



April 1, 2025

Ms. Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Notice of Exempt Modification New Cingular Wireless PCS LLC ("AT&T") Site CT1071
108 Oakdale Avenue (a/k/a 15 Oakdale Avenue), Winsted, CT 06098 (the "Property")
Latitude: 41.9216861 N Longitude: -73.0494989 W

Dear Ms. Bachman:

AT&T currently maintains (9) antennas at the 184' level on the existing 180'± monopole tower ("Tower") located at 108 Oakdale Avenue (a/k/a 15 Oakdale Avenue), Winsted, CT. The property is owned by William P. Stow, Trustee, and the Tower is owned by American Tower Corp. AT&T intends on modifying its facility by removing (8) antennas & (1) old Omni antenna and adding (3) TPA65R-BU6DV2B-K, (3) AIR6472 B77G B77M & (2) DMP65R-BU8D antennas at the 184' level of the Tower. AT&T also intends on removing (3) RRUs and adding (3) 4494 B14/B29 RRUs. The height of AT&Ts existing & proposed antennas & RRUs is 184' on the Tower.

This modification may include B2, B5, B17, B14, B29, B30, B66 & n77 hardware that is 4G(LTE) and/or 5GNR capable through remote software configuration and either or both services may be turned on or off at various times.

The Tower received CT Siting Council approval under Docket 138 on November 26, 1990. There were no conditions that could be feasibility be violated by this modification. The AT&T modification complies with the above-mentioned approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies ("R.C.S.A") §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A §16-50j-72(b)(2). In accordance with to R.C.S.A §16-50j-73, a copy of this letter is being sent the Hon. Todd Arcelaschi, Mayor, Town of Winsted, Mr. Geoffrey Green, Assistant Planner/Zoning Officer, Town of Winsted, William P. Stow, Trustee, c/o American Tower, the property owner and American Tower Corp, the Tower owner.

The planned modification of the facility falls squarely within those activities explicitly provided for in R.C.S.A §16-50j-72(b)(2). Specifically:

1. The proposed modifications will not result in an increase in the height of the existing Tower.

2. The proposed modifications will not require an extension of the site boundary.
3. The proposed modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing Tower and foundation can support the proposed loading.

For the foregoing reasons, AT&T respectfully submits the proposed modifications to the above referenced telecommunication facility constitute an exempt modification pursuant to R.C.S.A §16-50j-72(b)(2).

Sincerely,

Hollis M. Redding

Hollis M. Redding
SAI Communications, LLC
12 Industrial Way
Salem, NH 03079
Mobile: 860-834-6964
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Enclosures

Cc:

Hon. Todd Arcelaschi, Mayor, Town of Winsted
Mr. Geoffrey Green, Assistant Planner/Zoning Officer, Town of Winsted
William P. Stow, Trustee, c/o American Tower, the property owner
American Tower Corp, the Tower owner



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Calculated Radio Frequency Emissions Report



CT1071

15 Oakdale Avenue, Winsted, CT 06098

March 31, 2025

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modification of AT&T's antenna arrays mounted at 184' AGL on the existing monopole tower located at 15 Oakdale Avenue in Winsted, CT. The coordinates of the monopole tower are 41° 55' 18.1" N, 73° 02' 58.2" W.

AT&T is proposing the following:

- 1) Install nine (9) directional panel antennas, three (3) per sector to support its commercial LTE and 5G network.

This report considers the antenna configuration for AT&T's¹ proposed installation, in addition to equipment configurations from other FCC licensed operators that are currently located on the existing tower to calculate the resulting % Maximum Permissible Exposure (MPE) at ground level around the existing facility. The other operators on site include T-Mobile², Verizon³ and others⁴ (Eversource, Litchfield County Dispatch, CT State Police Department (CT State PD)).

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm²). The general population exposure limits for the various frequency ranges are defined in the document referenced in Attachment A of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

¹ As referenced to AT&T's Radio Frequency Design Sheet modified on 11/22/2024 and construction drawing prepared by TEP Northeast dated 10/18/2024.

² As referenced to T-Mobile's Connecticut Siting Council Notice of Exempt Modification – 15 Oakdale Avenue, Winsted, Connecticut, dated 11/04/2022.

³ As referenced to Verizon's Connecticut Siting Council Notice of Exempt Modification – 15 Oakdale Avenue, Winchester/Winsted, Connecticut, dated 18/11/2021.

⁴ As referenced to American Tower's Structural Analysis Report (dated 02/28/2025) and T-Mobile's Latest Connecticut Siting Council filing dated (11/04/2022).

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{\text{GRF}^2 \times 1.64 \times \text{ERP}}{4\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{H^2 + V^2}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor (GRF) of 1.6

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final installations.

The percent of MPE values presented in this report reflect levels that one may encounter from one sector of a carrier's antennas. Most carriers use 3 or 4 sectors per site with azimuths approximately 90 or 120 degrees apart, respectively; therefore, one could not be standing in the main beam of all sectors at the same time. In cases where antenna models are not uniform across all sectors, the antenna model with the highest gain was used for the calculations. This results in a conservative or "worst case" assumption for percent of MPE calculations.

4. Antenna Inventory

Table 1 below outlines AT&T's proposed antenna configuration for the site. The associated data model and antenna patterns for these specific antenna models are included in Attachments C.

Operator	Sector / Azimuth	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)
AT&T	Alpha / 23°	763	160	14.4	4407	TPA65R-BU6DV2	72	0	6	184
		722	80	14.4	2203		61			
		1900	160	18.2	10571		63			
		2100	240	18.6	17386		61			
		739	160	14	4019	DMP65R-BU6D	74	0	6	184
		850	160	14.6	4614		63			
		2300	100	18.4	6918		54			
		3500	200	19.1	16257		± 60			
		3700	200	18.9	15525	AIR 6472	± 60	0	3	184
	Beta / 143°	763	160	14.4	4407	TPA65R-BU6DV2	72	0	6	184
		722	80	14.4	2203		61			
		1900	160	18.2	10571		63			
		2100	240	18.6	17386		61			
		739	160	14	4019	DMP65R-BU6D	74	0	6	184
		850	160	14.6	4614		63			
		2300	100	18.4	6918		54			
		3500	200	19.1	16257		± 60			
		3700	200	18.9	15525	AIR 6472	± 60	0	3	184
	Gamma / 263°	763	160	14.4	4407	TPA65R-BU6DV2	72	0	6	184
		722	80	14.4	2203		61			
		1900	160	18.2	10571		63			
		2100	240	18.6	17386		61			
		739	160	14	4019	DMP65R-BU6D	74	0	6	184
		850	160	14.6	4614		63			
		2300	100	18.4	6918		54			
		3500	200	19.1	16257		± 60			
		3700	200	18.9	15525	AIR 6472	± 60	0	3	184

Table 1: Proposed Antenna Inventory^{5 6}

⁵ Antenna heights are in reference to construction drawings prepared by TEP Northeast dated 10/18/2024.

⁶ Transmit power assumes 0 dB of cable loss.

5. Calculation Results

The calculated % MPE results for the proposed and existing antenna configuration are shown in Figure 1 below. Each frequency band and technology is calculated as well as the resulting cumulative percent of MPE. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst-case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within ± 5 degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.

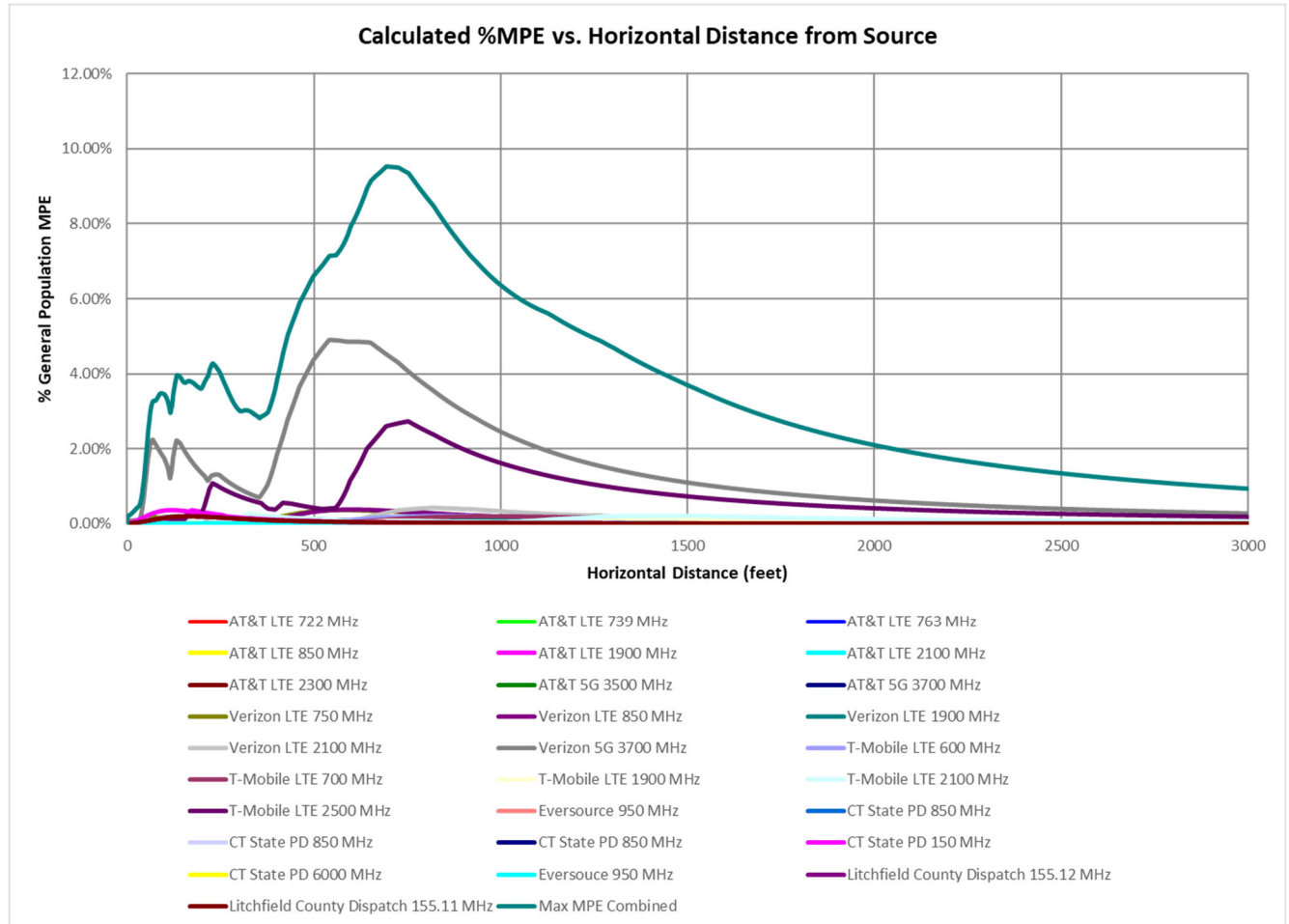


Figure 1: Graph of General Population % MPE vs. Distance

The highest percent of MPE (9.53% of the General Population limit) is calculated to occur at a horizontal distance of 693 feet from antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 850 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, and that all antenna channels are transmitting simultaneously. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. Additionally, a six-foot height offset was considered in this analysis to account for the height of a person standing at ground level. As a result, the calculated % MPE levels are significantly higher than the actual signal levels will be from the final installation. The results presented in Figure 1 and Table 2 assume level ground elevation from the base of the site out to the horizontal distances calculated.

Carrier	Number of Transmitters	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm ²)	Limit (mW/cm ²)	% MPE
AT&T 5G 3500 MHz	1	200.0	184.0	693	0.000739	1.000	0.07%
AT&T 5G 3700 MHz	1	200.0	184.0	693	0.001124	1.000	0.11%
AT&T LTE 1900 MHz	1	160.0	184.0	693	0.000305	1.000	0.03%
AT&T LTE 2100 MHz	1	240.0	184.0	693	0.000372	1.000	0.04%
AT&T LTE 2300 MHz	1	100.0	184.0	693	0.000479	1.000	0.05%
AT&T LTE 722 MHz	1	80.0	184.0	693	0.000288	0.481	0.06%
AT&T LTE 739 MHz	1	160.0	184.0	693	0.000601	0.493	0.12%
AT&T LTE 763 MHz	1	160.0	184.0	693	0.000576	0.509	0.11%
AT&T LTE 850 MHz	1	160.0	184.0	693	0.000403	0.567	0.07%
CT State PD 150 MHz	1	65.0	142.0	693	0.000076	0.200	0.04%
CT State PD 6000 MHz	1	0.1	80.0	693	0.000316	1.000	0.03%
CT State PD 850 MHz	2	25.0	150.1	693	0.000024	0.567	0.00%
CT State PD 850 MHz	1	35.0	147.0	693	0.000018	0.567	0.00%
CT State PD 850 MHz	1	25.0	146.0	693	0.000017	0.567	0.00%
Eversouce 950 MHz	1	12.5	97.0	693	0.000171	0.633	0.03%
Eversource 950 MHz	1	12.5	93.0	693	0.000173	0.633	0.03%
Litchfield County Dispatch 155.11 MHz	1	55.0	150.0	693	0.000069	0.200	0.03%
Litchfield County Dispatch 155.12 MHz	1	55.0	150.0	693	0.000069	0.200	0.03%
T-Mobile LTE 1900 MHz	2	140.0	166.0	693	0.000796	1.000	0.08%
T-Mobile LTE 2100 MHz	2	140.0	166.0	693	0.000476	1.000	0.05%
T-Mobile LTE 2500 MHz	1	240.0	166.0	693	0.026006	1.000	2.60%
T-Mobile LTE 600 MHz	1	140.0	166.0	693	0.000679	0.400	0.17%
T-Mobile LTE 700 MHz	4	40.0	166.0	693	0.000510	0.467	0.11%
Verizon 5G 3700 MHz	1	320.0	121.0	693	0.045290	1.000	4.53%
Verizon LTE 1900 MHz	1	160.0	121.0	693	0.001503	1.000	0.15%
Verizon LTE 2100 MHz	1	240.0	121.0	693	0.002874	1.000	0.29%
Verizon LTE 750 MHz	1	160.0	121.0	693	0.001663	0.500	0.33%
Verizon LTE 850 MHz	1	160.0	121.0	693	0.001991	0.567	0.35%
Total							9.53%

Table 2: Maximum Percent of General Population Exposure Values^{7 8 9}

⁷ Frequencies listed are representative of the operating band and are not the specific operating frequency.

⁸ The total % MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

⁹ Reasonable assumptions were made based on available FCC licenses for Eversource (WQBD270), CT State PD (WQZI413, WPRI290, WPPH351) and Litchfield County Dispatch (WQLB415).

6. Conclusion

The above analysis verifies that RF exposure levels from the site with AT&T's proposed antenna configuration will be well below the maximum permissible levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum cumulative percent of MPE in consideration of all transmitters is calculated to be **9.53 % of the FCC limit (General Population/Uncontrolled)**. This maximum cumulative percent of MPE value is calculated to occur 693 feet away from the site.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.1, ANSI/IEEE Std. C95.3 and FCC OET Bulletin 65 Edition 97-01.



Report Prepared By: Ram Acharya
RF Engineer
C Squared Systems, LLC

March 28, 2025
Date



Reviewed/Approved By: Martin Lavin
Senior RF Engineer
C Squared Systems, LLC

March 31, 2025
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2019, IEEE Standard Safety Levels With Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2021, IEEE Recommended Practice for Measurements and Computations of Electric, Magnetic, and Electromagnetic Fields with Respect to Human Exposure to Such Fields, 0 Hz-300 GHz IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure¹⁰

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure¹¹

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 3: FCC Limits for Maximum Permissible Exposure

¹⁰ Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

¹¹ General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

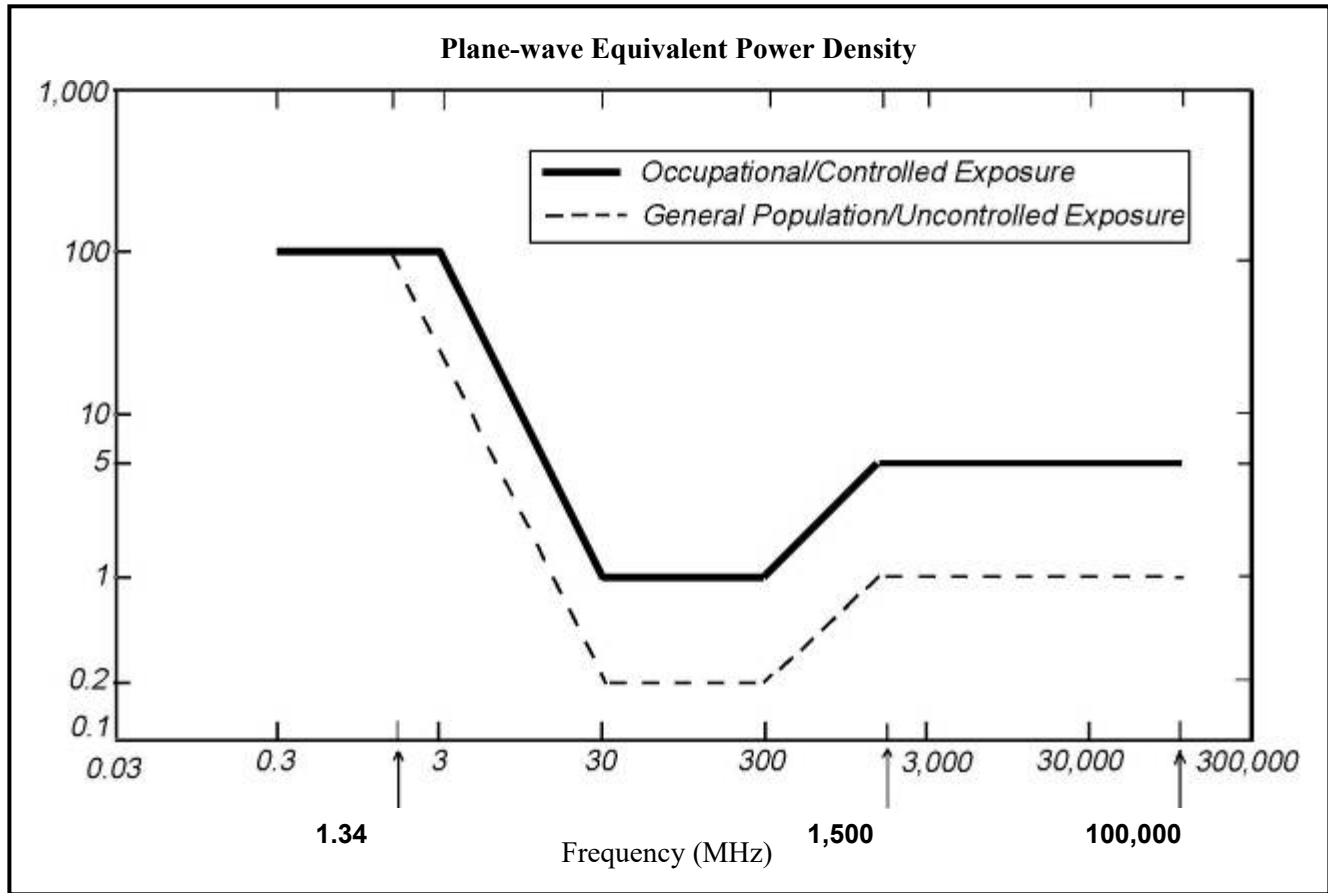
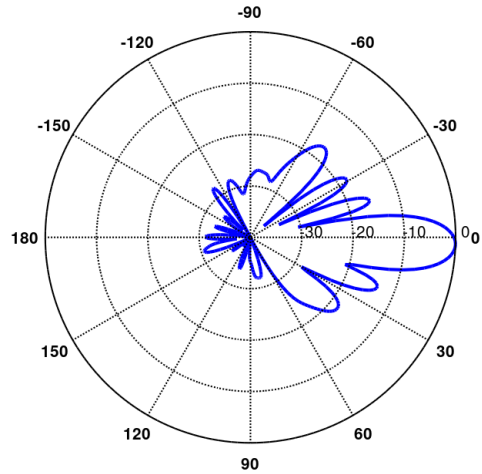


Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: AT&T Antenna Model Data and Electrical Patterns

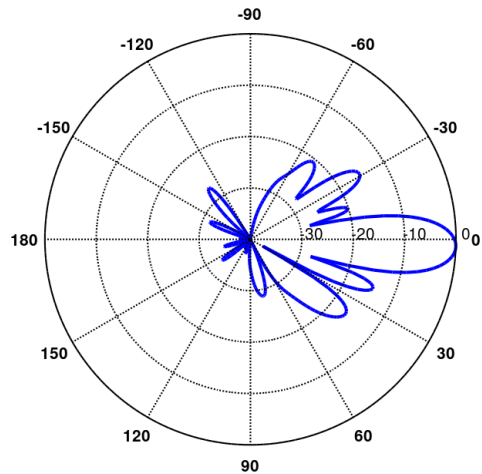
722/763 MHz

Manufacturer: CCI
 Model #: TPA65R-BU6DV2
 Frequency Band: 698-806 MHz
 Gain: 14.4 dBi
 Electrical Down-Tilt: 2°
 Vertical Beamwidth: 12.7°
 Horizontal Beamwidth: 72°
 Polarization: Dual Linear 45°
 Dimensions (L x W x D): 71.2" x 20.7" x 7.7"



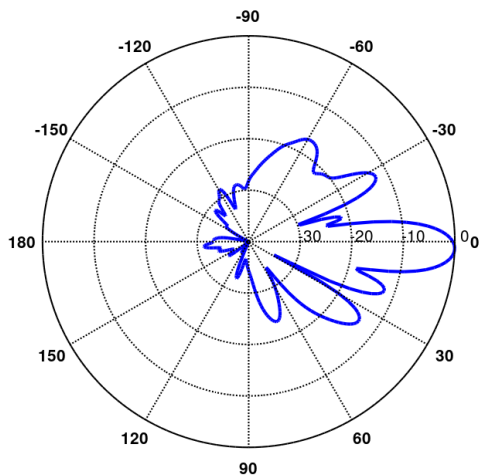
739 MHz

Manufacturer: CCI
 Model #: DMP65R-BU6D
 Frequency Band: 698-806 MHz
 Gain: 14 dBi
 Electrical Down-Tilt: 2°
 Vertical Beamwidth: 13°
 Horizontal Beamwidth: 74°
 Polarization: Dual Linear 45°
 Dimensions (L x W x D): 71.2" x 20.7" x 7.7"



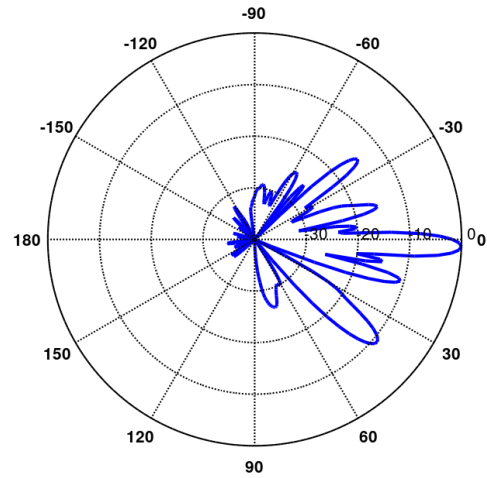
850 MHz

Manufacturer: CCI
 Model #: DMP65R-BU6D
 Frequency Band: 824-896 MHz
 Gain: 14.6 dBi
 Electrical Down-Tilt: 2°
 Vertical Beamwidth: 11.1°
 Horizontal Beamwidth: 63°
 Polarization: Dual Linear 45°
 Dimensions (L x W x D): 71.2" x 20.7" x 7.7"



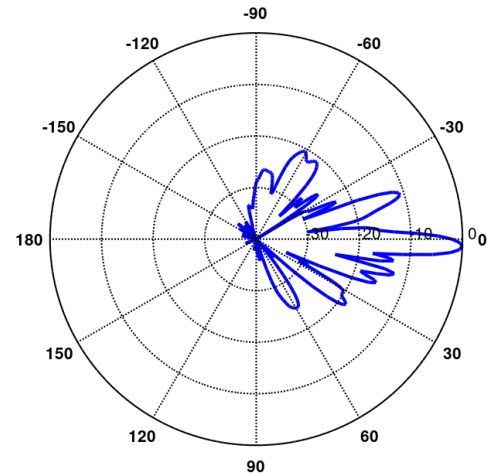
1900 MHz

Manufacturer: CCI
 Model #: TPA65R-BU6DV2
 Frequency Band: 1850-1990 MHz
 Gain: 18.2 dBi
 Electrical Down-Tilt: 2°
 Vertical Beamwidth: 5.1°
 Horizontal Beamwidth: 63°
 Polarization: Dual Linear 45°
 Dimensions (L x W x D): 71.2" x 20.7" x 7.7"



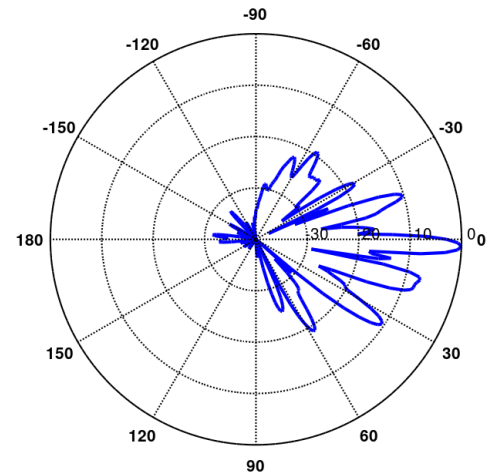
2100 MHz

Manufacturer: CCI
 Model #: TPA65R-BU6DV2
 Frequency Band: 1920-2180 MHz
 Gain: 18.6 dBi
 Electrical Down-Tilt: 2°
 Vertical Beamwidth: 4.8°
 Horizontal Beamwidth: 61°
 Polarization: Dual Linear 45°
 Dimensions (L x W x D): 71.2" x 20.7" x 7.7"



2300 MHz

Manufacturer: CCI
 Model #: DMP65R-BU6D
 Frequency Band: 2300-2400 MHz
 Gain: 18.4 dBi
 Electrical Down-Tilt: 2°
 Vertical Beamwidth: 4.1°
 Horizontal Beamwidth: 54°
 Polarization: Dual Linear 45°
 Dimensions (L x W x D): 71.2" x 20.7" x 7.7"



3500/3700 MHz	
Manufacturer:	ERICSSON
Model #:	AIR 6472
Frequency Band:	3450-3550 MHz 3840-3980
Gain:	- dBi
Electrical Down-Tilt	2°
Vertical Beamwidth:	87-105°
Horizontal Beamwidth:	±60°
Polarization:	N/A°
Dimensions (L x W x D):	36.3" x 15.83" x 7.4"
	N/A

PROJECT INFORMATION

SCOPE OF WORK:	<u>ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:</u> <ul style="list-style-type: none">• INSTALL AT&T ANTENNA TPA65R-BU6DV2B-K @ POS. 1 (TYP. OF 1 PER SECTOR, TOTAL OF 3).• INSTALL AT&T ANTENNA AIR6472 B77GB77M @ POS. 2 (TYP. OF 1 PER SECTOR, TOTAL OF 3).• INSTALL AT&T ANTENNA DMP65R-BU6D @ POS. 3 (TYP. OF 1 PER ALPHA AND BETA SECTORS, TOTAL OF 2)• INSTALL AT&T RADIO 4494B14B29 @ POS. 1 (TYP. OF 1 PER SECTOR, TOTAL OF 3).• INSTALL AT&T SURGE ARRESTOR DC9-48-60-24-8C-EV (TOTAL OF 1) WITH (1) 6AWG DC TRUNK AND (1) 24 PAIR FIBER TRUNK.
	<u>ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:</u> <ul style="list-style-type: none">• INSTALL NETSURE 48/58 DC-DC CONVERTER SYSTEM IN EXISTING UMTS FIF RACK (TOTAL OF 1).• INSTALL C48/58-2000P3 CONVERTER (TOTAL OF 9).• INSTALL 48V RECTIFIER (TOTAL OF 4).• INSTALL VERTIV BATTERY RACK; 48VDC 7FT H (TOTAL OF 1).• INSTALL SBS190F BATTERY IN PROPOSED BATTERY RACK (TOTAL OF 20).• INSTALL G4 BBU (TOTAL OF 1).• INSTALL 6610 SITE CONTROLLER (TOTAL OF 1).• INSTALL 150A BREAKERS FOR -58V DC CONVERTER SYSTEM (TOTAL OF 3).• INSTALL 50A BREAKERS FOR 6472'S (TOTAL OF 3).• INSTALL 35A FOR 4494'S (TOTAL OF 3).• INSTALL 20A FOR G4 BBU (TOTAL OF 1).• INSTALL 5A FOR 6610 (TOTAL OF 1).• INSTALL (1) FIBER MANAGEMENT BOX MOUNTED ON ICE BRIDGE POST.
JOB DETAILS:	<u>ITEMS TO BE REMOVED:</u> <ul style="list-style-type: none">• EXISTING OMNI ANTENNA @ POS. 2 (TOTAL OF 1 PER BETA SECTOR).• EXISTING AT&T ANTENNA OPA65R-BU6A @ POS. 1 (TYP. OF 1 PER SECTOR, TOTAL OF 3).• EXISTING AT&T ANTENNA HPA-65R-BUU-H6 @ POS. 3 (TYP. OF 1 PER SECTOR, TOTAL OF 3).• EXISTING AT&T ANTENNA DMP65R-BU6D @ POS. 4 (BROKEN RET) (TYP. OF 1 PER ALPHA AND BETA SECTORS, TOTAL OF 2).• EXISTING AT&T RADIO RRUS-E2 B2 @ POS. 1 (TYP. OF 1 PER SECTOR, TOTAL OF 3).• EXISTING AT&T RADIO RADIO-4478 B14 (GROUND) (TOTAL OF 2).• EXISTING AT&T UMTS RRUW-B5 (GROUND) (TOTAL OF 3).• EXISTING AT&T ALPHA 24 TO 48VDC DISTRIBUTION CENTER (TOTAL OF 1).• EXISTING AT&T HT150ET BATTERIES INSTALLED 7/2020 (TOTAL OF 8).
	<u>ITEMS TO REMAIN:</u> <ul style="list-style-type: none">• (1) ANTENNA, (9) RRU'S, (3) SURGE ARRESTORS, (6) DC TRUNK, (6) COAX CABLE & (2) FIBER TRUNKS.
RFDS:	WSCTB0028835_DoD 3.45 GHz A+B+C+D (40 MHz) Band n77, WSCTB0028848_700 MHz UPPER D (10 MHz) Band 14, WSCTB0029149_700 MHz D+E (10MHz) Band 29 DL Only, WSCTB0028455_CBAND 4 GHz B4+B5+C1+C2 (80MHz) Band n77
	RF ISSUE PRE-CONSTRUCTION RFDS DATED: 01/06/25

SITE NAME:	WINSTED/WINCHESTER
STRUCTURE	AMERICAN TOWER CORPORATION
LANDLORD:	
CONTACT INFO:	10 PRESIDENTIAL WAY WOBURN, MA 01801 877-282-7483
SITE ADDRESS:	15 OAKDALE AVENUE WINSTED, CT 06098
LATITUDE:	41.9216861° N, 41° 55' 18.1" N
LONGITUDE:	-73.0494989° W, 73° 02' 58.2" W
TYPE OF SITE:	MONOPOLE / INDOOR EQUIPMENT
STRUCTURE HEIGHT:	180'-0"±
RAD CENTER:	184'-0"±
GROUND ELEVATION: (AMSL)	1091'-0"±
HIGHEST APPURTENANCE:	189'-0"± PRIOR TO OMNI REMOVAL, 187'-0"± POST OMNI REMOVAL
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	0
GN-1	GENERAL NOTES	0
A-1	COMPOUND & EQUIPMENT PLAN	0
A-2	ELEVATIONS	0
A-3	EXISTING ANTENNA LAYOUT PLAN	0
A-4	PROPOSED ANTENNA LAYOUT PLAN	0
A-5	ANTENNA SCHEDULES	0
A-6	DETAILS	0
A-7	DETAILS	0
A-8	DETAILS	0
E-1	WIRING DIAGRAM - GROUND	0
E-2	WIRING DIAGRAM - TOWER	0
G-1	GROUNDING DETAILS	0
RF-1	RF PLUMBING DIAGRAM	0

- TEP OPCO, LLC. TO PERFORM POST/CLIMB AND INSPECTION TO CONFIRM PROPOSED INSTALLATION COMPLIES WITH THE RECORD STAMPED DRAWINGS AND STRUCTURAL REPORTS PRIOR TO SUBMITTING FCCA (FINAL CONSTRUCTION CONTROL AFFIDAVIT). GC IS RESPONSIBLE FOR COORDINATING INSPECTIONS WITH TEP OPCO, LLC. PRIOR TO CONSTRUCTION BEING COMPLETED.

