8/20 µs
Maximum Impulse (Lightning) Current [I_{imp}] per IEC 61643-11		5 kA 10/350 µs
Maximum Continuous Operating DC Voltage [U_c] (MCOV)		75 VDC
Voltage Protection Level [U_p] per IEC 61643-11		300 V
Voltage Protection Rating (VPR)		700 V
Suppression Technology		MOV
Strikesorb Module Type 2CA (UL 1449 4th edition)		30-V1-HV
Protection Modes:	Normal Mode	-48V to Return
	Common Mode	Return to Ground
Mechanical		
Connection Terminal (Alarm) Method		Form C Hardwired, #22 to #12 AWG [0.34 to 4 mm²]
Connection Terminal (Suppression) Method		Compression lug 2 hole, #10, 5/8 pitch, 12-4 AWG [3.31-21 mm²]
Connection Terminal (Terminal Block) Method	Copper	#14 to #2 AWG [2.5 to 35 mm²]
	Aluminum	#12 to #2 AWG [4 to 35 mm²]
Environmental Ingress Protection (IP) Rating		IP 68
Operating Temperature (°C)		-40° C to +100° C
Storage Temperature (°C)		-70° C to +80° C
Cold Temperature Cycling IEC 61300-2-22		-30° C to +60° C 200 hrs @5 PSI
Resistance to Aggressive Materials CEI IEC 61073-2		Including Acids and Bases
UV Protection ISO 4892-2 Method A		Xenon-Arc 2160 hrs
Enclosure Type		Outdoor - NEMA 4 Rated
Enclosure Dimensions (L x W x H)		18.17" x 20.06" x 6.37" [461.39 x 509.52 x 161.71 mm]
Weight		56.3 lbs [25.54 kg]
Combined Wind Loading	Sustained	135.3 lbs [602 N]
	Gust	228.6 lbs [1016 N]
Optional Product Configurations		
Conduit Fittings		3- 2" Conduit Fittings, 2- 2½" Conduit Fittings, 1- 1" Conduit Fitting
Cable Glands (kit included)		3- NPT 1" Cable Glands, 2- M75 Cable Glands, 3- M63 Cable Glands
Standards Compliance & Certifications		
Strikesorb modules are compliant to the following Surge Protection Device Standards:		
Standards:		UL 1449 4th Edition: 2011, IEC 61643-11: 2011, EN 61643-11: 2012, IEEE C62.11: 2005, IEEE C62.41: 2002, IEEE C62.45: 2002, NEMA-LS-1
Certifications:		UL, VDE, CE

AWG=American Wire Gauge

Raycap www.raycap.com

G02-00-267 150115

1 PROPOSED OUTDOOR DC12-48-60-0-25E-SS DETAIL

SCALE : N.T.S.

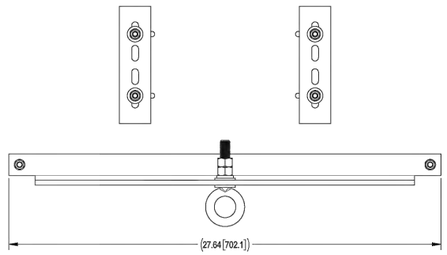
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

