

Mobile Northeast LLC (T-Mobile) since the Petition was filed with the Council? If so, please summarize the comments.

Response: On May 5th 2026, T-Mobile obtained a Zoning Permit from the Town of Southbury (please see Attachment 1, included with this response) to install T-Mobile's ground equipment consisting of a 10' x 15' concrete pad at the base of the tower within the fenced compound along with the following ground equipment: 1 48kw generator, 1 6160 V2 Cabinet, 1 Battery Cabinet, 1 Emerson Cabinet, 1 PPC hosing, and other ancillary equipment on the pad. The Town required this Zoning permit because it considers the ground equipment as accessory to the tower.

In addition, on Thursday March 12, 2026, Mr. Stephen Anderson, an individual residing at 700 Fish Haw Road, Southbury, CT 06488 reached out via phone to Attorney Adam Braillard and left a voicemail. Attorney Daniel Glissman attempted to contact Mr. Anderson via phone on March 31, 2026, and left a voicemail. Mr. Anderson has not returned Attorney Glissman's call nor reached out again since his initial outreach effort

Existing Facility and Site

Question 2: Petition p. 2 references the Certificate issued to Cellco Partnership d/b/a Verizon Wireless (Cellco) in Council Docket No. 325. Petition p. 2 and the site plans indicate the existing facility "is owned by American Tower Corporation (ATC)." Council records for Docket No. 325 indicate Cellco is the Certificate Holder and ATC entered into a maintenance agreement with Cellco for this facility. Please clarify.

Response: Yes, Cellco is the owner of the tower and ATC entered into a maintenance agreement with Cellco.

Question 3: Provide photographs of the existing facility and proposed location of T-Mobile's equipment within the site compound.

Response: Please reference Attachment 2 attached herewith providing photographs of the existing facility and proposed location of T-Mobile's equipment within the compound.

Question 4: Provide the distance, direction and address of the nearest property boundary from the existing tower.

Response: Please reference Attachment 3 attached to this response, which is an updated set of plans showing the distance, direction and address of the nearest property boundary from the existing tower.

Proposed Facility Extension and Associated Equipment

Question 5: Is the facility extension, or any portion of the facility extension, proposed to be undertaken by state departments, institutions or agencies, or to be funded in whole or in part by the state through any contract or grant?

Response: No portion of the facility extension is proposed to be undertaken by state departments, institutions or agencies, or to be funded in whole or in part by the state through any contract or grant.

Question 6: What is the estimated total cost of the facility extension and equipment installation?

Response: The Estimate cost to extend the tower is \$90,464.96.

Question 7: How would costs be recovered by T-Mobile?

Response: T-Mobile does not anticipate that it will recover the costs associated with this tower extension.

Question 8: Referencing Petition Site Plan Sheet C-201, the tower extension callout refers to the extension as being installed “on a separate project”.

Response: T-Mobile understands that the reference to “on a separate project” on Sheet C-201 of the Plans refers to the use of a different vendor to perform the tower extension than the vendor that would perform T-Mobile’s antenna installation on the tower. It does not mean that the tower extension is a separate undertaking unrelated to this proposal. Rather, the tower extension is part of the proposed T-Mobile installation and would be undertaken only if T-Mobile receives approval to proceed with the extension and install its equipment at the site.

Question 9: Referencing Petition Site Plan Sheet C-201 and Attachment 7, what entity owns/operates the 20-foot omni whip antenna at the 109-foot level of the tower extension?

Response: The 20-foot omni whip antenna is owned by the Town of Southbury.

Question 10: Provide a Structural Analysis Report for the existing tower that indicates the tower has sufficient structural capacity to support the proposed extension and T-Mobile's equipment.

Response: Please reference Attachment 3 attached herewith this response providing the structural analysis report for the tower extension.

Question 11: Referencing Petition Attachment 6, characterize the anticipated visibility of the proposed facility extension from the surrounding area.

Response: The photographic simulation package prepared by Virtual Site Simulations, LLC (VSS) for this facility extension, which was included as part of the initial petition filing, demonstrates that the proposed facility extension will have minimal visual impact on the surrounding area. VSS documented visibility conditions from 30 discrete vantage points within a one-mile radius. Of those, 20 locations (67%) showed the facility as "Not Visible" and an additional 4 locations (13%) showed only "Obscured" visibility, meaning the facility would be partially screened by existing vegetation or topography. Only 6 locations (20%) yielded "Year Round" visibility, and in each instance the simulations

confirm the facility appears as a minor background element integrated into the surrounding tree canopy, not as a dominant visual feature.

Significantly, no visible sightlines were identified from any location within 0.25 miles of the site. The 6 year-round visible locations are all situated between approximately one-third and nearly one mile away, where the facility presents only as a slender vertical element against the background ridgeline.

In sum, the photographic simulations demonstrate that the proposed extension will be effectively screened from the vast majority of surrounding properties and public ways, and where visible at all, will appear only at distance and without material intrusion on the visual character of the area.

Proposed Wireless Services

Question 12: Referencing Petition Attachment 2, what frequency is shown on the coverage models? How many square miles of coverage would be provided? How would deployment of the proposed frequencies listed in Attachment 7 improve services to the surrounding area?

Response: The plots compare the existing T-Mobile 5G Low Band coverage condition against the proposed coverage condition with the addition of Site CTNH124A. The coverage legend identifies the modeled service levels with coverage categories shown as in-building commercial, in-building residential, in-vehicle, and outdoor service levels. The Petition narrative identifies existing service-gap areas west of Interstate 84 and River Road;

residential areas along Royal Coach Lane, Luna Trail, and Lakeside Road; and areas near Lakeside Terrace and Lake Zoar.

Because CTNH124A is a proposed new T-Mobile installation at this location, there is no existing coverage contribution from CTNH124A itself. Based on the 600 MHz coverage analysis, the proposed facility would provide approximately 11.247 square miles of 5G 600 MHz coverage. This consists of approximately 0.893 square miles from the antenna oriented at 30 degrees, 4.611 square miles from the antenna oriented at 150 degrees, and 5.743 square miles from the antenna oriented at 270 degrees.

In addition to the 600 MHz 5G Low Band service modeled in Attachment 2, T-Mobile also proposes to deploy mid-band 5G frequencies and TDD spectrum as part of the installation. The mid-band frequencies include T-Mobile's 700 MHz, 1900 MHz PCS and 2100 MHz AWS spectrum. The 600 MHz low-band layer would primarily improve geographic coverage, service reliability, and in-building penetration, while the proposed 700 MHz and PCS/AWS mid-band layers would provide additional capacity, improved data throughput, and enhanced network performance in the surrounding area.

Deployment of these frequencies from the proposed 126-foot antenna centerline would improve T-Mobile's service by expanding low-band 5G coverage in the identified service-gap areas and adding mid-band capacity to better support customer demand. Together, the proposed low-band and mid-band frequency layers would improve in-building, in-vehicle, and outdoor wireless service for customers, residents, visitors, and emergency service providers in the surrounding Southbury area.

Question 13: Referencing Petition Attachments 1 and 2, identify any publicly accessible recreation areas within the vicinity of the site that would benefit from services provided by the equipment installation on the proposed facility extension.

Response: Based on the site location, the proposed coverage footprint, and the surrounding publicly accessible recreation areas, the following locations would benefit from the proposed installation.

| Public Recreation Area | Relationship to Proposed Coverage / Benefit |
|------------------------------------|--|
| Lake Zoar State Boat Launch | Located at 210 Scout Road , this public boat launch provides direct access to Lake Zoar and supports boating and fishing activity. This area is generally south/southeast of the proposed facility and would benefit from improved T-Mobile coverage for recreational users and emergency communications. |
| Lakeside Park | Located on Scout Road , this Town of Southbury park is near Lake Zoar and includes open space, a picnic table, playscape, and basketball hoop. This area would benefit from improved coverage for park visitors and nearby outdoor activity. |
| Kettletown State Park | Located at 1400 Georges Hill Road , Kettletown State Park is a public state park in Southbury. The park includes outdoor recreational uses such as boating, camping, hiking, and picnicking, and borders Lake Zoar shoreline. Improved service from the proposed facility would benefit park users and visitors in this portion of Southbury. |
| George C. Waldo State Park | Located at 457 Purchase Brook Road , this public state park consists of approximately 150 acres on the banks of Lake Lillinonah and allows activities such as fishing, hiking, horseback riding, hunting, and mountain biking. The proposed coverage footprint extends toward this general recreation area and would support improved wireless service for outdoor users. |

Question 14: Identify T-Mobile’s adjacent sites with which the proposed facility would hand off signals. Include the address, antenna height, structure type, and the distance/direction to each site.

Response: The proposed CTNH124A facility would be integrated into T-Mobile’s surrounding network and would hand off signals to adjacent T-Mobile facilities in the Southbury/Newtown area. Based on the adjacent site information provided, the nearby T-Mobile handoff sites are listed below:

| Adjacent T-Mobile Site | Address | Antenna Height | Structure Type | Distance / Direction from CTNH124A |
|-------------------------------|---|-----------------------|-----------------------|---|
| CT11124H | 214 Russian Village Road, Southbury, CT | 100 ft | Self-Support Tower | Approx. 1.15 miles NNW |
| CT11125B | 90 Lakeside Road, Southbury, CT | 125 ft | Self-Support Tower | Approx. 1.32 miles N |
| CT11723A | 21 Berkshire Road, Newtown, CT | 165 ft | Monopole | Approx. 2.44 miles SW |
| CT11668B | 151 Berkshire Road, Newtown, CT | 97 ft | Monopole | Approx. 2.83 miles S |
| CT11126F | 231 Kettletown Road, Southbury, CT | 195 ft | Monopole | Approx. 2.84 miles NE |
| CTNH231A | 459 Burr Road, Southbury, CT | 127 ft | Monopole | Approx. 2.94 miles ENE |
| CT11259F | 3 Edmund Road, Newtown, CT | 128 ft | Monopole | Approx. 3.37 miles WSW |
| CT11205C | 31 Main Street, Newtown, CT | 75 ft | Steeple | Approx. 4.08 miles WSW |

Question 15: Would the site provide capacity relief at adjacent T-Mobile facilities? If yes, identify the facilities and the frequencies and sectors at or near exhaustion that would benefit from capacity relief.

Response: The proposed CTNH124A facility is primarily intended to address coverage deficiencies and improve T-Mobile wireless service in the surrounding Southbury area. Although the project is coverage-driven, the installation would also provide a capacity benefit by adding a new serving location and allowing customer traffic in the area to be served by CTNH124A rather than solely by adjacent T-Mobile facilities. The proposed deployment would include 600 MHz low-band 5G service, 700 MHz, and mid-band PCS/AWS frequencies. The 600 MHz layer would improve coverage and in-building reliability, while the mid-band FDD layers would provide additional capacity, improved throughput, and enhanced network performance.

Public Health and Safety

Question 16: Would the proposed equipment installation be capable of supporting text-to-911 service and comply with federal E911 requirements and the Warning, Alert and Response Network Act of 2006?

Response: Yes, the proposed facility will be capable of supporting text-to-911 service and comply with federal E911 requirements and the Warning, Alert and Response Network Act of 2006

Question 17: What measures exist and/or are proposed for T-Mobile's equipment to ensure security and deter vandalism?

Response: T-Mobile's proposed ground equipment will be located within the existing secured fenced compound. Moreover, T-Mobile's ground equipment will have motion sensor lighting.

Question 18: Pursuant to CGS §16-50p(a)(3)(G), identify the safety standards and/or codes applicable to equipment, machinery or technology that would be used or operated at the proposed facility by T-Mobile.

Response: Yes. All equipment, machinery, and technology installed and operated by T-Mobile at the proposed facility will conform to applicable industry, national, and state safety standards, including but not limited to the following:

Occupational Safety and Health Administration (OSHA): Compliance with all applicable OSHA regulations, including those governing fall protection, RF safety, and worker safety during construction and maintenance activities. ANSI/TIA-222-H "Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures": Compliance with the structural integrity and safety of the mounting structures used for wireless antennas. 2021 International Building Code (IBC), with the 2022 Connecticut State Building Code amendments. 2020 National Electric Code (NFPA 70), with the 2022 Connecticut State Building Code amendments. 2021 International Mechanical Code, with the 2022 Connecticut State Building Code amendments. 2021 International Plumbing Code, with the 2022 Connecticut State Building Code amendments. 2022 Connecticut State Fire Safety Code, with the 2022 Connecticut State Fire Safety Code amendments.

T-Mobile is committed to the safe design, installation, and operation of all telecommunications equipment in accordance with the highest standards of industry practice and regulatory compliance.

Question 19: Referencing Petition Attachment 8, what is the distance to Waterbury-Oxford Airport?

Response: The distance to Waterbury-Oxford Airport is approximately 6 miles.

Question 20: What fire safety and management systems would T-Mobile employ at the site?

Response: T-Mobile deploys the following fire safety and management systems at its facilities: Battery Management Systems, including temperature monitoring, over-current protection, and alarm generation, with integrated battery monitoring and fire-protection features directly into the enclosure. Remote alarm monitoring back to T-Mobile's NOC facilities, including typical alarms such as: High temperature, HVAC failure, Power plant alarms, Battery alarms, Door intrusion alarms, Smoke/fire alarms and Environmental controls designed to prevent overheating.

Emergency Backup Power

Question 21: Would the backup diesel generator run periodically for maintenance purposes? If so, at what frequency and duration? Would this be scheduled during daytime hours?

Response: Yes, the generator requires two (2) 12-minute run cycles bi-weekly which can be scheduled for daytime hours.

Question 22: Does the backup diesel generator have containment measures to protect against fluid leakage?

Response: T-Mobile will ensure that the proposed backup generator is operated in full compliance with all applicable requirements of the Regulations of Connecticut State 15 Agencies (RCSA) Section 22a-174-3b. In particular, any proposed generator will be used only for emergency purposes (e.g., power outages) and limited maintenance/testing, with operation not exceeding 100 hours per year, as required by RCSA §22a-174-3b. It will meet EPA Tier emission standards, and T-Mobile will maintain records of run times and maintenance, which will be available to DEEP upon request. T-Mobile will register the generator with DEEP or obtain a permit-by-rule where necessary, ensuring compliance with all applicable air quality regulations.

Question 23: Referencing Petition Site Plan Sheet R-606, for what duration can the battery system provide emergency power?

Response: T-Mobile plans to install a B160 Battery cabinet which contains 3 shelves of batteries. The cabinet is expected to power the site at 100% power usage for 2-4 hours.

Environmental Effects and Mitigation Measures

Question 24: Are there any state or local scenic roads within one-mile of the existing site? If yes, provide the names of the roads, distance from the tower and anticipated visibility of the proposed facility extension.

Response: No formally designated Connecticut state scenic roads appear to be within 1 mile of 1. Moreover, T-Mobile performed an FCC Section 106 study which showed no signs of scenic roadways in the area.

Question 25: Are there any properties or districts listed on the National Register of Historic Places within 0.5-mile of the existing facility site? If yes, provide the name of the resource, distance from the existing facility site and anticipated visibility of the proposed facility extension.

Response: As noted above, T-Mobile performed an FCC Section 106 study which showed no National Register of Historic Places within 0.5-mile of the existing facility.

Question 26: What is the distance and direction of Kettletown State Park from the existing facility site? Is the proposed facility extension expected to be visible from any hiking trails or picnic areas in the park? What portions of the proposed facility extension would be visible from these locations, if any?

Response: Kettletown State Park is approximately 2 miles to the West of the facility, and therefore the proposed facility extension is not expected to be visible from that location.

Question 27: Identify the nearest National Audubon Society Important Bird Area from the existing facility site.

Response: The Bent of the River Sanctuary is approximately 1.15 miles to the West of the facility.

Question 28: Would the proposed facility extension comply with the USFWS Recommended Best Practices for Communication Tower Design, Siting, Construction, Operation, Maintenance and Decommissioning? (*available at <https://www.fws.gov/sites/default/files/documents/usfws-communication-towerguidance.pdf>*).

Response: Yes, the proposed facility extension complies with these recommended best practices.

Question 29: Condition 2 of the Council's Decision and Order in Docket No. 325 restricts construction work from February 1 to August 1 to avoid affecting eagles that may occur in the area. Describe mitigation procedures if an eagle nest is located on the existing tower or if eagles build nests on the proposed facility extension.

Response: If an eagle nest is identified on the existing tower or proposed facility extension, the facility owner will coordinate with the Connecticut Department of Energy and Environmental Protection and the U.S. Fish and Wildlife Service and implement any required protective measures, including construction restrictions or buffer zones. No nest

disturbance, removal, or relocation activities will occur unless authorized by the appropriate regulatory agencies and any required permits have been obtained.

Facility Extension Construction

Question 30: Describe how the proposed facility extension would be installed at the existing facility. What equipment would be used? Would any equipment be disturbed or temporarily removed from the tower?

Response: The proposed facility extension would be installed by attaching a prefabricated extension section to the top of the existing tower using a crane and standard tower construction equipment. Construction activities would result in minimal disturbance to the existing facility; however, the existing whip antenna located at the top of the tower may need to be temporarily deactivated and/or removed during installation of the extension and would be reinstalled upon completion of the work.

Question 31: Provide construction workdays and hours, and the anticipated duration of construction.

Response: Anticipated construction workdays and hours will be Mondays through Fridays from 7am-3pm. T-Mobile anticipates construction to take approximately three to four weeks.

Question 32: Would construction of the proposed facility extension impact or interfere with any existing public utilities or telecommunication services provided from the tower? Explain.

Response: Construction of the proposed facility extension is not expected to impact existing public utilities or telecommunications services provided from the tower. However, as noted above, the existing whip antenna may require a temporary outage during construction, which would be coordinated with the Town and limited to the duration necessary to complete the work.

Question 33: Would the finish and structural profile of the proposed facility extension match the finish and structural profile of the existing tower?

Response: Yes, the proposed facility extension will match the finish and structural profile of the existing tower.

Question 34: Would construction be limited to previously developed areas?

Response: Yes, T-Mobile proposes construction to be limited to previously developed areas.

ATTACHMENTS LIST:

- Attachment 1 – Town of Southbury Zoning Permit
- Attachment 2 – Existing Conditions Photographs
- Attachment 3 – Updated Plans
- Attachment 4 – Structural Analysis

ATTACHMENT 1



Zoning Permit

Permit Number: 26-092-Z

Issue Date: 05/11/2026

Permission is granted to: FERENCEK CARL M & MARILYN T (SV)

Exp Date: 05/11/2027

To build: Installation of a 10' x 15' concrete pad at the base of the tower within the fenced compound and installing the following equipment on the concrete pad: 1 48kw generator, 1 6160 V2 Cabinet, 1 Battery Cabinet, 1 Emerson Cabinet, 1 PPC hosing, and other ancillary equipment on the pad per plan.

Address: 111 UPPER FISH ROCK ROAD

MBL: 25A-61-13B

Conditions of Approval:

Any future footprint expansions or modifications will require a separate permit(s) to be pulled with the necessary departments. All structures to conform to the necessary setback requirements.

THIS IS NOT A BUILDING PERMIT

This permit pertains to Zoning approval only, you may need permits from the Building, Health or any other applicable department. Please be sure that you have obtained all permits before initiating your project.

Land Use Enforcement Officer

State statutes provide for an appeal process regarding the issuance of this zoning permit. While the Town of Southbury does not publish notice of zoning certifications (permits), you may chose (but not required) to publish a legal notice regarding the issuance of this permit. It must be published in a newspaper that has substantial circulation in the municipality and state that a zoning certification (permit) has been issued. It must contain the following information: (A) a description of the building, use or structure, (B) the location of the building, use or structure, (C) the identity of the applicant, and (D) a statement that an aggrieved person may appeal to the Zoning Board of Appeals in accordance with the provisions of Section 8-7 as amended (refer to CT General Statutes, sections 8-3(f) and 8-7)

ATTACHMENT 2



Existing Conditions Photos



T Mobile



ATTACHMENT 3

GENERAL CONSTRUCTION NOTES:

- OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
 - BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/COLocate ONLY)
 - AC/TELCO INTERFACE BOX (IFC)
 - ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/COLocate ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
 - TOWERS, MONOPOLES
 - TOWER LIGHTING
 - GENERATORS & LIQUID PROPANE TANK
 - ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
 - ANTENNAS (INSTALLED BY OTHERS)
 - TRANSMISSION LINE
 - TRANSMISSION LINE JUMPERS
 - TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
 - TRANSMISSION LINE GROUND KITS
 - HANGERS
 - HOISTING GRIPS
 - BTS EQUIPMENT
- 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, TREMS, 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 T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
- ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSIE/AIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
- CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
- 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.
- DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
- DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
- CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
- INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
- EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
- CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
- ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
- WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
- CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
- CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
- CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
- PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE 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.

- PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
- CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
- CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.

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.

CONTRACTOR SHALL NOTIFY T-MOBILE 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.

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 OR 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.

COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.

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.

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.

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 T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.

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.

T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE 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.

T-MOBILE 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 T-MOBILE OR THEIR ARCHITECT/ENGINEER.

STRUCTURAL STEEL NOTES:

- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
 - ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A592 OTHERWISE
 - ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE
 - ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
 - ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
 - ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
- ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B95.
- ALL FIELD CUT SURFACES: FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVALITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

- DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
- CONNECTIONS:
 - ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
 - ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
 - INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
 - IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
 - ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
 - MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
 - PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING % BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVALITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
 - THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS ARE COMPLETE.
 - ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE ENGINEER, AND T-MOBILE PROJECT MANAGER IN WRITING

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

- WORK INCLUDED:
 - ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE 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
 - INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND T-MOBILE SPECIFICATIONS.
 - INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
 - INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
 - CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU/PACKARD 87138 RF SCALAR NETWORK ANALYZER, SUBMIT FREQUENCY DOMAIN (REFLECTED) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED PFS "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.
 - 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.
 - ANTENNA AND COAXIAL CABLE GROUNDING:
 - ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #Z21213 OR EQUAL.
 - ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS).

CONCRETE AND REINFORCING STEEL NOTES:

- DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONSTRUCTION FOR BUILDINGS", ACI 317 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
- MIX DESIGN SHALL BE APPROVED BY T-MOBILE REP PRIOR TO PLACING CONCRETE.
- CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-6" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI UNLESS OTHERWISE NOTED.
- THE FOLLOWING MATERIALS SHALL BE USED:
 - PORTLAND CEMENT: ASTM C150, TYPE 2
 - REINFORCEMENT: ASTM A185, PLAIN STEEL WELDED WIRE FABRIC

- REINFORCEMENT BARS: ASTM A615, GRADE 60, DEFORMED
NORMAL WEIGHT AGGREGATE: ASTM C33
WATER: ASTM C 94/C 94M
- WELDED WIRE FABRIC: ASTM A185
ADMIXTURES:
 - WATER-REDUCING AGENT: ASTM C 494/C 494M, TYPE A
 - AIR-ENTERING AGENT: ASTM C 260/C 260M
 - SUPERPLASTICIZER: ASTM C494, TYPE F OR TYPE G
 - RETARDING: ASTM C 494/C 494M, TYPE B
- MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3".
- A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR APPROVAL FROM AN ATC ENGINEER WHEN DRILLING HOLES IN CONCRETE.
- ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN "METHOD 1" OF ACI 301.
- DO NOT WELD OR TACK WELD REINFORCING STEEL.
- ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
- REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
- DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
- FOR COLD-WEATHER (ACI 306) AND HOT-WEATHER (ACI 307M) CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
- ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."
- SPlicing OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
- DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
- ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITH HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
- LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.
- SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".
- BAR SUPPORTS SHALL BE ALL-GALVANIZED METAL WITH PLASTIC TIPS.
- ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.
- SLAB ON GROUND: COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" GRAVEL BENEATH SLAB.

ELECTRICAL NOTES:

- ELECTRICAL WORK SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL AND STATE CODES AND NATIONAL ELECTRICAL CODE.
- ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUIT SIZES, ETC.) ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH ALL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL LOAD STUDY TO VERIFY THE CAPACITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF ATC. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUNDING CABLES AND UTILITY LINES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUNDING LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION.

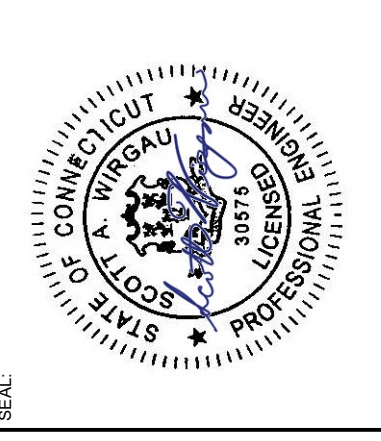


AMERICAN TOWER®
ATC TOWER SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27611
PHONE: (919) 468-0112
PEC.0001553

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 |
|------|------------------|-----|----------|
| △ | FOR CONSTRUCTION | VAR | 05/23/25 |
| △ | | | |
| △ | | | |
| △ | | | |
| △ | | | |

ATC SITE NUMBER: **411188**
ATC SITE NAME: **SOUTHBURY CT**
T-MOBILE SITE NAME: **CTNH124A**
SITE ADDRESS: **111 UPPER FISHROCK RD**
SOUTHBURY, CT 06488



SEAL: Digitally Signed: 2026-05-27

| | |
|--------------|-------------|
| ATC PROJ. #: | 14932961_D2 |
| CUST. ID: | CTNH124A |
| CUST. #: | CTNH124A |

GENERAL NOTES

REVISION: **0**
SHEET NUMBER: **G-002**

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.

PROJECT SUMMARY

FIELD SURVEY DATE: 09/14/2021
 SITE ADDRESS: 111 UPPER FISHROCK ROAD, SOUTHBRURY, CT 06488-4172

OWNER INFORMATION
 OWNER: CARL M. FERENCZEK AND MARILYN T. FERENCZEK AS JOINT TENANTS WITH RIGHTS OF SURVIVORSHIP
 OWNER ADDRESS: 111 UPPER FISHROCK RD, SOUTHBRURY, CT 06488
 APN: 25A-61-138

TOTAL AREAS
 PARENT PARCEL: 31.694+ ACRES
 AT LEASE AREA: 10,000 SQ. FT. OR 0.230+ ACRES
 30' WIDE ACCESS & UTILITY EASEMENT: 44,044 SQ. FT. OR 1.011+ ACRES

GEODENSIC COORDINATES OF TOWER
 NAD 83: 41°25'17.78" N
 LONGITUDE: 73°14'15.85" W
 HORIZONTAL DATUM: NAD83
 GROUND ELEVATION: 394.0'

THIS IS TO CERTIFY THAT THE ABOVE INFORMATION IS PROVIDED TO THE FOLLOWING ACCURACY:
 ± TWENTY (20) FEET IN THE HORIZONTAL ± THREE (3) FEET IN THE VERTICAL
 *MERIDIAN AND COORDINATES REFER TO CONNECTICUT STATE PLANE, NAD 83, FIPS ZONE AND ARE BASED ON GPS OBSERVATIONS.

ELOGRAPHIC
 PER THE FEMA FLOODPLAIN MAPS, THE SITE IS LOCATED IN AN AREA DESIGNATED AS ZONE X

COMMUNITY PANEL NO.: 09009C0228H
 EFFECTIVE DATE: 12/17/2010

BOUNDARY NOTE
 THIS SURVEY IS THE RESULT OF AN ACTUAL FIELD SURVEY BASED UPON SUFFICIENT RESEARCH AND FIELD EVIDENCE TO VERIFY THE PARENT PARCEL OF THE SUBJECT PROPERTY. HOWEVER, THIS SURVEYOR HAS RELIED UPON THE DEEDS OF RECORD, AS PROVIDED. THIS SURVEYOR MAKES NO GUARANTEE, EITHER EXPRESSED OR IMPLIED AS TO THE QUALITY OF THE DEED REPORT AND REFERENCE DOCUMENTS PROVIDED AND THE DOCUMENTS PROVIDED AFFECTING THE LEASE AND IMMEDIATE AREA HAVE BEEN PLOTTED. THE BOUNDARY SHOWN HEREON IS PLOTTED FROM THE RECORD INFORMATION PROVIDED AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

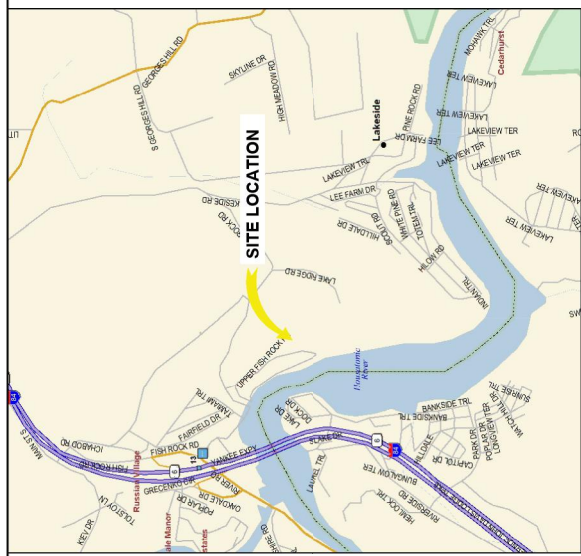
ENGRAGEMENT NOTE
 AT THE TIME OF THE SURVEY, NO VISIBLE ENCRAGEMENTS WERE EVIDENT ONTO OR BEYOND THE LEASE OR EASEMENT AREA, OR THE ACCESS AND UTILITY EASEMENT(S).
 AT LEASE OR EASEMENT AREA IS CONTAINED ENTIRELY ON THE PARENT PARCEL.

SURVEYOR'S NOTES

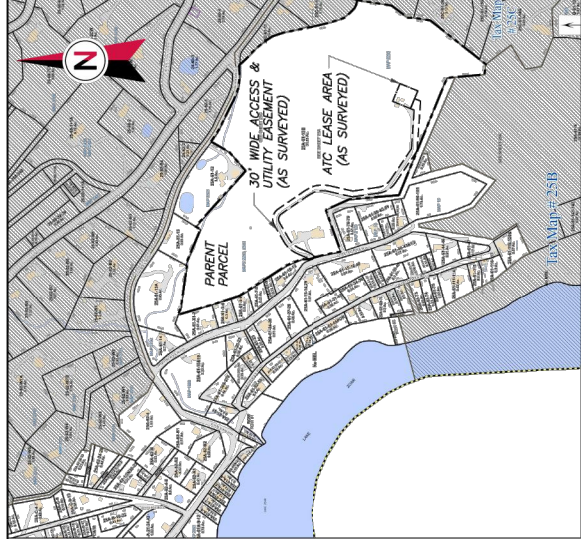
- THERE IS ACCESS TO THE SUBJECT PROPERTY VIA UPPER FISHROCK ROAD, A PUBLIC RIGHT OF WAY.
- THE LOCATIONS OF ALL UTILITIES SHOWN ON THE SURVEY ARE FROM VISIBLE SURFACE EVIDENCE ONLY.
- AT THE TIME OF THIS SURVEY THERE WAS NO OBSERVABLE SURFACE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS.
- AT THE TIME OF THIS SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF THE SUBJECT PROPERTY BEING USED AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.
- AT THE TIME OF THIS SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF ANY RECENT CHANGES IN STREET RIGHT-OF-WAY LINES EITHER COMPLETED OR PROPOSED, AND AVAILABLE FROM THE CONTROLLING JURISDICTION.
- AT THE TIME OF THIS SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF ANY RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.
- ANGLES OR BEARINGS SHOWN HEREON ARE FORMATTED IN DEGREES, MINUTES, AND SECONDS. DISTANCES OR ELEVATIONS SHOWN HEREON ARE IN U.S. SURVEY FEET, UNLESS NOTED OTHERWISE.
- UNDERGROUND IMPROVEMENTS IF ANY AND NOT VISIBLE AT THE TIME OF THE SURVEY, HAVE NOT BEEN LOCATED IN THE FIELD OR SHOWN HEREON.
- WETLANDS, IF PRESENT, HAVE NOT BEEN LOCATED OR SHOWN HEREON.
- NOT ALL IMPROVEMENTS ON THE PARENT PARCEL BEING SURVEYED ARE SHOWN HEREON.
- REFERENCES:
 A. MAP ENTITLED, "MAP SHOWING A PORTION OF LAND OF CARL M. FERENCZEK AND MARILYN T. FERENCZEK AS FILED IN THE SOUTHBRURY TOWN CLERK'S OFFICE ON 10/29/1987 AS MAP #2591.
 B. MAP ENTITLED, "SUBDIVISION OF LAND OF THERESA LONEGAN AS FILED IN THE SOUTHBRURY TOWN CLERK'S OFFICE ON 08/09/1972 AS MAP #1313.
 C. MAP ENTITLED, "RESUBDIVISION MAP" AS FILED IN THE SOUTHBRURY TOWN CLERK'S OFFICE ON 07/09/1988 AS MAP #2263.
 D. TITLE COMMITMENT PREPARED BY TOWER TITLE AS TITLE NUMBER ATC-116001-FR, TITLE SEARCHED FROM 01/01/1985 - 07/27/2021.

NOTES CORRESPONDING TO CORAL REPORT

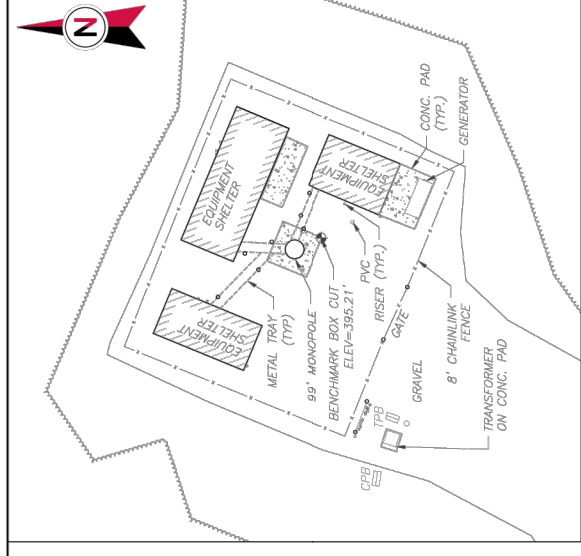
- THE CORAL REPORT ISSUED BY TOWER TITLE, FILE NO. ATC-116001-FR WITH A 35 YEAR SEARCH FROM JANUARY 1, 1985 TO JULY 27, 2021 CONTAINS THE FOLLOWING SURVEY RELATED ITEMS:
- NOTICE OF OPTION TO LEASE BETWEEN CARL M. FERENCZEK AND MARILYN T. FERENCZEK, AND CROWN ATLANTIC COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED OCTOBER 16, 2008 AND RECORDED OCTOBER 28, 2008 IN (BOOK 386) (PAGE) 104, IN NEW HAVEN COUNTY, CONNECTICUT. NOT SHOWN HEREON. NO METES AND BOUNDS PROVIDED.
 - AFFECTED BY (A) ASSIGNMENT AND ASSUMPTION AGREEMENT BETWEEN CROWN ATLANTIC COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY, AND CELLO PARTNERSHIP, A DELAWARE GENERAL PARTNERSHIP, DATED FEBRUARY 20, 2008 IN (BOOK 418) (PAGE) 873, IN NEW HAVEN COUNTY, CONNECTICUT.
 - MEMORANDUM OF OPTION AND LEASE AGREEMENT BETWEEN CARL M. FERENCZEK AND MARILYN T. FERENCZEK, AND CELLO PARTNERSHIP, A DELAWARE GENERAL PARTNERSHIP, DATED OCTOBER 20, 2008 AND RECORDED DECEMBER 10, 2002 AND RECORDED JANUARY 6, 2003 IN (BOOK 418) (PAGE) 873, IN NEW HAVEN COUNTY, CONNECTICUT. NOT SHOWN HEREON. NO METES AND BOUNDS PROVIDED.
 - MEMORANDUM OF OPTION AND LEASE AGREEMENT BETWEEN CARL M. FERENCZEK AND MARILYN T. FERENCZEK, AND CELLO PARTNERSHIP, A DELAWARE GENERAL PARTNERSHIP, DATED FEBRUARY 14, 2005 AND RECORDED APRIL 1, 2005 IN (BOOK 452) (PAGE) 877, IN NEW HAVEN COUNTY, CONNECTICUT. NOT SHOWN HEREON. NO METES AND BOUNDS PROVIDED.
 - ELECTRIC DISTRIBUTION EASEMENT BETWEEN CARL M. FERENCZEK AND MARILYN T. FERENCZEK, AND CELLO PARTNERSHIP DIBIA VERIZON WIRELESS, INC., DATED FEBRUARY 20, 2008 IN (BOOK 542) (PAGE) 108, IN NEW HAVEN COUNTY, CONNECTICUT. NOT SHOWN HEREON. NO METES AND BOUNDS PROVIDED.
 - TELEPHONE DISTRIBUTION EASEMENT BETWEEN CARL M. FERENCZEK AND MARILYN T. FERENCZEK, AND CELLO PARTNERSHIP DIBIA VERIZON WIRELESS, INC., DATED DECEMBER 3, 2007 AND RECORDED FEBRUARY 20, 2008 IN (BOOK 542) (PAGE) 110, IN NEW HAVEN COUNTY, CONNECTICUT. (5' FROM STRUCTURES) NOT SHOWN HEREON. NO METES AND BOUNDS PROVIDED.
 - MEMORANDUM OF SUPPLEMENT BETWEEN CELLO PARTNERSHIP DIBIA VERIZON WIRELESS, A DELAWARE GENERAL PARTNERSHIP, AND NEW CINGULAR WIRELESS PCS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, SUCCESSOR IN INTEREST TO AT&T WIRELESS PCS, LLC, DATED DECEMBER 31, 2013 AND RECORDED JANUARY 15, 2014 IN (BOOK 627) (PAGE) 1012, IN NEW HAVEN COUNTY, CONNECTICUT. NOT SHOWN HEREON. NO METES AND BOUNDS PROVIDED.
 - MEMORANDUM OF LEASE BETWEEN CELLO PARTNERSHIP, A DELAWARE GENERAL PARTNERSHIP, DIBIA VERIZON WIRELESS, AND ATC SEQUOIA LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED AUGUST 6, 2015 AND RECORDED AUGUST 26, 2015 IN (BOOK 646) (PAGE) 500, IN NEW HAVEN COUNTY, CONNECTICUT. NOT SHOWN HEREON. NO METES AND BOUNDS PROVIDED.
 - "SUBDIVISION OF LAND OF THERESA LONEGAN SOUTHBRURY, CONNECTICUT DATED MAY 19, 1972 AND RECORDED MAY 19, 1972 IN (INSTRUMENT) 1313 IN NEW HAVEN COUNTY, CONNECTICUT. SHOWN HEREON.
 - "RESUBDIVISION MAP" DATED JULY 9, 1975 AND RECORDED DECEMBER 30, 1975 IN (INSTRUMENT) 2263 IN NEW HAVEN COUNTY, CONNECTICUT. NOT SHOWN HEREON. NOT WITHIN SCOPE OF SURVEY.
 - "MAP SHOWING A PORTION OF LAND OF CARL M. & MARILYN T. FERENCZEK" DATED OCTOBER 5, 1987 AND RECORDED OCTOBER 28, 1987 IN (INSTRUMENT) 2591 IN NEW HAVEN COUNTY, CONNECTICUT. SHOWN HEREON.



1 VICINITY MAP
 SCALE: 1"=120' (11X17)



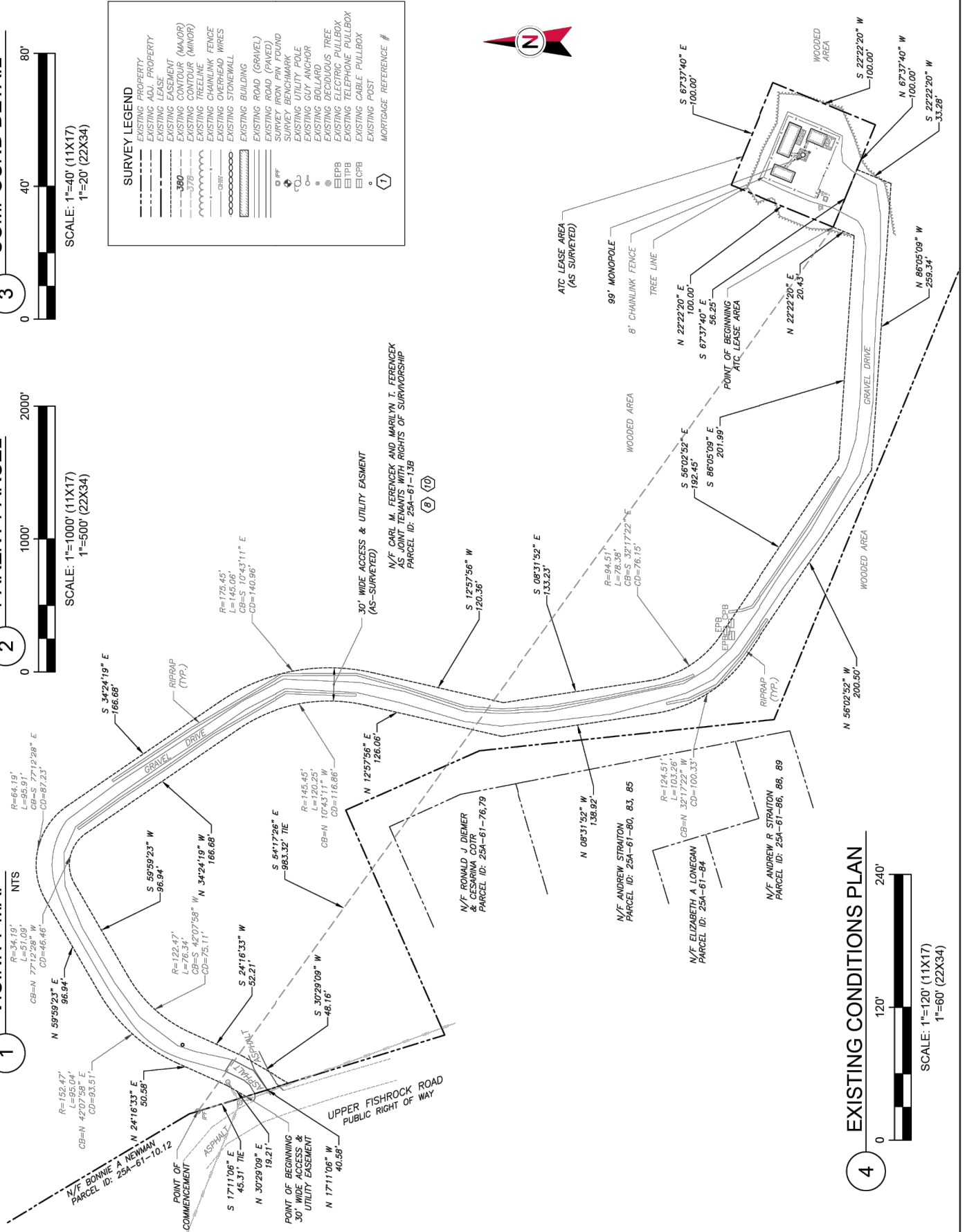
2 PARENT PARCEL
 SCALE: 1"=500' (22X34)



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

SURVEY LEGEND

- EXISTING PROPERTY
- EXISTING ADJ. PROPERTY
- EXISTING LEASE
- EXISTING EASEMENT (MAJOR)
- EXISTING EASEMENT (MINOR)
- EXISTING TIE LINE
- EXISTING CHAINLINK FENCE
- EXISTING OVERHEAD WIRES
- EXISTING STONEMALL
- EXISTING BUILDING
- EXISTING ROAD (GRAVEL)
- EXISTING ROAD (PAVED)
- SURVEY IRON PIN FOUND
- SURVEY BENCHMARK
- EXISTING UTILITY POLE
- EXISTING GUY ANCHOR
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING TELEPHONE PULLBOX
- EXISTING CABLE PULLBOX
- EXISTING POST
- MORTGAGE REFERENCE #



4 EXISTING CONDITIONS PLAN
 SCALE: 1"=120' (11X17)
 1"=60' (22X34)

AMERICAN TOWER®
ATC TOWER SERVICES, INC
 3533 REGENCY PARKWAY
 SUITE 133
 CARY, NC 27551
 PHONE: (919) 468-0145
 COA: D-0204

THESE DRAWINGS AND/OR THE ACCOMPANYING SURVEY MAPS ARE THE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION 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. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE RESPONSIBLE FOR ANY DISCREPANCIES OR OMISSIONS IN PROJECT CONTRACT(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

| REV. | DESCRIPTION | BY | DATE |
|------|--------------------|----|----------|
| 0 | ISSUED FOR COMMENT | SW | 09/29/21 |

ATC SITE NUMBER:
411188

ATC SITE NAME:
SOUTHBRURY CT

SITE ADDRESS:
 111 UPPER FISHROCK ROAD
 SOUTHBRURY, CT 06488-4172

SURVEY CERTIFICATE:
 I HEREBY CERTIFY TO THE INDIVIDUALS LISTED THAT THIS SURVEY MAP IS BASED ON A FIELD SURVEY COMPLETED UNDER MY IMMEDIATE SUPERVISION, AND IT CONFORMS TO THE "LAND SURVEYING PRACTICE GUIDELINES" APPROVED BY THE NEW YORK STATE BOARD FOR ENGINEERING AND LAND SURVEYING.

AMERICAN TOWER CORPORATION

SURVEY LOGO:

Tectonic
 GEODETIC SURVEYING, INC.
 70 Pleasant Hill Road
 Marlborough, MA 01752
 Phone: (860) 334-3099
 Fax: (860) 334-3091
 www.tectonicinc.com

| | |
|--------------|----------|
| DRAWN BY: | SW |
| APPROVED BY: | DS |
| DATE DRAWN: | 09/29/21 |
| ATC JOB NO.: | 411188 |

TITLE AND BOUNDARY PLAN

SHEET NUMBER:
V-101

REVISION:
0



AMERICAN TOWER®
ATC TOWER SERVICES LLC
 1 FENTON MAIN
 SUITE 300
 CARY, NC 27611
 PHONE: (919) 468-0112
 PEC.0001553

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.