ATC SITE NAME: WINCHESTER CT
ATC SITE NUMBER: 302506



SITE NAME: WINSTED/WINCHESTER

FA CODE: 10035017

PACE ID: MRCTB072964, MRCTB072407, MRCTB073100, MRCTB072573
PROJECT: 5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE
CARRIER, 5G NR RADIO

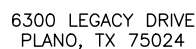
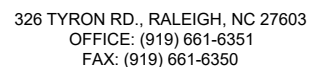
GET ON I-91 S FROM ENTERPRISE DR, CAPITAL BLVD AND STATE HWY 411, HEAD SOUTH TOWARD ENTERPRISE DR, TURN LEFT ONTO ENTERPRISE DR, TURN LEFT ONTO CAPITAL BLVD, USE THE LEFT LANE TO TURN LEFT ONTO STATE HWY 411, TURN LEFT TO MERGE WITH I-91 S, TAKE CT-9 N AND CT-72 W TO CT-177 N IN PLAINVILLE. TAKE EXIT 5 FROM CT-72 W, MERGE WITH I-91 S, TAKE EXIT 22N TO MERGE WITH CT-9 N TOWARD NEW BRITAIN, USE THE LEFT 2 LANES TO TAKE EXIT 37E FOR CT-72 TOWARD BRISTOL, CONTINUE ONTO CT-72 W, MERGE WITH CT-72 W/I-84, TAKE EXIT 33E FOR CT-72 W/NEW BRITAIN AVE TOWARD BRISTOL/PLAINVILLE, CONTINUE ONTO CT-72 W, TAKE EXIT 5 TOWARD CT-177 N, CONTINUE ON CT-177 N. TAKE CT-4 W TO US-44 W IN CANTON, USE THE LEFT 2 LANES TO TURN LEFT ONTO US-44 W, TAKE COLONY DR TO HOLABIRD AVE, TURN RIGHT ONTO OLD NEW HARTFORD RD, TURN LEFT ONTO GLENDALE AVE, TURN LEFT ONTO COLONY DR, TURN RIGHT ONTO HOLABIRD AVE, DESTINATION WILL BE ON THE LEFT.



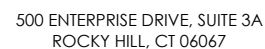
1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

OR CALL 811

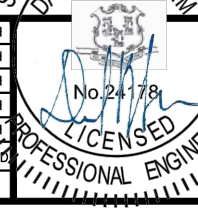
TEP IS A FAMILY OF COMPANIES LICENSED TO PROVIDE DIFFERENT SERVICES IN DIFFERENT JURISDICTIONS. DEPENDING ON THE JURISDICTION, PROFESSIONAL ENGINEERING AND LAND SURVEYING SERVICES ARE PROVIDED BY TEP OPCO LLC, A DELAWARE LIMITED LIABILITY COMPANY, TEP ENGINEERING, PLLC, A NORTH CAROLINA PROFESSIONAL LIMITED LIABILITY COMPANY, OR M&H ENGINEERING, PLLC, A NEW YORK PROFESSIONAL LIMITED LIABILITY COMPANY. GENERAL CONTRACTOR SERVICES ARE PROVIDED BY TEPDB OPCO LLC, A DELAWARE LIMITED LIABILITY COMPANY. WE ACQUIRE THE REQUISITE LICENSES IN EACH STATE. ADDITIONAL INFORMATION CAN BE OBTAINED FROM THE COMPANY.



SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
15 OAKDALE AVENUE
WINSTED, CT 06098
LITCHFIELD COUNTY



O	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
D	02/18/25	ISSUED FOR REVIEW	KPP	AT	DPH
C	10/18/24	ISSUED FOR REVIEW	JS	AT	DPH
B	10/14/24	ISSUED FOR REVIEW	SG	AT	DPH
A	10/01/24	ISSUED FOR REVIEW	KPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: KPP		



TITLE SHEET
ANTENNA MODIFICATIONS, LTE SOFTWARE
CARRIER, 5G NR RADIO

SITE NUMBER	DRAWING NUMBER	REV
CTL01071	T-1	0

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81 STANDARDS) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS AND #2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

CONTRACTOR – ERICSSON
SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
OWNER – AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. APPLICABLE BUILDING CODES:
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE: IBC 2021 WITH 2022 CT STATE BUILDING CODE AMENDMENTS
ELECTRICAL CODE: 2020 NATIONAL ELECTRICAL CODE (NFPA 70-2020)

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		



326 TYRON RD., RALEIGH, NC 27603
OFFICE: (919) 661-6351
FAX: (919) 661-6350



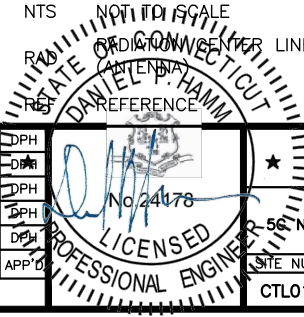
6300 LEGACY DRIVE
PLANO, TX 75024

SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
15 OAKDALE AVENUE
WINSTED, CT 06098
LITCHFIELD COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

O	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
D	02/18/25	ISSUED FOR REVIEW	KPP	AT	DPH
C	10/18/24	ISSUED FOR REVIEW	JS	AT	DPH
B	10/14/24	ISSUED FOR REVIEW	SG	AT	DPH
A	10/01/24	ISSUED FOR REVIEW	KPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: KPP		

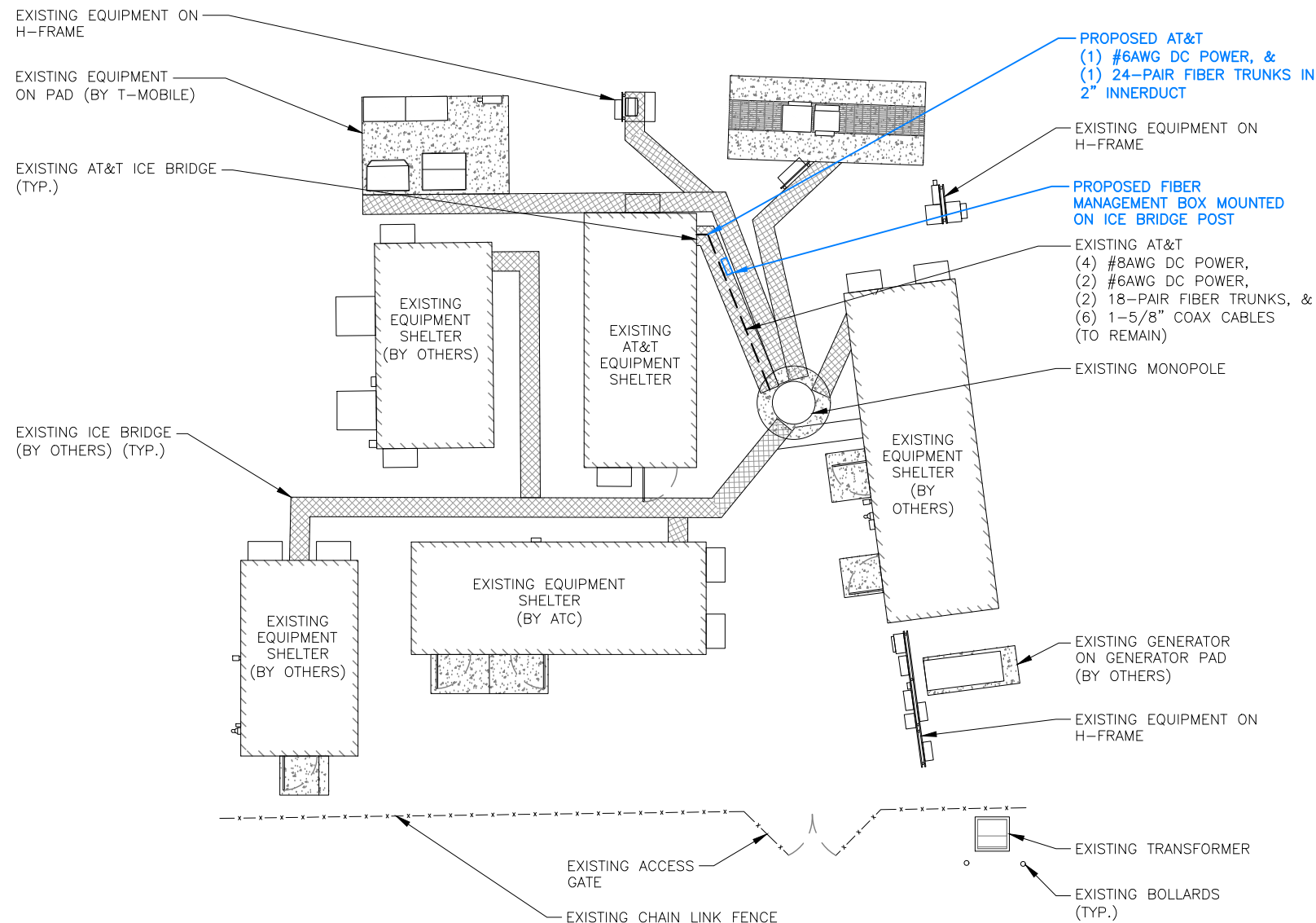


AT&T		
GENERAL NOTES 5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE CARRIER, 5G NR RADIO		
SITE NUMBER	DRAWING NUMBER	REV
CTL01071	GN-1	0

NOTE:
REFER TO STRUCTURAL ANALYSIS
BY: AMERICAN TOWER CORPORATION
DATED: FEBRUARY 28, 2025,
FOR THE CAPACITY OF THE EXISTING
STRUCTURES TO SUPPORT THE
PROPOSED EQUIPMENT.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF
THE EXISTING **ANTENNA MOUNT** TO
SUPPORT THE PROPOSED LOADING
HAS BEEN COMPLETED BY:
TEP OPCO, LLC.
DATED: OCTOBER 10, 2024

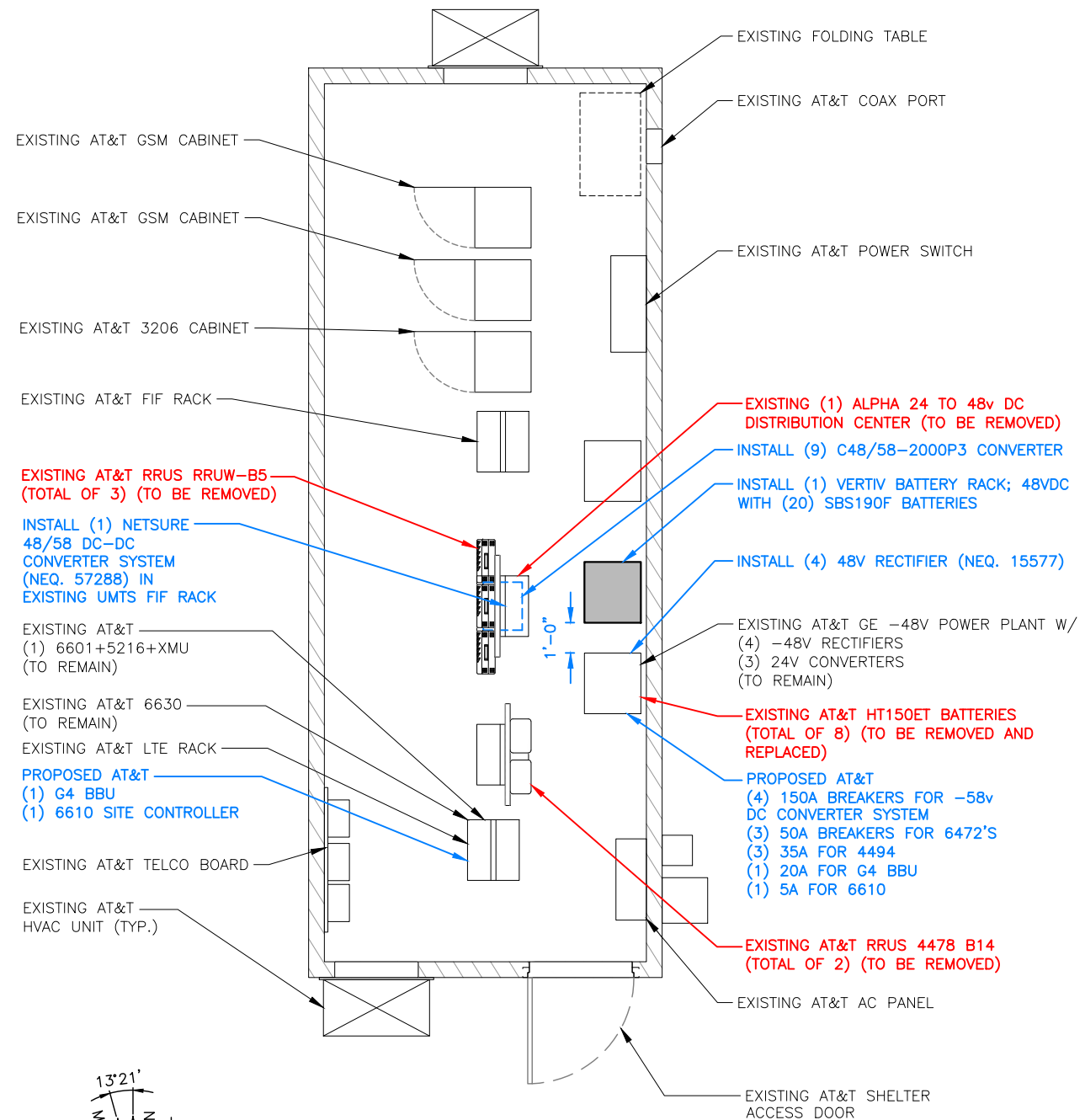
NOTE:
REFER TO THE RF ISSUE
PRE-CONSTRUCTION RFDS DATED:
01/06/25 FOR FINAL ANTENNA SETTINGS.



COMPOUND PLAN
22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"

1
A-1

0 4'-0" 8'-0" 16'-0" 24'-0"



EQUIPMENT PLAN
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"

2
A-1

0 4'-0" 8'-0"



326 TYRON RD., RALEIGH, NC 27603
OFFICE: (919) 661-6351
FAX: (919) 661-6350



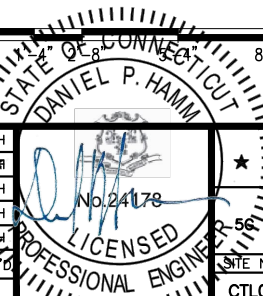
6300 LEGACY DRIVE
PLANO, TX 75024

SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
15 OAKDALE AVENUE
WINSTED, CT 06098
LITCHFIELD COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
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0	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
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NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE:	AS SHOWN	DESIGNED BY:	AT	DRAWN BY:	KPP



AT&T

COMPOUND & EQUIPMENT PLAN
5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE CARRIER, 5G NR RADIO

SITE NUMBER	DRAWING NUMBER	REV
CTL01071	A-1	0

CL OF EXISTING AT&T ANTENNAS
ELEV. = 184'-0"± A.G.L.
TOP OF MONOPOLE
ELEV. = 180'-0"± (A.G.L.)

EXISTING AT&T RADIO 8843
B66A B2A @ POS. 4
(TYP. OF 1 PER SECTOR,
TOTAL OF 3) (TO BE RELOCATED)

EXISTING AT&T LTE ANTENNA
DMP65R-BU6D @ POS. 4
(TOTAL OF 1 PER GAMMA SECTOR)
(TO BE RELOCATED)

EXISTING AT&T RRUS-4449
B5/B12A (850/700)
@ POS. 4 (TYP. OF 1 PER
SECTOR, TOTAL OF 3)
(TO BE RELOCATED)

EXISTING AT&T LTE ANTENNA
DMP65R-BU6D @ POS. 4
(TYP. OF 1 PER ALPHA &
BETA SECTORS, TOTAL OF 2)
(TO BE REMOVED-BROKEN RET)

EXISTING AT&T
(4) #8AWG DC POWER,
(2) #6AWG DC POWER,
(2) 18-PAIR FIBER TRUNKS, &
(6) 1-5/8" COAX CABLES
(TO REMAIN)

HIGHEST APPURTENANCE
ELEV. = 189'-0"± (A.G.L.)

EXISTING OMNI ANTENNA
(TO BE REMOVED)

EXISTING AT&T RRUS-E2 B29
@ POS. 1 (TYP. OF 1 PER
SECTOR, TOTAL OF 3)
(TO BE REMOVED)

EXISTING AT&T LTE ANTENNA
OPA65R-BU6A @ POS. 1
(TYP. OF 1 PER SECTOR,
TOTAL OF 3) (TO BE REMOVED)

EXISTING AT&T RRUS-32 B30
@ POS. 4 (TYP. OF 1 PER SECTOR,
TOTAL OF 3) (TO REMAIN)

EXISTING AT&T LTE ANTENNA
HPA-65R-BU6A @ POS. 3
(TYP. OF 1 PER SECTOR,
TOTAL OF 3) (TO BE REMOVED)

EXISTING ANTENNA
(BY OTHERS) (TYP.)

NOTE:
EXISTING GROUND EQUIPMENT NOT
SHOWN FOR CLARITY.

GROUND LEVEL
ELEV. = 0'-0"± A.G.L.
1091'-0"± A.M.S.L.

EXISTING TOWER ELEVATION

22x34 SCALE: 3/32"=1'-0"
11x17 SCALE: 3/64"=1'-0"

1
A-2

0 5'-4" 10'-8" 21'-4" 32'-0"



326 TYRON RD., RALEIGH, NC 27603
OFFICE: (919) 661-6351
FAX: (919) 661-6350



6300 LEGACY DRIVE
PLANO, TX 75024

SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
15 OAKDALE AVENUE
WINSTED, CT 06098
LITCHFIELD COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

CL OF EXISTING/PROPOSED
AT&T ANTENNAS
ELEV. = 184'-0"± A.G.L.

TOP OF MONOPOLE
ELEV. = 180'-0"± (A.G.L.)

EXISTING AT&T RELOCATED
LTE ANTENNA DMP65R-BU6D
@ POS. 3 (GAMMA SECTOR,
TOTAL OF 1)

PROPOSED AT&T LTE ANTENNA
DMP65R-BU6D @ POS. 3
(TYP. OF 1 PER ALPHA &
BETA SECTORS, TOTAL OF 2)

PROPOSED AT&T LTE
ANTENNA AIR6472 B77G B77M
@ POS. 2 (TYP. OF 1 PER
SECTOR, TOTAL OF 3)

EXISTING AT&T RELOCATED
RRUS-32 B30 @ POS. 3
(TYP. OF 1 PER SECTOR,
TOTAL OF 3)

EXISTING AT&T RELOCATED
RRUS-4449 B5/B12A
@ POS. 3 (TYP. OF 1 PER
SECTOR, TOTAL OF 3)

EXISTING AT&T
(4) #8AWG DC POWER,
(2) #6AWG DC POWER,
(2) 18-PAIR FIBER TRUNKS, &
(6) 1-5/8" COAX CABLES
(TO REMAIN)

PROPOSED AT&T
(1) #6AWG DC POWER, &
(1) 24-PAIR FIBER TRUNKS IN
2" INNERDUCT

GROUND LEVEL
ELEV. = 0'-0"± A.G.L.
1091'-0"± A.M.S.L.

PROPOSED TOWER ELEVATION

22x34 SCALE: 3/32"=1'-0"
11x17 SCALE: 3/64"=1'-0"

2
A-2

0 5'-4" 10'-8" 21'-4" 32'-0"

HIGHEST APPURTENANCE
ELEV. = 187'-0"± (A.G.L.)

PROPOSED AT&T LTE ANTENNA
TPA65R-BU6DV2B-K @ POS. 1
(TYP. OF 1 PER SECTOR, TOTAL OF 3)

PROPOSED AT&T DC9-48-60-24-8C-EV
SURGE ARRESTOR (TOTAL OF 1)

PROPOSED AT&T RRUS-4494 B14/B29
@ POS. 1 (TYP. OF 1 PER SECTOR,
TOTAL OF 3)

EXISTING AT&T RELOCATED RRUS-8843
B66A B2A @ POS. 1 (TYP. OF 1 PER
SECTOR, TOTAL OF 3)

EXISTING AT&T DC6-48-60-18-8C-EV
SURGE ARRESTORS (TOTAL OF 3)

EXISTING ANTENNA
(BY OTHERS) (TYP.)

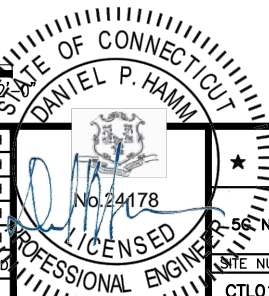
NOTE:
EXISTING GROUND EQUIPMENT NOT
SHOWN FOR CLARITY.

NOTE:
REFER TO THE RF ISSUE
PRE-CONSTRUCTION RFDS DATED:
01/06/25 FOR FINAL ANTENNA SETTINGS.

NOTE:
REFER TO STRUCTURAL ANALYSIS
BY: AMERICAN TOWER CORPORATION
DATED: FEBRUARY 28, 2025,
FOR THE CAPACITY OF THE EXISTING
STRUCTURES TO SUPPORT THE
PROPOSED EQUIPMENT.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF
THE EXISTING ANTENNA MOUNT TO
SUPPORT THE PROPOSED LOADING
HAS BEEN COMPLETED BY:
TEP OPCO, LLC.
DATED: OCTOBER 10, 2024

0	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
D	02/18/25	ISSUED FOR REVIEW	KPP	AT	DPH
C	10/18/24	ISSUED FOR REVIEW	JS	AT	DPH
B	10/14/24	ISSUED FOR REVIEW	SG	AT	DPH
A	10/01/24	ISSUED FOR REVIEW	KPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE:	AS SHOWN	DESIGNED BY:	AT	DRAWN BY:	KPP



AT&T		
ELEVATIONS 5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE CARRIER, 5G NR RADIO		
SITE NUMBER	DRAWING NUMBER	REV
CTL01071	A-2	0

NOTE:

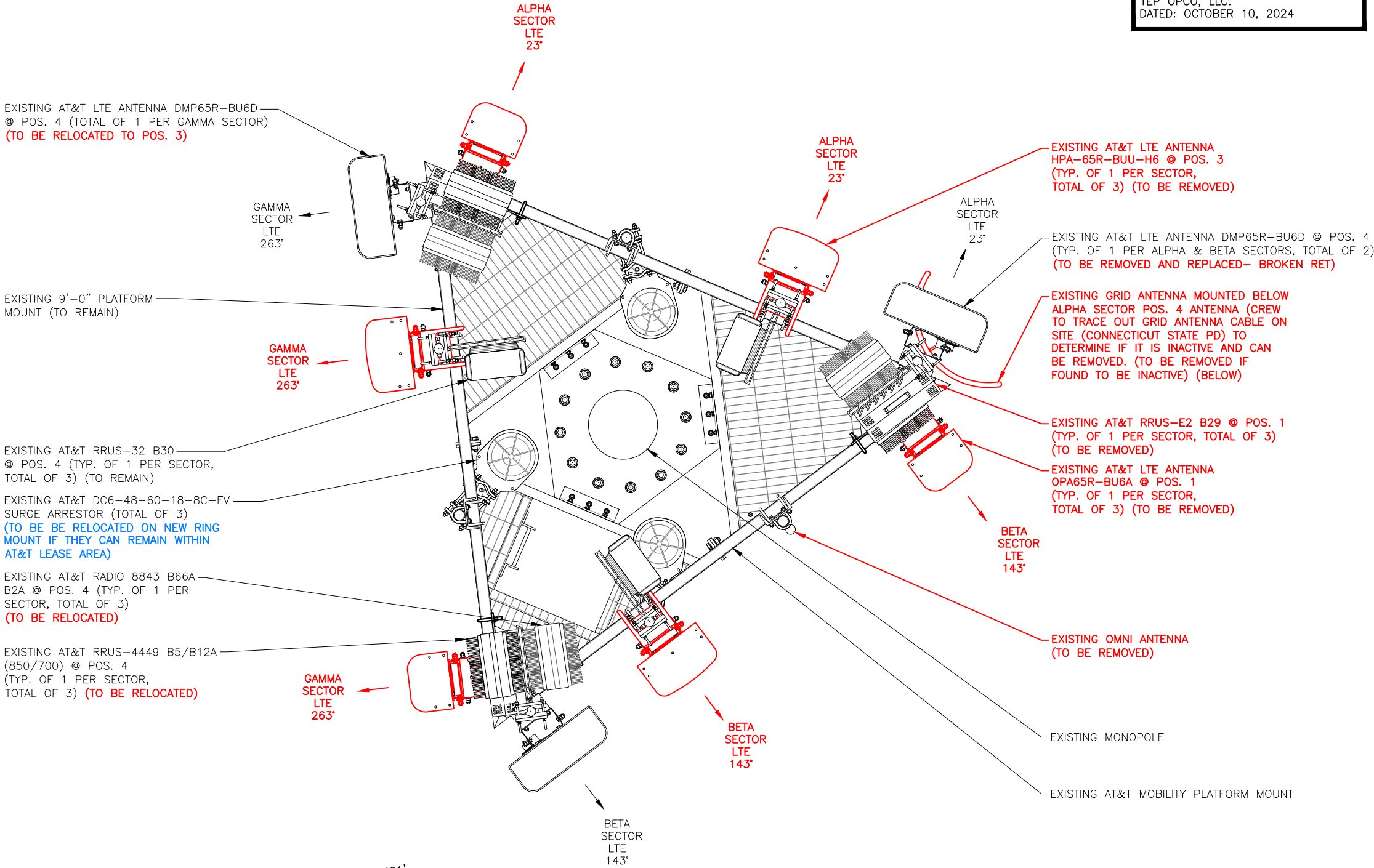
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: TEP OPCO, LLC. DATED: OCTOBER 10, 2024

NOTE:

REFER TO THE RF ISSUE PRE-CONSTRUCTION RFDS DATED: 01/06/25 FOR FINAL ANTENNA SETTINGS.

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: AMERICAN TOWER CORPORATION DATED: FEBRUARY 28, 2025, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



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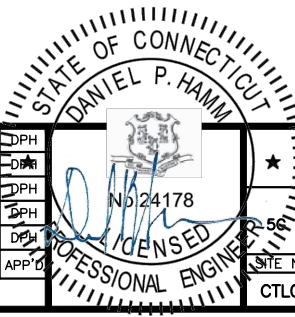
6300 LEGACY DRIVE
PLANO, TX 75024

SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
15 OAKDALE AVENUE
WINSTED, CT 06098
LITCHFIELD COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

0	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
D	02/18/25	ISSUED FOR REVIEW	KPP	AT	DPH
C	10/18/24	ISSUED FOR REVIEW	JS	AT	DPH
B	10/14/24	ISSUED FOR REVIEW	SG	AT	DPH
A	10/01/24	ISSUED FOR REVIEW	KPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: KPP		



AT&T		
EXISTING ANTENNA LAYOUT PLAN 5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE CARRIER, 5G NR RADIO		
SITE NUMBER	DRAWING NUMBER	REV
CTL01071	A-3	0

NOTE:

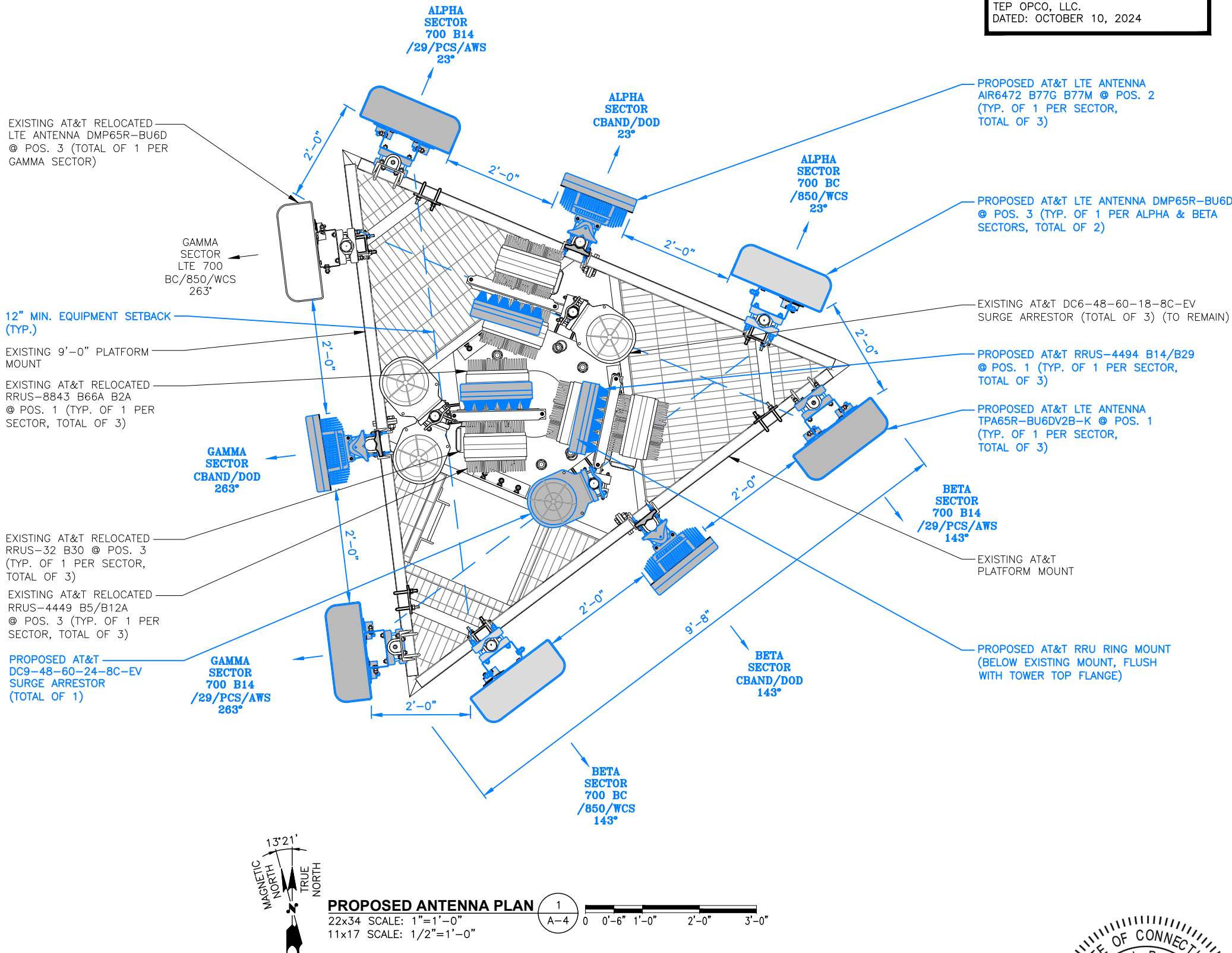
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY:
TEP OPCO, LLC.
DATED: OCTOBER 10, 2024

NOTE:

REFER TO THE RF ISSUE PRE-CONSTRUCTION RFDS DATED: 01/06/25 FOR FINAL ANTENNA SETTINGS

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: AMERICAN TOWER CORPORATION DATED: FEBRUARY 28, 2025, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



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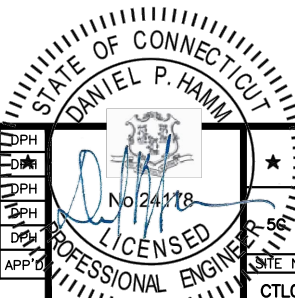
6300 LEGACY DRIVE
PLANO, TX 75024

SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
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LITCHFIELD COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

0	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
D	02/18/25	ISSUED FOR REVIEW	KPP	AT	DPH
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B	10/14/24	ISSUED FOR REVIEW	SG	AT	DPH
A	10/01/24	ISSUED FOR REVIEW	KPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE:	AS SHOWN	DESIGNED BY:	AT	DRAWN BY:	KPP



AT&T		
PROPOSED ANTENNA LAYOUT PLAN 5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE CARRIER, 5G NR RADIO		
SITE NUMBER	DRAWING NUMBER	REV
CTL01071	A-4	0

ANTENNA SCHEDULE											
AS-BUILT-IN/SUPPLIER APPROVE PRELIMINARY RFDS DATED 07/16/24											
SECTOR	EXISTING/ REMOVED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA Ɔ HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	REMOVED	LTE	OPA65R-BU6A	71.1x11.7x8.4	184'-0"±	23°	-	(E)(1) RRUS-32 B29	-	(E)(1) 6AWG DC TRUNKS (1) 18 PAIR FIBER TRUNK	(E) (1) RAYCAP DC6-48-60-18-8F
A2	-	-	-	-	-	-	-	-	-	-	
A3	REMOVED	LTE	HPA-65R-BUU-H6	72.3x14.4x7.3	184'-0"±	23°	-	(E)(1) RRUS-32 B30	-	-	
A4	REMOVED	-	DMP65R-BU6D	71.2x20.7x7.70	184'-0"±	23°	-	(E)(1) RRUS-4449 B5/B12A (E)(1) RRUS 8843 B66A B2A	-	(E)(2) 1-5/8" COAX CABLES (E)(2) 8AWG DC TRUNKS	
B1	REMOVED	LTE	OPA65R-BU6A	71.1x11.7x8.4	184'-0"±	143°	-	(E)(1) RRUS-32 B29	-	(E)(1) 6AWG DC TRUNKS (1) 18 PAIR FIBER TRUNK	(E) (1) RAYCAP DC6-48-60-18-8F
B2	-	-	-	-	-	-	-	-	-	-	
B3	REMOVED	LTE	HPA-65R-BUU-H6	72.3x14.4x7.3	184'-0"±	143°	-	(E)(1) RRUS-32 B30	-	-	
B4	REMOVED	-	DMP65R-BU6D	71.2x20.7x7.70	184'-0"±	143°	-	(E)(1) RRUS-4449 B5/B12A (E)(1) 8843 B66A B2A	-	(E)(2) 1-5/8" COAX CABLES (E)(1) 8AWG DC TRUNKS	
C1	REMOVED	LTE	OPA65R-BU6A	71.1x11.7x8.4	184'-0"±	263°	-	(E)(1) RRUS-32 B29	-	-	(E) (1) RAYCAP DC6-48-60-18-8C-EV
C2	-	-	-	-	-	-	-	-	-	-	
C3	REMOVED	LTE	HPA-65R-BUU-H6	72.3x14.4x7.3	184'-0"±	263°	-	(E)(1) RRUS-32 B30	-	-	
C4	EXISTING	-	DMP65R-BU6D	71.2x20.7x7.7	184'-0"±	263°	-	(E)(1) RRUS-4449 B5/B12A (E)(1) 8843 B66A B2A	-	(E)(2) 1-5/8" COAX CABLES (E)(1) 8AWG DC TRUNKS	