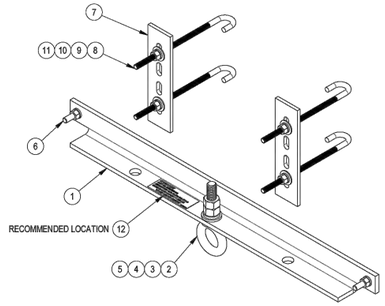
SUPPLEMENTAL

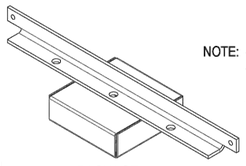
SHEET NUMBER:	REVISION:
R-607	-

1.0 GENERAL NOTES
1.1 ALL METRIC DIMENSIONS ARE IN BRACKETS [X. X]
1.2 FOR PATENT INFO: https://www.cs-pat.com
2.0 DESIGN NOTES
2.1 ANY HAZARDS OR OBSTRUCTIONS TO THE CLIMBING FACILITY AND SAFETY CLIMB MUST BE IDENTIFIED PRIOR TO INSTALLING THE APPURTENANCE. ADDITIONAL PRODUCTS MAY BE REQUIRED TO MAINTAIN THE INTEGRITY OF THE SAFETY CLIMB. DURING INSTALLATION, TEMPORARY AND/OR PERMANENT PRECAUTIONARY MEASURES SHOULD BE TAKEN TO PRESERVE THE CLIMBING FACILITY AND/OR SAFETY CLIMB.
3.0 MANUFACTURING/SPECIAL REQUIREMENTS
3.1 TIGHTEN ALL BOLTS SECURING FLAT PLATES BY THE TURN-OF-NUT METHOD. TIGHTEN ALL U-BOLTS USING TURN-OF-NUT METHOD WITH ATTENTION TO LEAVE EQUAL DISTANCE AND EQUAL FORCE ON EACH LEG OF THE U-BOLT.
4.0 TEST
5.0 PACKAGING
5.1 PACKAGING SHALL MEET COMMSCOPE REQUIREMENTS PER DOCUMENT IS-PL-3005
5.2 PRINTED DOCUMENT TO BE PLACED INSIDE POLYBAG AND THEN IN SHIPPING CONTAINER
5.3 EXTRA HARDWARE MAYBE SUPPLIED, BAGGED AND SHIPPED

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	RY1002 23OCT23	BESHAY 4018114/9CMO







PACKAGE

NOTE: -NOT TO BE USED FOR HOISTING
-COMPETENT PERSON TO MAKE DETERMINATION OF USAGE ON THE STRUCTURE
-DESIGNED TO BE UTILIZED ON "CL-0910-U" OR "CL-0920-U"

COMPONENT PART NUMBERS PROVIDED FOR ASSEMBLY PURPOSES;
INDIVIDUAL COMPONENTS MAY BE SHIPPED AS PARTS WITHIN AN INCLUDED KIT.

ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT	NOTE NO.
1	MTC4164-028-00	28 INCH CROSSMEMBER GALV	1	7.78 LBS	
2	9674-1	BOLT,EYE,5/8X3,STL,ZN PLD	1	0.08 LBS	
3	GWF05A	GALV FLAT WASHER HARDENED 5/8", 1.30D	2	0.04 LBS	
4	GWL-05	5/8" GALV LOCK WASHER	1	0.03 LBS	
5	GN-05	5/8" GALV HEX NUT	2	0.08 LBS	
6	GB-03145	3/8" X 1-1/2" GALV BOLT KIT	2	0.07 LBS	
7	HKCLU.02	BACKING PLATE	2	0.95 LBS	
8	GJB0380	8" GALV J-BOLT KIT	4	0.23 LBS	
9	GN-03	3/8" GALV HEX NUT	4	0.02 LBS	
10	GWL-03	3/8" GALV LOCK WASHER	4	0.01 LBS	
11	GWF-03	3/8" GALV FLAT WASHER	4	0.01 LBS	
12	MTC4164-LAB02	LABEL, GRIP ANCHOR, CABLE LADDER,009	1	0.02 LBS	

COMMSCOPE, INC. OF NORTH CAROLINA

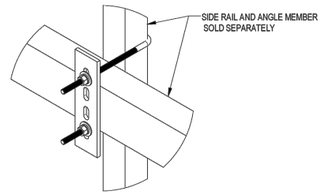
TOLERANCES			SAP MATERIAL MASTER
1 PLACE .X[ ]± 0.2[6.3]	3 PLACE .XXX[.X]± 0.060[1.5]		860674608-009
2 PLACE .XX[.X]± 0.12[3.0]	ANGLES ± 2°		
FINISH		MATERIAL	

	NAME	DATE
CE	RY1002	23OCT23
RM	RY1002	10OTT2023
AD	EB1063	10/30/2023
RE	YMIING	11/01/2023

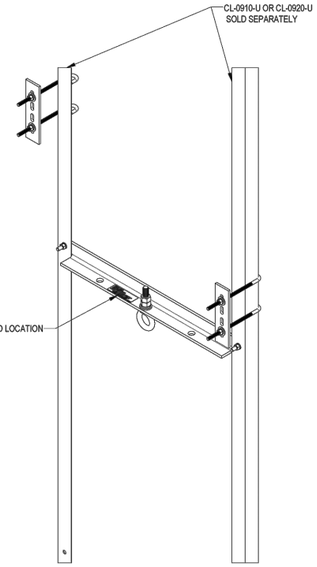
TITLE: GRIP ANCHOR, CABLE LADDER,009
SCALE: 1:3
DOCUMENT NO.: 860674608-009
SIZE: C
Ash Group
INSL.

