



VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: HIGHWAY 441 NORTH
 ATC SITE NUMBER: 97139
 VERIZON SITE NAME: HIGHWAY 441
 VERIZON SITE NUMBER: 228804
 VERIZON FUZE PID: 16276872
 SITE ADDRESS: 22535 N US HWY 441
 WHITE SPRINGS, FL 32096-7100



LOCATION MAP

**VERIZON WIRELESS
 ANTENNA AMENDMENT DRAWINGS**



326 TRYON ROAD
 RALEIGH, NC 27603-3530
 OFFICE: (919) 661-6351
 www.tepgroup.net
 FL COA#: 31011

ATC SITE NUMBER:
 97139
 ATC SITE NAME:
 HIGHWAY 441 NORTH
 VERIZON WIRELESS SITE NAME:
 HIGHWAY 441
 SITE ADDRESS:
 22535 N US HWY 441
 WHITE SPRINGS, FL 32096-7100

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SDD	05/03/23
O	100% CONSTRUCTION	BJO	06/22/23

DIGITAL/ELECTRONIC SEAL:
 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JOSHUA H. CARDEN, P.E. ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

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. 1. 2020 FLORIDA BUILDING CODE, 7TH EDITION 2. ANSI/TIA-222-H 3. 7TH EDITION FLORIDA FIRE PREVENTION CODE (NFPA 70) 4. 2017 NATIONAL ELECTRICAL CODE 5. CITY/COUNTY ORDINANCES DESIGN CRITERIA FOR TOWER STRUCTURAL ANALYSIS: ULTIMATE WIND SPEED: 116 MPH SERVICE WIND SPEED: 60 MPH RISK CATEGORY: II EXPOSURE CATEGORY: B TOPOGRAPHIC CATGUT: 1 INFORMATION PROVIDED BY PASSING STRUCTURAL ANALYSIS BY TELAMON CLS, DATED JUNE 7, 2021.	<u>SITE ADDRESS:</u> 22535 N US HWY 441 WHITE SPRINGS, FL 32096-7100 <u>COUNTY:</u> COLUMBIA <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 30.50635 LONGITUDE: -82.66652 GROUND ELEVATION: 121' AMSL <u>ZONING INFORMATION:</u> JURISDICTION: COLUMBIA COUNTY PARCEL ID: 121N1601511000	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (9) ANTENNA(S), (6) TMA(S), AND (2) 1-5/8" COAX CABLE(S). INSTALL (9) ANTENNA(S), (6) RRU(S), (2) OVP(S), (3) COMBINER(S), AND (2) 6x12 HYBRIFLEX CABLE(S). EXISTING (10) 1-5/8" COAX CABLE(S) TO REMAIN. <u>GROUND WORK:</u> REMOVE (6) RRU(S), (1) BATTERY CABINET(S), (1) 6201 CABINET(S), (1) CDMA CABINET(S), (1) BATTERY RACK(S) AND (1) MCPA FRAME(S). INSTALL (1) GE NE-M -48 POWER PLANT(S), (2) -48 STRINGS HT200ET BATTERY(IES), (1) 19" RACK(S) AND BASEBAND/ROUTER IN EXISTING 19" RACK(S).	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> TOWER ENGINEERING PROFESSIONALS 326 TRYON ROAD RALEIGH, NC 27603-3530 <u>APPLICANT:</u> VERIZON WIRELESS <u>PROPERTY OWNER:</u> CARTER SARA JANE 177 NW MADISON ST LAKE CITY, FL 32055	NOTE: THIS CONSTRUCTION DRAWING SET IS NOT INTENDED TO REPRESENT ANY ELECTRICAL DESIGN OTHER THAN THE GROUNDING SHOWN, OR TO BE USED TO OBTAIN AN ELECTRICAL PERMIT. AN ELECTRICAL PERMIT IS REQUIRED TO WIRE UP THE PROPOSED EQUIPMENT. ANY ELECTRICAL UPGRADES WILL BE ENGINEERED AND PERMITTED IN A SEPARATE CONSTRUCTION DRAWING SET.					
<u>UTILITY COMPANIES</u> POWER COMPANY: SUWANNEE VALLEY ELEC COOP PHONE: (800) 447-4509 TELEPHONE COMPANY: AT&T PHONE: (800) 331-0500	<u>PROJECT LOCATION DIRECTIONS</u> IN FL ON I-10: TAKE EXIT 303 AND TRAVEL NORTH APP. 18.7 MILES TO TOWER ON THE RIGHT.	<u>PROJECT NOTES</u> 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).					



verizon

DATE DRAWN: 06/22/23
 ATC JOB NO: 13686693
 CUSTOMER NAME: HIGHWAY 441
 CUSTOMER ID: 228804

TITLE SHEET

SHEET NUMBER: **G-001**
 REVISION: **0**

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON WIRELESS "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 VERIZON WIRELESS 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 ANSIEIA/ITIA-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 VERIZON WIRELESS REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON WIRELESS REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON WIRELESS 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 VERIZON WIRELESS 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 VERIZON WIRELESS 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 VERIZON WIRELESS 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 VERIZON WIRELESS 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 VERIZON WIRELESS REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
 23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
 24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON WIRELESS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
 25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS 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 VERIZON WIRELESS 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. 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.
 29. 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.
 30. 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 VERIZON WIRELESS REP. ANY WORK FOUND BY THE VERIZON WIRELESS REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
 31. 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.
 32. VERIZON WIRELESS FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WIRELESS 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.
 33. VERIZON WIRELESS 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 VERIZON WIRELESS OR THEIR ARCHITECT/ENGINEER.
- SPECIAL CONSTRUCTION**
- ANTENNA INSTALLATION NOTES:**
1. WORK INCLUDED:
 - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY VERIZON WIRELESS 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 VERIZON WIRELESS 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.



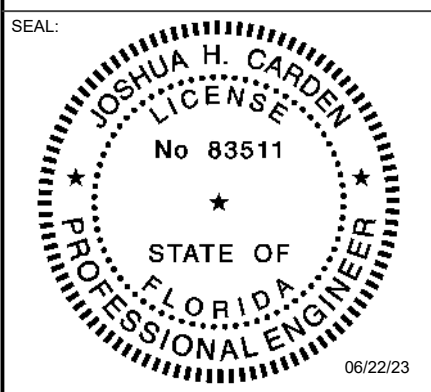
326 TRYON ROAD
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A	PRELIMINARY	SDD	05/03/23
0	100% CONSTRUCTION	BJO	06/22/23

DIGITAL/ELECTRONIC SEAL:
 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JOSHUA H. CARDEN, P.E. ON THE DATE ADJACENT TO THE SEAL.

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DATE DRAWN:	06/22/23
ATC JOB NO:	13686693
CUSTOMER NAME:	HIGHWAY 441
CUSTOMER ID:	228804

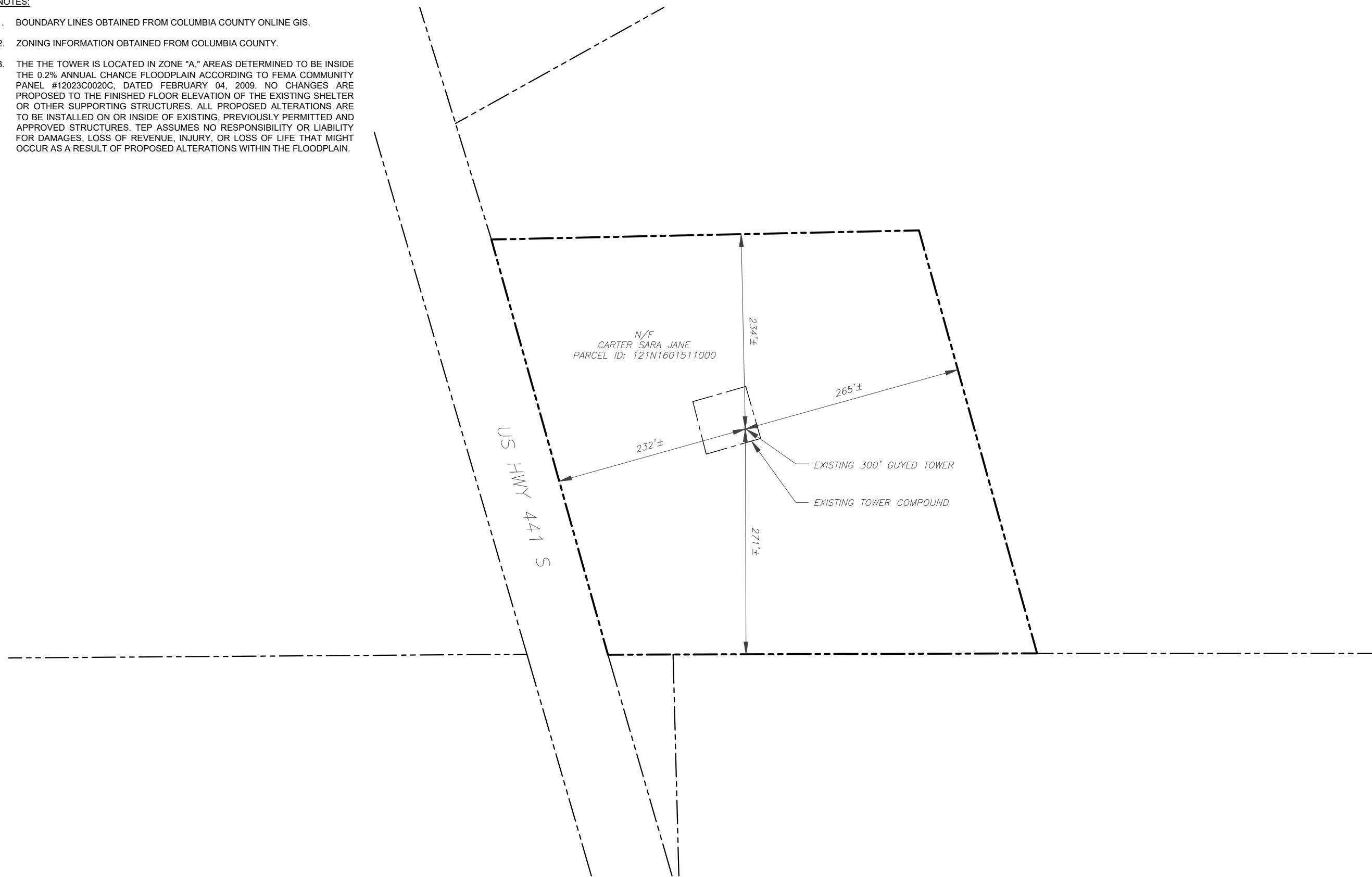
GENERAL NOTES

SHEET NUMBER:
G-002

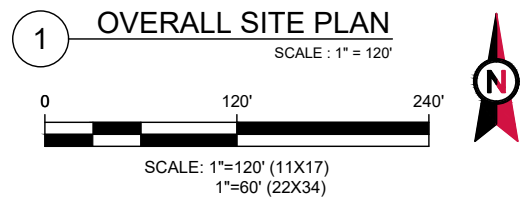
REVISION:
0

NOTES:

- BOUNDARY LINES OBTAINED FROM COLUMBIA COUNTY ONLINE GIS.
- ZONING INFORMATION OBTAINED FROM COLUMBIA COUNTY.
- THE TOWER IS LOCATED IN ZONE "A," AREAS DETERMINED TO BE INSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #12023C0020C, DATED FEBRUARY 04, 2009. NO CHANGES ARE PROPOSED TO THE FINISHED FLOOR ELEVATION OF THE EXISTING SHELTER OR OTHER SUPPORTING STRUCTURES. ALL PROPOSED ALTERATIONS ARE TO BE INSTALLED ON OR INSIDE OF EXISTING, PREVIOUSLY PERMITTED AND APPROVED STRUCTURES. TEP ASSUMES NO RESPONSIBILITY OR LIABILITY FOR DAMAGES, LOSS OF REVENUE, INJURY, OR LOSS OF LIFE THAT MIGHT OCCUR AS A RESULT OF PROPOSED ALTERATIONS WITHIN THE FLOODPLAIN.



