

VICINITY MAP

AT&T PACE NUMBER(s): MRKSL071140,MRKSL071366,MRKSL071546,MRKSL071571,MRKSL071800,MRKSL072666,MRKSL075134,MRKSL075354,MRKSL076899
AT&T IWM NUMBER(s): WSKSL0040568,WSKSL0044432,WSKSL0044223,WSKSL0043847,WSKSL0042322,WSKSL0040097,WSKSL0041882,WSKSL0039750,WSKSL0045739



ATC SITE NAME: UNITY VILLAGE MO 2
ATC SITE NUMBER: 306035
AT&T SITE ID: WSKSL0042322
AT&T FA CODE: 10000434
AT&T SITE NAME: UNITY VILLAGE
SITE ADDRESS: 1097 NW BLACK TWIG LN
LEES SUMMIT, MO 64081



LOCATION MAP

AT&T AMENDMENT PLAN

COMPLIANCE CODE	PROJECT SUMMARY		PROJECT DESCRIPTION	SHEET INDEX				
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. INTERNATIONAL BUILDING CODE (IBC 2018) NATIONAL ELECTRICAL CODE (NFPA 70, NEC 2014)	<u>SITE ADDRESS:</u> 1097 NW BLACK TWIG LN LEES SUMMIT, MO 64081 COUNTY: JACKSON <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 38.93364318 38° 56' 1.115" N LONGITUDE: -94.41750584 94° 25' 3.021" W GROUND ELEVATION: 983' AMSL		THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: REMOVE (12) ANTENNA(s), (15) RRU(s), (3) TTA(s) AND (1) SQUID(s) INSTALL MOUNT MODS, (9) ANTENNA(s), (12) RRU(s), (1) SQUID(s), AND (1) 0.40" FIBER TRUNK CABLE(s) EXISTING (2) SQUID(s), (12) 1-5/8" COAX, (6) 0.76" 8 AWG 6 DC TRUNK, (2) 0.39" FIBER TRUNK, AND (1) 3/8" RET CABLE(s) TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
				G-001	TITLE SHEET	0	09/10/24	AP
				G-002	GENERAL NOTES	0	09/10/24	AP
				C-101	DETAILED SITE PLAN	0	09/10/24	AP
				C-201	TOWER ELEVATION	0	09/10/24	AP
				C-401	ANTENNA PLAN AND SCHEDULE	0	09/10/24	AP
				C-402	ANTENNA PLAN AND SCHEDULE	0	09/10/24	AP
				C-501	CONSTRUCTION DETAILS	0	09/10/24	AP
				E-501	GROUNDING DETAILS	0	09/10/24	AP
				SUPPLEMENTAL SHEETS (3 PAGES)				

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, AT&T "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 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 REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE AT&T REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE AT&T 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 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 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 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 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 REP TO

23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO AT&T FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T 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 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 NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE 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 REP. ANY WORK FOUND BY THE AT&T 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 FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE AT&T 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 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 OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION
ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
- A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY AT&T 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 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.



THE USE AND PUBLICATION OF THESE DRAWINGS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OR THE SPECIFIED CARRIER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AP	09/10/24

ATC SITE NUMBER:
306035
ATC SITE NAME:
UNITY VILLAGE MO 2
AT&T SITE NAME:
UNITY VILLAGE
SITE ADDRESS:
1097 NW BLACK TWIG LN
LEES SUMMIT, MO 64081

SEAL:



Digitally Signed: 2024-09-11



ATC PROJ. #: 14861224_G0
CUST. ID: WSKSL0042322
CUST. #: 10000434

GENERAL NOTES

SHEET NUMBER:
G-002
REVISION:
0

SITE PLAN NOTES:

- 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.
- 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.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE AT&T REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.

GROUND SOW NOTES:

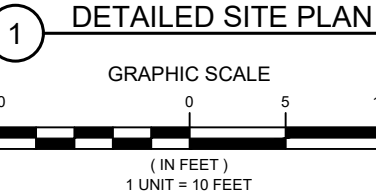
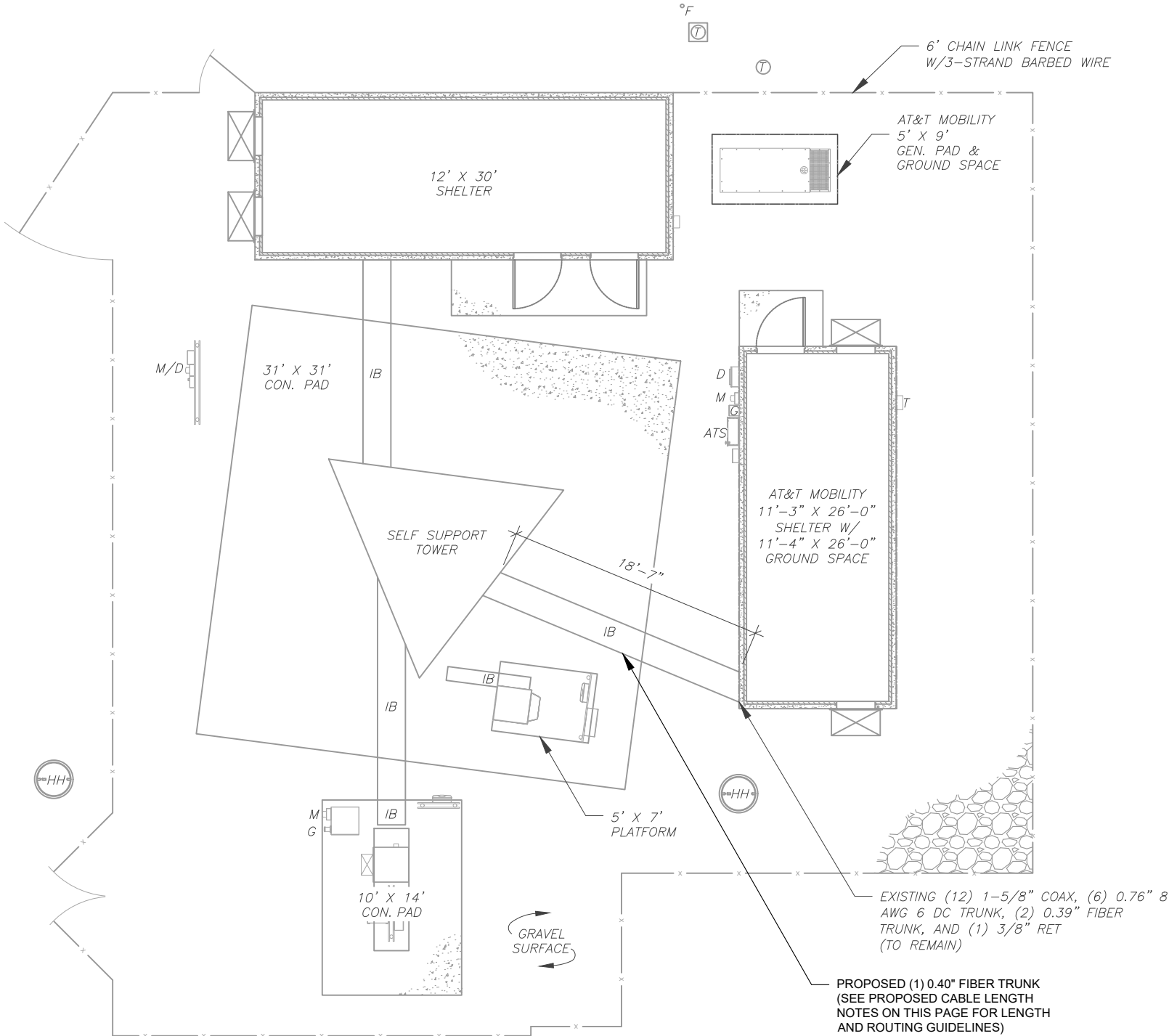
- RETAIN (1) VERTIV STD -48VDC NETSURE 7100 PLANT 1000A W/-58V CONV
- INSTALL (1) NEQ.53008 24 TO 58 RETRO FIT
- INSTALL (7) VERTIV C48/58-1500P3
- REMOVE (4) VERTIV C48/24-1500 CONVERTERS
- RETAIN (10) VERTIV R48-2000E3 RECTIFIERS
- REMOVE (8) SBS190F BATTERIES
- INSTALL (8) SBS190F BATTERIES
- RETAIN (3) EXISTING 200A BATTERY BREAKERS
- BATTERY INSTALLATION DATE - 06/16/2020
- REMOVE BLUE UPCONVERTERS BREAKERS FROM PP
- INSTALL (2) 6651
- INSTALL (1) 6610
- INSTALL (1) XMU
- INSTALL (1) 6601
- INSTALL BREAKERS AS NEEDED PER ATT-CEM-18002