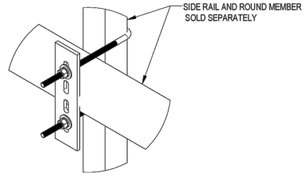
	MODEL			DRAWING			SHEET
	VERSION	STATUS	REVISION	VERSION	STATUS	REVISION	
	00	RE	A	00	RE	A	1 OF 2

DENSITY	lbs/ft³
MASS	11.28 lbs
VOLUME	41.75 in³
SURFACE AREA	591.40 in²
HEIGHT	8.26
LENGTH	27.64
WIDTH	



ANGLE MEMBER
SET-UP





ROUND MEMBER
SET-UP

NOTE: -NOT TO BE USED FOR HOISTING
-COMPETENT PERSON TO MAKE DETERMINATION OF USAGE ON THE STRUCTURE
-DESIGNED TO BE UTILIZED ON "CL-0910-U" OR "CL-0920-U"

COMMSCOPE, INC. OF NORTH CAROLINA
TITLE: GRIP ANCHOR, CABLE LADDER,009
SIZE: C | SCALE: 1:5 | DOCUMENT NO.: 860674608-009

DRAWING			SHEET
VERSION	STATUS	REVISION	
00	RE	A	2 OF 2

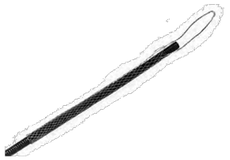
1 PROPOSED COMMSCOPE HOISTING ANCHOR DETAIL
SCALE : N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-608
REVISION: -

LUHG-38



Lace-up Hoisting Grip for HELIAX® 0.40-0.56 in (10.2-14.2 mm) cable including all RFFT discrete trunk series cables

Product Classification

Product Type	Hoisting grip
Product Brand	HELIAX®
Ordering Note	CommScope® standard product (Global)

General Specifications

Attachment Spacing Intervals	60.96 m | 200 ft
Hoisting Grip Type	Lace-up hoisting grip
Installation Tool	Required, not included
Support Clamp	Not included
Tool Type	Hoisting grip

Dimensions

Grip Length, minimum	152.4 mm | 6 in
Leader Length, minimum	165.1 mm | 6.5 in
Compatible Diameter, maximum	14.2 mm | 0.559 in
Compatible Diameter, minimum	10.2 mm | 0.402 in
Nominal Size	3/8 in

Electrical Specifications

Return Loss Effect, maximum	0.1 dB
DTF Effect, maximum	0.1 dB

Material Specifications

Material Type	Stainless steel

Mechanical Specifications

Pull Load Capacity	90.718 kg | 200 lb

LUHG-38

Packaging and Weights

Height, packed	55.88 mm | 2.2 in
Width, packed	266.7 mm | 10.5 in
Length, packed	266.7 mm | 10.5 in
Packaging quantity	1
Weight, gross	0.04 kg | 0.088 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant

©2025 CommScope, Inc. All rights reserved. CommScope and the CommScope logo are registered trademarks of CommScope and/or its affiliates in the U.S. and other countries. For additional trademark information see https://www.commscope.com/trademarks. All product names, trademarks and registered trademarks are property of their respective owners. Revised: January 14, 2025

1 PROPOSED COMMSCOPE CABLE HOISTING GRIP DETAIL

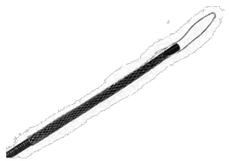
SCALE : N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-609	-

29958



Lace-up Hoisting Grip for HELIAX® 0.75-0.99 in (19-25.1 mm) cables and elliptical waveguide 85, 90, 127A, 132-144, PWRT-606-S

Product Classification

Product Type	Hoisting grip
Product Brand	HELIAX®
Ordering Note	CommScope® non-standard product

General Specifications

Attachment Spacing Intervals	60.96 m | 200 ft
Hoisting Grip Type	Lace-up hoisting grip
Support Clamp	Not included
Tool Type	Hoisting grip