EXISTING ANTENNA SCHEDULE 1
SCALE: N.T.S. A-5

ANTENNA SCHEDULE											
AS-BUILT-IN/SUPPLIER APPROVE PRELIMINARY RFDS DATED 07/16/24											
SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA Ɔ HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	PROPOSED	700 B14 /B29/PCS/AWS	TPA65R-BU6DV2B-K	71.2x20.7x7.7	184'-0"±	23°	-	(P)(1) RRUS-4494 B14/B29 (E)(1) RRUS 8843 B66A B2A	-	(E)(1) 6AWG DC TRUNKS (1)(E) 18 PAIR FIBER TRUNK	(E) (1) RAYCAP DC6-48-60-18-8F (P)(1) DC9-48-60-24-8C-EV
A2	PROPOSED	CBAND/DOD	AIR6472 B77GB77M	36.4x16.1x7.5	184'-0"±	23°	-	-	-	-	
A3	PROPOSED	700 BC/850/WCS	DMP65R-BU8D	71.2x20.7x7.7	184'-0"±	23°	-	(E)(1) RRUS-32 B30 (E)(1) RRUS-4449 B5/B12A	-	(E)(2)1-5/8" COAX CABLE (E)(2) 8AWG DC TRUNKS	
B1	PROPOSED	700 B14 /B29/PCS/AWS	TPA65R-BU6DV2B-K	71.2x20.7x7.7	184'-0"±	143°	-	(P)(1) RRUS-4494 B14/B29 (E)(1) RRUS 8843 B66A B2A	-	(P)(1) 6AWG DC TRUNK (E)(1) 6AWG DC TRUNK (1)(E) 18 PAIR FIBER TRUNK	(E) (1) RAYCAP DC6-48-60-18-8F
B2	PROPOSED	CBAND/DOD	AIR6472 B77GB77M	36.4x16.1x7.5	184'-0"±	143°	-	-	-	-	
B3	PROPOSED	700 BC/850/WCS	DMP65R-BU8D	71.2x20.7x7.7	184'-0"±	143°	-	(E)(1) RRUS-32 B30 (E)(1) RRUS-4449 B5/B12A	-	(E)(2) 1-5/8" COAX CABLE (E)(1) 8AWG DC TRUNK	
C1	PROPOSED	700 B14 /B29/PCS/AWS	TPA65R-BU6DV2B-K	71.2x20.7x7.7	184'-0"±	263°	-	(P)(1) RRUS-4494 B14/B29 (E)(1) RRUS 8843 B66A B2A	-	(P)(1) 24 PAIR FIBER TRUNK	(E) (1) RAYCAP DC6-48-60-18-8C-EV
C2	PROPOSED	CBAND/DOD	AIR6472 B77GB77M	36.4x16.1x7.5	184'-0"±	263°	-	-	-	-	
C3	EXISTING	700 BC/850/WCS	DMP65R-BU8D	71.2x20.7x7.7	184'-0"±	263°	-	(E)(1) RRUS-32 B30 (E)(1) RRUS-4449 B5/B12A	-	(E)(2) 1-5/8" COAX CABLES (E)(1) 8AWG DC TRUNKS	

FINAL ANTENNA SCHEDULE 2
SCALE: N.T.S. A-5

RRU CHART		
QUANTITY	MODEL	SIZE (L x W x D)
E(3)	4449 B5/B12A	17.9"x13.2"x10.4"
E(3)	RRUS-32 B30	27.2"x12.1"x7.0"
E(3)	8843 B66A B2A	14.9"x13.2"x10.4"
(E)(3)	RRUS-32 B29	27.2"x12.1"x7.0"
NOTE: MOUNT PER MANUFACTURER'S SPECIFICATIONS		

RRU CHART		
QUANTITY	MODEL	SIZE (L x W x D)
E(3)	4449 B5/B12A	17.9"x13.2"x10.4"
E(3)	RRUS-32 B30	27.2"x12.1"x7.0"
E(3)	8843 B66A B2A	14.9"x13.2"x10.4"
P(3)	4494 B14/B29	17.5"x15.1"x5.6"
NOTE: MOUNT PER MANUFACTURER'S SPECIFICATIONS		

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: TEP OPCO, LLC. DATED: OCTOBER 10, 2024

NOTE:
REFER TO THE RF ISSUE PRE-CONSTRUCTION RFDS DATED: 01/06/25 FOR FINAL ANTENNA SETTINGS.

NOTE:
REFER TO STRUCTURAL ANALYSIS BY: AMERICAN TOWER CORPORATION DATED: FEBRUARY 28, 2025, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



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6300 LEGACY DRIVE
PLANO, TX 75024

SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
15 OAKDALE AVENUE
WINSTED, CT 06098
LITCHFIELD COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

0	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
D	02/18/25	ISSUED FOR REVIEW	KPP	AT	DPH
C	10/18/24	ISSUED FOR REVIEW	JS	AT	DPH
B	10/14/24	ISSUED FOR REVIEW	SG	AT	DPH
A	10/01/24	ISSUED FOR REVIEW	KPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: KPP		



STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

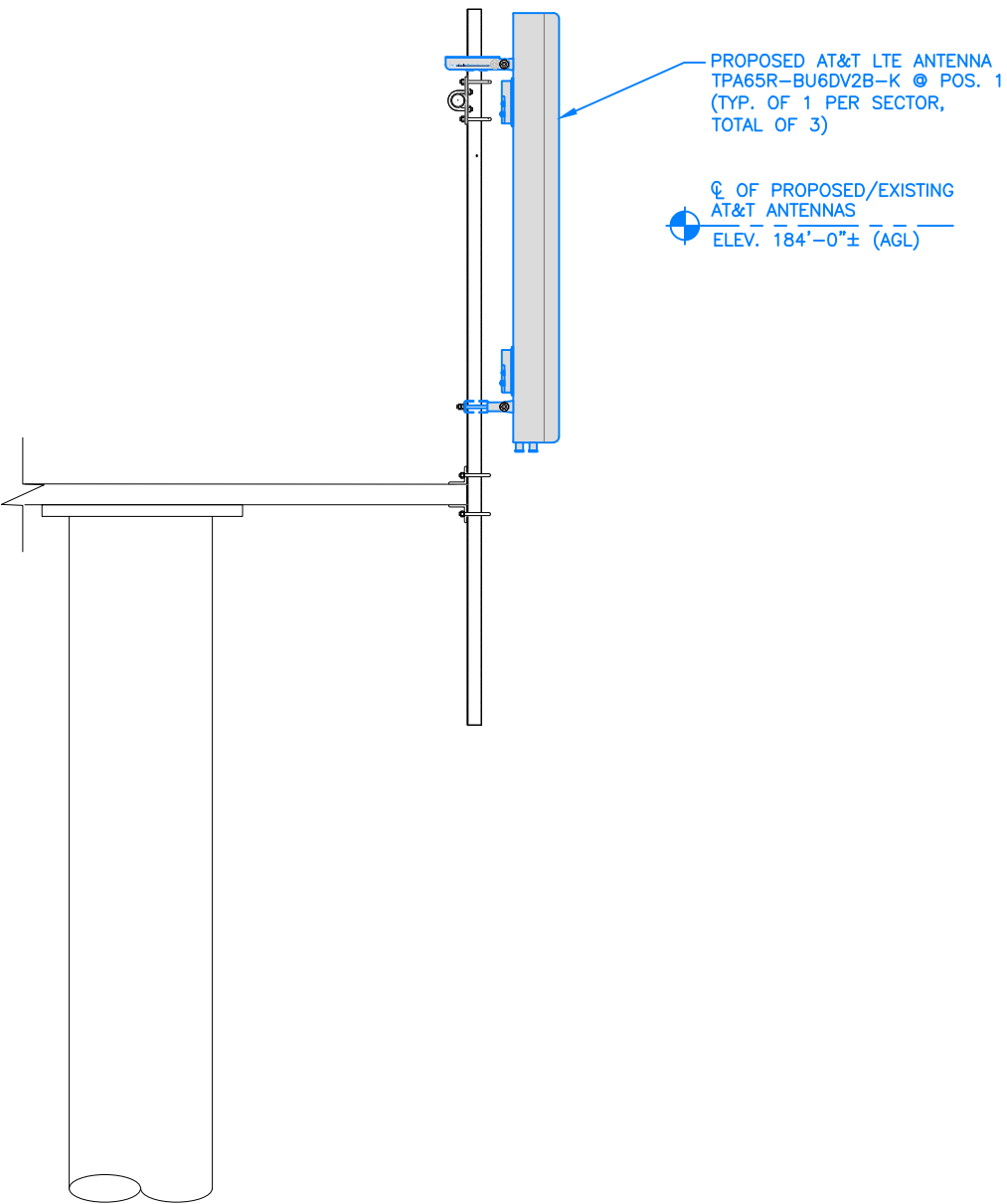
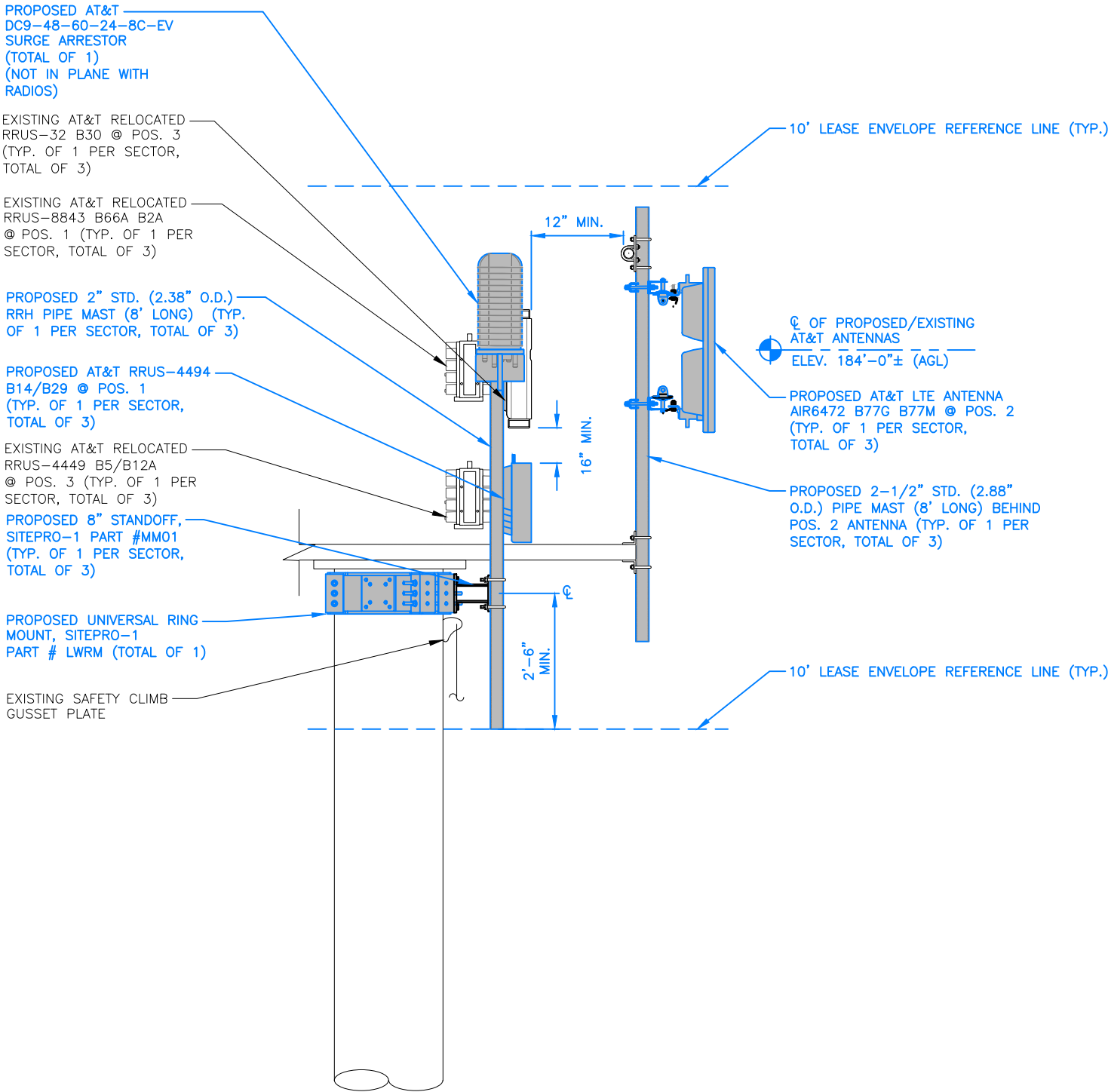
ANTENNA SCHEDULES
5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE CARRIER, 5G NR RADIO

SITE NUMBER	DRAWING NUMBER	REV
CTL01071	A-5	0

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: TEP OPCO, LLC. DATED: OCTOBER 10, 2024

NOTE:
REFER TO STRUCTURAL ANALYSIS BY: AMERICAN TOWER CORPORATION DATED: FEBRUARY 28, 2025, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:
REFER TO THE RF ISSUE PRE-CONSTRUCTION RFDS DATED: 01/06/25 FOR FINAL ANTENNA SETTINGS.



PROPOSED ANTENNA @ POS. 2
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"

PROPOSED ANTENNA @ POS. 1
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"



326 TYRON RD., RALEIGH, NC 27603
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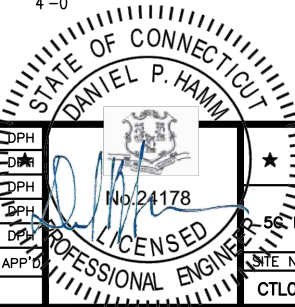
6300 LEGACY DRIVE
PLANO, TX 75024

SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
15 OAKDALE AVENUE
WINSTED, CT 06098
LITCHFIELD COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

0	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
D	02/18/25	ISSUED FOR REVIEW	KPP	AT	DPH
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B	10/14/24	ISSUED FOR REVIEW	SG	AT	DPH
A	10/01/24	ISSUED FOR REVIEW	KPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: KPP		



AT&T		
DETAILS 5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE CARRIER, 5G NR RADIO		
SITE NUMBER	DRAWING NUMBER	REV
CTL01071	A-6	0



Controller 6610

The Ericsson Smart Connected Site solution aims to intelligently integrate management of site elements. It offers real-time insights on any location, ensuring a site that is visible, intelligent and secure. The Ericsson Smart Connected Site Controller 6610 is the gateway for each site to manage and to interface passive and active site elements.

The Controller 6610 is highly flexible with several interfaces that is needed for connecting assets on most sites and is scalable and can be expanded with an additional external alarm unit as well as port expansion units for connecting additional elements, wired or wireless. The Controller 6610 is small size indoor device that can be mounted in a DIN rail, not using valuable 35-inch space in a rack or cabinet.

The security and intrusion protection are fully aligned with 5G RAN baseband products. The platform SW is built on embedded Wind River Linux.

Controller 6610 collects site alarms, connects external sensors, manages site power system, enables remote control and intelligent decision making to reduce energy consumption. The Controller 6610 is the important tool for service providers or tower companies, taking control of site management to protect revenues and to reduce operational costs and minimize backlogs.

All Ericsson ENS Enclosures and RSE 6000 cabinets can be fitted with Controller 6610, either pre-mounted for new deliveries or installed at site. The Controller 6610 support zero touch integration for fast deployment.

The Controller 6610 is fully integrated in ENM management platform. The Controller 6610 provide 10GbE/20GbE/40GbE ethernet port for northbound communication via baseband or mobile transport at the site.

NETSURE™ 24 & 48V VRLA BATTERY RACK



KEY FEATURES

- Battery connection cables are supplied with factory installed lugs for easy installation
- Optional circuit breakers provide individual battery string disconnect with alarm
- Compatible with any DC power system for versatility
- Complies with industry standards: UL Listed and Seismic Zone 4 compliant

Compact, flexible design is Seismic Zone 4 rated and ideal for telecommunications facilities requiring modular battery plants.

Product Overview

The NetSure™ 24 & 48V VRLA Battery Rack provides back-up capacity up to 1000 amp-hours per bay for <48V applications and 500 amp-hours per bay for <48V applications. Model 24S40200 (24VDC) and model 48S40200 (48VDC) battery racks mount up to six trays of VRLA batteries in 19" or 23" raily racks. Integrate a NetSure power system for a complete DC power plant with battery backup. The NetSure system is equipped with an MCA controller that controls low voltage battery disconnect and monitors battery recharge and discharge current. Battery life is maximized through monitoring and controlling battery voltage and current during charge cycles.



<48V Pre-Prep VRLA Stringed Battery Rack with NetSure™ 500 DC Power System

NETSURE™ 24 & 48V VRLA BATTERY RACK



Technical Specifications

DC OUTPUT	1000 amps per bay
ENVIRONMENTAL	
Operating ambient temperature range	+0°C to +40°C (32°F to +104°F)
Average ambient temperature range	+0°C to +40°C (32°F to +104°F)

Application

The NetSure™ VRLA Battery Rack is designed for use in wireless and wireless communication systems installed in small offices, hubs, CEVs and CUEs. It is also designed for use with NetSure™ DC power systems, and is compatible with most DC power equipment.

Additional Information

Additional specifications, engineering and installation information may be obtained by requesting SAC68881000/SAC68881000 for the <48 volt system and SAC68882100/SAC68882100 for the <48 volt system.



Single Bay Battery Rack

VertivCo.com | Vertiv Headquarters, 1000 Duxbury Drive, Columbus, OH 43260, USA

en-us-en-us

DATA SHEET

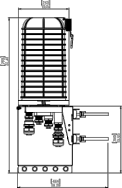
DC Surge Protection Solutions DC9-48-60-24-8C-EV Overvoltage Protection and Fiber Distribution/Cable Management Solution

Rooftop / Tower-top



Features

- Provides discrete protection for nine individual <48V DC circuits
- Maximum impulse current 12.5kA 10/350 µs
- Fiber connections for up to 24 fiber pair
- Simplifies inter-connectivity and cable management for DC conductors
- UL 1449 4th Edition Type 2 protective device for DC applications
- IEC 61643-11 Class 1 protection
- Copper-coated foil to reduce power line interference
- Patented design
- Patented Strikesorb technology ensures lowest let-through voltage available in the industry, providing enhanced coordination with the RRU/RRU
- Raycap recommends that DC protection system be installed within 5 meters of the radio



Benefits

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

Strikesorb is a registered trademark of Raycap
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602-91-010 100100

SPECIFICATIONS

DC Surge Protection Solutions DC9-48-60-24-8C-EV Overvoltage Protection and Fiber Distribution/Cable Management Solution

Strikesorb

Model Number	DC9-48-60-24-8C-EV
DC / ACV Number	CE02-P427
Number of Circuits Protected	9
Surge Protection Class per IEC 61643-11	Type 2
Surge Protection Class per IEC 61643-11	Class 1
Normal Operating DC Voltage (V _{DC})	<48 VDC
Normal Operating Current (I _n) per UL 1449 4th Edition	20kA 10/350 µs
Maximum Impulse (Lightning) Current (I _{imp}) per IEC 61643-11	12.5kA 10/350 µs
Maximum Continuous Operating DC Voltage (V _{DC})	60VDC
Voltage Protection Level (U _p) at 10.35kA per IEC 61643-11	148V
Voltage Protection Level (U _p) at 10.35kA per IEC 61643-11	148V
Voltage Protection Rating (UPV) per UL 1449 4th Edition	380V
Suppression Technology	MOV
Strikesorb Module Type (SCL) (UL 1449 4th Edition)	380V 10/350 µs
Protection Mode	Normal Mode <48V to Return Common Mode Return to Ground

Correction Terminal (Suppression) Method for all power cables	Correction terminal (SCL) (UL 1449 4th Edition)
Correction Terminal (Terminal Block) Method	Copper #18 to #14 AWG (3.5 - 21.5 mm)
Fiber Connection Method	LC/LC Single Mode
Environmental Temperature Protection (PT) Rating	PT 48
Operating Temperature (°C)	-40°C to +100°C
Storage Temperature (°C)	-40°C to +100°C
Resistance to Aggressive Materials (IEC 61030-0-02)	IEC 61030-0-02
UL Protection (UL 1449 4th Edition)	UL 1449 4th Edition
Enclosure Type	Outdoor NEMA 4X
Enclosure Dimensions (LxWxH)	14.5" (368 mm) x 10.5" (267 mm) x 10.5" (267 mm)
Weight	System: 18.0 lbs (8.2 kg) Mount: 10.0 lbs (4.5 kg) Total: 28.0 lbs (12.7 kg)
Continuous Wind Loading	150 mph Sustained 150.7 lbs (68.0 N) 140 mph Gust 215.0 lbs (98.0 N)
Turn Guard (UL A)	CE02-P428
Turn Guard (UL B)	CE02-P429
Turn Guard (UL C)	CE02-P430

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



www.raycap.com



602-91-010 100100

6610 SITE CONTROLLER DETAIL

NO SCALE

1

PROPOSED BATTERY RACK

NO SCALE

2

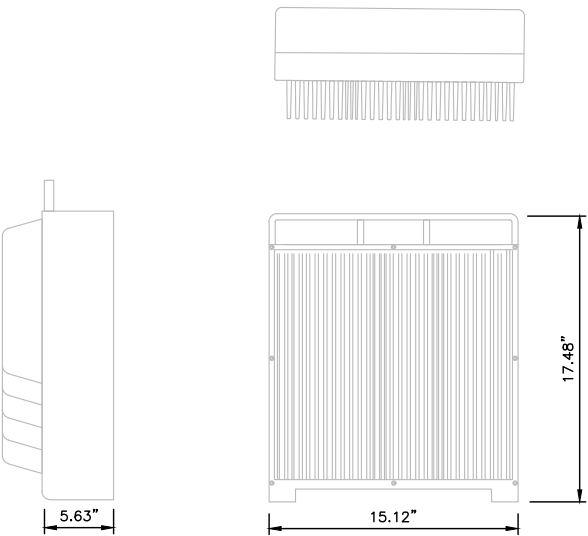
PROPOSED DC9-48-60-24-8C-EV

NO SCALE

3

ERICSSON RADIO 4494B14B29

DIMENSIONS, WxDxH: 17.48"x15.12"x5.63"
(mm) 524x397x178mm
TOTAL WEIGHT: 65 lb



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

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

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

Features and Benefits

- Capacity range 31-150Ah
- 12V monobloc configurations
- Multiple string configurations available
- Two year shelf life
- 98% efficient
- Proven long service life
- High energy density and cycling capability



Publication No. US-SBP-RS-014 - January 2014

Construction

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

Installation and Operation

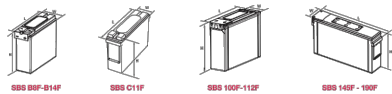
- Space efficient footprint
- VRLA design, reduces maintenance requirements
- Lighting handles for easy handling
- Greater than 10 year life expectancy in float service at 77°F (25°C)
- Increased active material surface area yields great cycling capability
- Operating temperature: -40°F (-40°C) to 120°F (50°C)
- Recommended temperature: 80°F (26°C) to 80°F (26°C)

Standards

- Meets criteria for "non-spillable" batteries
- Complies with "Telecord" GR-408, Network Equipment Building System (NEBS) Class Level 1
- The management systems governing the manufacture of this product are ISO 9001:2008 and ISO 14001:2004 certified

General Specifications

Cell Type	Nominal Capacity (Ah)		Nominal Dimensions			Weight - Unpacked				
	10.5 hr to 1.85V @ 25°C	6 hr to 1.75V @ 25°C	Length mm	Width mm	Height mm	Unpacked lbs	kg			
SBS 31F	31	31	11.9	300	9.8	67	15.9	22.7	10.3	
SBS 36F	36	36	11.9	300	9.8	87	7.2	16.6	26.5	12.8
SBS 41F	41	41	11.9	300	9.8	87	10.4	26.4	42.0	19.1
SBS 46F	46	46	11.9	300	9.8	87	10.4	26.4	42.0	19.1
SBS 51F	51	51	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 56F	56	56	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 61F	61	61	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 66F	66	66	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 71F	71	71	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 76F	76	76	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 81F	81	81	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 86F	86	86	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 91F	91	91	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 96F	96	96	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 101F	101	101	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 106F	106	106	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 111F	111	111	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 116F	116	116	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 121F	121	121	15.6	417	4.1	105	10.1	25.9	61.9	28.0
SBS 126F	126	126	15.6	417	4.1	105	10.1	25.9	61.9	28.0



SBS 31F-36F SBS 41F SBS 101F-112F SBS 145F - 160F

Battery Services for Backup Power

- Battery Installation
- Capacity and Acceptance
- Preventative Maintenance

backpower@alpinepowersystems.com
www.alpinepowersystems.com

PROPOSED RRU SPECIFICATIONS

NO SCALE

4

PROPOSED BATTERY DETAIL

NO SCALE

5

PROPOSED BATTERY DETAIL

NO SCALE

6



326 TYRON RD., RALEIGH, NC 27603
OFFICE: (919) 661-6351
FAX: (919) 661-6350



6300 LEGACY DRIVE
PLANO, TX 75024

SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
15 OKDALE AVENUE
WINSTED, CT 06098
LITCHFIELD COUNTY



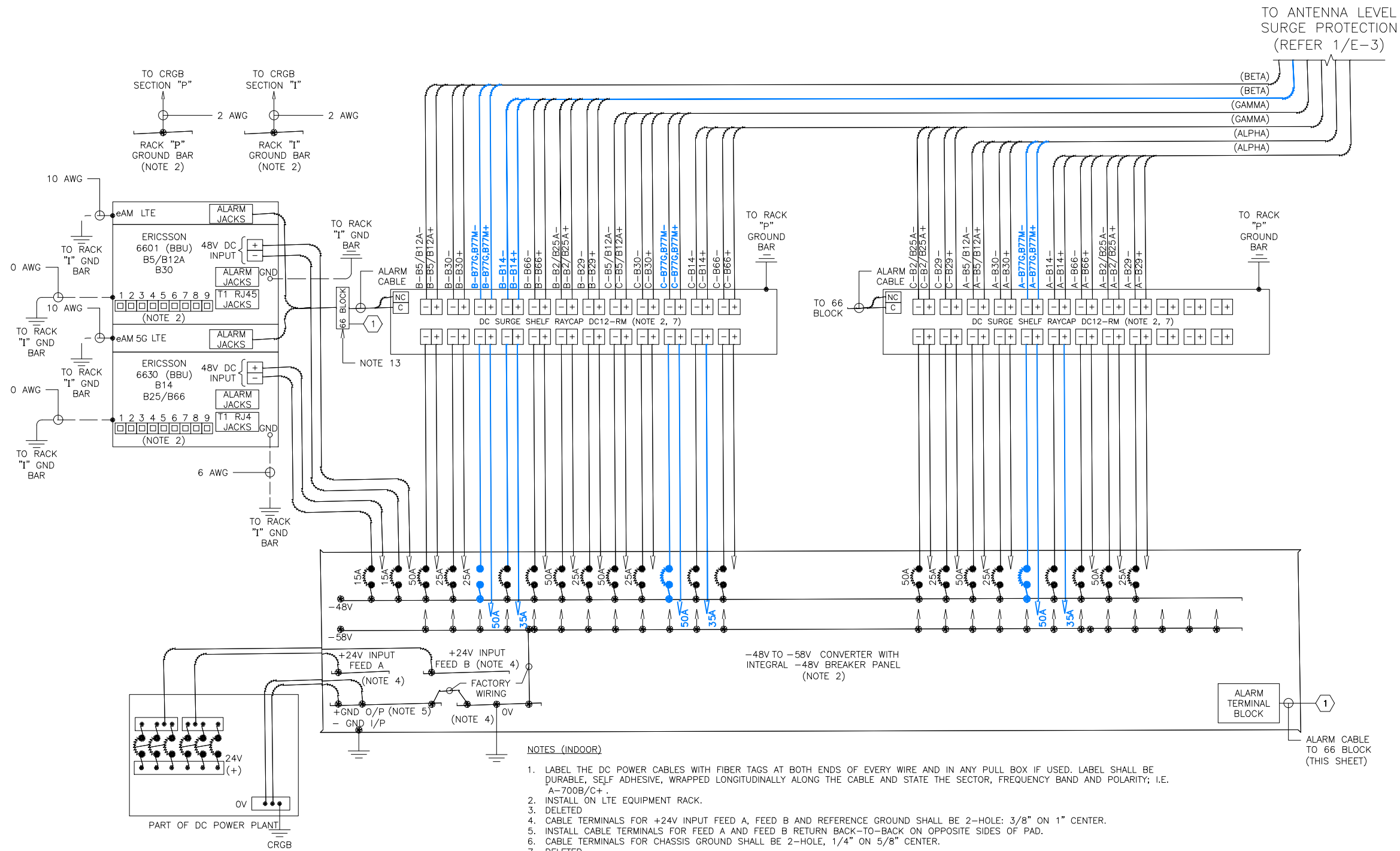
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

O	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
D	02/18/25	ISSUED FOR REVIEW	KPP	AT	DPH
C	10/18/24	ISSUED FOR REVIEW	JS	AT	DPH
B	10/14/24	ISSUED FOR REVIEW	SG	AT	DPH
A	10/01/24	ISSUED FOR REVIEW	KPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE:	AS SHOWN	DESIGNED BY:	AT	DRAWN BY:	KPP

AT&T

DETAILS
5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE CARRIER, 5G NR RADIO

SITE NUMBER	DRAWING NUMBER	REV
CTL01071	A-8	0



WIRING DIAGRAM
SCALE: N.T.S

1
E-1



326 TYRON RD., RALEIGH, NC 27603
OFFICE: (919) 661-6351
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6300 LEGACY DRIVE
PLANO, TX 75024

SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
15 OAKDALE AVENUE
WINSTED, CT 06098
LITCHFIELD COUNTY



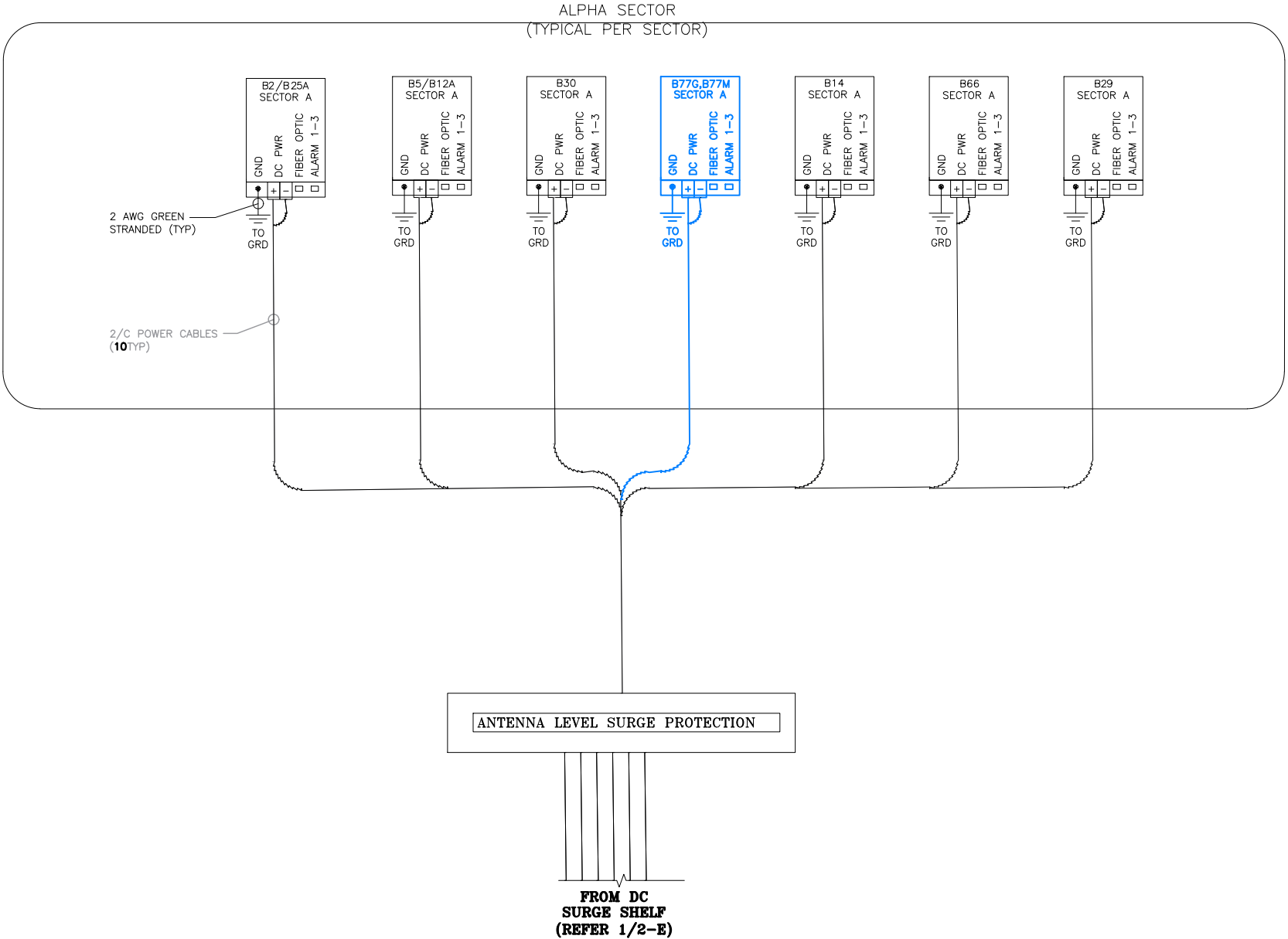
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