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:

- ESTIMATED LENGTH OF PROPOSED CABLE IS **196'**. 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.
- 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).



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2015011232

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REV.	DESCRIPTION	BY	DATE
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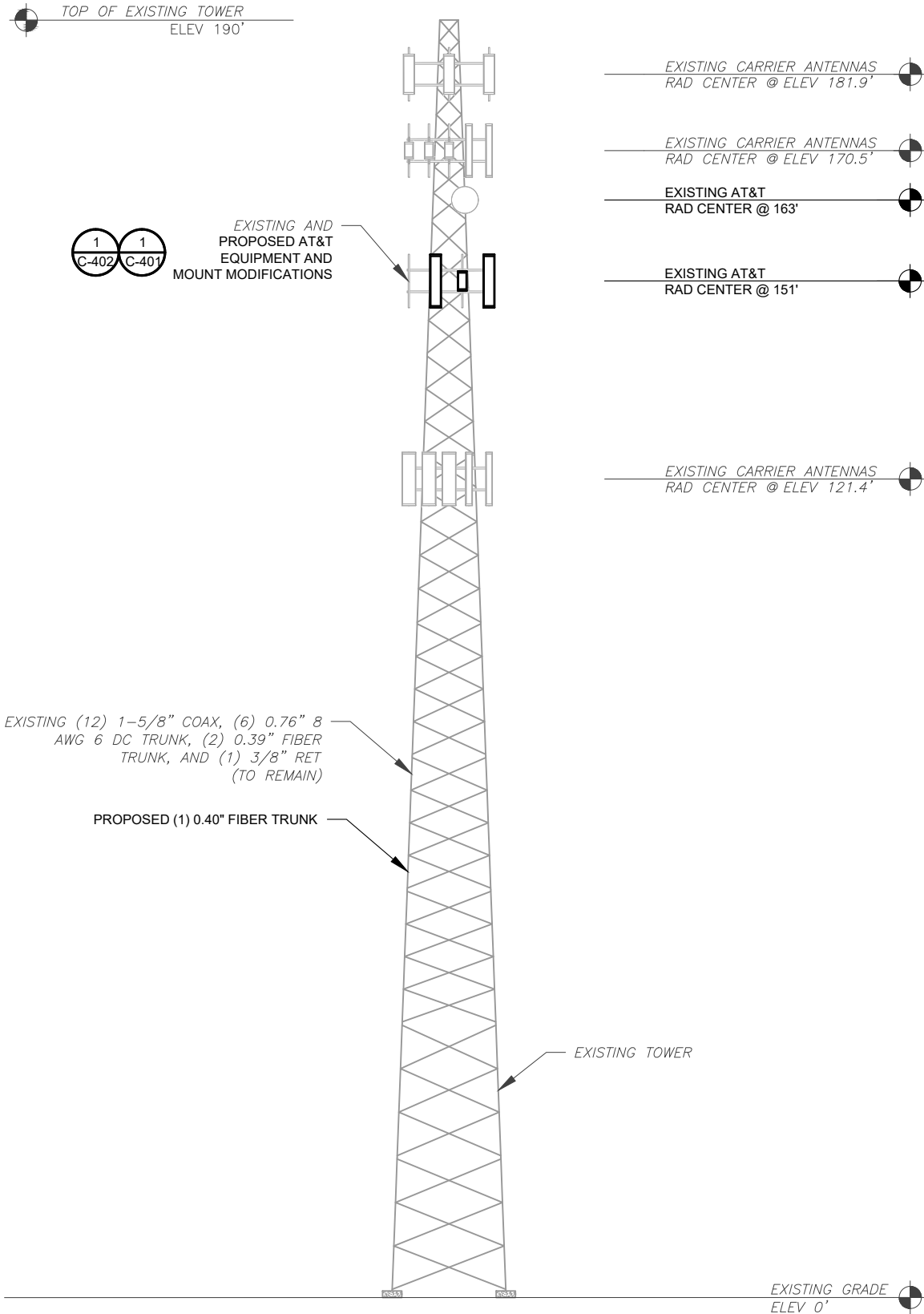
DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

EXISTING
(2) DC6-48-60-18-8F SQUID
(TO REMAIN)

EXISTING
(6) QS86512-2 ANTENNAS
(3) SBNHH-1D65C ANTENNAS
(3) AEQK ANTENNAS
(3) B66A RRH4x45-4R RRUS
(3) RRH4X25-WCS RRUS
(3) B25 RRH4x30 RRUS
(3) AHLBBA RRUS
(3) AHCA RRUS
(3) TT08-19DB111-001 TTAS
(1) DC6-48-60-0-8F SQUID
(TO BE REMOVED)

PROPOSED
(3) AIR 6472 B77G B77M ANTENNAS
(3) NNH4-65C-R6-V4 ANTENNAS
(3) RADIO 4890HP 48B2/B25 48B66 M01 RRUS
(3) RADIO 4490HP 44B5 44B12A C RRUS
(3) RADIO 4494 44B14 20B29 M01 RRUS
(3) RADIO 4471 B30 RRUS
(1) DC9-48-60-24-8C-EV SQUID



1 TOWER ELEVATION

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 08/16/24, 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.

ALL ELEVATIONS REFLECT ABOVE GROUND LEVEL (A.G.L.)