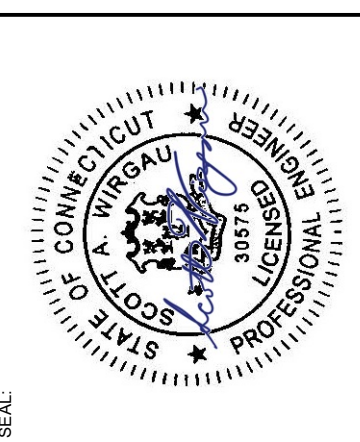
| REV. | DESCRIPTION | BY | DATE |
|------|-------------------------|-----|----------|
| 2 | OSP/WI DIST & ADDRESSES | VAR | 05/26/26 |
| | | | |
| | | | |
| | | | |
| | | | |

ATC SITE NUMBER:
411188


ATC SITE NAME:
SOUTHBURY CT

T-MOBILE SITE NAME:
CTNH124A

SITE ADDRESS:
 111 UPPER FISHROCK RD
 SOUTHBURY, CT 06488



Digitally Signed: 2026-05-27

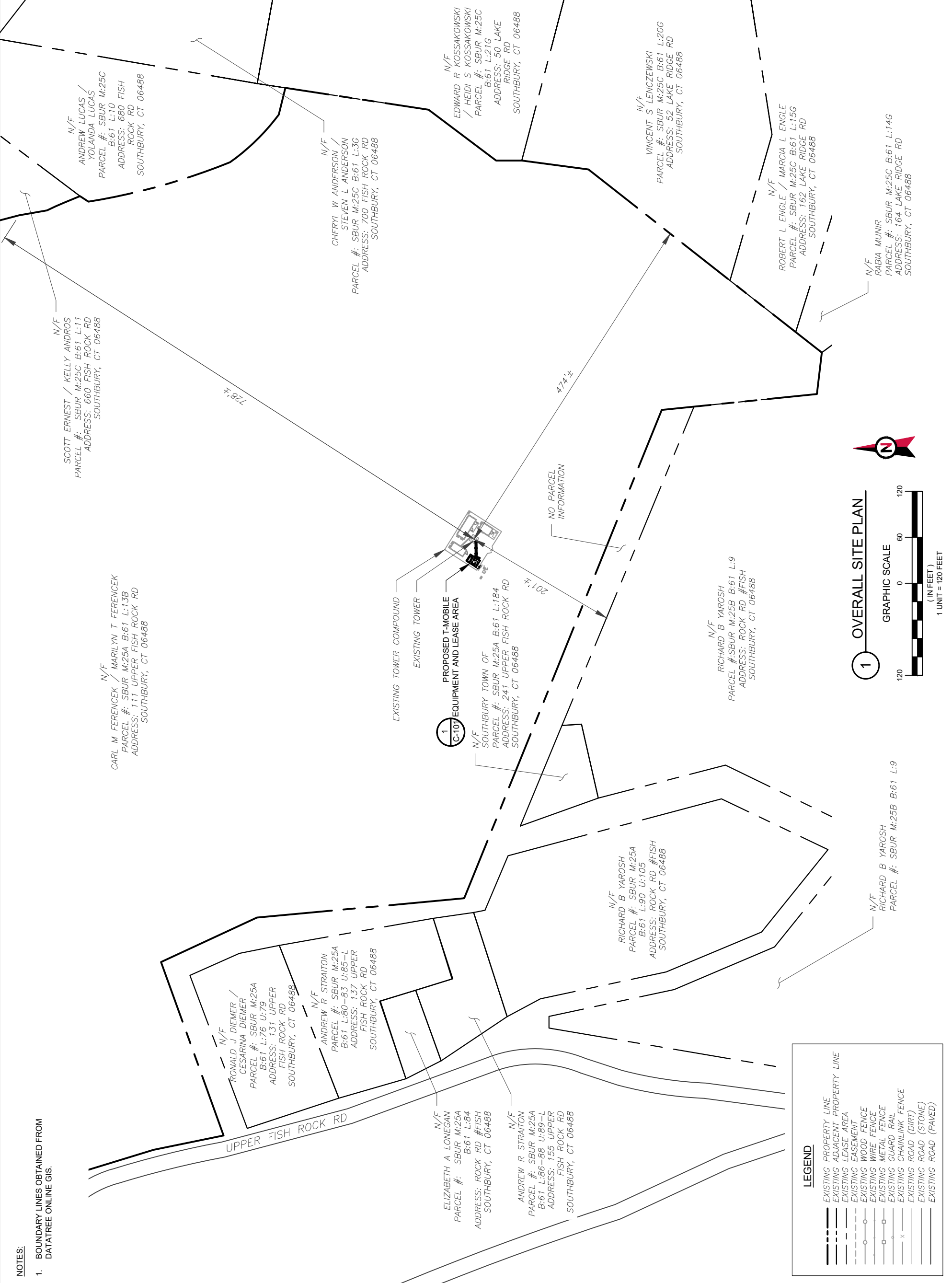


ATC PROJ. #: 14832961_D2
 CUST. ID: CTNH124A
 CUST. #: CTNH124A

OVERALL SITE PLAN

SHEET NUMBER:
C-001

REVISION:
2



NOTES:
 1. BOUNDARY LINES OBTAINED FROM DATATREE ONLINE GIS.

LEGEND

- EXISTING PROPERTY LINE
- - - EXISTING ADJACENT PROPERTY LINE
- - - EXISTING LEASE AREA
- - - EXISTING EASEMENT
- - - EXISTING WOOD FENCE
- - - EXISTING WIRE FENCE
- - - EXISTING METAL FENCE
- - - EXISTING GUARD RAIL
- - - EXISTING CHAINLINK FENCE
- - - EXISTING ROAD (DIRT)
- - - EXISTING ROAD (STONE)
- - - EXISTING ROAD (PAVED)

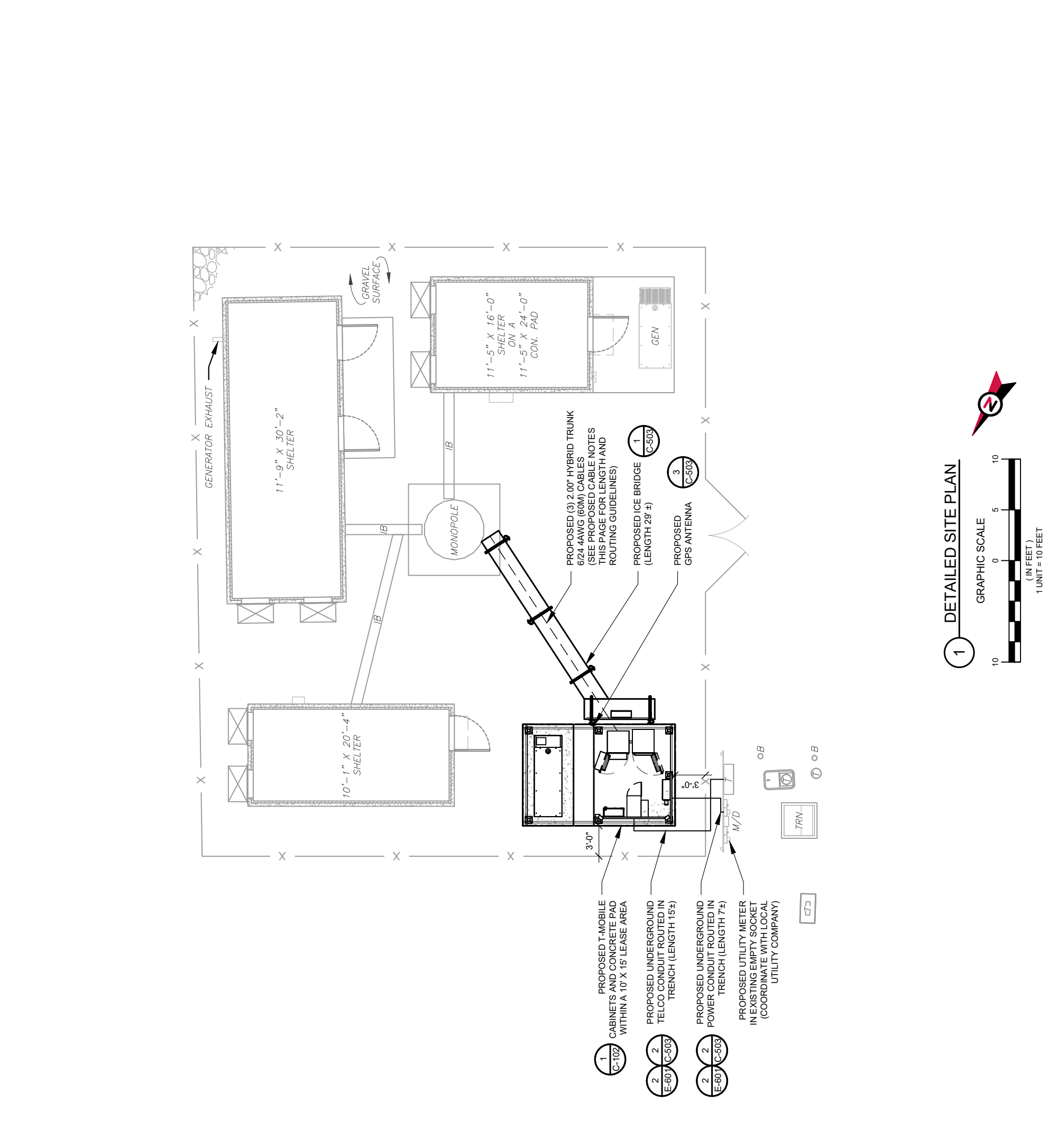
SITE PLAN NOTES:

- 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 T-MOBILE 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.

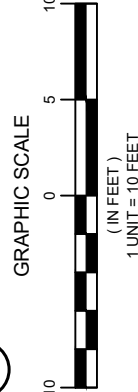
| LEGEND | |
|--------|---------------------------|
| ⊗ | GROUNDING TEST WELL |
| ATS | AUTOMATIC TRANSFER SWITCH |
| B | BOLLARD |
| CSC | CELL SITE CABINET |
| D | DISCONNECT |
| E | ELECTRICAL |
| F | FIBER |
| GEN | GENERATOR |
| G | GENERATOR RECEPTACLE |
| HH, V | HAND HOLE, VAULT |
| IB | ICE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

PROPOSED CABLE NOTES:

- ESTIMATED LENGTH OF PROPOSED CABLE IS **197'**. 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. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.



1 DETAILED SITE PLAN



AMERICAN TOWER®
ATC TOWER SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

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.

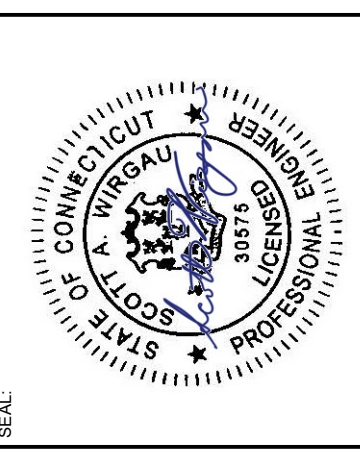
| REV. | DESCRIPTION | BY | DATE |
|------|------------------|-----|----------|
| △ | FOR CONSTRUCTION | VAR | 05/23/25 |
| △ | | | |
| △ | | | |
| △ | | | |

ATC SITE NUMBER:
411188

ATC SITE NAME:
SOUTHBRURY CT

T-MOBILE SITE NAME:
CTNH124A

SITE ADDRESS:
111 UPPER FISHROCK RD
SOUTHBRURY, CT 06488

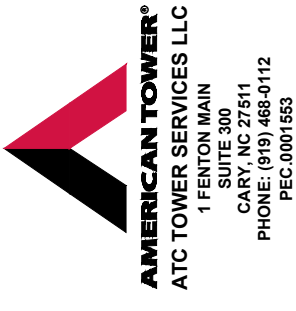


Digitally Signed: 2026-05-27



| | |
|--------------|-------------|
| ATC PROJ. #: | 14832961_D2 |
| CUST. ID: | CTNH124A |
| CUST. #: | CTNH124A |

| | |
|---------------------------|--------------|
| DETAILED SITE PLAN | |
| SHEET NUMBER: | C-101 |
| REVISION: | 0 |



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 |
|------|------------------|-----|----------|
| △ | FOR CONSTRUCTION | VAR | 05/23/25 |
| △ | | | |
| △ | | | |
| △ | | | |
| △ | | | |

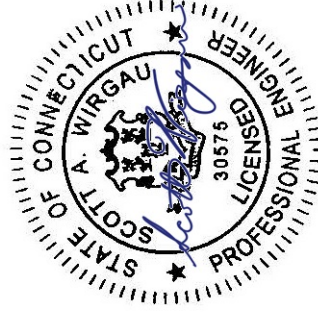
ATC SITE NUMBER:
411188

ATC SITE NAME:
SOUTHBURY CT

T-MOBILE SITE NAME:
CTNH124A

SITE ADDRESS:
111 UPPER FISHROCK RD
SOUTHBURY, CT 06488

SEAL:



Digitally Signed: 2026-05-27

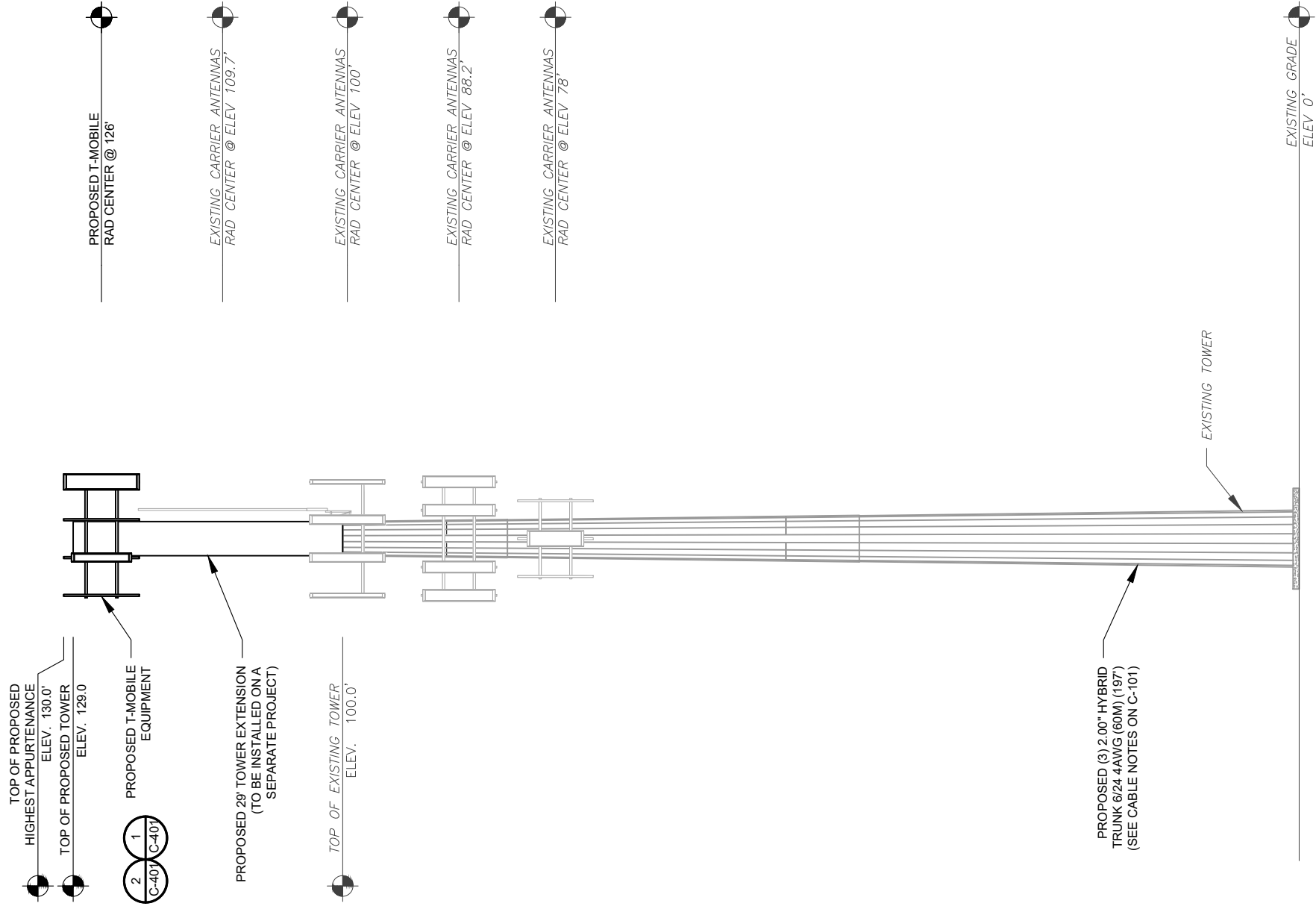


| | |
|--------------|-------------|
| ATC PROJ. #: | 14832961_D2 |
| CUST. ID: | CTNH124A |
| CUST. #: | CTNH124A |

TOWER ELEVATION

| | |
|---------------|--------------|
| SHEET NUMBER: | C-201 |
| REVISION: | 0 |

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 03/21/2025, THE PROPOSED MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



1 TOWER ELEVATION

SCALE: N.T.S.

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. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
 - TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



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 |
|------|------------------|-----|-----------|
| △ | FOR CONSTRUCTION | VAR | _05/23/25 |
| △ | AZIMUTH CHANGE | VAR | _01/12/26 |
| △ | | | |
| △ | | | |
| △ | | | |

ATC SITE NUMBER:
411188

ATC SITE NAME:
SOUTHBURY CT

T-MOBILE SITE NAME:
CTNH124A

SITE ADDRESS:
111 UPPER FISHROCK RD
SOUTHBURY, CT 06488

SEAL:

Digitally Signed: 2026-05-27

T-Mobile

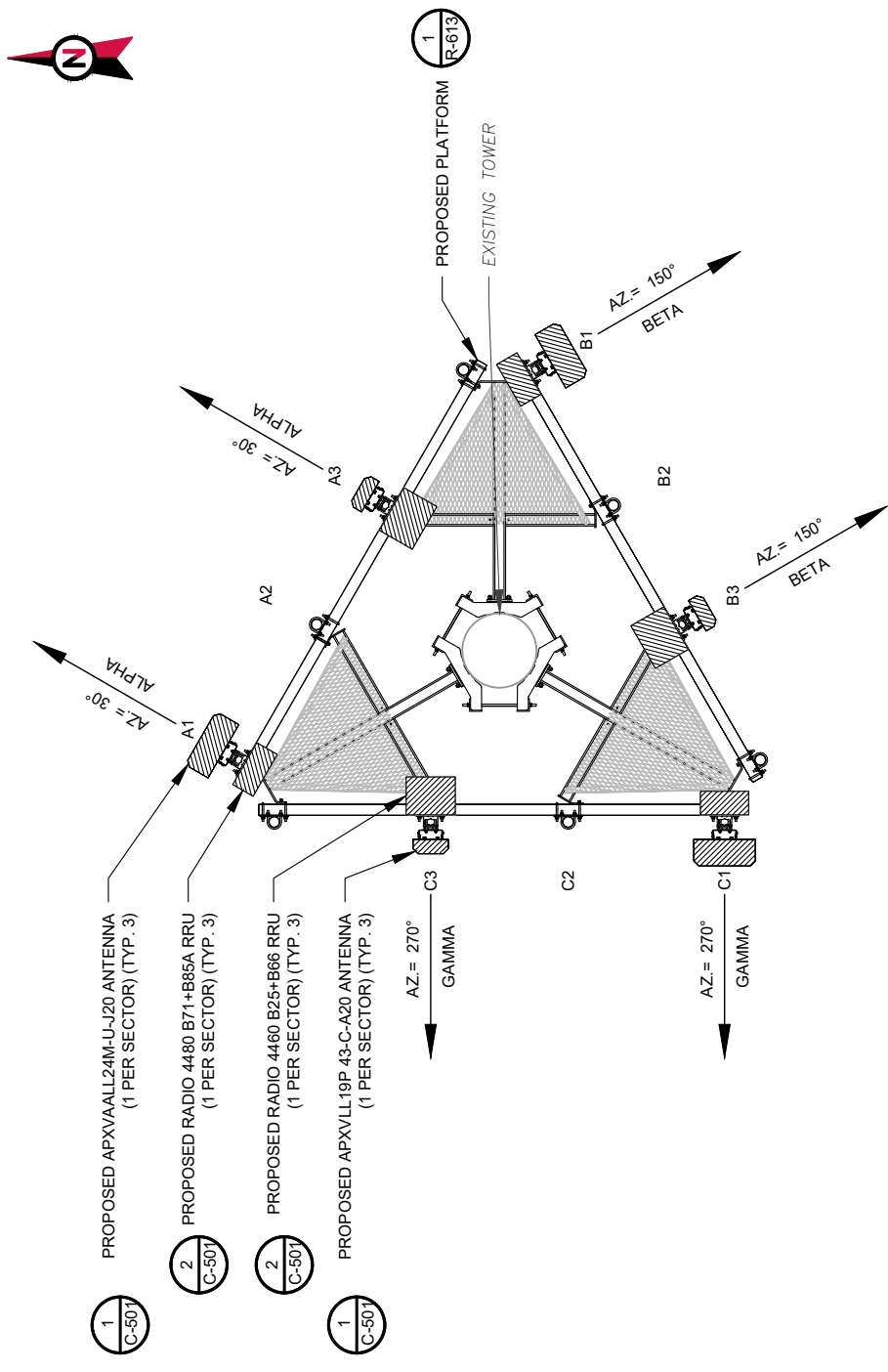
ATC PROJ. #: 14832961_D2
CUST. ID: CTNH124A
CUST. #: CTNH124A

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:
C-401

REVISION:
1

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 03/21/2025, THE PROPOSED MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



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

FINAL ANTENNA/ COAX SCHEDULE

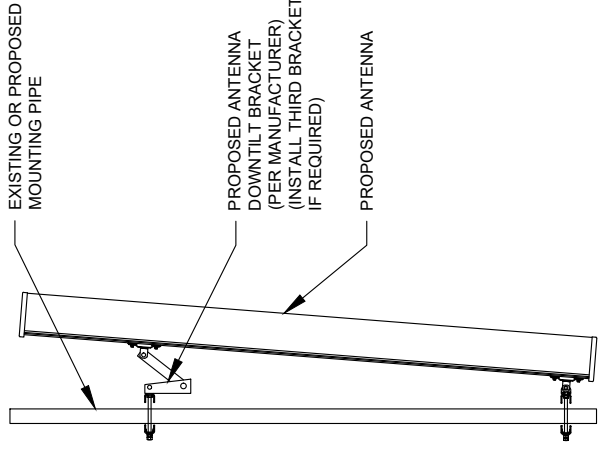
| SECTOR | ANT. | MODEL # | RAD CENTER | AZIMUTH | ADDITIONAL TOWER MOUNTED EQUIPMENT | CABLE DESCRIPTION |
|--------|------|--------------------|------------|---------|------------------------------------|--|
| ALPHA | A1 | APXVAALL24M-U-J20 | 126' | 30° | RADIO 4480 B71+B85 | (3) 2.00" HYBRID TRUNK 6/24 4AWG (60M) (197) |
| | A2 | - | | 30° | - | |
| | A3 | APXVLL19P_43-C-A20 | | 30° | RADIO 4460 B25+B66 | |
| BETA | B1 | APXVAALL24M-U-J20 | | 150° | RADIO 4480 B71+B85 | |
| | B2 | - | | 150° | - | |
| | B3 | APXVLL19P_43-C-A20 | | 150° | RADIO 4460 B25+B66 | |
| GAMMA | C1 | APXVAALL24M-U-J20 | | 270° | RADIO 4480 B71+B85 | |
| | C2 | - | | 270° | - | |
| | C3 | APXVLL19P_43-C-A20 | | 270° | RADIO 4460 B25+B66 | |

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. GC TO CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

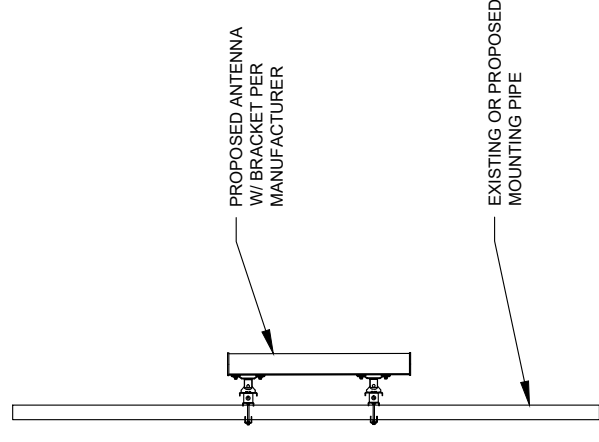
RF JUMPER LENGTH
MONOPOLE = 15'+
GUYED / SELF SUPPORT = FACE WIDTH + 15'
REFER TO FINAL RFDS FOR TYPE AND QUANTITY

2 ANTENNA SCHEDULE

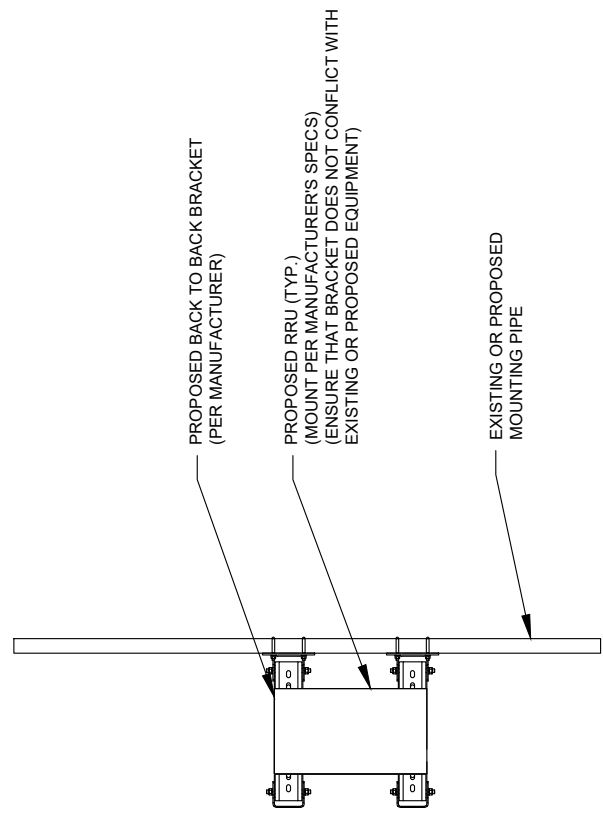
EXISTING/PROPOSED MOUNTS AND/OR MOUNT MODIFICATIONS NOT SHOWN FOR CLARITY. REFER TO ANTENNA PLANS, MOUNT ANALYSES AND/OR MOUNT MODIFICATION DOCUMENTS FOR ADDITIONAL DETAIL.



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



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



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.

AMERICAN TOWER®
ATC TOWER SERVICES LLC
 1 FENTON MAIN
 SUITE 300
 CARY, NC 27511
 PHONE: (919) 468-0112
 PEC.0001553

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 |
|------|------------------|-----|----------|
| △ | FOR CONSTRUCTION | VAR | 05/23/25 |
| △ | | | |
| △ | | | |
| △ | | | |
| △ | | | |

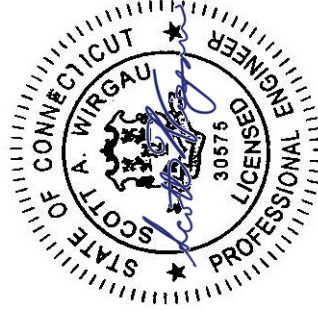
ATC SITE NUMBER:
411188

ATC SITE NAME:
SOUTHBURY CT

T-MOBILE SITE NAME:
CTNH124A

SITE ADDRESS:
 111 UPPER FISHROCK RD
 SOUTHBURY, CT 06488

SEAL:



Digitally Signed: 2026-05-27



| | |
|--------------|-------------|
| ATC PROJ. #: | 14832961_D2 |
| CUST. ID: | CTNH124A |
| CUST. #: | CTNH124A |

MOUNT DETAILS

| | | | |
|---------------|--------------|-----------|----------|
| SHEET NUMBER: | C-501 | REVISION: | 0 |
|---------------|--------------|-----------|----------|

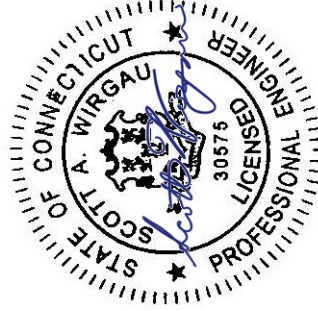


THE USE AND PUBLICATION OF THESE DRAWINGS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION 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 |
|------|------------------|-----|----------|
| △ | FOR CONSTRUCTION | VAR | 05/23/25 |
| △ | | | |
| △ | | | |
| △ | | | |
| △ | | | |

ATC SITE NUMBER:
411188
 ATC SITE NAME:
SOUTHBURY CT
 T-MOBILE SITE NAME:
CTNH124A
 SITE ADDRESS:
 111 UPPER FISHROCK RD
 SOUTHBURY, CT 06488

SEAL:



Digitally Signed: 2026-05-27



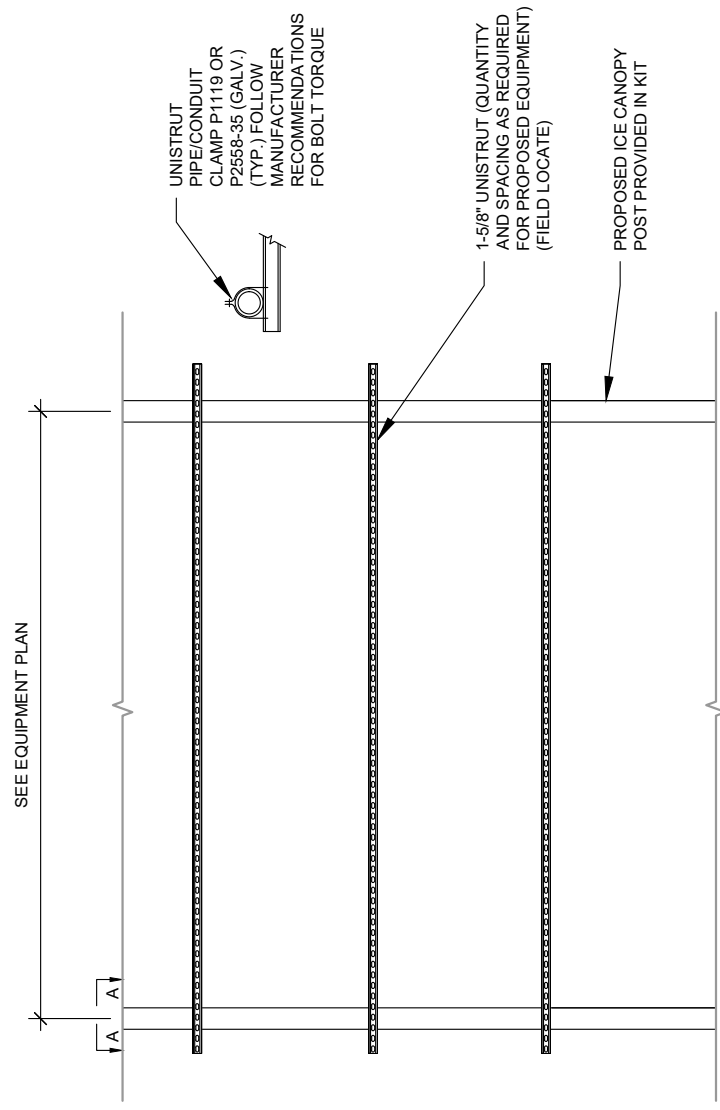
| | |
|--------------|-------------|
| ATC PROJ. #: | 14832961_D2 |
| CUST. ID: | CTNH124A |
| CUST. #: | CTNH124A |

**CONSTRUCTION
 DETAILS**

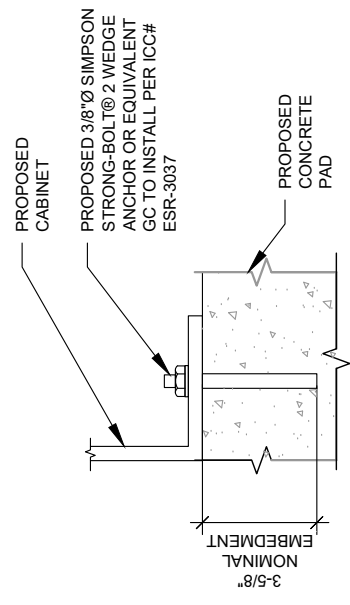
| | |
|---------------|--------------|
| SHEET NUMBER: | C-502 |
| REVISION: | 0 |

H-FRAME NOTES:

- IF IT IS NECESSARY TO EXTEND THE H-FRAME, AN ADDITIONAL POST WILL ALWAYS BE REQUIRED.
- PROPOSED UNISTRUTS TO BE FIELD CUT AND SHOULD NOT EXTEND MORE THAN 6 INCHES BEYOND THE LAST POST.
- SPRAY ENDS OF UNISTRUT WITH COLD GALVANIZING SPRAY PAINT. ALLOW TO DRY, THEN COVER WITH RUBBER PROTECTIVE CAPS FOR SAFETY.
- UNISTRUT TO BE CUT FLUSH WITH NO SHARP OR JAGGED EDGES.
- ALL PROPOSED HARDWARE TO BE MOUNTED PER MANUFACTURERS SPECS.

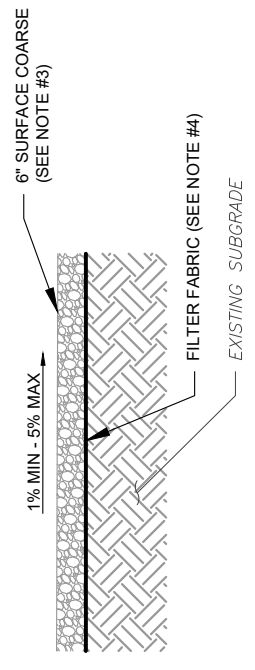


3 H-FRAME ON CANOPY POST DETAIL
 SCALE: N.T.S.



NOTE:
 INSTALL SIMPSON STRONG-TIE® STRONG-BOLT® 2 WEDGE ANCHOR(S) STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.STRONGTIE.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

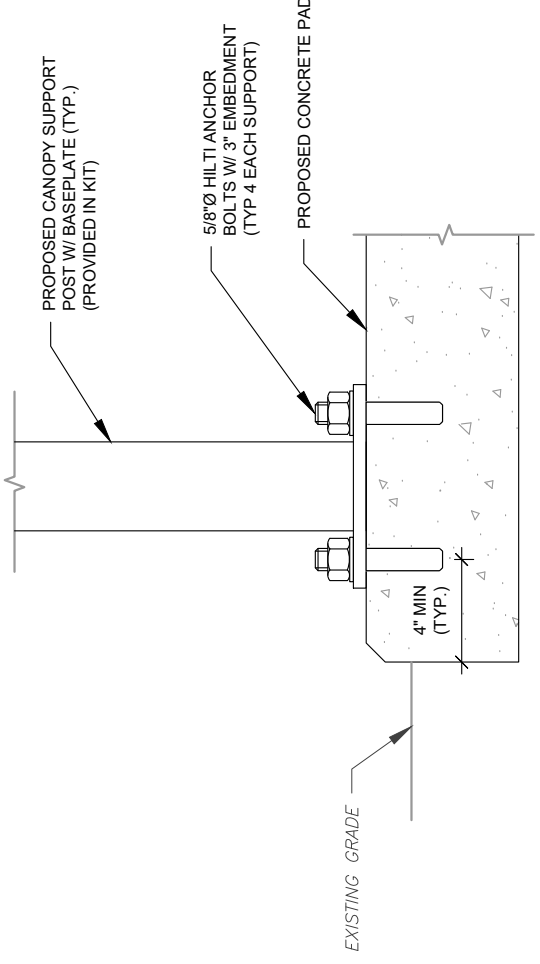
1 CABINET ATTACHMENT DETAIL
 SCALE: N.T.S.



2 COMPOUND CROSS SECTION
 SCALE: N.T.S.

NOTES:

- CONTRACTOR TO CONTACT ALL UTILITIES FOR LOCATION OF UNDERGROUND SERVICES. SERVICE LOCATIONS TO BE CONFIRMED PRIOR TO CONSTRUCTION.
- REMOVE ALL UNSUITABLE OR DELETERIOUS MATERIAL AS REQUIRED. COMPACT UNDERLYING SOIL TO 90% OF MAXIMUM DENSITY. REPLACE REMOVED SOIL WITH 8" LIFTS OF GRANULAR "B" MATERIAL TO A DEPTH OF 4" BELOW PROPOSED GRADE. COMPACT TO MINIMUM 95% OF MAXIMUM DRY DENSITY. ALL COMPACTION SHALL BE IN ACCORDANCE WITH THE MOST RECENT IBC. REVIEW WITH PROJECT MANAGER AND GEOTECH PRIOR TO CONSTRUCTION.
- SURFACE COARSE OF GRANULAR "A" MATERIAL SHALL CONSIST OF EVENLY GRADED MIXTURE OF CRUSHED STONE OR GRAVEL, WITH 100% PASSING THROUGH 3/4" SIEVE AND NOT MORE THAN 5% PASSING THROUGH #4 SIEVE.
- PROVIDE GEOTEXTILE FABRIC UNDER WASHED CHIPPED STONE COMPOUND UNLESS NOTED OTHERWISE. WOVEN GEOTEXTILE: US FABRICS: US 230 OR APPROVED EQUIVALENT. CONTRACTOR MAY SUBMIT DESIGN ALTERNATIVE AS OUTLINED IN THE AMERICAN TOWER MASTER SPECIFICATIONS.



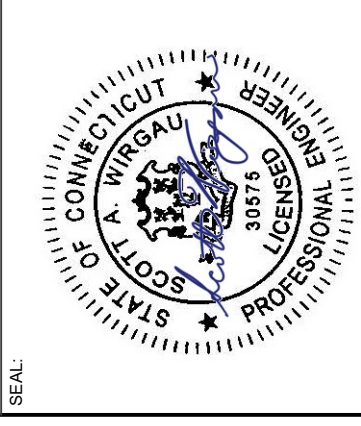
4 CANOPY SUPPORT ANCHOR DETAIL
 SCALE: N.T.S.



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 |
|------|------------------|-----|----------|
| △ | FOR CONSTRUCTION | VAR | 05/23/25 |
| △ | | | |
| △ | | | |
| △ | | | |

ATC SITE NUMBER: **411188**
 ATC SITE NAME: **SOUTHBURY CT**
 T-MOBILE SITE NAME: **CTNH124A**
 SITE ADDRESS: **111 UPPER FISHROCK RD**
SOUTHBURY, CT 06488



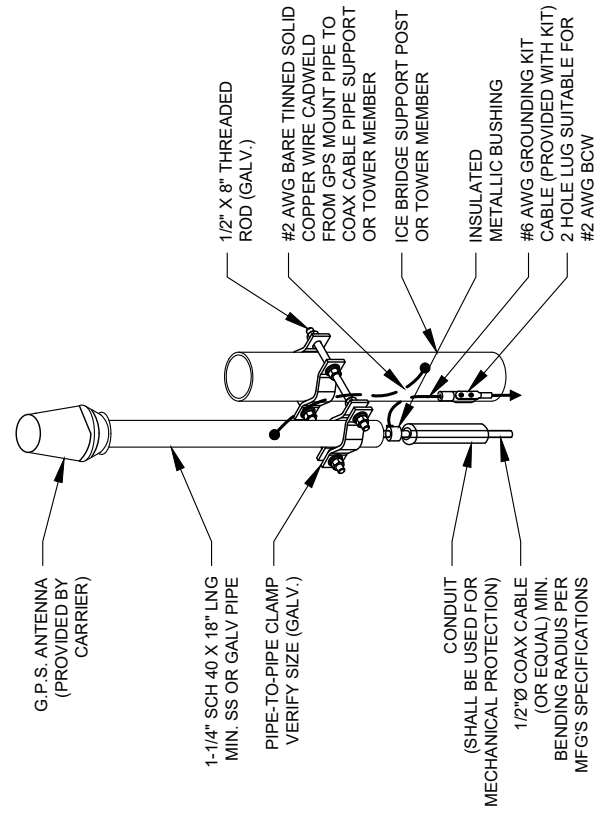
Digitally Signed: 2026-05-27



| | |
|--------------|-------------|
| ATC PROJ. #: | 14832961_D2 |
| CUST. ID: | CTNH124A |
| CUST. #: | CTNH124A |

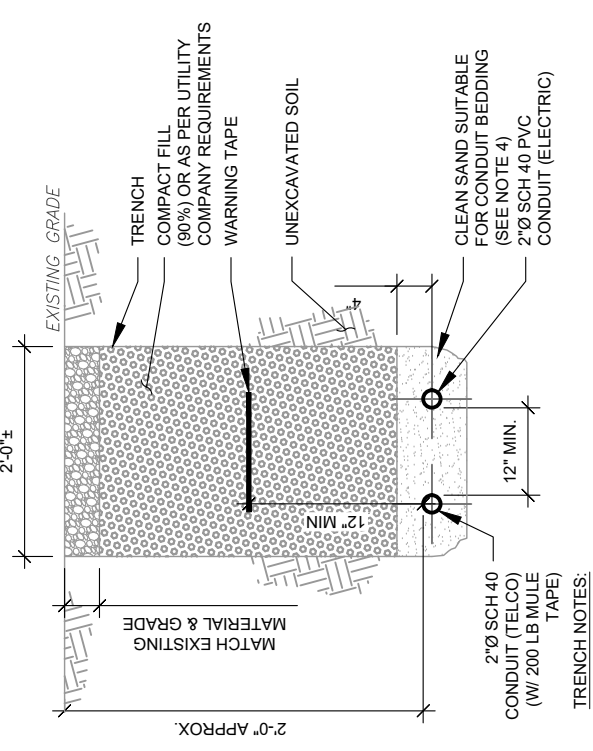
CONSTRUCTION DETAILS

| | |
|---------------|--------------|
| SHEET NUMBER: | C-503 |
| REVISION: | 0 |



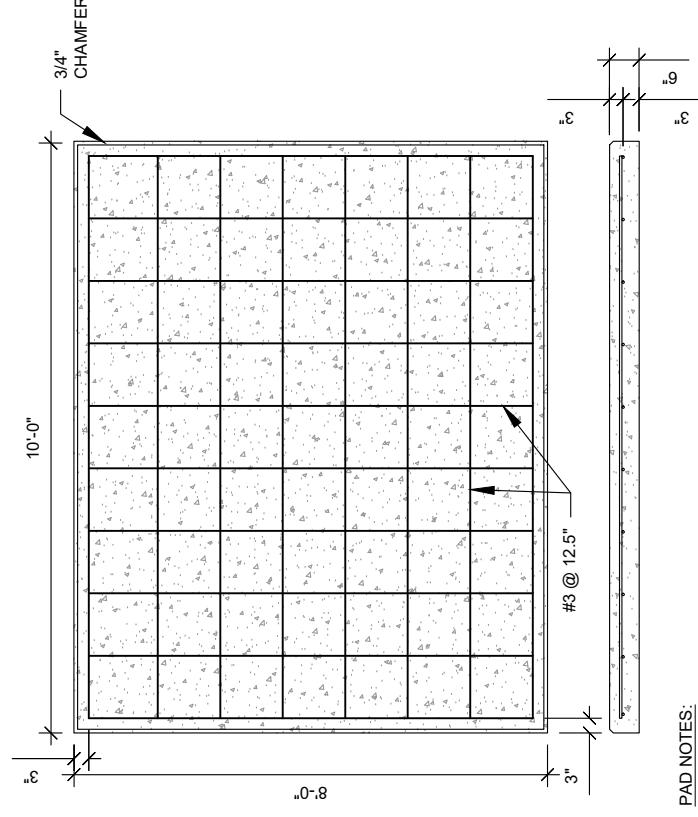
- NOTE:
- GPS SHALL BE PLACED WITH CLEAR SIGHT LINE TO THE SOUTHERN SKY.
 - CONTRACTOR TO SUPPLY COAX FOR GPS UNIT.

3 GPS ANTENNA ATTACHMENT DETAIL
SCALE: N.T.S.



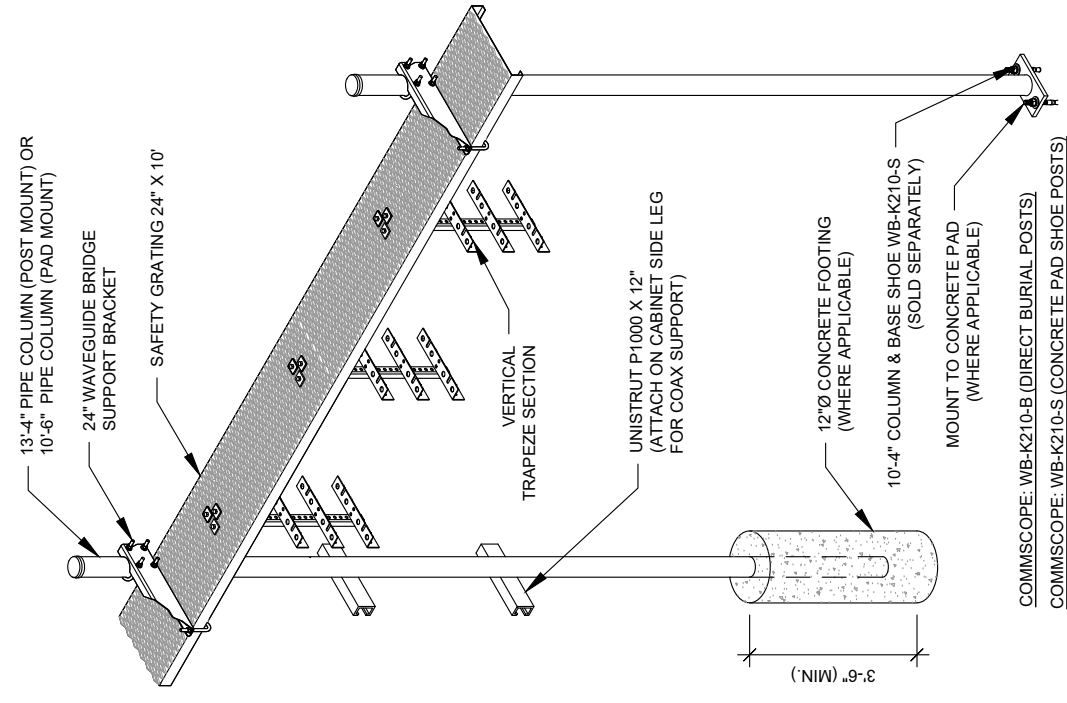
- TRENCH NOTES:
- IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
 - IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
 - IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
 - CONCRETE ENCASE CONDUIT WHEN TRENCHING UNDER SITE ACCESS ROAD.

2 TELCO AND POWER CONDUIT JOINT TRENCH
SCALE: N.T.S.



- PAD NOTES:
- PADS SHALL BE PRE-CAST MATCHING THIS DESIGN WHERE ALLOWED BY LOCAL JURISDICTION.
 - REFER TO CONCRETE & REINFORCED STEEL NOTES ON SHEET G-002 & ATC SPEC 033000 FOR CAST-IN-PLACE PADS.

4 REINFORCED PAD LAYOUT
SCALE: N.T.S.



- CONSTRUCTION NOTE:
- INSTALL ICE BRIDGE TO ALLOW 7 FEET CLEARANCE ABOVE GRADE TO LOWEST APPURTENANCE.
 - INSTALL PER MANUFACTURES SPECIFICATION.

1 WAVEGUIDE BRIDGE KIT
SCALE: N.T.S.



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 |
|------|------------------|-----|----------|
| △ | FOR CONSTRUCTION | VAR | 05/23/25 |
| △ | | | |
| △ | | | |
| △ | | | |
| △ | | | |

ATC SITE NUMBER:
411188

ATC SITE NAME:
SOUTHBURY CT

T-MOBILE SITE NAME:
CTNH124A

SITE ADDRESS:
 111 UPPER FISHROCK RD
 SOUTHBURY, CT 06488

SEAL:



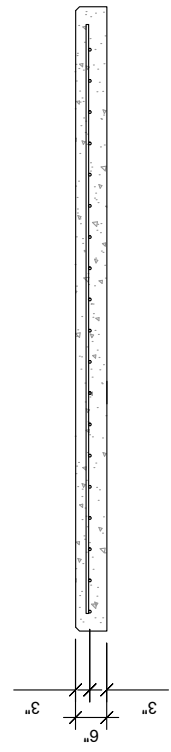
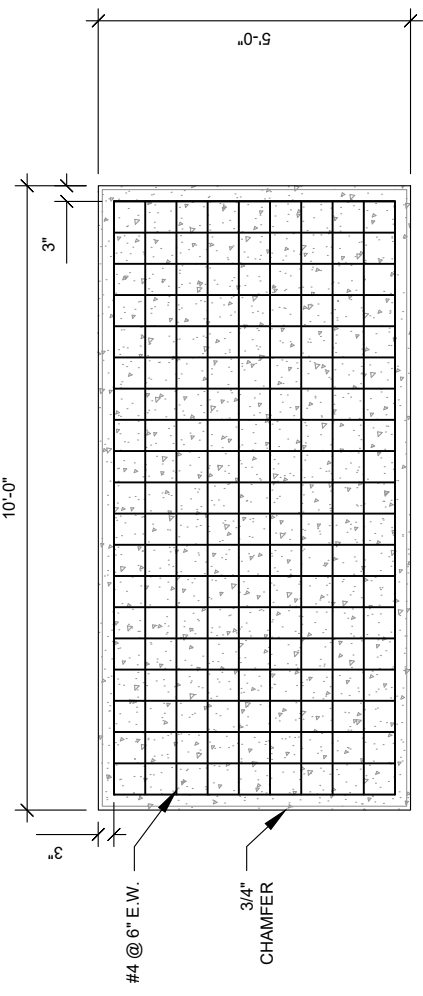
Digitally Signed: 2026-05-27



| | |
|--------------|-------------|
| ATC PROJ. #: | 14932961_D2 |
| CUST. ID: | CTNH124A |
| CUST. #: | CTNH124A |

CONSTRUCTION DETAILS

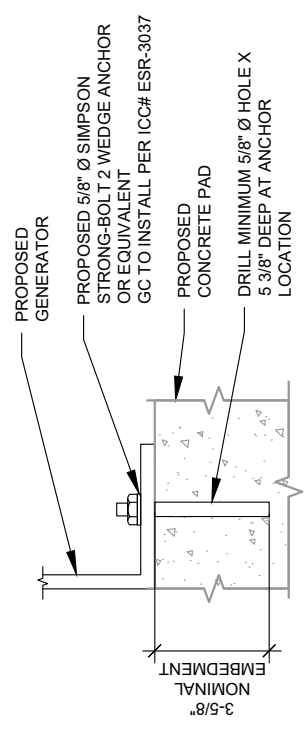
| | | | |
|---------------|--------------|-----------|----------|
| SHEET NUMBER: | C-504 | REVISION: | 0 |
|---------------|--------------|-----------|----------|



- PAD NOTES:**
- SUBGRADE AND FILL SHALL CONSIST OF CLEAN SOIL. DELETERIOUS MATERIAL AND ORGANICS SHALL BE REMOVED.
 - COMPACT SUBGRADE TO 95%.
 - USE GALVANIZED HILTI EXPANSION ANCHORS OR, APPROVED EQUAL, FOR EQUIPMENT ANCHORAGE.
 - FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENT, SEE EQUIPMENT VENDOR DRAWINGS.
 - DETAIL FOR ILLUSTRATIVE PURPOSES ONLY. MODIFY PER GENERATOR MANUFACTURER SPECIFICATIONS TO ACCOMMODATE STUB UP.