LEGEND	
	EXISTING PROPERTY LINE
	EXISTING ADJACENT PROPERTY LINE
	EXISTING LEASE AREA



326 TRYON ROAD
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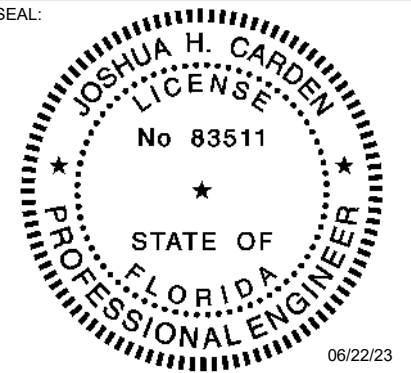
ATC SITE NUMBER:
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22535 N US HWY 441
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SEAL:



DATE DRAWN:	06/22/23
ATC JOB NO:	13686693
CUSTOMER NAME:	HIGHWAY 441
CUSTOMER ID:	228804

OVERALL SITE PLAN

SHEET NUMBER:
C-001

REVISION:
0

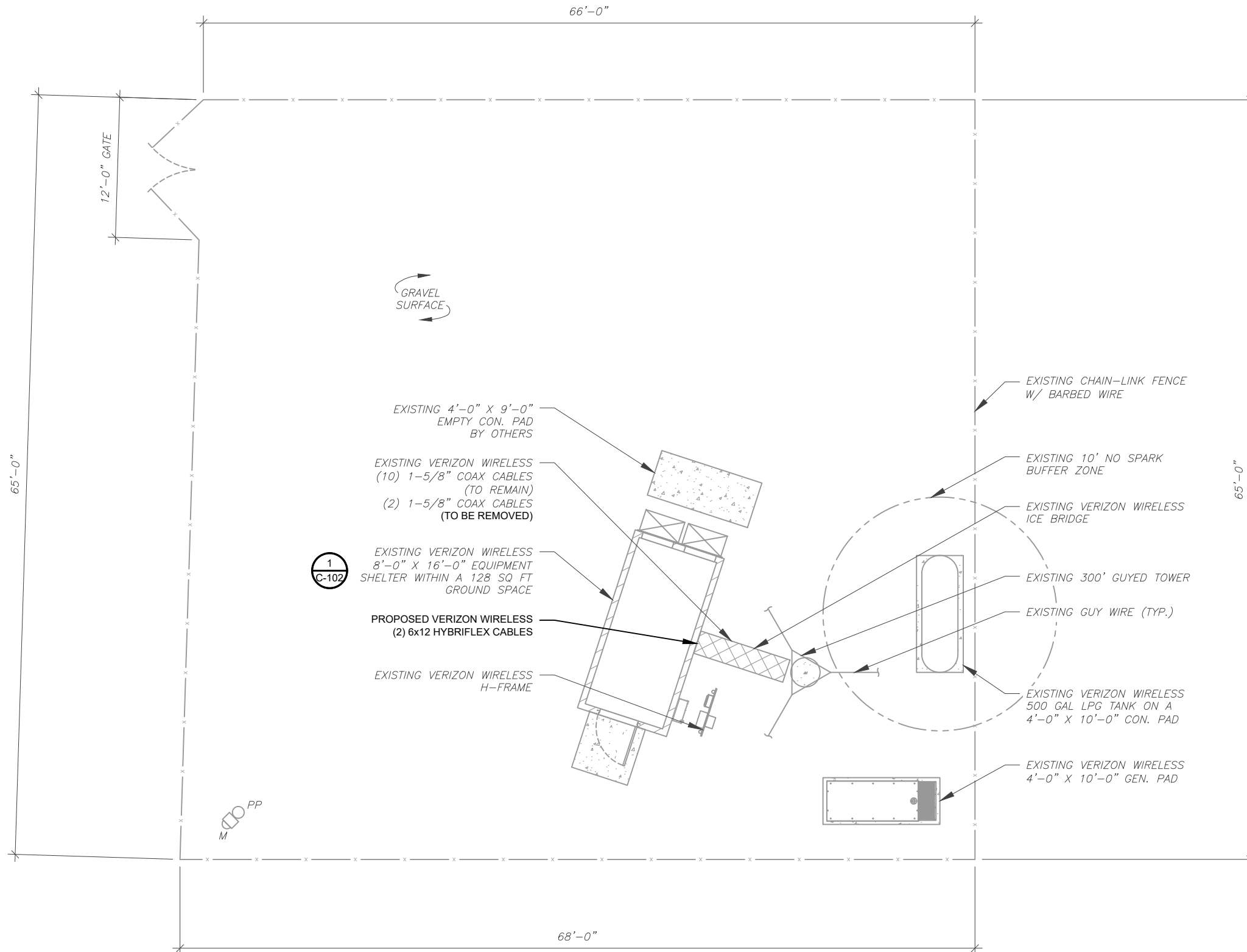
SITE PLAN NOTES:

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.
3. THIS CONSTRUCTION DRAWING SET IS NOT INTENDED TO REPRESENT ANY ELECTRICAL DESIGN OTHER THAN THE GROUNDING SHOWN, OR TO BE USED TO OBTAIN AN ELECTRICAL PERMIT. AN ELECTRICAL PERMIT IS REQUIRED TO WIRE UP THE PROPOSED EQUIPMENT. ANY ELECTRICAL UPGRADES WILL BE ENGINEERED AND PERMITTED IN A SEPARATE CONSTRUCTION DRAWING SET.

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

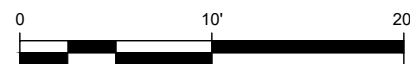
PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS 350'. 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'



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



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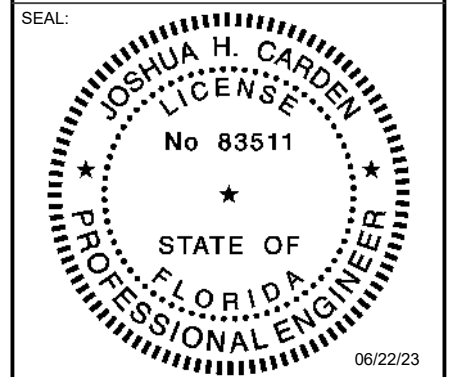
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DATE DRAWN:	06/22/23
ATC JOB NO:	13686693
CUSTOMER NAME:	HIGHWAY 441
CUSTOMER ID:	228804

DETAILED SITE PLAN

SHEET NUMBER: REVISION:

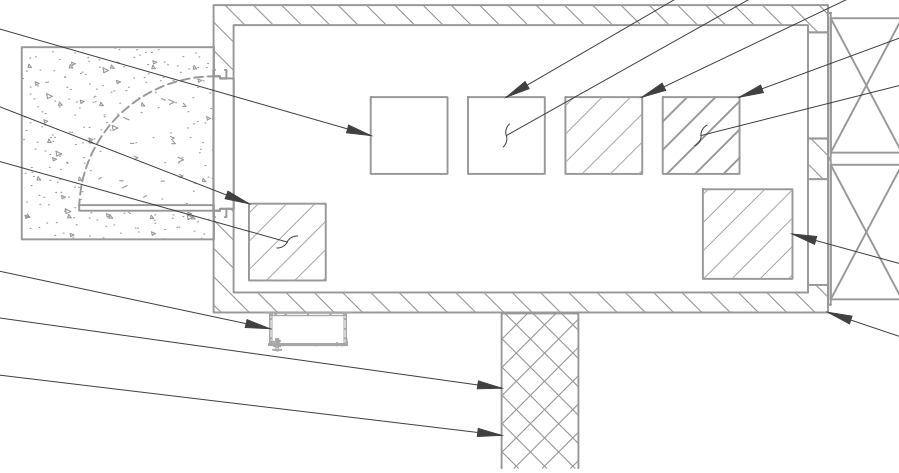
C-101

0

SITE PLAN NOTES:

1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. REMOVE EXISTING 2G CABINETS, AND POWER / TELCO WHIPS ASSOCIATED WITH THE DEAD EQUIPMENT IF APPLICABLE.
3. ALL OPEN PORTS NEED TO BE SEALED / WEATHERPROOFED PROPERLY
4. ALL UNNEEDED / EXCESS EQUIPMENT AND GARBAGE TO BE REMOVED FROM EQUIPMENT AREA. DISPOSE OF MATERIALS PROPERLY OFF SITE.