Dimensions

Grip Length, minimum	508 mm | 20 in
Leader Length, minimum	152.4 mm | 6 in
Compatible Diameter, maximum	25.1 mm | 0.988 in
Compatible Diameter, minimum	19 mm | 0.748 in
Nominal Size	5/8 in

Electrical Specifications

Return Loss Effect, maximum	0.1 dB
DTF Effect, maximum	0.1 dB

Material Specifications

Material Type	Stainless steel

Mechanical Specifications

Pull Load Capacity	226.796 kg | 500 lb

29958

Packaging and Weights

Height, packed	55.88 mm | 2.2 in
Width, packed	236.22 mm | 9.3 in
Length, packed	236.22 mm | 9.3 in
Packaging quantity	1
Weight, gross	0.3 kg | 0.661 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant

©2024 CommScope, Inc. All rights reserved. CommScope and the CommScope logo are registered trademarks of CommScope and/or its affiliates in the U.S. and other countries. For additional trademark information see https://www.commscope.com/trademarks. All product names, trademarks and registered trademarks are property of their respective owners. Revised: November 21, 2024

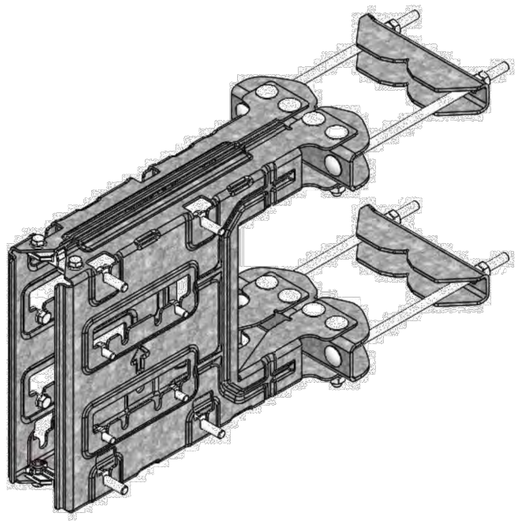
1 PROPOSED COMMSCOPE CABLE HOISTING GRIP DETAIL

SCALE : N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-610	-



SXK 125 5394/2

Universal B2B Bracket CC110

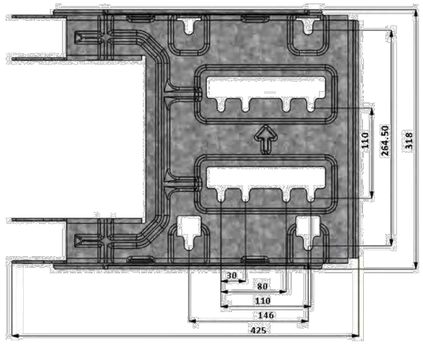
Universal B2B Bracket CC110 is designed for installation of back to back ERS on any supporting structure i.e. pole, mast, tower leg etc. It is Low PIM bracket. When installed properly, it meets the requirements of installation in High Risk PIM Zones. Static and dynamic testing was conducted as per IEC 61000-4-3: 2020 PRV and ITU-R SM-329.

Robustness

The Universal B2B Bracket CC110 kit supports for installation of back to back ERS weight upto 50 kg on each side simultaneously. It supports the ERS mounting on pole, mast, tower leg or square tube. Easy installation due to use of carriage bolts for mounting on the supporting structure and key holes for ERS in the bracket. Bush separators has been provided to avoid any contact of arms with each other.

Quality

All components of the assembly are made of galvanized High Tensile Steel, which supports corrosion resistance.



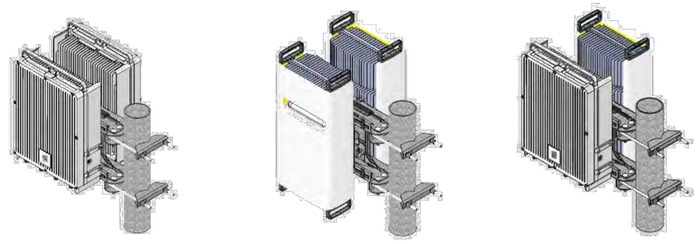
ericsson.com

Technical specification

Functional Description

SXK 125 5394/2

Universal B2B Bracket CC110 kit supports installation of ERS back to back with Centre to Centre distance of 30mm x 110mm, 80mm x 110mm and 110mm x 110mm. It also supports two RRUs (back to back) with Centre to Centre distance of 146mm x 264.5 mm (old generation ERS). ERS or RRU are mounted back to back in portrait position on any supporting structure with ERS or RRU weight up to 50kg on each side.