1 CONCRETE PAD FOR GENERATOR

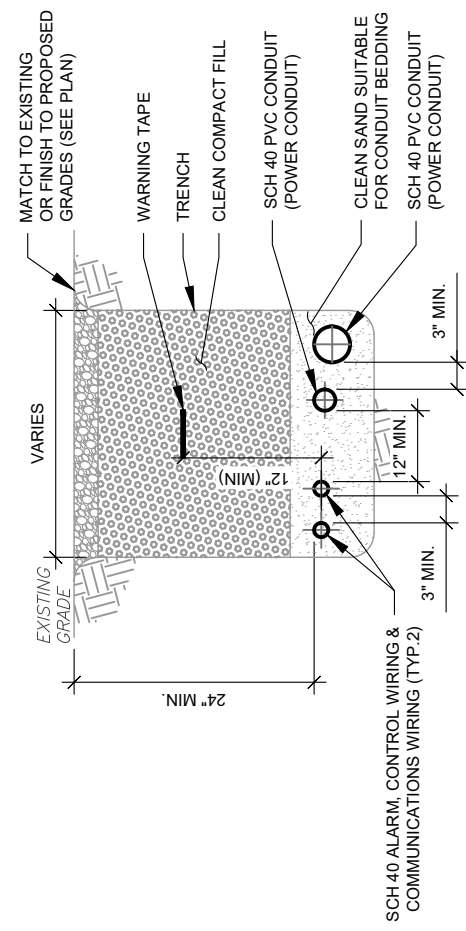
SCALE: N.T.S.



NOTE:
 INSTALL SIMPSON STRONG-TIE STRONG-BOLT WEDGE ANCHORS STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.STRONGTIE.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

3 GENERATOR ATTACHMENT DETAIL

SCALE: N.T.S.



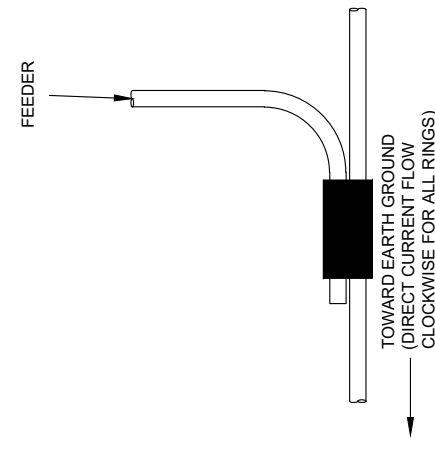
SCH 40 ALARM, CONTROL WIRING & COMMUNICATIONS WIRING (TYP. 2)

TRENCH NOTES:

- IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
- IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
- IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
- CONFIRM SPACING AND DEPTH WITH NEC OR LOCAL CODE REQUIREMENTS
- AC POWER CONDUITS MUST BE 3" MINIMUM FROM OTHER AC CONDUITS AND 12" MINIMUM FROM COMMUNICATIONS CONDUITS

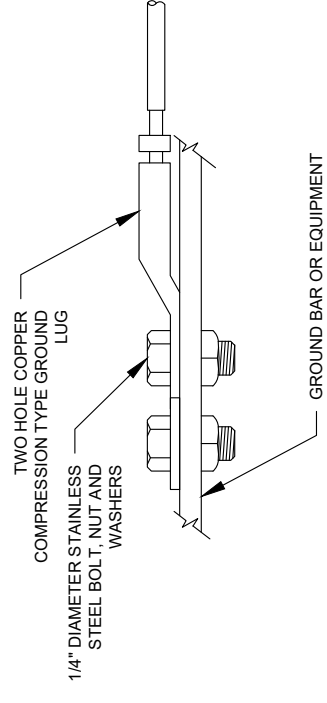
2 GENERATOR SERVICE CONDUIT TRENCH

SCALE: N.T.S.



4 GROUNDING CONDUCTOR CONNECTION

SCALE: N.T.S.



NOTE:

ALL MECHANICAL EXTERNAL TERMINATION SURFACES SHALL BE TREATED WITH T&B KOPR-SHIELD CP8 ANIT-OXIDATION COMPOUND.

5 TWO HOLE LUG CONNECTION DETAIL

SCALE: N.T.S.

1. **GROUNDING NOTES:**
 ALL EQUIPMENT ENCLOSURES, DEVICES AND CONDUITS SHALL BE GROUNDED TO CONFORM WITH THE LATEST REQUIREMENTS OF THE NEC BY THE INSTALLATION OF A SEPARATE, GREEN, INSULATED GROUND CONDUCTOR FOR ALL FEEDER AND BRANCH CIRCUITS. GROUND CONDUCTORS SHALL BE OF THE SIZE INDICATED ON THE DRAWINGS. GROUND CONDUCTORS SHALL BE CONTINUOUS IN LENGTH AND SHALL BE BONDED TO EACH ENCLOSURE THEY PASS THROUGH. CONDUIT SHALL NOT BE USED AS A GROUNDING CONDUCTOR.

2. **GROUNDING CONDUCTORS SHALL:**
 A. BE #2 AWG SOLID BARE TINNED COPPER (SBTC) FOR ALL GROUNDING SYSTEM WIRE UNLESS OTHERWISE NOTED, OR OTHERWISE REQUIRED BY CODE.
 B. BE MINIMUM 12" BEND RADIUS. KEEP NUMBER OF BENDS TO A MINIMUM.
 C. AVOID LONG BONDING CONNECTION RUNS. MAKE DIRECT AS POSSIBLE.
 D. NOT HAVE ANY U-SHAPED RUNS.
 E. BE IN NON-METALLIC CONDUIT ONLY, IF IN CONDUIT.
 F. BE PLACED THROUGH NON-METALLIC SLEEVES IN FLOORS, WALLS, CEILINGS, ETC.
 G. PROTECTED IN NON-METALLIC CONDUIT WHERE EXPOSED ABOVE GRADE.

2. **INSTALL ALL GROUNDING RINGS AND RADIALS WITH CONDUCTIVE CEMENT, SANKOSHA AS DISTRIBUTED BY ELECTRIC MOTION COMPANY, INC., WINSTED, CT 06098, OR AS SPECIFICALLY INDICATED. INSTALL PER MANUFACTURER'S SPECIFICATIONS.**

3. **GROUND RINGS SHALL BE:**
 A. MINIMUM 30" BELOW GRADE, OR BELOW FROST LINE WHICHEVER IS DEEPER.
 B. MINIMUM 2" FROM FOUNDATIONS, FOOTINGS, OTHER GROUNDING SYSTEMS AND ALL CONDUCTIVE OBJECTS.
 C. WITH MINIMUM 12" BEND RADI.
 D. WITH ALL CONNECTIONS IN CONTACT WITH EARTH, BONDED BY EXOTHERMIC WELDING.
 E. BONDED TO A SINGLE POINT GROUND (SPG) WITH A SINGLE WIRE AS INDICATED ON DRAWINGS.

4. **GROUND RODS SHALL BE:**
 A. MINIMUM 5/8" DIAMETER.
 B. MINIMUM 10' LONG.
 C. COPPER-CLAD GALVANIZED STEEL OR STAINLESS STEEL.
 D. PLACED IN UNDISTURBED SOIL AND BELOW THE FROST LINE.
 E. INSTALLED WITH MINIMUM SEPARATION DISTANCE OF TWICE THE DEPTH OF THE ROD(S), OR AS INDICATED ON DRAWINGS.
 F. MINIMUM TWO (2) RODS ON THE TOWER RING OR ONE (1) PER LEG WHICHEVER IS LARGER, MINIMUM FOUR (4) RODS ON EVERY EQUIPMENT BUILDING RING WITH ONE AT EACH CORNER OR AS INDICATED. MINIMUM ONE (1) ROD FOR POWER SERVICE GROUNDING ELECTRODE, AND MINIMUM ONE (1) ROD AT END OF EACH RADIAL.

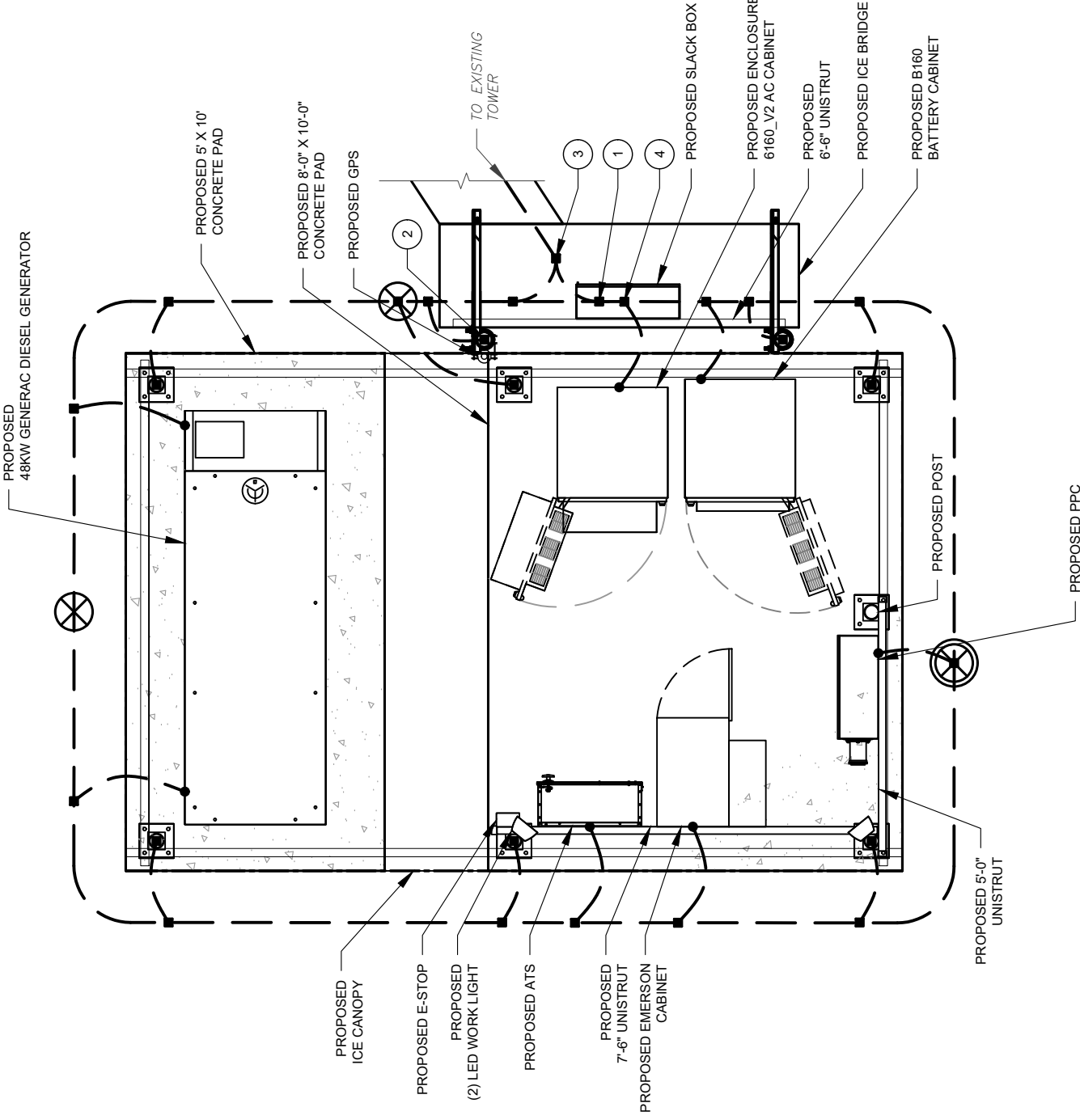
5. **CONDUCTIVE OBJECTS, SUCH AS FENCES, SHALL BE BONDED TO THE GROUNDING SYSTEM IF WITHIN 20' OF THE TOWER GROUNDING SYSTEM, OR 5' OF ANY OTHER GROUNDED COMPONENT.**

GROUNDING PLAN LEGEND:

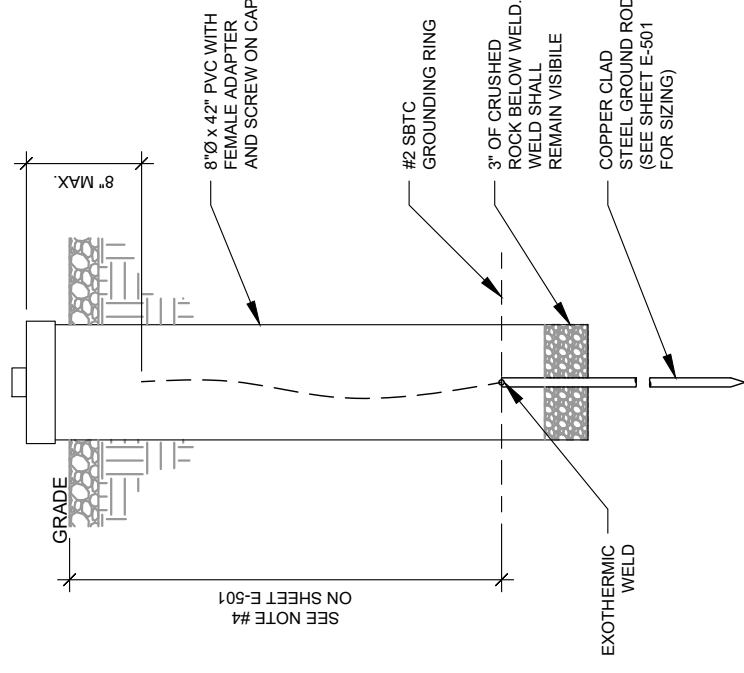


GROUNDING KEYED NOTES:

- 1 BOND TO TOWER GROUND RING
- 2 #2 AWG BOND FROM VERTICAL H-FRAME AND ICE BRIDGE POST TO EXTERNAL GROUND RING (TYP. EVERY POST).
- 3 #2 AWG SBTC BOND FROM TOWER GROUND RING TO EQUIPMENT.
- 4 EQUIPMENT BOND TO GROUND RING (TYP.)



1 **DETAILED GROUNDING PLAN**
 SCALE: N.T.S.

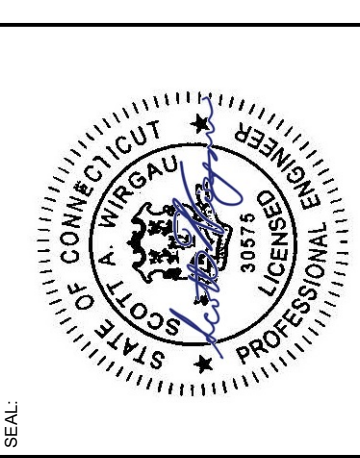


2 **TEST WELL DETAIL**
 SCALE: N.T.S.

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 |
|------|------------------|-----|----------|
| 1 | FOR CONSTRUCTION | VAR | 05/23/25 |
| | | | |
| | | | |
| | | | |
| | | | |

ATC SITE NUMBER: **411188**
 ATC SITE NAME: **SOUTHBURY CT**
 T-MOBILE SITE NAME: **CTNH124A**
 SITE ADDRESS: **111 UPPER FISHROCK RD SOUTHBUURY, CT 06488**



Digitally Signed: 2026-05-27



| | |
|--------------|-------------|
| ATC PROJ. #: | 14932961_D2 |
| CUST. ID: | CTNH124A |
| CUST. #: | CTNH124A |

GROUNDING PLAN AND NOTES

| | | | |
|---------------|--------------|-----------|----------|
| SHEET NUMBER: | E-101 | REVISION: | 0 |
|---------------|--------------|-----------|----------|

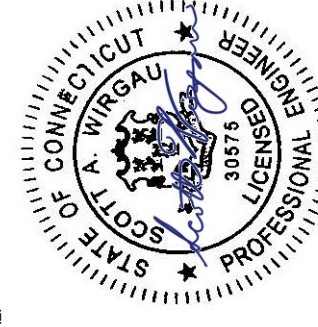


AMERICAN TOWER®
ATC TOWER SERVICES LLC
 1 FENTON MAIN
 SUITE 300
 CARY, NC 27511
 PHONE: (919) 468-0112
 PEC.0001553

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 |
|------|------------------|-----|----------|
| △ | FOR CONSTRUCTION | VAR | 05/23/25 |
| △ | | | |
| △ | | | |
| △ | | | |

ATC SITE NUMBER:
411188
 ATC SITE NAME:
SOUTHBURY CT
 T-MOBILE SITE NAME:
CTNH124A
 SITE ADDRESS:
 111 UPPER FISHROCK RD
 SOUTHBURY, CT 06488



SEAL:

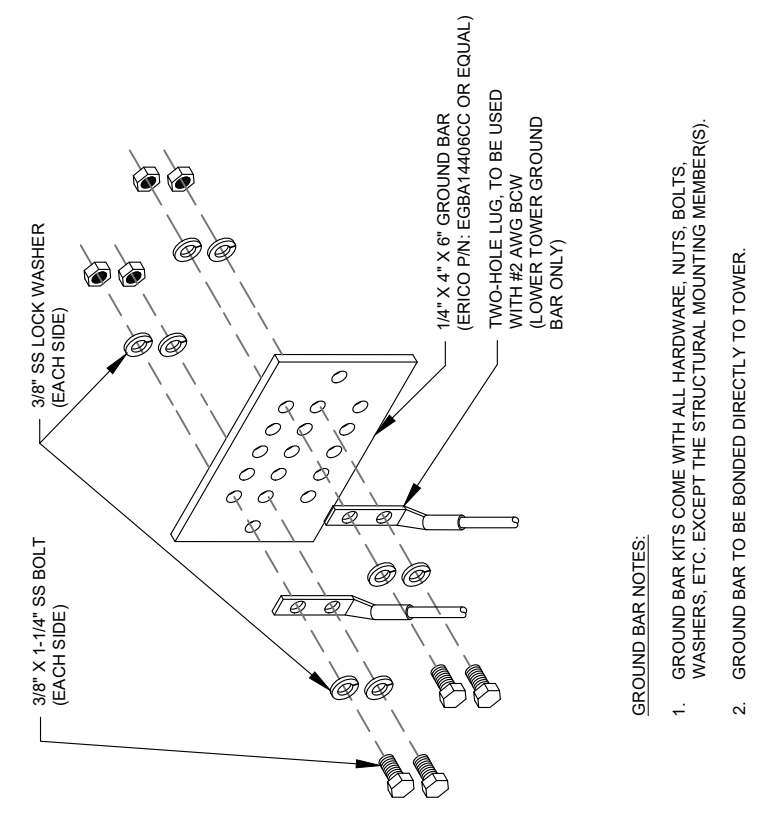
Digitally Signed: 2026-05-27

T-Mobile®

ATC PROJ. #: 14932961_D2
 CUST. ID: CTNH124A
 CUST. #: CTNH124A

GROUNDING DETAILS

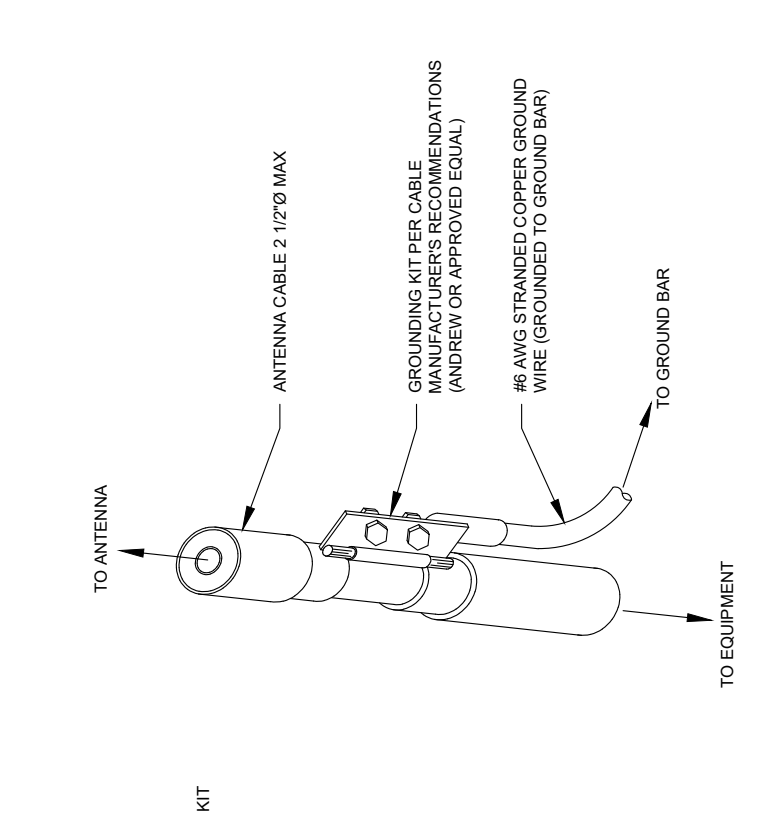
SHEET NUMBER: **E-501**
 REVISION: **0**



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

NOTES:

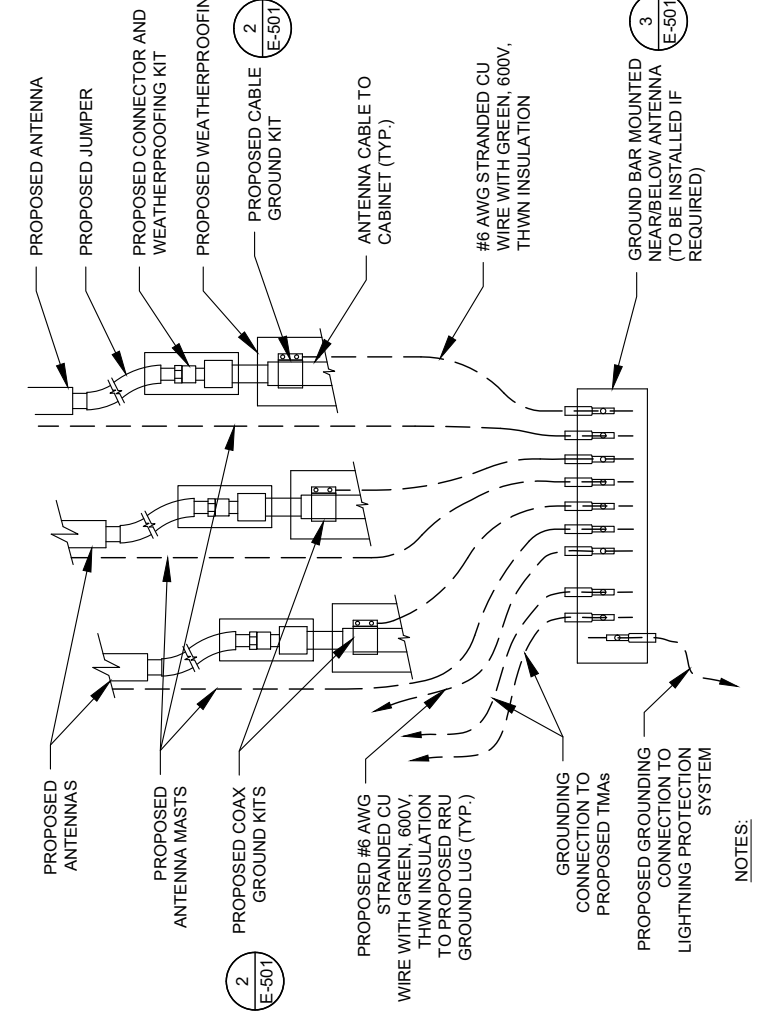
- THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
- SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING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



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

GROUND KIT NOTES:

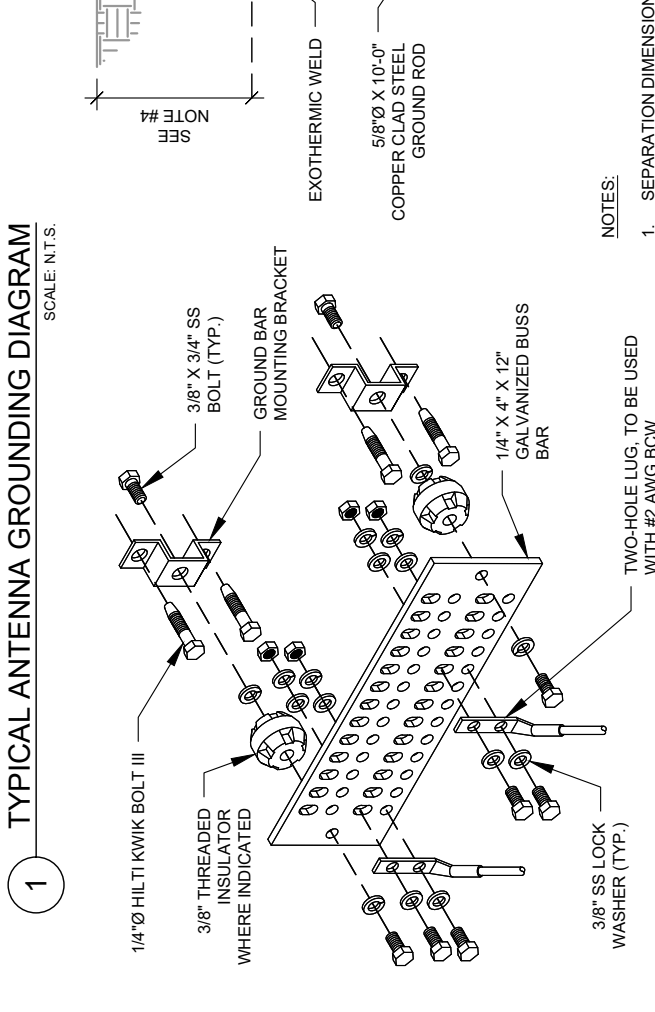
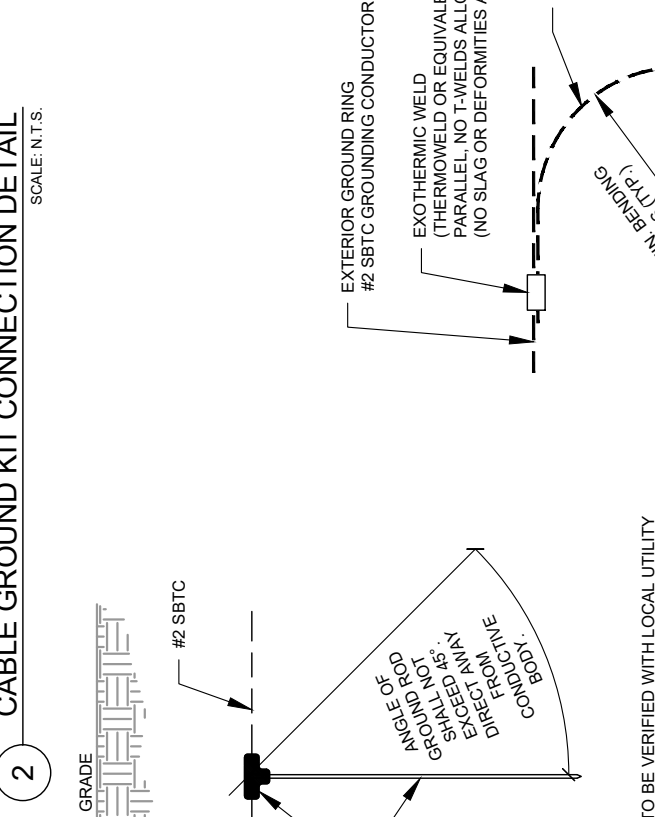
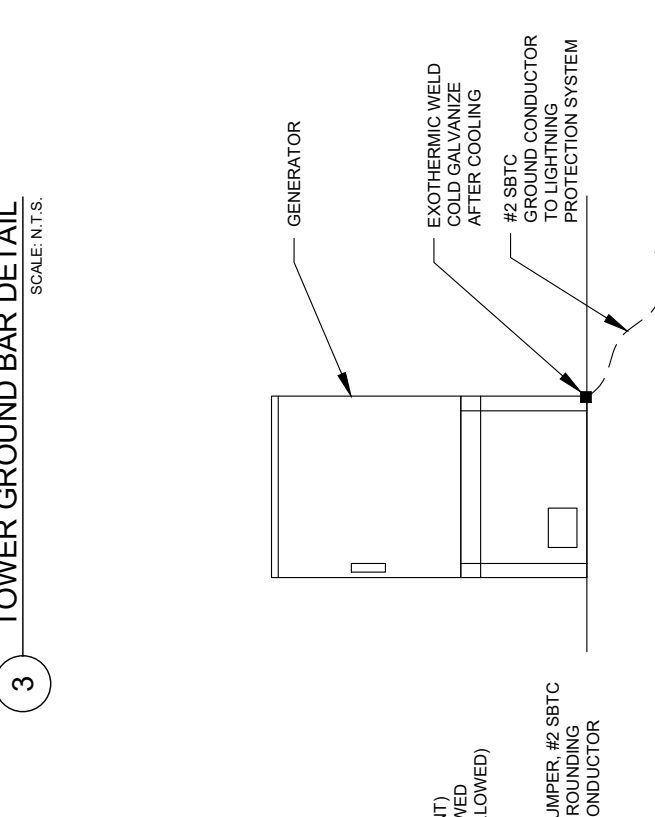
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL TAPE PER MANUFACTURER'S SPECIFICATIONS.



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

GROUND BAR NOTES:

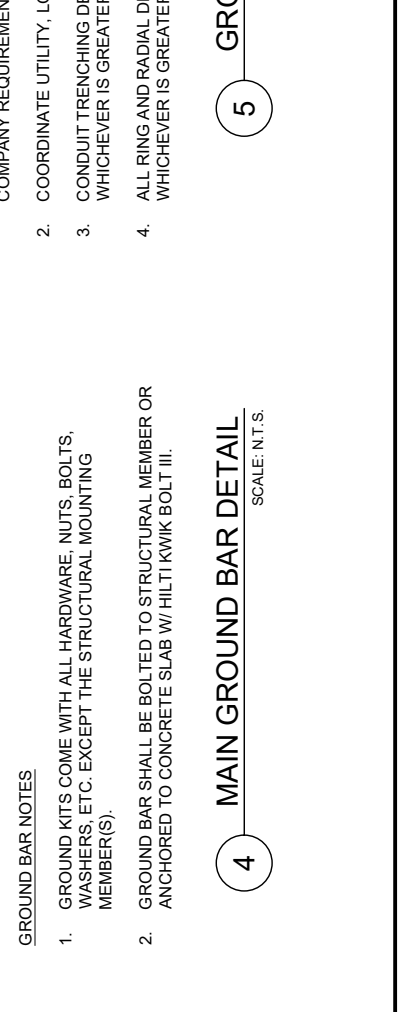
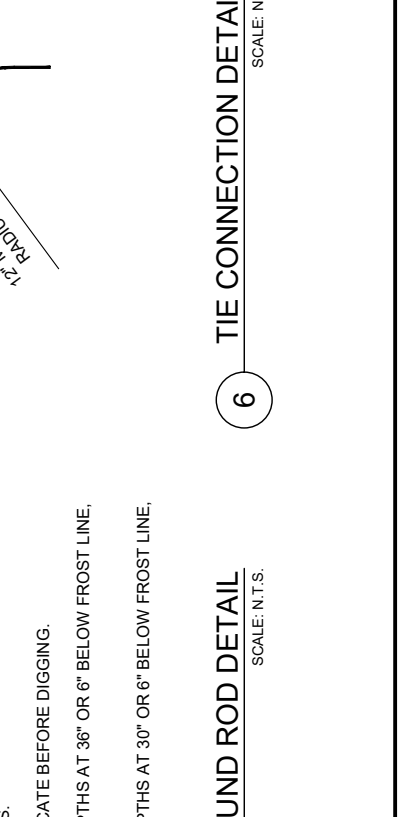
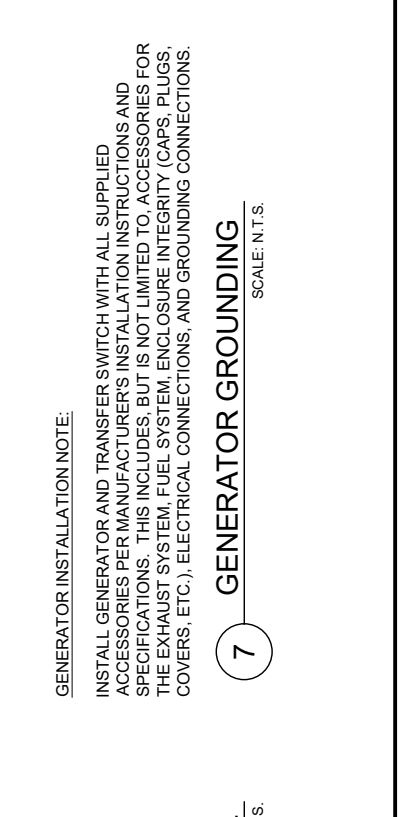
- GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
- GROUND BAR TO BE BONDED DIRECTLY TO TOWER.



6 TIE CONNECTION DETAIL
 SCALE: N.T.S.

GENERATOR INSTALLATION NOTE:

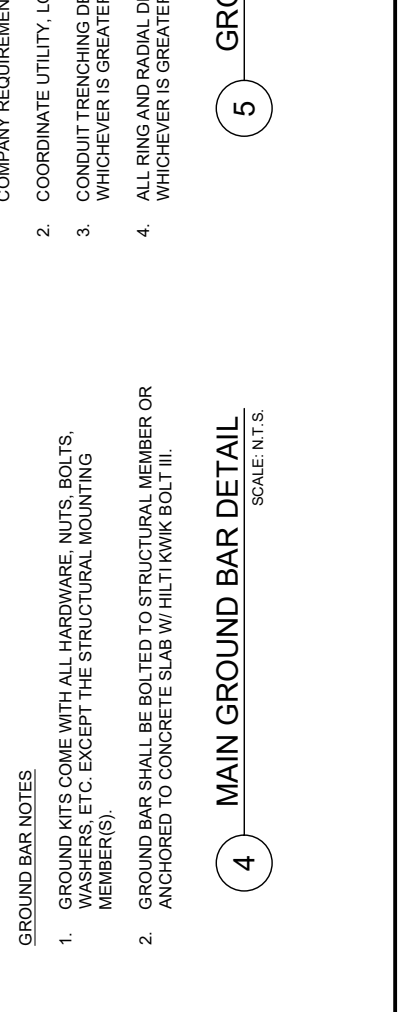
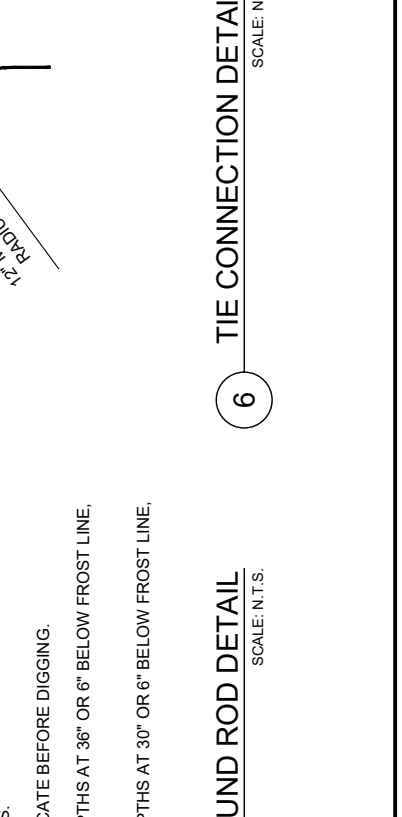
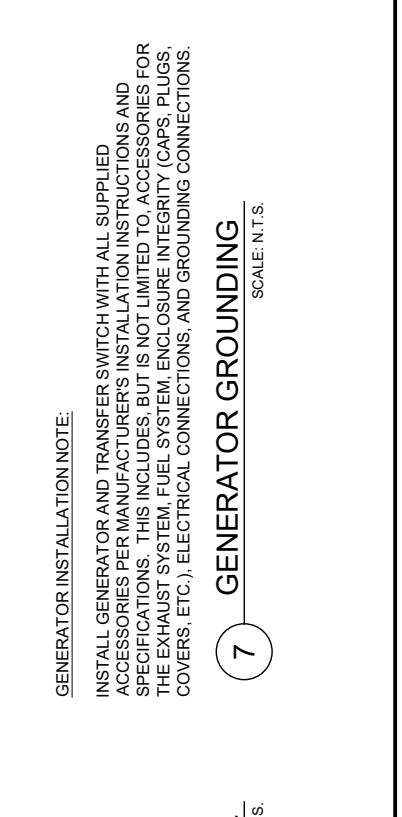
INSTALL GENERATOR AND TRANSFER SWITCH WITH ALL SUPPLIED ACCESSORIES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, ACCESSORIES FOR THE EXHAUST SYSTEM, FUEL SYSTEM, ENCLOSURE INTEGRITY (CAPS, PLUGS, COVERS, ETC.), ELECTRICAL CONNECTIONS, AND GROUNDING CONNECTIONS.



5 GROUND ROD DETAIL
 SCALE: N.T.S.

NOTES:

- SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.
- COORDINATE UTILITY. LOCATE BEFORE DIGGING.
- CONDUIT TRENCHING DEPTHS AT 36" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.
- ALL RING AND RADIAL DEPTHS AT 30" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.



4 MAIN GROUND BAR DETAIL
 SCALE: N.T.S.

GROUND BAR NOTES:

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

7 GENERATOR GROUNDING
 SCALE: N.T.S.

5 GROUND ROD DETAIL
 SCALE: N.T.S.

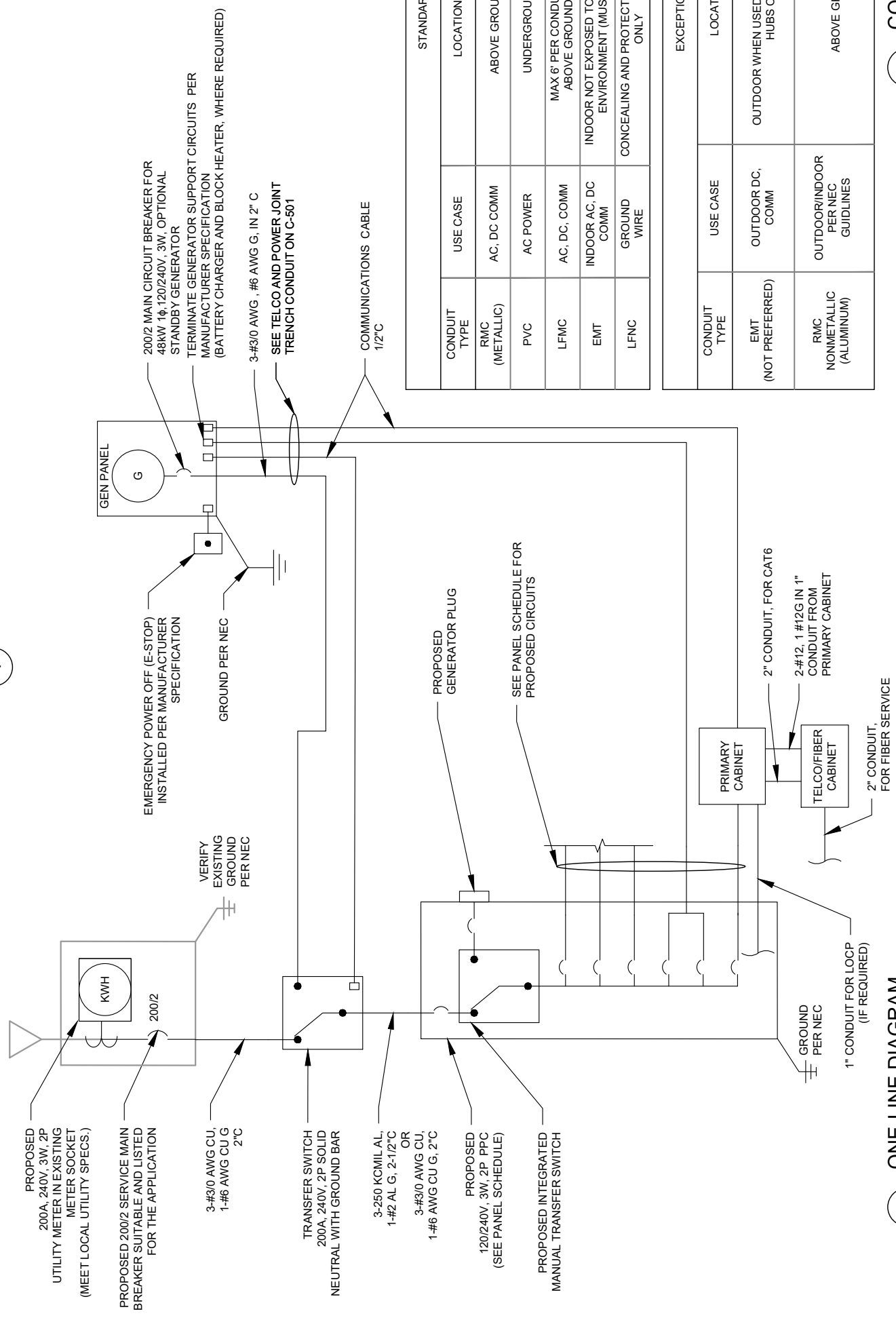
4 MAIN GROUND BAR DETAIL
 SCALE: N.T.S.

NOTE:
 1. ALL EQUIPMENTS' SHORT-CIRCUIT CURRENT RATING SHALL EXCEED AVAILABLE FAULT CURRENT PER UTILITY CONTRACTOR TO INSTALL HANDHOLES AT EVERY 3RD 90° TURN

| | | | | |
|-------------------------------|--|----------------------------|----------------------------------|------------------------------------|
| PANEL DESIGNATION: TMO | | TYPE: LIGHTING & APPLIANCE | SYSTEM: 120/240V, 1Ø, 3W, 24 CKT | LOCATION: TMO LEASE EQUIPMENT AREA |
| MOUNTING: SURFACE | | ENCLOSURE: NEMA 3R | MAIN BREAKER (MB): 200A | PANEL NOTES: PROPOSED |
| ENCLOSURE: NEMA 3R | | MIN. A.I.C. RATING: N/A | CONNECTED LOAD (KVA): 89 | DEMAND LOAD (KVA): 89 |
| MIN. A.I.C. RATING: N/A | | | | |

| CONNECTED LOAD (KVA) | BRIEF DESCRIPTION | | FEEDER OR BRANCH CIRCUIT | | FEEDER OR BRANCH CIRCUIT | | BRIEF DESCRIPTION | | CONNECTED LOAD (KVA) | | | | | | | |
|----------------------|-------------------|-------------------|--------------------------|-------|--------------------------|-------|-------------------|-------------|----------------------|------|-----|-------|---|----|------------|------------|
| | A | B | AMPS | POLES | WIRE | COND. | POLE NO. | CIRCUIT NO. | POLES | AMPS | | | | | | |
| 0.01 | 0.01 | SURGE | 60 | 2 | 3-#6 | #10 | 1 | 3 | 2 | 1/2" | #12 | 2-#12 | 1 | 20 | 0.18 | 0.50 |
| 7.50 | 7.50 | ENCLOSURE 6160 V2 | 150 | 2 | 2-#3/0 | #6 | 2 | 7 | 6 | 1/2" | #12 | 2-#12 | 1 | 20 | 0.15 | 0.00 |
| 0.00 | 0.00 | | | | | | 9 | 7 | 8 | | | | | | 0.00 | 0.00 |
| 0.00 | 0.00 | | | | | | 11 | 9 | 10 | | | | | | 0.00 | 0.00 |
| 0.00 | 0.00 | | | | | | 13 | 11 | 12 | | | | | | 0.00 | 0.00 |
| 0.00 | 0.00 | | | | | | 15 | 13 | 14 | | | | | | 0.00 | 0.00 |
| 0.00 | 0.00 | | | | | | 17 | 15 | 16 | | | | | | 0.00 | 0.00 |
| 0.00 | 0.00 | | | | | | 19 | 17 | 18 | | | | | | 0.00 | 0.00 |
| 0.00 | 0.00 | | | | | | 21 | 19 | 20 | | | | | | 0.00 | 0.00 |
| 0.00 | 0.00 | | | | | | 23 | 21 | 22 | | | | | | 0.00 | 0.00 |
| 7.5 | 7.5 | | | | | | TOTAL | 23 | 24 | | | | | | 0.3 | 0.5 |

1 PANEL SCHEDULE



2 ONE-LINE DIAGRAM

| STANDARD CONDUIT USE TABLE | | |
|----------------------------|--------------------|---|
| CONDUIT TYPE | USE CASE | LOCATION |
| RMC (METALLIC) | AC, DC COMM | ABOVE GROUND |
| PVC | AC POWER | UNDERGROUND |
| LFMC | AC, DC, COMM | MAX 6" PER CONDUIT RUN, ABOVE GROUND ONLY |
| EMT | INDOOR AC, DC COMM | INDOOR NOT EXPOSED TO THE OUTDOOR ENVIRONMENT (MUST BE DRY) |
| LFNC | GROUND WIRE | CONCEALING AND PROTECTING BTOW RISERS ONLY |

| EXCEPTION CONDUIT USE TABLE | | |
|-----------------------------|-----------------------------------|---|
| CONDUIT TYPE | USE CASE | LOCATION |
| EMT (NOT PREFERRED) | OUTDOOR DC, COMM | OUTDOOR WHEN USED WITH WATERTIGHT HUBS ONLY |
| RMC NONMETALLIC (ALUMINUM) | OUTDOOR/INDOOR PER NEC GUIDELINES | ABOVE GROUND |

| CONDUIT USE TABLE | | |
|-------------------|--------------------|---|
| CONDUIT TYPE | USE CASE | LOCATION |
| RMC (METALLIC) | AC, DC COMM | ABOVE GROUND |
| PVC | AC POWER | UNDERGROUND |
| LFMC | AC, DC, COMM | MAX 6" PER CONDUIT RUN, ABOVE GROUND ONLY |
| EMT | INDOOR AC, DC COMM | INDOOR NOT EXPOSED TO THE OUTDOOR ENVIRONMENT (MUST BE DRY) |
| LFNC | GROUND WIRE | CONCEALING AND PROTECTING BTOW RISERS ONLY |

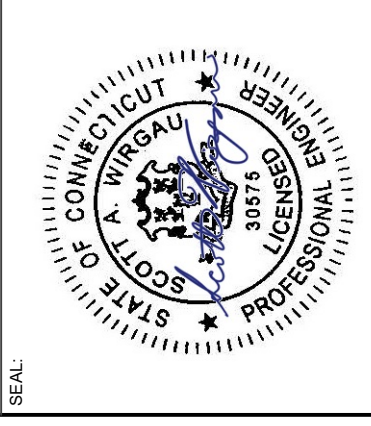
3 CONDUIT USE TABLES

AMERICAN TOWER®
ATC TOWER SERVICES LLC
 1 FENTON MAIN
 SUITE 300
 CARY, NC 27511
 PHONE: (919) 468-0112
 PEC.0001553

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 |
|------|------------------|-----|----------|
| △ | FOR CONSTRUCTION | VAR | 05/23/25 |
| △ | | | |
| △ | | | |
| △ | | | |

ATC SITE NUMBER: **411188**
 ATC SITE NAME: **SOUTHBURY CT**
 T-MOBILE SITE NAME: **CTNH124A**
 SITE ADDRESS: **111 UPPER FISHROCK RD SOUTHBURY, CT 06488**



Digitally Signed: 2026-05-27



| | |
|--------------|-------------|
| ATC PROJ. #: | 14832961_D2 |
| CUST. ID: | CTNH124A |
| CUST. #: | CTNH124A |

PANEL SCHEDULE & ONE-LINE DIAGRAM

| | | | |
|---------------|--------------|-----------|----------|
| SHEET NUMBER: | E-601 | REVISION: | 0 |
|---------------|--------------|-----------|----------|

Proposed RAN Equipment

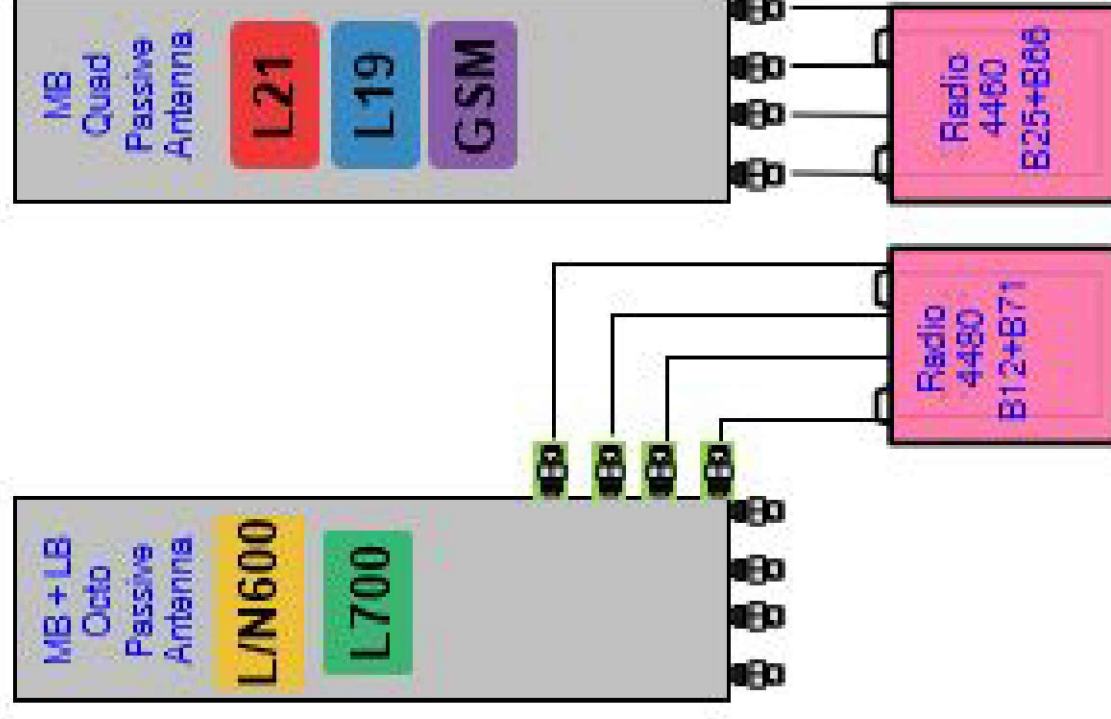
Template: 67E998E 6160

| | | |
|----------------------------|--|--------|
| Enclosure | 1 | 2 |
| Enclosure Type | (Enclosure 6160_V2 AC) | (B160) |
| Baseband | (RP 6651 N600 N1900 L700 L1900 L2100) | |
| Transport System | (CSR IXRe V2 (Gen2)) | |
| Hybrid Cable System | (Hybrid Trunk 6/24 4AWG 100m (x3)) | |

RAN Scope of Work:

3/3/2025:
Per Deborah Chase from NSS_email, RAD center is changed from 124ft to 126ft.
Subject: RE: T-MOBILE @ Southbury CT, 411188 / Customer # (14757611)-CTNH124A
RF Team,
Per my discussion last week with ATC, this project was on hold for RF review due to TMO's proximity to the town's Omni antenna. We will need to shift TMO up by 2 feet to RAD 126' to create the necessary vertical separation. Could you please provide an RFDS updated to RAD 126?
1/22/2025:
Per Matt Bandle, NSS:
We heard from ATC and we have to go 25' for the extension because there is an omni. RFDS and Atoll have been updated to 124'
9/20/2024 - As per RF Region and TMO Market, The proposed AIR6419 will need to be removed from this site, the new proposed configuration will not have Anchor.