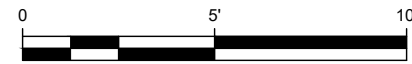
- EXISTING VERIZON WIRELESS MW CABINET (TO REMAIN)
- EXISTING VERIZON WIRELESS RBS 6201 CABINET (TO BE REMOVED)
- EXISTING VERIZON WIRELESS EQUIPMENT INSTALLED INSIDE RBS 6201 CABINET: (6) RUL01 B13 RRUs (TO BE REMOVED)
- EXISTING VERIZON WIRELESS ATS (TO REMAIN)
- EXISTING VERIZON WIRELESS ICE BRIDGE (TO REMAIN)
- EXISTING VERIZON WIRELESS (10) 1-5/8" COAX CABLES (TO REMAIN)
- (2) 1-5/8" COAX CABLES (TO BE REMOVED)



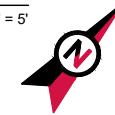
- EXISTING VERIZON WIRELESS POWER PLANT (TO REMAIN)
- EXISTING VERIZON WIRELESS CDMA CABINET (TO BE REMOVED)
- EXISTING VERIZON WIRELESS 1XR BATTERY CABINET (TO BE REMOVED)
- EXISTING VERIZON WIRELESS OVP 19" RACK (TO REMAIN)
- EXISTING VERIZON WIRELESS MCPA FRAME (TO BE REMOVED)
- EXISTING VERIZON WIRELESS HVAC UNIT (TO REMAIN) (TYP. 2)
- EXISTING VERIZON WIRELESS BATTERY STACK (TO BE REMOVED)
- EXISTING VERIZON WIRELESS 8'-0" X 16'-0" EQUIPMENT SHELTER WITHIN A 128 SQ FT GROUND SPACE

1 EXISTING GROUND EQUIPMENT LAYOUT

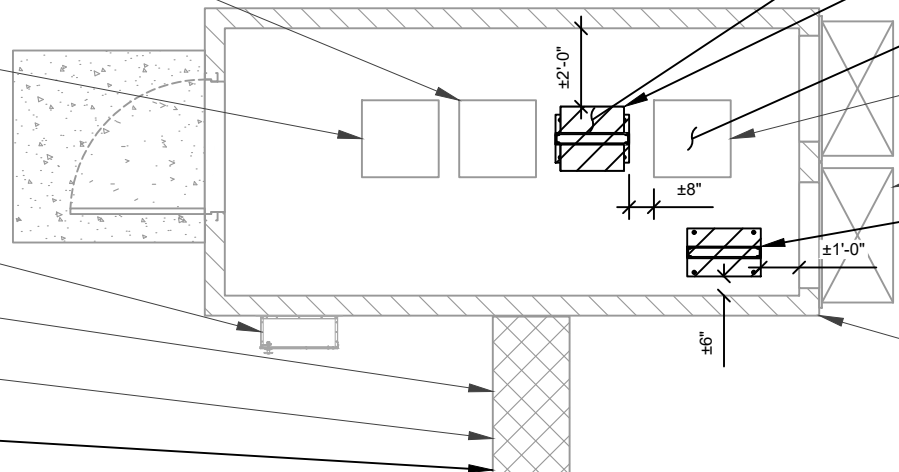
SCALE: 1" = 5'



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



- EXISTING VERIZON WIRELESS POWER PLANT
- EXISTING VERIZON WIRELESS MW CABINET
- EXISTING VERIZON WIRELESS ATS
- EXISTING VERIZON WIRELESS ICE BRIDGE
- EXISTING VERIZON WIRELESS (10) 1-5/8" COAX CABLES
- PROPOSED VERIZON WIRELESS (2) 6x12 HYBRIFLEX CABLES



- PROPOSED VERIZON WIRELESS (2) -48V STRINGS HT200ET BATTERIES INSTALLED IN DC POWER PLANT RACK
- PROPOSED VERIZON WIRELESS GE -48V NE-M DC POWER PLANT OR APPROVED EQUIVALENT
- PROPOSED VERIZON WIRELESS BASEBAND ROUTER TO BE INSTALLED IN EXISTING 19" RACK
- EXISTING VERIZON WIRELESS OVP 19" RACK (TO REMAIN)
- EXISTING VERIZON WIRELESS HVAC UNIT (TYP. 2)
- PROPOSED VERIZON WIRELESS 19" RACK
- EXISTING VERIZON WIRELESS 8'-0" X 16'-0" EQUIPMENT SHELTER WITHIN A 128 SQ FT GROUND SPACE

2 PROPOSED GROUND EQUIPMENT LAYOUT

SCALE: 1" = 5'



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



326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

FL COA#: 31011

ATC SITE NUMBER:

97139

ATC SITE NAME:

HIGHWAY 441 NORTH

VERIZON WIRELESS SITE NAME:

HIGHWAY 441

SITE ADDRESS:

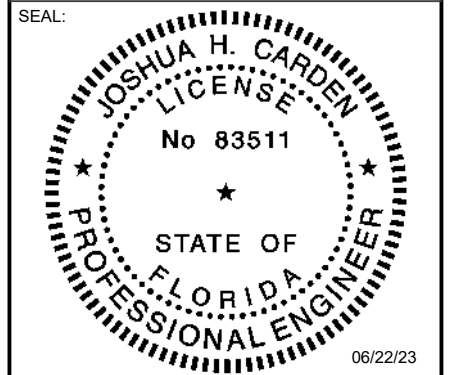
22535 N US HWY 441

WHITE SPRINGS, FL 32096-7100

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SDD	05/03/23
B	100% CONSTRUCTION	BJO	06/22/23

DIGITAL/ELECTRONIC SEAL:
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JOSHUA H. CARDEN, P.E. ON THE DATE ADJACENT TO THE SEAL.

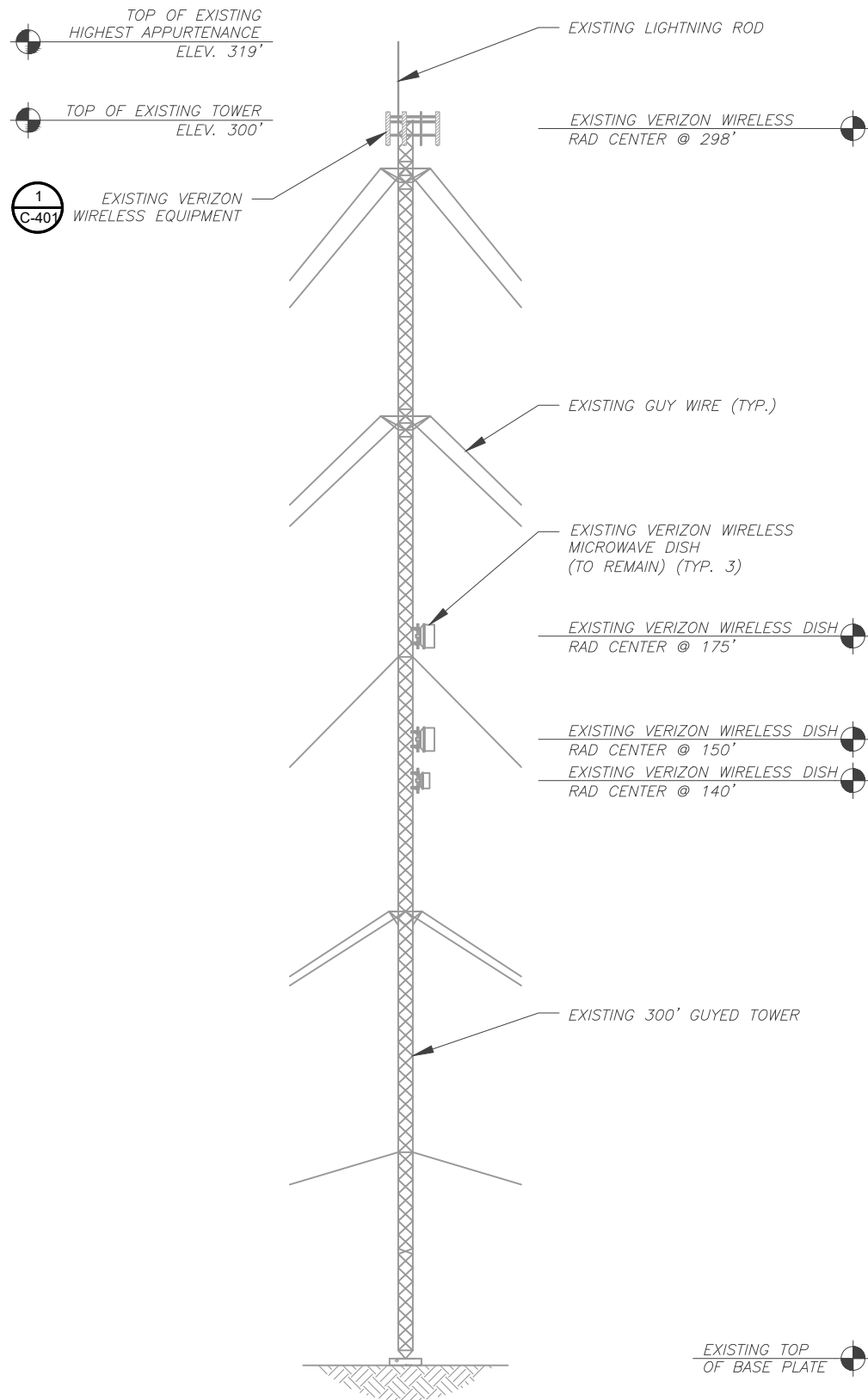
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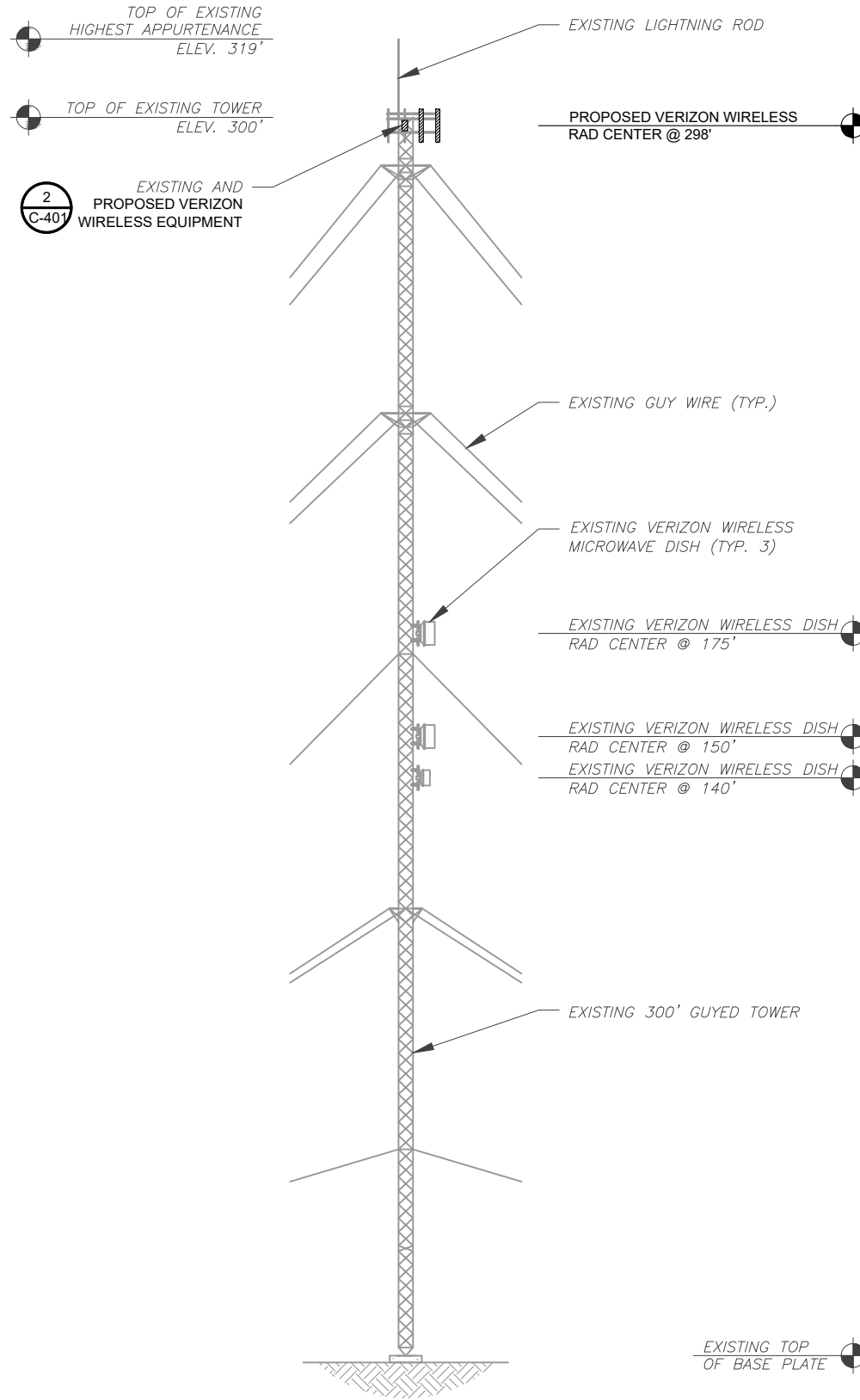
DATE DRAWN:	06/22/23
ATC JOB NO:	13686693
CUSTOMER NAME:	HIGHWAY 441
CUSTOMER ID:	228804