Product	Universal B2B Bracket CC110		
Product number	SXK 125 5394/2		
Mounting range	Profile	Minimum	Maximum
	Circular tube	Ø25 mm (1 inch)	Ø120 mm (4.7 inch)
	60⁰ Angle	35 mm Opening (1.4 inch)	115 mm Opening (4.5 inch)
	90⁰ Angle	35 x 35 mm (1.4 X 1.4 inch)	112 x 112 mm (4.4 X 4.4 inch)
	Square tube	35 x 35 mm (1.4 X 1.4 inch)	80 x 80 mm (3.1 X 3.1 inch)
Mechanical specification	Brackets	High Tensile Steel, Galvanized	
	Fasteners	Grade 8.8 Galvanized & A4	
	Bush Separators	Composite material(PBT+PET)-GF30	
Recommended tools	M8 ISO, 13mm torque wrench (10-22 Nm)		
	M10 ISO, 16mm & 17mm torque wrench (15-25 Nm)		
Performance	Maximum wind speed	67 m/s (240 km/h, 149 mph)	
	Survival wind speed	90 m/s (324 Km/h, 201 mph)	
	Maximum equipment weight	2 x 50 Kg (2 x 110.2 lbs)	

Packaging dimension	Length	Width	Height	Package Weight	Product Weight
Universal B2B Bracket CC110 (SXK 125 5394/2)	480 mm (18.9 in)	360 mm (14.2 in)	80 mm (3.2 in)	10.4 Kg (22.9 lbs)	10.0 Kg (22.0 lbs)

1 PROPOSED RRU BACK TO BACK BRACKET DETAIL
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-611

REVISION: -

Pxxx: Bulk Pipe

SITE PRO 1
A valmont COMPANY

Part #	Length	OD x Length (in)
Schedule 40		
P260	5′-0″	2-3/8″ x 60″
P263	5′-3″	2-3/8″ x 63″
P272	6′-0″	2-3/8″ x 72″
P284	7′-0″	2-3/8″ x 84″
P296	8′-0″	2-3/8″ x 96″
P2108	9′-0″	2-3/8″ x 108″
P2120	10′-0″	2-3/8″ x 120″
P2126	10′-6″	2-3/8″ x 126″
P2150	12′-6″	2-3/8″ x 150″
P2174	14′-6″	2-3/8″ x 174″
P2252	21′-0″	2-3/8″ x 252″
P3072	6′-0″	2-7/8″ x 72″
P3084	7′-0″	2-7/8″ x 84″
P3096	8′-0″	2-7/8″ x 96″
P30108	9′-0″	2-7/8″ x 108″
P30120	10′-0″	2-7/8″ x 120″
P30126	10′-6″	2-7/8″ x 126″
P30150	12′-6″	2-7/8″ x 150″
P30174	14′-6″	2-7/8″ x 174″
P30252	21′-0″	2-7/8″ x 252″
P360	5′-0″	3-1/2″ x 60″
P372	6′-0″	3-1/2″ x 72″
P384	7′-0″	3-1/2″ x 84″
P396	8′-0″	3-1/2″ x 96″
P3150	12′-6″	3-1/2″ x 150″
P3160	13′-4″	3-1/2″ x 160″
P3174	14′-6″	3-1/2″ x 174″
P3216	18′-0″	3-1/2″ x 216″
P3252	21′-0″	3-1/2″ x 252″
P472	6′-0″	4-1/2″ x 72″
P4126	10′-6″	4-1/2″ x 126″
P4252	21′-0″	4-1/2″ x 252″

Features:

- Factory cut end, hot-dip galvanized pipe

Construction:

- ASTM A53 Grade B
- Schedule 40 or Schedule 80

Design Criteria:

- ASTM A53 Grade B (Yield Fy = 35 ksi [240 MPa]/ Tensile Fu = 60 ksi [415 MPa])
- Hot dip galvanized in accordance with ASTM A123 requirements