1 CABINET CONFIGURATION



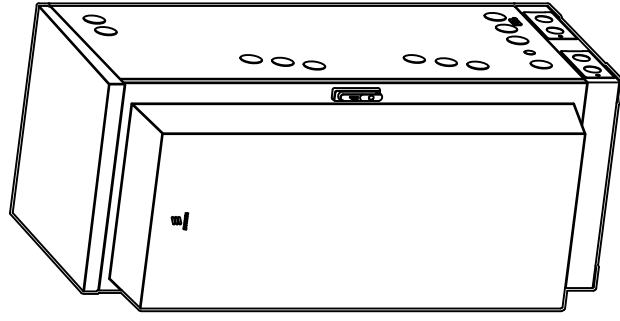
2 ANTENNA CONFIGURATION

SUPPLEMENTAL

SHEET NUMBER: **R-601**
REVISION: **0**

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

| | |
|---------------|--|
| MANUFACTURER: | ERICSSON |
| MODEL: | UT_E6160_AC_V2 - SITE SUPPORT CABINET |
| DIMENSIONS: | 63" x 25.6" x 33.46" (H x W x D) |
| WEIGHT: | 434.31 LBS (EMPTY POWER RACK AND USER SPACE) |



2.5" KNOCKOUTS FOR HYBRID OR SPOOL BOX CONDUITS

2.5" KNOCKOUTS FOR 1" RIGID CONDUIT (OPTIONAL MV/MV) (OPTIONAL) ROXTEC RG-M63 OR LIKE GLAND FOR 1/2" OR LARGER MW COAX MAY BE USED

2.5" KNOCKOUTS w/ RIGID CONDUIT, LB CONDUIT BODY FOR BATTERY CABLE. CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

2.5" KNOCKOUTS w/ RIGID CONDUIT, LB CONDUIT BODY FOR ALARM CABLE & TEMP SENSOR ROUTING. CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

2.5" KNOCKOUTS w/ RIGID CONDUIT, LB CONDUIT BODY FOR MV FIBER OPTIC CABLE w/ND POWER. CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

CABINET GROUND POINTS NOT TO BE USED WHEN ADJACENT KO'S ARE TERMINATED WITH HUBS/GLANDS.

REAR VIEW

2.5" KNOCKOUT UNUSED FOR DEDICATED CIRCUIT TO SERVICE OUTLET

2.5" KNOCKOUT w/ RIGID CONDUIT, LB CONDUIT BODY FOR AC POWER. CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

2.5" KNOCKOUT UNUSED FOR DEDICATED CIRCUIT TO SERVICE OUTLET

2.5" KNOCKOUTS w/ RIGID CONDUIT, LR CONDUIT BODY WILL BE USED FOR INTER-BASEBAND CONNECTION, RUNNING CONDUIT TO LEGACY 6131, 6201 ODE OR M/JAC CABINETS FOR 1" CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

CABINET GROUND POINT

CABINET LOWER 4" PLINTH CAN BE REMOVED FOR ADDITIONAL 12" PLINTH

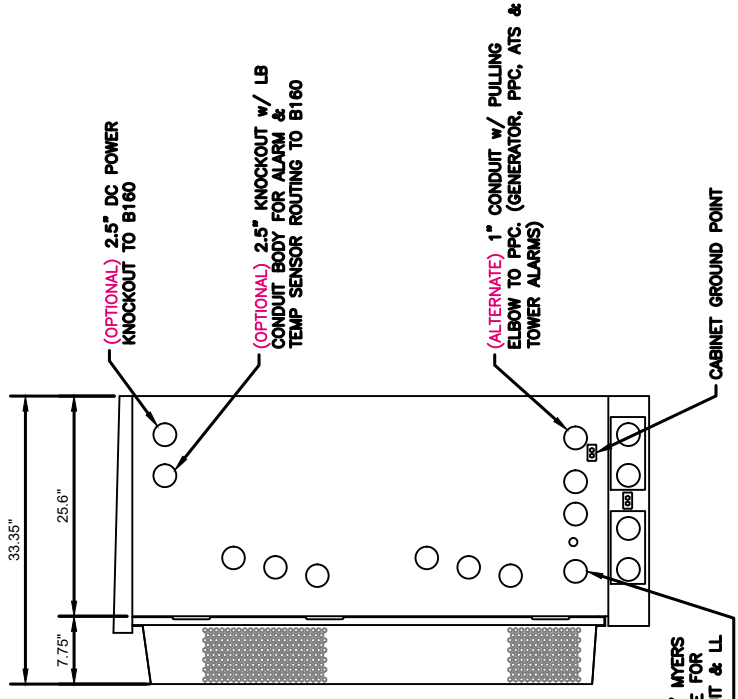
LEFT VIEW

1" LB CONDUIT BODY TO 1" CONDUIT TO PPC. (GENERATOR, PPC, ATS & TOWER ALARMS)

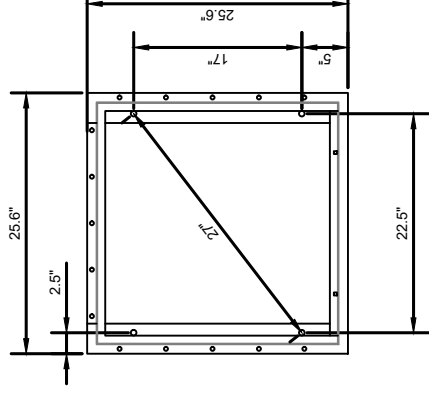
1" LL CONDUIT BODY TO A 2" MYERS HUB w/1" REDUCER & NIPPLE FOR GPS/GNSS w/1" RIGID CONDUIT & LL CONDUIT BODY

(OPTIONAL) ROXTEC RG-M63 OR LIKE GLAND FOR 1/2" OR LARGER GPS COAX MAY BE USED

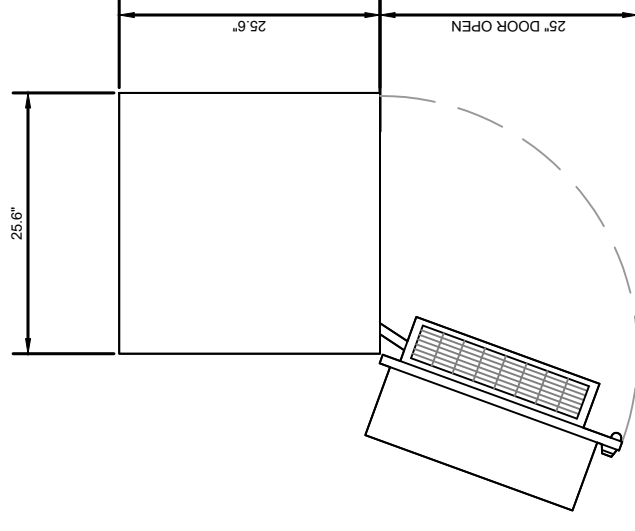
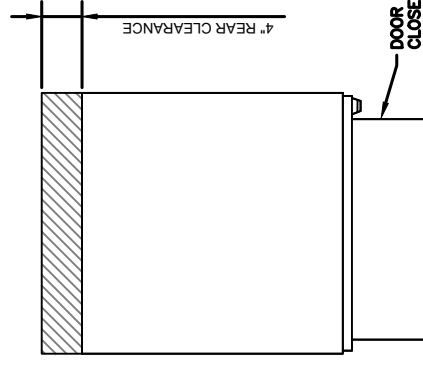
FRONT VIEW



RIGHT VIEW



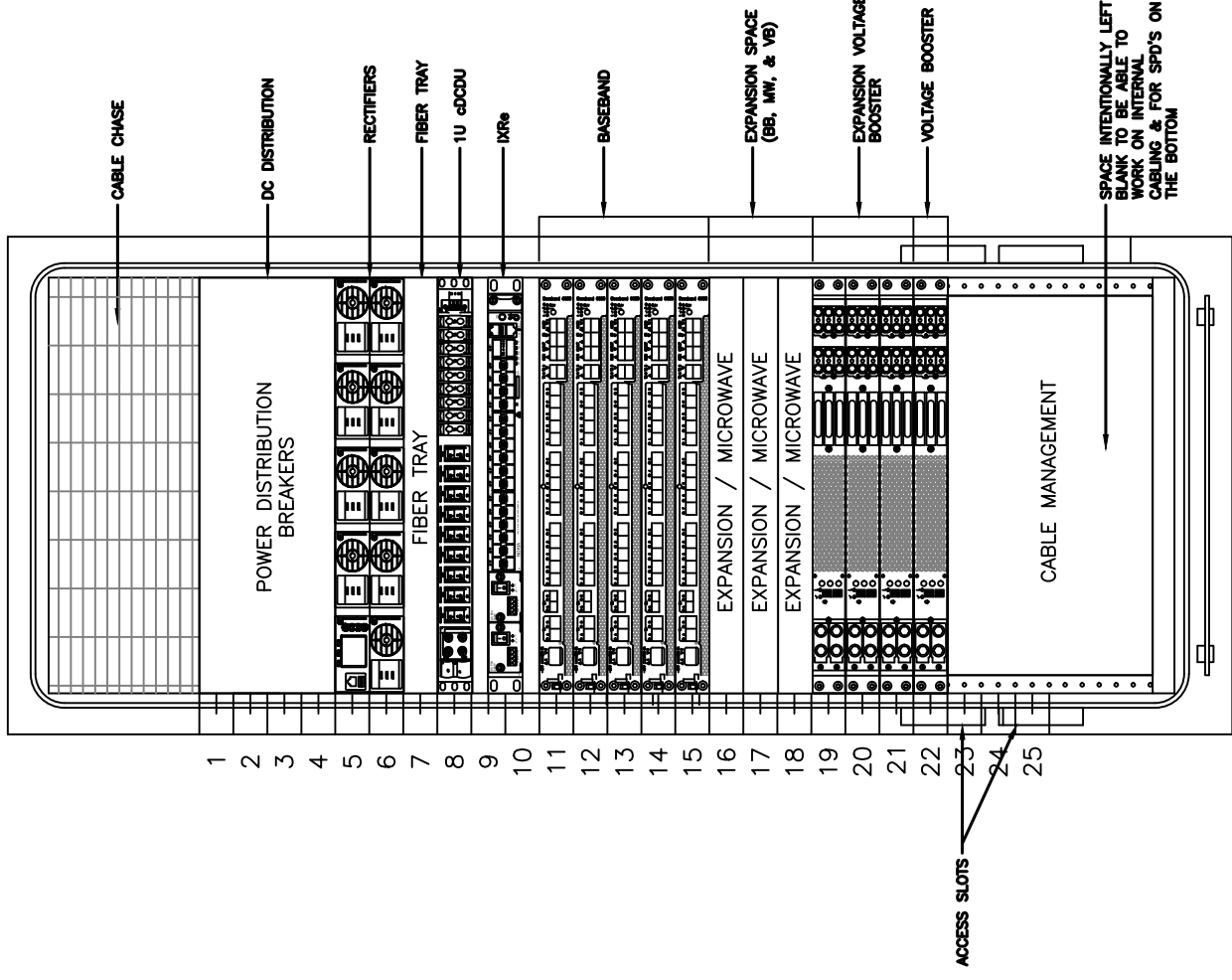
BOLT DOWN PATTERN



PLAN VIEW

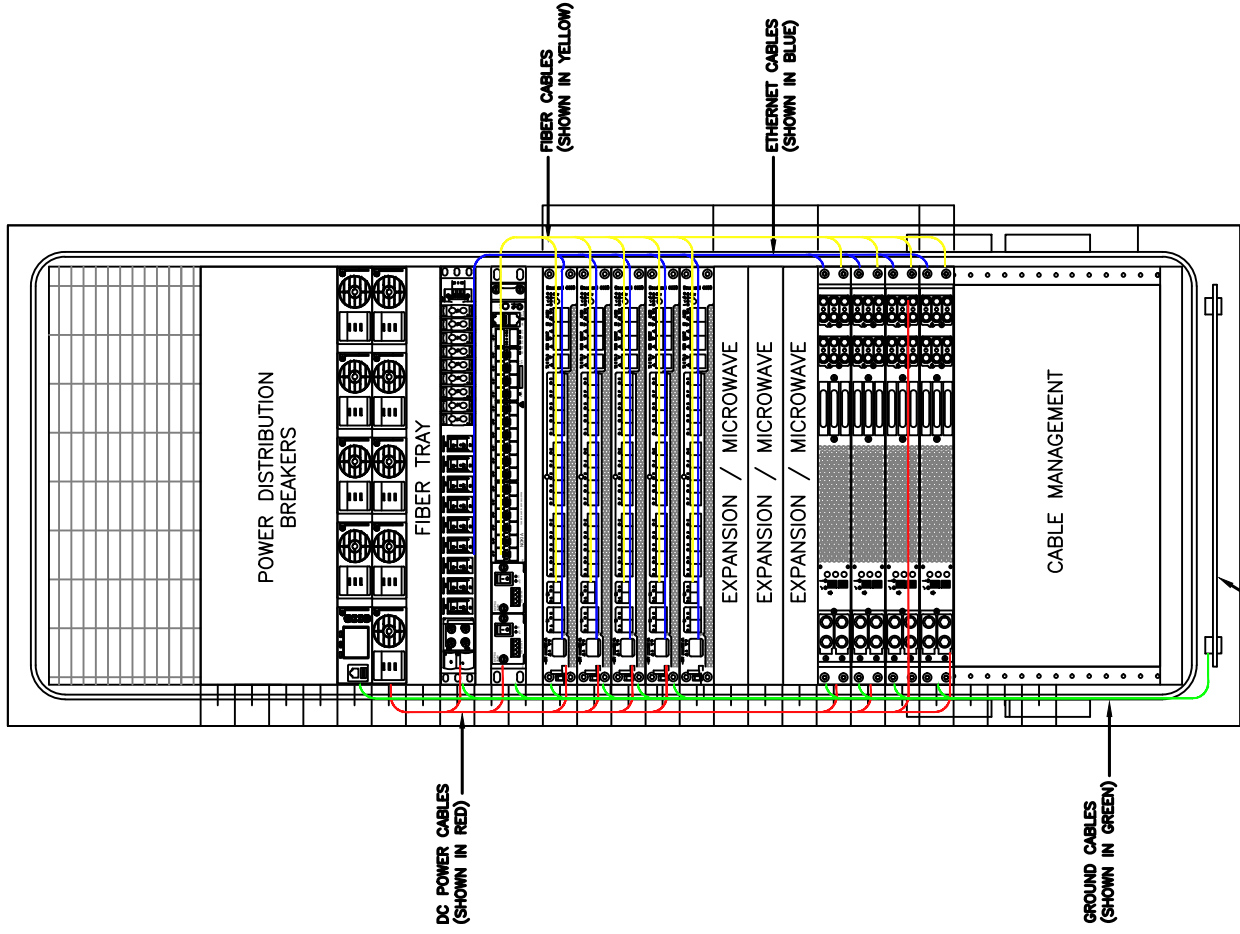
GROUNDING NOTE:
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, w/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."

NOTE:
CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING



FRONT VIEW
(DOOR OPEN)

| RACK ASSIGNMENTS | |
|------------------|-----------------------------|
| RU SLOTS | DESCRIPTION |
| 1 | POWER DISTRIBUTION BREAKERS |
| 2 | |
| 3 | |
| 4 | |
| 5 | RECTIFIER SHELF |
| 6 | |
| 7 | FIBER TRAY |
| 8 | cDCDU |
| 9 | BACKHAUL ROUTER |
| 10 | |
| 11 | 1ST BASEBAND |
| 12 | 2ND BASEBAND |
| 13 | 3RD BASEBAND |
| 14 | 4TH BASEBAND |
| 15 | 5TH BASEBAND |
| 16 | EXPANSION - MICROWAVE |
| 17 | |
| 18 | |
| 19 | EXPANSION / PSU |
| 20 | |
| 21 | VOLTAGE BOOSTER |
| 22 | |
| 23 | OPEN SPACE FOR SPD ACCESS |
| 24 | |
| 25 | |



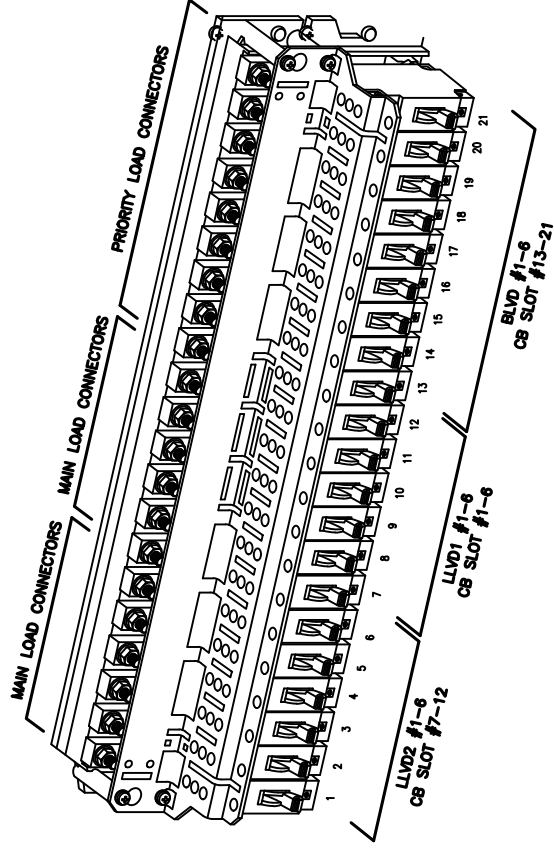
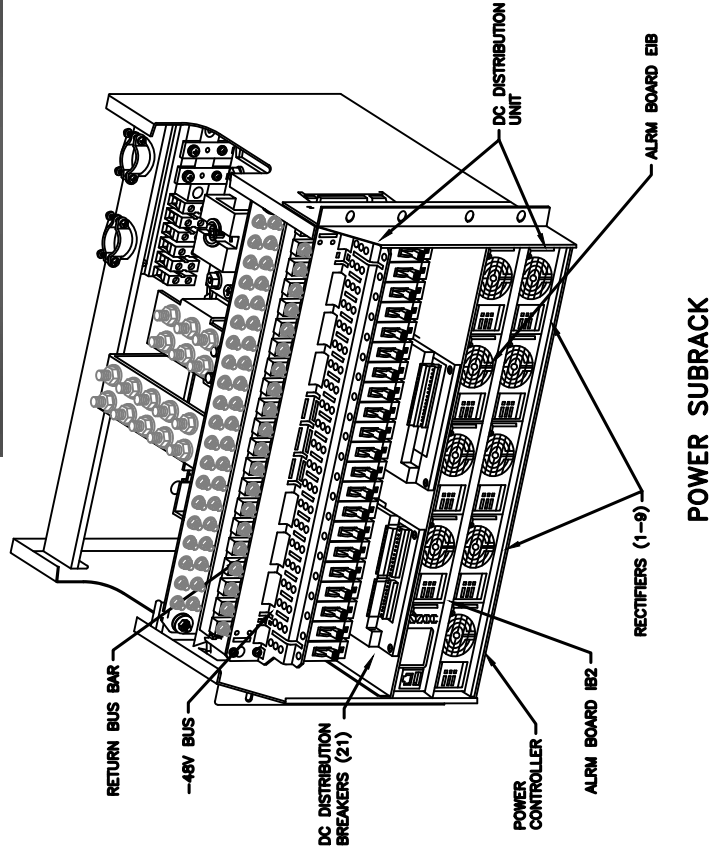
INTERNAL ROUTING
(DOOR OPEN)

NOTE:
THIS IS FOR REFERENCE ONLY. CHECK FOR SPECIFIC DETAIL
IN T-MOBILE CABINET SPECIFIC INSTALLATION GUIDES

| CB SLOT | 3 Sector B12771-Radio 4448 B25966-Radio 4480 B25966-Radio 4480 B25-Radio 4424 B41-Air B413 or B419 | 3 Sector B12771-Radio 4480 B25966-Radio 4480 B41-Air B413 or Radio 68635 | 4 Sector B12771-Radio 4480 B25966-Radio 4480 B41-Air B413 or Radio 68635 | 5 Sector B12771-Radio 4480 B25966-Radio 4480 B41-Air B413 or Radio 68635 (Excitator Only) |
|------------|---|---|---|---|
| 1 | IMPa PS-2* | - | IMPa PS-2* | IMPa PS-2* |
| 2 | B25966 DC-2a | - | B25966 DC-2a | B25966 DC-2a |
| 3 | B25966 DC-2a | B41a | B41a | OR Voltage Booster-7 B25966 DC-1a B25966 DC-2a and 1 |
| 4 | B25966 DC-2a | B41a | B41a | B41a |
| 5 | Voltage Booster-4 B41a, β and γ | OR Voltage Booster-4 B41a, β and γ | OR Voltage Booster-4 B41a, β and γ | Voltage Booster-4 B41a, β and γ |
| 6 | Voltage Booster-4 B41a, β and γ | B41a | B41a | OR Voltage Booster-4 B41a, β and γ |
| 7 | B12771 DC-1a | B12771a | B12771a | Voltage Booster-3 B12771a, β and γ |
| 8 | B12771 DC-1β | OR B12771a, β and γ | OR B12771a, β and γ | OR B12771a, β and γ |
| 9 | B12771 DC-1γ | - | B12771a | - |
| 10 | B12771 DC-2a | - | B12771a | - |
| 11 | B12771 DC-2β | B12771a | B12771a | Voltage Booster-5 B25966 DC-1a B25966 DC-2a |
| 12 | B12771 DC-2γ | OR B25966 DC-1a B25966 DC-2a | OR B25966 DC-1a B25966 DC-2a | OR B25966 DC-1a B25966 DC-2a |
| 13 | IMPa PS-1 | IMPa PS-1 | IMPa PS-1 | IMPa PS-1 |
| 14 | B25966a | Voltage Booster-1 B25966 DC-1a and β B25966 DC-2a | Voltage Booster-1 B25966 DC-1a and β B25966 DC-2a | Voltage Booster-1 B25966 DC-1a and β B25966 DC-2a |
| 15 | B25966 β | OR B25966 DC-2a | OR B25966 DC-2a | OR B25966 DC-2a |
| 16 | B25966 γ | B25966 DC-1β | B25966 DC-1β | - |
| 17 | B25966 γ | B25966 DC-2β | B25966 DC-2β | - |
| 18 | B25966 γ | B25966 DC-2β | B25966 DC-2β | Voltage Booster-2 B25966 DC-1γ B25966 DC-2β and γ |
| 19 | B25966 γ | B25966 DC-2γ | B25966 DC-2γ | B25966 DC-2γ |
| 20 | DCDU (FP1866), (MVA), (MVA), (MVA) | DCDU (FP1866), (MVA), (MVA), (MVA) | DCDU (FP1866), (MVA), (MVA), (MVA) | DCDU (FP1866), (MVA), (MVA), (MVA) |
| 21 | Primary/AVV | Primary/AVV | Primary/AVV | Primary/AVV |

See Breaker Tables for breaker sizes.

* Alpha, β = Beta, γ = Gamma, δ = Delta, ε = Epsilon, ζ = Zeta



POWER SUBRACK

DC DISTRIBUTION

SUPPLEMENTAL

1 ERICSSON 6160 ELECTRICAL DETAILS

SCALE: N.T.S.

SHEET NUMBER:

R-604

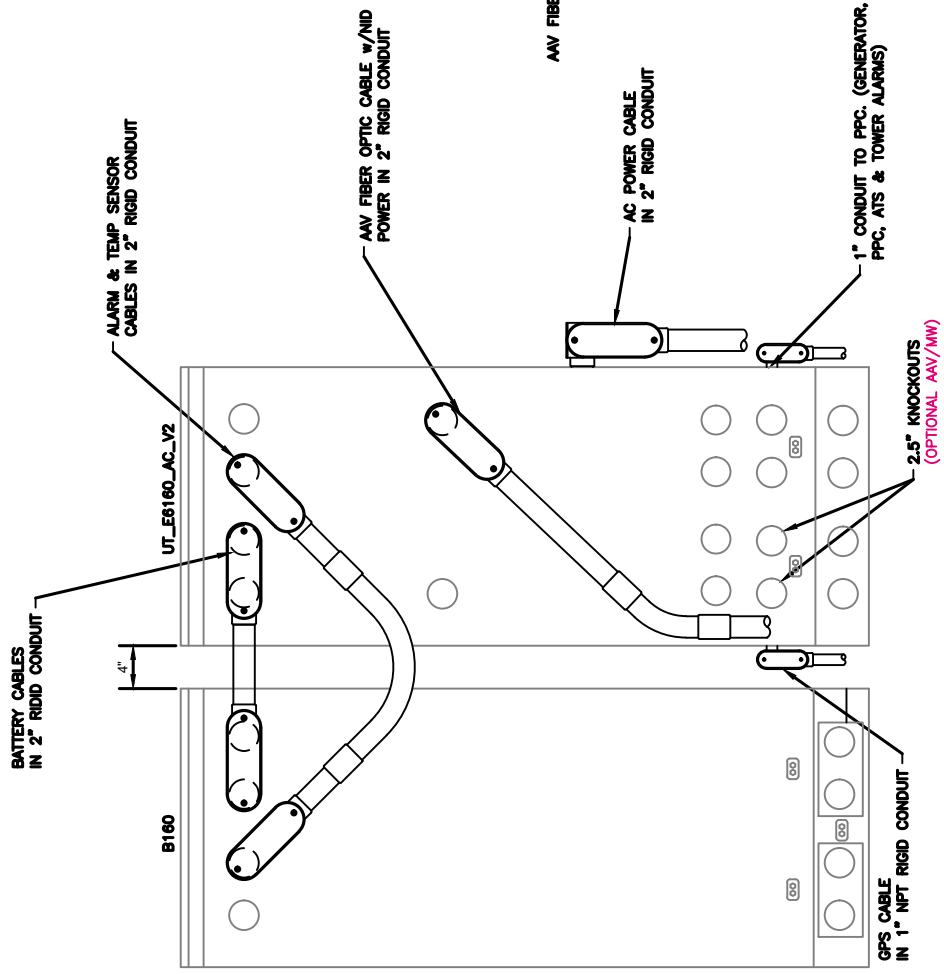
REVISION:

0

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

NOTE:

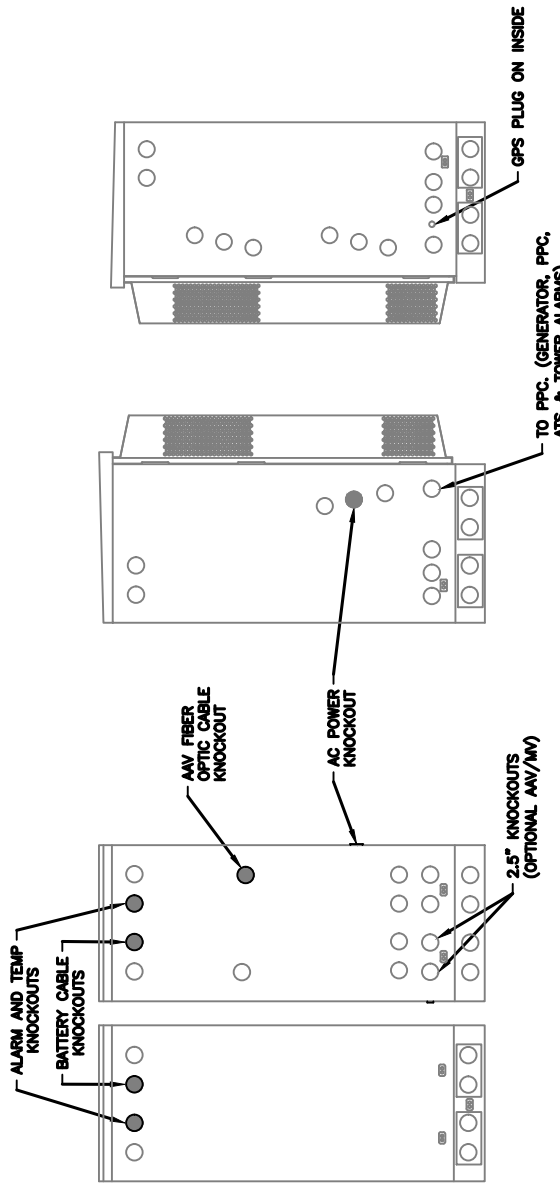
1. ALL CONDUIT AND FITTING ENTRANCES INTO CABINETS AND ENCLOSURES MUST UTILIZE MYERS OR EQUIVALENT HUBS TO PREVENT WATER ENTRY/SEEPAGE INTO CABINETS AND ENCLOSURES.
2. (LIQUIDFLEX) FLEXIBLE METALLIC CONDUIT (LFMC) & ASSOCIATED FITTINGS CAN BE USED AS NEEDED BUT ONLY FOR TIGHT CONDUIT BENDS AND RUNS SUBJECT TO UL AND NEC LIMITATIONS. 6' MAX PER CONDUIT RUN.
3. *DOOR HEX HOOD CLEARANCE MUST BE CONSIDERED WHEN INSTALLING AC POWER CONDUIT BODY TO MYERS HUB BY KEEPING THE CONDUIT BODY AS CLOSE TO THE CABINET AS POSSIBLE.
4. PULLING ELBOWS MAY BE USED IN LIEU OF A CONDUIT BODIES WHEN CLEARANCE IS LIMITED.
5. ALL EXTERNAL ALARM CONDUITS ARE TO TERMINATE AT THE PPC WITH A SINGLE 1" ALARM CONDUIT TO THE UT_E6160_AC_V2.



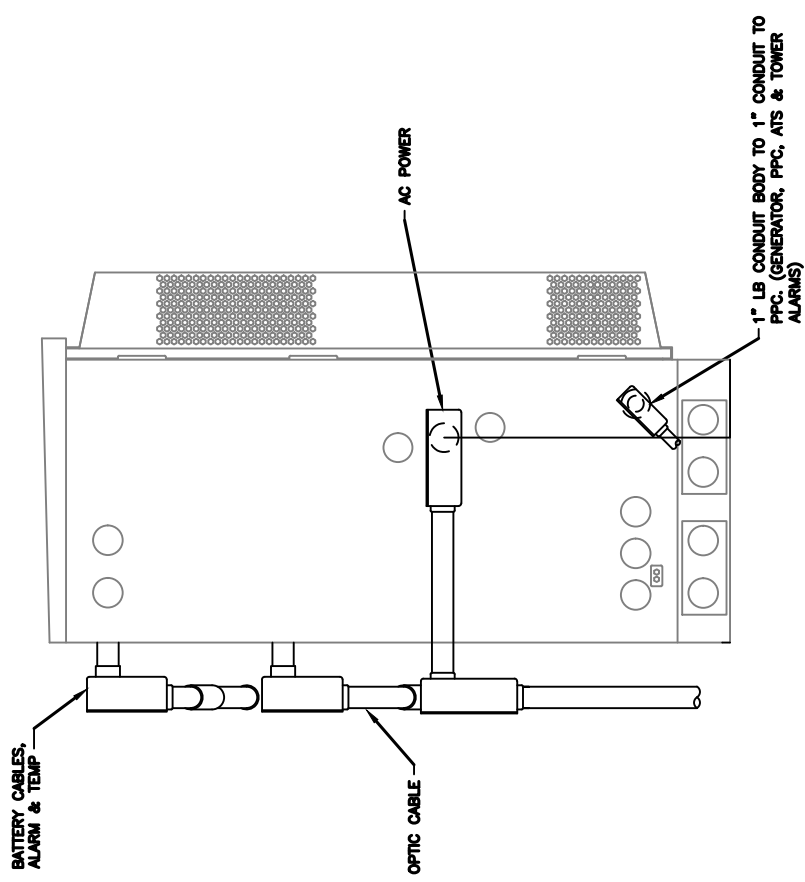
NOTE:
(OPTIONAL) ROXTEC RG-M63 OR LIKE GLAND FOR 1/2" OR LARGER
LARGER IN COAX MAY BE USED

NOTE:
(OPTIONAL) ROXTEC RG-M63 OR LIKE GLAND FOR 1/2" OR LARGER
GPS COAX MAY BE USED

REAR VIEW

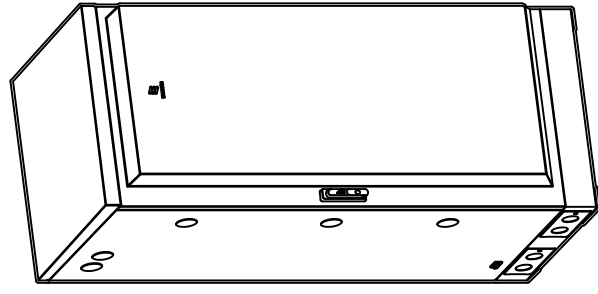


CONDUIT LOCATIONS



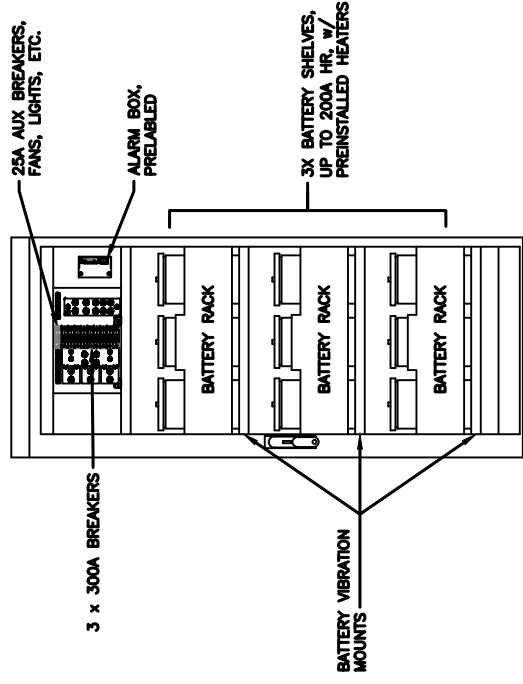
SIDE VIEW

| | |
|---------------|---------------------------------|
| MANUFACTURER: | ERICSSON |
| MODEL: | B160 BATTERY CABINET |
| DIMENSIONS: | 63" x 25.6" x 29.5" (H x W x D) |
| WEIGHT: | 295 LBS (WITHOUT BATTERIES) |

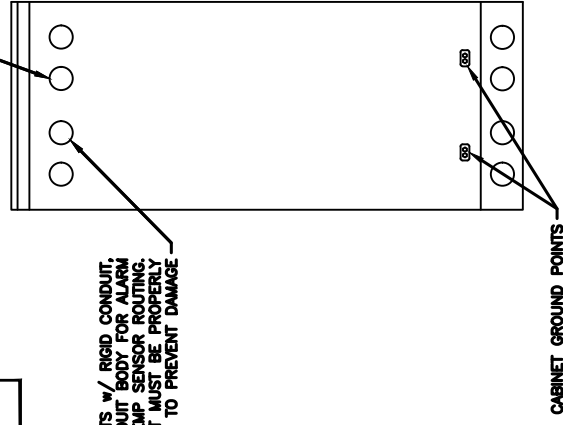


2.5" KNOCKOUTS w/ RIGID CONDUIT, LB CONDUIT BODY FOR ALARM CABLE & TEMP SENSOR ROUTING CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

2.5" KNOCKOUTS w/ RIGID CONDUIT, LB CONDUIT BODY FOR BATTERY CABLE CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

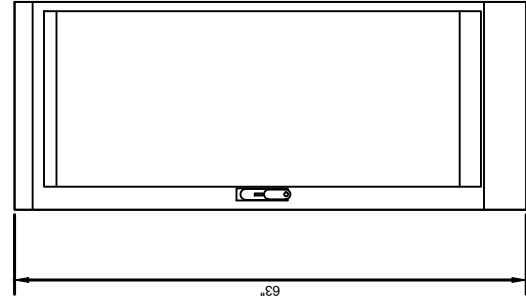


REAR VIEW

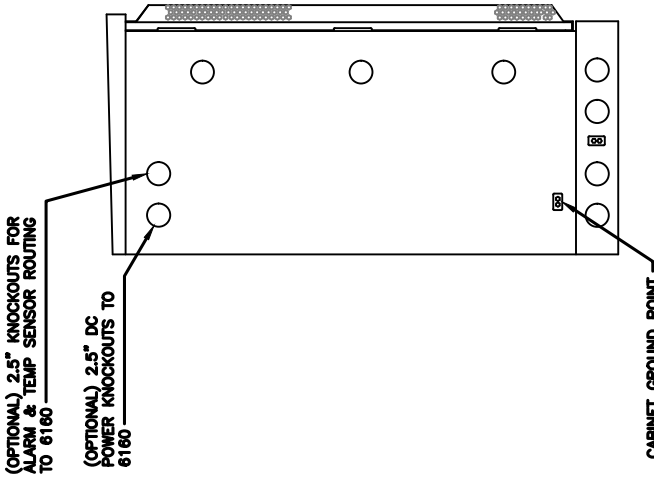


FRONT VIEW (DOOR OPEN)

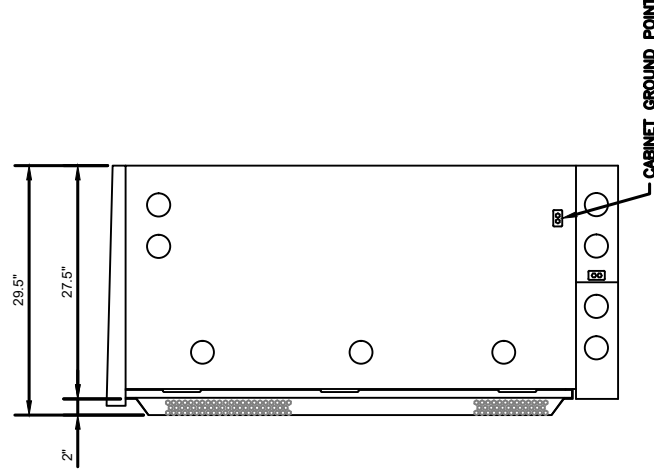
GROUNDING NOTE:
 "CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, w/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."



FRONT VIEW

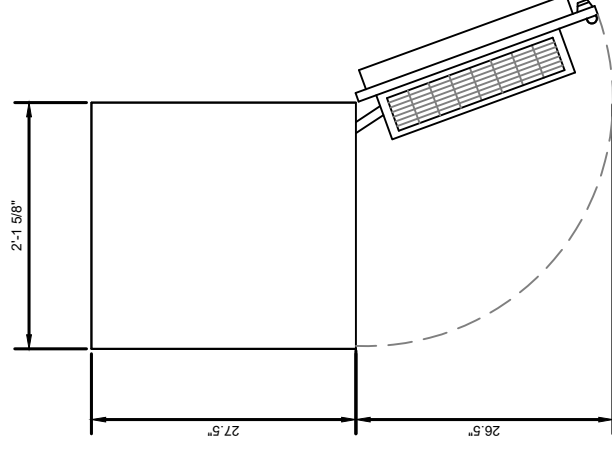
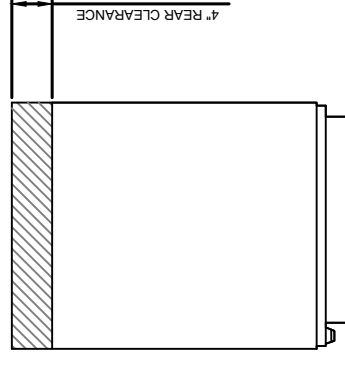


LEFT VIEW



RIGHT VIEW

NOTE:
 • CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
 • CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING



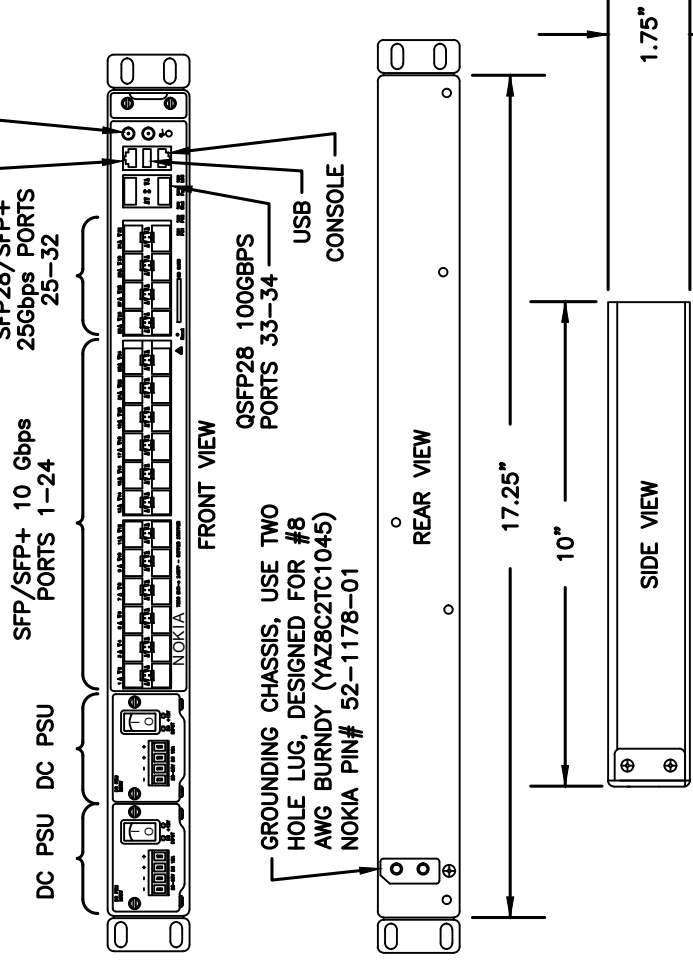
PLAN VIEW

B160 ERICSSON SITE SUPPORT BATTERY CABINET

SUPPLEMENTAL

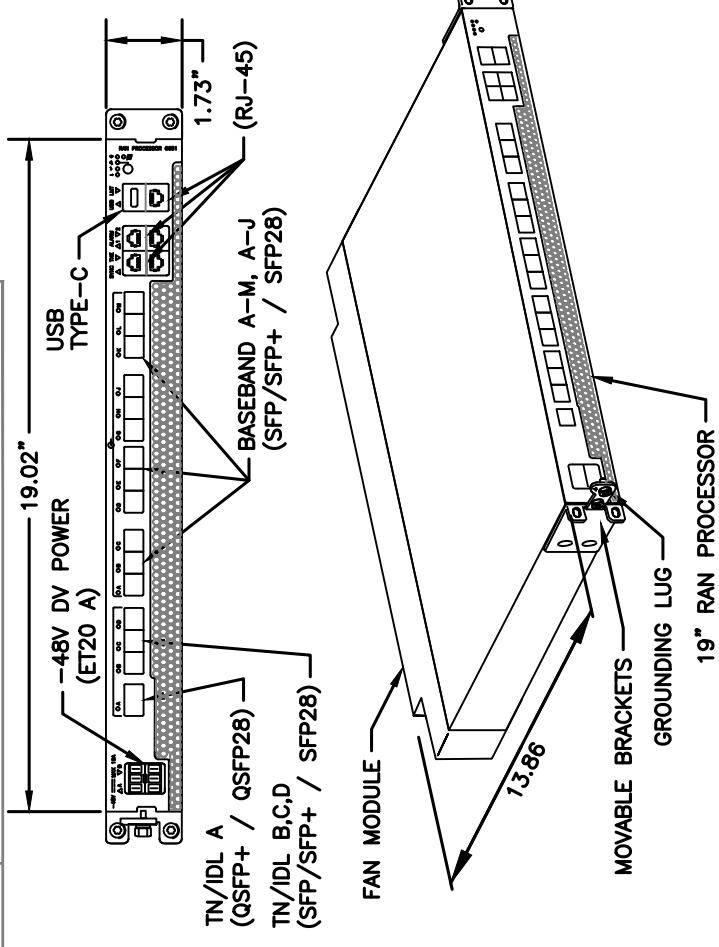
SHEET NUMBER: **R-606**
 REVISION: **0**

| | |
|---------------|---------------------------|
| MANUFACTURER: | NOKIA |
| MODEL: | 3HE15548AA |
| DIMENSIONS: | 17.25" x 10" x 1.75" |
| WEIGHT: | 10.5 LBS (FULLY EQUIPPED) |



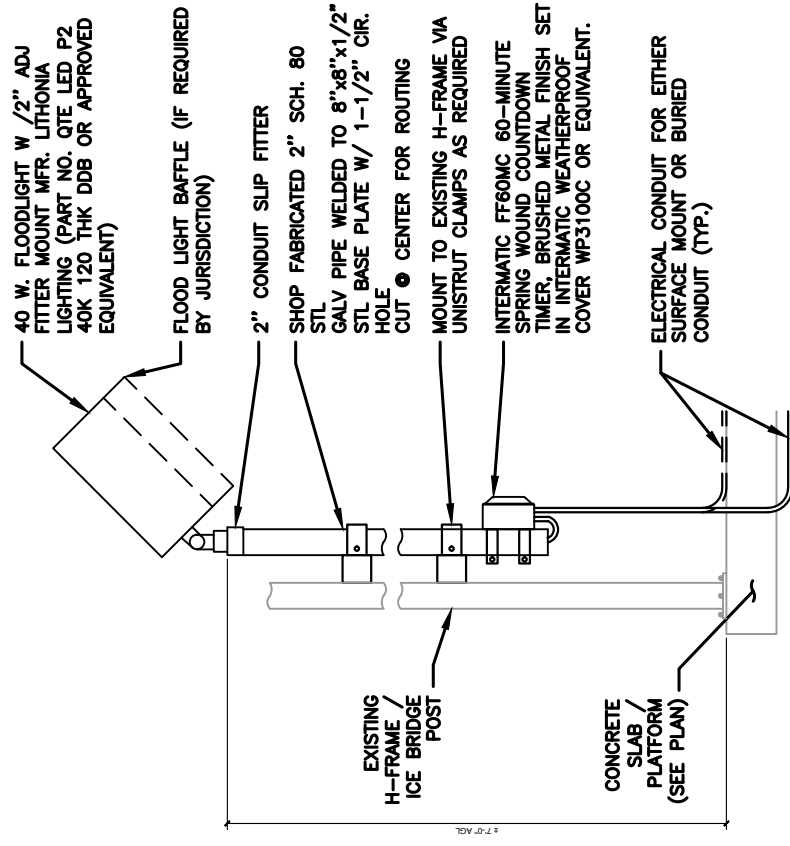
1 34097 - NOKIA 7250 IXR-e ROUTER w/ GNSS

| | |
|---------------|--|
| MANUFACTURER: | ERICSSON |
| MODEL: | 6651 RAN PROCESSOR (KDU1370093/11) |
| DIMENSIONS: | 1.73" X 19.02" X 13.86" (H" X W" X D") |
| WEIGHT: | 16.98 LBS |



2 34553 - ERICSSON 6651 RAN PROCESSOR

SCALE: N.T.S.