DETAILED EQUIPMENT LAYOUT

SHEET NUMBER:	REVISION:
C-102	0



1 EXISTING TOWER ELEVATION
SCALE: N.T.S.



2 PROPOSED TOWER ELEVATION
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS, & LAND SURVEYORS, D.P.C., DATED JUNE 02, 2021, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

- TOWER NOTES:**
- 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 ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)
 - TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



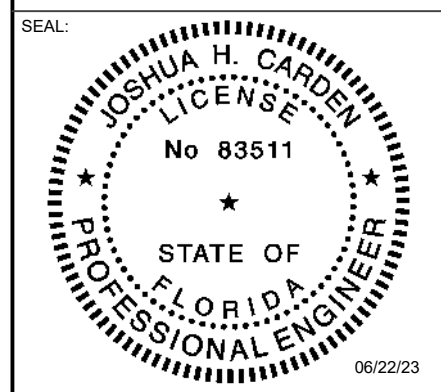
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
FL COA#: 31011

ATC SITE NUMBER:
97139
ATC SITE NAME:
HIGHWAY 441 NORTH
VERIZON WIRELESS SITE NAME:
HIGHWAY 441
SITE ADDRESS:
22535 N US HWY 441
WHITE SPRINGS, FL 32096-7100

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SDD	05/03/23
0	100% CONSTRUCTION	BJO	06/22/23

DIGITAL/ELECTRONIC SEAL:
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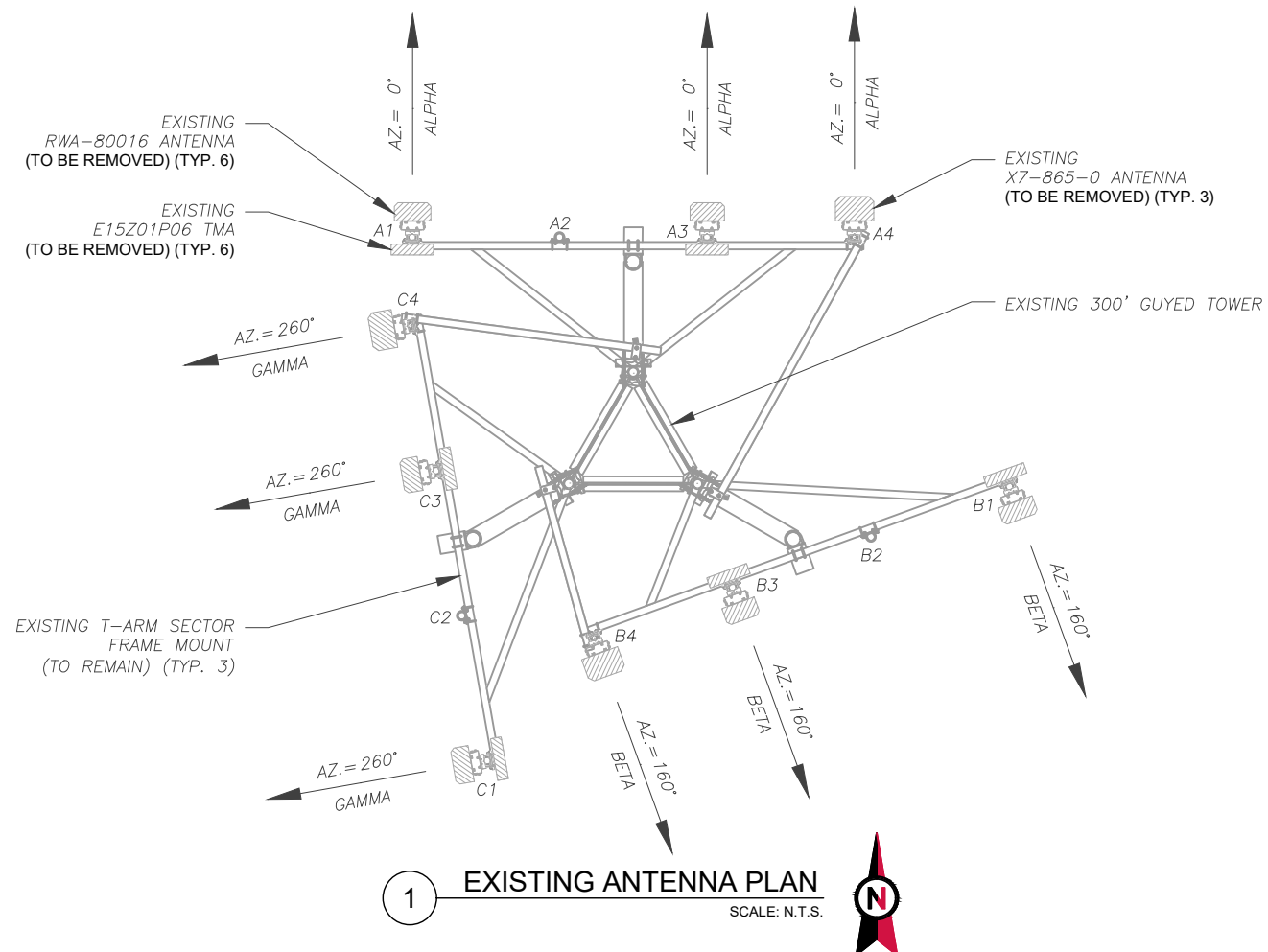
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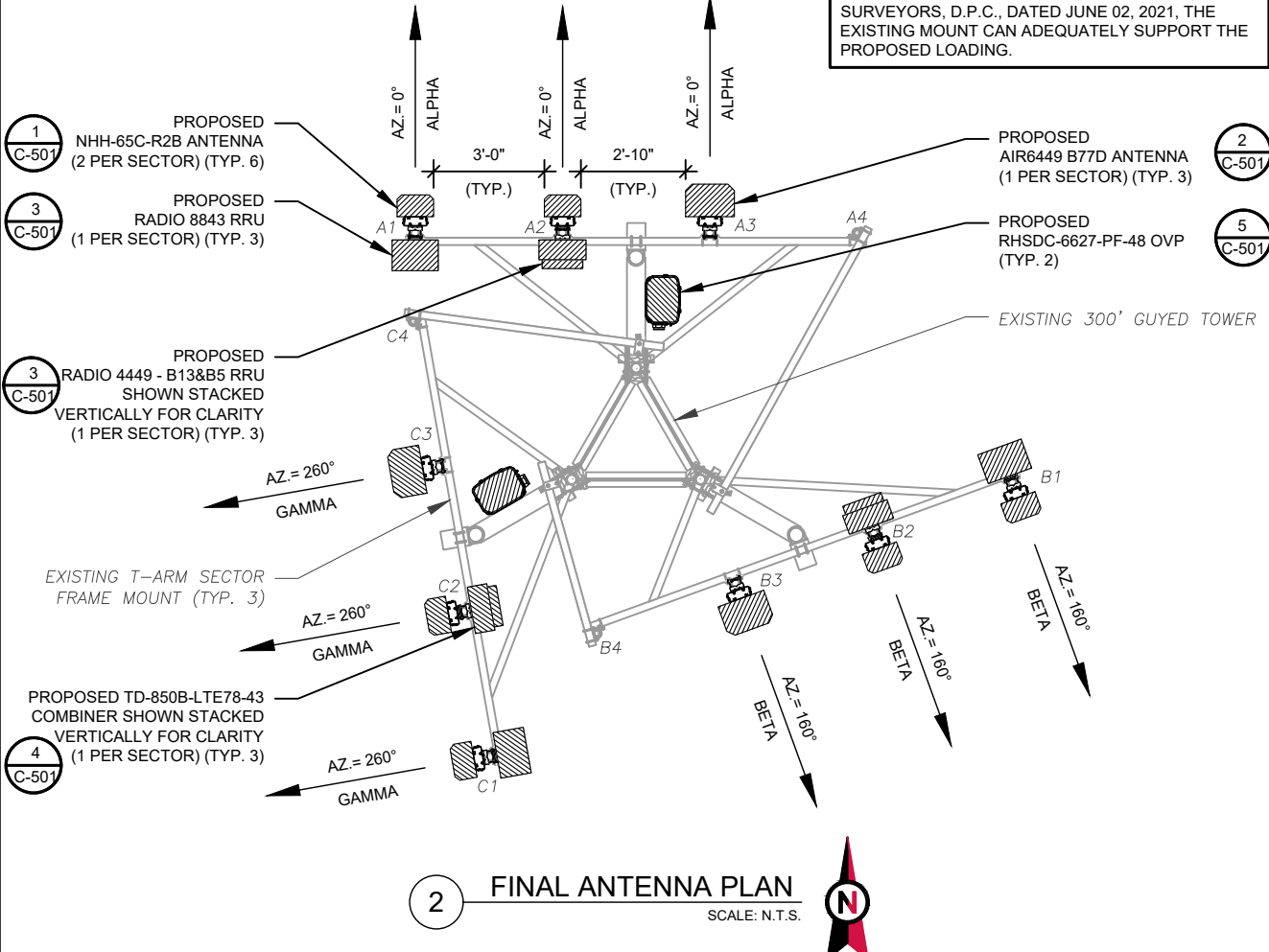
DATE DRAWN:	06/22/23
ATC JOB NO:	13686693
CUSTOMER NAME:	HIGHWAY 441
CUSTOMER ID:	228804

TOWER ELEVATION

SHEET NUMBER: C-201	REVISION: 0
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1 EXISTING ANTENNA PLAN
SCALE: N.T.S.



PER MOUNT ANALYSIS COMPLETED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS, & LAND SURVEYORS, D.P.C., DATED JUNE 02, 2021, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

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

EXISTING ANTENNA SCHEDULE							
LOCATION		ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	298'	0°	A1	RWA-80016	CDMA 850	RMV	(1) E15Z01P06
			A2	-	-	-	-
			A3	RWA-80016	CDMA 850	RMV	(1) E15Z01P06
			A4	X7-865-0	LTE 700	RMV	-
BETA	298'	160°	B1	RWA-80016	CDMA 850	RMV	(1) E15Z01P06
			B2	-	-	-	-
			B3	RWA-80016	CDMA 850	RMV	(1) E15Z01P06
			B4	X7-865-0	LTE 700	RMV	-
GAMMA	298'	260°	C1	RWA-80016	CDMA 850	RMV	(1) E15Z01P06
			C2	-	-	-	-
			C3	RWA-80016	CDMA 850	RMV	(1) E15Z01P06
			C4	X7-865-0	LTE 700	RMV	-

NOTES

- CONFIRM WITH VERIZON WIRELESS REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
- TEP DID NOT VERIFY THE EXISTING LOADING. LOADING DATA PROVIDED BY ATC AND VERIZON WIRELESS.