- TOWER NOTE:**
- 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. 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.
 - 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).
 - TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

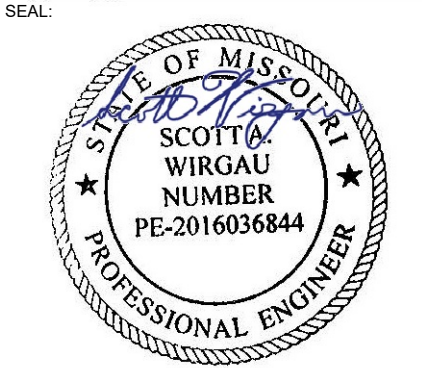


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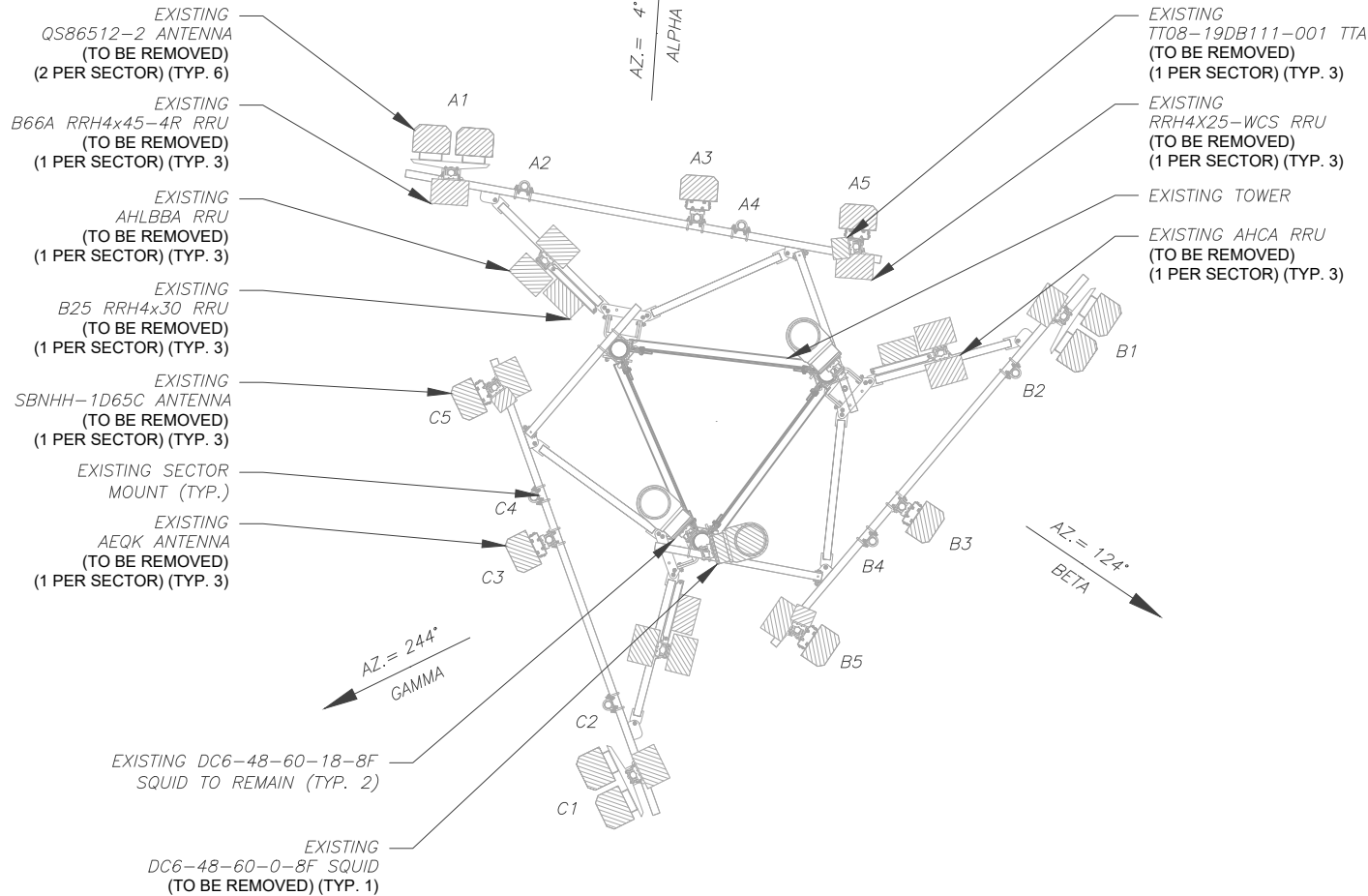


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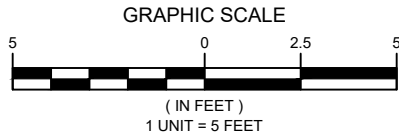
TOWER ELEVATION

SHEET NUMBER:
C-201
REVISION:
0

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



1 CURRENT ANTENNA PLAN



STATUS ABBREVIATIONS

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

2 EQUIPMENT SCHEDULE

EXISTING ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	FREQUENCY	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	151'	4°	A1	(2) QS86512-2	-	RMV	B66A RRH4x45-4R RRU	RMV
			A2	-	-	-	B25 RRH4X30 RRU AHLBBA RRU AHCA RRU	RMV RMV RMV
			A3	AEQK	-	RMV	-	-
			A4	-	-	-	-	-
			A5	SBNHH-1D65C	-	RMV	TT08-19DB111-001 TTA RRH4X25-WCS RRU	RMV RMV
BETA	151'	124°	B1	(2) QS86512-2	-	RMV	B66A RRH4x45-4R RRU	RMV
			B2	-	-	-	B25 RRH4X30 RRU AHLBBA RRU AHCA RRU	RMV RMV RMV
			B3	AEQK	-	RMV	-	-
			B4	-	-	-	-	-
			B5	SBNHH-1D65C	-	RMV	TT08-19DB111-001 TTA RRH4X25-WCS RRU	RMV RMV
GAMMA	151'	244°	C1	(2) QS86512-2	-	RMV	B66A RRH4x45-4R RRU	RMV
			C2	-	-	-	B25 RRH4X30 RRU AHLBBA RRU AHCA RRU	RMV RMV RMV
			C3	AEQK	-	RMV	-	-
			C4	-	-	-	-	-
			C5	SBNHH-1D65C	-	RMV	TT08-19DB111-001 TTA RRH4X25-WCS RRU	RMV RMV

EXISTING SQUID SUMMARY	
MODEL NUMBER	STATUS
(2) DC6-48-60-18-8F	RMN
DC6-48-60-0-8F	RMV

EXISTING CABLING SUMMARY	
CABLE QTY, SIZE, TYPE	STATUS
(12) 1-5/8" COAX, (6) 0.76" 8 AWG 6 DC TRUNK, (2) 0.39" FIBER TRUNK, AND (1) 3/8" RET	RMN
-	-

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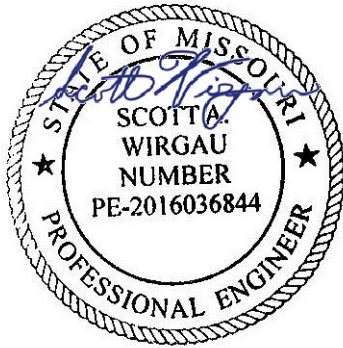
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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AP	09/10/24

ATC SITE NUMBER:
306035
ATC SITE NAME:
UNITY VILLAGE MO 2
AT&T SITE NAME:
UNITY VILLAGE
SITE ADDRESS:
1097 NW BLACK TWIG LN
LEES SUMMIT, MO 64081

SEAL:



Digitally Signed: 2024-09-11

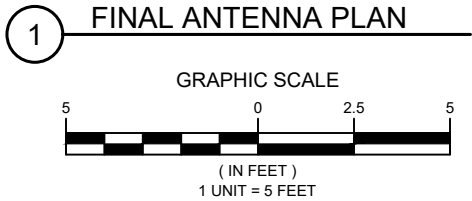
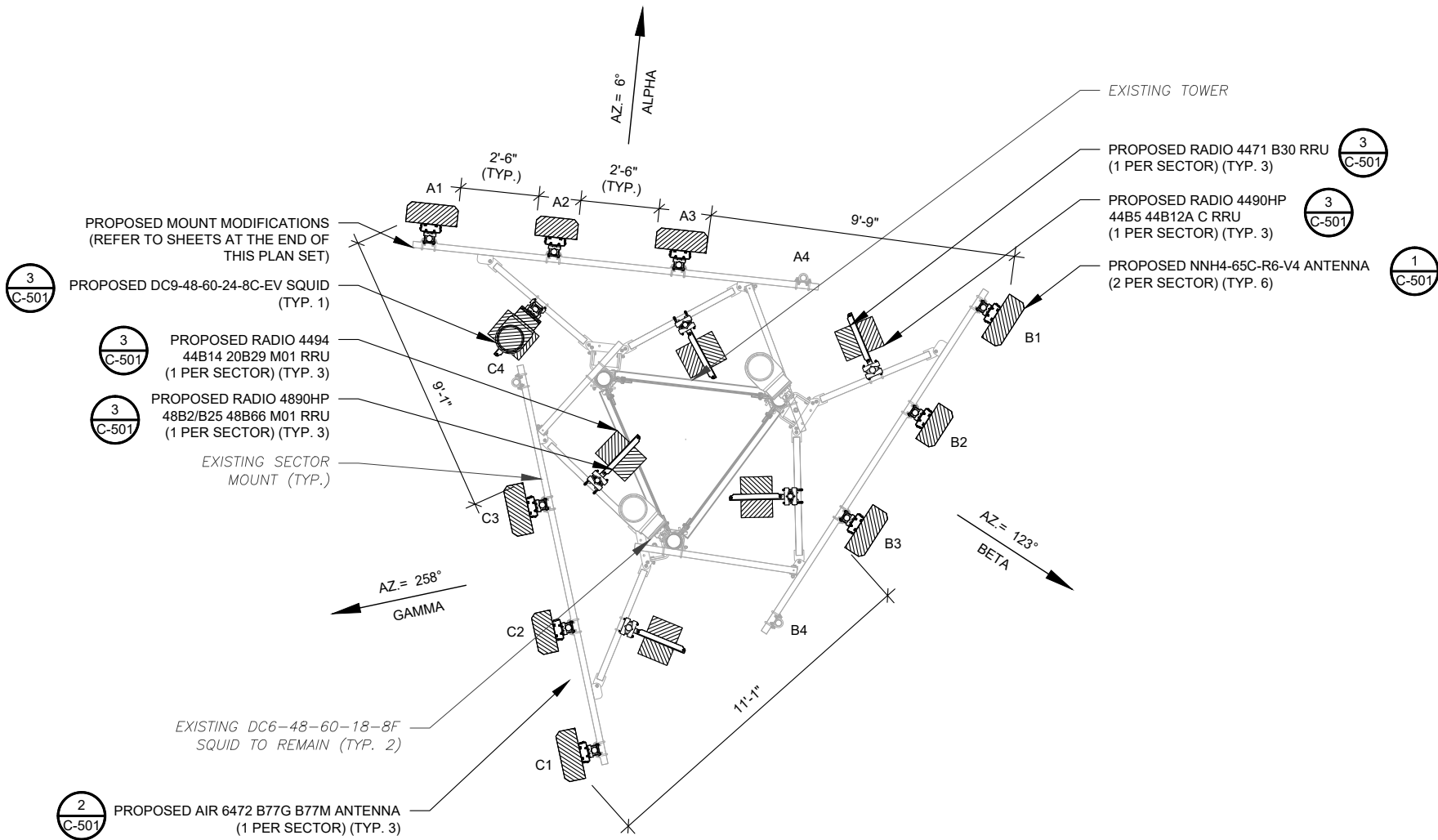


ATC PROJ. #: 14861224_G0
CUST. ID: WSKSL0042322
CUST. #: 10000434

ANTENNA PLAN AND SCHEDULE

SHEET NUMBER:
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REVISION:
0

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 08/16/24, 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.



- NOTES**
- GC TO VERIFY THE FINAL RFDS MATCHES THE FINAL CONSTRUCTION DRAWINGS. GC TO NOTIFY ATC PM OF ANY DISCREPANCY PRIOR TO INSTALLING THE EQUIPMENT.
 - GC TO CAP ALL UNUSED PORTS.
 - CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
 - 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.
 - CONTRACTOR TO ENSURE PROPER SEPARATION IN ACCORDANCE WITH AT&T'S FIRSTNET REQUIREMENTS (SEE SHEET R-602)

STATUS ABBREVIATIONS

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

2 EQUIPMENT SCHEDULE

FINAL ANTENNA SCHEDULE										
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY			
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	RRU VOLTAGE	DC TRUNK SIZE	STATUS
ALPHA	151'	6°	A1	NNH4-65C-R6-V4	LTE 700/850/2300	ADD	RADIO 4490HP 44B5 44B12A C RRU RADIO 4471 B30 RRU	-58 V -48 V	8 AWG 8 AWG	ADD ADD
			A2	AIR 6472 B77G B77M	5G CBAND/DOD	ADD	-	-	-	-
			A3	NNH4-65C-R6-V4	LTE 700/1900/2100	ADD	RADIO 4890HP 48B2/B25 48B66 M01 RRU RADIO 4494 44B14 20B29 M01 RRU	-58 V -48 V	8 AWG 8 AWG	ADD ADD
			A4	-	-	-	-	-	-	-
BETA	151'	123°	B1	NNH4-65C-R6-V4	LTE 700/850/2300	ADD	RADIO 4490HP 44B5 44B12A C RRU RADIO 4471 B30 RRU	-58 V -48 V	8 AWG 8 AWG	ADD ADD
			B2	AIR 6472 B77G B77M	5G CBAND/DOD	ADD	-	-	-	-
			B3	NNH4-65C-R6-V4	LTE 700/1900/2100	ADD	RADIO 4890HP 48B2/B25 48B66 M01 RRU RADIO 4494 44B14 20B29 M01 RRU	-58 V -48 V	8 AWG 8 AWG	ADD ADD
			B4	-	-	-	-	-	-	-
GAMMA	151'	258°	C1	NNH4-65C-R6-V4	LTE 700/850/2300	ADD	RADIO 4490HP 44B5 44B12A C RRU RADIO 4471 B30 RRU	-58 V -48 V	8 AWG 8 AWG	ADD ADD
			C2	AIR 6472 B77G B77M	5G CBAND/DOD	ADD	-	-	-	-
			C3	NNH4-65C-R6-V4	LTE 700/1900/2100	ADD	RADIO 4890HP 48B2/B25 48B66 M01 RRU RADIO 4494 44B14 20B29 M01 RRU	-58 V -48 V	8 AWG 8 AWG	ADD ADD
			C4	-	-	-	-	-	-	-

FINAL SQUID SUMMARY	
MODEL NUMBER	STATUS
(2) DC6-48-60-18-8F	RMN
DC9-48-60-24-8C-EV	ADD

FINAL CABLING SUMMARY	
CABLE QTY, SIZE, TYPE	STATUS
(12) 1-5/8" COAX, (6) 0.76" 8 AWG 6 DC TRUNK, (2) 0.39" FIBER TRUNK, AND (1) 3/8" RET	RMN
(1) 0.40" FIBER TRUNK	ADD

CABLE LENGTHS FOR JUMPERS

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

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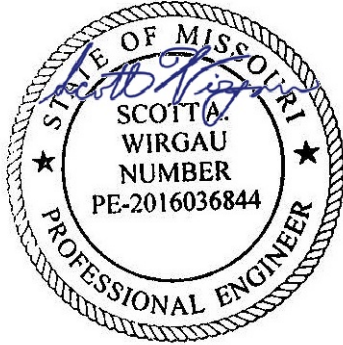
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REV.	DESCRIPTION	BY	DATE
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1			
2			
3			
4			