3 LIGHT W/ TIMER

SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER:
R-607

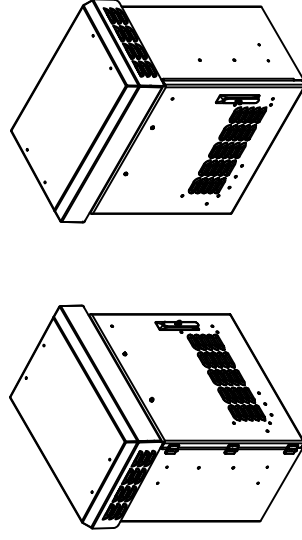
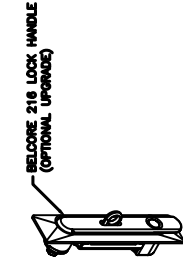
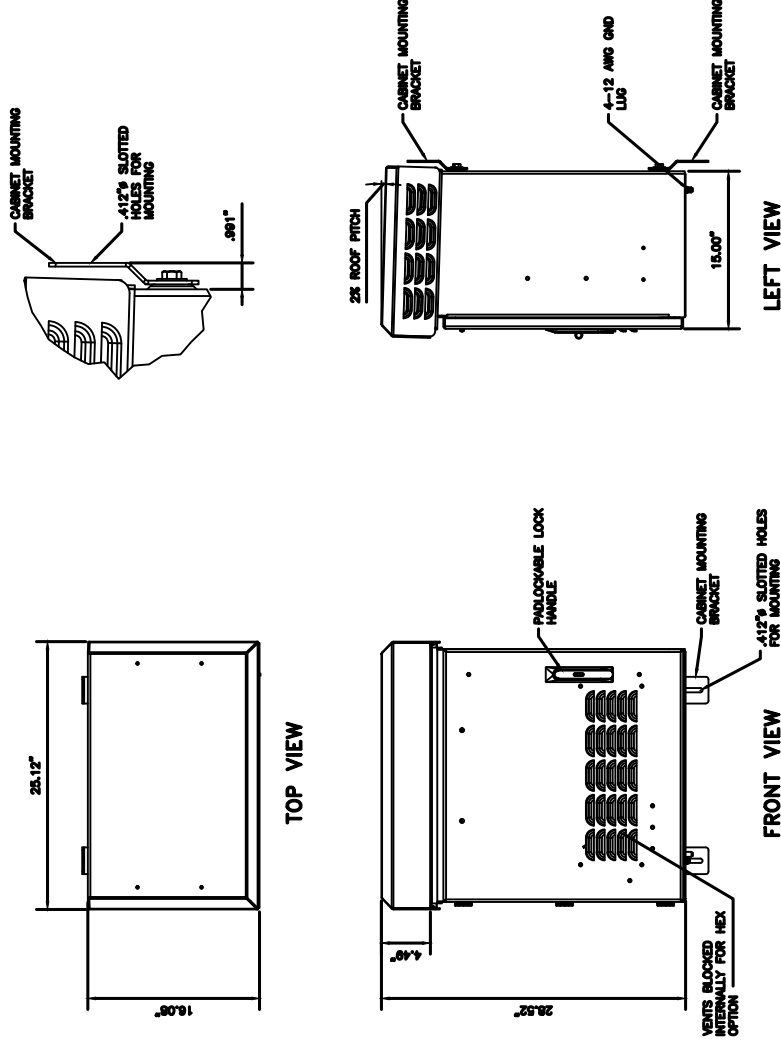
REVISION:
0

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

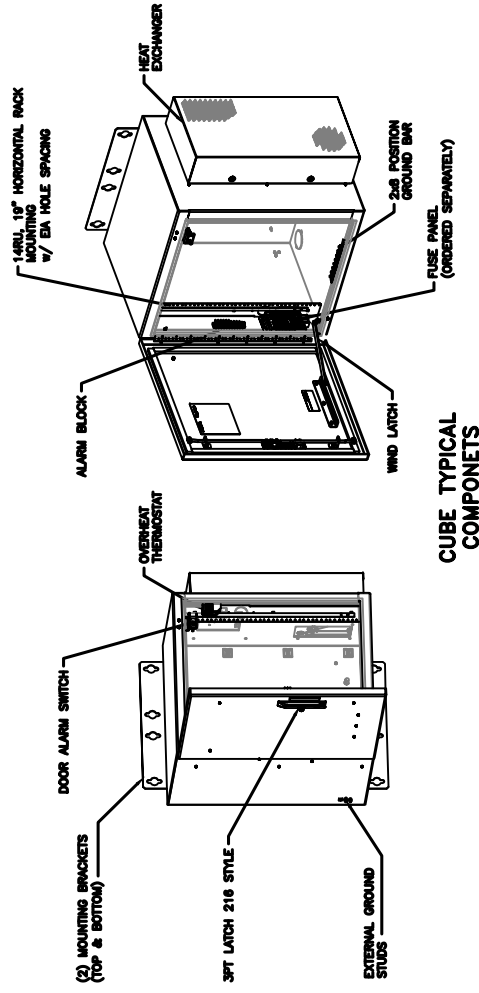
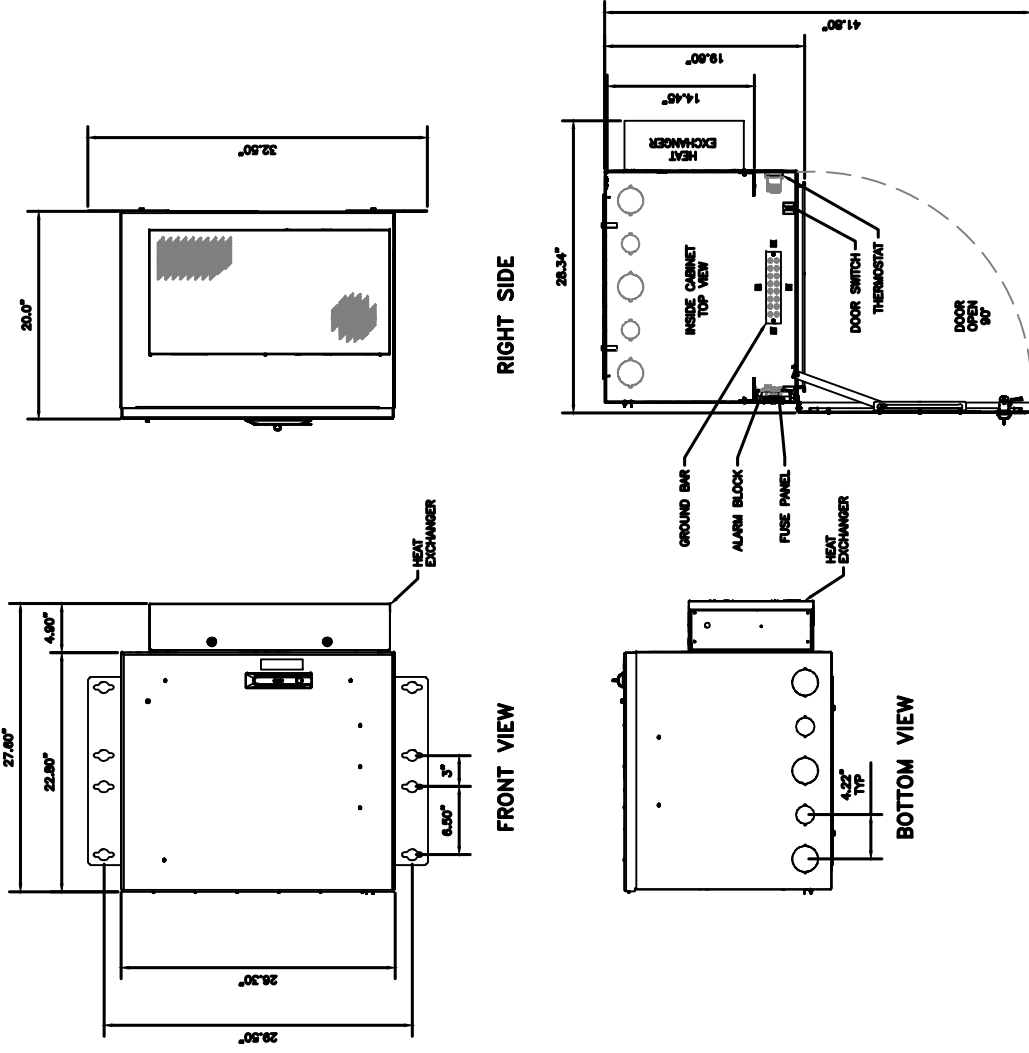
SUPPLEMENTAL

SHEET NUMBER: **R-608**
 REVISION: **0**

| | |
|---------------|--|
| MANUFACTURER: | RAYCAP |
| MODEL#: | RANE-227116-T |
| PARTS: | (1) SURGE PROTECTION DEVICE (STRIKESORB) (3) 30A, 4MM DIN RAIL TERMINAL BLOCK GND BUS BAR TERMINAL BLOCK END COVER (4) DIN RAIL END STOP |
| DIMENSIONS: | 26.52" x 25.12" x 16.06" (H x W x D) |
| WEIGHT: | 46.24 LBS (WITHOUT EQUIPMENT) |
| MOUNTS: | STANDARD H-FRAME MOUNT (COMES WITH) |



| | |
|---------------------------|---|
| MANUFACTURER: | CHARLES |
| MODEL: | LT-RL1003AB-A |
| DIMENSIONS: | 26.30" x 27.60" x 20.0" (H x W x D) |
| WEIGHT: | 90 LBS |
| KITS & REPLACEMENT PARTS: | H- FRAME MOUNTING KIT: 97-001971-0 POLE MOUNTING KIT: 97-CABRMTRK PAD MOUNTING KIT w/ PLINTH: 97-002127-A OPTIONAL FUSE PANEL: 96-FSPNL4824V |

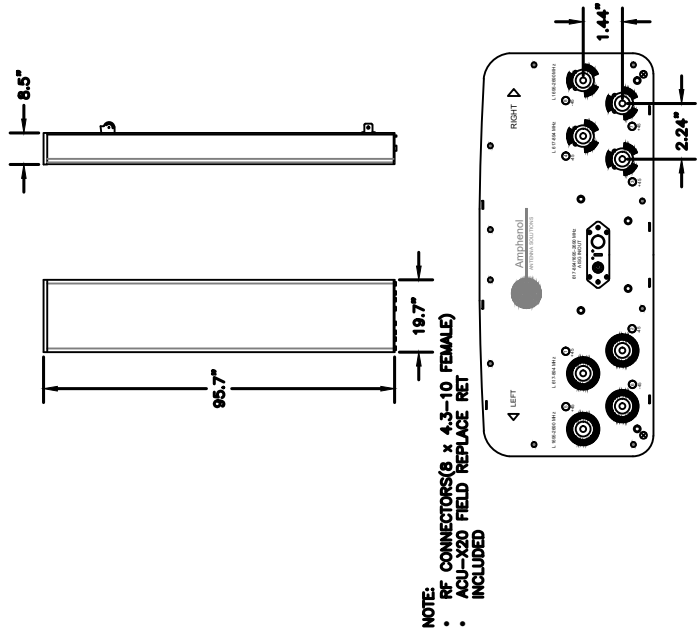


1 34576 - CHARLES RL1003AB-A ENCLOSURE
 SCALE: N.T.S.

2 34603 - RAYCAP RANE-227116-T AAV ENCLOSURE
 SCALE: N.T.S.

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

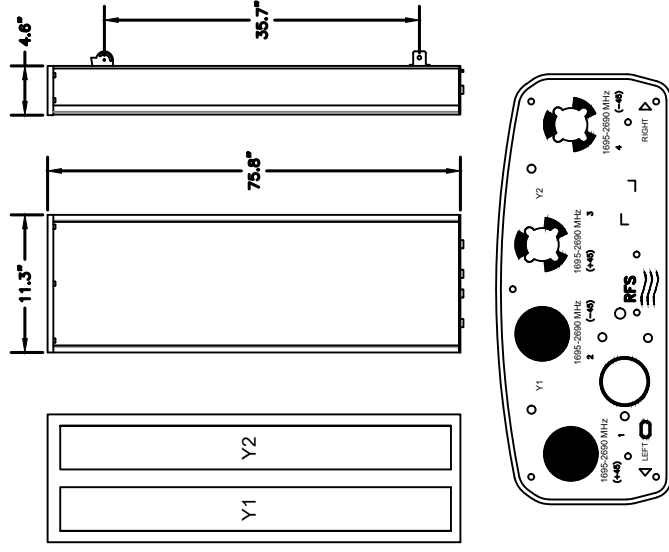
| | |
|---------------|---|
| MANUFACTURER: | AMPHENOL |
| MODEL: | APXVALL24M-U-J20 |
| DIMENSIONS: | 95.7" x 19.7" x 8.5" (H x W x D) |
| WEIGHT: | 86 LB |
| BAND: | MID BAND (5-8 PORT) |
| MOUNTING KIT: | APM40-SE BEAM TILT KIT & APM40-E10T (19.4 LBS) INCLUDED |



1 34877 - RFS APXVALL24M-U-J20

SCALE: N.T.S.

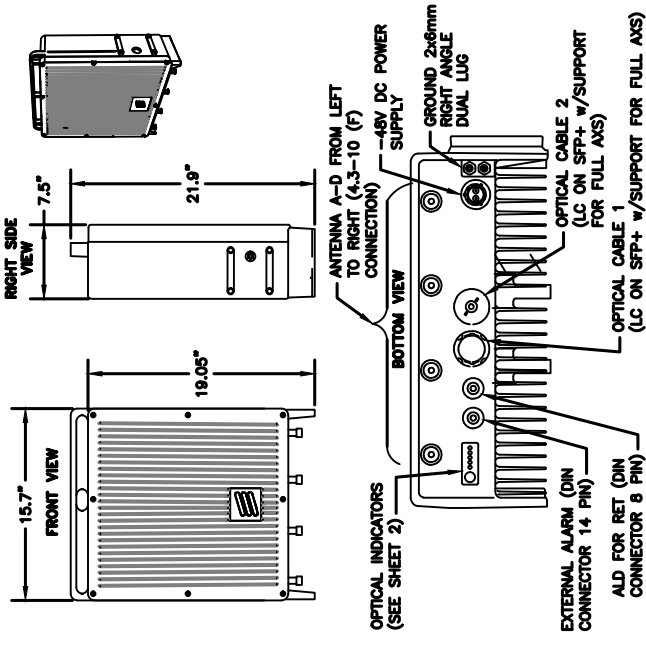
| | |
|----------------------|--|
| MANUFACTURER: | RFS |
| MODEL: | APXVLL19P_43-C-A20 |
| DIMENSIONS: | 75.8" x 11.3" x 4.6" H x W x D |
| WEIGHT: | 40.9 LBS |
| CONNECTOR TYPE: | 4 x 4.3-10 FEMALE/BOTTOM + 2 AISG CONNECTORS (1 MALE, 1 FEMALE) |
| MOUNTING KIT WEIGHT: | 7.49 LBS (APM40-2 BEAM TILT KIT) |



4 34403 - RFS APXVLL19P_43-C-A20

SCALE: N.T.S.

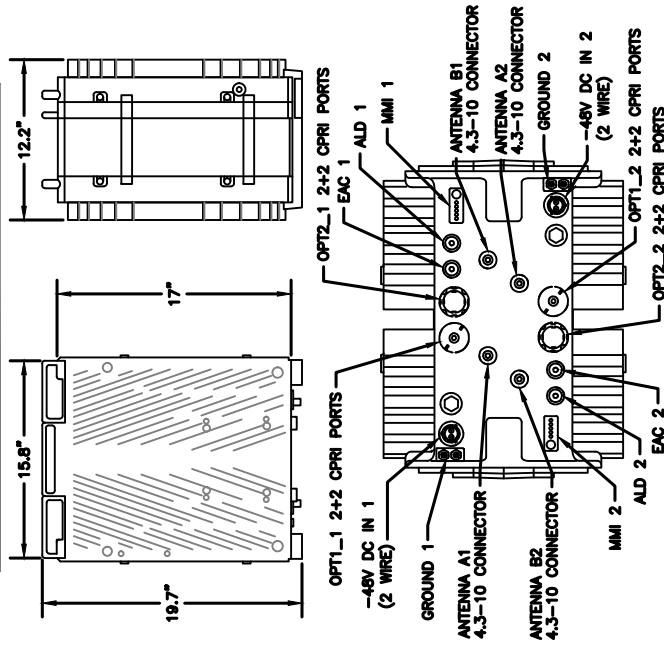
| | |
|-----------------|----------------------------------|
| MANUFACTURER: | ERICSSON |
| MODEL: | 4480 RADIO (KRC 161 922/1) |
| DIMENSIONS: | 21.9" x 15.7" x 7.5" (H x W x D) |
| MODEL BAND: | B71, B85 FOR NR AND LTE |
| WEIGHT: | 81 LBS |
| BRACKET WEIGHT: | 3.75 LBS (MULTI ERS #109 1973/2) |



2 34372 - ERICSSON 4480 RADIO

SCALE: N.T.S.

| | |
|-----------------|--------------------------------------|
| MANUFACTURER: | ERICSSON |
| MODEL: | 4460 RADIO B2/25 B66 (KRC 161 912/3) |
| DIMENSIONS: | 19.7" x 15.8" x 12.2" (H x W x D) |
| WEIGHT: | 109 LBS |
| BRACKET WEIGHT: | 4.8 LBS (ERS HEAVY #5XK1255983/1) |



3 34373 - ERICSSON 4460 RADIO B2/25 B66

SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER:

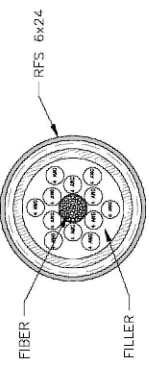
R-609

REVISION:

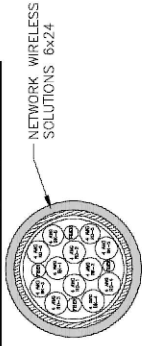
0

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

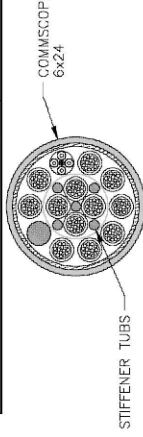
| PARAMETER | VALUE |
|------------------------------------|-------|
| NOMINAL DIAMETER (INCHES) | 2 |
| CROSS-SECTION AREA (SQUARE INCHES) | 3.13 |
| JACKET COLOR | BLACK |
| WEIGHT/LINEAR FOOT (POUNDS) | 2.55 |



| PARAMETER | VALUE |
|------------------------------------|-------|
| NOMINAL DIAMETER (INCHES) | 1.78 |
| CROSS-SECTION AREA (SQUARE INCHES) | 2.52 |
| JACKET COLOR | BLACK |
| WEIGHT/LINEAR FOOT (POUNDS) | 2.85 |

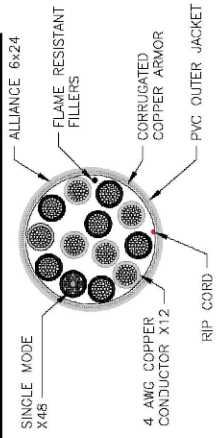


| PARAMETER | VALUE |
|------------------------------------|-------|
| NOMINAL DIAMETER (INCHES) | 1.76 |
| CROSS-SECTION AREA (SQUARE INCHES) | 2.43 |
| JACKET COLOR | BLACK |
| WEIGHT/LINEAR FOOT (POUNDS) | 2.29 |

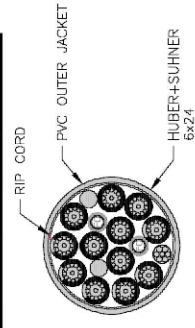


1 | 8.5" x 11" SCALE N.T.S. | 11" x 17" SCALE N.T.S. | (6x24) HYBRID TRUNK CROSS SECTION

| PARAMETER | VALUE |
|------------------------------------|-------|
| NOMINAL DIAMETER (INCHES) | 1.8 |
| CROSS-SECTION AREA (SQUARE INCHES) | 2.54 |
| JACKET COLOR | BLACK |
| WEIGHT/LINEAR FOOT (POUNDS) | 2.48 |



| PARAMETER | VALUE |
|------------------------------------|-------|
| NOMINAL DIAMETER (INCHES) | 1.62 |
| CROSS-SECTION AREA (SQUARE INCHES) | 2.04 |
| JACKET COLOR | BLACK |
| WEIGHT/LINEAR FOOT (POUNDS) | 2.39 |



2 | 8.5" x 11" SCALE N.T.S. | 11" x 17" SCALE N.T.S. | (6x24) HYBRID TRUNK CROSS SECTION

| Cable Vendor | Cable Type | Nominal OD (in.) | C.S. Area (sq. in.) | Weight (lbs./ft.) | on Top Breakout HCS Pendant (Breakout) Dimension (in.) | MAX ENTITLEMENT |
|--------------|---------------------------------|------------------|---------------------|-------------------|---|--------------------------|
| HCS 2.0 | 6 AWG 26' to 225' cable lengths | | | | | |
| | Alliance 6x24 4AWG | 1.46 | 1.67 | 1.61 | 16.56 x 9.30 x 5.79 (sq./in. 152.15) | Nominal OD (in.) 1.55 |
| | CommScope 6x24 4AWG | 1.55 | 1.89 | 1.71 | 19.37 x 10.83 x 5.12 (sq./in. 235.07) | C.S. Area (sq./in.) 1.89 |
| | NWS 6x24 6AWG | 1.48 | 1.72 | 1.61 | 15.95 x 10.20 x 3.21 (sq./in. 162.69) | Weight (lbs./ft.) 1.71 |
| 6x24 | Amphiread 6x24 6AWG | 1.46 | 1.67 | 1.65 | 19.37 x 10.83 x 5.12 (sq./in. 209.78) | Pendant (sq./in.) 235.07 |
| | Alliance 6x24 4AWG | 1.8 | 2.54 | 2.48 | 16.56 x 9.30 x 5.79 (sq./in. 152.15) | Nominal OD (in.) 1.8 |
| | CommScope 6x24 4AWG | 1.76 | 2.43 | 2.4 | 19.37 x 10.83 x 5.12 (sq./in. 235.07) | C.S. Area (sq./in.) 2.54 |
| | NWS 6x24 4AWG | 1.79 | 2.52 | 2.65 | 15.95 x 10.20 x 3.21 (sq./in. 162.69) | Weight (lbs./ft.) 2.65 |
| 6x24 | Amphiread 6x24 4AWG | 1.71 | 2.3 | 2.55 | 19.37 x 10.83 x 5.12 (sq./in. 209.78) | Pendant (sq./in.) 235.07 |
| | Alliance 6x24 4AWG | 1.8 | 2.54 | 2.48 | 16.56 x 9.30 x 5.79 (sq./in. 152.15) | Nominal OD (in.) 2 |
| | CommScope 6x24 4AWG | 1.76 | 2.43 | 2.29 | 5.11 x 9.45 (c.s. Area 7.60) | C.S. Area (sq./in.) 3.13 |
| | H8S 6x24 4AWG | 1.62 | 2.04 | 2.39 | 3.82 x 9.26 (c.s. Area 11.46) | Weight (lbs./ft.) 2.65 |
| RFS | 6x24 4AWG | 1.79 | 2.52 | 2.65 | 2.92 x 8.82 (c.s. Area 7.02) | Carrier (sq./in.) 11.46 |
| | 6x24 4AWG | 2 | 3.13 | 2.55 | 2.88 x 9.72 (c.s. Area 6.51) | |

3 | 8.5" x 11" SCALE N.T.S. | 11" x 17" SCALE N.T.S. | (6x24) HYBRID TRUNK ENTITLEMENT INFORMATION

RD048 | 3.4L | **48kW**
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

Model Number
48kW: G0071940

Standby Power Rating
48 kW, 60 Hz

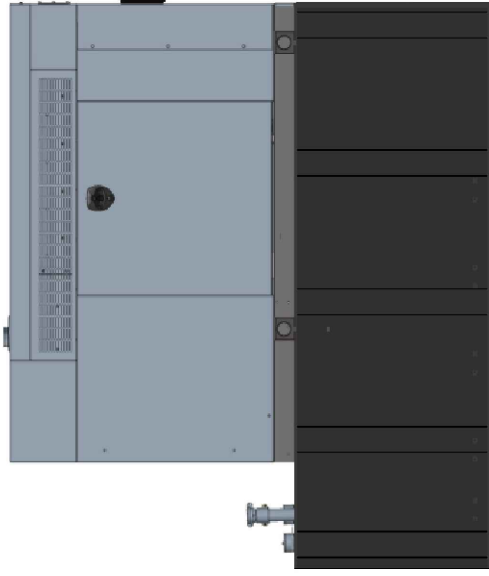


Image used for illustration purposes only

CODES AND STANDARDS

Not all codes and standards apply to all configurations. Contact factory for details.

- UL2200, UL508, UL489, UL142
- CSA C22.2
- BS5514 and DIN 8271
- SAE J1349
- NFPA 37, 70, 99
- ISO 3046, 8528, 9001
- NEMA ICS1, ICS10, MG1, 250, ICS6, AB1
- ANSI/IEEE C62.41

POWERING AHEAD

For over 50 years, Generac has led the industry with innovative design and superior manufacturing. Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

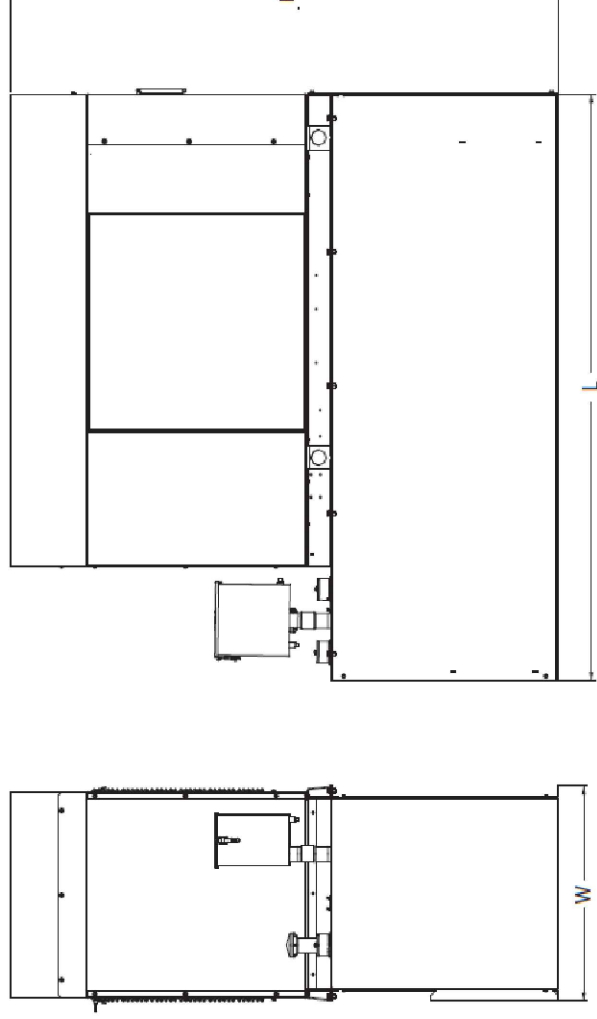
Generac's gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application. Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial application under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

RD048 | 3.4L | **48kW**
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

DIMENSIONS AND WEIGHTS*



Weights and Dimensions

| Unit Weight - lbs | Unit Weight with Skid - lbs | Dimensions (L x W x H) - in |
|-------------------|-----------------------------|---|
| 2,915 | 2,954 | 103.4 (2,625) x 35.0 (888) x 90.0 (2,286) |

| 48kW Fuel Consumption | |
|--|-----|
| Fuel Tank Gross Total Capacity | 240 |
| Fuel Tank Gross Usable Capacity | 229 |
| Fuel Tank Net Usable Capacity (Run Hours Based on Net Usable Capacity) | 206 |
| Run Hours 100% Load | 52 |
| Run Hours 75% Load | 67 |
| Run Hours 50% Load | 96 |

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

| Sound Emission Data | |
|---|----|
| Rated Load Sound Output at 23ft - dB(A) | 65 |

1 OF 6
SPEC SHEET

1 GENERATOR SPECS
SCALE: N.T.S.

Specification characterization may change without notice. Dimensions and weights are for preliminary purpose only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53180
P: (262) 544-4811 ©2018 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

Part No. 1000032700
Rev. 3/08/2018

SUPPLEMENTAL

SHEET NUMBER:

R-611

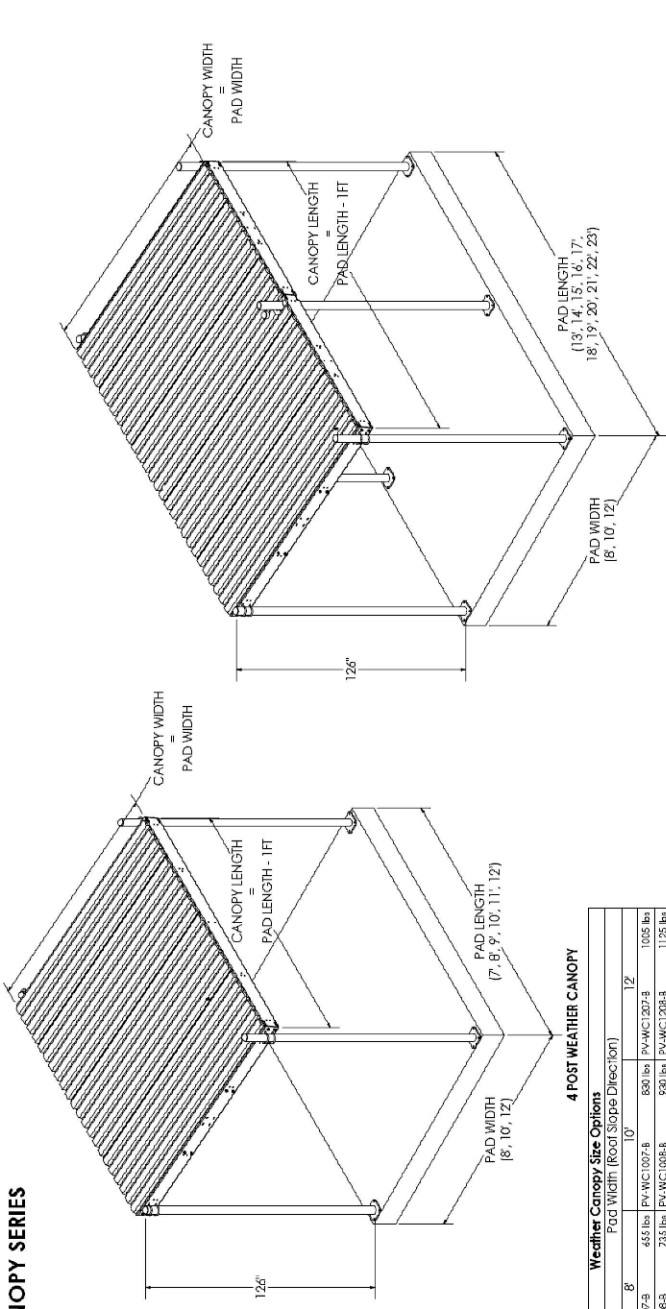
REVISION:

0

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

WEATHER CANOPY SERIES

SERIES OVERVIEW

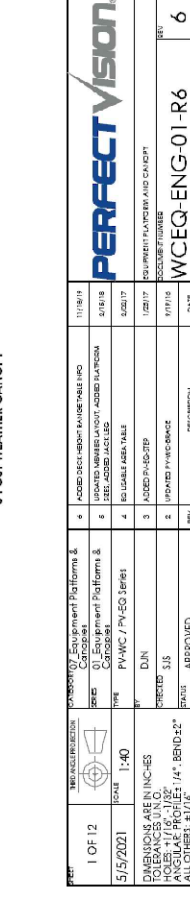


4 POST WEATHER CANOPY

| Weather Canopy Size Options | | |
|----------------------------------|--------------|----------|
| Pad Width (Roof Slope Direction) | Pad Length | Weight |
| 7' | PV-WC0007-8 | 655 lbs |
| 7' | PV-WC0007-9 | 800 lbs |
| 7' | PV-WC0007-10 | 1005 lbs |
| 8' | PV-WC0008-8 | 735 lbs |
| 8' | PV-WC0008-9 | 930 lbs |
| 8' | PV-WC0008-10 | 1125 lbs |
| 9' | PV-WC0009-8 | 815 lbs |
| 9' | PV-WC0009-9 | 1035 lbs |
| 9' | PV-WC0009-10 | 1255 lbs |
| 10' | PV-WC0010-8 | 895 lbs |
| 10' | PV-WC0010-9 | 1135 lbs |
| 10' | PV-WC0010-10 | 1375 lbs |
| 11' | PV-WC0011-8 | 975 lbs |
| 11' | PV-WC0011-9 | 1235 lbs |
| 11' | PV-WC0011-10 | 1495 lbs |
| 12' | PV-WC0012-8 | 1055 lbs |
| 12' | PV-WC0012-9 | 1340 lbs |
| 12' | PV-WC0012-10 | 1625 lbs |
| 13' | PV-WC0013-8 | 1221 lbs |
| 13' | PV-WC0013-9 | 1540 lbs |
| 13' | PV-WC0013-10 | 1970 lbs |
| 14' | PV-WC0014-8 | 1297 lbs |
| 14' | PV-WC0014-9 | 1640 lbs |
| 14' | PV-WC0014-10 | 2125 lbs |
| 15' | PV-WC0015-8 | 1382 lbs |
| 15' | PV-WC0015-9 | 1755 lbs |
| 15' | PV-WC0015-10 | 2280 lbs |
| 16' | PV-WC0016-8 | 1440 lbs |
| 16' | PV-WC0016-9 | 1854 lbs |
| 16' | PV-WC0016-10 | 2420 lbs |
| 17' | PV-WC0017-8 | 1538 lbs |
| 17' | PV-WC0017-9 | 1984 lbs |
| 17' | PV-WC0017-10 | 2590 lbs |
| 18' | PV-WC0018-8 | 1620 lbs |
| 18' | PV-WC0018-9 | 2089 lbs |
| 18' | PV-WC0018-10 | 2740 lbs |
| 19' | PV-WC0019-8 | 1690 lbs |
| 19' | PV-WC0019-9 | 2197 lbs |
| 19' | PV-WC0019-10 | 2810 lbs |
| 20' | PV-WC0020-8 | 1774 lbs |
| 20' | PV-WC0020-9 | 2295 lbs |
| 20' | PV-WC0020-10 | 2940 lbs |
| 21' | PV-WC0021-8 | 1857 lbs |
| 21' | PV-WC0021-9 | 2384 lbs |
| 21' | PV-WC0021-10 | 3060 lbs |
| 22' | PV-WC0022-8 | 1937 lbs |
| 22' | PV-WC0022-9 | 2464 lbs |
| 22' | PV-WC0022-10 | 3130 lbs |
| 23' | PV-WC0023-8 | 2014 lbs |
| 23' | PV-WC0023-9 | 2544 lbs |
| 23' | PV-WC0023-10 | 3210 lbs |

© Perfect Vision Company or its wholly owned subsidiaries. All rights reserved.

4 POST WEATHER CANOPY



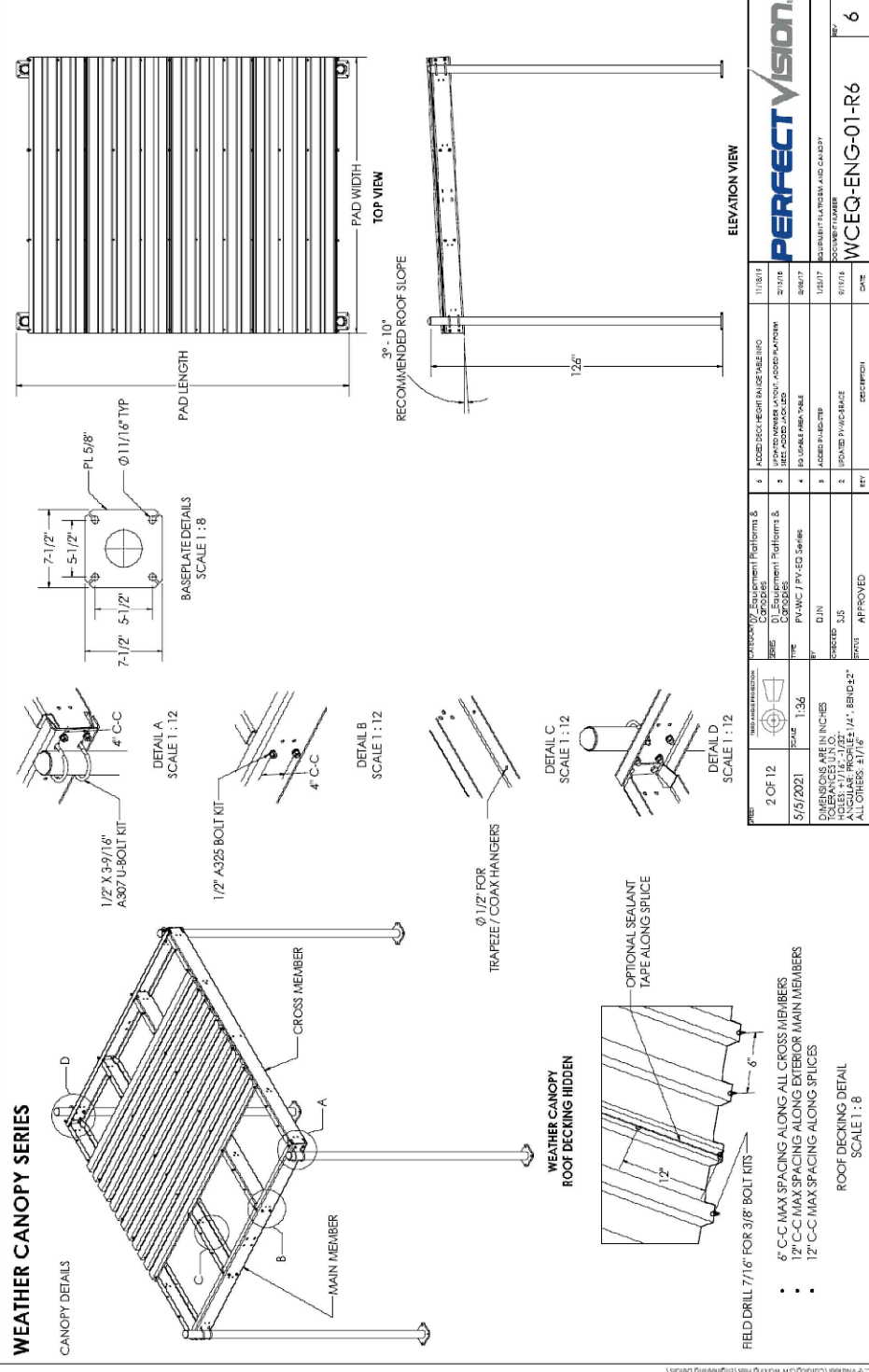
| REV | DESCRIPTION | DATE | BY | CHKD |
|-----|-----------------------|----------|----|------|
| 1 | ISSUED FOR PERMITTING | 11/18/17 | | |
| 2 | ISSUED FOR PERMITTING | 11/18/17 | | |
| 3 | ISSUED FOR PERMITTING | 11/18/17 | | |
| 4 | ISSUED FOR PERMITTING | 11/18/17 | | |
| 5 | ISSUED FOR PERMITTING | 11/18/17 | | |
| 6 | ISSUED FOR PERMITTING | 11/18/17 | | |

PERFECT VISION
WCEQ-ENG-01-R6

PROPRIETARY AND CONFIDENTIAL. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PERFECT VISION INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PERFECT VISION INC. IS PROHIBITED.

WEATHER CANOPY SERIES

CANOPY DETAILS



- 6\"/>

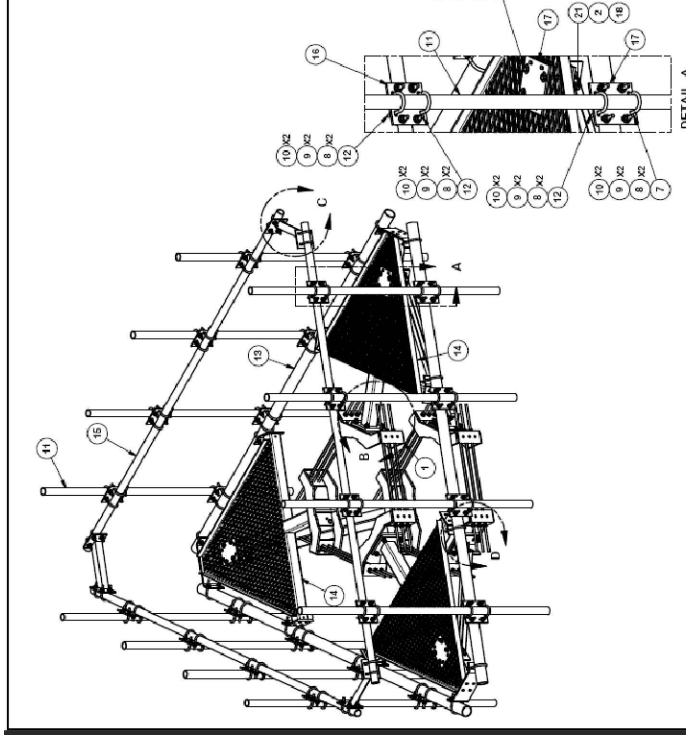
| REV | DESCRIPTION | DATE | BY | CHKD |
|-----|-----------------------|----------|----|------|
| 1 | ISSUED FOR PERMITTING | 11/18/17 | | |
| 2 | ISSUED FOR PERMITTING | 11/18/17 | | |
| 3 | ISSUED FOR PERMITTING | 11/18/17 | | |
| 4 | ISSUED FOR PERMITTING | 11/18/17 | | |
| 5 | ISSUED FOR PERMITTING | 11/18/17 | | |
| 6 | ISSUED FOR PERMITTING | 11/18/17 | | |

PERFECT VISION
WCEQ-ENG-01-R6

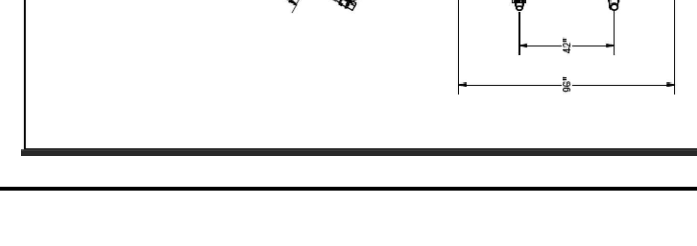
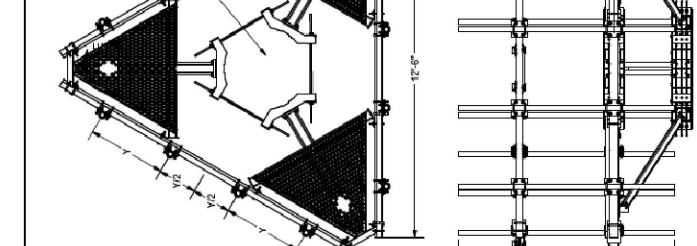
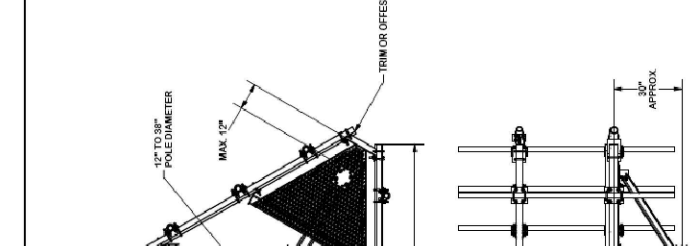
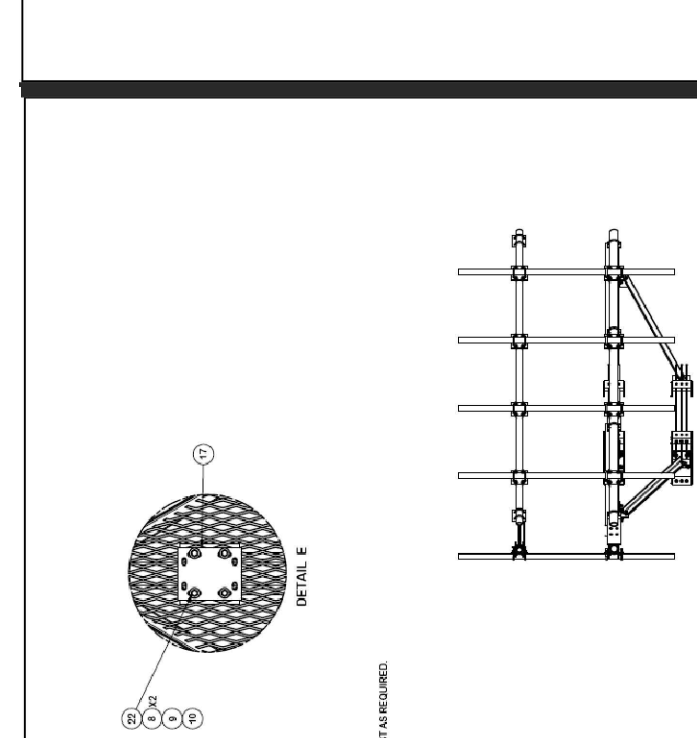
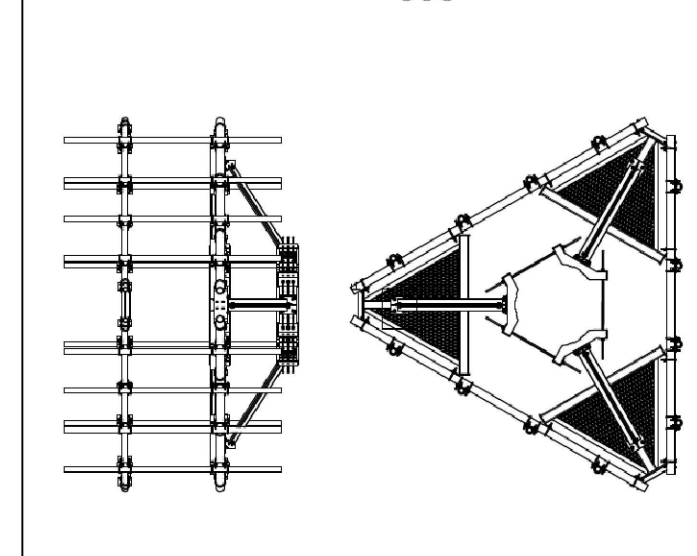
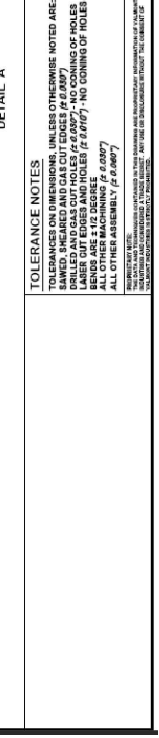
PROPRIETARY AND CONFIDENTIAL. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PERFECT VISION INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PERFECT VISION INC. IS PROHIBITED.