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
ALPHA	298'	0°	A1	NHH-65C-R2B	LTE 700/LTE 850/LTE AWS/LTE AWS3/CDMA 850/5G 850	ADD	(1) RADIO 8843
			A2	NHH-65C-R2B	LTE 700/LTE 850/LTE AWS/LTE AWS3/CDMA 850/5G 850	ADD	(1) TD-850B-LTE78-43 (1) RADIO 4449 - B13&B5
			A3	AIR6449 B77D	5G L-SUB6	ADD	-
			A4	-	-	-	-
BETA	298'	160°	B1	NHH-65C-R2B	LTE 700/LTE 850/LTE AWS/LTE AWS3/CDMA 850/5G 850	ADD	(1) RADIO 8843
			B2	NHH-65C-R2B	LTE 700/LTE 850/LTE AWS/LTE AWS3/CDMA 850/5G 850	ADD	(1) TD-850B-LTE78-43 (1) RADIO 4449 - B13&B5
			B3	AIR6449 B77D	5G L-SUB6	ADD	-
			B4	-	-	-	-
GAMMA	298'	260°	C1	NHH-65C-R2B	LTE 700/LTE 850/LTE AWS/LTE AWS3/CDMA 850/5G 850	ADD	(1) RADIO 8843
			C2	NHH-65C-R2B	LTE 700/LTE 850/LTE AWS/LTE AWS3/CDMA 850/5G 850	ADD	(1) TD-850B-LTE78-43 (1) RADIO 4449 - B13&B5
			C3	AIR6449 B77D	5G L-SUB6	ADD	-
			C4	-	-	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRIFLEX	STATUS
-	-	(10) 7/8"	-	REL
-	-	(2) 1-5/8"	-	RMV

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRIFLEX	STATUS
-	-	(10) 7/8"	-	RMN
(2) RHSDC-6627-PF-48	ADD	-	(2) 6x12	ADD



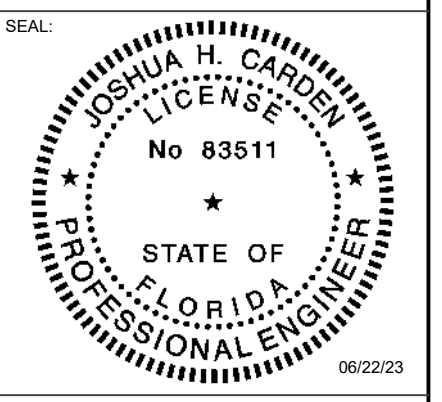
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

FL COA#: 31011
ATC SITE NUMBER:
97139
ATC SITE NAME:
HIGHWAY 441 NORTH
VERIZON WIRELESS SITE NAME:
HIGHWAY 441
SITE ADDRESS:
22535 N US HWY 441
WHITE SPRINGS, FL 32096-7100

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SDD	05/03/23
O	100% CONSTRUCTION	BJO	06/22/23

DIGITAL/ELECTRONIC SEAL:
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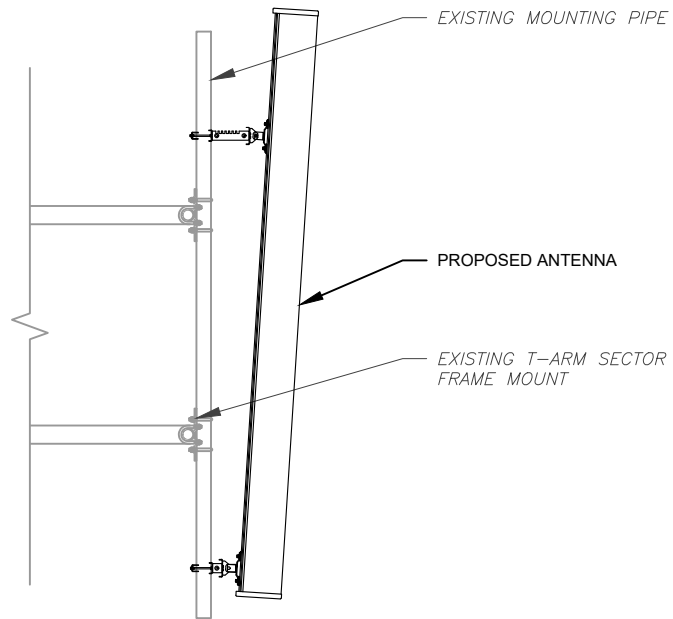
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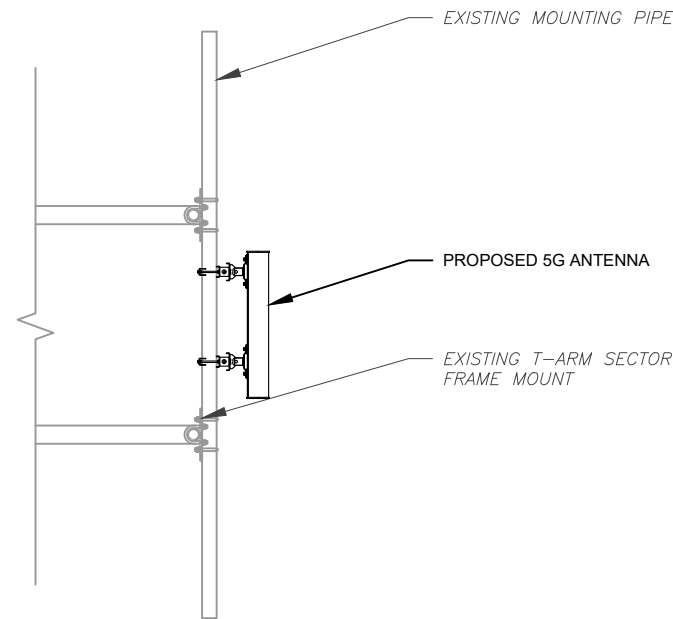
DATE DRAWN:	06/22/23
ATC JOB NO:	13686693
CUSTOMER NAME:	HIGHWAY 441
CUSTOMER ID:	228804

ANTENNA INSTALLATION AND SCHEDULE

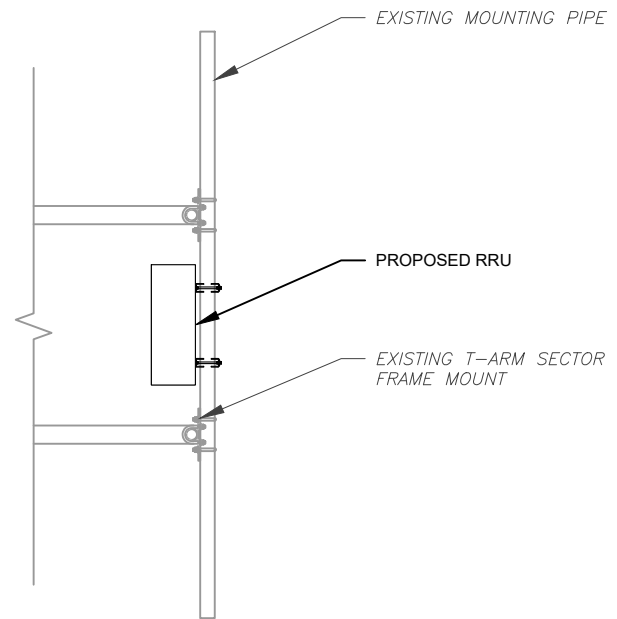
SHEET NUMBER:	REVISION:
C-401	0



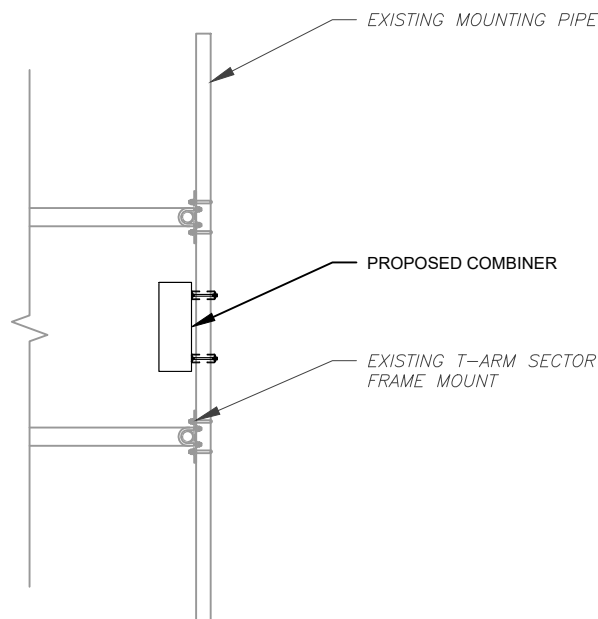
1 PROPOSED ANTENNA MOUNTING DETAIL
SCALE: N.T.S.



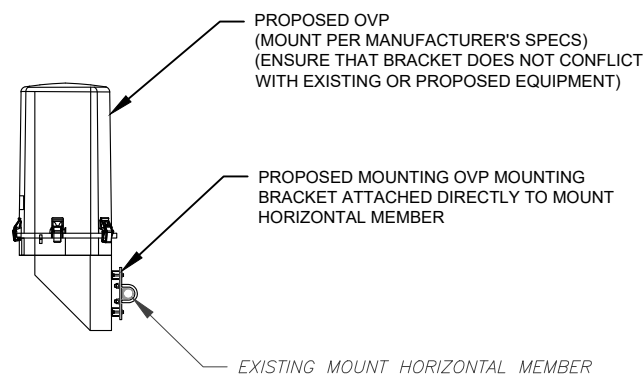
2 PROPOSED 5G ANTENNA MOUNTING DETAIL
SCALE: N.T.S.



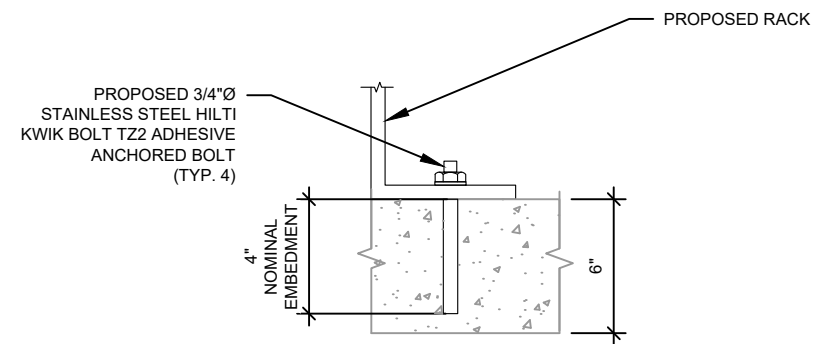
3 PROPOSED RRU MOUNTING DETAIL
SCALE: N.T.S.