O	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
D	02/18/25	ISSUED FOR REVIEW	KPP	AT	DPH
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B	10/14/24	ISSUED FOR REVIEW	SG	AT	DPH
A	10/01/24	ISSUED FOR REVIEW	KPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN			DESIGNED BY: AT	DRAWN BY: KPP	

AT&T

WIRING DIAGRAM-GROUND
5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE
CARRIER, 5G NR RADIO

SITE NUMBER	DRAWING NUMBER	REV
CTL01071	E-1	0



WIRING DIAGRAM
SCALE: N.T.S

1
E-2



326 TYRON RD., RALEIGH, NC 27603
OFFICE: (919) 661-6351
FAX: (919) 661-6350



6300 LEGACY DRIVE
PLANO, TX 75024

SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
15 OAKDALE AVENUE
WINSTED, CT 06098
LITCHFIELD COUNTY



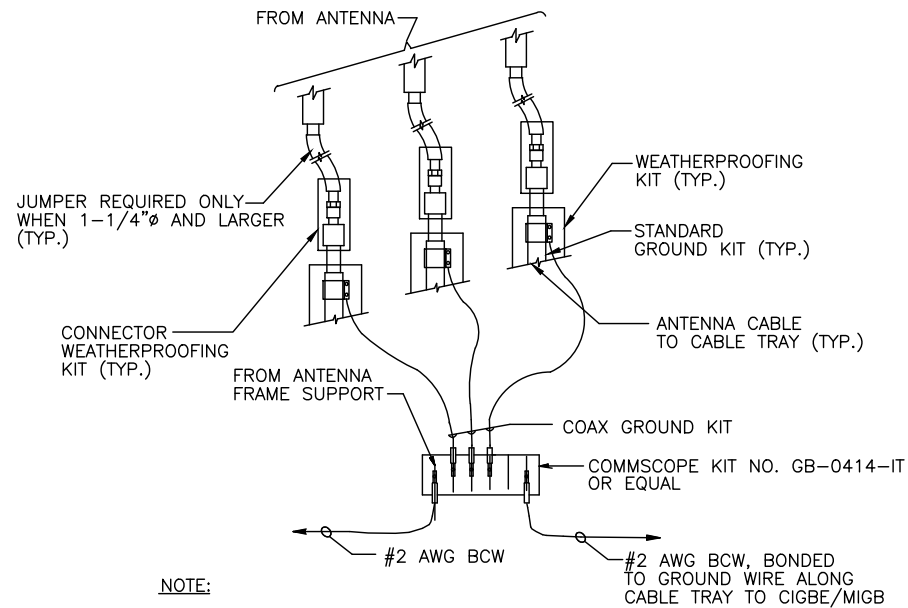
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

0	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
D	02/18/25	ISSUED FOR REVIEW	KPP	AT	DPH
C	10/18/24	ISSUED FOR REVIEW	JS	AT	DPH
B	10/14/24	ISSUED FOR REVIEW	SG	AT	DPH
A	10/01/24	ISSUED FOR REVIEW	KPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: KPP		

AT&T

WIRING DIAGRAM-TOWER
5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE
CARRIER, 5G NR RADIO

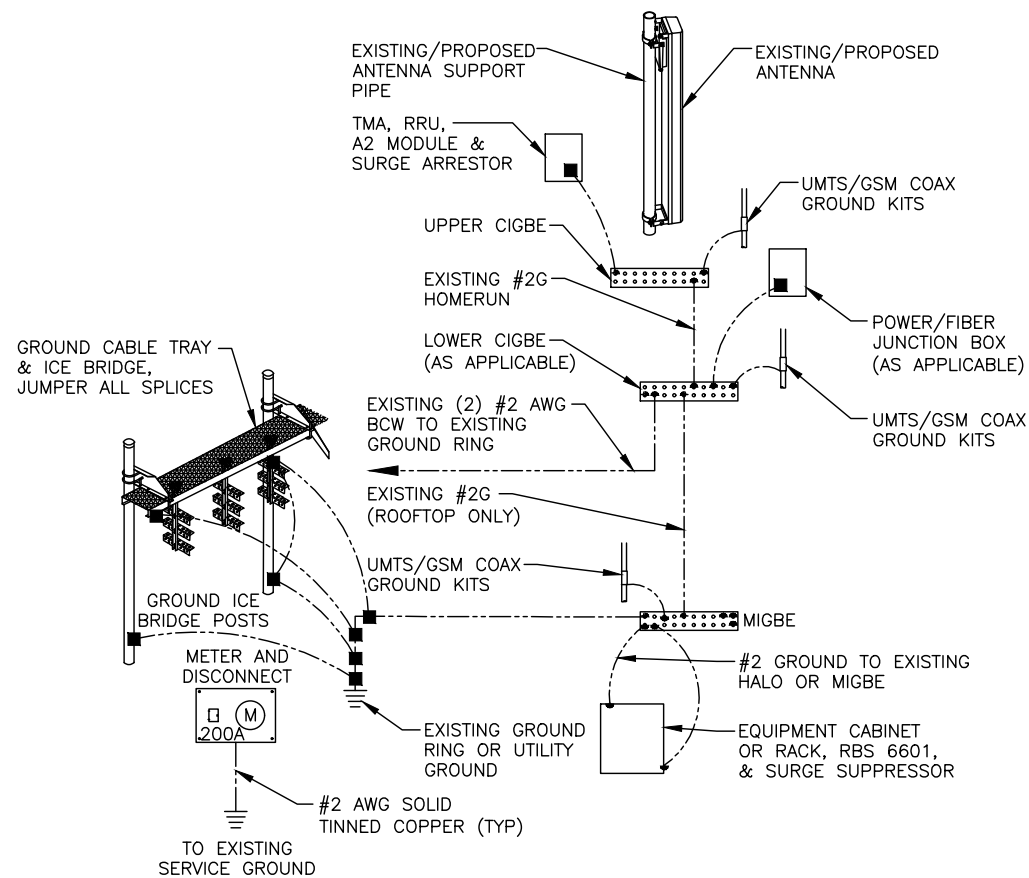
SITE NUMBER	DRAWING NUMBER	REV
CTL01071	E-2	0



GROUND WIRE TO GROUND BAR CONNECTION DETAIL

SCALE: N.T.S

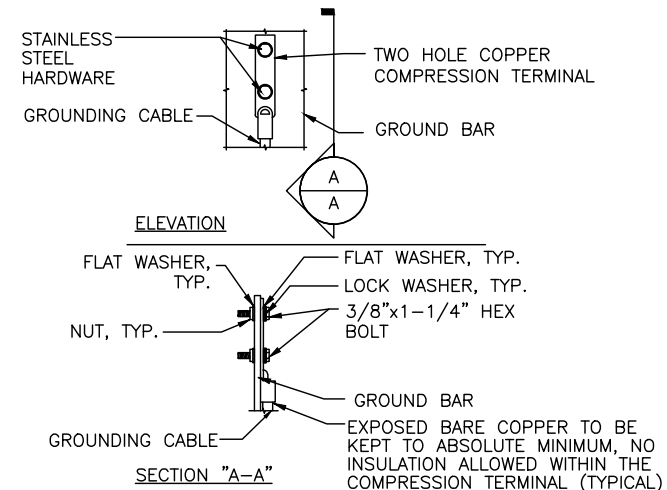
1
G-1



GROUNDING RISER DIAGRAM

SCALE: N.T.S

2
G-1



NOTES:

1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATION.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB

TYPICAL GROUND BAR CONNECTION DETAIL

SCALE: N.T.S

1
G-1

AT&T GROUNDING STANDARDS TO BE FOLLOWED:

ATT-TP-76416
ATT-TP-76300
ATT-CEM-18002
ATT-002-290-531
ATT-002-290-701
ATT-CEM-23001

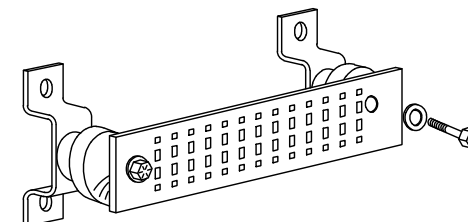
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

CABLE ENTRY PORTS (HATCH PLATES) (#2 AWG)
GENERATOR FRAMEWORK (IF AVAILABLE) (#2 AWG)
TELCO GROUND BAR
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2 AWG)
+24V POWER SUPPLY RETURN BAR (#2 AWG)
-48V POWER SUPPLY RETURN BAR (#2 AWG)
RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

INTERIOR GROUND RING (#2 AWG)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2 AWG)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2 AWG)
BUILDING STEEL (IF AVAILABLE) (#2 AWG)



GROUND BAR - DETAIL (AS REQUIRED)

SCALE: N.T.S



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FAX: (919) 661-6350



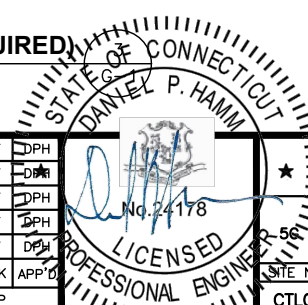
6300 LEGACY DRIVE
PLANO, TX 75024

SITE NUMBER: CTL01071
SITE NAME: WINSTED/WINCHESTER
ATC SITE #: 302506
ATC SITE NAME: WINCHESTER 3
15 OAKDALE AVENUE
WINSTED, CT 06098
LITCHFIELD COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

0	03/10/25	ISSUED FOR CONSTRUCTION	SG	AT	DPH
D	02/18/25	ISSUED FOR REVIEW	KPP	AT	DPH
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A	10/01/24	ISSUED FOR REVIEW	KPP	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: KPP		



AT&T

GROUNDING DETAILS
5G NR RADIO, ANTENNA MODIFICATIONS, LTE SOFTWARE
CARRIER, 5G NR RADIO

SITE NUMBER	DRAWING NUMBER	REV
CTL01071	G-1	0

Antenna 1
LTE 700DE/ B14 / PCS / AWS

Broadband Low 700/850 +45/-45	Broadband Low 700/850 +45/-45	Broadband High 4Tx/4Rx +45/-45	Broadband High 4Tx/4Rx +45/-45	Broadband High 4Tx/4Rx +45/-45	Broadband High 4Tx/4Rx +45/-45
- +	- +	- +	- +	- +	- +
RET	RET	RET	RET	RET	RET

Antenna 2
DoD + C band

3.45GHz/ Cband Air6472

Antenna 3
LTE WCS / 700 BC / 850

Broadband Octo Low 700/850 +45/-45	Broadband Octo Low 700/850 +45/-45	Broadband Octo High 4Tx/4Rx +45/-45	Broadband Octo High 4Tx/4Rx +45/-45
- +	- +	- +	- +
RET	RET	RET	RET

4494 B14/B29

LTE RRU-8843

Fiber/DC Demarcation Box (Squid)

DC Plant

LTE RRU-4449
850/700 BC

LTE RRU-32
WCS

Fiber/DC Demarcation Box (Squid)

DC Plant

6630 XMU

6672

IDLe

RF PLUMBING DIAGRAM

SCALE: N.T.S.

1
RF-1

NOTE:

REFER TO THE FINAL RF DATA SHEET
FOR FINAL ANTENNA SETTINGS.



Structural Analysis Report

Structure : 180 ft Monopole
ATC Asset Name : Winchester CT 3
ATC Asset Number : 302506
Engineering Number : OAA796775_C3_01
Proposed Carrier : AT&T MOBILITY
Carrier Site Name : Winsted - Winchester
Carrier Site Number : CT1071
Site Location : 15 Oakdale Avenue
Winsted, CT 06098-1862
41.9216° N, 73.0494° W
County : Litchfield
Date : February 28, 2025
Max Usage : 84%
Analysis Result : Pass - Pending

Created By:

Kobby Gyimah
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 180 ft Monopole tower to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower:	EI Job #7676, dated August 21, 2000
Foundation:	Mapping by SGS Project #1922084, dated August 2, 2019
Geotechnical:	Walti Project: SNET Tower-Whalen's Hill, dated February 8, 2000
Modification:	ATC Job #42523432, dated October 24, 2008 ATC Job #50492933, dated October 15, 2012 ATC Job #14867785_C6_05, dated August 30, 2024 (Pending)

* The modifications listed in ATC Engineering #14867785_C6_05 are scheduled to be installed by March 18, 2025.

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:	122 mph (3-second gust)
Basic Wind Speed w/ Ice:	48 mph (3-second gust) w/ 1.41" radial ice concurrent
Code(s):	ANSI/TIA-222-I / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	B
Risk Category:	III
Topographic Factor Procedure:	Method 1
Feature:	Rolling Hill
Crest Height (H):	402 ft
Crest Length (L):	2202 ft
Spectral Response:	$S_{DS} = 0.16$, $S_{D1} = 0.07$
Site Class:	Default

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report. If the pending modifications cited in the Supporting Documents table are not completed by the forecast date above, the results of this analysis are no longer valid, and AT&T MOBILITY should contact American Tower's Site Manager for further direction on how to proceed.

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	82.4%	1.2D + 1.0W	Pass
Reinforcement	84.1%	10 ft to 105.36 ft	Pass
Upper Termination	71.5%	10 ft to 105.36 ft	Pass
Intermediate Connector	60.7%	10 ft to 105.36 ft	Pass
Lower Termination	56.7%	135.75 ft to 147.25 ft	Pass
Serviceability Usage	56.6%	1.0D + 1.0W	Pass
Base Plate @ 0.0 ft	83.6%	Rods	Pass
Foundation	51.0%	Moment	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	5,388.3	67.6	49.4

**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.

AT&T MOBILITY Final Loading

Elev (ft)	Qty	Equipment	Lines
184.0	1	Raycap DC6-48-60-18-8C-EV (Enclosure)	(2) 0.39" (10mm) Fiber Trunk (1) 0.40" (10.3mm) Fiber (7) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax (3) 2" conduit
	1	Raycap DC9-48-60-24-8C-EV (Enclosure)	
	2	Raycap DC6-48-60-18-8F (23.5" Height)	
	3	CCI DMP65R-BU6DA	
	3	CCI TPA65R-BU6Dv2	
	3	Ericsson AIR 6472 B77G B77M (77.2lbs)	
	3	Ericsson RRUS 32 B30	
	3	Ericsson RRUS 4449 B5, B12	
	3	Ericsson RRUS 8843 B2, B66A	
	3	Ericsson Radio 4494 44B14 20B29 M01	
180.0	1	Platform with Handrails	-

Install proposed lines inside the pole shaft.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines
185.0	-	-	(1) 0.78" (19.7mm) 8 AWG 6 (2) 2" conduit
166.0	-	-	(1) 1.99" (50.7mm) Hybrid
165.1	3	Ericsson Radio 4449 B71 B85A	-
165.0	-	-	(3) 1 1/4" (1.25" - 31.8mm) Fiber
164.0	1	Ceragon FibeAir IP-20S	(4) 1/2" Coax
	1	Commscope VHL P2-11W/A	
	3	Ericsson Air6449 B41	
	3	Mount Reinforcement	
	3	Sector Frame	
	3	RFS APXVAARR24_43-U-NA20	
159.0	3	Ericsson Radio 4460 B25+B66	-
150.1	2	Decibel DB809DK-XT	-
150.0	1	Sinclair SD210-SF2P4SNM	(1) 1 5/8" Coax
147.0	1	Sinclair SC442D-HF1LDF(DXX-I30-G9-NUFP)	(2) 1 5/8" Coax
146.0	1	Sinclair SC479-HF1LDF(E5765)	(5) 1 5/8" Coax
142.0	1	Telewave ANT150D (5 lbs)	(1) 7/8" Coax
141.0	-	-	(1) 1 5/8" Coax
140.0	4	Side Arm	-
139.5	1	Bird 432-83H-01-T	-
139.0	-	-	(1) 1/2" Coax
121.0	1	Platform with Handrails	(6) 1 5/8" Coax (1) 1 5/8" Hybriflex
	1	Raycap RCMD C-6627-PF-48	
	2	Antel LPA-80063/6CF	
	3	Commscope CBC78T-DS-43-2X	
	3	Samsung B2/B66A RRH ORAN (RF 4439d-25A)	
	3	Samsung MT6413-77A	
	3	Samsung RF4461d-13A	
	4	Antel LPA-80080/6CF ____	
	6	Commscope JAHH-65B-R3B	



Elev (ft)	Qty	Equipment	Lines
97.0	1	Andrew DB586	(1) 7/8" Coax
95.0	1	Bird 429-83H-01-T	(1) 1/2" Coax
	1	Side Arm	
93.0	1	Andrew DB586	(1) 7/8" Coax
80.0	1	RFS PA6-65AC	(1) EW63
30.0	1	GPS	-

(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:	122 mph	Ice Wind:	48 mph w/ 1.4" ice	Service Wind:	60 mph
Risk Category:	III	Exposure:	B	S _{DI} :	0.067
Topo Factor:	Method 1	Topo Feature:	Rolling Hill	S _{DS} :	0.160
Structure Height:	180.0 ft	Base Elevation:	0.00 ft	Structure Type:	Taper
Base Diameter:	52.75 in	Base Rotation:	0.00°	Taper:	0.2190 (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	49.040	41.99	52.75	0.438		0.00	18 Sides	65
2	49.500	33.21	44.07	0.375	Slip Joint	73.00	18 Sides	65
3	48.330	24.31	34.92	0.312	Slip Joint	59.00	18 Sides	65
4	47.880	15.00	25.51	0.188	Slip Joint	45.00	18 Sides	65

DISCRETE APPURTENANCE

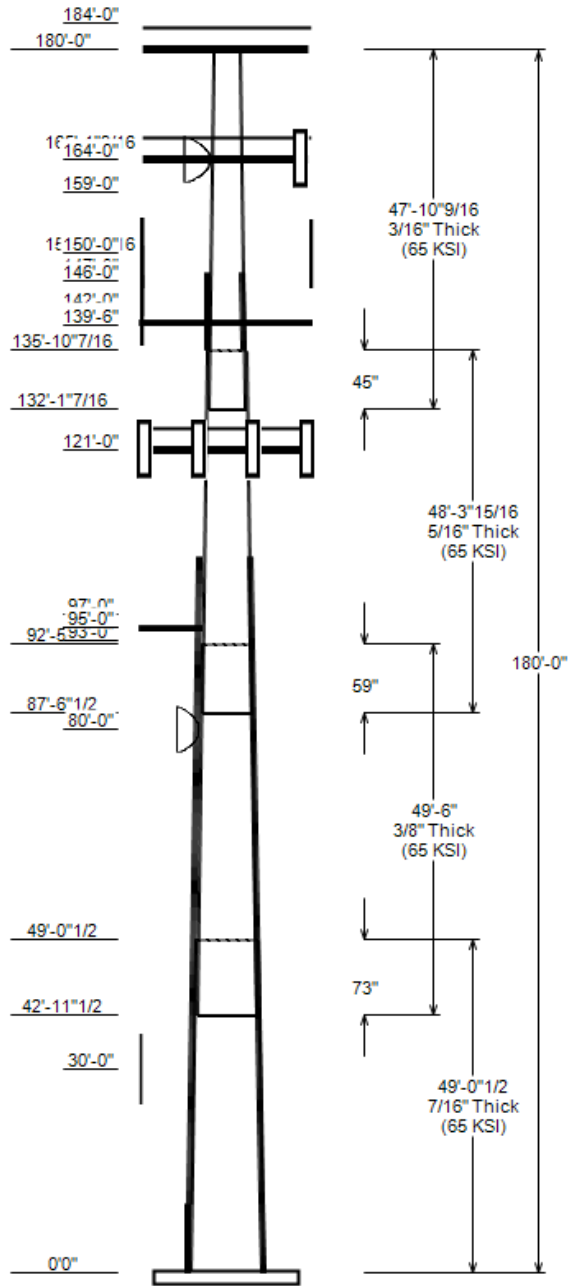
Elev (ft)	Description
184.0	(3) Ericsson RRUS 4449 B5, B12
184.0	(3) Ericsson AIR 6472 B77G B77M (77.2)
184.0	(3) CCI DMP65R-BU6DA
184.0	(1) Raycap DC9-48-60-24-8C-EV (Encl)
184.0	(3) Ericsson RRUS 32 B30
184.0	(3) Ericsson RRUS 8843 B2, B66A
184.0	(3) Ericsson Radio 4494 44B14 20B29 M
184.0	(3) CCI TPA65R-BU6Dv2
184.0	(2) Raycap DC6-48-60-18-8F (23.5" Heig
184.0	(1) Raycap DC6-48-60-18-8C-EV (Encl)
180.0	(1) Generic Flat Platform with Handrails
165.1	(3) Ericsson Radio 4449 B71 B85A
164.0	(1) Ceragon FibeAir IP-20S
164.0	(3) Ericsson Air6449 B41
164.0	(3) Generic Mount Reinforcement
164.0	(3) Generic Round Sector Frame
164.0	(1) Commscope VHLP2-11W/A
164.0	(3) RFS APXVAARR24_43-U-NA20
159.0	(3) Ericsson Radio 4460 B25+B66
150.1	(2) Decibel DB809DK-XT
150.0	(1) Sinclair SD210-SF2P4SNM
147.0	(1) Sinclair SC442D-HF1LDF(DXX-I30-G
146.0	(1) Sinclair SC479-HF1LDF(E5765)
142.0	(1) Telewave ANT150D (5 lbs)
140.0	(4) Generic Round Side Arm
139.5	(1) Bird 432-83H-01-T
121.0	(2) Antel LPA-80063/6CF
121.0	(1) Generic Round Platform with Handrail
121.0	(3) Commscope CBC78T-DS-43-2X
121.0	(6) Commscope JAHH-65B-R3B
121.0	(1) Raycap RCMD-6627-PF-48
121.0	(3) Samsung B2/B66A RRH ORAN (RF 4
121.0	(3) Samsung RF4461d-13A
121.0	(3) Samsung MT6413-77A
121.0	(4) Antel LPA-80080/6CF
97.0	(1) Andrew DB586
95.0	(1) Bird 429-83H-01-T
95.0	(1) Generic Round Side Arm
93.0	(1) Andrew DB586
80.0	(1) RFS PA6-65AC
30.0	(1) Generic GPS

LINEAR APPURTENANCE

Elev To (ft)	Description
185.0	(2) 2" conduit
185.0	(1) 0.78" (19.7mm) 8 AWG 6
184.0	(3) 2" conduit
184.0	(6) 1 5/8" Coax
184.0	(6) 0.78" (19.7mm) 8 AWG 6
184.0	(1) 0.40" (10.3mm) Fiber
184.0	(2) 0.39" (10mm) Fiber Trunk
184.0	(1) 0.78" (19.7mm) 8 AWG 6
166.0	(1) 1.99" (50.7mm) Hybrid
165.0	(3) 1 1/4" (1.25"- 31.8mm) Fiber
164.0	(4) 1/2" Coax
150.0	(1) 1 5/8" Coax
149.0	(1) 1.25" Thick Flat Plate
149.0	(1) 1.25" Thick Flat Plate
149.0	(1) 1.25" Thick Flat Plate
149.0	(1) 1.25" Thick Flat Plate
147.0	(2) 1 5/8" Coax
146.0	(5) 1 5/8" Coax
142.0	(1) 7/8" Coax
141.0	(1) 1 5/8" Coax
139.0	(1) 1/2" Coax
121.0	(1) 1 5/8" Hybriflex
121.0	(6) 1 5/8" Coax
112.0	(1) #20 w/ Angle Brackets
112.0	(1) #20 w/ Angle Brackets
112.0	(1) #20 w/ Angle Brackets
112.0	(1) #20 w/ Angle Brackets
97.0	(1) 7/8" Coax
95.0	(1) 1/2" Coax
93.0	(1) 7/8" Coax
80.0	(1) EW63

DISH SERVICEABILITY

Load Case	Elevation (ft)	Deflection (in)	Rotation (°)
1.0D + 1.0W	80.0	6.5977	0.7962
1.0D + 1.0W	164.0	29.8328	1.9549



GLOBAL BASE REACTIONS

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	5388.30	67.55	49.39
0.9D + 1.0W	5308.17	50.64	49.35
1.2D + 1.0Di + 1.0Wi	1204.31	104.56	9.46
1.2D + 1.0Ev + 1.0Eh	250.17	67.12	1.70
0.9D + 1.0Ev + 1.0Eh	244.97	47.29	1.69
1.0D + 1.0W	1157.01	56.37	10.68

ANALYSIS PARAMETERS

Location:	Litchfield County,CT	Height:	180 ft
Type and Shape:	Taper, 18 Sides	Base Diameter:	52.75 in
Manufacturer:	EEl	Top Diameter:	15.00 in
K _d (non-service):	0.95	Taper:	0.2190 in/ft
K _e :	0.96	Rotation:	0.000°

ICE & WIND PARAMETERS

Risk Category:	III	Design Wind Speed:	122 mph
Exposure Category:	B	Design Wind Speed w/ Ice:	48 mph
Design Ice Thickness:	1.41 in		
Topo Factor Procedure:	Method 1	Design Tornado Wind Speed:	50
Crest Height(H):	402 ft	Service Wind Speed:	60 mph
Crest Length(L):	2202 ft	HMSL:	1073.00 ft
Feature:	Rolling Hill	Distance from Apex (x):	0 ft
		Upwind/Downwind:	Upwind

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	Default	Period Based on Rayleigh Method (sec):	3.02
T _L (sec):	6	P:	1
S _{ds} :	0.160	S _{d1} :	0.067
		C _s :	0.030
		C _s Max:	0.030
		C _s Min:	0.030

LOAD CASES

1.2D + 1.0W	122 mph Wind with No Ice
0.9D + 1.0W	122 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	48 mph Wind with 1.41" 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)	Weight (lb)	Bottom						Top						Taper (in/ft)
							Dia (in)	Elev (ft)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	
1-18	49.04	0.4375	65		0.00	10,875	52.75	0.000	72.64	25,115.3	19.85	120.57	41.99	49.04	57.70	12,585.	15.51	95.97	0.2194
2-18	49.50	0.3750	65	Slip	73.00	7,672	44.07	42.960	52.01	12,548.1	19.31	117.53	33.21	92.46	39.08	5,324.0	14.21	88.56	0.2194
3-18	48.33	0.3125	65	Slip	59.00	4,779	34.92	87.540	34.32	5,191.9	18.29	111.73	24.31	135.87	23.80	1,731.7	12.31	77.79	0.2194
4-18	47.88	0.1875	65	Slip	45.00	1,946	25.51	132.120	15.07	1,220.5	22.58	136.04	15.00	180.00	8.82	244.4	12.70	80.01	0.2194

Total Shaft Weight25,272

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
184.00	CCI DMP65R-BU6DA	3	0.75	0.000	79.40	12.709	0.63	345.69	15.592	0.63
184.00	Ericsson AIR 6472 B77G B77M (7	3	0.75	0.000	77.20	4.914	0.65	199.18	19.261	0.65
184.00	Ericsson RRUS 32 B30	3	0.75	0.000	60.00	2.743	0.50	136.05	3.952	0.50
184.00	Raycap DC6-48-60-18-8C-EV (Enc	1	0.75	0.000	16.00	2.687	1.00	102.68	3.867	1.00
184.00	Raycap DC6-48-60-18-8F (23.5"	2	0.75	0.000	20.00	1.260	0.50	74.43	1.941	0.50
184.00	Ericsson Radio 4494 44B14 20B2	3	0.75	0.000	57.30	2.202	0.67	114.12	3.211	0.67
184.00	Ericsson RRUS 4449 B5, B12	3	0.75	0.000	71.00	1.969	0.50	137.62	2.933	0.50
184.00	Ericsson RRUS 8843 B2, B66A	3	0.75	0.000	72.00	1.639	0.50	135.36	2.512	0.50
184.00	CCI TPA65R-BU6Dv2	3	0.75	0.000	68.30	12.709	0.63	334.60	15.592	0.63
184.00	Raycap DC9-48-60-24-8C-EV (Enc	1	0.75	0.000	18.50	2.676	1.00	105.10	3.853	1.00
180.00	Generic Flat Platform with Han	1	1.00	0.000	2500.00	42.400	1.00	4336.41	64.080	1.00
165.10	Ericsson Radio 4449 B71 B85A	3	0.80	0.000	75.00	1.650	0.50	136.94	2.525	0.50
164.00	RFS APXVAARR24_43-U-NA20	3	0.80	0.000	127.90	20.243	0.63	531.89	24.060	0.63
164.00	Ericsson Air6449 B41	3	0.80	0.000	104.00	5.682	0.63	244.24	7.315	0.63
164.00	Generic Mount Reinforcement	3	0.75	0.000	200.00	4.980	0.67	399.15	10.096	0.67
164.00	Commscope VHLP2-11W/A	1	0.80	0.000	17.00	4.650	0.78	109.51	5.957	0.78
164.00	Generic Round Sector Frame	3	0.75	0.000	700.00	14.400	0.75	1703.66	31.433	0.75
164.00	Ceragon FibeAir IP-20S	1	0.80	0.000	13.20	0.570	1.00	24.54	1.044	1.00
159.00	Ericsson Radio 4460 B25+B66	3	0.80	0.000	109.00	2.564	0.50	199.81	3.647	0.50
150.10	Decibel DB809DK-XT	2	1.00	0.000	64.00	6.350	1.00	227.02	14.027	1.00
150.00	Sinclair SD210-SF2P4SNM	1	1.00	0.000	8.30	1.370	1.00	55.79	6.021	1.00
147.00	Sinclair SC442D-HF1LDF(DXX-I30	1	1.00	-1.000	79.00	10.479	1.00	333.38	18.132	1.00
146.00	Sinclair SC479-HF1LDF(E5765)	1	1.00	0.000	34.00	5.030	1.00	161.04	10.287	1.00
142.00	Telewave ANT150D (5 lbs)	1	1.00	0.000	5.00	1.090	1.00	8.56	1.866	1.00
140.00	Generic Round Side Arm	4	1.00	0.000	187.50	5.200	0.67	280.87	7.974	0.67
139.50	Bird 432-83H-01-T	1	0.80	0.000	25.00	1.400	0.50	69.23	2.200	0.50
121.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	4140.39	51.956	1.00
121.00	Antel LPA-80063/6CF	2	0.75	0.000	27.00	9.593	0.82	318.58	10.968	0.82
121.00	Commscope JAAH-65B-R3B	6	0.75	0.000	60.60	9.113	0.69	265.49	11.923	0.69
121.00	Antel LPA-80080/6CF ____	4	0.75	0.000	21.00	8.628	0.62	218.43	5.524	0.62
121.00	Raycap RCMDC-6627-PF-48	1	0.75	0.000	32.00	4.056	0.50	160.71	5.438	0.50
121.00	Samsung MT6413-77A	3	0.75	0.000	57.30	3.805	0.61	143.29	5.150	0.61
121.00	Samsung RF4461d-13A	3	0.75	0.000	79.10	1.875	0.50	144.40	2.789	0.50
121.00	Commscope CBC78T-DS-43-2X	3	0.75	0.000	20.70	0.552	0.50	43.07	1.066	0.50
121.00	Samsung B2/B66A RRH ORAN (RF 4	3	0.75	0.000	74.70	1.875	0.50	139.42	2.786	0.50
97.00	Andrew DB586	1	1.00	0.000	8.30	0.740	1.00	14.08	1.255	1.00
95.00	Bird 429-83H-01-T	1	0.90	1.000	20.00	0.917	0.50	51.87	1.654	0.50
95.00	Generic Round Side Arm	1	1.00	0.000	187.50	5.200	1.00	278.72	7.911	1.00
93.00	Andrew DB586	1	1.00	0.000	8.30	0.740	1.00	14.06	1.254	1.00
80.00	RFS PA6-65AC	1	1.00	0.000	278.00	47.050	0.98	743.47	51.570	0.98
30.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	36.57	1.481	1.00
Totals	Row Count: 41	89			13,278.40			30,841.78		