ATC SITE NUMBER:
306035
ATC SITE NAME:
UNITY VILLAGE MO 2
AT&T SITE NAME:
UNITY VILLAGE
SITE ADDRESS:
1097 NW BLACK TWIG LN
LEES SUMMIT, MO 64081

SEAL:



Digitally Signed: 2024-09-11

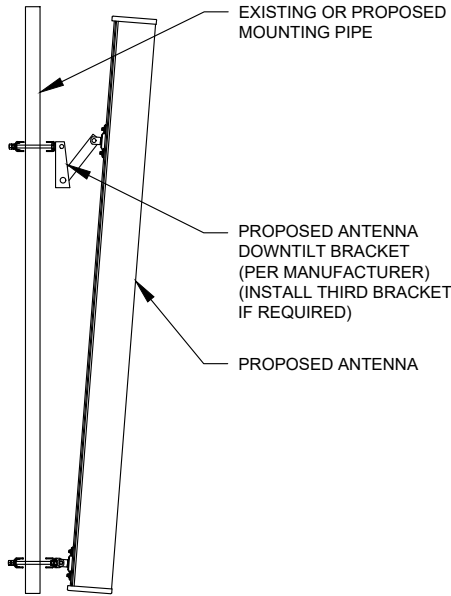


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CUST. ID: WSKSL0042322
CUST. #: 10000434

ANTENNA PLAN AND SCHEDULE

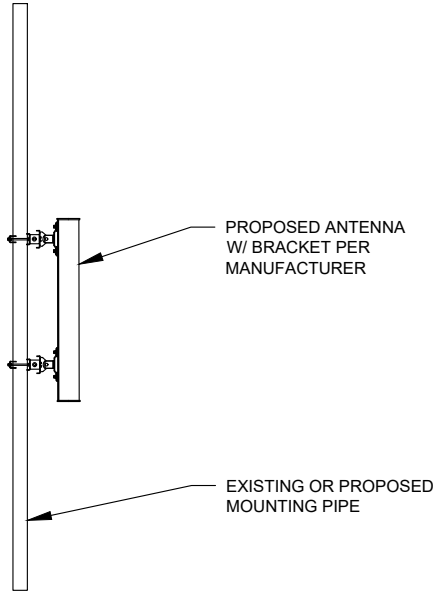
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C-402
REVISION:
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EXISTING/PROPOSED MOUNTS AND/OR MOUNT MODIFICATIONS NOT SHOWN FOR CLARITY. REFER TO ANTENNA PLANS, MOUNT ANALYSES AND/OR MOUNT MODIFICATION DOCUMENTS FOR ADDITIONAL DETAIL.

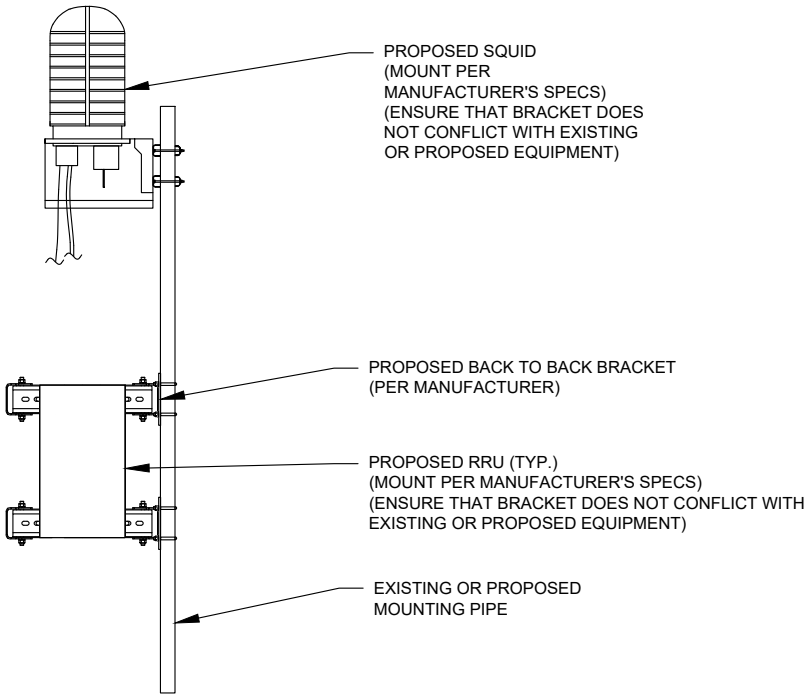


1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.

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



3 PROPOSED RRU / SQUID MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AP	09/10/24

ATC SITE NUMBER:
306035
ATC SITE NAME:
UNITY VILLAGE MO 2
AT&T SITE NAME:
UNITY VILLAGE
SITE ADDRESS:
1097 NW BLACK TWIG LN
LEES SUMMIT, MO 64081

SEAL:



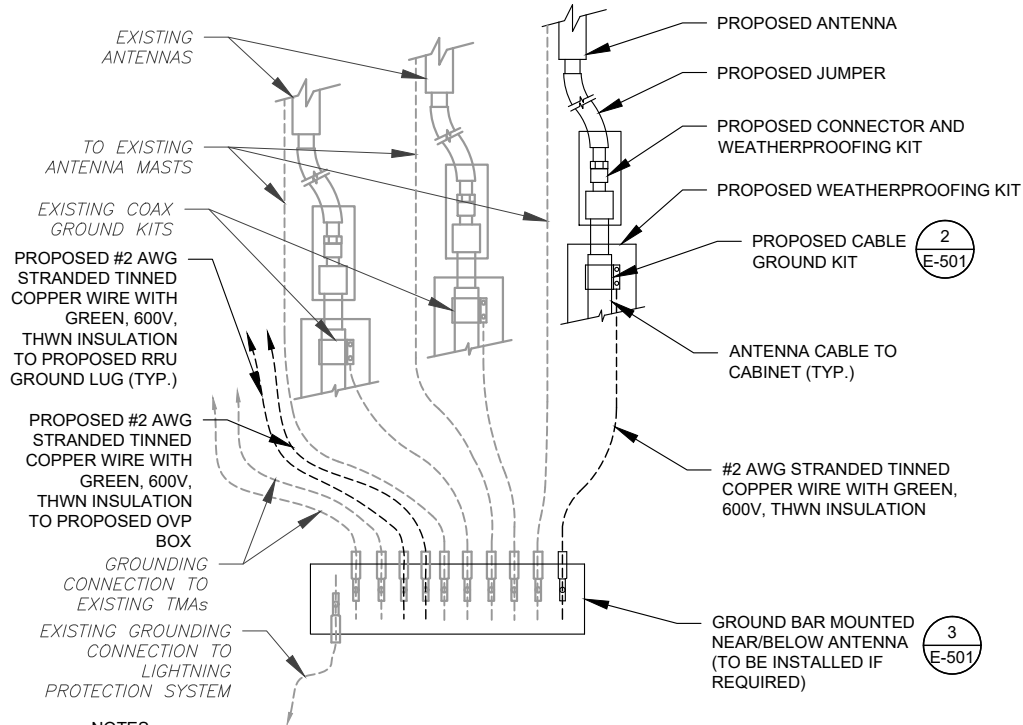
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ATC PROJ. #:	14861224_G0
CUST. ID:	WSKSL0042322
CUST. #:	10000434