4 PROPOSED COMBINER MOUNTING DETAIL
SCALE: N.T.S.



5 PROPOSED OVP MOUNTING DETAIL
SCALE: N.T.S.



NOTES:

1. INSTALL HILTI KWIK BOLT TZ2 ANCHOR(S) STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.US.HILTI.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.
2. SEE C-102 SHEET FOR SPACING AND PLACEMENT OF PROPOSED RACK.

6 PROPOSED RACK ATTACHMENT DETAIL
SCALE: N.T.S.



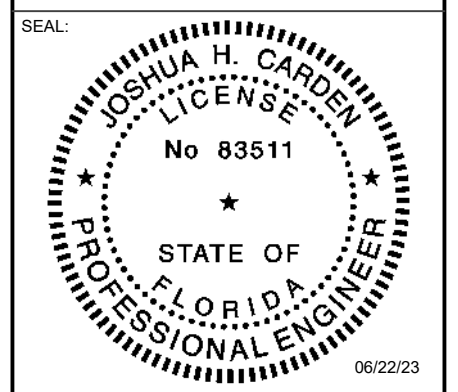
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

FL COA#: 31011
ATC SITE NUMBER:
97139
ATC SITE NAME:
HIGHWAY 441 NORTH
VERIZON WIRELESS SITE NAME:
HIGHWAY 441
SITE ADDRESS:
22535 N US HWY 441
WHITE SPRINGS, FL 32096-7100

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SDD	05/03/23
0	100% CONSTRUCTION	BJO	06/22/23

DIGITAL/ELECTRONIC SEAL:
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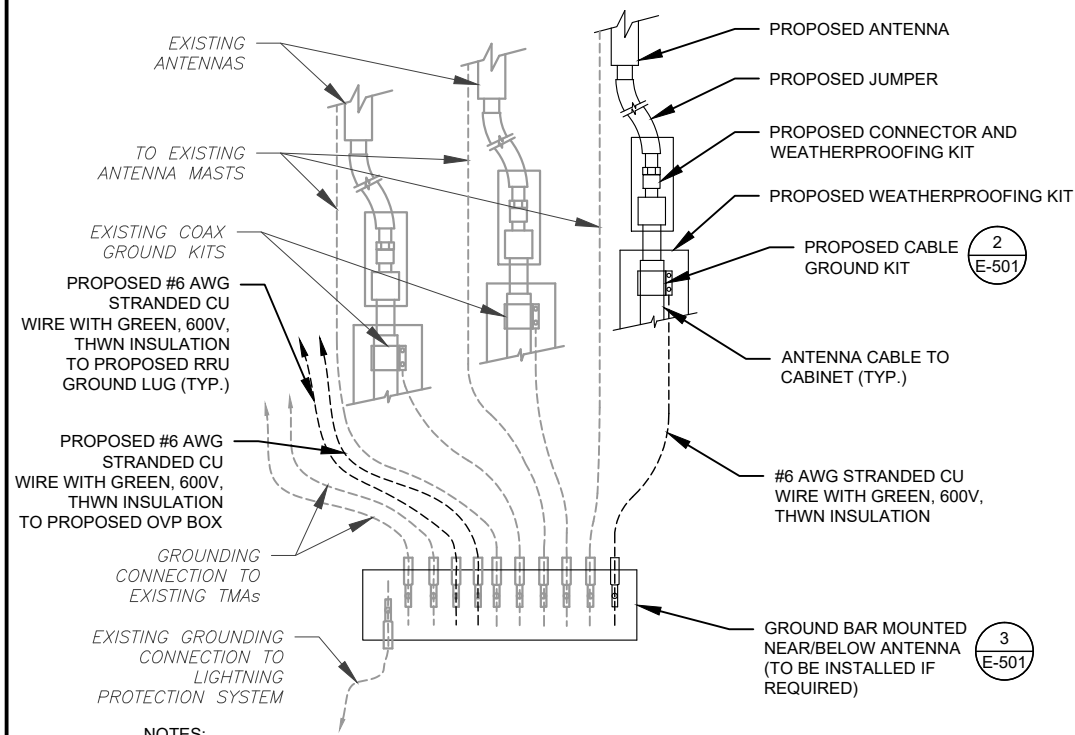
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DATE DRAWN:	06/22/23
ATC JOB NO:	13686693
CUSTOMER NAME:	HIGHWAY 441
CUSTOMER ID:	228804

**CONSTRUCTION
DETAILS**

SHEET NUMBER: C-501	REVISION: 0
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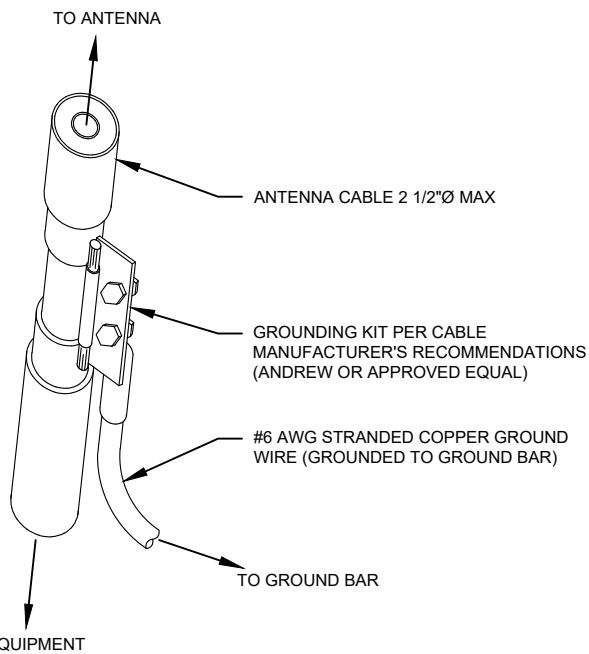


NOTES:

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 VERIZON WIRELESS GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON WIRELESS 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.

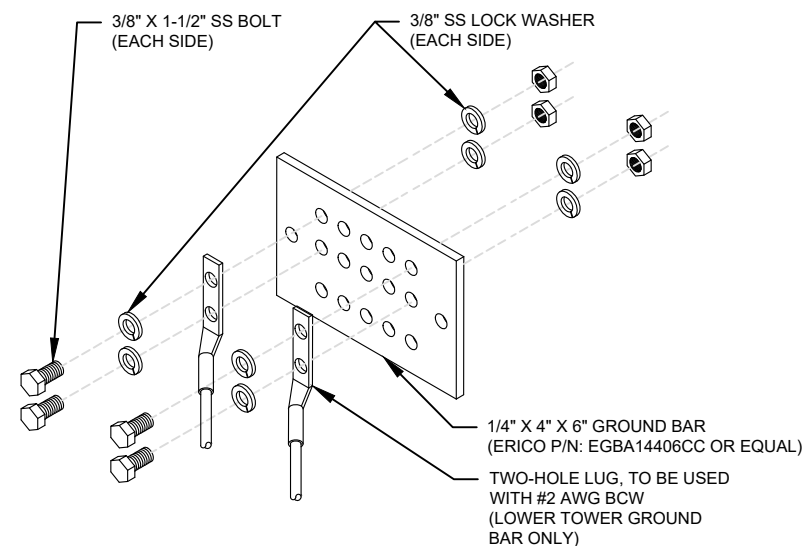


GROUND KIT NOTES:

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.



326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

FL COA#: 31011

ATC SITE NUMBER:

97139

ATC SITE NAME:

HIGHWAY 441 NORTH

VERIZON WIRELESS SITE NAME:

HIGHWAY 441

SITE ADDRESS:

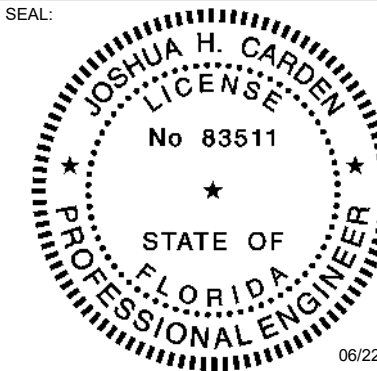
22535 N US HWY 441
WHITE SPRINGS, FL 32096-7100

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SDD	05/03/23
0	100% CONSTRUCTION	BJO	06/22/23

DIGITAL/ELECTRONIC SEAL:
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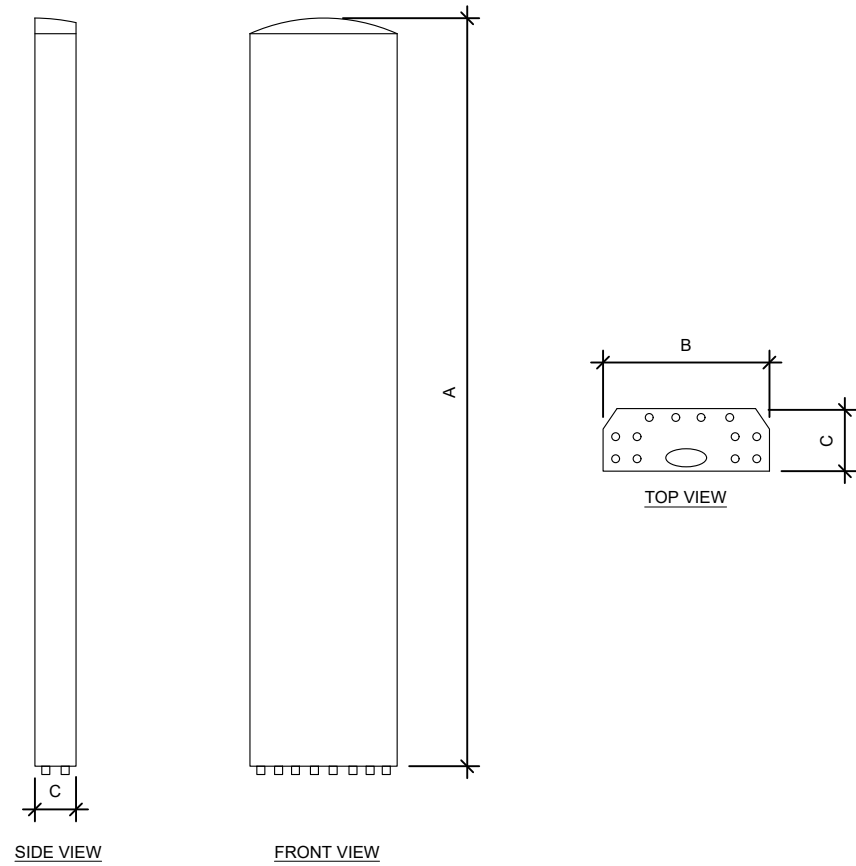
SEAL:



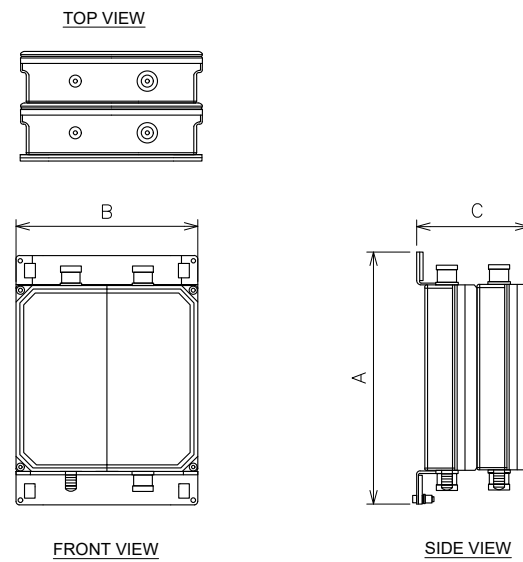
DATE DRAWN:	06/22/23
ATC JOB NO:	13686693
CUSTOMER NAME:	HIGHWAY 441
CUSTOMER ID:	228804

GROUNDING DETAILS

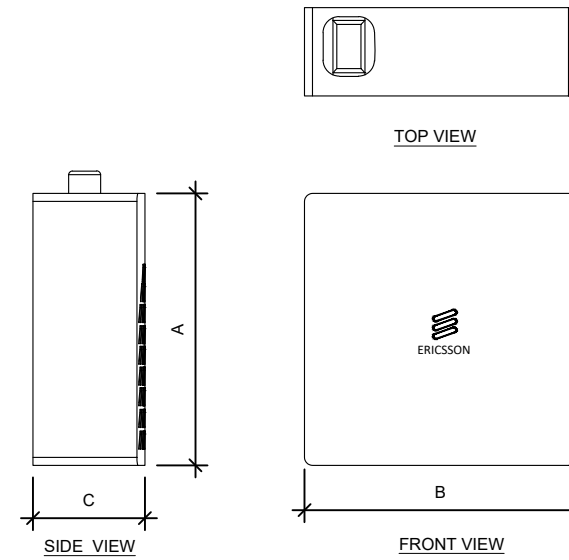
SHEET NUMBER:	REVISION:
E-501	0



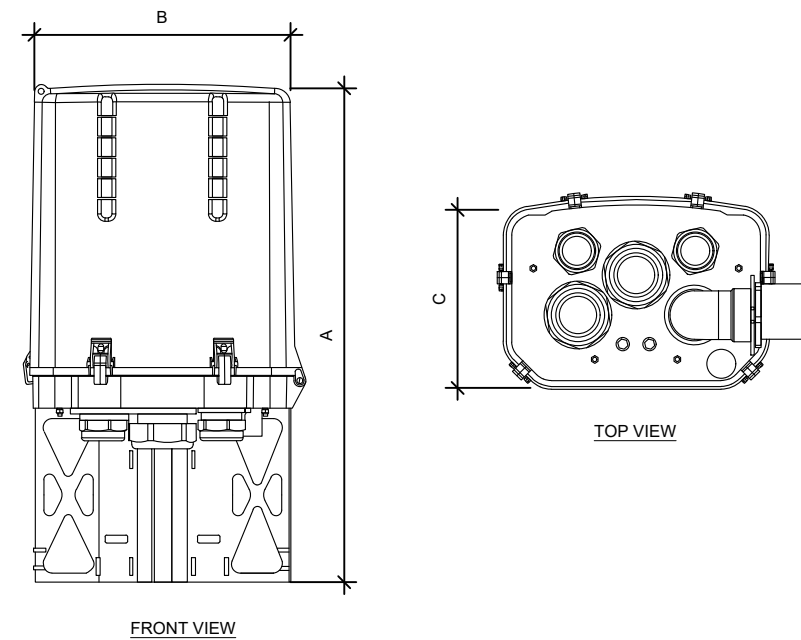
ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
NHH-65C-R2B	96.0"	11.9"	7.1"	51.6
AIR6449 B77D	30.4"	15.9"	10.6"	81.6



COMBINER SPECIFICATIONS				
COMBINER MODEL	A	B	C	WEIGHT (LBS)
TD-850B-LTE78-43	15.4"	15.3"	6.4"	53.0



RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RADIO 8843	28.0"	15.0"	10.0"	85.0
RADIO 4449 - B13&B5	15.0"	13.2"	9.3"	70.0



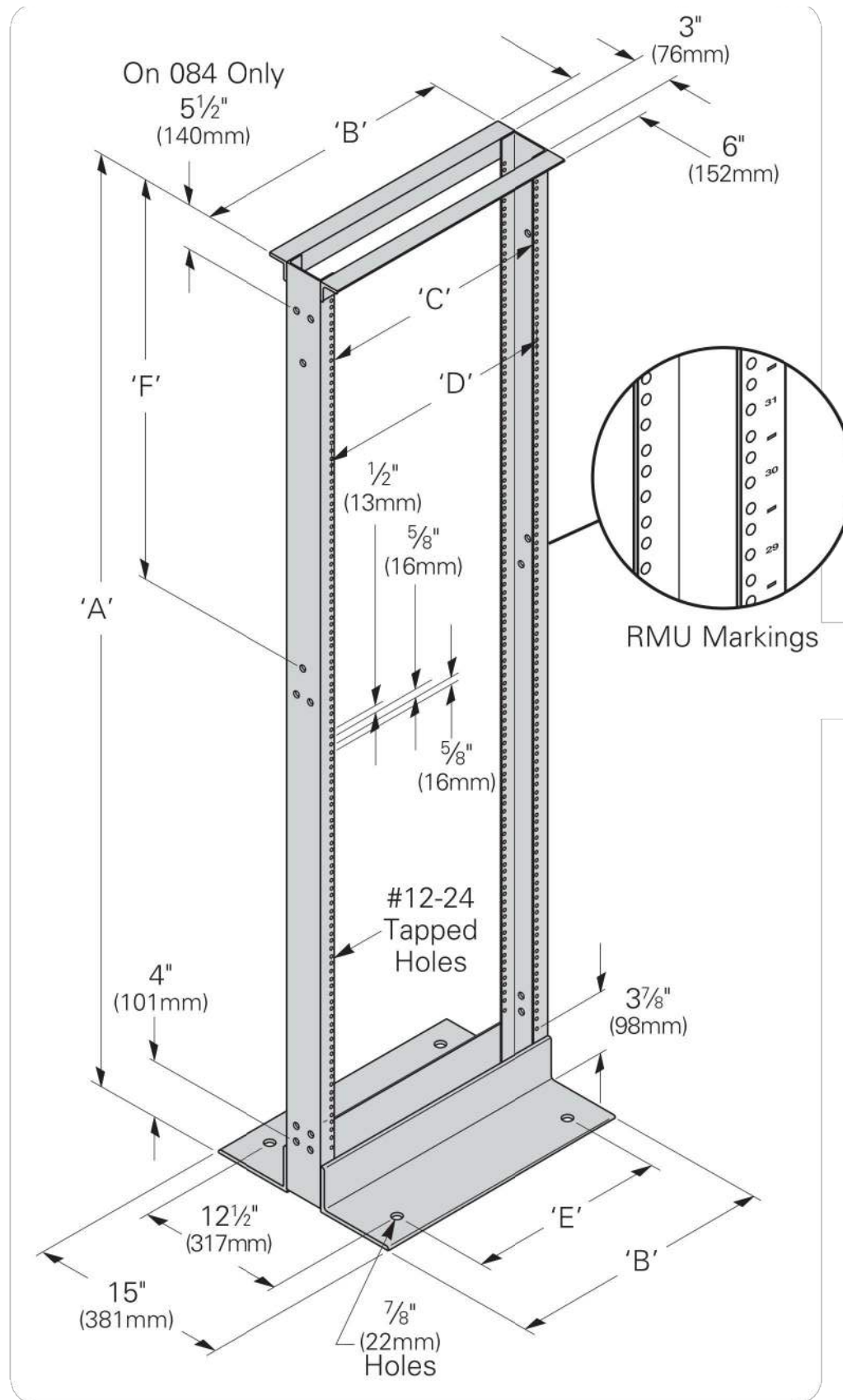
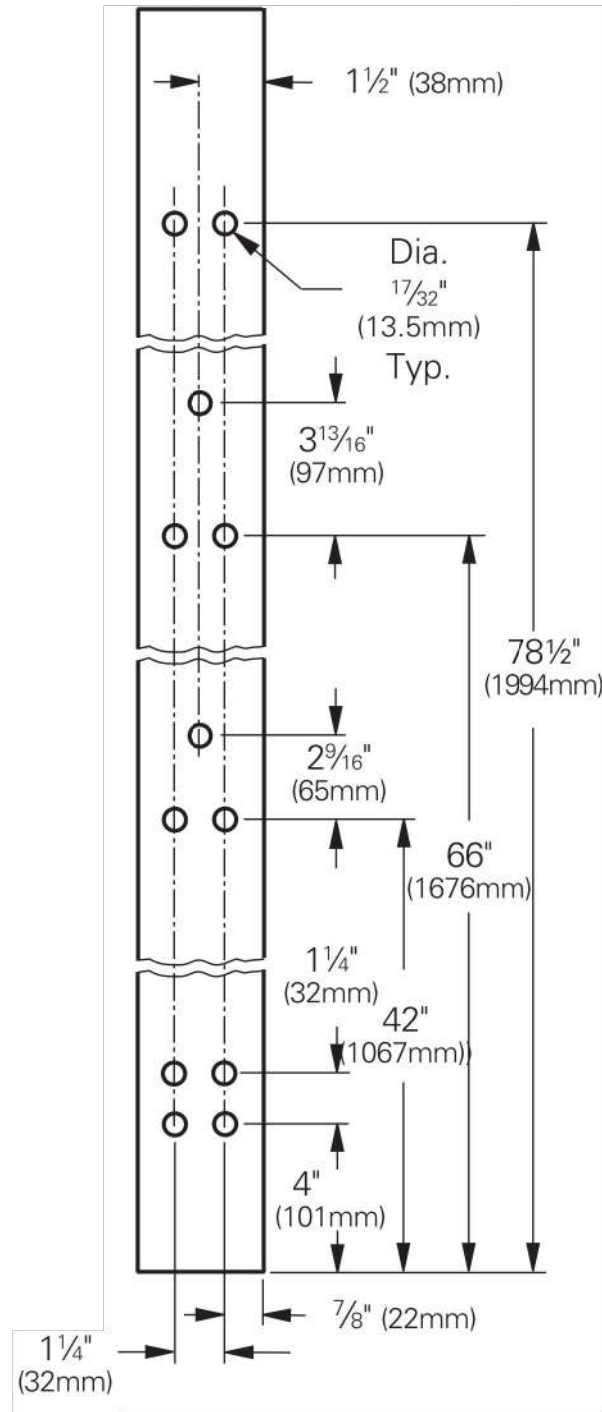
OVP SPECIFICATIONS				
OVP MODEL	A	B	C	WEIGHT (LBS)
RHSDC-6627-PF-48	29.5"	16.5"	12.6"	32.0

EQUIPMENT SPECIFICATIONS
SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER: **R-601**
REVISION: -

**Junction Hole Pattern
for 84" tall rails**



1 PROPOSED 19" RACK DETAIL
SCALE: N.T.S.

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

SUPPLEMENTAL

SHEET NUMBER: R-602	REVISION: -
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Infinity M HC Power System

Dual Voltage Capable, Rack Mounted
Power System



Overview

The GE Infinity M DC energy system is a modular power plant that supports dual voltage (+24V/-48V) operation through the use of a comprehensive range of advanced rectifiers and DC-DC converters. Primary voltage is supported by rectifiers and battery reserve, while secondary voltage is supported by DC-DC converter modules. Primary voltage can be -48V or +24V.