SUPPLEMENTAL
SHEET NUMBER: R-612
REVISION: 0

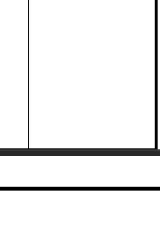
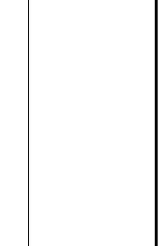
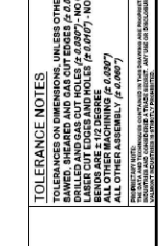
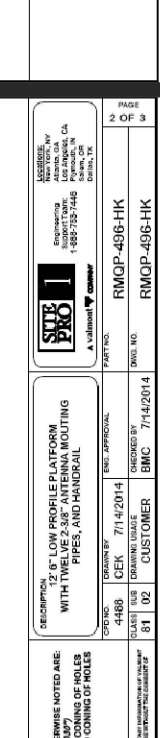
| PARTS LIST | | | | | |
|------------|-----|----------|-------------------------------------|------------|---------|
| ITEM | QTY | PART NO. | PART DESCRIPTION | UNIT WT. | NET WT. |
| 1 | 6 | X-LWRM | RING MOUNT WELDMENT | 68.16 | 408.95 |
| 2 | 66 | CSBLW | 5/8" HDG LOCKWASHER | 0.03 | 1.72 |
| 3 | 60 | ASRNUT | 5/8" HDG ANS HEX NUT | 0.13 | 7.78 |
| 4 | 18 | CSBR24 | 5/8" X 1/8" HDG HEX BOLT (24) | 0.15 | 2.70 |
| 5 | 18 | CSBR24 | 5/8" X 1/8" HDG HEX BOLT (24) | 0.15 | 2.70 |
| 6 | 24 | ASR24 | 5/8" X 2.54" HDG ANS24 HEX BOLT | 2.94 | 6.83 |
| 7 | 24 | ASR24 | 5/8" HDG ANS24 FLAT WASHER | 0.03 | 0.62 |
| 8 | 254 | CSR24 | 1/2" X 3.54" X 1/2" U-BOLT (HDG.) | 0.73 | 26.34 |
| 9 | 254 | CSR24 | 1/2" HDG USS FLAT WASHER | 0.03 | 0.90 |
| 10 | 254 | CSR24 | 1/2" HDG USS HEX NUT | 0.07 | 1.75 |
| 11 | 254 | CSR24 | 1/2" HDG USS FLAT W/ ANGLE | 0.07 | 1.03 |
| 12 | 254 | CSR24 | 1/2" HDG USS FLAT W/ ANGLE | 0.07 | 1.03 |
| 13 | 24 | X-LWRM | 2.54" X 1.27" X 1.27" U-BOLT (HDG.) | 30.76 | 369.08 |
| 14 | 3 | PS150 | 3.12" X 1.57" X 1.57" U-BOLT (HDG.) | 0.73 | 61.46 |
| 15 | 3 | PS150 | 3.12" X 1.57" X 1.57" U-BOLT (HDG.) | 0.73 | 61.46 |
| 16 | 3 | PS150 | 3.12" X 1.57" X 1.57" U-BOLT (HDG.) | 0.73 | 61.46 |
| 17 | 12 | SC24 | 2.54" HDG ANS24 FLAT WASHER | 0.03 | 0.36 |
| 18 | 12 | SC24 | 2.54" HDG ANS24 FLAT WASHER | 0.03 | 0.36 |
| 19 | 6 | ASRNUT | 5/8" HDG HEAVY ZN HEX NUT | 0.13 | 0.79 |
| 20 | 6 | X-253993 | PLATFORM REINFORCEMENT KIT ANGLE | 52.25 | 65.59 |
| 21 | 6 | X-253992 | T-BRACKET FOR REINFORCEMENT KIT | 13.55 | 81.27 |
| 22 | 6 | CSR24 | 1/2" X 3.54" X 1/2" U-BOLT (HDG.) | 0.73 | 4.52 |
| 23 | 3 | X-ANCP | 1/2" X 3.54" X 1/2" U-BOLT (HDG.) | 0.73 | 4.52 |
| 24 | 3 | X-ANCP | ANGLE HANDRAIL CORNER PLATE | 12.52 | 38.76 |
| | | | | TOTAL WT # | 2448.72 |



| TOLERANCE NOTES | | | | |
|---|--|--|--|--|
| TOLERANCES ON DIMENSIONS UNLESS OTHERWISE NOTED ARE: SAWN, FINISHED AND GAS CUT EDGES (F.A.M.F.) DRILLED AND GAS CUT HOLES (F.A.M.F.) - NO CORNING OF HOLES ALL OTHER MACHINING (F.A.M.F.) ALL OTHER BURNING (F.A.M.F.) ALL OTHER BURNING (F.A.M.F.) ALL OTHER BURNING (F.A.M.F.) | | | | |



| TOLERANCE NOTES | | | | |
|--|--|--|--|--|
| TOLERANCES ON DIMENSIONS UNLESS OTHERWISE NOTED ARE: DRILLED AND GAS CUT HOLES (F.A.M.F.) - NO CORNING OF HOLES ALL OTHER MACHINING (F.A.M.F.) ALL OTHER BURNING (F.A.M.F.) ALL OTHER BURNING (F.A.M.F.) | | | | |



DESCRIPTION: 12' LOW PROFILE PLATFORM WITH TWELVE 2.53" ANTENNA MOUNTING PIPES, AND HANDRAIL

DATE: 7/14/2014

DESIGNED BY: BMC

CHECKED BY: CUSTOMER

CLASS: 81 02

PROJECT: RMQP-496-HK

DWG. NO.: RMQP-496-HK

PAGE: 3 OF 3

DESCRIPTION: 12' LOW PROFILE PLATFORM WITH TWELVE 2.53" ANTENNA MOUNTING PIPES, AND HANDRAIL

DATE: 7/14/2014

DESIGNED BY: BMC

CHECKED BY: CUSTOMER

CLASS: 81 02

PROJECT: RMQP-496-HK

DWG. NO.: RMQP-496-HK

PAGE: 2 OF 3

DESCRIPTION: 12' LOW PROFILE PLATFORM WITH TWELVE 2.53" ANTENNA MOUNTING PIPES, AND HANDRAIL

DATE: 7/14/2014

DESIGNED BY: BMC

CHECKED BY: CUSTOMER

CLASS: 81 02

PROJECT: RMQP-496-HK

DWG. NO.: RMQP-496-HK

PAGE: 3 OF 3

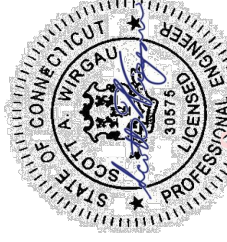


Mount Analysis Report

Mount Type : 12.5 ft Platform w/ Handrails
ATC Asset Name : Southbury CT
ATC Asset Number : 411188
Engineering Number : 14932961_C8_01
Mount Elevation : 127 ft
Proposed Carrier : T-Mobile
Carrier Site Name : CTNH124A
Carrier Site Number : CTNH124A
Site Location : 111 Upper Fishrock Road
 Southbury, CT 06488-4172
 41.438288, -73.237751
County : New Haven
Date : March 19, 2025
Max Usage : 37%
Analysis Result : Pass

Prepared By:
Brennan Donovan
Structural Engineer

Brennan Donovan



Scott
 Wirgau
 u
 Digitally signed
 by Scott
 Wirgau
 Date: 2025.03.21
 10:50:25 -04'00'

COA: PEC.0001553

A.T. Engineering Service, PLLC - 1 Fenton Main, Suite 300 - Cary, NC 27511 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

Eng. Number 14932961_C8_01
 March 19, 2025
 Page 3



Introduction

The purpose of this report is to summarize results of the mount analysis performed for T-Mobile at 127 ft.

Supporting Documents

| | |
|-----------------------------|---|
| Specifications Sheet: | Site Pro 1 RMQP-4096-HK, dated September 20, 2018 |
| Radio Frequency Data Sheet: | RFDS ID #CTNH124A, dated March 3, 2025 |
| Reference Photos: | Site photos from 2021 |

Analysis

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

| | |
|-------------------------------|---|
| Basic Wind Speed: | 116 mph (3-Second Gust) |
| Basic Wind Speed w/ Ice: | 47 mph (3-Second Gust) w/ 1.05" radial ice concurrent |
| Codes: | ANSI/TIA-222-I |
| Exposure Category: | C |
| Risk Category: | II |
| Topographic Factor Procedure: | Method 1 |
| Feature: | Flat |
| Crest Height (H): | 0 ft |
| Crest Length (L): | 0 ft |
| Spectral Response: | Sds = 0.17, Sd1 = 0.067 |
| Site Class: | D - Stiff Soil |
| Live Loads: | Lm = 500 lbs |

*Live Load(s) reduction is confirmed to either not govern or not be applicable
 * Based on experience, it has been determined that the lv load cases will not control over Lm load cases in platform mount analyses. Therefore, these load cases have been excluded from this analysis.

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report.

- Analysis based on new installation of Site Pro 1 RMQP-4096-HK Platform w/ Handrails(s) (M2050R(2500)-4(6)).

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.

A.T. Engineering Service, PLLC - 1 Fenton Main, Suite 300 - Cary, NC 27511 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

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.

ATTACHMENT 4



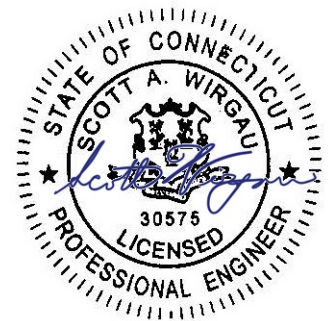
AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 129 ft Monopole (Proposed Extension Included)
ATC Asset Name : Southbury CT
ATC Asset Number : 411188
Engineering Number : 14932961_C3_06
Proposed Carrier : T-MOBILE
Carrier Site Name : CTNH124A
Carrier Site Number : CTNH124A
Site Location : 111 Upper Fishrock Road
Southbury, CT 06488-4172
41.4383° N, 73.2378° W
County : New Haven
Date : March 18, 2025
Max Usage : 31%
Analysis Result : Pass - Pending Extension

Created By:

Thomas Ambrosio
Structural Engineer I



COA: PEC.0001553



Table of Contents

| | |
|---------------------------|----------|
| Introduction | 3 |
| Supporting Documents..... | 3 |
| Analysis | 3 |
| Conclusion | 3 |
| Structure Usages | 4 |
| Maximum Reactions | 4 |
| Tower Loading | 5 |
| Standard Conditions..... | Attached |
| Calculations..... | Attached |

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 129 ft Monopole tower (Proposed Extension Included) to reflect the change in loading by T-MOBILE.

Supporting Documents

| | |
|----------------------|---|
| Tower: | EI Project #14859, dated August 29, 2007 |
| Foundation: | EI Project #14859, dated April 20, 2007 |
| Geotechnical: | Wolti Geotechnical Engineering Site Location: 111 Upper Fishrock Rd, Southbury, CT, dated March 5, 2007 |

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

| | |
|--------------------------------------|--|
| Basic Wind Speed: | 116 mph (3-second gust) |
| Basic Wind Speed w/ Ice: | 47 mph (3-second gust) w/ 1.05" radial ice concurrent |
| Code(s): | ANSI/TIA-222-I / 2021 IBC / 2022 Connecticut State Building Code |
| Exposure Category: | C |
| Risk Category: | II |
| Topographic Factor Procedure: | Method 1 |
| Feature: | Flat |
| Crest Height (H): | 0 ft |
| Crest Length (L): | 0 ft |
| Spectral Response: | $S_{05} = 0.17, S_{01} = 0.07$ |
| Site Class: | Default |

Conclusion

Based on the analysis results, the extended structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report. Extension design details will be provided in a subsequent service.

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 Engineering@americantower.com. Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

| Structural Component | Usage | Control | Result |
|----------------------|-------|-----------------------|--------|
| Pole Shaft | 29.5% | 1.2D + 1.0W | Pass |
| Serviceability Usage | 9.8% | 1.0D + 1.0W | Pass |
| Base Plate @ 0.0 ft | 18.8% | Rods | Pass |
| Mat & Pier | 30.9% | Flexure [Steel (Mat)] | Pass |

Maximum Reactions

| Foundation | Moment (k-ft) | Axial (k) | Shear (k) |
|---------------|---------------|-----------|-----------|
| Monopole Base | 2,996.6 | 71.1 | 35.4 |

**Reactions shown reflect the results from the Load Case with maximum Moment excluding Overstrength Load Cases*

Structure base reactions were analyzed using available geotechnical and foundation information.

T-MOBILE Final Loading

| Elev (ft) | Qty | Equipment | Lines |
|-----------|-----|------------------------------------|---------------------------|
| 126.0 | 1 | Triangular Platform with Handrails | (3) 2.00" (50.8mm) Hybrid |
| | 3 | Amphenol Antel APXVAALL24M-U-J20 | |
| | 3 | Ericsson Radio 4460 B25+B66 | |
| | 3 | Ericsson Radio 4480 B71+B85 | |
| | 3 | RFS APXVLL19P_43-C-A20 | |

Install proposed lines inside the pole shaft.

Other Existing/Reserved Loading

| Elev (ft) | Qty | Equipment | Lines |
|-----------|-----|---------------------------------------|--|
| 109.8 | 1 | 20' Omni | - |
| 109.0 | - | - | (1) 7/8" Coax |
| 100.0 | 1 | Raycap RVZDC-6627-PF-48 | (18) 1 5/8" Coax (2) 1 5/8" Hybriflex |
| | 2 | Kaelus KA-6030 | |
| | 3 | Commscope CBC78T-DS-43-2X | |
| | 3 | Samsung B2/B66A RRH-BR049 | |
| | 3 | Samsung B5/B13 RRH-BR04C | |
| | 3 | Samsung MT6407-77A | |
| | 3 | Samsung XXDWMM-12.5-65-8T-CBRS | |
| | 6 | Antel LPA-80080/8CF ____ | |
| | 6 | Commscope JAHH-65C-R3B | |
| 99.0 | 1 | Triangular Low Profile Platform | - |
| | 1 | Unused Reserve (10083.90 sqin) | |
| 89.0 | 3 | Ericsson AIR 6419 B77D | - |
| 88.9 | 9 | Ericsson RRU11 | - |
| 88.0 | - | - | (5) 3" conduit |
| 87.0 | 1 | Triangular Platform with Handrails | (3) 0.41" (10.3mm) Fiber (6) 0.92" (23.4mm) Cable (1) 2" conduit |
| | 3 | CCI OPA65R-BU6D | |
| | 3 | CCI TPA65R-BU6D | |
| | 3 | Ericsson RRUS 4478 B14 (18.1" Height) | |
| | 3 | Ericsson RRUS 4490 | |
| | 3 | Ericsson Radio 4890HP B2/B25 B66 | |
| | 3 | Raycap DC6-48-60-18-8F(32.8 lbs) | |
| | 6 | Mount Reinforcement | |
| 85.0 | 3 | Ericsson AIR 6419 B77G | - |
| 78.0 | 1 | Commscope RDIDC-9181-PF-48 | (1) 1.60" (40.6mm) Hybrid |
| | 1 | Triangular Platform with Handrails | |
| | 3 | Fujitsu TA08025-B604 | |
| | 3 | Fujitsu TA08025-B605 | |
| | 3 | JMA Wireless MX08FRO665-21 | |

(If table breaks across pages, please see previous page for data in merged cells)



Standard Conditions

All engineering services performed by A.T. Engineering Services LLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts, and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Services LLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services LLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Services LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

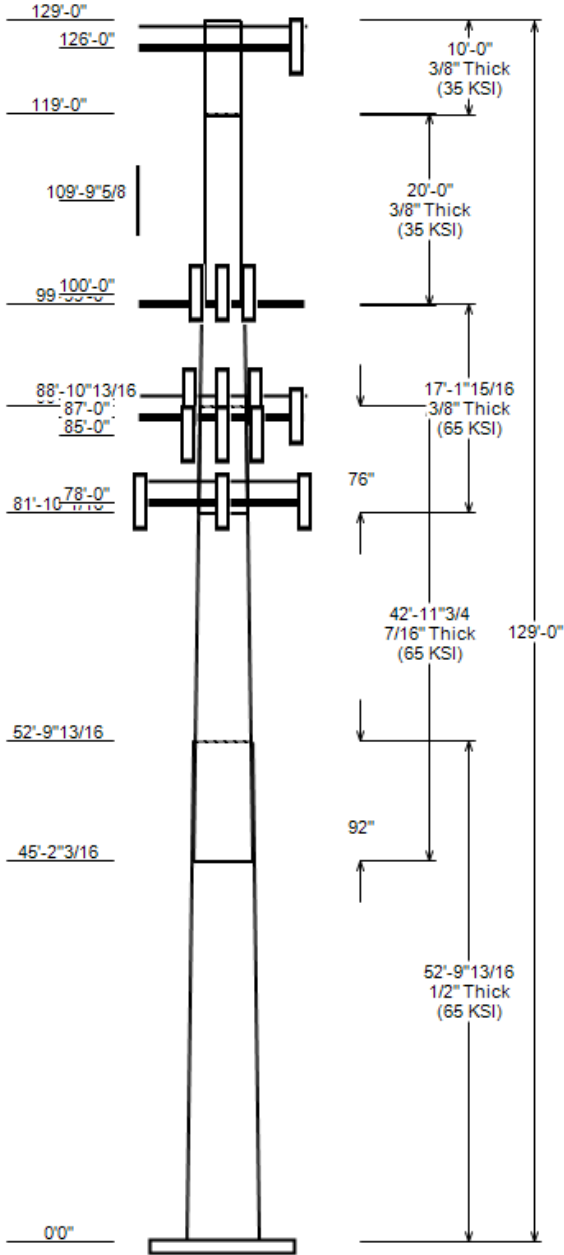
All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

ANALYSIS PARAMETERS

| | | |
|-----------------------------------|-------------------------------------|---|
| Design Wind: 116 mph | Ice Wind: 47 mph w/ 1.0" ice | Service Wind: 60 mph |
| Risk Category: II | Exposure: C | S_{DI}: 0.067 S_{DS}: 0.170 |
| Topo Factor: Method 1 | Topo Feature: Flat | |
| Structure Height: 129.0 ft | Base Elevation: 0.00 ft | Structure Type: Custom |
| Base Diameter: 70.00 in | Base Rotation: 0.00° | Taper: 0.2990 (in/ft) |

POLE SECTION PROPERTIES

| Section | Length (ft) | Flat Diameter (in) | | Thick (in) | Joint Type | Joint Length (in) | Pole Shape | Yield Strength (ksi) |
|---------|-------------|--------------------|--------|------------|------------|-------------------|------------|----------------------|
| | | Top | Bottom | | | | | |
| 1 | 52.820 | 54.19 | 70.00 | 0.500 | | 0.00 | 18 Sides | 65 |
| 2 | 42.980 | 44.48 | 57.35 | 0.438 | Slip Joint | 91.63 | 18 Sides | 65 |
| 3 | 17.161 | 41.98 | 47.12 | 0.375 | Slip Joint | 75.91 | 18 Sides | 65 |
| 4 | 20.000 | 36.00 | 36.00 | 0.375 | Butt Joint | 0.00 | Round | 35 |
| 5 | 10.000 | 36.00 | 36.00 | 0.375 | Butt Joint | 0.00 | Round | 35 |



DISCRETE APPURTENANCE

| Elev (ft) | Description |
|-----------|--|
| 126.0 | (3) RFS APXVLL19P_43-C-A20 |
| 126.0 | (3) Ericsson Radio 4480 B71+B85 |
| 126.0 | (3) Amphenol Antel APXVAALL24M-U-J2 |
| 126.0 | (3) Ericsson Radio 4460 B25+B66 |
| 126.0 | (1) Generic Platform with Handrails |
| 109.8 | (1) Generic 20' Omni |
| 100.0 | (3) Commscope CBC78T-DS-43-2X |
| 100.0 | (3) Samsung B5/B13 RRH-BR04C |
| 100.0 | (3) Samsung MT6407-77A |
| 100.0 | (3) Samsung B2/B66A RRH-BR049 |
| 100.0 | (2) Kaelus KA-6030 |
| 100.0 | (6) Commscope JAHH-65C-R3B |
| 100.0 | (3) Samsung XXDWMM-12.5-65-8T-CBR |
| 100.0 | (1) Raycap RVZDC-6627-PF-48 |
| 100.0 | (6) Antel LPA-80080/8CF |
| 99.0 | (1) Generic Flat Low Profile Platform |
| 99.0 | (1) Unused Reserve (10083.90 sqin) |
| 89.0 | (3) Ericsson AIR 6419 B77D |
| 88.9 | (9) Ericsson RRU11 |
| 87.0 | (3) CCI TPA65R-BU6D |
| 87.0 | (3) Ericsson RRUS 4478 B14 (18.1" Heig |
| 87.0 | (3) Raycap DC6-48-60-18-8F(32.8 lbs) |
| 87.0 | (3) Ericsson RRUS 4490 |
| 87.0 | (6) Generic Mount Reinforcement |
| 87.0 | (3) CCI OPA65R-BU6D |
| 87.0 | (3) Ericsson Radio 4890HP B2/B25 B66 |
| 87.0 | (1) Generic Round Platform with Handrail |
| 85.0 | (3) Ericsson AIR 6419 B77G |
| 78.0 | (1) Commscope RDIDC-9181-PF-48 |
| 78.0 | (3) JMA Wireless MX08FRO665-21 |
| 78.0 | (3) Fujitsu TA08025-B605 |
| 78.0 | (3) Fujitsu TA08025-B604 |
| 78.0 | (1) Generic Round Platform with Handrail |

LINEAR APPURTENANCE

| Elev To (ft) | Description |
|--------------|---------------------------|
| 126.0 | (3) 2.00" (50.8mm) Hybrid |
| 109.0 | (1) 7/8" Coax |
| 100.0 | (2) 1 5/8" Coax |
| 100.0 | (2) 1 5/8" Hybriflex |
| 100.0 | (16) 1 5/8" Coax |
| 88.0 | (5) 3" conduit |
| 87.0 | (1) 0.41" (10.3mm) Fiber |
| 87.0 | (2) 0.41" (10.3mm) Fiber |
| 87.0 | (3) 0.92" (23.4mm) Cable |
| 87.0 | (3) 0.92" (23.4mm) Cable |
| 87.0 | (1) 2" conduit |
| 78.0 | (1) 1.60" (40.6mm) Hybrid |

GLOBAL BASE REACTIONS

| Load Case | Moment (kip-ft) | Axial (kip) | Shear (kip) |
|----------------------|-----------------|-------------|-------------|
| 1.2D + 1.0W | 2996.65 | 71.05 | 35.41 |
| 0.9D + 1.0W | 2986.21 | 53.29 | 35.40 |
| 1.2D + 1.0Di + 1.0Wi | 725.01 | 90.99 | 8.73 |
| 1.2D + 1.0Ev + 1.0Eh | 201.55 | 70.33 | 2.27 |
| 0.9D - 1.0Ev + 1.0Eh | 200.73 | 49.35 | 2.27 |
| 1.0D + 1.0W | 715.60 | 59.23 | 8.47 |

ANALYSIS PARAMETERS

| | | | |
|-------------------------------------|---------------------|-----------------------|--------------|
| Location: | New Haven County,CT | Height: | 129 ft |
| Type and Shape: | Custom, Round | Base Diameter: | 70.00 in |
| Manufacturer: | EEL | Top Diameter: | 36.00 in |
| K_d (non-service): | 0.95 | Taper: | 0.2990 in/ft |
| K_e: | 0.99 | Rotation: | 0.000° |

ICE & WIND PARAMETERS

| | | | |
|-------------------------------|----------|----------------------------------|-----------|
| Risk Category: | II | Design Wind Speed: | 116 mph |
| Exposure Category: | C | Design Wind Speed w/ Ice: | 47 mph |
| Design Ice Thickness: | 1.05 in | | |
| Topo Factor Procedure: | Method 1 | | |
| Crest Height(H): | 0 ft | Service Wind Speed: | 60 mph |
| Crest Length(L): | 0 ft | HMSL: | 394.00 ft |
| Feature: | Flat | Distance from Apex (x): | 0 ft |
| | | Upwind/Downwind: | |

SEISMIC PARAMETERS

| | | | |
|-----------------------------|---------------------------------|---|-------|
| Analysis Method: | Equivalent Lateral Force Method | | |
| Site Class: | Default | Period Based on Rayleigh Method (sec): | 1.16 |
| T_L (sec): | 6 | P: | 1 |
| S_{ds}: | 0.170 | S_{d1}: | 0.067 |
| | | C_s: | 0.038 |
| | | C_s Max: | 0.038 |
| | | C_s Min: | 0.030 |

LOAD CASES

| | |
|----------------------|---------------------------------------|
| 1.2D + 1.0W | 116 mph Wind with No Ice |
| 0.9D + 1.0W | 116 mph Wind with No Ice (Reduced DL) |
| 1.2D + 1.0Di + 1.0Wi | 47 mph Wind with 1.05" Radial Ice |
| 1.2D + 1.0Ev + 1.0Eh | Seismic |
| 0.9D - 1.0Ev + 1.0Eh | Seismic (Reduced DL) |
| 1.0D + 1.0W | 60 mph Wind with No Ice |
| 1.2D + 1.0Ev + 1.5Eh | Seismic Overstrength |
| 0.9D - 1.0Ev + 1.5Eh | Seismic Overstrength (Reduced DL) |

SHAFT SECTION PROPERTIES

| Section | Length (ft) | Thick (in) | Fy (ksi) | Joint Type | Joint Len (in) | Bottom | | | | | | Top | | | | | | | | |
|---------------------------|-------------|------------|----------|------------|----------------|---------------|----------|-----------|-------------------------|-----------------------|-----------|-----------|----------|-----------|-------------------------|-----------------------|-----------|-----------|---------------|--|
| | | | | | | Weight (lb) | Dia (in) | Elev (ft) | Area (in ²) | Ix (in ⁴) | W/t Ratio | D/t Ratio | Dia (in) | Elev (ft) | Area (in ²) | Ix (in ⁴) | W/t Ratio | D/t Ratio | Taper (in/ft) | |
| 1-18 | 52.82 | 0.5000 | 65 | | 0.00 | 17,568 | 70.00 | 0.000 | 110.29 | 67,308.3 | 23.28 | 140.00 | 54.19 | 52.82 | 85.20 | 31,023. | 17.70 | 108.37 | 0.2994 | |
| 2-18 | 42.98 | 0.4375 | 65 | Slip | 91.63 | 10,251 | 57.35 | 45.180 | 79.02 | 32,334.8 | 21.70 | 131.08 | 44.48 | 88.16 | 61.15 | 14,986. | 16.52 | 101.67 | 0.2994 | |
| 3-18 | 17.16 | 0.3750 | 65 | Slip | 75.91 | 3,070 | 47.12 | 81.839 | 55.64 | 15,362.0 | 20.75 | 125.66 | 41.98 | 99.00 | 49.52 | 10,833. | 18.33 | 111.96 | 0.2994 | |
| 4-R | 20.00 | 0.3750 | 35 | Butt | 0.00 | 2,856 | 36.00 | 99.000 | 41.97 | 6,663.3 | 0.00 | 96.00 | 36.00 | 119.00 | 41.97 | 6,663.3 | 0.00 | 96.00 | 0.0000 | |
| 5-R | 10.00 | 0.3750 | 35 | Butt | 0.00 | 1,428 | 36.00 | 119.000 | 41.97 | 6,663.3 | 0.00 | 96.00 | 36.00 | 129.00 | 41.97 | 6,663.3 | 0.00 | 96.00 | 0.0000 | |
| Total Shaft Weight | | | | | | 35,173 | | | | | | | | | | | | | | |

DISCRETE APPURTENANCE PROPERTIES

| Attach Elev (ft) | Description | Qty | Ka | Vert Ecc (ft) | No Ice | | | Ice | | |
|------------------|--------------------------------|-----------|------|---------------|------------------|-----------|--------------------|------------------|-----------|--------------------|
| | | | | | Weight (lb) | EPAa (sf) | Orientation Factor | Weight (lb) | EPAa (sf) | Orientation Factor |
| 126.00 | Amphenol Antel APXVAALL24M-U-J | 3 | 0.75 | 0.000 | 86.00 | 17.083 | 0.65 | 318.67 | 19.617 | 0.65 |
| 126.00 | RFS APXVLL19P_43-C-A20 | 3 | 0.75 | 0.000 | 40.90 | 8.250 | 0.65 | 145.90 | 10.286 | 0.65 |
| 126.00 | Ericsson Radio 4480 B71+B85 | 3 | 0.75 | 0.000 | 93.00 | 2.798 | 0.67 | 144.38 | 3.562 | 0.67 |
| 126.00 | Ericsson Radio 4460 B25+B66 | 3 | 0.75 | 0.000 | 109.00 | 2.564 | 0.67 | 169.90 | 3.290 | 0.67 |
| 126.00 | Generic Platform with Handrail | 1 | 1.00 | 0.000 | 2500.00 | 50.000 | 1.00 | 3940.07 | 74.001 | 1.00 |
| 109.80 | Generic 20' Omni | 1 | 1.00 | 0.000 | 55.00 | 6.000 | 1.00 | 157.00 | 10.804 | 1.00 |
| 100.00 | Antel LPA-80080/8CF ____ | 6 | 0.80 | 0.000 | 24.00 | 12.170 | 0.76 | 184.41 | 7.227 | 0.76 |
| 100.00 | Commscope JAHH-65C-R3B | 6 | 0.80 | 0.000 | 55.10 | 12.862 | 0.69 | 233.26 | 15.384 | 0.69 |
| 100.00 | Samsung MT6407-77A | 3 | 0.80 | 0.000 | 81.60 | 4.709 | 0.61 | 150.22 | 5.732 | 0.61 |
| 100.00 | Raycap RVZDC-6627-PF-48 | 1 | 0.80 | 0.000 | 32.00 | 3.781 | 1.00 | 105.83 | 4.671 | 1.00 |
| 100.00 | Samsung B2/B66A RRH-BR049 | 3 | 0.80 | 0.000 | 84.40 | 1.875 | 0.50 | 127.35 | 2.483 | 0.50 |
| 100.00 | Samsung B5/B13 RRH-BR04C | 3 | 0.80 | 0.000 | 70.30 | 1.875 | 0.50 | 108.81 | 2.483 | 0.50 |
| 100.00 | Samsung XXDWMM-12.5-65-8T-CBRS | 3 | 0.80 | 0.000 | 23.10 | 1.539 | 0.50 | 51.03 | 2.099 | 0.50 |
| 100.00 | Commscope CBC78T-DS-43-2X | 3 | 0.80 | 0.000 | 20.70 | 0.552 | 0.50 | 35.57 | 0.894 | 0.50 |
| 100.00 | Kaelus KA-6030 | 2 | 0.80 | 0.000 | 17.60 | 0.963 | 0.50 | 33.47 | 1.403 | 0.50 |
| 99.00 | Generic Flat Low Profile Platf | 1 | 1.00 | 0.000 | 1875.00 | 26.100 | 1.00 | 2418.84 | 38.920 | 1.00 |
| 99.00 | Unused Reserve (10083.90 sqin) | 1 | 0.80 | 0.000 | 1117.90 | 70.027 | 0.90 | 1640.87 | 102.787 | 0.90 |
| 89.00 | Ericsson AIR 6419 B77D | 3 | 0.75 | 0.000 | 63.10 | 4.186 | 0.67 | 137.34 | 5.120 | 0.67 |
| 88.90 | Ericsson RRU11 | 9 | 0.75 | 0.000 | 63.90 | 2.950 | 0.67 | 127.79 | 3.713 | 0.67 |
| 87.00 | Ericsson RRUS 4478 B14 (18.1" | 3 | 0.75 | 0.000 | 59.40 | 2.021 | 0.67 | 100.12 | 2.647 | 0.67 |
| 87.00 | Generic Round Platform with Ha | 1 | 1.00 | 0.000 | 2500.00 | 27.200 | 1.00 | 3574.66 | 43.418 | 1.00 |
| 87.00 | Raycap DC6-48-60-18-8F(32.8 lb | 3 | 0.75 | 0.000 | 32.80 | 1.470 | 1.00 | 73.73 | 1.933 | 1.00 |
| 87.00 | CCI OPA65R-BU6D | 3 | 0.75 | 0.000 | 63.20 | 12.871 | 0.63 | 236.60 | 14.727 | 0.63 |
| 87.00 | Ericsson Radio 4890HP B2/B25 B | 3 | 0.75 | 0.000 | 68.00 | 2.217 | 0.67 | 107.85 | 2.866 | 0.67 |
| 87.00 | Ericsson RRUS 4490 | 3 | 0.75 | 0.000 | 68.40 | 2.695 | 0.67 | 114.97 | 3.414 | 0.67 |
| 87.00 | Generic Mount Reinforcement | 6 | 1.00 | 0.000 | 200.00 | 4.980 | 1.00 | 328.40 | 8.279 | 1.00 |
| 87.00 | CCI TPA65R-BU6D | 3 | 0.75 | 0.000 | 68.30 | 12.709 | 0.63 | 239.22 | 14.559 | 0.63 |
| 85.00 | Ericsson AIR 6419 B77G | 3 | 0.75 | 0.000 | 66.10 | 3.797 | 0.65 | 130.28 | 4.668 | 0.65 |
| 78.00 | Fujitsu TA08025-B605 | 3 | 0.75 | 0.000 | 75.00 | 1.962 | 0.50 | 116.08 | 2.565 | 0.50 |
| 78.00 | Generic Round Platform with Ha | 1 | 1.00 | 0.000 | 2500.00 | 27.200 | 1.00 | 3562.15 | 43.230 | 1.00 |
| 78.00 | Commscope RDIDC-9181-PF-48 | 1 | 0.75 | 0.000 | 21.90 | 1.867 | 0.50 | 59.22 | 2.457 | 0.50 |
| 78.00 | Fujitsu TA08025-B604 | 3 | 0.75 | 0.000 | 63.90 | 1.962 | 0.50 | 102.14 | 2.565 | 0.50 |
| 78.00 | JMA Wireless MX08FRO665-21 | 3 | 0.75 | 0.000 | 64.50 | 12.489 | 0.64 | 233.05 | 14.332 | 0.64 |
| Totals | Row Count: 33 | 97 | | | 16,791.80 | | | 29,681.74 | | |

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg): 0.00

| Elev From (ft) | Elev To (ft) | Qty | Description | Diameter (in) | Weight (lb/ft) | Flat | Max/ Row | Distance Between Rows(in) | Distance Between Cols(in) | Azimuth (deg) | Distance From Face (in) | Exposed To Wind | Carrier |
|----------------|--------------|-----|-----------------------|---------------|----------------|------|----------|---------------------------|---------------------------|---------------|-------------------------|-----------------|------------------|
| 0.00 | 126.00 | 3 | 2.00" (50.8mm) Hybrid | 2 | 3.09 | N | 0 | 0 | 0 | 0 | 0 | N | T-MOBILE |
| 0.00 | 109.00 | 1 | 7/8" Coax | 1.09 | 0.33 | N | 0 | 0 | 0 | 0 | 0 | N | Other |
| 0.00 | 100.00 | 16 | 1 5/8" Coax | 1.98 | 0.82 | N | 0 | 0 | 0 | 0 | 0 | N | VERIZON WIRELESS |
| 0.00 | 100.00 | 2 | 1 5/8" Coax | 1.98 | 0.82 | N | 0 | 0 | 0 | 0 | 0 | N | VERIZON WIRELESS |
| 0.00 | 100.00 | 2 | 1 5/8" Hybriflex | 1.98 | 1.3 | N | 0 | 0 | 0 | 0 | 0 | N | VERIZON WIRELESS |
| 0.00 | 88.00 | 5 | 3" conduit | 3.5 | 7.58 | N | 5 | 1 | 1 | 90 | 1 | N | AT&T MOBILITY |
| 0.00 | 87.00 | 3 | 0.92" (23.4mm) Cable | 0.92 | 0.89 | N | 3 | 0.96 | 0.96 | 270 | 0.96 | Y | AT&T MOBILITY |
| 0.00 | 87.00 | 3 | 0.92" (23.4mm) Cable | 0.92 | 0.89 | N | 0 | 0 | 0 | 0 | 0 | N | AT&T MOBILITY |

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg): 0.00

| Elev From (ft) | Elev To (ft) | Qty | Description | Diameter (in) | Weight (lb/ft) | Flat | Max/Row | Distance Between Rows(in) | Distance Between Cols(in) | Azimuth (deg) | Distance From Face (in) | Exposed To Wind | Carrier |
|----------------|--------------|-----|-----------------------|---------------|----------------|------|---------|---------------------------|---------------------------|---------------|-------------------------|-----------------|----------------------|
| 0.00 | 87.00 | 2 | 0.41" (10.3mm) Fiber | 0.41 | 0.09 | N | 2 | 0.71 | 0.71 | 270 | 0.71 | Y | AT&T MOBILITY |
| 0.00 | 87.00 | 1 | 2" conduit | 2.38 | 3.65 | N | 0 | 0 | 0 | 0 | 0 | N | AT&T MOBILITY |
| 0.00 | 87.00 | 1 | 0.41" (10.3mm) Fiber | 0.41 | 0.09 | N | 1 | 1 | 1 | 90 | 1 | Y | AT&T MOBILITY |
| 0.00 | 78.00 | 1 | 1.60" (40.6mm) Hybrid | 1.6 | 2.34 | N | 0 | 0 | 0 | 0 | 0 | N | DISH WIRELESS L.L.C. |

SEGMENT PROPERTIES

| Seg Top Elev (ft) | Description | (Max Length: 5 ft) | Thick (in) | Flat Dia (in) | Area (in ²) | Ix (in ⁴) | W/t Ratio | D/t Ratio | F _y (ksi) | S (in ³) | Z (in ³) | Weight (lb) |
|-------------------|-----------------|--------------------|------------|---------------|-------------------------|-----------------------|-----------|-----------|----------------------|----------------------|----------------------|-------------|
| 0.00 | | | 0.5000 | 70.000 | 110.293 | 67,308.30 | 23.28 | 140.00 | 74 | 1893.9 | 0.0 | 0.0 |
| 5.00 | | | 0.5000 | 68.503 | 107.917 | 63,052.00 | 22.75 | 137.01 | 74.6 | 1812.9 | 0.0 | 1,856.3 |
| 10.00 | | | 0.5000 | 67.006 | 105.541 | 58,978.90 | 22.22 | 134.01 | 75.3 | 1733.7 | 0.0 | 1,815.9 |
| 15.00 | | | 0.5000 | 65.509 | 103.166 | 55,085.20 | 21.69 | 131.02 | 75.9 | 1656.2 | 0.0 | 1,775.5 |
| 20.00 | | | 0.5000 | 64.012 | 100.790 | 51,366.70 | 21.16 | 128.02 | 76.5 | 1580.5 | 0.0 | 1,735.0 |
| 25.00 | | | 0.5000 | 62.515 | 98.414 | 47,819.50 | 20.64 | 125.03 | 77.1 | 1506.6 | 0.0 | 1,694.6 |
| 30.00 | | | 0.5000 | 61.018 | 96.039 | 44,439.40 | 20.11 | 122.04 | 77.8 | 1434.5 | 0.0 | 1,654.2 |
| 35.00 | | | 0.5000 | 59.521 | 93.663 | 41,222.50 | 19.58 | 119.04 | 78.4 | 1364.1 | 0.0 | 1,613.8 |
| 40.00 | | | 0.5000 | 58.024 | 91.287 | 38,164.70 | 19.05 | 116.05 | 79 | 1295.5 | 0.0 | 1,573.4 |
| 45.00 | | | 0.5000 | 56.527 | 88.912 | 35,262.00 | 18.52 | 113.05 | 79.6 | 1228.7 | 0.0 | 1,532.9 |
| 45.18 | Bot - Section 2 | | 0.5000 | 56.472 | 88.824 | 35,157.70 | 18.50 | 112.94 | 79.6 | 1226.2 | 0.0 | 55.8 |
| 50.00 | | | 0.5000 | 55.030 | 86.536 | 32,510.30 | 18.00 | 110.06 | 80.2 | 1163.6 | 0.0 | 2,715.2 |
| 52.82 | Top - Section 1 | | 0.4375 | 55.061 | 75.848 | 28,592.60 | 20.78 | 125.85 | 77 | 1022.8 | 0.0 | 1,557.4 |
| 55.00 | | | 0.4375 | 54.408 | 74.942 | 27,579.80 | 20.52 | 124.36 | 77.3 | 998.4 | 0.0 | 559.3 |
| 60.00 | | | 0.4375 | 52.911 | 72.863 | 25,347.90 | 19.91 | 120.94 | 78 | 943.6 | 0.0 | 1,257.4 |
| 65.00 | | | 0.4375 | 51.414 | 70.785 | 23,239.80 | 19.31 | 117.52 | 78.7 | 890.3 | 0.0 | 1,222.0 |
| 70.00 | | | 0.4375 | 49.917 | 68.706 | 21,251.90 | 18.71 | 114.10 | 79.4 | 838.6 | 0.0 | 1,186.6 |
| 75.00 | | | 0.4375 | 48.420 | 66.627 | 19,380.80 | 18.10 | 110.67 | 80.1 | 788.4 | 0.0 | 1,151.3 |
| 78.00 | | | 0.4375 | 47.522 | 65.380 | 18,312.60 | 17.74 | 108.62 | 80.5 | 759.0 | 0.0 | 673.8 |
| 80.00 | | | 0.4375 | 46.923 | 64.549 | 17,622.80 | 17.50 | 107.25 | 80.8 | 739.7 | 0.0 | 442.1 |
| 81.84 | Bot - Section 3 | | 0.4375 | 46.372 | 63.784 | 17,004.00 | 17.28 | 105.99 | 81.1 | 722.2 | 0.0 | 401.5 |
| 85.00 | | | 0.4375 | 45.426 | 62.470 | 15,974.50 | 16.90 | 103.83 | 81.5 | 692.6 | 0.0 | 1,271.4 |
| 87.00 | | | 0.4375 | 44.827 | 61.638 | 15,345.10 | 16.66 | 102.46 | 81.8 | 674.2 | 0.0 | 790.9 |
| 88.16 | Top - Section 2 | | 0.3750 | 45.229 | 53.385 | 13,569.50 | 19.86 | 120.61 | 78 | 590.9 | 0.0 | 455.7 |
| 88.90 | | | 0.3750 | 45.008 | 53.123 | 13,370.70 | 19.75 | 120.02 | 78.2 | 585.1 | 0.0 | 133.3 |
| 89.00 | | | 0.3750 | 44.978 | 53.087 | 13,343.80 | 19.74 | 119.94 | 78.2 | 584.3 | 0.0 | 18.1 |
| 90.00 | | | 0.3750 | 44.679 | 52.731 | 13,076.90 | 19.60 | 119.14 | 78.4 | 576.5 | 0.0 | 180.0 |
| 95.00 | | | 0.3750 | 43.182 | 50.949 | 11,795.60 | 18.89 | 115.15 | 79.2 | 538.0 | 0.0 | 882.0 |
| 99.00 | Top - Section 3 | | 0.3750 | 41.984 | 49.524 | 10,833.00 | 18.33 | 111.96 | 79.8 | 508.2 | 0.0 | 683.8 |
| 99.00 | Bot - Section 4 | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | |
| 100.00 | | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | 142.8 |
| 105.00 | | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | 714.1 |
| 109.80 | | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | 685.5 |
| 110.00 | | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | 28.6 |
| 115.00 | | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | 714.1 |
| 119.00 | Top - Section 4 | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | 571.2 |
| 119.00 | Bot - Section 5 | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | |
| 120.00 | | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | 142.8 |
| 125.00 | | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | 714.1 |
| 126.00 | | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | 142.8 |
| 129.00 | | | 0.3750 | 36.000 | 41.970 | 6,663.30 | 0.00 | 96.00 | 34.8 | 370.2 | 475.9 | 428.4 |
| Total: | | | | | | | | | | | 35,173.6 | |

CALCULATED FORCES

Load Case: 1.2D + 1.0W 116 mph Wind with No Ice 17 Iterations

Gust Response Factor: 1.10
 Dead load Factor: 1.20
 Wind Load Factor: 1.00

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | Phi Pn (kips) | Phi Vn (kips) | Phi Tn (ft-kips) | Phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -71.05 | -35.41 | 0.00 | -2,996.6 | 0.00 | 2,996.65 | 7,347.96 | 1,935.63 | 12,150.54 | 10,514.58 | 0 | 0 | 0.295 |
| 5.00 | -68.33 | -34.84 | 0.00 | -2,819.6 | 0.00 | 2,819.60 | 7,250.00 | 1,893.94 | 11,632.80 | 10,149.34 | 0.03 | -0.06 | 0.288 |
| 10.00 | -65.66 | -34.29 | 0.00 | -2,645.4 | 0.00 | 2,645.39 | 7,149.38 | 1,852.25 | 11,126.33 | 9,786.55 | 0.13 | -0.12 | 0.280 |
| 15.00 | -63.03 | -33.73 | 0.00 | -2,474.0 | 0.00 | 2,473.97 | 7,046.10 | 1,810.56 | 10,631.13 | 9,426.45 | 0.3 | -0.18 | 0.272 |
| 20.00 | -60.46 | -33.15 | 0.00 | -2,305.3 | 0.00 | 2,305.34 | 6,940.17 | 1,768.86 | 10,147.21 | 9,069.30 | 0.52 | -0.25 | 0.263 |
| 25.00 | -57.94 | -32.55 | 0.00 | -2,139.6 | 0.00 | 2,139.60 | 6,831.58 | 1,727.17 | 9,674.56 | 8,715.33 | 0.81 | -0.31 | 0.254 |
| 30.00 | -55.46 | -31.94 | 0.00 | -1,976.8 | 0.00 | 1,976.84 | 6,720.34 | 1,685.48 | 9,213.17 | 8,364.81 | 1.17 | -0.37 | 0.245 |
| 35.00 | -53.04 | -31.32 | 0.00 | -1,817.1 | 0.00 | 1,817.14 | 6,606.45 | 1,643.78 | 8,763.07 | 8,017.96 | 1.59 | -0.43 | 0.235 |
| 40.00 | -50.66 | -30.69 | 0.00 | -1,660.5 | 0.00 | 1,660.53 | 6,489.89 | 1,602.09 | 8,324.23 | 7,675.05 | 2.08 | -0.49 | 0.225 |