CONSTRUCTION
DETAILS

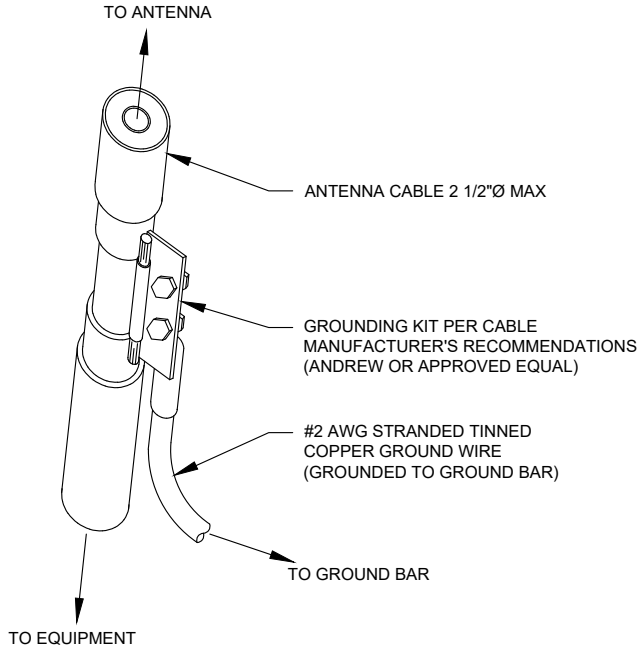
SHEET NUMBER:	REVISION:
C-501	0



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 GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH AT&T GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

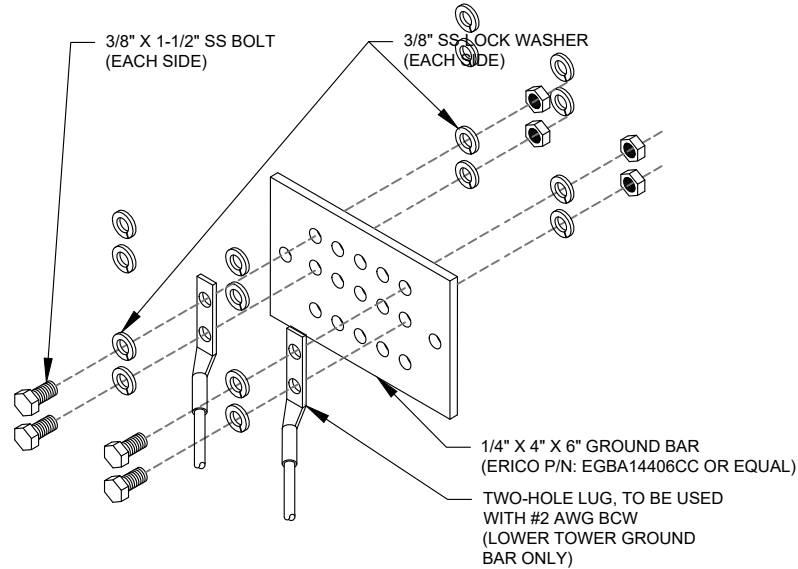
1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



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.

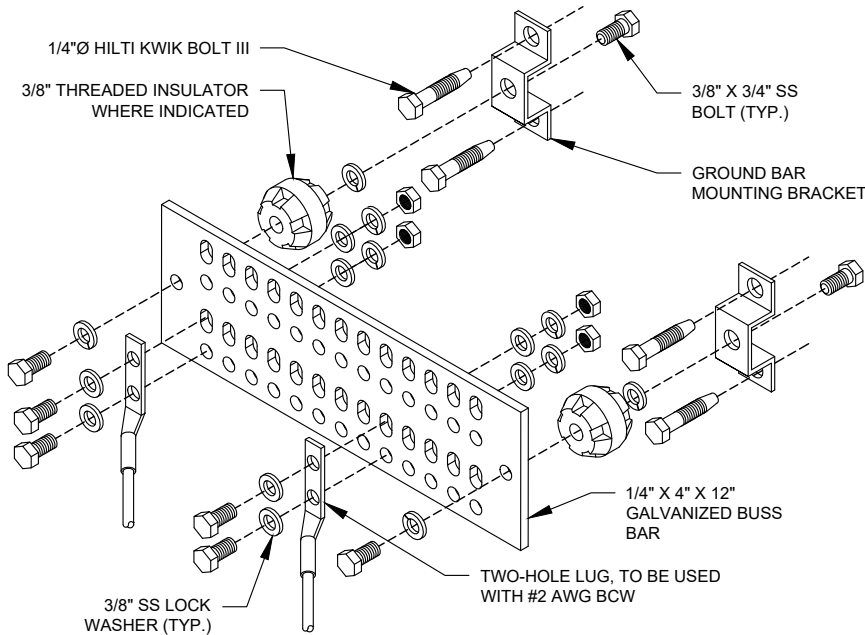
2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



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.

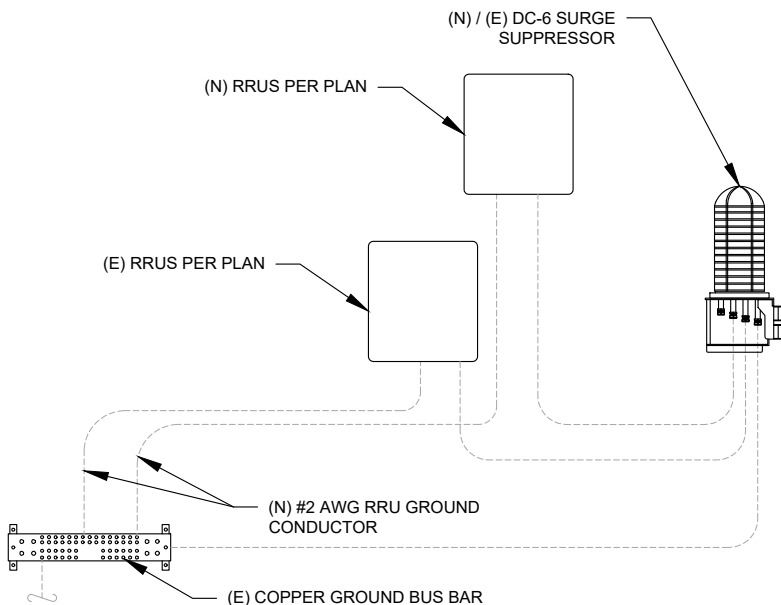
3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.



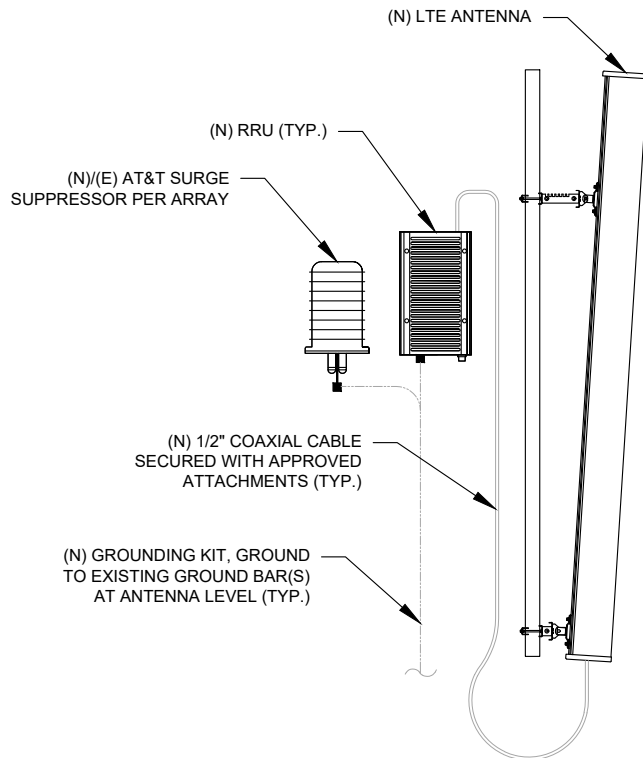
GROUND BAR NOTES

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.