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	185.00	2	2" conduit	2.38	3.65	N	0	0	0	0	0	N AT&T MOBILITY

ASSET: 302506, Winchester CT 3
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA796775_C3_01

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	185.00	1	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	184.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	184.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	184.00	3	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	184.00	2	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	184.00	1	0.40" (10.3mm) Fiber	0.4	0.09	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	184.00	1	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	166.00	1	1.99" (50.7mm) Hybrid	1.99	1.9	N	1	1	1	280	1	Y	T-MOBILE
0.00	165.00	3	1 1/4" (1.25"- 31.8mm	1.25	1.05	N	3	1	1	290	1	Y	T-MOBILE
0.00	164.00	4	1 1/2" Coax	0.63	0.15	N	4	1	1	280	1	Y	T-MOBILE
0.00	150.00	1	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	LITCHFIELD COUNTY DIS
134.00	149.00	1	1.25" Thick Flat Plat	1.25	0	Y	1	0	0	0	0	Y	
134.00	149.00	1	1.25" Thick Flat Plat	1.25	0	Y	1	0	0	270	0	Y	
134.00	149.00	1	1.25" Thick Flat Plat	1.25	0	Y	1	0	0	180	0	Y	
134.00	149.00	1	1.25" Thick Flat Plat	1.25	0	Y	1	0	0	90	0	Y	
0.00	147.00	2	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	CONNECTICUT STATE P
0.00	146.00	5	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	CONNECTICUT STATE P
0.00	142.00	1	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	CONNECTICUT STATE P
0.00	141.00	1	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	CONNECTICUT STATE P
0.00	139.00	1	1 1/2" Coax	0.63	0.15	N	0	0	0	0	0	N	CONNECTICUT STATE P
0.00	121.00	6	1 5/8" Coax	1.98	0.82	N	3	1	1	90	1	Y	VERIZON WIRELESS
0.00	121.00	1	1 5/8" Hybriflex	1.98	1.3	N	1	1.49	1.49	85	1.49	Y	VERIZON WIRELESS
0.00	112.00	1	#20 w/ Angle Brackets	4	4.68	Y	1	0	0	80	0	Y	
0.00	112.00	1	#20 w/ Angle Brackets	4	4.68	Y	1	0	0	330	0	Y	
0.00	112.00	1	#20 w/ Angle Brackets	4	4.68	Y	1	0	0	150	0	Y	
0.00	112.00	1	#20 w/ Angle Brackets	4	4.68	Y	1	0	0	260	0	Y	
0.00	97.00	1	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	EVERSOURCE ENERGY
0.00	95.00	1	1/2" Coax	0.63	0.15	N	0	0	0	0	0	N	EVERSOURCE ENERGY
0.00	93.00	1	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	EVERSOURCE ENERGY
0.00	80.00	1	EW63	2.01	0.51	N	0	0	0	0	0	N	CONNECTICUT STATE P

ADDITIONAL STEEL

Intermediate Connectors

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Bracket Type	Spacing (in)	Length (in)	Connectors	Continuation?
0.00	10.00	4	SOL #20 All Thread Bar	80	2.19	6" Angle Bracket	15.00	3.13	5/8" A36 U-Bolt	N
10.00	105.36	4	SOL #20 All Thread Bar	80	2.19	6" Angle Bracket	30.00	3.31	5/8" A36 U-Bolt	Y
135.75	147.25	4	PL PL 3.5" x 1.25"	46	0.00	AJAX M20 Class 8.8	24.00	3.00	AJAX M20 Class 8.8	N

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description	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)	Additional Reinforcing		
												Area (in ²)	Ix (in ⁴)	Weight (lb)
0.00		0.4375	52.750	72.640	25,115.3	19.85	120.57	78.1	937.8	0.0	0.0	19.640	8,737.00	0.0
5.00		0.4375	51.653	71.116	23,567.9	19.41	118.06	78.6	898.7	0.0	1,222.9	19.640	8,418.70	334.0
10.00	Reinf. Top Reinf Bottom	0.4375	50.556	69.593	22,085.4	18.96	115.56	79.1	860.4	0.0	1,197.0	19.640	8,106.30	334.0
15.00		0.4375	49.458	68.069	20,666.5	18.52	113.05	79.6	823.0	0.0	1,171.1	19.640	7,799.90	334.0
20.00		0.4375	48.361	66.546	19,309.6	18.08	110.54	80.1	786.4	0.0	1,145.2	19.640	7,499.30	334.0
25.00		0.4375	47.264	65.022	18,013.5	17.64	108.03	80.7	750.7	0.0	1,119.2	19.640	7,204.70	334.0
30.00		0.4375	46.167	63.499	16,776.7	17.20	105.52	81.2	715.7	0.0	1,093.3	19.640	6,916.00	334.0
35.00		0.4375	45.070	61.975	15,597.8	16.75	103.02	81.7	681.7	0.0	1,067.4	19.640	6,633.10	334.0
40.00		0.4375	43.972	60.451	14,475.6	16.31	100.51	82.2	648.4	0.0	1,041.5	19.640	6,356.20	334.0
42.96	Bot - Section 2	0.4375	43.324	59.551	13,838.0	16.05	99.03	82.5	629.1	0.0	603.6	19.640	6,195.30	197.5
45.00		0.4375	42.875	58.928	13,408.4	15.87	98.00	82.6	616.0	0.0	771.7	19.640	6,269.80	136.5
49.04	Top - Section 1	0.3750	42.739	50.422	11,432.9	18.69	113.97	79.4	526.9	0.0	1,502.0	19.640	6,051.90	269.9
50.00		0.3750	42.528	50.171	11,263.2	18.59	113.41	79.5	521.6	0.0	164.3	19.640	6,000.70	64.1
55.00		0.3750	41.431	48.865	10,406.4	18.07	110.48	80.1	494.7	0.0	842.5	19.640	5,737.50	334.0
60.00		0.3750	40.334	47.559	9,594.10	17.55	107.56	80.8	468.5	0.0	820.3	19.640	5,480.20	334.0
65.00		0.3750	39.236	46.253	8,825.30	17.04	104.63	81.4	443.0	0.0	798.1	19.640	5,228.80	334.0
70.00		0.3750	38.139	44.947	8,098.70	16.52	101.70	82	418.2	0.0	775.8	19.640	4,983.30	334.0
75.00		0.3750	37.042	43.641	7,413.10	16.01	98.78	82.6	394.2	0.0	753.6	19.640	4,743.70	334.0
80.00		0.3750	35.945	42.335	6,767.40	15.49	95.85	82.6	370.8	0.0	731.4	19.640	4,510.10	334.0
85.00		0.3750	34.848	41.030	6,160.20	14.97	92.93	82.6	348.2	0.0	709.2	19.640	4,282.30	334.0
87.54	Bot - Section 3	0.3750	34.290	40.366	5,866.20	14.71	91.44	82.6	337.0	0.0	351.7	19.640	4,168.90	169.7
90.00		0.3750	33.750	39.724	5,590.60	14.46	90.00	82.6	326.3	0.0	620.3	19.640	4,186.10	164.3
92.46	Top - Section 2	0.3125	33.836	33.250	4,721.20	17.68	108.28	80.6	274.8	0.0	609.6	19.640	4,077.60	164.1
93.00		0.3125	33.717	33.132	4,671.00	17.61	107.89	80.7	272.9	0.0	61.4	19.640	4,053.80	36.3
95.00		0.3125	33.278	32.697	4,489.30	17.37	106.49	81	265.7	0.0	224.0	19.640	3,966.80	133.6
97.00		0.3125	32.839	32.261	4,312.40	17.12	105.09	81.3	258.6	0.0	221.0	19.640	3,880.70	133.6
100.00		0.3125	32.181	31.608	4,055.80	16.75	102.98	81.7	248.2	0.0	326.0	19.640	3,753.40	200.4
105.00		0.3125	31.084	30.520	3,651.20	16.13	99.47	82.4	231.4	0.0	528.5	19.640	3,545.90	334.0
105.36	Reinf. Top	0.3125	31.005	30.442	3,623.10	16.08	99.22	82.5	230.2	0.0	37.3	19.640	3,531.20	24.0
110.00		0.3125	29.987	29.432	3,274.40	15.51	95.96	82.6	215.1	0.0	472.7			
115.00		0.3125	28.889	28.344	2,924.40	14.89	92.45	82.6	199.4	0.0	491.5			
120.00		0.3125	27.792	27.255	2,600.30	14.27	88.94	82.6	184.3	0.0	473.0			
121.00		0.3125	27.573	27.038	2,538.50	14.15	88.23	82.6	181.3	0.0	92.4			
125.00		0.3125	26.695	26.167	2,301.10	13.65	85.42	82.6	169.8	0.0	362.1			
130.00		0.3125	25.598	25.079	2,025.80	13.03	81.91	82.6	155.9	0.0	435.9			
132.12	Bot - Section 4	0.3125	25.133	24.618	1,916.00	12.77	80.42	82.6	150.2	0.0	179.2			
135.00		0.3125	24.501	23.991	1,773.40	12.41	78.40	82.6	142.6	0.0	384.0			
135.75	Reinf Bottom	0.3125	24.336	23.827	1,737.40	12.32	77.88	82.6	140.6	0.0	98.4			
135.87	Top - Section 3	0.1875	24.685	14.578	1,105.30	21.80	131.65	75.8	88.2	0.0	15.7	17.500	1,481.40	7.1
139.50		0.1875	23.888	14.104	1,001.00	21.05	127.40	76.6	82.5	0.0	177.2	17.500	1,392.40	216.0
140.00		0.1875	23.778	14.039	987.10	20.95	126.82	76.8	81.8	0.0	23.9	17.500	1,380.40	29.8
142.00		0.1875	23.340	13.778	933.10	20.54	124.48	77.2	78.7	0.0	94.7	17.500	1,332.70	119.0
145.00		0.1875	22.681	13.386	855.70	19.92	120.97	78	74.3	0.0	138.6	17.500	1,262.90	178.5
146.00		0.1875	22.462	13.255	830.90	19.71	119.80	78.2	72.9	0.0	45.3	17.500	1,240.00	59.5
147.00		0.1875	22.242	13.125	806.60	19.51	118.63	78.5	71.4	0.0	44.9	17.500	1,217.30	59.5
147.25	Reinf. Top	0.1875	22.187	13.092	800.60	19.45	118.33	78.5	71.1	0.0	11.2	17.500	1,211.70	14.9
150.00		0.1875	21.584	12.733	736.50	18.89	115.11	79.2	67.2	0.0	120.8			
150.10		0.1875	21.562	12.720	734.20	18.87	115.00	79.2	67.1	0.0	4.3			
155.00		0.1875	20.487	12.080	628.90	17.86	109.26	80.4	60.5	0.0	206.8			
159.00		0.1875	19.609	11.558	550.80	17.03	104.58	81.4	55.3	0.0	160.9			
160.00		0.1875	19.390	11.427	532.30	16.82	103.41	81.6	54.1	0.0	39.1			
164.00		0.1875	18.512	10.905	462.60	16.00	98.73	82.6	49.2	0.0	152.0			
165.00		0.1875	18.292	10.774	446.20	15.79	97.56	82.6	48.0	0.0	36.9			
165.10		0.1875	18.270	10.761	444.60	15.77	97.44	82.6	47.9	0.0	3.7			
170.00		0.1875	17.195	10.121	369.90	14.76	91.71	82.6	42.4	0.0	174.1			
175.00		0.1875	16.098	9.468	302.80	13.73	85.86	82.6	37.1	0.0	166.6			
180.00		0.1875	15.001	8.815	244.40	12.70	80.00	82.6	32.1	0.0	155.5			
Totals:											25,271.3			7,722.3

ASSET: 302506, Winchester CT 3
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA796775_C3_01

CALCULATED FORCES

Load Case: 1.2D + 1.0W

122 mph Wind with No Ice

28 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	-67.55	-49.39	0.00	-5,388.3	0.00	5,388.30	5,102.86	1,274.83	6,023.66	5,489.79	0	0	0.740
5.00	-65.09	-48.84	0.00	-5,141.4	0.00	5,141.35	5,029.12	1,248.09	5,773.66	5,296.04	0.12	-0.22	0.727
10.00	-62.66	-48.30	0.00	-4,897.1	0.00	4,897.14	4,953.96	1,221.35	5,528.96	5,104.17	0.47	-0.44	0.713
15.00	-60.27	-47.75	0.00	-4,655.7	0.00	4,655.67	4,877.37	1,194.61	5,289.56	4,914.29	1.06	-0.67	0.699
20.00	-57.91	-47.20	0.00	-4,417.0	0.00	4,416.95	4,799.35	1,167.88	5,055.46	4,726.50	1.88	-0.9	0.684
25.00	-55.59	-46.64	0.00	-4,181.0	0.00	4,180.97	4,719.91	1,141.14	4,826.65	4,540.87	2.94	-1.12	0.668
30.00	-53.29	-45.96	0.00	-3,947.8	0.00	3,947.77	4,639.04	1,114.40	4,603.14	4,357.53	4.25	-1.35	0.652
35.00	-51.05	-44.89	0.00	-3,718.0	0.00	3,717.99	4,556.74	1,087.66	4,384.94	4,176.56	5.79	-1.58	0.635
40.00	-48.89	-43.94	0.00	-3,493.6	0.00	3,493.55	4,473.02	1,060.92	4,172.03	3,998.06	7.57	-1.81	0.617
42.96	-47.62	-43.35	0.00	-3,363.6	0.00	3,363.63	4,422.84	1,045.11	4,048.62	3,893.71	8.74	-1.95	0.607
45.00	-46.28	-42.72	0.00	-3,275.0	0.00	3,275.04	4,378.05	1,034.19	3,964.41	3,813.57	9.6	-2.05	0.595
49.04	-43.77	-41.99	0.00	-3,102.4	0.00	3,102.45	3,604.18	884.90	3,386.08	3,138.53	11.41	-2.24	0.657
50.00	-43.34	-41.47	0.00	-3,062.1	0.00	3,062.14	3,591.52	880.50	3,352.48	3,111.81	11.87	-2.28	0.653
55.00	-41.40	-40.32	0.00	-2,854.8	0.00	2,854.79	3,524.72	857.58	3,180.26	2,973.74	14.39	-2.52	0.629
60.00	-39.50	-39.15	0.00	-2,653.2	0.00	2,653.21	3,456.50	834.66	3,012.57	2,837.55	17.16	-2.77	0.605
65.00	-37.64	-37.97	0.00	-2,457.5	0.00	2,457.47	3,386.84	811.74	2,849.42	2,703.31	20.19	-3.01	0.581
70.00	-35.82	-36.79	0.00	-2,267.6	0.00	2,267.60	3,315.77	788.82	2,690.82	2,571.14	23.47	-3.25	0.556
75.00	-34.04	-35.61	0.00	-2,083.6	0.00	2,083.64	3,242.33	765.91	2,536.75	2,440.43	26.99	-3.48	0.530
80.00	-32.11	-32.25	0.00	-1,905.6	0.00	1,905.58	3,145.31	742.99	2,387.23	2,295.85	30.77	-3.72	0.507
85.00	-30.43	-31.24	0.00	-1,744.3	0.00	1,744.34	3,048.29	720.07	2,242.25	2,155.68	34.78	-3.95	0.486
87.54	-29.58	-30.64	0.00	-1,665.0	0.00	1,665.00	2,999.00	708.43	2,170.34	2,086.17	36.91	-4.07	0.475
90.00	-28.42	-30.03	0.00	-1,589.6	0.00	1,589.62	2,951.27	697.15	2,101.81	2,019.93	39.04	-4.18	0.458
92.46	-27.30	-29.55	0.00	-1,515.8	0.00	1,515.85	2,412.09	583.54	1,767.02	1,661.39	41.22	-4.29	0.499
93.00	-27.12	-29.29	0.00	-1,499.8	0.00	1,499.79	2,405.87	581.47	1,754.47	1,651.16	41.71	-4.31	0.496
95.00	-26.29	-28.52	0.00	-1,441.2	0.00	1,441.20	2,382.84	573.83	1,708.68	1,613.66	43.53	-4.41	0.484
97.00	-25.68	-27.95	0.00	-1,384.2	0.00	1,384.16	2,359.57	566.19	1,663.49	1,576.43	45.4	-4.51	0.471
100.00	-24.80	-27.11	0.00	-1,300.3	0.00	1,300.31	2,324.24	554.73	1,596.85	1,521.10	48.27	-4.65	0.453
105.00	-23.38	-26.25	0.00	-1,164.8	0.00	1,164.77	2,264.22	535.63	1,488.80	1,430.31	53.26	-4.87	0.422
105.36	-23.26	-25.88	0.00	-1,155.3	0.00	1,155.32	2,259.84	534.25	1,481.17	1,423.84	53.62	-4.89	0.420
105.36	-23.26	-25.88	0.00	-1,155.3	0.00	1,155.32	2,259.84	534.25	1,481.17	1,423.84	53.62	-4.89	0.824
110.00	-22.28	-24.86	0.00	-1,035.2	0.00	1,035.22	2,186.65	516.53	1,384.54	1,331.56	58.47	-5.09	0.790
115.00	-21.28	-23.96	0.00	-910.9	0.00	910.91	2,105.79	497.43	1,284.06	1,234.41	64.02	-5.51	0.750
120.00	-20.39	-23.34	0.00	-791.1	0.00	791.13	2,024.94	478.33	1,187.37	1,140.95	70.01	-5.93	0.706
121.00	-16.23	-17.91	0.00	-767.8	0.00	767.79	2,008.77	474.51	1,168.48	1,122.70	71.26	-6.01	0.693
125.00	-15.53	-17.57	0.00	-696.1	0.00	696.14	1,944.09	459.23	1,094.46	1,051.17	76.42	-6.34	0.672
130.00	-14.71	-17.27	0.00	-608.3	0.00	608.29	1,863.24	440.14	1,005.33	965.06	83.26	-6.74	0.640
132.12	-14.36	-17.06	0.00	-571.7	0.00	571.69	1,828.96	432.04	968.69	929.67	86.29	-6.92	0.624
135.00	-13.73	-16.85	0.00	-522.6	0.00	522.55	1,782.39	421.04	919.99	882.64	90.53	-7.15	0.601
135.75	-13.57	-16.80	0.00	-509.9	0.00	509.91	1,770.26	418.17	907.52	870.59	91.65	-7.21	0.595
135.87	-13.54	-16.65	0.00	-507.9	0.00	507.90	993.96	255.85	566.11	501.11	91.83	-7.22	0.444
139.50	-12.86	-16.37	0.00	-447.5	0.00	447.46	972.83	247.53	529.89	474.38	97.37	-7.38	0.405
140.00	-11.97	-15.44	0.00	-439.3	0.00	439.27	969.86	246.38	525.00	470.72	98.14	-7.4	0.399
142.00	-11.62	-15.14	0.00	-408.4	0.00	408.40	957.83	241.80	505.65	456.17	101.26	-7.51	0.378
145.00	-11.09	-14.91	0.00	-363.0	0.00	362.99	939.37	234.93	477.30	434.56	106.01	-7.65	0.347
146.00	-10.92	-14.55	0.00	-348.1	0.00	348.08	933.10	232.63	468.04	427.41	107.61	-7.7	0.336
147.00	-10.73	-13.93	0.00	-333.5	0.00	333.53	926.77	230.34	458.86	420.30	109.23	-7.75	0.325
147.25	-10.69	-13.81	0.00	-330.0	0.00	330.05	925.18	229.77	456.58	418.52	109.63	-7.76	0.322
147.25	-10.69	-13.81	0.00	-330.0	0.00	330.05	925.18	229.77	456.58	418.52	109.63	-7.76	0.804
150.00	-10.43	-13.59	0.00	-292.1	0.00	292.08	907.46	223.47	431.88	399.15	114.12	-7.88	0.747
150.10	-10.33	-12.78	0.00	-290.7	0.00	290.72	906.80	223.24	431.00	398.45	114.29	-7.89	0.744
155.00	-9.84	-12.48	0.00	-228.1	0.00	228.07	874.12	212.01	388.73	364.59	122.62	-8.38	0.640
159.00	-9.10	-12.06	0.00	-178.2	0.00	178.17	846.42	202.84	355.84	337.64	129.78	-8.75	0.542
160.00	-9.00	-11.91	0.00	-166.1	0.00	166.11	839.35	200.55	347.85	331.00	131.62	-8.84	0.516
164.00	-5.21	-7.22	0.00	-118.5	0.00	118.46	810.18	191.38	316.78	304.75	139.13	-9.14	0.397
165.00	-5.13	-7.18	0.00	-111.2	0.00	111.24	800.48	189.09	309.24	297.46	141.04	-9.21	0.382
165.10	-4.88	-6.90	0.00	-110.5	0.00	110.52	799.51	188.86	308.49	296.73	141.24	-9.22	0.380

CALCULATED FORCES													
170.00	-4.52	-6.58	0.00	-76.7	0.00	76.71	751.97	177.63	272.90	262.32	150.82	-9.51	0.300
175.00	-4.18	-6.28	0.00	-43.8	0.00	43.80	703.45	166.17	238.83	229.40	160.87	-9.75	0.198
180.00	0.00	-5.47	0.00	-12.4	0.00	12.42	654.94	154.71	207.03	198.68	171.11	-9.88	0.064

CALCULATED FORCES

Load Case: 0.9D + 1.0W

122 mph Wind with No Ice (Reduced DL)

28 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	-50.64	-49.35	0.00	-5,308.2	0.00	5,308.17	5,102.86	1,274.83	6,023.66	5,489.79	0	0	0.727
5.00	-48.75	-48.74	0.00	-5,061.4	0.00	5,061.41	5,029.12	1,248.09	5,773.66	5,296.04	0.12	-0.22	0.713
10.00	-46.89	-48.13	0.00	-4,817.7	0.00	4,817.69	4,953.96	1,221.35	5,528.96	5,104.17	0.46	-0.44	0.699
15.00	-45.05	-47.53	0.00	-4,577.0	0.00	4,577.03	4,877.37	1,194.61	5,289.56	4,914.29	1.04	-0.66	0.685
20.00	-43.24	-46.92	0.00	-4,339.4	0.00	4,339.39	4,799.35	1,167.88	5,055.46	4,726.50	1.85	-0.88	0.670
25.00	-41.46	-46.32	0.00	-4,104.8	0.00	4,104.78	4,719.91	1,141.14	4,826.65	4,540.87	2.9	-1.11	0.654
30.00	-39.70	-45.59	0.00	-3,873.2	0.00	3,873.18	4,639.04	1,114.40	4,603.14	4,357.53	4.18	-1.33	0.638
35.00	-37.99	-44.48	0.00	-3,645.2	0.00	3,645.24	4,556.74	1,087.66	4,384.94	4,176.56	5.69	-1.56	0.620
40.00	-36.34	-43.51	0.00	-3,422.8	0.00	3,422.83	4,473.02	1,060.92	4,172.03	3,998.06	7.45	-1.78	0.603
42.96	-35.38	-42.90	0.00	-3,294.2	0.00	3,294.20	4,422.84	1,045.11	4,048.62	3,893.71	8.59	-1.92	0.592
45.00	-34.36	-42.25	0.00	-3,206.5	0.00	3,206.54	4,378.05	1,034.19	3,964.41	3,813.57	9.43	-2.01	0.580
49.04	-32.46	-41.52	0.00	-3,035.8	0.00	3,035.85	3,604.18	884.90	3,386.08	3,138.53	11.22	-2.19	0.641
50.00	-32.12	-40.97	0.00	-2,996.0	0.00	2,995.99	3,591.52	880.50	3,352.48	3,111.81	11.66	-2.24	0.637
55.00	-30.64	-39.79	0.00	-2,791.1	0.00	2,791.12	3,524.72	857.58	3,180.26	2,973.74	14.14	-2.48	0.613
60.00	-29.20	-38.60	0.00	-2,592.2	0.00	2,592.18	3,456.50	834.66	3,012.57	2,837.55	16.86	-2.71	0.590
65.00	-27.78	-37.40	0.00	-2,399.2	0.00	2,399.19	3,386.84	811.74	2,849.42	2,703.31	19.83	-2.95	0.565
70.00	-26.40	-36.21	0.00	-2,212.2	0.00	2,212.17	3,315.77	788.82	2,690.82	2,571.14	23.04	-3.18	0.540
75.00	-25.05	-35.01	0.00	-2,031.1	0.00	2,031.14	3,242.33	765.91	2,536.75	2,440.43	26.5	-3.41	0.515
80.00	-23.62	-31.64	0.00	-1,856.1	0.00	1,856.09	3,145.31	742.99	2,387.23	2,295.85	30.2	-3.64	0.492
85.00	-22.36	-30.64	0.00	-1,697.9	0.00	1,697.88	3,048.29	720.07	2,242.25	2,155.68	34.13	-3.87	0.471
87.54	-21.72	-30.04	0.00	-1,620.1	0.00	1,620.06	2,999.00	708.43	2,170.34	2,086.17	36.22	-3.98	0.461
90.00	-20.85	-29.43	0.00	-1,546.2	0.00	1,546.16	2,951.27	697.15	2,101.81	2,019.93	38.3	-4.09	0.444
92.46	-20.00	-28.97	0.00	-1,473.9	0.00	1,473.86	2,412.09	583.54	1,767.02	1,661.39	40.43	-4.2	0.484
93.00	-19.87	-28.70	0.00	-1,458.1	0.00	1,458.12	2,405.87	581.47	1,754.47	1,651.16	40.91	-4.22	0.480
95.00	-19.25	-27.94	0.00	-1,400.7	0.00	1,400.71	2,382.84	573.83	1,708.68	1,613.66	42.7	-4.32	0.468
97.00	-18.79	-27.36	0.00	-1,344.8	0.00	1,344.83	2,359.57	566.19	1,663.49	1,576.43	44.53	-4.41	0.456
100.00	-18.13	-26.52	0.00	-1,262.8	0.00	1,262.75	2,324.24	554.73	1,596.85	1,521.10	47.34	-4.54	0.438
105.00	-17.07	-25.68	0.00	-1,130.2	0.00	1,130.17	2,264.22	535.63	1,488.80	1,430.31	52.21	-4.76	0.408
105.36	-16.98	-25.30	0.00	-1,120.9	0.00	1,120.92	2,259.84	534.25	1,481.17	1,423.84	52.57	-4.78	0.405
105.36	-16.98	-25.30	0.00	-1,120.9	0.00	1,120.92	2,259.84	534.25	1,481.17	1,423.84	52.57	-4.78	0.797
110.00	-16.24	-24.26	0.00	-1,003.5	0.00	1,003.54	2,186.65	516.53	1,384.54	1,331.56	57.31	-4.97	0.763
115.00	-15.47	-23.33	0.00	-882.2	0.00	882.23	2,105.79	497.43	1,284.06	1,234.41	62.73	-5.38	0.724
120.00	-14.80	-22.72	0.00	-765.6	0.00	765.57	2,024.94	478.33	1,187.37	1,140.95	68.58	-5.78	0.681
121.00	-11.79	-17.39	0.00	-742.8	0.00	742.85	2,008.77	474.51	1,168.48	1,122.70	69.8	-5.87	0.669
125.00	-11.25	-17.04	0.00	-673.3	0.00	673.28	1,944.09	459.23	1,094.46	1,051.17	74.84	-6.18	0.648
130.00	-10.62	-16.74	0.00	-588.1	0.00	588.06	1,863.24	440.14	1,005.33	965.06	81.52	-6.57	0.617
132.12	-10.35	-16.53	0.00	-552.6	0.00	552.58	1,828.96	432.04	968.69	929.67	84.47	-6.74	0.602
135.00	-9.88	-16.33	0.00	-505.0	0.00	504.98	1,782.39	421.04	919.99	882.64	88.6	-6.97	0.579
135.75	-9.76	-16.28	0.00	-492.7	0.00	492.73	1,770.26	418.17	907.52	870.59	89.69	-7.03	0.573
135.87	-9.74	-16.12	0.00	-490.8	0.00	490.78	993.96	255.85	566.11	501.11	89.87	-7.04	0.427
139.50	-9.23	-15.86	0.00	-432.2	0.00	432.25	972.83	247.53	529.89	474.38	95.27	-7.19	0.389
140.00	-8.58	-14.96	0.00	-424.3	0.00	424.32	969.86	246.38	525.00	470.72	96.02	-7.21	0.383
142.00	-8.32	-14.66	0.00	-394.4	0.00	394.40	957.83	241.80	505.65	456.17	99.06	-7.31	0.364
145.00	-7.93	-14.45	0.00	-350.4	0.00	350.41	939.37	234.93	477.30	434.56	103.69	-7.45	0.333
146.00	-7.80	-14.09	0.00	-336.0	0.00	335.96	933.10	232.63	468.04	427.41	105.25	-7.5	0.323
147.00	-7.68	-13.48	0.00	-321.9	0.00	321.87	926.77	230.34	458.86	420.30	106.82	-7.54	0.312
147.25	-7.65	-13.36	0.00	-318.5	0.00	318.50	925.18	229.77	456.58	418.52	107.21	-7.56	0.310
147.25	-7.65	-13.36	0.00	-318.5	0.00	318.50	925.18	229.77	456.58	418.52	107.21	-7.56	0.773
150.00	-7.46	-13.15	0.00	-281.8	0.00	281.77	907.46	223.47	431.88	399.15	111.59	-7.67	0.718
150.10	-7.40	-12.33	0.00	-280.4	0.00	280.45	906.80	223.24	431.00	398.45	111.75	-7.68	0.715
155.00	-7.02	-12.02	0.00	-220.0	0.00	220.03	874.12	212.01	388.73	364.59	119.87	-8.16	0.615
159.00	-6.47	-11.62	0.00	-172.0	0.00	171.97	846.42	202.84	355.84	337.64	126.83	-8.51	0.520
160.00	-6.39	-11.46	0.00	-160.4	0.00	160.35	839.35	200.55	347.85	331.00	128.62	-8.6	0.495
164.00	-3.69	-6.96	0.00	-114.5	0.00	114.49	810.18	191.38	316.78	304.75	135.93	-8.89	0.382
165.00	-3.63	-6.91	0.00	-107.5	0.00	107.54	800.48	189.09	309.24	297.46	137.79	-8.96	0.367

CALCULATED FORCES													
165.10	-3.44	-6.64	0.00	-106.8	0.00	106.85	799.51	188.86	308.49	296.73	137.98	-8.97	0.366
170.00	-3.18	-6.34	0.00	-74.3	0.00	74.30	751.97	177.63	272.90	262.32	147.3	-9.25	0.289
175.00	-2.93	-6.04	0.00	-42.6	0.00	42.63	703.45	166.17	238.83	229.40	157.07	-9.48	0.191
180.00	0.00	-5.47	0.00	-12.4	0.00	12.42	654.94	154.71	207.03	198.68	167.03	-9.61	0.064

CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi													28 Iterations
48 mph Wind with 1.41" Radial Ice													
Ice Dead Load Factor 1.00													
Ice Importance 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	-104.56	-9.46	0.00	-1,204.3	0.00	1,204.31	5,102.86	1,274.83	6,023.66	5,489.79	0	0	0.179
5.00	-101.61	-9.37	0.00	-1,157.0	0.00	1,157.02	5,029.12	1,248.09	5,773.66	5,296.04	0.03	-0.05	0.177
10.00	-98.64	-9.29	0.00	-1,110.2	0.00	1,110.16	4,953.96	1,221.35	5,528.96	5,104.17	0.11	-0.1	0.175
15.00	-95.67	-9.20	0.00	-1,063.7	0.00	1,063.72	4,877.37	1,194.61	5,289.56	4,914.29	0.24	-0.15	0.172
20.00	-92.71	-9.12	0.00	-1,017.7	0.00	1,017.71	4,799.35	1,167.88	5,055.46	4,726.50	0.42	-0.2	0.170
25.00	-89.78	-9.03	0.00	-972.1	0.00	972.13	4,719.91	1,141.14	4,826.65	4,540.87	0.67	-0.26	0.168
30.00	-86.84	-8.94	0.00	-927.0	0.00	926.96	4,639.04	1,114.40	4,603.14	4,357.53	0.96	-0.31	0.165
35.00	-83.97	-8.85	0.00	-882.3	0.00	882.26	4,556.74	1,087.66	4,384.94	4,176.56	1.32	-0.36	0.162
40.00	-81.14	-8.77	0.00	-838.0	0.00	838.00	4,473.02	1,060.92	4,172.03	3,998.06	1.73	-0.42	0.159
42.96	-79.47	-8.72	0.00	-812.1	0.00	812.06	4,422.84	1,045.11	4,048.62	3,893.71	2	-0.45	0.158
45.00	-77.89	-8.66	0.00	-794.2	0.00	794.24	4,378.05	1,034.19	3,964.41	3,813.57	2.2	-0.48	0.155
49.04	-74.81	-8.59	0.00	-759.2	0.00	759.25	3,604.18	884.90	3,386.08	3,138.53	2.62	-0.52	0.173
50.00	-74.30	-8.54	0.00	-751.0	0.00	751.01	3,591.52	880.50	3,352.48	3,111.81	2.72	-0.53	0.172
55.00	-71.71	-8.43	0.00	-708.3	0.00	708.31	3,524.72	857.58	3,180.26	2,973.74	3.31	-0.59	0.168
60.00	-69.15	-8.32	0.00	-666.2	0.00	666.15	3,456.50	834.66	3,012.57	2,837.55	3.97	-0.65	0.164
65.00	-66.62	-8.20	0.00	-624.6	0.00	624.55	3,386.84	811.74	2,849.42	2,703.31	4.68	-0.71	0.159
70.00	-64.13	-8.08	0.00	-583.5	0.00	583.53	3,315.77	788.82	2,690.82	2,571.14	5.46	-0.77	0.154
75.00	-61.67	-7.96	0.00	-543.1	0.00	543.11	3,242.33	765.91	2,536.75	2,440.43	6.31	-0.84	0.149
80.00	-58.52	-7.45	0.00	-503.3	0.00	503.31	3,145.31	742.99	2,387.23	2,295.85	7.22	-0.9	0.144
85.00	-56.14	-7.34	0.00	-466.0	0.00	466.05	3,048.29	720.07	2,242.25	2,155.68	8.19	-0.96	0.140
87.54	-54.94	-7.27	0.00	-447.4	0.00	447.40	2,999.00	708.43	2,170.34	2,086.17	8.71	-0.99	0.138
90.00	-53.44	-7.20	0.00	-429.5	0.00	429.51	2,951.27	697.15	2,101.81	2,019.93	9.23	-1.02	0.134
92.46	-51.96	-7.14	0.00	-411.8	0.00	411.83	2,412.09	583.54	1,767.02	1,661.39	9.76	-1.05	0.147
93.00	-51.70	-7.10	0.00	-408.0	0.00	407.95	2,405.87	581.47	1,754.47	1,651.16	9.88	-1.06	0.146
95.00	-50.47	-6.98	0.00	-393.7	0.00	393.74	2,382.84	573.83	1,708.68	1,613.66	10.33	-1.08	0.143
97.00	-49.59	-6.90	0.00	-379.8	0.00	379.79	2,359.57	566.19	1,663.49	1,576.43	10.79	-1.11	0.140
100.00	-48.29	-6.80	0.00	-359.1	0.00	359.09	2,324.24	554.73	1,596.85	1,521.10	11.5	-1.15	0.136
105.00	-46.16	-6.69	0.00	-325.1	0.00	325.12	2,264.22	535.63	1,488.80	1,430.31	12.73	-1.21	0.128
105.36	-46.01	-6.64	0.00	-322.7	0.00	322.71	2,259.84	534.25	1,481.17	1,423.84	12.82	-1.21	0.127
105.36	-46.01	-6.64	0.00	-322.7	0.00	322.71	2,259.84	534.25	1,481.17	1,423.84	12.82	-1.21	0.247
110.00	-44.43	-6.53	0.00	-291.9	0.00	291.89	2,186.65	516.53	1,384.54	1,331.56	14.03	-1.27	0.240
115.00	-42.89	-6.44	0.00	-259.2	0.00	259.25	2,105.79	497.43	1,284.06	1,234.41	15.43	-1.39	0.231
120.00	-41.47	-6.36	0.00	-227.1	0.00	227.07	2,024.94	478.33	1,187.37	1,140.95	16.95	-1.51	0.220
121.00	-32.18	-5.08	0.00	-220.7	0.00	220.71	2,008.77	474.51	1,168.48	1,122.70	17.27	-1.53	0.213
125.00	-31.21	-5.01	0.00	-200.4	0.00	200.38	1,944.09	459.23	1,094.46	1,051.17	18.6	-1.63	0.207
130.00	-30.03	-4.93	0.00	-175.4	0.00	175.35	1,863.24	440.14	1,005.33	965.06	20.36	-1.74	0.198
132.12	-29.53	-4.89	0.00	-164.9	0.00	164.89	1,828.96	432.04	968.69	929.67	21.15	-1.8	0.194
135.00	-28.69	-4.84	0.00	-150.8	0.00	150.81	1,782.39	421.04	919.99	882.64	22.25	-1.86	0.187
135.75	-28.46	-4.83	0.00	-147.2	0.00	147.18	1,770.26	418.17	907.52	870.59	22.55	-1.88	0.185
135.87	-28.42	-4.80	0.00	-146.6	0.00	146.60	993.96	255.85	566.11	501.11	22.6	-1.88	0.138
139.50	-27.38	-4.72	0.00	-129.2	0.00	129.17	972.83	247.53	529.89	474.38	24.04	-1.93	0.127
140.00	-26.03	-4.49	0.00	-126.8	0.00	126.81	969.86	246.38	525.00	470.72	24.25	-1.94	0.125
142.00	-25.50	-4.42	0.00	-117.8	0.00	117.83	957.83	241.80	505.65	456.17	25.06	-1.96	0.118
145.00	-24.72	-4.36	0.00	-104.6	0.00	104.57	939.37	234.93	477.30	434.56	26.31	-2.01	0.109
146.00	-24.31	-4.25	0.00	-100.2	0.00	100.21	933.10	232.63	468.04	427.41	26.73	-2.02	0.106
147.00	-23.75	-4.08	0.00	-96.0	0.00	95.96	926.77	230.34	458.86	420.30	27.16	-2.03	0.102
147.25	-23.69	-4.05	0.00	-94.9	0.00	94.94	925.18	229.77	456.58	418.52	27.27	-2.04	0.102
147.25	-23.69	-4.05	0.00	-94.9	0.00	94.94	925.18	229.77	456.58	418.52	27.27	-2.04	0.253
150.00	-23.17	-3.96	0.00	-83.8	0.00	83.80	907.46	223.47	431.88	399.15	28.45	-2.07	0.236
150.10	-22.72	-3.70	0.00	-83.4	0.00	83.41	906.80	223.24	431.00	398.45	28.49	-2.08	0.235
155.00	-21.92	-3.63	0.00	-65.3	0.00	65.28	874.12	212.01	388.73	364.59	30.7	-2.22	0.204
159.00	-20.67	-3.51	0.00	-50.8	0.00	50.78	846.42	202.84	355.84	337.64	32.6	-2.32	0.175
160.00	-20.51	-3.48	0.00	-47.3	0.00	47.27	839.35	200.55	347.85	331.00	33.09	-2.35	0.168
164.00	-11.24	-2.07	0.00	-33.4	0.00	33.36	810.18	191.38	316.78	304.75	35.1	-2.43	0.123
165.00	-11.10	-2.05	0.00	-31.3	0.00	31.28	800.48	189.09	309.24	297.46	35.61	-2.45	0.119

CALCULATED FORCES													
165.10	-10.66	-1.98	0.00	-31.1	0.00	31.08	799.51	188.86	308.49	296.73	35.66	-2.45	0.118
170.00	-10.07	-1.88	0.00	-21.4	0.00	21.40	751.97	177.63	272.90	262.32	38.22	-2.54	0.095
175.00	-9.50	-1.78	0.00	-12.0	0.00	12.01	703.45	166.17	238.83	229.40	40.92	-2.6	0.066
180.00	0.00	-1.34	0.00	-3.1	0.00	3.12	654.94	154.71	207.03	198.68	43.66	-2.64	0.016

CALCULATED FORCES

Load Case: 1.0D + 1.0W

60 mph Wind with No Ice

27 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	-56.37	-10.68	0.00	-1,157.0	0.00	1,157.01	5,102.86	1,274.83	6,023.66	5,489.79	0	0	0.165
5.00	-54.47	-10.56	0.00	-1,103.6	0.00	1,103.60	5,029.12	1,248.09	5,773.66	5,296.04	0.03	-0.05	0.162
10.00	-52.59	-10.43	0.00	-1,050.8	0.00	1,050.82	4,953.96	1,221.35	5,528.96	5,104.17	0.1	-0.1	0.159
15.00	-50.74	-10.30	0.00	-998.7	0.00	998.68	4,877.37	1,194.61	5,289.56	4,914.29	0.23	-0.14	0.156
20.00	-48.91	-10.18	0.00	-947.2	0.00	947.17	4,799.35	1,167.88	5,055.46	4,726.50	0.4	-0.19	0.152
25.00	-47.11	-10.05	0.00	-896.3	0.00	896.29	4,719.91	1,141.14	4,826.65	4,540.87	0.63	-0.24	0.149
30.00	-45.32	-9.90	0.00	-846.0	0.00	846.05	4,639.04	1,114.40	4,603.14	4,357.53	0.91	-0.29	0.145
35.00	-43.58	-9.66	0.00	-796.6	0.00	796.57	4,556.74	1,087.66	4,384.94	4,176.56	1.24	-0.34	0.141
40.00	-41.86	-9.45	0.00	-748.3	0.00	748.28	4,473.02	1,060.92	4,172.03	3,998.06	1.62	-0.39	0.137
42.96	-40.85	-9.32	0.00	-720.3	0.00	720.33	4,422.84	1,045.11	4,048.62	3,893.71	1.87	-0.42	0.135
45.00	-39.80	-9.18	0.00	-701.3	0.00	701.28	4,378.05	1,034.19	3,964.41	3,813.57	2.06	-0.44	0.132
49.04	-37.75	-9.03	0.00	-664.2	0.00	664.18	3,604.18	884.90	3,386.08	3,138.53	2.45	-0.48	0.146
50.00	-37.46	-8.91	0.00	-655.5	0.00	655.52	3,591.52	880.50	3,352.48	3,111.81	2.55	-0.49	0.145
55.00	-35.93	-8.66	0.00	-611.0	0.00	610.97	3,524.72	857.58	3,180.26	2,973.74	3.09	-0.54	0.140
60.00	-34.44	-8.40	0.00	-567.7	0.00	567.68	3,456.50	834.66	3,012.57	2,837.55	3.68	-0.59	0.134
65.00	-32.96	-8.15	0.00	-525.7	0.00	525.67	3,386.84	811.74	2,849.42	2,703.31	4.33	-0.64	0.129
70.00	-31.51	-7.89	0.00	-484.9	0.00	484.94	3,315.77	788.82	2,690.82	2,571.14	5.03	-0.7	0.123
75.00	-30.08	-7.63	0.00	-445.5	0.00	445.49	3,242.33	765.91	2,536.75	2,440.43	5.79	-0.75	0.118
80.00	-28.40	-6.91	0.00	-407.3	0.00	407.32	3,145.31	742.99	2,387.23	2,295.85	6.6	-0.8	0.113
85.00	-27.02	-6.69	0.00	-372.8	0.00	372.79	3,048.29	720.07	2,242.25	2,155.68	7.46	-0.85	0.108
87.54	-26.32	-6.56	0.00	-355.8	0.00	355.80	2,999.00	708.43	2,170.34	2,086.17	7.92	-0.87	0.106
90.00	-25.37	-6.43	0.00	-339.7	0.00	339.67	2,951.27	697.15	2,101.81	2,019.93	8.37	-0.89	0.102
92.46	-24.43	-6.33	0.00	-323.9	0.00	323.87	2,412.09	583.54	1,767.02	1,661.39	8.84	-0.92	0.111
93.00	-24.29	-6.27	0.00	-320.4	0.00	320.44	2,405.87	581.47	1,754.47	1,651.16	8.94	-0.92	0.110
95.00	-23.59	-6.11	0.00	-307.9	0.00	307.89	2,382.84	573.83	1,708.68	1,613.66	9.33	-0.94	0.108
97.00	-23.09	-5.98	0.00	-295.7	0.00	295.68	2,359.57	566.19	1,663.49	1,576.43	9.73	-0.96	0.105
100.00	-22.37	-5.80	0.00	-277.7	0.00	277.74	2,324.24	554.73	1,596.85	1,521.10	10.35	-0.99	0.101
105.00	-21.17	-5.62	0.00	-248.7	0.00	248.74	2,264.22	535.63	1,488.80	1,430.31	11.42	-1.04	0.094
105.36	-21.09	-5.54	0.00	-246.7	0.00	246.72	2,259.84	534.25	1,481.17	1,423.84	11.5	-1.05	0.094
105.36	-21.09	-5.54	0.00	-246.7	0.00	246.72	2,259.84	534.25	1,481.17	1,423.84	11.5	-1.05	0.183
110.00	-20.30	-5.31	0.00	-221.0	0.00	221.04	2,186.65	516.53	1,384.54	1,331.56	12.54	-1.09	0.175
115.00	-19.53	-5.12	0.00	-194.5	0.00	194.46	2,105.79	497.43	1,284.06	1,234.41	13.72	-1.18	0.167
120.00	-18.82	-4.99	0.00	-168.9	0.00	168.88	2,024.94	478.33	1,187.37	1,140.95	15.01	-1.27	0.157
121.00	-14.97	-3.82	0.00	-163.9	0.00	163.89	2,008.77	474.51	1,168.48	1,122.70	15.28	-1.29	0.153
125.00	-14.44	-3.75	0.00	-148.6	0.00	148.60	1,944.09	459.23	1,094.46	1,051.17	16.38	-1.36	0.149
130.00	-13.79	-3.68	0.00	-129.9	0.00	129.86	1,863.24	440.14	1,005.33	965.06	17.85	-1.44	0.142
132.12	-13.53	-3.64	0.00	-122.1	0.00	122.06	1,828.96	432.04	968.69	929.67	18.5	-1.48	0.139
135.00	-13.02	-3.60	0.00	-111.6	0.00	111.57	1,782.39	421.04	919.99	882.64	19.41	-1.53	0.134
135.75	-12.89	-3.59	0.00	-108.9	0.00	108.87	1,770.26	418.17	907.52	870.59	19.65	-1.54	0.132
135.87	-12.86	-3.55	0.00	-108.4	0.00	108.44	993.96	255.85	566.11	501.11	19.69	-1.55	0.099
139.50	-12.29	-3.49	0.00	-95.6	0.00	95.55	972.83	247.53	529.89	474.38	20.87	-1.58	0.090
140.00	-11.47	-3.30	0.00	-93.8	0.00	93.80	969.86	246.38	525.00	470.72	21.04	-1.58	0.089
142.00	-11.17	-3.23	0.00	-87.2	0.00	87.21	957.83	241.80	505.65	456.17	21.71	-1.61	0.084
145.00	-10.74	-3.19	0.00	-77.5	0.00	77.51	939.37	234.93	477.30	434.56	22.73	-1.64	0.077
146.00	-10.56	-3.11	0.00	-74.3	0.00	74.32	933.10	232.63	468.04	427.41	23.07	-1.65	0.075
147.00	-10.34	-2.97	0.00	-71.2	0.00	71.21	926.77	230.34	458.86	420.30	23.42	-1.66	0.072
147.25	-10.31	-2.95	0.00	-70.5	0.00	70.47	925.18	229.77	456.58	418.52	23.5	-1.66	0.072
147.25	-10.31	-2.95	0.00	-70.5	0.00	70.47	925.18	229.77	456.58	418.52	23.5	-1.66	0.180
150.00	-10.08	-2.90	0.00	-62.4	0.00	62.36	907.46	223.47	431.88	399.15	24.47	-1.68	0.168
150.10	-9.95	-2.73	0.00	-62.1	0.00	62.07	906.80	223.24	431.00	398.45	24.5	-1.69	0.167
155.00	-9.58	-2.66	0.00	-48.7	0.00	48.72	874.12	212.01	388.73	364.59	26.29	-1.79	0.145
159.00	-8.95	-2.57	0.00	-38.1	0.00	38.08	846.42	202.84	355.84	337.64	27.83	-1.87	0.124
160.00	-8.88	-2.54	0.00	-35.5	0.00	35.51	839.35	200.55	347.85	331.00	28.22	-1.89	0.118
164.00	-5.20	-1.54	0.00	-25.3	0.00	25.34	810.18	191.38	316.78	304.75	29.83	-1.95	0.090
165.00	-5.13	-1.53	0.00	-23.8	0.00	23.80	800.48	189.09	309.24	297.46	30.24	-1.97	0.086

CALCULATED FORCES													
165.10	-4.90	-1.47	0.00	-23.6	0.00	23.65	799.51	188.86	308.49	296.73	30.29	-1.97	0.086
170.00	-4.59	-1.41	0.00	-16.4	0.00	16.43	751.97	177.63	272.90	262.32	32.34	-2.03	0.069
175.00	-4.28	-1.34	0.00	-9.4	0.00	9.40	703.45	166.17	238.83	229.40	34.5	-2.08	0.047
180.00	0.00	-1.18	0.00	-2.7	0.00	2.69	654.94	154.71	207.03	198.68	36.7	-2.11	0.014

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

Design Spectral Response Acceleration at Short Period (S_{ds}):	0.160
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):	1.250
Response Modification Coefficient (R):	1.500
Seismic Response Coefficient (C_s):	0.030
Upper Limit C_s :	0.030
Lower Limit C_s :	0.030
Period based on Rayleigh Method (sec):	3.020
Redundancy Factor (ρ):	1.000
Seismic Force Distribution Exponent (k):	2.000
Total Unfactored Dead Load:	56.380 k
Seismic Base Shear (E):	1.690 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)
Segment							
56		177.5	296	9,327	0.016	27	365
55		172.5	307	9,140	0.016	26	378
54		167.55	313	8,801	0.015	25	386
53		165.05	7	182	0.000	1	8
52		164.5	70	1,895	0.003	5	86
51		162	287	7,532	0.013	22	354
50		159.5	73	1,853	0.003	5	90
49		157	296	7,293	0.012	21	365
48		152.55	372	8,660	0.015	25	458
47		150.05	8	173	0.000	0	9
46		148.625	216	4,769	0.008	14	266
45		147.125	35	750	0.001	2	43
44		146.5	141	3,017	0.005	9	173
43		145.5	145	3,073	0.005	9	179
42		143.5	438	9,021	0.015	26	540
41		141	296	5,880	0.010	17	364
40		139.75	74	1,453	0.002	4	92
39		137.6849	544	10,315	0.018	30	670
38		135.8099	28	512	0.001	1	34
37		135.375	130	2,375	0.004	7	160
36		133.5599	504	8,988	0.015	26	621
35		131.0599	267	4,594	0.008	13	329
34		127.5	644	10,469	0.018	30	793
33		123	529	7,996	0.014	23	651
32		120.5	140	2,036	0.004	6	173
31		117.5	712	9,832	0.017	28	877
30		112.5	768	9,721	0.016	28	946
29		107.68	781	9,061	0.015	26	963
28		105.18	85	944	0.002	3	105
27		102.5	1,195	12,558	0.021	36	1,473
26		98.5	726	7,044	0.012	20	894
25		96	488	4,501	0.008	13	602
24		94	492	4,344	0.007	12	606
23		92.7283	134	1,155	0.002	3	165
22		91.2283	939	7,816	0.013	22	1,157
21		88.77	950	7,489	0.013	21	1,171
20		86.27	692	5,154	0.009	15	853
19		82.5	1,380	9,392	0.016	27	1,700
18		77.5	1,405	8,437	0.014	24	1,731
17		72.5	1,427	7,500	0.013	22	1,758
16		67.5	1,449	6,603	0.011	19	1,785
15		62.5	1,471	5,748	0.010	16	1,813

ASSET: 302506, Winchester CT 3
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA796775_C3_01

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh	Seismic	Height Above Base	Weight	W _z		Horizontal Force	Vertical Force
Segment		(ft)	(lb)	(lb-ft)	C _{vx}	(lb)	(lb)
14		57.5	1,494	4,938	0.008	14	1,840
13		52.5	1,516	4,178	0.007	12	1,868
12		49.52	294	720	0.001	2	362
11		47.02	2,046	4,524	0.008	13	2,521
10		43.9783	1,047	2,025	0.003	6	1,290
9		41.4783	1,002	1,724	0.003	5	1,234
8		37.5	1,715	2,411	0.004	7	2,113
7		32.5	1,741	1,839	0.003	5	2,145
6		27.5	1,767	1,336	0.002	4	2,177
5		22.5	1,793	907	0.002	3	2,208
4		17.5	1,819	557	0.001	2	2,240
3		12.5	1,844	288	0.000	1	2,272
2		7.5	1,870	105	0.000	0	2,304
1		2.5	1,896	12	0.000	0	2,336
Raycap DC6-48-60-18-8F (23.5" Height)		180	40	1,296	0.002	4	49
Ericsson RRUS 8843 B2, B66A		180	216	6,998	0.012	20	266
Ericsson RRUS 4449 B5, B12		180	213	6,901	0.012	20	262
Ericsson Radio 4494 44B14 20B29 M01		180	172	5,570	0.010	16	212
Raycap DC9-48-60-24-8C-EV (Enclosure)		180	18	599	0.001	2	23
Raycap DC6-48-60-18-8C-EV (Enclosure)		180	16	518	0.001	1	20
Ericsson RRUS 32 B30		180	180	5,832	0.010	17	222
Ericsson AIR 6472 B77G B77M (77.2lbs)		180	232	7,504	0.013	22	285
CCI DMP65R-BU6DA		180	238	7,718	0.013	22	293
CCI TPA65R-BU6Dv2		180	205	6,639	0.011	19	252
Generic Flat Platform with Handrails		180	2,500	81,000	0.138	232	3,080
Ericsson Radio 4449 B71 B85A		165.1	225	6,133	0.010	18	277
Ceragon FibeAir IP-20S		164	13	355	0.001	1	16
Commscope VHLP2-11W/A		164	17	457	0.001	1	21
Generic Mount Reinforcement		164	600	16,138	0.027	46	739
Ericsson Air6449 B41		164	312	8,392	0.014	24	384
Generic Round Sector Frame		164	2,100	56,482	0.096	162	2,587
RFS APXVAARR24_43-U-NA20		164	384	10,320	0.018	30	473
Ericsson Radio 4460 B25+B66		159	327	8,267	0.014	24	403
Decibel DB809DK-XT		150.1	128	2,884	0.005	8	158
Sinclair SD210-SF2P4SNM		150	8	187	0.000	1	10
Sinclair SC442D-HF1LDF(DXX-I30-G9-NUFP)		147	79	1,707	0.003	5	97
Sinclair SC479-HF1LDF(E5765)		146	34	725	0.001	2	42
Telewave ANT150D (5 lbs)		142	5	101	0.000	0	6
Generic Round Side Arm		140	750	14,700	0.025	42	924
Generic Round Side Arm		95	188	1,692	0.003	5	231
Bird 432-83H-01-T		139.5	25	487	0.001	1	31
Commscope CBC78T-DS-43-2X		121	62	909	0.002	3	77
Samsung B2/B66A RRH ORAN (RF 4439d-25A)		121	224	3,281	0.006	9	276
Samsung RF4461d-13A		121	237	3,474	0.006	10	292
Samsung MT6413-77A		121	172	2,517	0.004	7	212
Raycap RCMDC-6627-PF-48		121	32	469	0.001	1	39
Antel LPA-80080/6CF ____		121	84	1,230	0.002	4	103
Commscope JAHH-65B-R3B		121	364	5,323	0.009	15	448
Antel LPA-80063/6CF		121	54	791	0.001	2	67
Generic Round Platform with Handrails		121	2,500	36,602	0.062	105	3,080
Andrew DB586		97	8	78	0.000	0	10
Andrew DB586		93	8	72	0.000	0	10
Bird 429-83H-01-T		95	20	180	0.000	1	25
RFS PA6-65AC		80	278	1,779	0.003	5	342
Generic GPS		30	10	9	0.000	0	12
Totals:			56,377	589,283	1.000	1,691	69,456

ASSET: 302506, Winchester CT 3
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA796775_C3_01

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)
56	177.5	296	9,327	0.016	27	257
55	172.5	307	9,140	0.016	26	267
54	167.55	313	8,801	0.015	25	272
53	165.05	7	182	0.000	1	6
52	164.5	70	1,895	0.003	5	61
51	162	287	7,532	0.013	22	249
50	159.5	73	1,853	0.003	5	63
49	157	296	7,293	0.012	21	257
48	152.55	372	8,660	0.015	25	323
47	150.05	8	173	0.000	0	7
46	148.625	216	4,769	0.008	14	187
45	147.125	35	750	0.001	2	30
44	146.5	141	3,017	0.005	9	122
43	145.5	145	3,073	0.005	9	126
42	143.5	438	9,021	0.015	26	380
41	141	296	5,880	0.010	17	257
40	139.75	74	1,453	0.002	4	65
39	137.6849	544	10,315	0.018	30	472
38	135.8099	28	512	0.001	1	24
37	135.375	130	2,375	0.004	7	112
36	133.5599	504	8,988	0.015	26	437
35	131.0599	267	4,594	0.008	13	232
34	127.5	644	10,469	0.018	30	559
33	123	529	7,996	0.014	23	459
32	120.5	140	2,036	0.004	6	122
31	117.5	712	9,832	0.017	28	618
30	112.5	768	9,721	0.016	28	667
29	107.68	781	9,061	0.015	26	678
28	105.18	85	944	0.002	3	74
27	102.5	1,195	12,558	0.021	36	1,037
26	98.5	726	7,044	0.012	20	630
25	96	488	4,501	0.008	13	424
24	94	492	4,344	0.007	12	427
23	92.7283	134	1,155	0.002	3	117
22	91.2283	939	7,816	0.013	22	815
21	88.77	950	7,489	0.013	21	825
20	86.27	692	5,154	0.009	15	601
19	82.5	1,380	9,392	0.016	27	1,198
18	77.5	1,405	8,437	0.014	24	1,219
17	72.5	1,427	7,500	0.013	22	1,239
16	67.5	1,449	6,603	0.011	19	1,258
15	62.5	1,471	5,748	0.010	16	1,277
14	57.5	1,494	4,938	0.008	14	1,296
13	52.5	1,516	4,178	0.007	12	1,316
12	49.52	294	720	0.001	2	255
11	47.02	2,046	4,524	0.008	13	1,776
10	43.9783	1,047	2,025	0.003	6	909
9	41.4783	1,002	1,724	0.003	5	870
8	37.5	1,715	2,411	0.004	7	1,488
7	32.5	1,741	1,839	0.003	5	1,511
6	27.5	1,767	1,336	0.002	4	1,533
5	22.5	1,793	907	0.002	3	1,556
4	17.5	1,819	557	0.001	2	1,578
3	12.5	1,844	288	0.000	1	1,601
2	7.5	1,870	105	0.000	0	1,623
1	2.5	1,896	12	0.000	0	1,646
Raycap DC6-48-60-18-8F (23.5" Height)	180	40	1,296	0.002	4	35
Ericsson RRUS 8843 B2, B66A	180	216	6,998	0.012	20	187
Ericsson RRUS 4449 B5, B12	180	213	6,901	0.012	20	185
Ericsson Radio 4494 44B14 20B29 M01	180	172	5,570	0.010	16	149
Raycap DC9-48-60-24-8C-EV (Enclosure)	180	18	599	0.001	2	16

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)
Raycap DC6-48-60-18-8C-EV (Enclosure)	180	16	518	0.001	1	14
Ericsson RRUS 32 B30	180	180	5,832	0.010	17	156
Ericsson AIR 6472 B77G B77M (77.2lbs)	180	232	7,504	0.013	22	201
CCI DMP65R-BU6DA	180	238	7,718	0.013	22	207
CCI TPA65R-BU6Dv2	180	205	6,639	0.011	19	178
Generic Flat Platform with Handrails	180	2,500	81,000	0.138	232	2,170
Ericsson Radio 4449 B71 B85A	165.1	225	6,133	0.010	18	195
Ceragon FibeAir IP-20S	164	13	355	0.001	1	11
Commscope VHLP2-11W/A	164	17	457	0.001	1	15
Generic Mount Reinforcement	164	600	16,138	0.027	46	521
Ericsson Air6449 B41	164	312	8,392	0.014	24	271
Generic Round Sector Frame	164	2,100	56,482	0.096	162	1,823
RFS APXVAARR24_43-U-NA20	164	384	10,320	0.018	30	333
Ericsson Radio 4460 B25+B66	159	327	8,267	0.014	24	284
Decibel DB809DK-XT	150.1	128	2,884	0.005	8	111
Sinclair SD210-SF2P4SNM	150	8	187	0.000	1	7
Sinclair SC442D-HF1LDF(DXX-I30-G9-NUFP)	147	79	1,707	0.003	5	69
Sinclair SC479-HF1LDF(E5765)	146	34	725	0.001	2	30
Telewave ANT150D (5 lbs)	142	5	101	0.000	0	4
Generic Round Side Arm	140	750	14,700	0.025	42	651
Generic Round Side Arm	95	188	1,692	0.003	5	163
Bird 432-83H-01-T	139.5	25	487	0.001	1	22
Commscope CBC78T-DS-43-2X	121	62	909	0.002	3	54
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	121	224	3,281	0.006	9	195
Samsung RF4461d-13A	121	237	3,474	0.006	10	206
Samsung MT6413-77A	121	172	2,517	0.004	7	149
Raycap RCMDC-6627-PF-48	121	32	469	0.001	1	28
Antel LPA-80080/6CF ____	121	84	1,230	0.002	4	73
Commscope JAHH-65B-R3B	121	364	5,323	0.009	15	316
Antel LPA-80063/6CF	121	54	791	0.001	2	47
Generic Round Platform with Handrails	121	2,500	36,602	0.062	105	2,170
Andrew DB586	97	8	78	0.000	0	7
Andrew DB586	93	8	72	0.000	0	7
Bird 429-83H-01-T	95	20	180	0.000	1	17
RFS PA6-65AC	80	278	1,779	0.003	5	241
Generic GPS	30	10	9	0.000	0	9
Totals:		56,377	589,283	1.000	1,691	48,935

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)
56	177.5	296	9,327	0.016	40	365
55	172.5	307	9,140	0.016	39	378
54	167.55	313	8,801	0.015	38	386
53	165.05	7	182	0.000	1	8
52	164.5	70	1,895	0.003	8	86
51	162	287	7,532	0.013	32	354
50	159.5	73	1,853	0.003	8	90
49	157	296	7,293	0.012	31	365
48	152.55	372	8,660	0.015	37	458
47	150.05	8	173	0.000	1	9
46	148.625	216	4,769	0.008	21	266
45	147.125	35	750	0.001	3	43
44	146.5	141	3,017	0.005	13	173
43	145.5	145	3,073	0.005	13	179
42	143.5	438	9,021	0.015	39	540
41	141	296	5,880	0.010	25	364
40	139.75	74	1,453	0.002	6	92
39	137.6849	544	10,315	0.018	44	670
38	135.8099	28	512	0.001	2	34

ASSET: 302506, Winchester CT 3
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA796775_C3_01

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)
37	135.375	130	2,375	0.004	10	160
36	133.5599	504	8,988	0.015	39	621
35	131.0599	267	4,594	0.008	20	329
34	127.5	644	10,469	0.018	45	793
33	123	529	7,996	0.014	34	651
32	120.5	140	2,036	0.004	9	173
31	117.5	712	9,832	0.017	42	877
30	112.5	768	9,721	0.016	42	946
29	107.68	781	9,061	0.015	39	963
28	105.18	85	944	0.002	4	105
27	102.5	1,195	12,558	0.021	54	1,473
26	98.5	726	7,044	0.012	30	894
25	96	488	4,501	0.008	19	602
24	94	492	4,344	0.007	19	606
23	92.7283	134	1,155	0.002	5	165
22	91.2283	939	7,816	0.013	34	1,157
21	88.77	950	7,489	0.013	32	1,171
20	86.27	692	5,154	0.009	22	853
19	82.5	1,380	9,392	0.016	40	1,700
18	77.5	1,405	8,437	0.014	36	1,731
17	72.5	1,427	7,500	0.013	32	1,758
16	67.5	1,449	6,603	0.011	28	1,785
15	62.5	1,471	5,748	0.010	25	1,813
14	57.5	1,494	4,938	0.008	21	1,840
13	52.5	1,516	4,178	0.007	18	1,868
12	49.52	294	720	0.001	3	362
11	47.02	2,046	4,524	0.008	19	2,521
10	43.9783	1,047	2,025	0.003	9	1,290
9	41.4783	1,002	1,724	0.003	7	1,234
8	37.5	1,715	2,411	0.004	10	2,113
7	32.5	1,741	1,839	0.003	8	2,145
6	27.5	1,767	1,336	0.002	6	2,177
5	22.5	1,793	907	0.002	4	2,208
4	17.5	1,819	557	0.001	2	2,240
3	12.5	1,844	288	0.000	1	2,272
2	7.5	1,870	105	0.000	0	2,304
1	2.5	1,896	12	0.000	0	2,336
Raycap DC6-48-60-18-8F (23.5" Height)	180	40	1,296	0.002	6	49
Ericsson RRUS 8843 B2, B66A	180	216	6,998	0.012	30	266
Ericsson RRUS 4449 B5, B12	180	213	6,901	0.012	30	262
Ericsson Radio 4494 44B14 20B29 M01	180	172	5,570	0.010	24	212
Raycap DC9-48-60-24-8C-EV (Enclosure)	180	18	599	0.001	3	23
Raycap DC6-48-60-18-8C-EV (Enclosure)	180	16	518	0.001	2	20
Ericsson RRUS 32 B30	180	180	5,832	0.010	25	222
Ericsson AIR 6472 B77G B77M (77.2lbs)	180	232	7,504	0.013	32	285
CCI DMP65R-BU6DA	180	238	7,718	0.013	33	293
CCI TPA65R-BU6Dv2	180	205	6,639	0.011	29	252
Generic Flat Platform with Handrails	180	2,500	81,000	0.138	349	3,080
Ericsson Radio 4449 B71 B85A	165.1	225	6,133	0.010	26	277
Ceragon FibeAir IP-20S	164	13	355	0.001	2	16
Commscope VHLP2-11W/A	164	17	457	0.001	2	21
Generic Mount Reinforcement	164	600	16,138	0.027	69	739
Ericsson Air6449 B41	164	312	8,392	0.014	36	384
Generic Round Sector Frame	164	2,100	56,482	0.096	243	2,587
RFS APXVAARR24_43-U-NA20	164	384	10,320	0.018	44	473
Ericsson Radio 4460 B25+B66	159	327	8,267	0.014	36	403
Decibel DB809DK-XT	150.1	128	2,884	0.005	12	158
Sinclair SD210-SF2P4SNM	150	8	187	0.000	1	10
Sinclair SC442D-HF1LDF(DXX-I30-G9-NUPF)	147	79	1,707	0.003	7	97
Sinclair SC479-HF1LDF(E5765)	146	34	725	0.001	3	42
Telewave ANT150D (5 lbs)	142	5	101	0.000	0	6