CALCULATED FORCES

| | | | | | | | | | | | | | |
|--------|--------|--------|------|----------|------|----------|----------|----------|----------|----------|-------|-------|-------|
| 45.00 | -48.35 | -30.36 | 0.00 | -1,507.1 | 0.00 | 1,507.07 | 6,370.69 | 1,560.40 | 7,896.66 | 7,336.32 | 2.62 | -0.55 | 0.213 |
| 45.18 | -48.26 | -30.05 | 0.00 | -1,501.5 | 0.00 | 1,501.46 | 6,366.24 | 1,558.86 | 7,881.10 | 7,323.90 | 2.64 | -0.55 | 0.213 |
| 50.00 | -44.54 | -29.53 | 0.00 | -1,356.8 | 0.00 | 1,356.78 | 6,248.83 | 1,518.71 | 7,480.37 | 7,002.02 | 3.23 | -0.61 | 0.201 |
| 52.82 | -42.40 | -29.20 | 0.00 | -1,273.5 | 0.00 | 1,273.50 | 5,253.49 | 1,331.14 | 6,567.48 | 5,903.55 | 3.6 | -0.64 | 0.224 |
| 55.00 | -41.51 | -28.75 | 0.00 | -1,209.8 | 0.00 | 1,209.85 | 5,211.58 | 1,315.23 | 6,411.49 | 5,785.93 | 3.9 | -0.66 | 0.218 |
| 60.00 | -39.53 | -28.11 | 0.00 | -1,066.1 | 0.00 | 1,066.13 | 5,113.56 | 1,278.75 | 6,060.79 | 5,518.37 | 4.62 | -0.72 | 0.201 |
| 65.00 | -37.58 | -27.47 | 0.00 | -925.6 | 0.00 | 925.60 | 5,012.88 | 1,242.27 | 5,719.95 | 5,254.11 | 5.41 | -0.78 | 0.184 |
| 70.00 | -35.69 | -26.84 | 0.00 | -788.2 | 0.00 | 788.25 | 4,909.55 | 1,205.79 | 5,388.98 | 4,993.41 | 6.26 | -0.83 | 0.166 |
| 75.00 | -33.84 | -26.33 | 0.00 | -654.1 | 0.00 | 654.06 | 4,803.57 | 1,169.31 | 5,067.87 | 4,736.51 | 7.16 | -0.88 | 0.146 |
| 78.00 | -29.03 | -23.83 | 0.00 | -575.1 | 0.00 | 575.08 | 4,738.70 | 1,147.42 | 4,879.94 | 4,584.29 | 7.72 | -0.91 | 0.132 |
| 80.00 | -28.31 | -23.59 | 0.00 | -527.4 | 0.00 | 527.43 | 4,694.92 | 1,132.83 | 4,756.62 | 4,483.64 | 8.1 | -0.92 | 0.124 |
| 81.84 | -27.67 | -23.28 | 0.00 | -484.0 | 0.00 | 484.05 | 4,654.30 | 1,119.41 | 4,644.62 | 4,391.71 | 8.46 | -0.94 | 0.117 |
| 85.00 | -25.62 | -22.70 | 0.00 | -410.5 | 0.00 | 410.48 | 4,583.63 | 1,096.35 | 4,455.23 | 4,235.08 | 9.09 | -0.96 | 0.103 |
| 87.00 | -18.84 | -17.76 | 0.00 | -365.1 | 0.00 | 365.09 | 4,538.37 | 1,081.75 | 4,337.44 | 4,136.91 | 9.5 | -0.98 | 0.093 |
| 88.16 | -18.21 | -17.64 | 0.00 | -344.4 | 0.00 | 344.41 | 3,749.85 | 936.91 | 3,795.73 | 3,458.98 | 9.74 | -0.98 | 0.105 |
| 88.90 | -17.35 | -16.99 | 0.00 | -331.4 | 0.00 | 331.44 | 3,737.27 | 932.31 | 3,758.56 | 3,430.31 | 9.89 | -0.99 | 0.102 |
| 89.00 | -17.10 | -16.65 | 0.00 | -329.7 | 0.00 | 329.74 | 3,735.55 | 931.68 | 3,753.52 | 3,426.41 | 9.91 | -0.99 | 0.101 |
| 90.00 | -16.85 | -16.29 | 0.00 | -313.1 | 0.00 | 313.09 | 3,718.33 | 925.43 | 3,703.31 | 3,387.54 | 10.12 | -1 | 0.097 |
| 95.00 | -15.63 | -15.75 | 0.00 | -231.6 | 0.00 | 231.63 | 3,630.66 | 894.16 | 3,457.30 | 3,194.96 | 11.18 | -1.03 | 0.077 |
| 99.00 | -11.16 | -12.00 | 0.00 | -168.6 | 0.00 | 168.65 | 3,558.60 | 869.14 | 3,266.59 | 3,043.18 | 12.05 | -1.05 | 0.059 |
| 99.00 | -11.16 | -12.00 | 0.00 | -168.6 | 0.00 | 168.65 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 12.05 | -1.05 | 0.157 |
| 100.00 | -9.38 | -7.07 | 0.00 | -156.6 | 0.00 | 156.65 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 12.27 | -1.05 | 0.144 |
| 105.00 | -8.47 | -6.66 | 0.00 | -121.3 | 0.00 | 121.30 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 13.38 | -1.08 | 0.113 |
| 109.80 | -7.54 | -6.17 | 0.00 | -89.3 | 0.00 | 89.34 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 14.48 | -1.1 | 0.084 |
| 110.00 | -7.50 | -5.96 | 0.00 | -88.1 | 0.00 | 88.11 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 14.53 | -1.1 | 0.083 |
| 115.00 | -6.60 | -5.57 | 0.00 | -58.3 | 0.00 | 58.33 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 15.69 | -1.12 | 0.056 |
| 119.00 | -5.87 | -5.35 | 0.00 | -36.1 | 0.00 | 36.06 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 16.63 | -1.13 | 0.036 |
| 120.00 | -5.69 | -5.09 | 0.00 | -30.7 | 0.00 | 30.71 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 16.87 | -1.13 | 0.031 |
| 125.00 | -4.79 | -4.83 | 0.00 | -5.2 | 0.00 | 5.23 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 18.05 | -1.13 | 0.008 |
| 126.00 | -0.51 | -0.14 | 0.00 | -0.4 | 0.00 | 0.41 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 18.29 | -1.13 | 0.001 |
| 129.00 | 0.00 | -0.13 | 0.00 | 0.0 | 0.00 | 0.00 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 19 | -1.13 | 0.000 |

CALCULATED FORCES

Load Case: 0.9D + 1.0W

116 mph Wind with No Ice (Reduced DL)

17 Iterations

Gust Response Factor: 1.10
 Dead load Factor: 0.90
 Wind Load Factor: 1.00

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | Phi Pn (kips) | Phi Vn (kips) | Phi Tn (ft-kips) | Phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -53.29 | -35.40 | 0.00 | -2,986.2 | 0.00 | 2,986.21 | 7,347.96 | 1,935.63 | 12,150.54 | 10,514.58 | 0 | 0 | 0.292 |
| 5.00 | -51.23 | -34.81 | 0.00 | -2,809.2 | 0.00 | 2,809.22 | 7,250.00 | 1,893.94 | 11,632.80 | 10,149.34 | 0.03 | -0.06 | 0.284 |
| 10.00 | -49.22 | -34.24 | 0.00 | -2,635.2 | 0.00 | 2,635.15 | 7,149.38 | 1,852.25 | 11,126.33 | 9,786.55 | 0.13 | -0.12 | 0.276 |
| 15.00 | -47.24 | -33.67 | 0.00 | -2,464.0 | 0.00 | 2,463.95 | 7,046.10 | 1,810.56 | 10,631.13 | 9,426.45 | 0.29 | -0.18 | 0.268 |
| 20.00 | -45.31 | -33.07 | 0.00 | -2,295.6 | 0.00 | 2,295.62 | 6,940.17 | 1,768.86 | 10,147.21 | 9,069.30 | 0.52 | -0.25 | 0.260 |
| 25.00 | -43.40 | -32.47 | 0.00 | -2,130.2 | 0.00 | 2,130.25 | 6,831.58 | 1,727.17 | 9,674.56 | 8,715.33 | 0.81 | -0.31 | 0.251 |
| 30.00 | -41.54 | -31.84 | 0.00 | -1,967.9 | 0.00 | 1,967.93 | 6,720.34 | 1,685.48 | 9,213.17 | 8,364.81 | 1.17 | -0.37 | 0.242 |
| 35.00 | -39.72 | -31.21 | 0.00 | -1,808.7 | 0.00 | 1,808.72 | 6,606.45 | 1,643.78 | 8,763.07 | 8,017.96 | 1.59 | -0.43 | 0.232 |
| 40.00 | -37.93 | -30.58 | 0.00 | -1,652.7 | 0.00 | 1,652.66 | 6,489.89 | 1,602.09 | 8,324.23 | 7,675.05 | 2.07 | -0.49 | 0.222 |
| 45.00 | -36.19 | -30.24 | 0.00 | -1,499.8 | 0.00 | 1,499.78 | 6,370.69 | 1,560.40 | 7,896.66 | 7,336.32 | 2.61 | -0.55 | 0.210 |
| 45.18 | -36.12 | -29.92 | 0.00 | -1,494.2 | 0.00 | 1,494.20 | 6,366.24 | 1,558.86 | 7,881.10 | 7,323.90 | 2.63 | -0.55 | 0.210 |
| 50.00 | -33.33 | -29.41 | 0.00 | -1,350.1 | 0.00 | 1,350.12 | 6,248.83 | 1,518.71 | 7,480.37 | 7,002.02 | 3.22 | -0.6 | 0.199 |
| 52.82 | -31.72 | -29.08 | 0.00 | -1,267.2 | 0.00 | 1,267.18 | 5,253.49 | 1,331.14 | 6,567.48 | 5,903.55 | 3.58 | -0.64 | 0.221 |
| 55.00 | -31.05 | -28.62 | 0.00 | -1,203.8 | 0.00 | 1,203.80 | 5,211.58 | 1,315.23 | 6,411.49 | 5,785.93 | 3.88 | -0.66 | 0.214 |
| 60.00 | -29.56 | -27.97 | 0.00 | -1,060.7 | 0.00 | 1,060.72 | 5,113.56 | 1,278.75 | 6,060.79 | 5,518.37 | 4.61 | -0.72 | 0.198 |
| 65.00 | -28.10 | -27.33 | 0.00 | -920.8 | 0.00 | 920.85 | 5,012.88 | 1,242.27 | 5,719.95 | 5,254.11 | 5.39 | -0.78 | 0.181 |
| 70.00 | -26.67 | -26.70 | 0.00 | -784.2 | 0.00 | 784.18 | 4,909.55 | 1,205.79 | 5,388.98 | 4,993.41 | 6.23 | -0.83 | 0.163 |
| 75.00 | -25.28 | -26.19 | 0.00 | -650.7 | 0.00 | 650.68 | 4,803.57 | 1,169.31 | 5,067.87 | 4,736.51 | 7.13 | -0.88 | 0.143 |
| 78.00 | -21.68 | -23.71 | 0.00 | -572.1 | 0.00 | 572.10 | 4,738.70 | 1,147.42 | 4,879.94 | 4,584.29 | 7.69 | -0.9 | 0.130 |
| 80.00 | -21.14 | -23.47 | 0.00 | -524.7 | 0.00 | 524.69 | 4,694.92 | 1,132.83 | 4,756.62 | 4,483.64 | 8.07 | -0.92 | 0.122 |
| 81.84 | -20.66 | -23.16 | 0.00 | -481.5 | 0.00 | 481.53 | 4,654.30 | 1,119.41 | 4,644.62 | 4,391.71 | 8.43 | -0.93 | 0.115 |
| 85.00 | -19.12 | -22.58 | 0.00 | -408.3 | 0.00 | 408.33 | 4,583.63 | 1,096.35 | 4,455.23 | 4,235.08 | 9.05 | -0.96 | 0.101 |
| 87.00 | -14.06 | -17.68 | 0.00 | -363.2 | 0.00 | 363.16 | 4,538.37 | 1,081.75 | 4,337.44 | 4,136.91 | 9.46 | -0.97 | 0.091 |
| 88.16 | -13.58 | -17.55 | 0.00 | -342.6 | 0.00 | 342.58 | 3,749.85 | 936.91 | 3,795.73 | 3,458.98 | 9.7 | -0.98 | 0.103 |
| 88.90 | -12.94 | -16.91 | 0.00 | -329.7 | 0.00 | 329.67 | 3,737.27 | 932.31 | 3,758.56 | 3,430.31 | 9.85 | -0.98 | 0.100 |
| 89.00 | -12.75 | -16.57 | 0.00 | -328.0 | 0.00 | 327.98 | 3,735.55 | 931.68 | 3,753.52 | 3,426.41 | 9.87 | -0.98 | 0.099 |
| 90.00 | -12.57 | -16.21 | 0.00 | -311.4 | 0.00 | 311.41 | 3,718.33 | 925.43 | 3,703.31 | 3,387.54 | 10.08 | -0.99 | 0.096 |
| 95.00 | -11.66 | -15.67 | 0.00 | -230.3 | 0.00 | 230.33 | 3,630.66 | 894.16 | 3,457.30 | 3,194.96 | 11.13 | -1.02 | 0.076 |
| 99.00 | -8.32 | -11.95 | 0.00 | -167.6 | 0.00 | 167.64 | 3,558.60 | 869.14 | 3,266.59 | 3,043.18 | 12 | -1.04 | 0.058 |
| 99.00 | -8.32 | -11.95 | 0.00 | -167.6 | 0.00 | 167.64 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 12 | -1.04 | 0.154 |
| 100.00 | -7.01 | -7.02 | 0.00 | -155.7 | 0.00 | 155.69 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 12.21 | -1.04 | 0.142 |
| 105.00 | -6.32 | -6.62 | 0.00 | -120.6 | 0.00 | 120.57 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 13.33 | -1.07 | 0.110 |
| 109.80 | -5.62 | -6.13 | 0.00 | -88.8 | 0.00 | 88.80 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 14.42 | -1.1 | 0.082 |
| 110.00 | -5.60 | -5.92 | 0.00 | -87.6 | 0.00 | 87.58 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 14.46 | -1.1 | 0.081 |
| 115.00 | -4.92 | -5.54 | 0.00 | -58.0 | 0.00 | 57.99 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 15.62 | -1.11 | 0.055 |
| 119.00 | -4.38 | -5.32 | 0.00 | -35.8 | 0.00 | 35.85 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 16.56 | -1.12 | 0.035 |
| 120.00 | -4.25 | -5.07 | 0.00 | -30.5 | 0.00 | 30.53 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 16.79 | -1.12 | 0.030 |
| 125.00 | -3.57 | -4.80 | 0.00 | -5.2 | 0.00 | 5.20 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 17.97 | -1.13 | 0.007 |
| 126.00 | -0.38 | -0.13 | 0.00 | -0.4 | 0.00 | 0.40 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 18.2 | -1.13 | 0.001 |
| 129.00 | 0.00 | -0.13 | 0.00 | 0.0 | 0.00 | 0.00 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 18.91 | -1.13 | 0.000 |

CALCULATED FORCES

| Load Case: 1.2D + 1.0Di + 1.0Wi | | | | | | | | | | | | | 47 mph Wind with 1.05" Radial Ice | | 16 Iterations |
|---------------------------------|------------------|------------------|----------------------|-----------------|-----------------|----------------------------|-----------------------|---------------|------------------|------------------|--------------------|----------------|-----------------------------------|--|---------------|
| Gust Response Factor: | | 1.10 | Ice Dead Load Factor | | | 1.00 | Ice Importance Factor | | | | | | 1.00 | | |
| Dead Load Factor: | | 1.20 | | | | | | | | | | | | | |
| Wind Load Factor: | | 1.00 | | | | | | | | | | | | | |
| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | Phi Pn (kips) | Phi Vn (kips) | Phi Tn (ft-kips) | Phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio | | |
| 0.00 | -90.99 | -8.73 | 0.00 | -725.0 | 0.00 | 725.01 | 7,347.96 | 1,935.63 | 12,150.54 | 10,514.58 | 0 | 0 | 0.081 | | |
| 5.00 | -87.92 | -8.58 | 0.00 | -681.4 | 0.00 | 681.36 | 7,250.00 | 1,893.94 | 11,632.80 | 10,149.34 | 0.01 | -0.01 | 0.079 | | |
| 10.00 | -84.87 | -8.42 | 0.00 | -638.5 | 0.00 | 638.48 | 7,149.38 | 1,852.25 | 11,126.33 | 9,786.55 | 0.03 | -0.03 | 0.077 | | |
| 15.00 | -81.85 | -8.27 | 0.00 | -596.4 | 0.00 | 596.36 | 7,046.10 | 1,810.56 | 10,631.13 | 9,426.45 | 0.07 | -0.04 | 0.075 | | |
| 20.00 | -78.87 | -8.11 | 0.00 | -555.0 | 0.00 | 555.00 | 6,940.17 | 1,768.86 | 10,147.21 | 9,069.30 | 0.13 | -0.06 | 0.073 | | |
| 25.00 | -75.94 | -7.95 | 0.00 | -514.4 | 0.00 | 514.44 | 6,831.58 | 1,727.17 | 9,674.56 | 8,715.33 | 0.2 | -0.07 | 0.070 | | |
| 30.00 | -73.06 | -7.78 | 0.00 | -474.7 | 0.00 | 474.70 | 6,720.34 | 1,685.48 | 9,213.17 | 8,364.81 | 0.28 | -0.09 | 0.068 | | |
| 35.00 | -70.23 | -7.61 | 0.00 | -435.8 | 0.00 | 435.79 | 6,606.45 | 1,643.78 | 8,763.07 | 8,017.96 | 0.38 | -0.1 | 0.065 | | |
| 40.00 | -67.45 | -7.44 | 0.00 | -397.8 | 0.00 | 397.75 | 6,489.89 | 1,602.09 | 8,324.23 | 7,675.05 | 0.5 | -0.12 | 0.062 | | |
| 45.00 | -64.73 | -7.34 | 0.00 | -360.6 | 0.00 | 360.56 | 6,370.69 | 1,560.40 | 7,896.66 | 7,336.32 | 0.63 | -0.13 | 0.059 | | |
| 45.18 | -64.63 | -7.26 | 0.00 | -359.2 | 0.00 | 359.21 | 6,366.24 | 1,558.86 | 7,881.10 | 7,323.90 | 0.64 | -0.13 | 0.059 | | |
| 50.00 | -60.52 | -7.11 | 0.00 | -324.3 | 0.00 | 324.27 | 6,248.83 | 1,518.71 | 7,480.37 | 7,002.02 | 0.78 | -0.15 | 0.056 | | |
| 52.82 | -58.15 | -7.02 | 0.00 | -304.2 | 0.00 | 304.20 | 5,253.49 | 1,331.14 | 6,567.48 | 5,903.55 | 0.87 | -0.15 | 0.063 | | |
| 55.00 | -57.10 | -6.90 | 0.00 | -288.9 | 0.00 | 288.89 | 5,211.58 | 1,315.23 | 6,411.49 | 5,785.93 | 0.94 | -0.16 | 0.061 | | |
| 60.00 | -54.72 | -6.72 | 0.00 | -254.4 | 0.00 | 254.41 | 5,113.56 | 1,278.75 | 6,060.79 | 5,518.37 | 1.11 | -0.17 | 0.057 | | |
| 65.00 | -52.38 | -6.54 | 0.00 | -220.8 | 0.00 | 220.82 | 5,012.88 | 1,242.27 | 5,719.95 | 5,254.11 | 1.3 | -0.19 | 0.053 | | |
| 70.00 | -50.10 | -6.36 | 0.00 | -188.1 | 0.00 | 188.11 | 4,909.55 | 1,205.79 | 5,388.98 | 4,993.41 | 1.51 | -0.2 | 0.048 | | |
| 75.00 | -47.87 | -6.22 | 0.00 | -156.3 | 0.00 | 156.29 | 4,803.57 | 1,169.31 | 5,067.87 | 4,736.51 | 1.72 | -0.21 | 0.043 | | |
| 78.00 | -41.36 | -5.62 | 0.00 | -137.6 | 0.00 | 137.63 | 4,738.70 | 1,147.42 | 4,879.94 | 4,584.29 | 1.86 | -0.22 | 0.039 | | |
| 80.00 | -40.50 | -5.56 | 0.00 | -126.4 | 0.00 | 126.38 | 4,694.92 | 1,132.83 | 4,756.62 | 4,483.64 | 1.95 | -0.22 | 0.037 | | |
| 81.84 | -39.71 | -5.47 | 0.00 | -116.2 | 0.00 | 116.17 | 4,654.30 | 1,119.41 | 4,644.62 | 4,391.71 | 2.03 | -0.23 | 0.035 | | |
| 85.00 | -37.28 | -5.32 | 0.00 | -98.9 | 0.00 | 98.88 | 4,583.63 | 1,096.35 | 4,455.23 | 4,235.08 | 2.19 | -0.23 | 0.032 | | |
| 87.00 | -27.62 | -4.15 | 0.00 | -88.2 | 0.00 | 88.23 | 4,538.37 | 1,081.75 | 4,337.44 | 4,136.91 | 2.28 | -0.23 | 0.027 | | |
| 88.16 | -26.91 | -4.11 | 0.00 | -83.4 | 0.00 | 83.40 | 3,749.85 | 936.91 | 3,795.73 | 3,458.98 | 2.34 | -0.24 | 0.031 | | |
| 88.90 | -25.53 | -3.98 | 0.00 | -80.4 | 0.00 | 80.37 | 3,737.27 | 932.31 | 3,758.56 | 3,430.31 | 2.38 | -0.24 | 0.030 | | |
| 89.00 | -25.10 | -3.90 | 0.00 | -80.0 | 0.00 | 79.98 | 3,735.55 | 931.68 | 3,753.52 | 3,426.41 | 2.38 | -0.24 | 0.030 | | |
| 90.00 | -24.79 | -3.80 | 0.00 | -76.1 | 0.00 | 76.08 | 3,718.33 | 925.43 | 3,703.31 | 3,387.54 | 2.43 | -0.24 | 0.029 | | |
| 95.00 | -23.24 | -3.64 | 0.00 | -57.1 | 0.00 | 57.08 | 3,630.66 | 894.16 | 3,457.30 | 3,194.96 | 2.69 | -0.25 | 0.024 | | |
| 99.00 | -17.61 | -2.72 | 0.00 | -42.5 | 0.00 | 42.50 | 3,558.60 | 869.14 | 3,266.59 | 3,043.18 | 2.9 | -0.25 | 0.019 | | |
| 99.00 | -17.61 | -2.72 | 0.00 | -42.5 | 0.00 | 42.50 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 2.9 | -0.25 | 0.051 | | |
| 100.00 | -13.36 | -1.88 | 0.00 | -39.8 | 0.00 | 39.78 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 2.95 | -0.25 | 0.045 | | |
| 105.00 | -12.18 | -1.74 | 0.00 | -30.4 | 0.00 | 30.36 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 3.22 | -0.26 | 0.036 | | |
| 109.80 | -10.90 | -1.59 | 0.00 | -22.0 | 0.00 | 22.00 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 3.48 | -0.27 | 0.028 | | |
| 110.00 | -10.85 | -1.51 | 0.00 | -21.7 | 0.00 | 21.68 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 3.49 | -0.27 | 0.027 | | |
| 115.00 | -9.67 | -1.38 | 0.00 | -14.1 | 0.00 | 14.12 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 3.77 | -0.27 | 0.020 | | |
| 119.00 | -8.72 | -1.30 | 0.00 | -8.6 | 0.00 | 8.62 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 4 | -0.27 | 0.014 | | |
| 120.00 | -8.49 | -1.21 | 0.00 | -7.3 | 0.00 | 7.32 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 4.06 | -0.27 | 0.013 | | |
| 125.00 | -7.30 | -1.12 | 0.00 | -1.3 | 0.00 | 1.26 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 4.34 | -0.27 | 0.007 | | |
| 126.00 | -0.68 | -0.05 | 0.00 | -0.1 | 0.00 | 0.14 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 4.4 | -0.27 | 0.001 | | |
| 129.00 | 0.00 | -0.04 | 0.00 | 0.0 | 0.00 | 0.00 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 4.57 | -0.27 | 0.000 | | |

CALCULATED FORCES

Load Case: 1.0D + 1.0W

60 mph Wind with No Ice

16 Iterations

Gust Response Factor: 1.10
 Dead load Factor: 1.00
 Wind Load Factor: 1.00

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | Phi Pn (kips) | Phi Vn (kips) | Phi Tn (ft-kips) | Phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -59.23 | -8.47 | 0.00 | -715.6 | 0.00 | 715.60 | 7,347.96 | 1,935.63 | 12,150.54 | 10,514.58 | 0 | 0 | 0.076 |
| 5.00 | -56.99 | -8.34 | 0.00 | -673.2 | 0.00 | 673.23 | 7,250.00 | 1,893.94 | 11,632.80 | 10,149.34 | 0.01 | -0.01 | 0.074 |
| 10.00 | -54.79 | -8.20 | 0.00 | -631.6 | 0.00 | 631.56 | 7,149.38 | 1,852.25 | 11,126.33 | 9,786.55 | 0.03 | -0.03 | 0.072 |
| 15.00 | -52.63 | -8.06 | 0.00 | -590.6 | 0.00 | 590.56 | 7,046.10 | 1,810.56 | 10,631.13 | 9,426.45 | 0.07 | -0.04 | 0.070 |
| 20.00 | -50.51 | -7.92 | 0.00 | -550.2 | 0.00 | 550.25 | 6,940.17 | 1,768.86 | 10,147.21 | 9,069.30 | 0.12 | -0.06 | 0.068 |
| 25.00 | -48.43 | -7.78 | 0.00 | -510.6 | 0.00 | 510.64 | 6,831.58 | 1,727.17 | 9,674.56 | 8,715.33 | 0.19 | -0.07 | 0.066 |
| 30.00 | -46.39 | -7.63 | 0.00 | -471.8 | 0.00 | 471.75 | 6,720.34 | 1,685.48 | 9,213.17 | 8,364.81 | 0.28 | -0.09 | 0.063 |
| 35.00 | -44.39 | -7.48 | 0.00 | -433.6 | 0.00 | 433.61 | 6,606.45 | 1,643.78 | 8,763.07 | 8,017.96 | 0.38 | -0.1 | 0.061 |
| 40.00 | -42.44 | -7.33 | 0.00 | -396.2 | 0.00 | 396.21 | 6,489.89 | 1,602.09 | 8,324.23 | 7,675.05 | 0.5 | -0.12 | 0.058 |
| 45.00 | -40.52 | -7.25 | 0.00 | -359.6 | 0.00 | 359.57 | 6,370.69 | 1,560.40 | 7,896.66 | 7,336.32 | 0.63 | -0.13 | 0.055 |
| 45.18 | -40.45 | -7.17 | 0.00 | -358.2 | 0.00 | 358.23 | 6,366.24 | 1,558.86 | 7,881.10 | 7,323.90 | 0.63 | -0.13 | 0.055 |
| 50.00 | -37.36 | -7.05 | 0.00 | -323.7 | 0.00 | 323.70 | 6,248.83 | 1,518.71 | 7,480.37 | 7,002.02 | 0.77 | -0.14 | 0.052 |
| 52.82 | -35.59 | -6.97 | 0.00 | -303.8 | 0.00 | 303.82 | 5,253.49 | 1,331.14 | 6,567.48 | 5,903.55 | 0.86 | -0.15 | 0.058 |
| 55.00 | -34.86 | -6.86 | 0.00 | -288.6 | 0.00 | 288.63 | 5,211.58 | 1,315.23 | 6,411.49 | 5,785.93 | 0.93 | -0.16 | 0.057 |
| 60.00 | -33.22 | -6.71 | 0.00 | -254.3 | 0.00 | 254.33 | 5,113.56 | 1,278.75 | 6,060.79 | 5,518.37 | 1.1 | -0.17 | 0.053 |
| 65.00 | -31.62 | -6.55 | 0.00 | -220.8 | 0.00 | 220.80 | 5,012.88 | 1,242.27 | 5,719.95 | 5,254.11 | 1.29 | -0.19 | 0.048 |
| 70.00 | -30.05 | -6.40 | 0.00 | -188.0 | 0.00 | 188.03 | 4,909.55 | 1,205.79 | 5,388.98 | 4,993.41 | 1.49 | -0.2 | 0.044 |
| 75.00 | -28.51 | -6.28 | 0.00 | -156.0 | 0.00 | 156.02 | 4,803.57 | 1,169.31 | 5,067.87 | 4,736.51 | 1.71 | -0.21 | 0.039 |
| 78.00 | -24.48 | -5.68 | 0.00 | -137.2 | 0.00 | 137.18 | 4,738.70 | 1,147.42 | 4,879.94 | 4,584.29 | 1.84 | -0.22 | 0.035 |
| 80.00 | -23.89 | -5.63 | 0.00 | -125.8 | 0.00 | 125.81 | 4,694.92 | 1,132.83 | 4,756.62 | 4,483.64 | 1.93 | -0.22 | 0.033 |
| 81.84 | -23.35 | -5.55 | 0.00 | -115.5 | 0.00 | 115.46 | 4,654.30 | 1,119.41 | 4,644.62 | 4,391.71 | 2.02 | -0.22 | 0.031 |
| 85.00 | -21.65 | -5.41 | 0.00 | -97.9 | 0.00 | 97.91 | 4,583.63 | 1,096.35 | 4,455.23 | 4,235.08 | 2.17 | -0.23 | 0.028 |
| 87.00 | -15.93 | -4.24 | 0.00 | -87.1 | 0.00 | 87.08 | 4,538.37 | 1,081.75 | 4,337.44 | 4,136.91 | 2.27 | -0.23 | 0.025 |
| 88.16 | -15.41 | -4.21 | 0.00 | -82.2 | 0.00 | 82.15 | 3,749.85 | 936.91 | 3,795.73 | 3,458.98 | 2.32 | -0.23 | 0.028 |
| 88.90 | -14.68 | -4.05 | 0.00 | -79.0 | 0.00 | 79.05 | 3,737.27 | 932.31 | 3,758.56 | 3,430.31 | 2.36 | -0.24 | 0.027 |
| 89.00 | -14.47 | -3.97 | 0.00 | -78.6 | 0.00 | 78.65 | 3,735.55 | 931.68 | 3,753.52 | 3,426.41 | 2.37 | -0.24 | 0.027 |
| 90.00 | -14.26 | -3.89 | 0.00 | -74.7 | 0.00 | 74.67 | 3,718.33 | 925.43 | 3,703.31 | 3,387.54 | 2.42 | -0.24 | 0.026 |
| 95.00 | -13.25 | -3.76 | 0.00 | -55.2 | 0.00 | 55.24 | 3,630.66 | 894.16 | 3,457.30 | 3,194.96 | 2.67 | -0.24 | 0.021 |
| 99.00 | -9.47 | -2.86 | 0.00 | -40.2 | 0.00 | 40.21 | 3,558.60 | 869.14 | 3,266.59 | 3,043.18 | 2.88 | -0.25 | 0.016 |
| 99.00 | -9.47 | -2.86 | 0.00 | -40.2 | 0.00 | 40.21 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 2.88 | -0.25 | 0.042 |
| 100.00 | -7.92 | -1.68 | 0.00 | -37.3 | 0.00 | 37.34 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 2.93 | -0.25 | 0.039 |
| 105.00 | -7.16 | -1.59 | 0.00 | -28.9 | 0.00 | 28.92 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 3.19 | -0.26 | 0.031 |
| 109.80 | -6.37 | -1.47 | 0.00 | -21.3 | 0.00 | 21.30 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 3.46 | -0.26 | 0.023 |
| 110.00 | -6.34 | -1.42 | 0.00 | -21.0 | 0.00 | 21.01 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 3.47 | -0.26 | 0.023 |
| 115.00 | -5.58 | -1.33 | 0.00 | -13.9 | 0.00 | 13.91 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 3.74 | -0.27 | 0.016 |
| 119.00 | -4.97 | -1.28 | 0.00 | -8.6 | 0.00 | 8.60 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 3.97 | -0.27 | 0.011 |
| 120.00 | -4.82 | -1.21 | 0.00 | -7.3 | 0.00 | 7.32 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 4.03 | -0.27 | 0.010 |
| 125.00 | -4.06 | -1.15 | 0.00 | -1.2 | 0.00 | 1.25 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 4.31 | -0.27 | 0.004 |
| 126.00 | -0.43 | -0.03 | 0.00 | -0.1 | 0.00 | 0.10 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 4.36 | -0.27 | 0.000 |
| 129.00 | 0.00 | -0.03 | 0.00 | 0.0 | 0.00 | 0.00 | 1,313.82 | 396.61 | 1,242.23 | 1,145.34 | 4.53 | -0.27 | 0.000 |

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

| | |
|--|----------|
| Design Spectral Response Acceleration at Short Period (S_{ds}): | 0.170 |
| Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}): | 0.067 |
| Long-Period Transition Period (T_L - Seconds): | 6 |
| Importance Factor (I_e): | 1.000 |
| Response Modification Coefficient (R): | 1.500 |
| Seismic Response Coefficient (C_s): | 0.038 |
| Upper Limit C_S : | 0.038 |
| Lower Limit C_S : | 0.030 |
| Period based on Rayleigh Method (sec): | 1.160 |
| Redundancy Factor (ρ): | 1.000 |
| Seismic Force Distribution Exponent (k): | 1.330 |
| Total Unfactored Dead Load: | 59.230 k |
| Seismic Base Shear (E): | 2.270 k |

SEISMIC FORCES

| 1.2D + 1.0Ev + 1.0Eh | Seismic | Height Above Base (ft) | Weight (lb) | W_z (lb-ft) | C_{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|----------------------------------|---------|------------------------|-------------|---------------|----------|-----------------------|---------------------|
| 38 | | 127.5 | 428 | 273 | 0.016 | 37 | 529 |
| 37 | | 125.5 | 152 | 95 | 0.006 | 13 | 188 |
| 36 | | 122.5 | 760 | 460 | 0.028 | 63 | 938 |
| 35 | | 119.5 | 152 | 89 | 0.005 | 12 | 188 |
| 34 | | 117 | 608 | 346 | 0.021 | 47 | 751 |
| 33 | | 112.5 | 760 | 410 | 0.025 | 56 | 938 |
| 32 | | 109.9 | 30 | 16 | 0.001 | 2 | 38 |
| 31 | | 107.4 | 731 | 371 | 0.022 | 51 | 902 |
| 30 | | 102.5 | 762 | 363 | 0.022 | 50 | 940 |
| 29 | | 99.5 | 170 | 78 | 0.005 | 11 | 210 |
| 28 | | 97 | 792 | 351 | 0.021 | 48 | 977 |
| 27 | | 92.5 | 1,017 | 423 | 0.026 | 58 | 1,255 |
| 26 | | 89.5 | 207 | 82 | 0.005 | 11 | 255 |
| 25 | | 88.95 | 21 | 8 | 0.000 | 1 | 26 |
| 24 | | 88.5323 | 153 | 60 | 0.004 | 8 | 189 |
| 23 | | 87.5823 | 525 | 203 | 0.012 | 28 | 648 |
| 22 | | 86 | 939 | 354 | 0.021 | 49 | 1,159 |
| 21 | | 83.4195 | 1,506 | 546 | 0.033 | 75 | 1,858 |
| 20 | | 80.9195 | 538 | 187 | 0.011 | 26 | 664 |
| 19 | | 79 | 590 | 199 | 0.012 | 27 | 729 |
| 18 | | 76.5 | 903 | 292 | 0.018 | 40 | 1,115 |
| 17 | | 72.5 | 1,534 | 461 | 0.028 | 63 | 1,892 |
| 16 | | 67.5 | 1,569 | 429 | 0.026 | 59 | 1,936 |
| 15 | | 62.5 | 1,604 | 396 | 0.024 | 54 | 1,980 |
| 14 | | 57.5 | 1,640 | 362 | 0.022 | 50 | 2,023 |
| 13 | | 53.91 | 726 | 147 | 0.009 | 20 | 896 |
| 12 | | 51.41 | 1,773 | 337 | 0.020 | 46 | 2,188 |
| 11 | | 47.5923 | 3,083 | 529 | 0.032 | 73 | 3,805 |
| 10 | | 45.0923 | 70 | 11 | 0.001 | 2 | 86 |
| 9 | | 42.5 | 1,915 | 283 | 0.017 | 39 | 2,363 |
| 8 | | 37.5 | 1,956 | 244 | 0.015 | 34 | 2,413 |
| 7 | | 32.5 | 1,996 | 206 | 0.012 | 28 | 2,463 |
| 6 | | 27.5 | 2,036 | 168 | 0.010 | 23 | 2,513 |
| 5 | | 22.5 | 2,077 | 131 | 0.008 | 18 | 2,563 |
| 4 | | 17.5 | 2,117 | 96 | 0.006 | 13 | 2,613 |
| 3 | | 12.5 | 2,158 | 62 | 0.004 | 9 | 2,663 |
| 2 | | 7.5 | 2,198 | 32 | 0.002 | 4 | 2,713 |
| 1 | | 2.5 | 2,239 | 8 | 0.000 | 1 | 2,762 |
| Ericsson Radio 4460 B25+B66 | | 126 | 327 | 205 | 0.012 | 28 | 404 |
| Ericsson Radio 4480 B71+B85 | | 126 | 279 | 175 | 0.011 | 24 | 344 |
| RFS APXVLL19P_43-C-A20 | | 126 | 123 | 77 | 0.005 | 11 | 151 |
| Amphenol Antel APXVAALL24M-U-J20 | | 126 | 258 | 162 | 0.010 | 22 | 318 |

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh

Seismic

| Segment | Height Above Base (ft) | Weight (lb) | W _z (lb-ft) | C _{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|---------------------------------------|------------------------|---------------|------------------------|-----------------|-----------------------|---------------------|
| Generic Platform with Handrails | 126 | 2,500 | 1,569 | 0.095 | 215 | 3,085 |
| Generic 20' Omni | 109.8 | 55 | 29 | 0.002 | 4 | 68 |
| Commscope CBC78T-DS-43-2X | 100 | 62 | 29 | 0.002 | 4 | 77 |
| Kaelus KA-6030 | 100 | 35 | 16 | 0.001 | 2 | 43 |
| Samsung XXDWMM-12.5-65-8T-CBRS | 100 | 69 | 32 | 0.002 | 4 | 86 |
| Samsung B5/B13 RRH-BR04C | 100 | 211 | 97 | 0.006 | 13 | 260 |
| Samsung B2/B66A RRH-BR049 | 100 | 253 | 117 | 0.007 | 16 | 312 |
| Raycap RVZDC-6627-PF-48 | 100 | 32 | 15 | 0.001 | 2 | 39 |
| Samsung MT6407-77A | 100 | 245 | 113 | 0.007 | 15 | 302 |
| Antel LPA-80080/8CF ____ | 100 | 144 | 66 | 0.004 | 9 | 178 |
| Commscope JAHH-65C-R3B | 100 | 331 | 153 | 0.009 | 21 | 408 |
| Generic Flat Low Profile Platform | 99 | 1,875 | 854 | 0.052 | 117 | 2,314 |
| Unused Reserve (10083.90 sqin) | 99 | 1,118 | 509 | 0.031 | 70 | 1,379 |
| Ericsson AIR 6419 B77D | 89 | 189 | 75 | 0.004 | 10 | 234 |
| Ericsson RRU11 | 88.9 | 575 | 227 | 0.014 | 31 | 710 |
| Raycap DC6-48-60-18-8F(32.8 lbs) | 87 | 98 | 38 | 0.002 | 5 | 121 |
| Ericsson RRUS 4478 B14 (18.1" Height) | 87 | 178 | 68 | 0.004 | 9 | 220 |
| Ericsson Radio 4890HP B2/B25 B66 | 87 | 204 | 78 | 0.005 | 11 | 252 |
| Ericsson RRUS 4490 | 87 | 205 | 79 | 0.005 | 11 | 253 |
| Generic Mount Reinforcement | 87 | 1,200 | 460 | 0.028 | 63 | 1,481 |
| CCI TPA65R-BU6D | 87 | 205 | 79 | 0.005 | 11 | 253 |
| CCI OPA65R-BU6D | 87 | 190 | 73 | 0.004 | 10 | 234 |
| Generic Round Platform with Handrails | 87 | 2,500 | 958 | 0.058 | 131 | 3,085 |
| Generic Round Platform with Handrails | 78 | 2,500 | 828 | 0.050 | 114 | 3,085 |
| Ericsson AIR 6419 B77G | 85 | 198 | 74 | 0.004 | 10 | 245 |
| Commscope RDIDC-9181-PF-48 | 78 | 22 | 7 | 0.000 | 1 | 27 |
| Fujitsu TA08025-B605 | 78 | 225 | 75 | 0.004 | 10 | 278 |
| Fujitsu TA08025-B604 | 78 | 192 | 64 | 0.004 | 9 | 237 |
| JMA Wireless MX08FRO665-21 | 78 | 194 | 64 | 0.004 | 9 | 239 |
| Totals: | | 59,229 | 16,573 | 1.000 | 2,273 | 73,088 |

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

| Segment | Height Above Base (ft) | Weight (lb) | W _z (lb-ft) | C _{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|---------|------------------------|-------------|------------------------|-----------------|-----------------------|---------------------|
| 38 | 127.5 | 428 | 273 | 0.016 | 37 | 371 |
| 37 | 125.5 | 152 | 95 | 0.006 | 13 | 132 |
| 36 | 122.5 | 760 | 460 | 0.028 | 63 | 659 |
| 35 | 119.5 | 152 | 89 | 0.005 | 12 | 132 |
| 34 | 117 | 608 | 346 | 0.021 | 47 | 527 |
| 33 | 112.5 | 760 | 410 | 0.025 | 56 | 659 |
| 32 | 109.9 | 30 | 16 | 0.001 | 2 | 26 |
| 31 | 107.4 | 731 | 371 | 0.022 | 51 | 633 |
| 30 | 102.5 | 762 | 363 | 0.022 | 50 | 660 |
| 29 | 99.5 | 170 | 78 | 0.005 | 11 | 147 |
| 28 | 97 | 792 | 351 | 0.021 | 48 | 686 |
| 27 | 92.5 | 1,017 | 423 | 0.026 | 58 | 881 |
| 26 | 89.5 | 207 | 82 | 0.005 | 11 | 179 |
| 25 | 88.95 | 21 | 8 | 0.000 | 1 | 18 |
| 24 | 88.5323 | 153 | 60 | 0.004 | 8 | 133 |
| 23 | 87.5823 | 525 | 203 | 0.012 | 28 | 455 |
| 22 | 86 | 939 | 354 | 0.021 | 49 | 813 |
| 21 | 83.4195 | 1,506 | 546 | 0.033 | 75 | 1,304 |
| 20 | 80.9195 | 538 | 187 | 0.011 | 26 | 466 |
| 19 | 79 | 590 | 199 | 0.012 | 27 | 511 |
| 18 | 76.5 | 903 | 292 | 0.018 | 40 | 782 |
| 17 | 72.5 | 1,534 | 461 | 0.028 | 63 | 1,328 |
| 16 | 67.5 | 1,569 | 429 | 0.026 | 59 | 1,359 |
| 15 | 62.5 | 1,604 | 396 | 0.024 | 54 | 1,389 |
| 14 | 57.5 | 1,640 | 362 | 0.022 | 50 | 1,420 |
| 13 | 53.91 | 726 | 147 | 0.009 | 20 | 629 |

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

| Segment | Height Above Base (ft) | Weight (lb) | W _z (lb-ft) | C _{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|---------------------------------------|------------------------|---------------|------------------------|-----------------|-----------------------|---------------------|
| 12 | 51.41 | 1,773 | 337 | 0.020 | 46 | 1,535 |
| 11 | 47.5923 | 3,083 | 529 | 0.032 | 73 | 2,670 |
| 10 | 45.0923 | 70 | 11 | 0.001 | 2 | 61 |
| 9 | 42.5 | 1,915 | 283 | 0.017 | 39 | 1,659 |
| 8 | 37.5 | 1,956 | 244 | 0.015 | 34 | 1,694 |
| 7 | 32.5 | 1,996 | 206 | 0.012 | 28 | 1,729 |
| 6 | 27.5 | 2,036 | 168 | 0.010 | 23 | 1,764 |
| 5 | 22.5 | 2,077 | 131 | 0.008 | 18 | 1,799 |
| 4 | 17.5 | 2,117 | 96 | 0.006 | 13 | 1,834 |
| 3 | 12.5 | 2,158 | 62 | 0.004 | 9 | 1,869 |
| 2 | 7.5 | 2,198 | 32 | 0.002 | 4 | 1,904 |
| 1 | 2.5 | 2,239 | 8 | 0.000 | 1 | 1,939 |
| Ericsson Radio 4460 B25+B66 | 126 | 327 | 205 | 0.012 | 28 | 283 |
| Ericsson Radio 4480 B71+B85 | 126 | 279 | 175 | 0.011 | 24 | 242 |
| RFS APXVLL19P_43-C-A20 | 126 | 123 | 77 | 0.005 | 11 | 106 |
| Amphenol Antel APXVAALL24M-U-J20 | 126 | 258 | 162 | 0.010 | 22 | 223 |
| Generic Platform with Handrails | 126 | 2,500 | 1,569 | 0.095 | 215 | 2,165 |
| Generic 20' Omni | 109.8 | 55 | 29 | 0.002 | 4 | 48 |
| Commscope CBC78T-DS-43-2X | 100 | 62 | 29 | 0.002 | 4 | 54 |
| Kaelus KA-6030 | 100 | 35 | 16 | 0.001 | 2 | 30 |
| Samsung XXDWMM-12.5-65-8T-CBRS | 100 | 69 | 32 | 0.002 | 4 | 60 |
| Samsung B5/B13 RRH-BR04C | 100 | 211 | 97 | 0.006 | 13 | 183 |
| Samsung B2/B66A RRH-BR049 | 100 | 253 | 117 | 0.007 | 16 | 219 |
| Raycap RVZDC-6627-PF-48 | 100 | 32 | 15 | 0.001 | 2 | 28 |
| Samsung MT6407-77A | 100 | 245 | 113 | 0.007 | 15 | 212 |
| Antel LPA-80080/8CF ____ | 100 | 144 | 66 | 0.004 | 9 | 125 |
| Commscope JAHH-65C-R3B | 100 | 331 | 153 | 0.009 | 21 | 286 |
| Generic Flat Low Profile Platform | 99 | 1,875 | 854 | 0.052 | 117 | 1,624 |
| Unused Reserve (10083.90 sqin) | 99 | 1,118 | 509 | 0.031 | 70 | 968 |
| Ericsson AIR 6419 B77D | 89 | 189 | 75 | 0.004 | 10 | 164 |
| Ericsson RRU11 | 88.9 | 575 | 227 | 0.014 | 31 | 498 |
| Raycap DC6-48-60-18-8F(32.8 lbs) | 87 | 98 | 38 | 0.002 | 5 | 85 |
| Ericsson RRUS 4478 B14 (18.1" Height) | 87 | 178 | 68 | 0.004 | 9 | 154 |
| Ericsson Radio 4890HP B2/B25 B66 | 87 | 204 | 78 | 0.005 | 11 | 177 |
| Ericsson RRUS 4490 | 87 | 205 | 79 | 0.005 | 11 | 178 |
| Generic Mount Reinforcement | 87 | 1,200 | 460 | 0.028 | 63 | 1,039 |
| CCI TPA65R-BU6D | 87 | 205 | 79 | 0.005 | 11 | 177 |
| CCI OPA65R-BU6D | 87 | 190 | 73 | 0.004 | 10 | 164 |
| Generic Round Platform with Handrails | 87 | 2,500 | 958 | 0.058 | 131 | 2,165 |
| Generic Round Platform with Handrails | 78 | 2,500 | 828 | 0.050 | 114 | 2,165 |
| Ericsson AIR 6419 B77G | 85 | 198 | 74 | 0.004 | 10 | 172 |
| Commscope RDIDC-9181-PF-48 | 78 | 22 | 7 | 0.000 | 1 | 19 |
| Fujitsu TA08025-B605 | 78 | 225 | 75 | 0.004 | 10 | 195 |
| Fujitsu TA08025-B604 | 78 | 192 | 64 | 0.004 | 9 | 166 |
| JMA Wireless MX08FRO665-21 | 78 | 194 | 64 | 0.004 | 9 | 168 |
| Totals: | | 59,229 | 16,573 | 1.000 | 2,273 | 51,292 |