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REV.	DESCRIPTION	BY	DATE
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Δ			

ATC SITE NUMBER:

306035

ATC SITE NAME:

UNITY VILLAGE MO 2

AT&T SITE NAME:

UNITY VILLAGE

SITE ADDRESS:

1097 NW BLACK TWIG LN
LEES SUMMIT, MO 64081

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CUST. ID: WSKSL0042322

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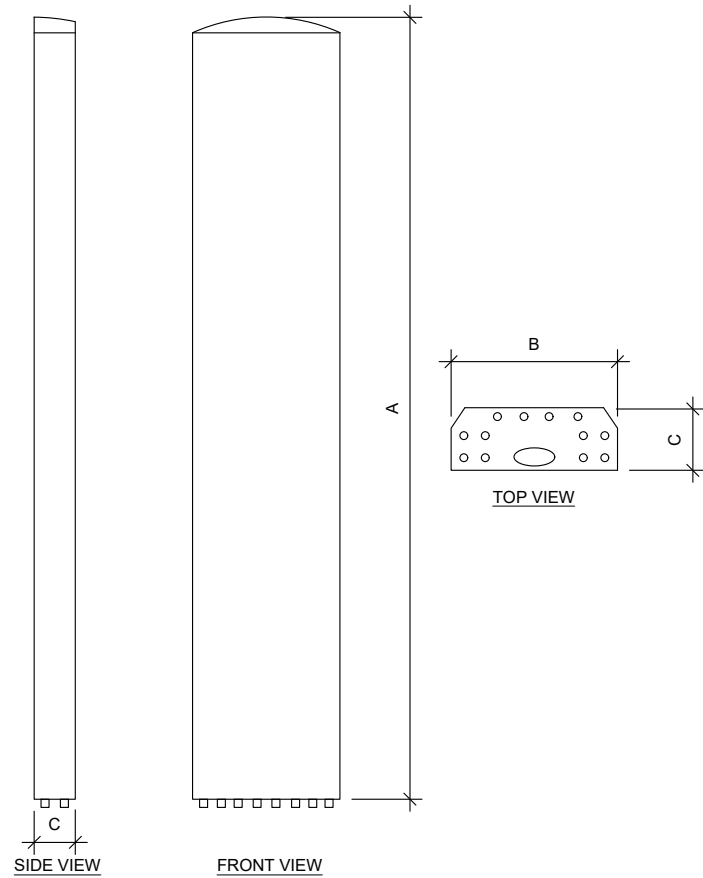
GROUNDING DETAILS

SHEET NUMBER:

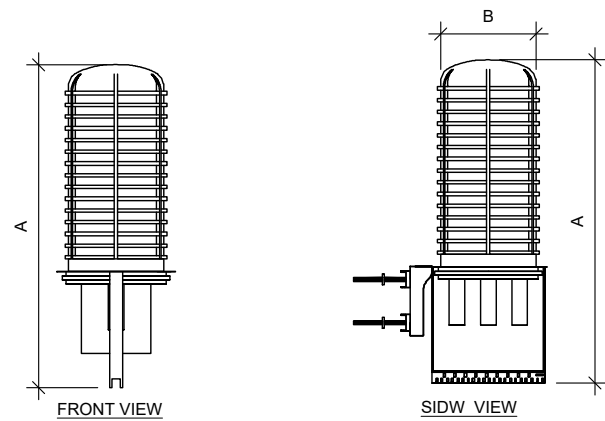
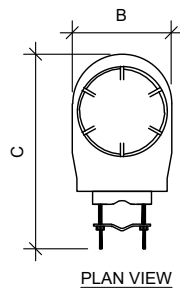
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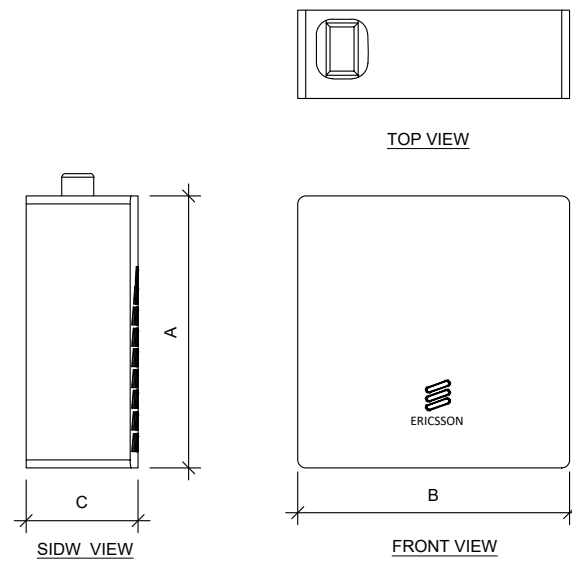
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ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
NHH4-65C-R6-V4	96.0"	19.6"	7.8"	93.7
AIR 6472 B77G B77M	36.4"	16.1"	7.5"	92.6



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



RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RADIO 4890HP 48B2/B25 48B66 M01 RRU	17.5"	15.1"	6.9"	68.3
RADIO 4490HP 44B5 44B12A C RRU	17.5"	15.1"	6.8"	68.3
RADIO 4494 44B14 20B29 M01 RRU	17.5"	15.1"	5.6"	57.3
RADIO 4471 B30 RRU	14.2"	10.3"	5.1"	28.7

7. Antenna Separation Guidelines (Our Own Antennas)

7.1 MIMO or 4T4R Antenna Separation (excluding 700 MHz B/C or D/E or B14-FirstNet antennas)

For MIMO (Multiple-Input Multiple-Output), the relationship between antenna correlation and performance is more complicated due to different MIMO operation modes. Depending SNR, several operation modes will be implemented in MIMO: transmit diversity-based space frequency block coding (SFBC), rank-based spatial multiplexing and beamforming. A cross-polarization antenna with single antenna array can support 2x2 MIMO or 2T2R. There are two options to support 4T4R operation: using an antenna with two antenna arrays or use two single-array antennas.

- There are two architectures for antennas with two same band arrays:
 - horizontal side-by-side arrays architecture, the antenna may be wider if it consists of two LO arrays.
 - vertical stacking arrays architecture, the trade-off is the gain reduction due to limited antenna elements can be implemented.
- When use two single-array antennas to support 4T4R operation, the horizontal spacing between two antennas can be any distance and no need to be very close to each other. The antennas can be installed at the standard positions. Several antenna vendors also offer dual-antenna bracket option, it is noted that the total weight (two antennas plus bracket) can be more than 200 lbs and possible wind load impact if the antennas are too close.

It is noted that 4T4R operation the same azimuth and tilting for both antennas/arrays must be maintained. Those antennas/arrays may be controlled by different actuators.