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)
Generic Round Side Arm	140	750	14,700	0.025	63	924
Generic Round Side Arm	95	188	1,692	0.003	7	231
Bird 432-83H-01-T	139.5	25	487	0.001	2	31
Commscope CBC78T-DS-43-2X	121	62	909	0.002	4	77
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	121	224	3,281	0.006	14	276
Samsung RF4461d-13A	121	237	3,474	0.006	15	292
Samsung MT6413-77A	121	172	2,517	0.004	11	212
Raycap RCMDC-6627-PF-48	121	32	469	0.001	2	39
Antel LPA-80080/6CF ____	121	84	1,230	0.002	5	103
Commscope JAHH-65B-R3B	121	364	5,323	0.009	23	448
Antel LPA-80063/6CF	121	54	791	0.001	3	67
Generic Round Platform with Handrails	121	2,500	36,602	0.062	158	3,080
Andrew DB586	97	8	78	0.000	0	10
Andrew DB586	93	8	72	0.000	0	10
Bird 429-83H-01-T	95	20	180	0.000	1	25
RFS PA6-65AC	80	278	1,779	0.003	8	342
Generic GPS	30	10	9	0.000	0	12
Totals:		56,377	589,283	1.000	2,537	69,456

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)
56	177.5	296	9,327	0.016	40	257
55	172.5	307	9,140	0.016	39	267
54	167.55	313	8,801	0.015	38	272
53	165.05	7	182	0.000	1	6
52	164.5	70	1,895	0.003	8	61
51	162	287	7,532	0.013	32	249
50	159.5	73	1,853	0.003	8	63
49	157	296	7,293	0.012	31	257
48	152.55	372	8,660	0.015	37	323
47	150.05	8	173	0.000	1	7
46	148.625	216	4,769	0.008	21	187
45	147.125	35	750	0.001	3	30
44	146.5	141	3,017	0.005	13	122
43	145.5	145	3,073	0.005	13	126
42	143.5	438	9,021	0.015	39	380
41	141	296	5,880	0.010	25	257
40	139.75	74	1,453	0.002	6	65
39	137.6849	544	10,315	0.018	44	472
38	135.8099	28	512	0.001	2	24
37	135.375	130	2,375	0.004	10	112
36	133.5599	504	8,988	0.015	39	437
35	131.0599	267	4,594	0.008	20	232
34	127.5	644	10,469	0.018	45	559
33	123	529	7,996	0.014	34	459
32	120.5	140	2,036	0.004	9	122
31	117.5	712	9,832	0.017	42	618
30	112.5	768	9,721	0.016	42	667
29	107.68	781	9,061	0.015	39	678
28	105.18	85	944	0.002	4	74
27	102.5	1,195	12,558	0.021	54	1,037
26	98.5	726	7,044	0.012	30	630
25	96	488	4,501	0.008	19	424
24	94	492	4,344	0.007	19	427
23	92.7283	134	1,155	0.002	5	117
22	91.2283	939	7,816	0.013	34	815
21	88.77	950	7,489	0.013	32	825
20	86.27	692	5,154	0.009	22	601
19	82.5	1,380	9,392	0.016	40	1,198

ASSET: 302506, Winchester CT 3
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA796775_C3_01

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)
18	77.5	1,405	8,437	0.014	36	1,219
17	72.5	1,427	7,500	0.013	32	1,239
16	67.5	1,449	6,603	0.011	28	1,258
15	62.5	1,471	5,748	0.010	25	1,277
14	57.5	1,494	4,938	0.008	21	1,296
13	52.5	1,516	4,178	0.007	18	1,316
12	49.52	294	720	0.001	3	255
11	47.02	2,046	4,524	0.008	19	1,776
10	43.9783	1,047	2,025	0.003	9	909
9	41.4783	1,002	1,724	0.003	7	870
8	37.5	1,715	2,411	0.004	10	1,488
7	32.5	1,741	1,839	0.003	8	1,511
6	27.5	1,767	1,336	0.002	6	1,533
5	22.5	1,793	907	0.002	4	1,556
4	17.5	1,819	557	0.001	2	1,578
3	12.5	1,844	288	0.000	1	1,601
2	7.5	1,870	105	0.000	0	1,623
1	2.5	1,896	12	0.000	0	1,646
Raycap DC6-48-60-18-8F (23.5" Height)	180	40	1,296	0.002	6	35
Ericsson RRUS 8843 B2, B66A	180	216	6,998	0.012	30	187
Ericsson RRUS 4449 B5, B12	180	213	6,901	0.012	30	185
Ericsson Radio 4494 44B14 20B29 M01	180	172	5,570	0.010	24	149
Raycap DC9-48-60-24-8C-EV (Enclosure)	180	18	599	0.001	3	16
Raycap DC6-48-60-18-8C-EV (Enclosure)	180	16	518	0.001	2	14
Ericsson RRUS 32 B30	180	180	5,832	0.010	25	156
Ericsson AIR 6472 B77G B77M (77.2lbs)	180	232	7,504	0.013	32	201
CCI DMP65R-BU6DA	180	238	7,718	0.013	33	207
CCI TPA65R-BU6Dv2	180	205	6,639	0.011	29	178
Generic Flat Platform with Handrails	180	2,500	81,000	0.138	349	2,170
Ericsson Radio 4449 B71 B85A	165.1	225	6,133	0.010	26	195
Ceragon FibeAir IP-20S	164	13	355	0.001	2	11
Commscope VHLP2-11W/A	164	17	457	0.001	2	15
Generic Mount Reinforcement	164	600	16,138	0.027	69	521
Ericsson Air6449 B41	164	312	8,392	0.014	36	271
Generic Round Sector Frame	164	2,100	56,482	0.096	243	1,823
RFS APXVAARR24_43-U-NA20	164	384	10,320	0.018	44	333
Ericsson Radio 4460 B25+B66	159	327	8,267	0.014	36	284
Decibel DB809DK-XT	150.1	128	2,884	0.005	12	111
Sinclair SD210-SF2P4SNM	150	8	187	0.000	1	7
Sinclair SC442D-HF1LDF(DXX-I30-G9-NUPF)	147	79	1,707	0.003	7	69
Sinclair SC479-HF1LDF(E5765)	146	34	725	0.001	3	30
Telewave ANT150D (5 lbs)	142	5	101	0.000	0	4
Generic Round Side Arm	140	750	14,700	0.025	63	651
Generic Round Side Arm	95	188	1,692	0.003	7	163
Bird 432-83H-01-T	139.5	25	487	0.001	2	22
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Samsung B2/B66A RRH ORAN (RF 4439d-25A)	121	224	3,281	0.006	14	195
Samsung RF4461d-13A	121	237	3,474	0.006	15	206
Samsung MT6413-77A	121	172	2,517	0.004	11	149
Raycap RCMDC-6627-PF-48	121	32	469	0.001	2	28
Antel LPA-80080/6CF ____	121	84	1,230	0.002	5	73
Commscope JAHH-65B-R3B	121	364	5,323	0.009	23	316
Antel LPA-80063/6CF	121	54	791	0.001	3	47
Generic Round Platform with Handrails	121	2,500	36,602	0.062	158	2,170
Andrew DB586	97	8	78	0.000	0	7
Andrew DB586	93	8	72	0.000	0	7
Bird 429-83H-01-T	95	20	180	0.000	1	17
RFS PA6-65AC	80	278	1,779	0.003	8	241
Generic GPS	30	10	9	0.000	0	9
Totals:		56,377	589,283	1.000	2,537	48,935

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	-67.12	-1.70	0.00	-250.17	0.00	250.17	5,102.86	1,274.83	6,024	5,489.79	0.00	0.00	0.04
5.00	-64.81	-1.71	0.00	-241.68	0.00	241.68	5,029.12	1,248.09	5,774	5,296.04	0.01	-0.01	0.04
10.00	-62.54	-1.72	0.00	-233.14	0.00	233.14	4,953.96	1,221.35	5,529	5,104.17	0.02	-0.02	0.04
10.00	-62.54	-1.72	0.00	-233.14	0.00	233.14	4,953.96	1,221.35	5,529	5,104.17	0.02	-0.02	0.04
15.00	-60.30	-1.73	0.00	-224.55	0.00	224.55	4,877.37	1,194.61	5,290	4,914.29	0.05	-0.03	0.04
20.00	-58.09	-1.73	0.00	-215.92	0.00	215.92	4,799.35	1,167.88	5,055	4,726.50	0.09	-0.04	0.04
25.00	-55.92	-1.74	0.00	-207.25	0.00	207.25	4,719.91	1,141.14	4,827	4,540.87	0.14	-0.05	0.04
30.00	-53.76	-1.74	0.00	-198.55	0.00	198.55	4,639.04	1,114.40	4,603	4,357.53	0.20	-0.07	0.04
35.00	-51.65	-1.74	0.00	-189.83	0.00	189.83	4,556.74	1,087.66	4,385	4,176.56	0.28	-0.08	0.04
40.00	-50.41	-1.75	0.00	-181.11	0.00	181.11	4,473.02	1,060.92	4,172	3,998.06	0.36	-0.09	0.04
42.96	-49.12	-1.74	0.00	-175.95	0.00	175.95	4,422.84	1,045.11	4,049	3,893.71	0.42	-0.10	0.04
45.00	-46.60	-1.73	0.00	-172.39	0.00	172.39	4,378.05	1,034.19	3,964	3,813.57	0.46	-0.10	0.04
49.04	-46.24	-1.73	0.00	-165.39	0.00	165.39	3,604.18	884.90	3,386	3,138.53	0.55	-0.11	0.04
50.00	-44.37	-1.72	0.00	-163.73	0.00	163.73	3,591.52	880.50	3,352	3,111.81	0.58	-0.11	0.04
55.00	-42.53	-1.72	0.00	-155.11	0.00	155.11	3,524.72	857.58	3,180	2,973.74	0.70	-0.13	0.04
60.00	-40.72	-1.71	0.00	-146.52	0.00	146.52	3,456.50	834.66	3,013	2,837.55	0.84	-0.14	0.04
65.00	-38.93	-1.69	0.00	-138.00	0.00	138.00	3,386.84	811.74	2,849	2,703.31	1.00	-0.15	0.04
70.00	-37.17	-1.67	0.00	-129.55	0.00	129.55	3,315.77	788.82	2,691	2,571.14	1.16	-0.17	0.04
75.00	-35.44	-1.65	0.00	-121.18	0.00	121.18	3,242.33	765.91	2,537	2,440.43	1.34	-0.18	0.04
80.00	-33.40	-1.62	0.00	-112.92	0.00	112.92	3,145.31	742.99	2,387	2,295.85	1.54	-0.19	0.04
85.00	-32.55	-1.61	0.00	-104.81	0.00	104.81	3,048.29	720.07	2,242	2,155.68	1.75	-0.21	0.04
87.54	-31.37	-1.59	0.00	-100.73	0.00	100.73	2,999.00	708.43	2,170	2,086.17	1.86	-0.21	0.04
90.00	-30.22	-1.56	0.00	-96.82	0.00	96.82	2,951.27	697.15	2,102	2,019.93	1.98	-0.22	0.03
92.46	-30.05	-1.56	0.00	-92.98	0.00	92.98	2,412.09	583.54	1,767	1,661.39	2.09	-0.23	0.04
93.00	-29.44	-1.55	0.00	-92.13	0.00	92.13	2,405.87	581.47	1,754	1,651.16	2.12	-0.23	0.04
95.00	-28.58	-1.53	0.00	-89.03	0.00	89.03	2,382.84	573.83	1,709	1,613.66	2.22	-0.24	0.04
97.00	-27.67	-1.51	0.00	-85.97	0.00	85.97	2,359.57	566.19	1,663	1,576.43	2.32	-0.24	0.04
100.00	-26.20	-1.47	0.00	-81.44	0.00	81.44	2,324.24	554.73	1,597	1,521.10	2.47	-0.25	0.04
105.00	-26.10	-1.47	0.00	-74.08	0.00	74.08	2,264.22	535.63	1,489	1,430.31	2.74	-0.26	0.03
105.36	-25.13	-1.45	0.00	-73.55	0.00	73.55	2,259.84	534.25	1,481	1,423.84	2.76	-0.27	0.03
105.36	-25.13	-1.45	0.00	-73.55	0.00	73.55	2,259.84	534.25	1,481	1,423.84	2.76	-0.27	0.06
110.00	-24.19	-1.42	0.00	-66.84	0.00	66.84	2,186.65	516.53	1,385	1,331.56	3.03	-0.28	0.06
115.00	-23.31	-1.40	0.00	-59.73	0.00	59.73	2,105.79	497.43	1,284	1,234.41	3.33	-0.31	0.06
120.00	-23.14	-1.40	0.00	-52.73	0.00	52.73	2,024.94	478.33	1,187	1,140.95	3.67	-0.33	0.06
121.00	-17.89	-1.19	0.00	-51.33	0.00	51.33	2,008.77	474.51	1,168	1,122.70	3.74	-0.34	0.06
125.00	-17.10	-1.17	0.00	-46.56	0.00	46.56	1,944.09	459.23	1,094	1,051.17	4.03	-0.36	0.05
130.00	-16.77	-1.16	0.00	-40.73	0.00	40.73	1,863.24	440.14	1,005	965.06	4.43	-0.39	0.05
132.12	-16.15	-1.13	0.00	-38.27	0.00	38.27	1,828.96	432.04	969	929.67	4.60	-0.40	0.05
135.00	-15.99	-1.13	0.00	-35.02	0.00	35.02	1,782.39	421.04	920	882.64	4.85	-0.42	0.05
135.75	-15.95	-1.12	0.00	-34.17	0.00	34.17	1,770.26	418.17	908	870.59	4.91	-0.42	0.05
135.87	-15.28	-1.09	0.00	-34.04	0.00	34.04	993.96	255.85	566	501.11	4.92	-0.42	0.04
139.50	-15.16	-1.09	0.00	-30.08	0.00	30.08	972.83	247.53	530	474.38	5.25	-0.43	0.03
140.00	-13.87	-1.02	0.00	-29.54	0.00	29.54	969.86	246.38	525	470.72	5.29	-0.43	0.03
142.00	-13.33	-0.99	0.00	-27.50	0.00	27.50	957.83	241.80	506	456.17	5.48	-0.44	0.03
145.00	-13.15	-0.98	0.00	-24.53	0.00	24.53	939.37	234.93	477	434.56	5.76	-0.45	0.03
146.00	-12.93	-0.97	0.00	-23.55	0.00	23.55	933.10	232.63	468	427.41	5.85	-0.45	0.03
147.00	-12.79	-0.96	0.00	-22.58	0.00	22.58	926.77	230.34	459	420.30	5.95	-0.46	0.03
147.25	-12.53	-0.95	0.00	-22.34	0.00	22.34	925.18	229.77	457	418.52	5.97	-0.46	0.03
147.25	-12.53	-0.95	0.00	-22.34	0.00	22.34	925.18	229.77	457	418.52	5.97	-0.46	0.07
150.00	-12.51	-0.95	0.00	-19.73	0.00	19.73	907.46	223.47	432	399.15	6.24	-0.46	0.06
150.10	-11.89	-0.91	0.00	-19.64	0.00	19.64	906.80	223.24	431	398.45	6.25	-0.47	0.06
155.00	-11.53	-0.89	0.00	-15.16	0.00	15.16	874.12	212.01	389	364.59	6.74	-0.50	0.06
159.00	-11.03	-0.86	0.00	-11.59	0.00	11.59	846.42	202.84	356	337.64	7.17	-0.52	0.05
160.00	-10.68	-0.84	0.00	-10.72	0.00	10.72	839.35	200.55	348	331.00	7.28	-0.53	0.05
164.00	-6.38	-0.53	0.00	-7.36	0.00	7.36	810.18	191.38	317	304.75	7.73	-0.55	0.03
165.00	-6.37	-0.53	0.00	-6.83	0.00	6.83	800.48	189.09	309	297.46	7.85	-0.55	0.03
165.10	-5.70	-0.48	0.00	-6.77	0.00	6.77	799.51	188.86	308	296.73	7.86	-0.55	0.03
170.00	-5.33	-0.46	0.00	-4.40	0.00	4.40	751.97	177.63	273	262.32	8.43	-0.57	0.02
175.00	-4.96	-0.43	0.00	-2.13	0.00	2.13	703.45	166.17	239	229.40	9.04	-0.58	0.02

ASSET: 302506, Winchester CT 3
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-I
PROJECT: OAA796775_C3_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
180.00	0.00	-0.37	0.00	0.00	0.00	0.00	654.94	154.71	207	198.68	9.65	-0.59	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	-47.29	-1.69	0.00	-244.97	0.00	244.97	5,102.86	1,274.83	6,024	5,489.79	0.00	0.00	0.04
5.00	-45.66	-1.70	0.00	-236.50	0.00	236.50	5,029.12	1,248.09	5,774	5,296.04	0.01	-0.01	0.04
10.00	-44.06	-1.71	0.00	-227.99	0.00	227.99	4,953.96	1,221.35	5,529	5,104.17	0.02	-0.02	0.04
10.00	-44.06	-1.71	0.00	-227.99	0.00	227.99	4,953.96	1,221.35	5,529	5,104.17	0.02	-0.02	0.04
15.00	-42.48	-1.71	0.00	-219.45	0.00	219.45	4,877.37	1,194.61	5,290	4,914.29	0.05	-0.03	0.04
20.00	-40.93	-1.72	0.00	-210.88	0.00	210.88	4,799.35	1,167.88	5,055	4,726.50	0.09	-0.04	0.04
25.00	-39.39	-1.72	0.00	-202.28	0.00	202.28	4,719.91	1,141.14	4,827	4,540.87	0.14	-0.05	0.04
30.00	-37.87	-1.72	0.00	-193.68	0.00	193.68	4,639.04	1,114.40	4,603	4,357.53	0.20	-0.06	0.04
35.00	-36.39	-1.72	0.00	-185.07	0.00	185.07	4,556.74	1,087.66	4,385	4,176.56	0.27	-0.08	0.04
40.00	-35.52	-1.72	0.00	-176.48	0.00	176.48	4,473.02	1,060.92	4,172	3,998.06	0.36	-0.09	0.04
42.96	-34.61	-1.72	0.00	-171.39	0.00	171.39	4,422.84	1,045.11	4,049	3,893.71	0.41	-0.09	0.04
45.00	-32.83	-1.70	0.00	-167.89	0.00	167.89	4,378.05	1,034.19	3,964	3,813.57	0.45	-0.10	0.04
49.04	-32.58	-1.70	0.00	-161.00	0.00	161.00	3,604.18	884.90	3,386	3,138.53	0.54	-0.11	0.04
50.00	-31.26	-1.69	0.00	-159.37	0.00	159.37	3,591.52	880.50	3,352	3,111.81	0.56	-0.11	0.04
55.00	-29.96	-1.68	0.00	-150.89	0.00	150.89	3,524.72	857.58	3,180	2,973.74	0.69	-0.12	0.04
60.00	-28.69	-1.67	0.00	-142.47	0.00	142.47	3,456.50	834.66	3,013	2,837.55	0.82	-0.14	0.04
65.00	-27.43	-1.66	0.00	-134.11	0.00	134.11	3,386.84	811.74	2,849	2,703.31	0.97	-0.15	0.04
70.00	-26.19	-1.64	0.00	-125.83	0.00	125.83	3,315.77	788.82	2,691	2,571.14	1.14	-0.16	0.04
75.00	-24.97	-1.61	0.00	-117.65	0.00	117.65	3,242.33	765.91	2,537	2,440.43	1.31	-0.18	0.04
80.00	-23.53	-1.58	0.00	-109.58	0.00	109.58	3,145.31	742.99	2,387	2,295.85	1.50	-0.19	0.03
85.00	-22.93	-1.57	0.00	-101.66	0.00	101.66	3,048.29	720.07	2,242	2,155.68	1.71	-0.20	0.03
87.54	-22.10	-1.55	0.00	-97.67	0.00	97.67	2,999.00	708.43	2,170	2,086.17	1.82	-0.21	0.03
90.00	-21.29	-1.53	0.00	-93.86	0.00	93.86	2,951.27	697.15	2,102	2,019.93	1.93	-0.22	0.03
92.46	-21.17	-1.52	0.00	-90.11	0.00	90.11	2,412.09	583.54	1,767	1,661.39	2.04	-0.22	0.04
93.00	-20.74	-1.51	0.00	-89.28	0.00	89.28	2,405.87	581.47	1,754	1,651.16	2.07	-0.22	0.03
95.00	-20.13	-1.49	0.00	-86.26	0.00	86.26	2,382.84	573.83	1,709	1,613.66	2.16	-0.23	0.03
97.00	-19.50	-1.47	0.00	-83.27	0.00	83.27	2,359.57	566.19	1,663	1,576.43	2.26	-0.24	0.03
100.00	-18.46	-1.43	0.00	-78.86	0.00	78.86	2,324.24	554.73	1,597	1,521.10	2.41	-0.24	0.03
105.00	-18.38	-1.43	0.00	-71.69	0.00	71.69	2,264.22	535.63	1,489	1,430.31	2.67	-0.26	0.03
105.36	-17.71	-1.41	0.00	-71.17	0.00	71.17	2,259.84	534.25	1,481	1,423.84	2.69	-0.26	0.03
105.36	-17.71	-1.41	0.00	-71.17	0.00	71.17	2,259.84	534.25	1,481	1,423.84	2.69	-0.26	0.06
110.00	-17.04	-1.38	0.00	-64.64	0.00	64.64	2,186.65	516.53	1,385	1,331.56	2.95	-0.27	0.06
115.00	-16.42	-1.36	0.00	-57.73	0.00	57.73	2,105.79	497.43	1,284	1,234.41	3.25	-0.30	0.06
120.00	-16.30	-1.36	0.00	-50.94	0.00	50.94	2,024.94	478.33	1,187	1,140.95	3.58	-0.32	0.05
121.00	-12.60	-1.16	0.00	-49.58	0.00	49.58	2,008.77	474.51	1,168	1,122.70	3.64	-0.33	0.05
125.00	-12.04	-1.13	0.00	-44.95	0.00	44.95	1,944.09	459.23	1,094	1,051.17	3.93	-0.35	0.05
130.00	-11.81	-1.12	0.00	-39.30	0.00	39.30	1,863.24	440.14	1,005	965.06	4.31	-0.38	0.05
132.12	-11.37	-1.09	0.00	-36.92	0.00	36.92	1,828.96	432.04	969	929.67	4.48	-0.39	0.05
135.00	-11.26	-1.09	0.00	-33.78	0.00	33.78	1,782.39	421.04	920	882.64	4.72	-0.40	0.05
135.75	-11.24	-1.09	0.00	-32.96	0.00	32.96	1,770.26	418.17	908	870.59	4.78	-0.41	0.04
135.87	-10.77	-1.05	0.00	-32.83	0.00	32.83	993.96	255.85	566	501.11	4.79	-0.41	0.03
139.50	-10.68	-1.05	0.00	-29.00	0.00	29.00	972.83	247.53	530	474.38	5.11	-0.42	0.03
140.00	-9.77	-0.98	0.00	-28.48	0.00	28.48	969.86	246.38	525	470.72	5.15	-0.42	0.03
142.00	-9.39	-0.96	0.00	-26.51	0.00	26.51	957.83	241.80	506	456.17	5.33	-0.43	0.03
145.00	-9.26	-0.95	0.00	-23.64	0.00	23.64	939.37	234.93	477	434.56	5.60	-0.44	0.03
146.00	-9.11	-0.94	0.00	-22.69	0.00	22.69	933.10	232.63	468	427.41	5.69	-0.44	0.03
147.00	-9.01	-0.93	0.00	-21.75	0.00	21.75	926.77	230.34	459	420.30	5.78	-0.44	0.03
147.25	-8.82	-0.92	0.00	-21.52	0.00	21.52	925.18	229.77	457	418.52	5.81	-0.44	0.03
147.25	-8.82	-0.92	0.00	-21.52	0.00	21.52	925.18	229.77	457	418.52	5.81	-0.44	0.06
150.00	-8.81	-0.91	0.00	-19.00	0.00	19.00	907.46	223.47	432	399.15	6.06	-0.45	0.06
150.10	-8.38	-0.88	0.00	-18.91	0.00	18.91	906.80	223.24	431	398.45	6.07	-0.45	0.06
155.00	-8.12	-0.86	0.00	-14.60	0.00	14.60	874.12	212.01	389	364.59	6.55	-0.48	0.05
159.00	-7.77	-0.83	0.00	-11.15	0.00	11.15	846.42	202.84	356	337.64	6.97	-0.51	0.04

CALCULATED FORCES													
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 (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
160.00	-7.52	-0.81	0.00	-10.32	0.00	10.32	839.35	200.55	348	331.00	7.08	-0.51	0.04
164.00	-4.49	-0.51	0.00	-7.08	0.00	7.08	810.18	191.38	317	304.75	7.51	-0.53	0.03
165.00	-4.48	-0.51	0.00	-6.57	0.00	6.57	800.48	189.09	309	297.46	7.63	-0.53	0.03
165.10	-4.02	-0.47	0.00	-6.52	0.00	6.52	799.51	188.86	308	296.73	7.64	-0.54	0.03
170.00	-3.75	-0.44	0.00	-4.24	0.00	4.24	751.97	177.63	273	262.32	8.20	-0.55	0.02
175.00	-3.49	-0.41	0.00	-2.05	0.00	2.05	703.45	166.17	239	229.40	8.78	-0.56	0.01
180.00	0.00	-0.37	0.00	0.00	0.00	0.00	654.94	154.71	207	198.68	9.38	-0.57	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	49.39	0.00	67.55	0.00	0.00	5388.30	105.36	0.82
0.9D + 1.0W	49.35	0.00	50.64	0.00	0.00	5308.17	105.36	0.8
1.2D + 1.0Di + 1.0Wi	9.46	0.00	104.56	0.00	0.00	1204.31	147.25	0.25
1.2D + 1.0Ev + 1.0Eh	1.70	0.00	67.12	0.00	0.00	250.17	147.25	0.07
0.9D - 1.0Ev + 1.0Eh	1.69	0.00	47.29	0.00	0.00	244.97	147.25	0.06
1.0D + 1.0W	10.68	0.00	56.37	0.00	0.00	1157.01	105.36	0.18

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	2.55	0.00	67.12	0.00	0.00	375.24
0.9D - 1.0Ev + 1.5Eh	2.54	0.00	47.29	0.00	0.00	367.65

ADDITIONAL STEEL SUMMARY

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors				Max Member		
			VQ/I (k/in)	Shear Applied (kips)	phiVn (kips)	Ratio	Pu (kip)	phiPn (kip)	Ratio
0.00	10.00	SOL #20 All Thread Bar	225.6	3.4	16.8	0.2013	283.2	347.6	0.8147
10.00	105.36	SOL #20 All Thread Bar	340.0	10.2	16.8	0.6068	277.9	330.5	0.8409
135.75	147.25	PL PL 3.5" x 1.25"	376.1	9.0	27.2	0.332	125.1	168.8	0.7413

Elev From (ft)	Elev To (ft)	Member	Upper Termination Connectors					Lower Termination Connectors				
			MQ/I (kips)	phiVn (kips)	Number Required	Number Actual	Ratio	MQ/I (kips)	phiVn (kip)	Number Required	Number Actual	Ratio
0.00	10.00	SOL #20 All Thread Bar	0	12	0	0	0.0000	0	12	0	0	0.0000
10.00	105.36	SOL #20 All Thread Bar	180.2307	12	16	21	0.7152	0	12	0	0	0.0000
135.75	147.25	PL PL 3.5" x 1.25"	100.9082	27.19	4	7	0.5302	107.8567	27.19	4	7	0.5667

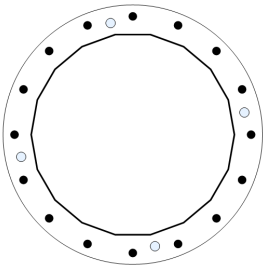
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
5388.3	67.55	49.39

PLATE PARAMETERS (ID# 31111)

Width:	68	in
Shape:	Round	
Thickness:	2	in
Grade:	A572-60	
Yield Strength:	60	ksi
Tensile Strength:	75	ksi
Rod Detail Type:	d	
Clear Distance	3	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Elastic	
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#31926]	Radial	16	2.25	62	A615-75	75	100	-	-

DYWIDAG BAR PARAMETERS

Quantity	Bar Size	Bar Diameter (in)	F _y (ksi)	F _u (ksi)	Bracket Type	Bracket Offset (in)	Circle (in)	Offset (°)
4 [ID# 2889]	#20	2.5	80	100	Angle	2.19	59.63	11.25

COMPONENT PROPERTIES

Component	ID	Gross Area (in ²)	Net Area (in ²)	Individual Inertia (in ⁴)	Moment of Inertia (in ⁴)	Threads/in
Pole	52.75"ø x 0.4375" (18 Sides)	71.5363	-	-	24475.33	-
Bolt Group	Original (16) 2.25"ø	3.9761	3.2477	0.8393	22912.18	4.5
Dywidag Group	(4) #20	4.9087	4.9087	1.9175	8734.76	-


REACTION DISTRIBUTION

Component	ID	Moment M _u (k-ft)	Axial Load P _u (k)	Shear V _u (k)	Moment Factor
Pole	52.75"ø x 0.4375" (18 Sides)	3971.1	67.55	49.39	0.737
Bolt Group	Original (16) 2.25"ø	3971.1	-	49.39	0.737
Dywidag Group	(4) #20	1417.2	-	-	0.263


BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES					PLATE PROPERTIES		
Flat-to-Flat Diameter:	52.88	in	Flat Width:	9.323	in	Neutral Axis:	0°
Point-to-Point Diameter:	53.69	in	Flat Radians:	0.349	rad	Bend Line Limits:	0.963 to 2.179 rad
Orientation Offset:	-	°					
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	38.472	0.00	38.472	1034.9	2077.5	49.8%	✓
Corners	37.325	0.00	37.325	798.2	2015.6	39.6%	✓
Circumferential	50.366	0.00	50.366	1649.6	2719.8	60.7%	✓

ELASTIC 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)	Compressive Result	Interaction Result
Original	16	2.25	203.6	0.0	243.6	0.836	75.9% 

DYWIDAG BAR ANALYSIS

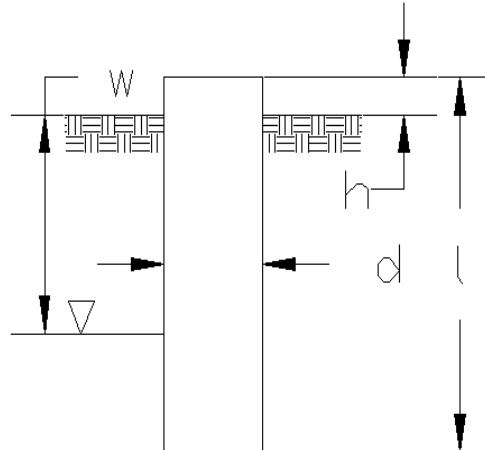
Group Quantity	Bar Size	Bar Circle (in)	Applied Axial Load P_u (k)	Compressive Capacity ΦP_n (k)	Compressive Result $P_u / \Phi P_n$
4	#20	59.63	283.9	368.2	77.1% 

Site Name: Winchester CT 3, CT
Site Number: 302506
Tower Type: MP
Design Base Loads (Factored) - Analysis per TIA-222-I Standard