SEISMIC FORCES

1.2D + 1.0Ev + 1.5Eh

Seismic Overstrength

| Segment | Height Above Base (ft) | Weight (lb) | W _z (lb-ft) | C _{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|---------|------------------------|-------------|------------------------|-----------------|-----------------------|---------------------|
| 38 | 127.5 | 428 | 273 | 0.016 | 56 | 529 |
| 37 | 125.5 | 152 | 95 | 0.006 | 20 | 188 |
| 36 | 122.5 | 760 | 460 | 0.028 | 95 | 938 |
| 35 | 119.5 | 152 | 89 | 0.005 | 18 | 188 |
| 34 | 117 | 608 | 346 | 0.021 | 71 | 751 |
| 33 | 112.5 | 760 | 410 | 0.025 | 84 | 938 |
| 32 | 109.9 | 30 | 16 | 0.001 | 3 | 38 |
| 31 | 107.4 | 731 | 371 | 0.022 | 76 | 902 |
| 30 | 102.5 | 762 | 363 | 0.022 | 75 | 940 |
| 29 | 99.5 | 170 | 78 | 0.005 | 16 | 210 |

SEISMIC FORCES

1.2D + 1.0Ev + 1.5Eh

Seismic Overstrength

| Segment | Height Above Base (ft) | Weight (lb) | W _z (lb-ft) | C _{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|---------------------------------------|------------------------|-------------|------------------------|-----------------|-----------------------|---------------------|
| 28 | 97 | 792 | 351 | 0.021 | 72 | 977 |
| 27 | 92.5 | 1,017 | 423 | 0.026 | 87 | 1,255 |
| 26 | 89.5 | 207 | 82 | 0.005 | 17 | 255 |
| 25 | 88.95 | 21 | 8 | 0.000 | 2 | 26 |
| 24 | 88.5323 | 153 | 60 | 0.004 | 12 | 189 |
| 23 | 87.5823 | 525 | 203 | 0.012 | 42 | 648 |
| 22 | 86 | 939 | 354 | 0.021 | 73 | 1,159 |
| 21 | 83.4195 | 1,506 | 546 | 0.033 | 112 | 1,858 |
| 20 | 80.9195 | 538 | 187 | 0.011 | 39 | 664 |
| 19 | 79 | 590 | 199 | 0.012 | 41 | 729 |
| 18 | 76.5 | 903 | 292 | 0.018 | 60 | 1,115 |
| 17 | 72.5 | 1,534 | 461 | 0.028 | 95 | 1,892 |
| 16 | 67.5 | 1,569 | 429 | 0.026 | 88 | 1,936 |
| 15 | 62.5 | 1,604 | 396 | 0.024 | 81 | 1,980 |
| 14 | 57.5 | 1,640 | 362 | 0.022 | 74 | 2,023 |
| 13 | 53.91 | 726 | 147 | 0.009 | 30 | 896 |
| 12 | 51.41 | 1,773 | 337 | 0.020 | 69 | 2,188 |
| 11 | 47.5923 | 3,083 | 529 | 0.032 | 109 | 3,805 |
| 10 | 45.0923 | 70 | 11 | 0.001 | 2 | 86 |
| 9 | 42.5 | 1,915 | 283 | 0.017 | 58 | 2,363 |
| 8 | 37.5 | 1,956 | 244 | 0.015 | 50 | 2,413 |
| 7 | 32.5 | 1,996 | 206 | 0.012 | 42 | 2,463 |
| 6 | 27.5 | 2,036 | 168 | 0.010 | 35 | 2,513 |
| 5 | 22.5 | 2,077 | 131 | 0.008 | 27 | 2,563 |
| 4 | 17.5 | 2,117 | 96 | 0.006 | 20 | 2,613 |
| 3 | 12.5 | 2,158 | 62 | 0.004 | 13 | 2,663 |
| 2 | 7.5 | 2,198 | 32 | 0.002 | 7 | 2,713 |
| 1 | 2.5 | 2,239 | 8 | 0.000 | 2 | 2,762 |
| Ericsson Radio 4460 B25+B66 | 126 | 327 | 205 | 0.012 | 42 | 404 |
| Ericsson Radio 4480 B71+B85 | 126 | 279 | 175 | 0.011 | 36 | 344 |
| RFS APXVLL19P_43-C-A20 | 126 | 123 | 77 | 0.005 | 16 | 151 |
| Amphenol Antel APXVAALL24M-U-J20 | 126 | 258 | 162 | 0.010 | 33 | 318 |
| Generic Platform with Handrails | 126 | 2,500 | 1,569 | 0.095 | 323 | 3,085 |
| Generic 20' Omni | 109.8 | 55 | 29 | 0.002 | 6 | 68 |
| Commscope CBC78T-DS-43-2X | 100 | 62 | 29 | 0.002 | 6 | 77 |
| Kaelus KA-6030 | 100 | 35 | 16 | 0.001 | 3 | 43 |
| Samsung XXDWMM-12.5-65-8T-CBRS | 100 | 69 | 32 | 0.002 | 7 | 86 |
| Samsung B5/B13 RRH-BR04C | 100 | 211 | 97 | 0.006 | 20 | 260 |
| Samsung B2/B66A RRH-BR049 | 100 | 253 | 117 | 0.007 | 24 | 312 |
| Raycap RVZDC-6627-PF-48 | 100 | 32 | 15 | 0.001 | 3 | 39 |
| Samsung MT6407-77A | 100 | 245 | 113 | 0.007 | 23 | 302 |
| Antel LPA-80080/8CF | 100 | 144 | 66 | 0.004 | 14 | 178 |
| Commscope JAHH-65C-R3B | 100 | 331 | 153 | 0.009 | 31 | 408 |
| Generic Flat Low Profile Platform | 99 | 1,875 | 854 | 0.052 | 176 | 2,314 |
| Unused Reserve (10083.90 sqin) | 99 | 1,118 | 509 | 0.031 | 105 | 1,379 |
| Ericsson AIR 6419 B77D | 89 | 189 | 75 | 0.004 | 15 | 234 |
| Ericsson RRU11 | 88.9 | 575 | 227 | 0.014 | 47 | 710 |
| Raycap DC6-48-60-18-8F(32.8 lbs) | 87 | 98 | 38 | 0.002 | 8 | 121 |
| Ericsson RRUS 4478 B14 (18.1" Height) | 87 | 178 | 68 | 0.004 | 14 | 220 |
| Ericsson Radio 4890HP B2/B25 B66 | 87 | 204 | 78 | 0.005 | 16 | 252 |
| Ericsson RRUS 4490 | 87 | 205 | 79 | 0.005 | 16 | 253 |
| Generic Mount Reinforcement | 87 | 1,200 | 460 | 0.028 | 95 | 1,481 |
| CCI TPA65R-BU6D | 87 | 205 | 79 | 0.005 | 16 | 253 |
| CCI OPA65R-BU6D | 87 | 190 | 73 | 0.004 | 15 | 234 |
| Generic Round Platform with Handrails | 87 | 2,500 | 958 | 0.058 | 197 | 3,085 |
| Generic Round Platform with Handrails | 78 | 2,500 | 828 | 0.050 | 170 | 3,085 |
| Ericsson AIR 6419 B77G | 85 | 198 | 74 | 0.004 | 15 | 245 |
| Commscope RDIDC-9181-PF-48 | 78 | 22 | 7 | 0.000 | 1 | 27 |
| Fujitsu TA08025-B605 | 78 | 225 | 75 | 0.004 | 15 | 278 |
| Fujitsu TA08025-B604 | 78 | 192 | 64 | 0.004 | 13 | 237 |
| JMA Wireless MX08FRO665-21 | 78 | 194 | 64 | 0.004 | 13 | 239 |

SEISMIC FORCES

1.2D + 1.0Ev + 1.5Eh

Seismic Overstrength

| Segment | Height Above Base (ft) | Weight (lb) | W _z (lb-ft) | C _{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|----------------|------------------------|---------------|------------------------|-----------------|-----------------------|---------------------|
| Totals: | | 59,229 | 16,573 | 1.000 | 3,409 | 73,088 |

SEISMIC FORCES

0.9D - 1.0Ev + 1.5Eh

Seismic Overstrength (Reduced DL)

| Segment | Height Above Base (ft) | Weight (lb) | W _z (lb-ft) | C _{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|-----------------------------------|------------------------|-------------|------------------------|-----------------|-----------------------|---------------------|
| 38 | 127.5 | 428 | 273 | 0.016 | 56 | 371 |
| 37 | 125.5 | 152 | 95 | 0.006 | 20 | 132 |
| 36 | 122.5 | 760 | 460 | 0.028 | 95 | 659 |
| 35 | 119.5 | 152 | 89 | 0.005 | 18 | 132 |
| 34 | 117 | 608 | 346 | 0.021 | 71 | 527 |
| 33 | 112.5 | 760 | 410 | 0.025 | 84 | 659 |
| 32 | 109.9 | 30 | 16 | 0.001 | 3 | 26 |
| 31 | 107.4 | 731 | 371 | 0.022 | 76 | 633 |
| 30 | 102.5 | 762 | 363 | 0.022 | 75 | 660 |
| 29 | 99.5 | 170 | 78 | 0.005 | 16 | 147 |
| 28 | 97 | 792 | 351 | 0.021 | 72 | 686 |
| 27 | 92.5 | 1,017 | 423 | 0.026 | 87 | 881 |
| 26 | 89.5 | 207 | 82 | 0.005 | 17 | 179 |
| 25 | 88.95 | 21 | 8 | 0.000 | 2 | 18 |
| 24 | 88.5323 | 153 | 60 | 0.004 | 12 | 133 |
| 23 | 87.5823 | 525 | 203 | 0.012 | 42 | 455 |
| 22 | 86 | 939 | 354 | 0.021 | 73 | 813 |
| 21 | 83.4195 | 1,506 | 546 | 0.033 | 112 | 1,304 |
| 20 | 80.9195 | 538 | 187 | 0.011 | 39 | 466 |
| 19 | 79 | 590 | 199 | 0.012 | 41 | 511 |
| 18 | 76.5 | 903 | 292 | 0.018 | 60 | 782 |
| 17 | 72.5 | 1,534 | 461 | 0.028 | 95 | 1,328 |
| 16 | 67.5 | 1,569 | 429 | 0.026 | 88 | 1,359 |
| 15 | 62.5 | 1,604 | 396 | 0.024 | 81 | 1,389 |
| 14 | 57.5 | 1,640 | 362 | 0.022 | 74 | 1,420 |
| 13 | 53.91 | 726 | 147 | 0.009 | 30 | 629 |
| 12 | 51.41 | 1,773 | 337 | 0.020 | 69 | 1,535 |
| 11 | 47.5923 | 3,083 | 529 | 0.032 | 109 | 2,670 |
| 10 | 45.0923 | 70 | 11 | 0.001 | 2 | 61 |
| 9 | 42.5 | 1,915 | 283 | 0.017 | 58 | 1,659 |
| 8 | 37.5 | 1,956 | 244 | 0.015 | 50 | 1,694 |
| 7 | 32.5 | 1,996 | 206 | 0.012 | 42 | 1,729 |
| 6 | 27.5 | 2,036 | 168 | 0.010 | 35 | 1,764 |
| 5 | 22.5 | 2,077 | 131 | 0.008 | 27 | 1,799 |
| 4 | 17.5 | 2,117 | 96 | 0.006 | 20 | 1,834 |
| 3 | 12.5 | 2,158 | 62 | 0.004 | 13 | 1,869 |
| 2 | 7.5 | 2,198 | 32 | 0.002 | 7 | 1,904 |
| 1 | 2.5 | 2,239 | 8 | 0.000 | 2 | 1,939 |
| Ericsson Radio 4460 B25+B66 | 126 | 327 | 205 | 0.012 | 42 | 283 |
| Ericsson Radio 4480 B71+B85 | 126 | 279 | 175 | 0.011 | 36 | 242 |
| RFS APXVLL19P_43-C-A20 | 126 | 123 | 77 | 0.005 | 16 | 106 |
| Amphenol Antel APXVAALL24M-U-J20 | 126 | 258 | 162 | 0.010 | 33 | 223 |
| Generic Platform with Handrails | 126 | 2,500 | 1,569 | 0.095 | 323 | 2,165 |
| Generic 20' Omni | 109.8 | 55 | 29 | 0.002 | 6 | 48 |
| Commscope CBC78T-DS-43-2X | 100 | 62 | 29 | 0.002 | 6 | 54 |
| Kaelus KA-6030 | 100 | 35 | 16 | 0.001 | 3 | 30 |
| Samsung XXDWMM-12.5-65-8T-CBRS | 100 | 69 | 32 | 0.002 | 7 | 60 |
| Samsung B5/B13 RRH-BR04C | 100 | 211 | 97 | 0.006 | 20 | 183 |
| Samsung B2/B66A RRH-BR049 | 100 | 253 | 117 | 0.007 | 24 | 219 |
| Raycap RVZDC-6627-PF-48 | 100 | 32 | 15 | 0.001 | 3 | 28 |
| Samsung MT6407-77A | 100 | 245 | 113 | 0.007 | 23 | 212 |
| Antel LPA-80080/8CF ____ | 100 | 144 | 66 | 0.004 | 14 | 125 |
| Commscope JAHH-65C-R3B | 100 | 331 | 153 | 0.009 | 31 | 286 |
| Generic Flat Low Profile Platform | 99 | 1,875 | 854 | 0.052 | 176 | 1,624 |
| Unused Reserve (10083.90 sqin) | 99 | 1,118 | 509 | 0.031 | 105 | 968 |

SEISMIC FORCES

0.9D - 1.0Ev + 1.5Eh

Seismic Overstrength (Reduced DL)

| Segment | Height Above Base (ft) | Weight (lb) | W _z (lb-ft) | C _{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|---------------------------------------|------------------------|---------------|------------------------|-----------------|-----------------------|---------------------|
| Ericsson AIR 6419 B77D | 89 | 189 | 75 | 0.004 | 15 | 164 |
| Ericsson RRU11 | 88.9 | 575 | 227 | 0.014 | 47 | 498 |
| Raycap DC6-48-60-18-8F(32.8 lbs) | 87 | 98 | 38 | 0.002 | 8 | 85 |
| Ericsson RRUS 4478 B14 (18.1" Height) | 87 | 178 | 68 | 0.004 | 14 | 154 |
| Ericsson Radio 4890HP B2/B25 B66 | 87 | 204 | 78 | 0.005 | 16 | 177 |
| Ericsson RRUS 4490 | 87 | 205 | 79 | 0.005 | 16 | 178 |
| Generic Mount Reinforcement | 87 | 1,200 | 460 | 0.028 | 95 | 1,039 |
| CCI TPA65R-BU6D | 87 | 205 | 79 | 0.005 | 16 | 177 |
| CCI OPA65R-BU6D | 87 | 190 | 73 | 0.004 | 15 | 164 |
| Generic Round Platform with Handrails | 87 | 2,500 | 958 | 0.058 | 197 | 2,165 |
| Generic Round Platform with Handrails | 78 | 2,500 | 828 | 0.050 | 170 | 2,165 |
| Ericsson AIR 6419 B77G | 85 | 198 | 74 | 0.004 | 15 | 172 |
| Commscope RDIDC-9181-PF-48 | 78 | 22 | 7 | 0.000 | 1 | 19 |
| Fujitsu TA08025-B605 | 78 | 225 | 75 | 0.004 | 15 | 195 |
| Fujitsu TA08025-B604 | 78 | 192 | 64 | 0.004 | 13 | 166 |
| JMA Wireless MX08FRO665-21 | 78 | 194 | 64 | 0.004 | 13 | 168 |
| Totals: | | 59,229 | 16,573 | 1.000 | 3,409 | 51,292 |

1.2D + 1.0Ev + 1.0Eh

Seismic

CALCULATED FORCES

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (fr-kips) | Mu Mx (ft-kips) | Resultant Moment (ft-kips) | Phi Pn (kips) | Phi Vn (kips) | Phi Tn (kips) | Phi Mn (kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|---------------|---------------|--------------------|----------------|-------|
| 0.00 | -70.33 | -2.27 | 0.00 | -201.55 | 0.00 | 201.55 | 7,347.96 | 1,935.63 | 12,151 | 10,514.58 | 0.00 | 0.00 | 0.03 |
| 5.00 | -67.61 | -2.27 | 0.00 | -190.18 | 0.00 | 190.18 | 7,250.00 | 1,893.94 | 11,633 | 10,149.34 | 0.00 | 0.00 | 0.03 |
| 10.00 | -64.95 | -2.27 | 0.00 | -178.81 | 0.00 | 178.81 | 7,149.38 | 1,852.25 | 11,126 | 9,786.55 | 0.01 | -0.01 | 0.03 |
| 15.00 | -62.34 | -2.26 | 0.00 | -167.46 | 0.00 | 167.46 | 7,046.10 | 1,810.56 | 10,631 | 9,426.45 | 0.02 | -0.01 | 0.03 |
| 20.00 | -59.77 | -2.25 | 0.00 | -156.15 | 0.00 | 156.15 | 6,940.17 | 1,768.86 | 10,147 | 9,069.30 | 0.04 | -0.02 | 0.03 |
| 25.00 | -57.26 | -2.23 | 0.00 | -144.92 | 0.00 | 144.92 | 6,831.58 | 1,727.17 | 9,675 | 8,715.33 | 0.06 | -0.02 | 0.03 |
| 30.00 | -54.80 | -2.20 | 0.00 | -133.78 | 0.00 | 133.78 | 6,720.34 | 1,685.48 | 9,213 | 8,364.81 | 0.08 | -0.02 | 0.02 |
| 35.00 | -52.38 | -2.17 | 0.00 | -122.78 | 0.00 | 122.78 | 6,606.45 | 1,643.78 | 8,763 | 8,017.96 | 0.11 | -0.03 | 0.02 |
| 40.00 | -50.02 | -2.13 | 0.00 | -111.92 | 0.00 | 111.92 | 6,489.89 | 1,602.09 | 8,324 | 7,675.05 | 0.14 | -0.03 | 0.02 |
| 45.00 | -49.93 | -2.13 | 0.00 | -101.25 | 0.00 | 101.25 | 6,370.69 | 1,560.40 | 7,897 | 7,336.32 | 0.18 | -0.04 | 0.02 |
| 45.18 | -46.13 | -2.06 | 0.00 | -100.86 | 0.00 | 100.86 | 6,366.24 | 1,558.86 | 7,881 | 7,323.90 | 0.18 | -0.04 | 0.02 |
| 50.00 | -43.94 | -2.02 | 0.00 | -90.93 | 0.00 | 90.93 | 6,248.83 | 1,518.71 | 7,480 | 7,002.02 | 0.22 | -0.04 | 0.02 |
| 52.82 | -43.05 | -2.00 | 0.00 | -85.25 | 0.00 | 85.25 | 5,253.49 | 1,331.14 | 6,567 | 5,903.55 | 0.24 | -0.04 | 0.02 |
| 55.00 | -41.02 | -1.95 | 0.00 | -80.90 | 0.00 | 80.90 | 5,211.58 | 1,315.23 | 6,411 | 5,785.93 | 0.26 | -0.04 | 0.02 |
| 60.00 | -39.04 | -1.89 | 0.00 | -71.16 | 0.00 | 71.16 | 5,113.56 | 1,278.75 | 6,061 | 5,518.37 | 0.31 | -0.05 | 0.02 |
| 65.00 | -37.11 | -1.84 | 0.00 | -61.70 | 0.00 | 61.70 | 5,012.88 | 1,242.27 | 5,720 | 5,254.11 | 0.37 | -0.05 | 0.02 |
| 70.00 | -35.21 | -1.77 | 0.00 | -52.52 | 0.00 | 52.52 | 4,909.55 | 1,205.79 | 5,389 | 4,993.41 | 0.42 | -0.06 | 0.02 |
| 75.00 | -34.10 | -1.73 | 0.00 | -43.65 | 0.00 | 43.65 | 4,803.57 | 1,169.31 | 5,068 | 4,736.51 | 0.48 | -0.06 | 0.02 |
| 78.00 | -29.51 | -1.56 | 0.00 | -38.46 | 0.00 | 38.46 | 4,738.70 | 1,147.42 | 4,880 | 4,584.29 | 0.52 | -0.06 | 0.02 |
| 80.00 | -28.84 | -1.53 | 0.00 | -35.34 | 0.00 | 35.34 | 4,694.92 | 1,132.83 | 4,757 | 4,483.64 | 0.55 | -0.06 | 0.01 |
| 81.84 | -26.98 | -1.46 | 0.00 | -32.52 | 0.00 | 32.52 | 4,654.30 | 1,119.41 | 4,645 | 4,391.71 | 0.57 | -0.06 | 0.01 |
| 85.00 | -25.58 | -1.40 | 0.00 | -27.91 | 0.00 | 27.91 | 4,583.63 | 1,096.35 | 4,455 | 4,235.08 | 0.61 | -0.06 | 0.01 |
| 87.00 | -19.03 | -1.11 | 0.00 | -25.12 | 0.00 | 25.12 | 4,538.37 | 1,081.75 | 4,337 | 4,136.91 | 0.64 | -0.07 | 0.01 |
| 88.16 | -18.85 | -1.10 | 0.00 | -23.82 | 0.00 | 23.82 | 3,749.85 | 936.91 | 3,796 | 3,458.98 | 0.66 | -0.07 | 0.01 |
| 88.90 | -18.11 | -1.07 | 0.00 | -23.01 | 0.00 | 23.01 | 3,737.27 | 932.31 | 3,759 | 3,430.31 | 0.67 | -0.07 | 0.01 |
| 89.00 | -17.62 | -1.05 | 0.00 | -22.90 | 0.00 | 22.90 | 3,735.55 | 931.68 | 3,754 | 3,426.41 | 0.67 | -0.07 | 0.01 |
| 90.00 | -16.37 | -0.99 | 0.00 | -21.86 | 0.00 | 21.86 | 3,718.33 | 925.43 | 3,703 | 3,387.54 | 0.68 | -0.07 | 0.01 |
| 95.00 | -15.39 | -0.94 | 0.00 | -16.91 | 0.00 | 16.91 | 3,630.66 | 894.16 | 3,457 | 3,194.96 | 0.75 | -0.07 | 0.01 |
| 99.00 | -11.49 | -0.74 | 0.00 | -13.15 | 0.00 | 13.15 | 3,558.60 | 869.14 | 3,267 | 3,043.18 | 0.81 | -0.07 | 0.01 |
| 99.00 | -11.49 | -0.74 | 0.00 | -13.15 | 0.00 | 13.15 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 0.81 | -0.07 | 0.02 |
| 100.00 | -8.84 | -0.60 | 0.00 | -12.42 | 0.00 | 12.42 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 0.83 | -0.07 | 0.02 |
| 105.00 | -7.94 | -0.55 | 0.00 | -9.43 | 0.00 | 9.43 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 0.90 | -0.07 | 0.01 |
| 109.80 | -7.83 | -0.54 | 0.00 | -6.81 | 0.00 | 6.81 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 0.98 | -0.07 | 0.01 |
| 110.00 | -6.90 | -0.48 | 0.00 | -6.70 | 0.00 | 6.70 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 0.98 | -0.08 | 0.01 |
| 115.00 | -6.14 | -0.43 | 0.00 | -4.29 | 0.00 | 4.29 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.06 | -0.08 | 0.01 |
| 119.00 | -5.96 | -0.42 | 0.00 | -2.55 | 0.00 | 2.55 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.12 | -0.08 | 0.01 |
| 119.00 | -5.96 | -0.42 | 0.00 | -2.55 | 0.00 | 2.55 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.12 | -0.08 | 0.01 |

CALCULATED FORCES

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (fr-kips) | Mu Mx (ft-kips) | Resultant Moment (ft-kips) | Phi Pn (kips) | Phi Vn (kips) | Phi Tn (kips) | Phi Mn (kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|---------------|---------------|--------------------|----------------|-------|
| 120.00 | -5.02 | -0.36 | 0.00 | -2.13 | 0.00 | 2.13 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.14 | -0.08 | 0.01 |
| 125.00 | -4.83 | -0.34 | 0.00 | -0.34 | 0.00 | 0.34 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.22 | -0.08 | 0.00 |
| 126.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.24 | -0.08 | 0.00 |
| 129.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.29 | -0.08 | 0.00 |

0.9D - 1.0Ev + 1.0Eh Seismic (Reduced DL)

CALCULATED FORCES

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (fr-kips) | Mu Mx (ft-kips) | Resultant Moment (ft-kips) | Phi Pn (kips) | Phi Vn (kips) | Phi Tn (kips) | Phi Mn (kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|---------------|---------------|--------------------|----------------|-------|
| 0.00 | -49.35 | -2.27 | 0.00 | -200.73 | 0.00 | 200.73 | 7,347.96 | 1,935.63 | 12,151 | 10,514.58 | 0.00 | 0.00 | 0.03 |
| 5.00 | -47.45 | -2.27 | 0.00 | -189.37 | 0.00 | 189.37 | 7,250.00 | 1,893.94 | 11,633 | 10,149.34 | 0.00 | 0.00 | 0.03 |
| 10.00 | -45.58 | -2.27 | 0.00 | -178.01 | 0.00 | 178.01 | 7,149.38 | 1,852.25 | 11,126 | 9,786.55 | 0.01 | -0.01 | 0.03 |
| 15.00 | -43.75 | -2.26 | 0.00 | -166.67 | 0.00 | 166.67 | 7,046.10 | 1,810.56 | 10,631 | 9,426.45 | 0.02 | -0.01 | 0.02 |
| 20.00 | -41.95 | -2.24 | 0.00 | -155.39 | 0.00 | 155.39 | 6,940.17 | 1,768.86 | 10,147 | 9,069.30 | 0.04 | -0.02 | 0.02 |
| 25.00 | -40.18 | -2.22 | 0.00 | -144.19 | 0.00 | 144.19 | 6,831.58 | 1,727.17 | 9,675 | 8,715.33 | 0.05 | -0.02 | 0.02 |
| 30.00 | -38.46 | -2.19 | 0.00 | -133.09 | 0.00 | 133.09 | 6,720.34 | 1,685.48 | 9,213 | 8,364.81 | 0.08 | -0.02 | 0.02 |
| 35.00 | -36.76 | -2.16 | 0.00 | -122.12 | 0.00 | 122.12 | 6,606.45 | 1,643.78 | 8,763 | 8,017.96 | 0.11 | -0.03 | 0.02 |
| 40.00 | -35.10 | -2.12 | 0.00 | -111.31 | 0.00 | 111.31 | 6,489.89 | 1,602.09 | 8,324 | 7,675.05 | 0.14 | -0.03 | 0.02 |
| 45.00 | -35.04 | -2.12 | 0.00 | -100.68 | 0.00 | 100.68 | 6,370.69 | 1,560.40 | 7,897 | 7,336.32 | 0.18 | -0.04 | 0.02 |
| 45.18 | -32.37 | -2.05 | 0.00 | -100.29 | 0.00 | 100.29 | 6,366.24 | 1,558.86 | 7,881 | 7,323.90 | 0.18 | -0.04 | 0.02 |
| 50.00 | -30.84 | -2.01 | 0.00 | -90.41 | 0.00 | 90.41 | 6,248.83 | 1,518.71 | 7,480 | 7,002.02 | 0.22 | -0.04 | 0.02 |
| 52.82 | -30.21 | -1.99 | 0.00 | -84.76 | 0.00 | 84.76 | 5,253.49 | 1,331.14 | 6,567 | 5,903.55 | 0.24 | -0.04 | 0.02 |
| 55.00 | -28.79 | -1.94 | 0.00 | -80.43 | 0.00 | 80.43 | 5,211.58 | 1,315.23 | 6,411 | 5,785.93 | 0.26 | -0.04 | 0.02 |
| 60.00 | -27.40 | -1.88 | 0.00 | -70.74 | 0.00 | 70.74 | 5,113.56 | 1,278.75 | 6,061 | 5,518.37 | 0.31 | -0.05 | 0.02 |
| 65.00 | -26.04 | -1.82 | 0.00 | -61.33 | 0.00 | 61.33 | 5,012.88 | 1,242.27 | 5,720 | 5,254.11 | 0.36 | -0.05 | 0.02 |
| 70.00 | -24.71 | -1.76 | 0.00 | -52.20 | 0.00 | 52.20 | 4,909.55 | 1,205.79 | 5,389 | 4,993.41 | 0.42 | -0.06 | 0.02 |
| 75.00 | -23.93 | -1.72 | 0.00 | -43.39 | 0.00 | 43.39 | 4,803.57 | 1,169.31 | 5,068 | 4,736.51 | 0.48 | -0.06 | 0.01 |
| 78.00 | -20.71 | -1.55 | 0.00 | -38.23 | 0.00 | 38.23 | 4,738.70 | 1,147.42 | 4,880 | 4,584.29 | 0.52 | -0.06 | 0.01 |
| 80.00 | -20.24 | -1.52 | 0.00 | -35.13 | 0.00 | 35.13 | 4,694.92 | 1,132.83 | 4,757 | 4,483.64 | 0.54 | -0.06 | 0.01 |
| 81.84 | -18.94 | -1.45 | 0.00 | -32.33 | 0.00 | 32.33 | 4,654.30 | 1,119.41 | 4,645 | 4,391.71 | 0.57 | -0.06 | 0.01 |
| 85.00 | -17.95 | -1.39 | 0.00 | -27.75 | 0.00 | 27.75 | 4,583.63 | 1,096.35 | 4,455 | 4,235.08 | 0.61 | -0.06 | 0.01 |
| 87.00 | -13.36 | -1.10 | 0.00 | -24.97 | 0.00 | 24.97 | 4,538.37 | 1,081.75 | 4,337 | 4,136.91 | 0.64 | -0.07 | 0.01 |
| 88.16 | -13.22 | -1.10 | 0.00 | -23.68 | 0.00 | 23.68 | 3,749.85 | 936.91 | 3,796 | 3,458.98 | 0.65 | -0.07 | 0.01 |
| 88.90 | -12.71 | -1.06 | 0.00 | -22.88 | 0.00 | 22.88 | 3,737.27 | 932.31 | 3,759 | 3,430.31 | 0.66 | -0.07 | 0.01 |
| 89.00 | -12.37 | -1.04 | 0.00 | -22.77 | 0.00 | 22.77 | 3,735.55 | 931.68 | 3,754 | 3,426.41 | 0.66 | -0.07 | 0.01 |
| 90.00 | -11.49 | -0.98 | 0.00 | -21.73 | 0.00 | 21.73 | 3,718.33 | 925.43 | 3,703 | 3,387.54 | 0.68 | -0.07 | 0.01 |
| 95.00 | -10.80 | -0.93 | 0.00 | -16.82 | 0.00 | 16.82 | 3,630.66 | 894.16 | 3,457 | 3,194.96 | 0.75 | -0.07 | 0.01 |
| 99.00 | -8.06 | -0.73 | 0.00 | -13.08 | 0.00 | 13.08 | 3,558.60 | 869.14 | 3,267 | 3,043.18 | 0.81 | -0.07 | 0.01 |
| 99.00 | -8.06 | -0.73 | 0.00 | -13.08 | 0.00 | 13.08 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 0.81 | -0.07 | 0.02 |
| 100.00 | -6.20 | -0.59 | 0.00 | -12.34 | 0.00 | 12.34 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 0.82 | -0.07 | 0.02 |
| 105.00 | -5.57 | -0.54 | 0.00 | -9.37 | 0.00 | 9.37 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 0.90 | -0.07 | 0.01 |
| 109.80 | -5.50 | -0.54 | 0.00 | -6.77 | 0.00 | 6.77 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 0.97 | -0.07 | 0.01 |
| 110.00 | -4.84 | -0.48 | 0.00 | -6.66 | 0.00 | 6.66 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 0.98 | -0.07 | 0.01 |
| 115.00 | -4.31 | -0.43 | 0.00 | -4.26 | 0.00 | 4.26 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.05 | -0.08 | 0.01 |
| 119.00 | -4.18 | -0.42 | 0.00 | -2.54 | 0.00 | 2.54 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.12 | -0.08 | 0.01 |
| 119.00 | -4.18 | -0.42 | 0.00 | -2.54 | 0.00 | 2.54 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.12 | -0.08 | 0.01 |
| 120.00 | -3.52 | -0.36 | 0.00 | -2.12 | 0.00 | 2.12 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.13 | -0.08 | 0.01 |
| 125.00 | -3.39 | -0.34 | 0.00 | -0.34 | 0.00 | 0.34 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.21 | -0.08 | 0.00 |
| 126.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.23 | -0.08 | 0.00 |
| 129.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,313.82 | 396.61 | 1,242 | 1,145.34 | 1.28 | -0.08 | 0.00 |

ANALYSIS SUMMARY

| Load Case | Base Reactions | | | | | | Max Usage | |
|----------------------|-----------------|-----------------|-----------------|---------------------|---------------------|---------------------|-----------|-------------------|
| | Shear FX (kips) | Shear FZ (kips) | Axial FY (kips) | Moment MX (ft-kips) | Moment MY (ft-kips) | Moment MZ (ft-kips) | Elev (ft) | Interaction Ratio |
| 1.2D + 1.0W | 35.41 | 0.00 | 71.05 | 0.00 | 0.00 | 2996.65 | 0.00 | 0.3 |
| 0.9D + 1.0W | 35.40 | 0.00 | 53.29 | 0.00 | 0.00 | 2986.21 | 0.00 | 0.29 |
| 1.2D + 1.0Di + 1.0Wi | 8.73 | 0.00 | 90.99 | 0.00 | 0.00 | 725.01 | 0.00 | 0.08 |
| 1.2D + 1.0Ev + 1.0Eh | 2.27 | 0.00 | 70.33 | 0.00 | 0.00 | 201.55 | 0.00 | 0.03 |
| 0.9D - 1.0Ev + 1.0Eh | 2.27 | 0.00 | 49.35 | 0.00 | 0.00 | 200.73 | 0.00 | 0.03 |
| 1.0D + 1.0W | 8.47 | 0.00 | 59.23 | 0.00 | 0.00 | 715.60 | 0.00 | 0.08 |

ANALYSIS SUMMARY - OVERSTRENGTH LOAD CASES

| Load Case | Base Reactions | | | | | |
|----------------------|-----------------|-----------------|-----------------|---------------------|---------------------|---------------------|
| | Shear FX (kips) | Shear FZ (kips) | Axial FY (kips) | Moment MX (ft-kips) | Moment MY (ft-kips) | Moment MZ (ft-kips) |
| 1.2D + 1.0Ev + 1.5Eh | 3.41 | 0.00 | 70.33 | 0.00 | 0.00 | 302.32 |
| 0.9D - 1.0Ev + 1.5Eh | 3.41 | 0.00 | 49.35 | 0.00 | 0.00 | 301.10 |

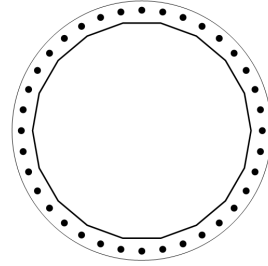
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

| Moment (k-ft) | Axial (k) | Shear (k) |
|---------------|-----------|-----------|
| 2996.65 | 71.05 | 35.41 |

PLATE PARAMETERS (ID# 33545)

| | | |
|---------------------|---------|-----|
| Width: | 84 | in |
| Shape: | Round | |
| Thickness: | 3.5 | in |
| Grade: | A572-60 | |
| Yield Strength: | 60 | ksi |
| Tensile Strength: | 75 | ksi |
| Rod Detail Type: | d | |
| Clear Distance | 3.125 | in |
| Base Weld Size: | 0.125 | in |
| Orientation Offset: | - | ° |
| Analysis Type: | Plastic | |
| Neutral Axis: | 0 | ° |



ANCHOR ROD PARAMETERS

| Class | Arrangement | Quantity | Diameter (in) | Circle (in) | Grade | F _y (ksi) | F _u (ksi) | Spacing (in) | Offset (°) |
|---------------------|-------------|----------|---------------|-------------|---------|----------------------|----------------------|--------------|------------|
| Original [ID#34425] | Radial | 36 | 2.25 | 78 | A615-75 | 75 | 100 | - | - |

COMPONENT PROPERTIES

| Component | ID | Gross Area (in ²) | Net Area (in ²) | Individual Inertia (in ⁴) | Moment of Inertia (in ⁴) | Threads/in |
|------------|------------------------|-------------------------------|-----------------------------|---------------------------------------|--------------------------------------|------------|
| Pole | 70"ø x 0.5" (18 Sides) | 108.6169 | - | - | 65589.95 | - |
| Bolt Group | Original (36) 2.25"ø | 3.9761 | 3.2477 | 0.8393 | 83061.48 | 4.5 |

REACTION DISTRIBUTION

| Component | ID | Moment M _u (k-ft) | Axial Load P _u (k) | Shear V _u (k) | Moment Factor |
|------------|------------------------|------------------------------|-------------------------------|--------------------------|---------------|
| Pole | 70"ø x 0.5" (18 Sides) | 2996.6 | 71.05 | 35.41 | 1.000 |
| Bolt Group | Original (36) 2.25"ø | 2996.6 | - | 35.41 | 1.000 |

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES

| | | |
|--------------------------|-------|----|
| Flat-to-Flat Diameter: | 70.12 | in |
| Point-to-Point Diameter: | 71.21 | in |
| Orientation Offset: | - | ° |

| | | |
|---------------|--------|-----|
| Flat Width: | 12.365 | in |
| Flat Radians: | 0.349 | rad |

PLATE PROPERTIES

| | | |
|-------------------|----------------|-----|
| Neutral Axis: | 0 | ° |
| Bend Line Limits: | 1.162 to 1.980 | rad |

| Bend Line | Chord Length (in) | Additional Length (in) | Section Modulus (in ³) | Applied Moment M _u (k-in) | Moment Capacity ΦM _n (k-in) | Flexure Result M _u /ΦM _n |
|-----------------|-------------------|------------------------|------------------------------------|--------------------------------------|--|--|
| Flats | 41.314 | 0.00 | 126.523 | 403.1 | 6832.2 | 5.9% |
| Corners | 39.420 | 0.00 | 120.723 | 278.3 | 6519.1 | 4.3% |
| Circumferential | 45.071 | 0.00 | 138.029 | 556.1 | 7453.6 | 7.5% |

PLASTIC ANCHOR ROD ANALYSIS

| Class | Group Quantity | Rod Diameter (in) | Applied Axial Load P _u (k) | Applied Shear Load V _u (k) | Compressive Capacity ΦP _n (k) | Interaction Result |
|----------|----------------|-------------------|---------------------------------------|---------------------------------------|--|--------------------|
| Original | 36 | 2.25 | 41.4 | 1.5 | 243.6 | 17.0% |

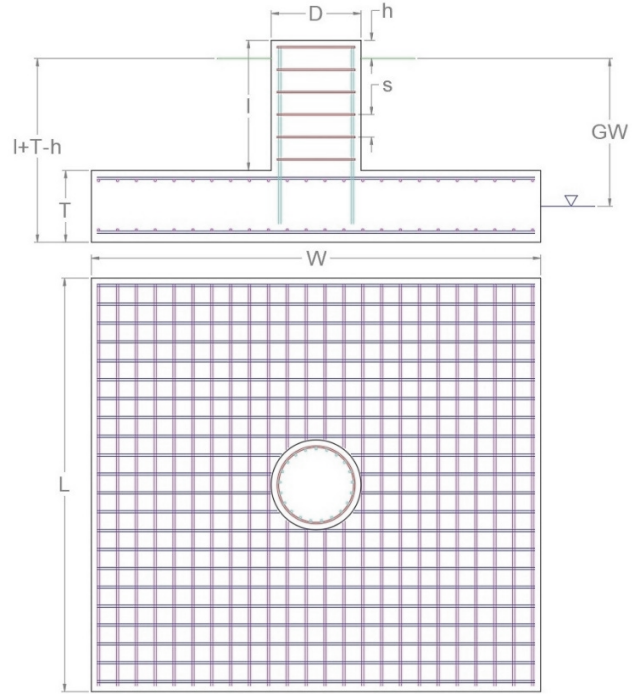
MONOLITHIC MAT & PIER FOUNDATION ANALYSIS

APPLIED GLOBAL REACTIONS

| Moment (k-ft) | Axial (k) | Shear (k) |
|---------------|-----------|-----------|
| 2,996.65 | 71.05 | 35.41 |

FOUNDATION PARAMETERS

| | | | |
|--------------------------------|-------|-----------------------------|-----|
| Mat Length: | L | 32 | ft |
| Mat Width: | W | 32 | ft |
| Mat Thickness: | T | 3 | ft |
| Base Depth: | L+T-h | 5 | ft |
| Pier Shape: | | Square | |
| Pier Width: | D | 9 | ft |
| Pier Height above Grade: | h | 1 | ft |
| Concrete Compressive Strength: | | 4,000 | psi |
| Mat Top Rebar: | | (19) #11 bars [60 ksi] | |
| Mat Bottom Rebar: | | (37) #11 bars [60 ksi] | |
| Pier Vertical Rebar: | | (30) #11 bars [60 ksi] | |
| Pier Rebar Ties: | s | #4 bars @ 6.0" c/c [60 ksi] | |
| Rebar Clear Cover: | | 3.0 | in |
| Tower Eccentricity: | ecc | 0 | ft |
| Tower Leg Count | | 1 | |



SOIL PARAMETERS

| | | | |
|--------------------------------|----|--------|-----|
| Water Table Depth [BGL]: | GW | | ft |
| Soil Unit Weight: | | 105 | pcf |
| Ultimate Skin Friction: | | 0 | psf |
| Ultimate Bearing Pressure: | | 12,000 | psf |
| Bearing Pressure Type: | | Gross | |
| Coefficient of Shear Friction: | | 0.3 | |

SOIL STRENGTH ANALYSIS

| Soil Strength Reduction Factor, Φ_s | Uplift Strength Reduction Factor, Φ_s | Asset Dead Load Factor | Dead Load Factor |
|--|--|------------------------|------------------|
| 0.75 | 0.75 | 0.9 | 1.2 |

SOIL OVERTURNING ANALYSIS

| Design Moment, $M_{u,Design}$ (k-ft) | Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft) | Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$ |
|--------------------------------------|---|--|
| 3,209.11 | 11,178.18 | 28.7% ✔ |

SOIL BEARING ANALYSIS

| Net Bearing Pressure, $P_{u,Net}$ (psf) | Nominal Bearing Capacity, $\Phi_b P_n$ (psf) | Bearing Pressure Controlling Load Direction | Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$ |
|---|--|---|--|
| 927.00 | 9,000.00 | Diagonal to Pad Edge | 10.3% ✔ |

SOIL SLIDING SHEAR ANALYSIS

| Applied Shear Force, V_u (k) | Friction Resistance (k) | Passive Pressure (psf) | Passive Pressure Resistance (k) | Nominal Shear Capacity, $\Phi_s V_n$ (k) | Soil Sliding Shear Usage, $V_u / \Phi_s V_n$ |
|--------------------------------|-------------------------|------------------------|---------------------------------|--|--|
| 35.41 | 226.35 | 367.5 | 35.28 | 196.22 | 18.0% ✔ |

MAT REINFORCING STEEL STRENGTH ANALYSIS

| Steel Elastic Modulus, E (ksi) | Strength Bending/Tension Reduction Factor, Φ_b | Strength Shear Reduction Factor, Φ_v | Strength Compression Reduction Factor, Φ_c |
|--------------------------------|---|---|---|
| 29,000 | 0.9 | 0.75 | 0.65 |

MAT REINFORCING ONE WAY SHEAR ANALYSIS

| One Way Design Shear, V_u (k) | Nominal One Way Shear Capacity, $\Phi_c V_n$ (k) | One Way Shear Controlling Load Direction | Mat One Way Shear Usage, $V_u / \Phi_c V_n$ |
|---------------------------------|--|--|---|
| 96.52 | 1,115.50 | Diagonal to Pad Edge | 8.7% |

MAT REINFORCING PUNCHING SHEAR ANALYSIS

| Punching Shear Design Stress, v_u (psi) | Nominal Punching Shear Capacity, $\Phi_c v_n$ (psi) | Mat Punching Shear Usage, $v_u / \Phi_c v_n$ |
|---|---|--|
| 24.2 | 189.7 | 12.7% |

MAT REINFORCING MOMENT TRANSFER ANALYSIS

| Moment Transfer Effective Flexural Width, w_t (in) | Neutral Axis Depth (in) | Pier Moment at Joint, M_{ut} (k-in) | Nominal Moment Transfer Capacity, $\Phi M_{sc,f}$ (k-in) | Mat Moment Transfer Usage, $0.6 M_{ut} / \Phi M_{sc,f}$ |
|--|-------------------------|---------------------------------------|--|---|
| 18.00 | 2.75 | 0.00 | 55,437.4 | 0.0% |

MAT REINFORCING FLEXURE ANALYSIS - UPPER STEEL

| Factored Moment, M_u (k-ft) | Nominal Flexural Capacity, ΦM_n (k-ft) | Flexural Steel Controlling Load Direction | Mat Upper Rebar Flexure Usage, $M_u / \Phi M_n$ |
|-------------------------------|--|---|---|
| 1,278.39 | 4,140.93 | Parallel to Pad Edge | 30.9% |

MAT REINFORCING FLEXURE ANALYSIS - LOWER STEEL

| Factored Moment, M_u (k-ft) | Nominal Flexural Capacity, ΦM_n (k-ft) | Flexural Steel Controlling Load Direction | Mat Lower Rebar Flexure Usage, $M_u / \Phi M_n$ |
|-------------------------------|--|---|---|
| 1,098.30 | 7,921.46 | Parallel to Pad Edge | 13.9% |

PIER REINFORCING STEEL STRENGTH ANALYSIS

| Rebar Cage Diameter (in) | Steel Elastic Modulus, E (ksi) | Strength Bending/Tension Reduction Factor, Φ_b | Strength Shear Reduction Factor, Φ_v | Strength Compression Reduction Factor, Φ_c |
|--------------------------|--------------------------------|---|---|---|
| 99.62 | 29,000 | 0.9 | 0.75 | 0.65 |

PIER REINFORCING MOMENT ANALYSIS

| Design Moment, M_u (k-ft) | Nominal Moment Capacity, $\Phi_u M_n$ (k-ft) | Bending Reinforcement Ratio | Pier Rebar Flexure Usage, $M_u / \Phi_u M_n$ |
|-----------------------------|--|-----------------------------|--|
| 3,102.88 | 10,267.54 | 0.004 | 30.2% |

PIER REINFORCING COMPRESSION ANALYSIS

| Design Compression, P_u (k) | Nominal Compressive Capacity, $\Phi_p P_n$ (k) | Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$ |
|-------------------------------|--|--|
| 71.05 | 20,587.88 | 0.3% |

PIER REINFORCING SHEAR ANALYSIS

| Design Shear, V_u (k) | Nominal Shear Capacity, $\Phi_v V_n$ (k) | Pier Rebar Shear Usage, $V_u / \Phi_v V_n$ |
|-------------------------|--|--|
| 35.41 | 1,369.11 | 2.6% |