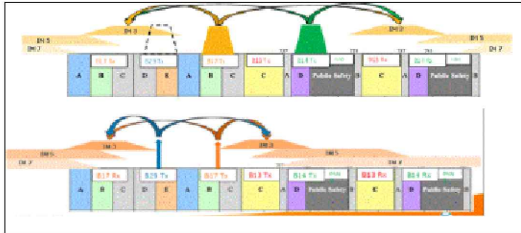
7.2 Integrated Antenna Separation

Integrated Antenna (IA) like ALU AAS or Ericsson AIR consists of radios integrated with the antenna. Adequate free space is required between Integrated Antennas installed side by side. Please refer to OEM product description or installation documents for required free space. Sufficient air flow is needed to cool the integrated radio when Integrated Antenna is installed inside an FRP (Fiber Reinforced Panel) enclosure.

7.3 700 MHz B/C (B17), 700 MHz D/E (B29) and B14-FirstNet Antennas Separation

Due to 700 MHz B/C (Band 17) and 700 MHz D/E (Band 29) are adjacent each other, LTE transmitter in 700 MHz D/E block must be isolated (via filtering and antenna separation) from adjacent 700 B/C receiver. The two main concerns are out-of-band emission (OOBE) and receiver blocking/desensitization.

- B14 + B17 will have 3rd order IM (2A-B) in B17 RX or B14 RX
- B14 + B29 will have 3rd order IM (2A-B) in B14 RX



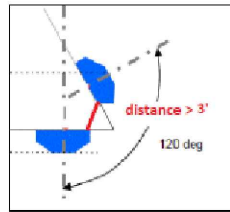
- 700 MHz B/C (B17), 700 MHz D/E (B29) and FirstNet (B14) operation all should have their own antennas. No antenna sharing unless certain dual band or tri-band radios are used.
- At least 6" horizontal separation between 700 MHz D/E (B29) and 700 MHz B/C (B17) antennas within the same sector/face.
 - About 40 dB isolation can be achieved for 65° HBW antennas.
 - More separation is required for wide HBW antennas. The horizontal separation will increase proportionally as the HBW increases, e.g., 50% more horizontal separation for 65° or 90° HBW antennas.
 - Based on measurement data, isolation between 700 B/C and D/E will not be compromised if the azimuth variation is less than $\pm 6^\circ$ for the antennas within the same sector as shown in the following figure. Please note a maximum aiming/alignment accuracy of $\pm 3^\circ$ is required for all panel (directional) antennas [14].



- At least 3' horizontal separation (edge to edge) between FirstNet (B14) antenna from either 700 MHz D/E (B29) or 700 MHz B/C (B17). More separation between B14 and B17 antennas is recommended such as they are not in adjacent position if possible.
- Considering the vertical or diagonal separation (sections 4.3.1 & 4.3.3) if possible. Good isolation can be easily achieved with more than 3' vertical antenna

separation (distances between the tips of the antennas, i.e., the distance from the tip of the bottom antenna to the bottom of the top one).

- Isolation between 700 MHz antennas in different faces may be an issue if they are close to each other in the corner as shown in the following figure. The distance between the edge of the antenna backplanes should be at least 6' if possible, 3' is minimum.



If the above recommended separation cannot be obtained, exception review is required so alternative solutions can be provided. For example,

- Tolerate additional uplink performance degradation at reduced horizontal antenna separation.
- Reduce radio transmit power.
- Adjust antenna tilting or azimuth or relocate antennas.

The following figures illustrate possible antenna separation between 700 B/C and 700 D/E antennas (shown in green or gray colors). The inter-antenna distance depends upon the sector platform or antenna boom/frame size and the number of antennas positions can be mounted on. The following table lists acceptable antenna positions for typical platform with 10'-14' sector width. Antenna position shall be consistent in all faces and back-to-back separation @ corner > 3'.

# of antenna positions per sector/face	3 antenna positions	4 antenna positions	5 antenna positions
10' platform or antenna boom	(3-B)	(4-A) to (4-C)	(5-B), (5-C), (5-E)
12' platform or antenna boom	(3-A) and (3-B)	(4-A) to (4-C)	(5-A) to (5-F)
14' platform or antenna boom	(3-A) and (3-B)	(4-A) to (4-C)	(5-A) to (5-F)

SUPPLEMENTAL

SHEET NUMBER:

R-602

REVISION:

0

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



Mount Analysis Report

ATC Asset Name : Unity Village MO 2
ATC Asset Number : 306035
Engineering Number : 14861224_C8_01
Mount Elevation : 150 ft
Proposed Carrier : AT&T Mobility
Carrier Site Name : UNITY VILLAGE
Carrier Site Number : WSKSL0042322
Site Location : 1097 NW Black Twig Ln
Lees Summit, MO 64081-1905
38.9336, -94.4175
County : Jackson
Date : August 16, 2024
Max Usage : 49%
Analysis Result : Contingent Pass

Prepared By:
Sarah Kramer
Structural Engineer I

Sarah D. Kramer



Michael Deese
Date: 2024.08.16 09:46:44
-04'00'

COA: 2006031326

ATC Tower Services - 1 Fenton Main, Suite 300 - Cary, NC 27511 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com



Eng. Number 14861224_C8_01
August 16, 2024
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Introduction

The purpose of this report is to summarize results of the mount analysis performed for AT&T Mobility at 150 ft.

Supporting Documents

Specifications Sheet:	Sabre C10857007C, dated October 19, 2016
Previous Analysis:	ATC Project #13619563_C8_01, dated May 20, 2021
Radio Frequency Data Sheet:	RFDS ID #10000434, dated August 8, 2024
Reference Photos:	Site photos from 2023

Analysis

This mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	109 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 1.50" radial ice concurrent
Codes:	ANSI/TIA-222-H / 2018 IBC
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.099, S1 = 0.068
Site Class:	D - Stiff Soil - Default
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 P2 (2.375" x 120") in mount pipe position MA2. Connect with Site Pro 1 SCX7-U (or approved equivalent) crossover plate kits.
- Remove existing mount pipe P1 from all sectors. Evenly space remaining mount pipes across face.
- Rotate sector frames as necessary to achieve RFDS with no antenna skew.
- No structural failures were addressed with the noted contingencies. Contingencies address Carrier's antenna spacing requirements.
- The rough cost estimate, pre-MOD design, is estimated to be ≤\$10k.

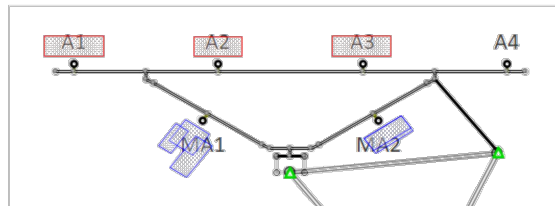
If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact MountAnalysis@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

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Mount Layout



Equipment Position Table

MP	RAD Center (ft)	Qty.	Antenna Model	Max Width (in)	Left (in)	Right (in)
A1	151.0	1	Commscope NNH4-65C-R6-V4	19.6	N/A	30.15
A2	151.0	1	Ericsson AIR 6472 B77G B77M (92.6lbs)	16.1	30.15	30.15
A3	151.0	1	Commscope NNH4-65C-R6-V4	19.6	30.15	N/A
A4	-	-	Empty	-	-	-
MA1	151.0	1	Raycap DC6-48-60-18-8F	-	-	-
	151.0	1	Ericsson Radio 4471 B30			
	151.0	1	Ericsson Radio 4490HP 44B5 44B12A C (68.3lbs)			
MA2	151.0	1	Ericsson Radio 4890HP 48B2/B25 48B66 M01 (68.3lbs)	-	-	-
	151.0	1	Ericsson Radio 4494 44B14 20B29 M01			

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SUPPLEMENTAL

SHEET NUMBER:

R-603

REVISION:

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