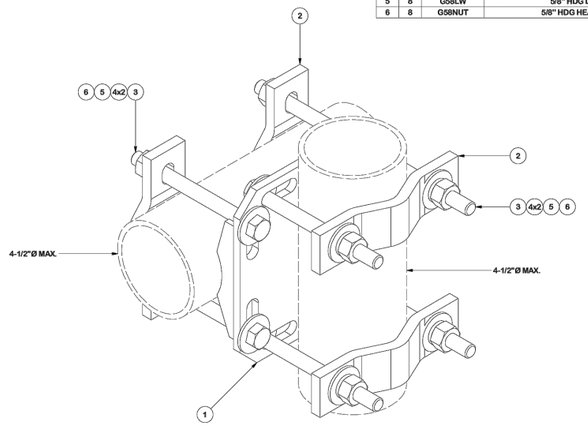
Part #	Length	OD x Length (in)
Schedule 80		
P2252-80	21′	2-1/2″ x 252″
P30126-80	10′-6″	2-7/8″ x 126″
P30252-80	21′	2-7/8″ x 252″
P3252-80	21′	3-1/2″ x 252″

created on: 03/02/2023

SitePro1.com 888-438-7761

1 PROPOSED PIPE MOUNT DETAIL
SCALE: N.T.S.

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-SCX4-FR	4-1/2" FORTRESS CROSSOVER PLATE		8.15	8.15
2	4	DCP	1/2" THICK, 5-3/4" CNTER TO CENTER CLAMP HALF	8 1/8 in	2.36	9.45
3	8	G5807	5/8" x 7" HDG HEX BOLT GR5 FULL THREAD	7 in	0.70	5.64
4	16	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	1.13
5	8	G58LW	5/8" HDG LOCKWASHER		0.03	0.21
6	8	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	1.04
					TOTAL WT. #	25.62



FINISH:
HOT DIP GALVANIZED.

TOLERANCE NOTES
TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES (± 0.030")
DRILLED AND GAS CUT HOLES (± 0.030") - NO CONING OF HOLES
LASER CUT EDGES AND HOLES (± 0.010") - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING (± 0.030")
ALL OTHER ASSEMBLY (± 0.060")

PROPRIETARY NOTE:
THE INFORMATION AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION: HEAVY-DUTY UNIVERSAL CROSSOVER KIT

SITE PRO 1 A valmont COMPANY — Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CMFL 9/14/2021		FCX45-U
CLASS: 87 SUB: 02	DRAWING USAGE: CUSTOMER	CHECKED BY	DWG. NO. FCX45-U

PAGE 1 OF 1

2 PROPOSED CROSSOVER PLATE KIT DETAIL
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-612

REVISION: -

Pxxx: Bulk Pipe

SITE PRO 1
A valmont COMPANY

Part #	Length	OD x Length (in)
Schedule 40		
P260	5'-0"	2-3/8" x 60"
P263	5'-3"	2-3/8" x 63"
P272	6'-0"	2-3/8" x 72"
P284	7'-0"	2-3/8" x 84"
P296	8'-0"	2-3/8" x 96"
P2108	9'-0"	2-3/8" x 108"
P2120	10'-0"	2-3/8" x 120"
P2126	10'-6"	2-3/8" x 126"
P2150	12'-6"	2-3/8" x 150"
P2174	14'-6"	2-3/8" x 174"
P2252	21'-0"	2-3/8" x 252"
P3072	6'-0"	2-7/8" x 72"
P3084	7'-0"	2-7/8" x 84"
P3096	8'-0"	2-7/8" x 96"
P30108	9'-0"	2-7/8" x 108"
P30120	10'-0"	2-7/8" x 120"
P30126	10'-6"	2-7/8" x 126"
P30150	12'-6"	2-7/8" x 150"
P30174	14'-6"	2-7/8" x 174"
P30252	21'-0"	2-7/8" x 252"
P360	5'-0"	3-1/2" x 60"
P372	6'-0"	3-1/2" x 72"
P384	7'-0"	3-1/2" x 84"
P396	8'-0"	3-1/2" x 96"
P3150	12'-6"	3-1/2" x 150"
P3160	13'-4"	3-1/2" x 160"
P3174	14'-6"	3-1/2" x 174"
P3216	18'-0"	3-1/2" x 216"
P3252	21'-0"	3-1/2" x 252"
P472	6'-0"	4-1/2" x 72"
P4126	10'-6"	4-1/2" x 126"
P4252	21'-0"	4-1/2" x 252"