The Infinity M Power System has primary voltage capacity for +24V and -48V power up to 2,100A; secondary voltage capacity is up to 600A per expansion module.

Shelf / Bay Options

Infinity M systems may be equipped in a 7ft 23" relay rack; a half height rack for mounting on battery stands; indoor or outdoor power cabinets; or mounting rails for field install applications. The distribution module is either 10U (17.5"), 14U (24.5") or 18U (31.5") tall and accommodates up to 104 single voltage or selectable voltage bullet breaker positions or up to 24 Large Breaker positions that support GJ style breakers and TPL Fuses. Universal shelves are 1U tall with four slots that accept any Infinity series rectifier or converter interchangeably in any power slot. This

allows the available slots to be filled with the mix of power modules desired. The only restriction is whether AC power is applied to the shelf. This gives extreme flexibility in the provisioning of power modules within the system.

Infinity Rectifier and Converter Family

The Infinity Series offers DC rectifiers and converters for both +24V to -48V and -48V to +24V applications. For easy module selection, the rectifiers and converters are color coded to quickly identify voltage, module type and input voltage type (AC or DC).

Galaxy Pulsar* Plus Controller

The Galaxy Pulsar Plus is used throughout many of the GE DC Power products including GPS, Infinity, CP, and SPS with the only differentiator being the form factor which is scaled to meet the nature of the application. The controller utilizes secure network management protocols allowing for advanced network supervision with SNMP communications to deliver extensive monitoring and control features with both local and remote access.

Galaxy Millennium* II Controller

The Galaxy Millennium II controller combines sophisticated power monitoring and secure remote management. This flagship controller simplifies operations and maintenance while lowering administrative costs. Remote peripheral modules support over 500 monitoring points for GJ, TPL and Bullet Breaker current monitoring as well as external GE or third party devices. Ethernet, SNMP Modbus, and TL1 provide integration with power engineering and NOC workflow.

Advantages

- Dual Voltage power system with ultimate flexibility
- -48V up to 2100amps and expandable to 4200amp with Supplemental bay
- Secondary voltage up to 600A
- High availability applications
- Hardened for extreme environments
- Efficiency approaching 97%

SOME LIKE IT HOT

Deka Fahrenheit

HEAT TOLERANT VRLA BATTERIES

HT200ET

- Helios™ Additive reduces float current up to 75% enhancing high temperature life
- THT™ Plastic specifically formulated heat resistant plastic case and cover optimizes compression
- Microcat® Catalyst lowers float current, mitigates thermal buildup and cell dryout
- Exclusive IPF® Technology optimizes power capacity, cell consistency, and long-term reliability
- TempX™ Alloy inhibits corrosion under the highest temperature extremes
- Advanced AGM technology for superior power
- Puncture resistant micro-porous glass mat separators extend life
- Front access design for easy installation and maintenance
- Reinforced case resists bulging and meets safety requirements (UL 94 V-0)
- Case & cover heat sealed and 100% tested to prevent leaks
- Epoxy-sealed posts eliminate leaks
- Flame arresting, low pressure, self-sealing valves are 100% factory tested
- Computer-aided design and manufacturing control processes and standards to ensure quality products
- All batteries meet or exceed IEEE recommended practices
- Battery design and construction meet UL recognition requirements



SPECIFICATIONS

Nominal Voltage: 12-Volts

Rating: 190 Ampere-Hours @ 8 hr. rate to 1.75 V.P.C.

Positive Plate: Pure lead, low-calcium, high-tin alloy

Negative Plate: Lead calcium alloy

Post Seal: Epoxy-sealed

Terminal: Front access, 1/4" – 20 threaded insert

Case/Cover: Flame-retardant, THT™ – UL 94 V-0/>39% L.O.I.

Catalyst: Microcat®

Safety Vent: Low positive pressure, self-sealing w/ flame arrester

Float Voltage: 2.25 V.P.C. ± 0.01 V.P.C. (Range: 13.44V to 13.56V per battery)

Design life: 10 years in float applications at 95°F (35°C)

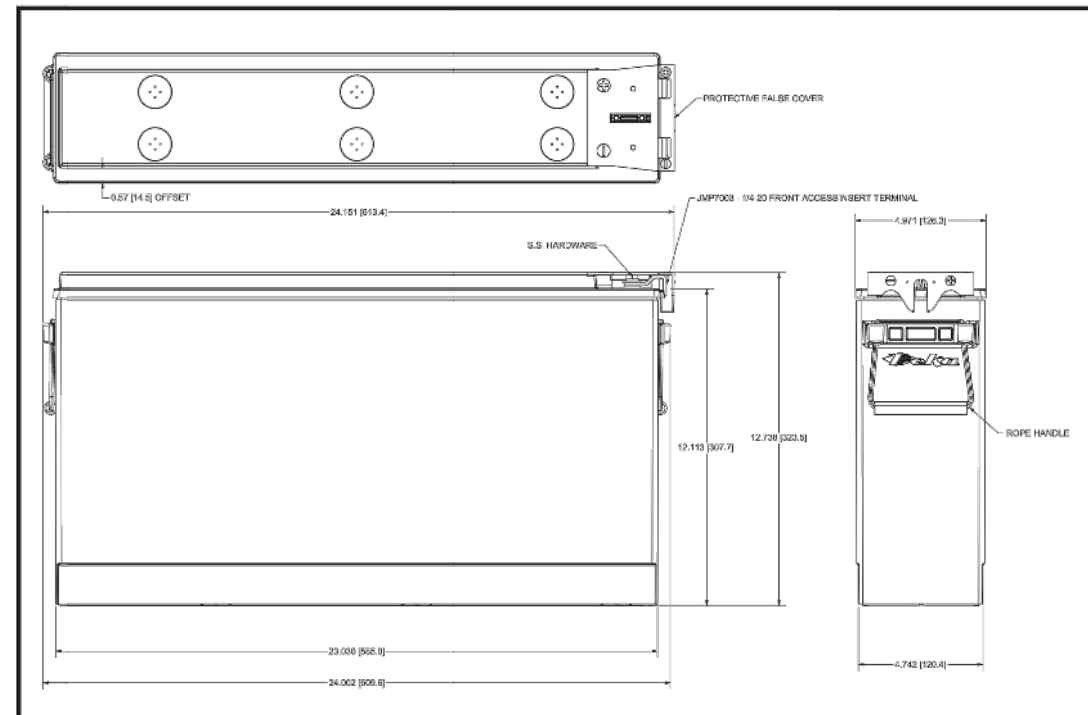
Dimensions: Length - 24.15" (613.4 mm)
Width - 4.97" (126.3 mm)
Height - 12.73" (323.4 mm)

Weight: 151 lbs. (68.5 kg)

DISCHARGE RATINGS IN AMPS @ 77°F (25°C)[†]

Volts Per Cell (V.P.C.)	1 HR.	2 HR.	3 HR.	4 HR.	5 HR.	8 HR.	12 HR.	20 HR.	24 HR.
1.75	144	82	57.3	44.4	36.4	23.5	16.3	10.1	8.4
1.80	136	79.1	55.4	43.1	35.4	23.2	16.0	9.9	8.3
1.85	124	73.1	51.9	40.6	33.5	22.1	15.2	9.4	7.9
1.88	113	68	48.7	38.3	31.7	21.0	14.5	9.0	7.6
1.90	105	63.9	46.2	36.4	30.1	20.0	13.9	8.6	7.2

[†] Subject to change without notice.



INSTALLATION AND OPERATING INSTRUCTIONS

- <http://www.eastpennmanufacturing.com/wp-content/uploads/Fahrenheit-IO-Manual-2100.pdf>



www.dekabatteries.com



East Penn Manufacturing Co. Lyon Station, PA 19536-0147 Phone: 610-682-3263 Fax: 610-682-0891 e-mail: reservepowersales@dekabatteries.com

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1 PROPOSED BATTERY DETAILS

SCALE: N.T.S.

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

SUPPLEMENTAL

SHEET NUMBER:

R-604

REVISION:

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Mount Post-Modification Analysis Report
 (3) 12.50-Ft Sector Frames

June 2, 2021
 Site ID: 228804-VZW / HIGHWAY 441
 Page | 4

Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10071297
 Tectonic Project #:10880.119

June 2, 2021

Site Information

Site ID: 228804-VZW / HIGHWAY 441
 Site Name: HIGHWAY 441
 Carrier Name: Verizon Wireless
 Address: SR-6 Hwy 441
 White Springs, Florida 32055, Columbia County
 Latitude: 30.506667°
 Longitude: -82.666389°

Structure Information

Tower Type: 300-Ft Guyed
 Mount Type: 12.50-Ft Sector Frame

FUZE ID # 16276872

Analysis Results

Sector Frame: 78 % Pass

***Contractor PMI Requirements:

Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

Contractor - Please Review Specific Site PMI Requirements Upon Award

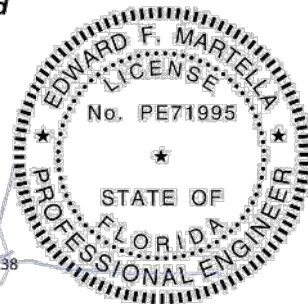
Requirements also Noted on Mount Modification Drawings

Requirements may also be Noted on A & E drawings

Report Prepared By: Ian Marinaccio / William LaPorte

Edward
 Martella

Edward Martella
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6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Tectonic is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
 - o Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - o HSS (Rectangular) ASTM 500 (Gr. B-46)
 - o Pipe ASTM A53 (Gr. B-35)
 - o Threaded Rod F1554 (Gr. 36)
 - o Bolts ASTM A325
8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Tectonic.

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontal	76 %	Pass
Standoff Vertical	7 %	
Standoff Horizontal	33 %	
Mount Pipe	65 %	
Tieback	29 %	
VZWSMART-SFK3 V-Bracing Kit	30 %	
Tower Connection	78 %	

Structure Rating – (Controlling Utilization of all Components) 78 %

Recommendation:

The existing mount will be **SUFFICIENT** for the final loading after the proposed modifications are successfully completed.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

Attachments:

1. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
4. Contractor Required PMI Report Deliverables
5. Antenna Placement Diagrams

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.

MOUNT ANALYSIS

SUPPLEMENTAL

SHEET NUMBER:
R-605

REVISION:

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