Features:

- Factory cut end, hot-dip galvanized pipe

Construction:

- ASTM A53 Grade B
- Schedule 40 or Schedule 80

Design Criteria:

- ASTM A53 Grade B (Yield Fy = 35 ksi [240 MPa]/ Tensile Fu = 60 ksi [415 MPa])
- Hot dip galvanized in accordance with ASTM A123 requirements

Part #	Length	OD x Length (in)
Schedule 80		
P2252-80	21'	2-1/2" x 252"
P30126-80	10'-6"	2-7/8" x 126"
P30252-80	21'	2-7/8" x 252"
P3252-80	21'	3-1/2" x 252"

created on: 03/09/2023

SitePro1.com 888-438-7761

1 PROPOSED PIPE MOUNT DETAIL
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-613

REVISION: -

AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by

ENGINEERED
TOWER SOLUTIONS

Antenna Mount Analysis Report

Mount Type	:	**(1) 15.0 ft & (2) 13.0 ft Sector Frame**
ATC Asset Name	:	**SPOUT SPRINGS NC1**
ATC Asset Number	:	**21274**
Engineering Number	:	**14884053_C8_01**
ETS, PLLC Job Number	:	**25134852.STR.0164**
Mount Elevation	:	**300.0 ft**
Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**368-218**
Carrier Site Number	:	**WSVWN0055007**
Site Location	:	**2305 NC 87 South** **Sanford, NC 27332** **35.27725912, -79.07085941**
County	:	**Harnett**
Date	:	**April 14, 2025**
Max Usage	:	**48%**
Result	:	**Contingent Pass**

Prepared By:
Bach Tran, EI
Structural Engineer

Reviewed By:
J. Scott Hilgoe, PE
Structural Engineering Manager

NORTH CAROLINA PROFESSIONAL SEAL 041389 ENGINEER J. SCOTT HILGOE

Firm# P-1016

04/15/2025

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for AT&T Mobility at 300.0 ft.

Supporting Documents

Mount Analysis	Mastec Engineering Project #16807-MNO1, dated December 28, 2018
Scoping Form	FA # 10017390 dated January 9, 2025
Photos	Site photos from 2020

Analysis

This antenna mount was analyzed using RISA-3D v22 analysis software.

Basic Wind Speed:	117 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	37 mph (3-Second Gust) w/ 0.63" radial ice concurrent
Codes:	ANSI/TIA-222-I
Structure Class:	II
Exposure Category:	B
Topographic Procedure:	Method 1
Topographic Feature:	Flat
Crest Height:	0 ft
Crest Length:	0 ft
Spectral Response:	S_{ms} = 0.270, S_{m1} = 0.160
Site Class:	D
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

***Live Load(s) reduction is confirmed to either not govern or not be applicable**

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above provided the modifications listed below are completed:

- Install (6) Site Pro 1 #P2120, 2.0 SCH 40 x 10'-0", A53 Gr.B (ANT.55993, or approved equivalent) mount pipe to be located 12 +/- 3 inches from the tower connection on left and right mount arm on all sectors. Connect with Site Pro 1 FCX45-U (ANT.56006, or approved equivalent) crossover kits.
- Install (3) Site Pro 1 #P30120, 2.5 SCH 40 x 10'-0", A53 Gr.B (ANT.16008 or approved equivalent) mount pipe on position 2. Connect to horizontal pipe with Site Pro 1 FCX45-U (ANT.56006, or approved equivalent) crossover kits.
- Relocate remaining mount pipes to match antenna spacing requirements per 2024 AT&T Macro Build Standards.

The rough cost estimate, pre-MOD design, is estimated to be ≤10k. No structural failures were addressed with the noted contingencies. Contingencies address Carrier's antenna spacing requirements.

Engineered Tower Solutions, PLLC – 3227 Wellington Ct, Raleigh, NC 27615 - 919.782.2710 Office - www.engineeredtowersolutions.com

- MOUNT ANALYSIS

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONSTRUCTION.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-614	-