Pier Foundation Analysis

Foundation Analysis Parameters

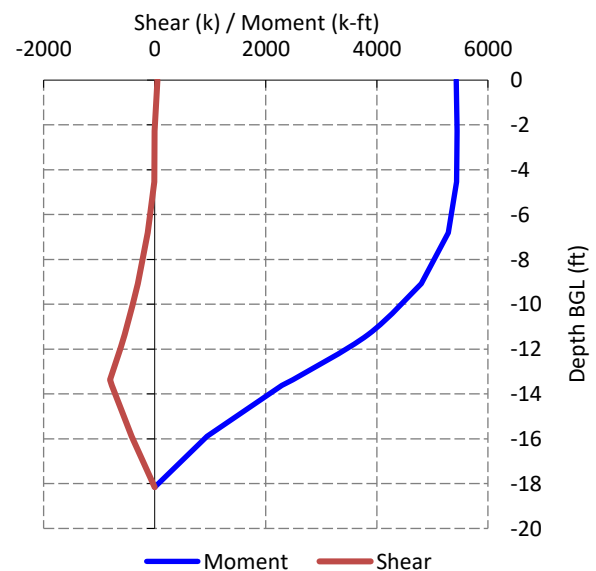
Analyze or Design a Foundation?	Analyze	-
Foundation Mapped:	Y	-
Moment (M):	5,388.3	k-ft
Shear/Leg (V):	49.4	k
Axial Load (P):	67.6	k
Uplift/Leg (U):	0.0	k
Diameter of Caisson (d):	7.4167	ft
Caisson Embedment (L-h):	18.16	ft
Caisson Height Above Ground (h):	0.83	ft
Depth Below Ground Surface to Water Table (w):	99	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Water:	62.4	pcf
Tension/Compression Skin Friction Factor:	0.75	-
Pullout Angle:	30	°



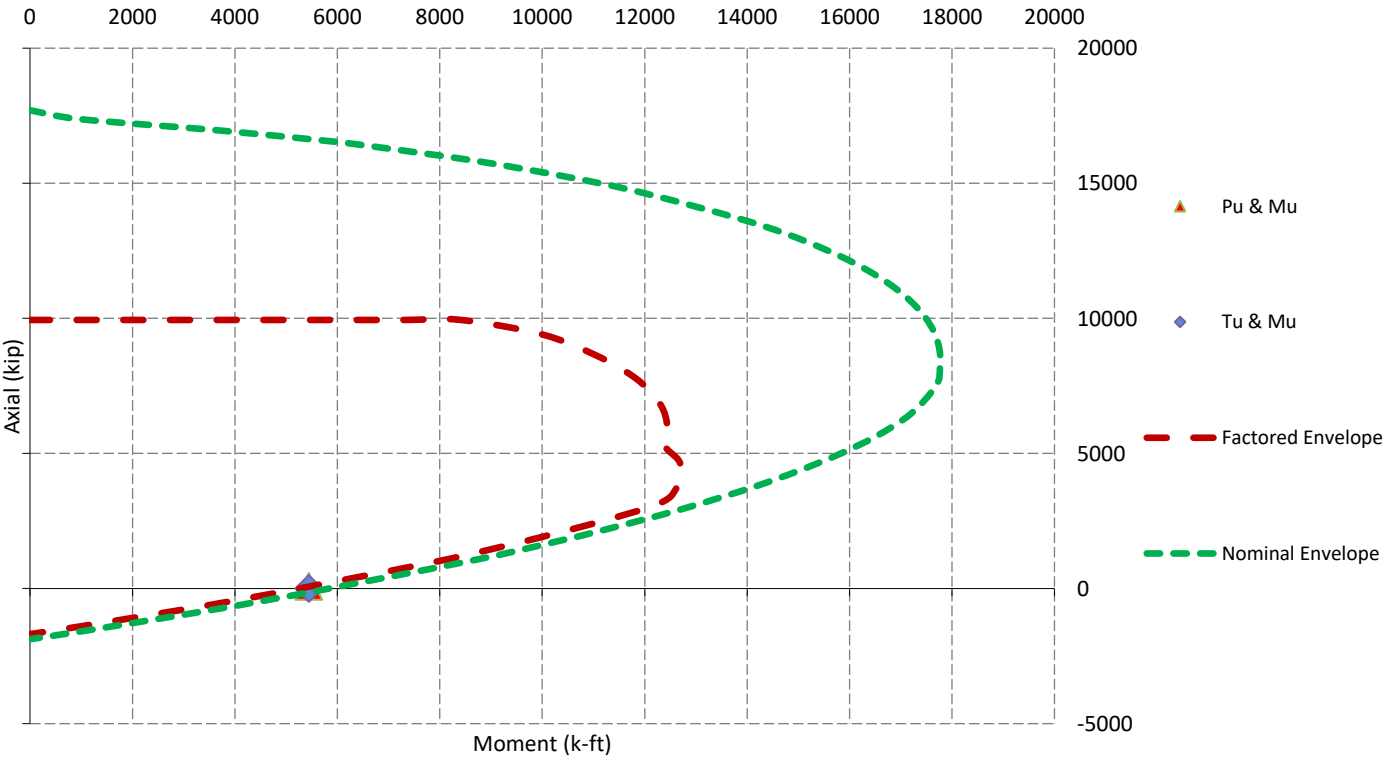
Depth (ft)		γ_{Soil} (pcf)	C_u (psf)	ϕ (degree)	Ultimate Skin Friction (psf)	Ultimate Bearing Pressure (psf)
Top	Bottom					
0	3.70835	105	0	0	0	0
3.70835	19.16	140	0	60	1,300	91,200

Soil Strength Capacities

Required Embedment:	14.8	ft
Volume of Concrete:	820.4	ft ³
Buoyant Weight of Concrete:	123.1	k
Average Soil Unit Weight:	132.9	pcf
Skin Friction Resistance:	437.7	k
Compressive Bearing Resistance:	3940.1	k
Pullout Weight (Minus Concrete Weight):	572.4	k
Factored Uplift Capacity per Leg ($\Phi_s T_n$):	246.2	k
Factored Compressive Capacity per Leg ($\Phi_s P_n$):	3283.4	k
T_u :	0.00	k
$T_u / \Phi_s T_n$:	0%	Pass
P_u :	83.7	k
$P_u / \Phi_s P_n$:	3%	Pass
Total Lateral Resistance:	5171.3	k
Inflection Point (Below Ground Surface):	13.4	ft
Moment At Inflection Point (M_D):	6089.7	k-ft
Factored Moment Capacity ($\Phi_s M_n$):	12001.3	k-ft
ϕ_s :	0.75	-
$M_D / \phi_s M_n$:	51%	Pass



Nominal and Factored Moment Capacity and Factored Design Loads



October 10, 2024



Ericsson
6300 Legacy Drive
Plano, TX 75024

RE: AT&T Site Number: CTL01071 (C-Band)
 FA Number: 10035017
 PACE Number: MRCTB072964
 PT Number: 2051A1F5VL
 ATC Site Number: 302506
 ATC Site Name: WINCHESTER CT 3
 TEP Project Number: 94002.1006253
 AT&T Site Name: WINSTED/WINCHESTER
 Site Address: 15 Oakdale Avenue
 Winsted, CT 06098

To Whom It May Concern:

TEP has been authorized by Ericsson to perform a mount analysis on AT&T's existing antenna mount and proposed RRH mounts to determine their capability of supporting the following additional loading:

- (1) DMP65R-BU6D Antenna (71.2"x20.7"x7.7" – Wt. = 96 lbs.)
- (3) 8843 B2/B66A RRH's (14.9"x13.2"x10.9" – Wt. = 72 lbs. /each) (Separate Mount)
- (3) RRUS-32 B30 RRH's (27.2"x12.1"x7.0" – Wt. = 60 lbs. /each) (Separate Mount)
- (3) 4449 B5/B12 RRH's (17.9"x13.2"x9.4" – Wt. = 73 lbs. /each) (Separate Mount)
- (3) DC6-48-60-18-8F Surge Arrestors (31.4"x10.2"Ø – Wt. = 29 lbs. /each) (Separate Mount)
- **(3) TPA65R-BU6Dv2B-K Antennas (71.2"x20.7"x7.7" – Wt. = 78 lbs. /each)**
- **(3) AIR6472 Antennas (36.3"x15.8"x9.3" – Wt. = 89 lbs. /each)**
- **(2) DMP65R-BU6D Antennas (71.2"x20.7"x7.7" – Wt. = 96 lbs. /each)**
- **(3) 4494 B14/B29 RRH's (17.5"x15.1"x5.6" – Wt. = 58 lbs. /each) (Separate Mount)**
- **(1) DC9-48-60-24-8C-EV Surge Arrestor (31.4"x10.2"Ø – Wt. = 29 lbs.) (Separate Mount)**

**Proposed equipment shown in bold.*

No original structural design documents or fabrication drawings were available for the existing mounts. Previous Mount Analysis Report prepared by American Tower Corporation dated May 1, 2020, and drone footage of the existing AT&T antenna mount conducted by Ericsson on August 11, 2024, were used to perform this analysis.

Assembly drawings prepared by SitePro1, P/N LWRM dated September 5, 2024, and P/N MM01 dated May 10, 2010, were used to perform the analysis.

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-H, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2021 with 2022 Connecticut State Building Code, and AT&T Mount Technical Directive – R22.
- TEP considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-H and Appendix P of the Connecticut State Building Code, the max basic wind speed for this site is equal to 115 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.0 in. An escalated ice thickness of 1.35 in was used for this analysis.
- TEP considers this site to be exposure category B; tower is located in an urban/suburban or wooded area with numerous closely spaced obstructions.
- TEP considers this site to be topographic category 3; tower is located at the upper half of a hill.
- TEP considers this site to have a spectral response acceleration parameter at short periods, S_s , of 0.167 and a spectral response acceleration parameter at a period of 1 second, S_1 , of 0.054.
- The mount has been analyzed with load combinations consisting of 250 lbs live load using a service wind speed of 30 mph wind on the worst case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 1.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst case location on the mount.
- The existing mount is secured to the top plate of the existing monopole with clip angles and bolts. TEP considers the bolts to be the governing connection member.
- The proposed RRH mount will be secured to the existing monopole with ring mounts and threaded rods. TEP considers the threaded rods to be the governing connection member.

Based on our evaluation, we have determined that the existing and proposed mounts **ARE CAPABLE** of supporting the proposed installation.

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Existing Antenna Mount Rating	43	LC3	88%	PASS
Proposed RRH Mount Rating	51	LC2	35%	PASS

Reference Documents:

- Mount Analysis Report prepared by American Tower dated May 1, 2020.
- Assembly drawings prepared by SitePro1, P/N LWRM dated September 5, 2024.
- Assembly drawings prepared by SitePro1, P/N MM01 dated May 10, 2010.

This determination was based on the following limitations and assumptions:

1. TEP is not responsible for any modifications completed prior to and hereafter in which TEP was not directly involved.
2. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The existing mount has been adequately secured to the monopole per the mount manufacturer's specifications.
5. All components pertaining to AT&T's mount must be tightened and re-plumbed prior to the installation of new appurtenances.
6. TEP performed a localized analysis on the mount itself and not on the supporting tower structure.

Please feel free to contact our office should you have any questions.

Respectfully Submitted,
TEP

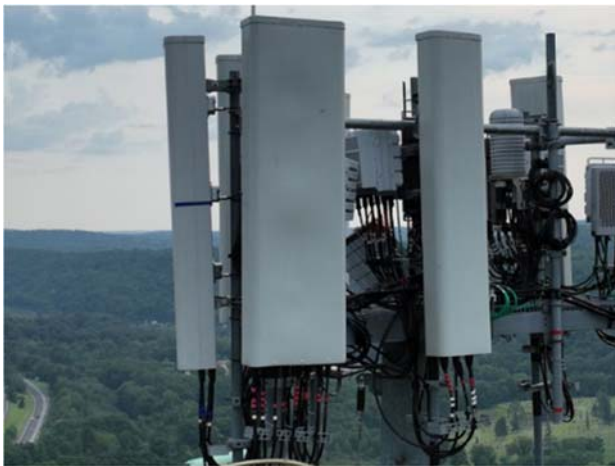


Michael Cabral
Director



Daniel P. Hamm, PE
Vice President

FIELD PHOTOS:





Wind & Ice Load Calculations

Date: 10/10/2024
 Project Name: WINSTED/WINCHESTER
 Project No.: CTL01071
 Designed By: KSBM Checked By: MSC



2.6.5.2 Velocity Pressure Coeff:

$$K_z = 2.01 (z/z_g)^{2/\alpha}$$

$K_z = 1.176$

$z = 184$ (ft)
 $z_g = 1200$ (ft)
 $\alpha = 7$

$$K_{zmin} \leq K_z \leq 2.01$$

Table 2-4

Exposure	Z_g	α	K_{zmin}	K_c
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.2 Topographic Factor:

Table 2-5

Topo. Category	K_t	f
2	0.43	1.25
3	0.53	2.0
4	0.72	1.5

$$K_{zt} = [1 + (K_c K_t / K_h)]^2$$

$K_{zt} = 1.44$

(If Category 1 then $K_{zt} = 1.0$)

Category = 3

$$K_h = e^{(f \cdot z / H)}$$

$K_h = 2.41$
 $K_c = 0.9$ (from Table 2-4)
 $K_t = 0.53$ (from Table 2-5)
 $f = 2$ (from Table 2-5)
 $z = 184$
 $z_s = 1073$ (Mean elevation of base of structure above sea level)
 $H = 419$ (Ht. of the crest above surrounding terrain)
 $K_{zt} = 1.44$ (from 2.6.6.2.1)
 $K_e = 0.96$ (from 2.6.8)

2.6.10 Design Ice Thickness

Max Ice Thickness =

Importance Factor =

$$t_{iz} = t_i * I * K_{iz} * (K_{zt})^{0.35}$$

$t_i = 1.00$ in
 $I = 1.00$ (from Table 2-3)
 $K_{iz} = 1.19$ (from Sec. 2.6.10)

$t_{iz} = 1.35$ in

Date: 10/10/2024
 Project Name: WINSTED/WINCHESTER
 Project No.: CTL01071
 Designed By: KSBM Checked By: MSC



2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

$G_h = 1.0$ Latticed Structures > 600 ft

$G_h = 0.85$ Latticed Structures 450 ft or less

$$G_h = 0.85 + 0.15 [h/150 - 3.0]$$

$h =$ ht. of structure

$h =$ 180

$G_h =$ 0.85

2.6.9.2 Guyed Masts

$G_h =$ 0.85

2.6.9.3 Pole Structures

$G_h =$ 1.1

2.6.9 Appurtenances

$G_h =$ 1.0

2.6.9.4 Structures Supported on Other Structures

(Cantilivered tubular or latticed spines, pole, structures on buildings ($ht. : width \text{ ratio} > 5$))

$G_h =$ 1.35

$G_h =$ 1.00

2.6.11.2 Design Wind Force on Appurtenances

$$F = q_z * G_h * (EPA)_A$$

$$q_z = 0.00256 * K_z * K_{zt} * K_s * K_e * K_d * V_{max}^2$$

$$K_z = 1.176 \text{ (from 2.6.5.2)}$$

$$K_{zt} = 1.4 \text{ (from 2.6.6.2.1)}$$

$$K_s = 1.0 \text{ (from 2.6.7)}$$

$$K_e = 0.96 \text{ (from 2.6.8)}$$

$$K_d = 0.95 \text{ (from Table 2-2)}$$

$$V_{max} = 115 \text{ mph (Ultimate Wind Speed)}$$

$$V_{max (ice)} = 50 \text{ mph}$$

$$V_{30} = 30 \text{ mph}$$

$$q_z = 52.25$$

$$q_{z (ice)} = 9.88$$

$$q_{z (30)} = 3.56$$

Table 2-2

Structure Type	Wind Direction Probability Factor, K_d
Latticed structures with triangular, square or rectangular cross sections	0.85
Tubular pole structures, latticed structures with other cross sections, appurtenances	0.95
Tubular pole structures supporting antennas enclosed within a cylindrical shroud	1.00

Date: 10/10/2024
 Project Name: WINSTED/WINCHESTER
 Project No.: CTL01071
 Designed By: KSBM Checked By: MSC



Determine Ca:

Table 2-9

Force Coefficients (Ca) for Appurtenances				
Member Type		Aspect Ratio ≤ 2.5	Aspect Ratio = 7	Aspect Ratio ≥ 25
		Ca	Ca	Ca
Flat		1.2	1.4	2.0
Square/Rectangular HSS		$1.2 - 2.8(r_s) \geq 0.85$	$1.4 - 4.0(r_s) \geq 0.90$	$2.0 - 6.0(r_s) \geq 1.25$
Round	C < 39 (Subcritical)	0.7	0.8	1.2
	$39 \leq C \leq 78$ (Transitional)	$4.14/(C^{0.485})$	$3.66/(C^{0.415})$	$46.8/(C^{1.0})$
	C > 78 (Supercritical)	0.5	0.6	0.6

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.
 (Aspect ratio is independent of the spacing between support points of a linear appurtenance,
 Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness =

1.35 in

Angle = 0 (deg)

Equivalent Angle = 180 (deg)

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) (w/ Ice)	Force (lbs) (30 mph)
TPA65R-BU6Dv2B-K Antenna	71.2	20.7	7.7	10.24	3.44	1.24	664	147	45
AIR6472 Antenna	36.3	15.8	9.3	3.98	2.30	1.20	250	59	17
DMP65R-BU6D Antenna	71.2	20.7	7.7	10.24	3.44	1.24	664	147	45
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.20	86	23	6
4494 B14/B29 RRH	17.5	15.1	5.6	1.84	1.16	1.20	115	30	8
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	2.25	1.20	143	36	10
4449 B5/B12 RRH	17.9	13.2	9.4	1.64	1.36	1.20	103	27	7
Squid Surge Arrestor	31.4	10.2	10.2	2.22	3.08	0.70	81	21	6
HSS 4x4	4.0	12.0		0.33	0.33	1.25	22		
C 5x9 Angle	5.0	12.0		0.42	0.42	2.00	44		
Plate 10x3/8	0.4	12.0		0.03	0.03	2.00	3		
3x3 Angle	3.0	12.0		0.25	0.25	2.00	26		
2" Pipe	2.4	12.0		0.20	0.20	1.20	12		



WIND LOADS

Angle = 30 (deg)

Ice Thickness = 1.35 in.

Equivalent Angle = 210 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio (normal)	Aspect Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
TPA65R-BU6Dv2B-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	664	293	571
AIR6472 Antenna	36.3	15.8	9.3	3.98	2.34	2.30	3.90	1.20	1.26	250	155	226
DMP65R-BU6D Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	664	293	571
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	86	71	82
4494 B14/B29 RRH	17.5	15.1	5.6	1.84	0.68	1.16	3.13	1.20	1.23	115	44	97
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	143	87	129
4449 B5/B12 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	103	73	95

WIND LOADS WITH ICE:

TPA65R-BU6Dv2B-K Antenna	73.9	23.4	10.4	12.01	5.33	3.16	7.11	1.23	1.40	146	74	128
AIR6472 Antenna	39.0	18.5	12.0	5.01	3.25	2.11	3.25	1.20	1.23	59	40	54
DMP65R-BU6D Antenna	73.9	23.4	10.4	12.01	5.33	3.16	7.11	1.23	1.40	146	74	128
8843 B2/B66A RRH	17.6	15.9	13.6	1.94	1.66	1.11	1.29	1.20	1.20	23	20	22
4494 B14/B29 RRH	20.2	17.8	8.3	2.50	1.16	1.13	2.43	1.20	1.20	30	14	26
RRUS-32 B30 RRH	29.9	14.8	9.7	3.07	2.01	2.02	3.08	1.20	1.23	36	24	33
4449 B5/B12 RRH	20.6	15.9	12.1	2.27	1.73	1.30	1.70	1.20	1.20	27	21	25

WIND LOADS AT 30 MPH:

TPA65R-BU6Dv2B-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	45	20	39
AIR6472 Antenna	36.3	15.8	9.3	3.98	2.34	2.30	3.90	1.20	1.26	17	11	15
DMP65R-BU6D Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	45	20	39
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	6	5	6
4494 B14/B29 RRH	17.5	15.1	5.6	1.84	0.68	1.16	3.13	1.20	1.23	8	3	7
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	10	6	9
4449 B5/B12 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	7	5	6

Date: 10/10/2024
Project Name: WINSTED/WINCHESTER
Project No.: CTL01071
Designed By: KSBM Checked By: MSC



WIND LOADS

Angle =	60	(deg)	Ice Thickness =	1.35	in.	Equivalent Angle =	240	(deg)
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WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio (normal)	Aspect Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
TPA65R-BU6Dv2B-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	664	293	386
AIR6472 Antenna	36.3	15.8	9.3	3.98	2.34	2.30	3.90	1.20	1.26	250	155	178
DMP65R-BU6D Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	664	293	386
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	86	71	74
4494 B14/B29 RRH	17.5	15.1	5.6	1.84	0.68	1.16	3.13	1.20	1.23	115	44	62
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	143	87	101
4449 B5/B12 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	103	73	81

WIND LOADS WITH ICE:

TPA65R-BU6Dv2B-K Antenna	73.9	23.4	10.4	12.01	5.33	3.16	7.11	1.23	1.40	146	74	92
AIR6472 Antenna	39.0	18.5	12.0	5.01	3.25	2.11	3.25	1.20	1.23	59	40	45
DMP65R-BU6D Antenna	73.9	23.4	10.4	12.01	5.33	3.16	7.11	1.23	1.40	146	74	92
8843 B2/B66A RRH	17.6	15.9	13.6	1.94	1.66	1.11	1.29	1.20	1.20	23	20	21
4494 B14/B29 RRH	20.2	17.8	8.3	2.50	1.16	1.13	2.43	1.20	1.20	30	14	18
RRUS-32 B30 RRH	29.9	14.8	9.7	3.07	2.01	2.02	3.08	1.20	1.23	36	24	27
4449 B5/B12 RRH	20.6	15.9	12.1	2.27	1.73	1.30	1.70	1.20	1.20	27	21	22

WIND LOADS AT 30 MPH:

TPA65R-BU6Dv2B-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	45	20	26
AIR6472 Antenna	36.3	15.8	9.3	3.98	2.34	2.30	3.90	1.20	1.26	17	11	12
DMP65R-BU6D Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	45	20	26
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	6	5	5
4494 B14/B29 RRH	17.5	15.1	5.6	1.84	0.68	1.16	3.13	1.20	1.23	8	3	4
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	10	6	7
4449 B5/B12 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	7	5	5



WIND LOADS

Angle =	90	(deg)	Ice Thickness =	1.35	in.	Equivalent Angle =	270	(deg)
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WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio (normal)	Aspect Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
TPA65R-BU6Dv2B-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	664	293	293
AIR6472 Antenna	36.3	15.8	9.3	3.98	2.34	2.30	3.90	1.20	1.26	250	155	155
DMP65R-BU6D Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	664	293	293
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	86	71	71
4494 B14/B29 RRH	17.5	15.1	5.6	1.84	0.68	1.16	3.13	1.20	1.23	115	44	44
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	143	87	87
4449 B5/B12 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	103	73	73

WIND LOADS WITH ICE:

TPA65R-BU6Dv2B-K Antenna	73.9	23.4	10.4	12.01	5.33	3.16	7.11	1.23	1.40	146	74	74
AIR6472 Antenna	39.0	18.5	12.0	5.01	3.25	2.11	3.25	1.20	1.23	59	40	40
DMP65R-BU6D Antenna	73.9	23.4	10.4	12.01	5.33	3.16	7.11	1.23	1.40	146	74	74
8843 B2/B66A RRH	17.6	15.9	13.6	1.94	1.66	1.11	1.29	1.20	1.20	23	20	20
4494 B14/B29 RRH	20.2	17.8	8.3	2.50	1.16	1.13	2.43	1.20	1.20	30	14	14
RRUS-32 B30 RRH	29.9	14.8	9.7	3.07	2.01	2.02	3.08	1.20	1.23	36	24	24
4449 B5/B12 RRH	20.6	15.9	12.1	2.27	1.73	1.30	1.70	1.20	1.20	27	21	21

WIND LOADS AT 30 MPH:

TPA65R-BU6Dv2B-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	45	20	20
AIR6472 Antenna	36.3	15.8	9.3	3.98	2.34	2.30	3.90	1.20	1.26	17	11	11
DMP65R-BU6D Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	45	20	20
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	6	5	5
4494 B14/B29 RRH	17.5	15.1	5.6	1.84	0.68	1.16	3.13	1.20	1.23	8	3	3
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	10	6	6
4449 B5/B12 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	7	5	5



WIND LOADS

Angle =	120	(deg)	Ice Thickness =	1.35	in.	Equivalent Angle =	300	(deg)
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WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio (normal)	Aspect Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
TPA65R-BU6Dv2B-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	664	293	386
AIR6472 Antenna	36.3	15.8	9.3	3.98	2.34	2.30	3.90	1.20	1.26	250	155	178
DMP65R-BU6D Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	664	293	386
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	86	71	74
4494 B14/B29 RRH	17.5	15.1	5.6	1.84	0.68	1.16	3.13	1.20	1.23	115	44	62
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	143	87	101
4449 B5/B12 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	103	73	81

WIND LOADS WITH ICE:

TPA65R-BU6Dv2B-K Antenna	73.9	23.4	10.4	12.01	5.33	3.16	7.11	1.23	1.40	146	74	92
AIR6472 Antenna	39.0	18.5	12.0	5.01	3.25	2.11	3.25	1.20	1.23	59	40	45
DMP65R-BU6D Antenna	73.9	23.4	10.4	12.01	5.33	3.16	7.11	1.23	1.40	146	74	92
8843 B2/B66A RRH	17.6	15.9	13.6	1.94	1.66	1.11	1.29	1.20	1.20	23	20	21
4494 B14/B29 RRH	20.2	17.8	8.3	2.50	1.16	1.13	2.43	1.20	1.20	30	14	18
RRUS-32 B30 RRH	29.9	14.8	9.7	3.07	2.01	2.02	3.08	1.20	1.23	36	24	27
4449 B5/B12 RRH	20.6	15.9	12.1	2.27	1.73	1.30	1.70	1.20	1.20	27	21	22

WIND LOADS AT 30 MPH:

TPA65R-BU6Dv2B-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	45	20	26
AIR6472 Antenna	36.3	15.8	9.3	3.98	2.34	2.30	3.90	1.20	1.26	17	11	12
DMP65R-BU6D Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	45	20	26
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	6	5	5
4494 B14/B29 RRH	17.5	15.1	5.6	1.84	0.68	1.16	3.13	1.20	1.23	8	3	4
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	10	6	7
4449 B5/B12 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	7	5	5



WIND LOADS

Angle = 150 (deg)

Ice Thickness = 1.35 in.

Equivalent Angle = 330 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio (normal)	Aspect Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
TPA65R-BU6Dv2B-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	664	293	571
AIR6472 Antenna	36.3	15.8	9.3	3.98	2.34	2.30	3.90	1.20	1.26	250	155	226
DMP65R-BU6D Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	664	293	571
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	86	71	82
4494 B14/B29 RRH	17.5	15.1	5.6	1.84	0.68	1.16	3.13	1.20	1.23	115	44	97
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	143	87	129
4449 B5/B12 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	103	73	95

WIND LOADS WITH ICE:

TPA65R-BU6Dv2B-K Antenna	73.9	23.4	10.4	12.01	5.33	3.16	7.11	1.23	1.40	146	74	128
AIR6472 Antenna	39.0	18.5	12.0	5.01	3.25	2.11	3.25	1.20	1.23	59	40	54
DMP65R-BU6D Antenna	73.9	23.4	10.4	12.01	5.33	3.16	7.11	1.23	1.40	146	74	128
8843 B2/B66A RRH	17.6	15.9	13.6	1.94	1.66	1.11	1.29	1.20	1.20	23	20	22
4494 B14/B29 RRH	20.2	17.8	8.3	2.50	1.16	1.13	2.43	1.20	1.20	30	14	26
RRUS-32 B30 RRH	29.9	14.8	9.7	3.07	2.01	2.02	3.08	1.20	1.23	36	24	33
4449 B5/B12 RRH	20.6	15.9	12.1	2.27	1.73	1.30	1.70	1.20	1.20	27	21	25

WIND LOADS AT 30 MPH:

TPA65R-BU6Dv2B-K Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	45	20	39
AIR6472 Antenna	36.3	15.8	9.3	3.98	2.34	2.30	3.90	1.20	1.26	17	11	15
DMP65R-BU6D Antenna	71.2	20.7	7.7	10.24	3.81	3.44	9.25	1.24	1.47	45	20	39
8843 B2/B66A RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	6	5	6
4494 B14/B29 RRH	17.5	15.1	5.6	1.84	0.68	1.16	3.13	1.20	1.23	8	3	7
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	10	6	9
4449 B5/B12 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	7	5	6

Date: 10/10/2024

Project Name: WINSTED/WINCHESTER

Project No.: CTL01071

Designed By: KSBM Checked By: MSC



ICE WEIGHT CALCULATIONS

Thickness of ice: 1.35 in.
Density of ice: 56 pcf

TPA65R-BU6Dv2B-K Antenna

Weight of ice based on total radial SF area:

Height (in): 71.2
Width (in): 20.7
Depth (in): 7.7

Total weight of ice on object: 229 lbs

Weight of object: 78.0 lbs

Combined weight of ice and object: 307 lbs

AIR6472 Antenna

Weight of ice based on total radial SF area:

Height (in): 36.3
Width (in): 15.8
Depth (in): 9.3

Total weight of ice on object: 98 lbs

Weight of object: 89.0 lbs

Combined weight of ice and object: 187 lbs

DMP65R-BU6D Antenna

Weight of ice based on total radial SF area:

Height (in): 71.2
Width (in): 20.7
Depth (in): 7.7

Total weight of ice on object: 229 lbs

Weight of object: 96.0 lbs

Combined weight of ice and object: 325 lbs

8843 B2/B66A RRH

Weight of ice based on total radial SF area:

Height (in): 14.9
Width (in): 13.2
Depth (in): 10.9

Total weight of ice on object: 38 lbs

Weight of object: 72.0 lbs

Combined weight of ice and object: 110 lbs

4494 B14/B29 RRH

Weight of ice based on total radial SF area:

Height (in): 17.5
Width (in): 15.1
Depth (in): 5.6

Total weight of ice on object: 42 lbs

Weight of object: 58.0 lbs

Combined weight of ice and object: 100 lbs

RRUS-32 B30 RRH

Weight of ice based on total radial SF area:

Height (in): 27.2
Width (in): 12.1
Depth (in): 7.0

Total weight of ice on object: 57 lbs

Weight of object: 60.0 lbs

Combined weight of ice and object: 117 lbs

4449 B5/B12 RRH

Weight of ice based on total radial SF area:

Height (in): 17.9
Width (in): 13.2
Depth (in): 9.4

Total weight of ice on object: 43 lbs

Weight of object: 73.0 lbs

Combined weight of ice and object: 116 lbs

Squid Surge Arrestor

Weight of ice based on total radial SF area:

Depth (in): 31.4
Diameter(in): 10.2

Total weight of ice on object: 50 lbs

Weight of object: 29 lbs

Combined weight of ice and object: 79 lbs

2" Pipe

Per foot weight of ice:

diameter (in): 2.38

Per foot weight of ice on object: 6 plf

HSS 4x4

Weight of ice based on total radial SF area:

Height (in): 4
Width (in): 4

Per foot weight of ice on object: 12 plf

PL 10x3/8

Weight of ice based on total radial SF area:

Height (in): 0.38
Width (in): 10.0

Per foot weight of ice on object: 19 plf

L 3x3 Angles

Weight of ice based on total radial SF area:

Height (in): 3
Width (in): 3

Per foot weight of ice on object: 9 plf

C 5x9

Weight of ice based on total radial SF area:

Height (in): 5
Width (in): 1.88

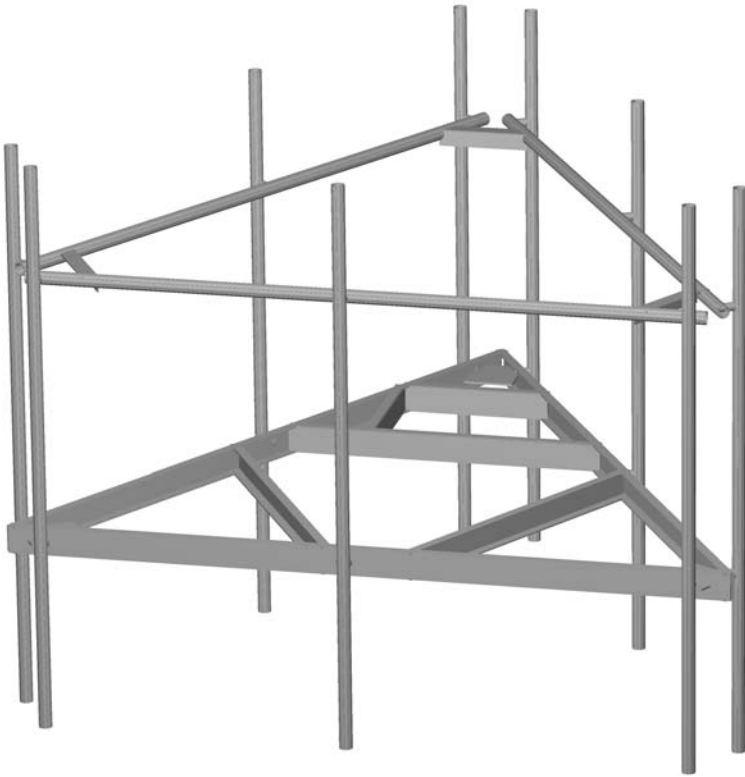
Per foot weight of ice on object: 11 plf



**Mount Calculations
(Existing Conditions)**

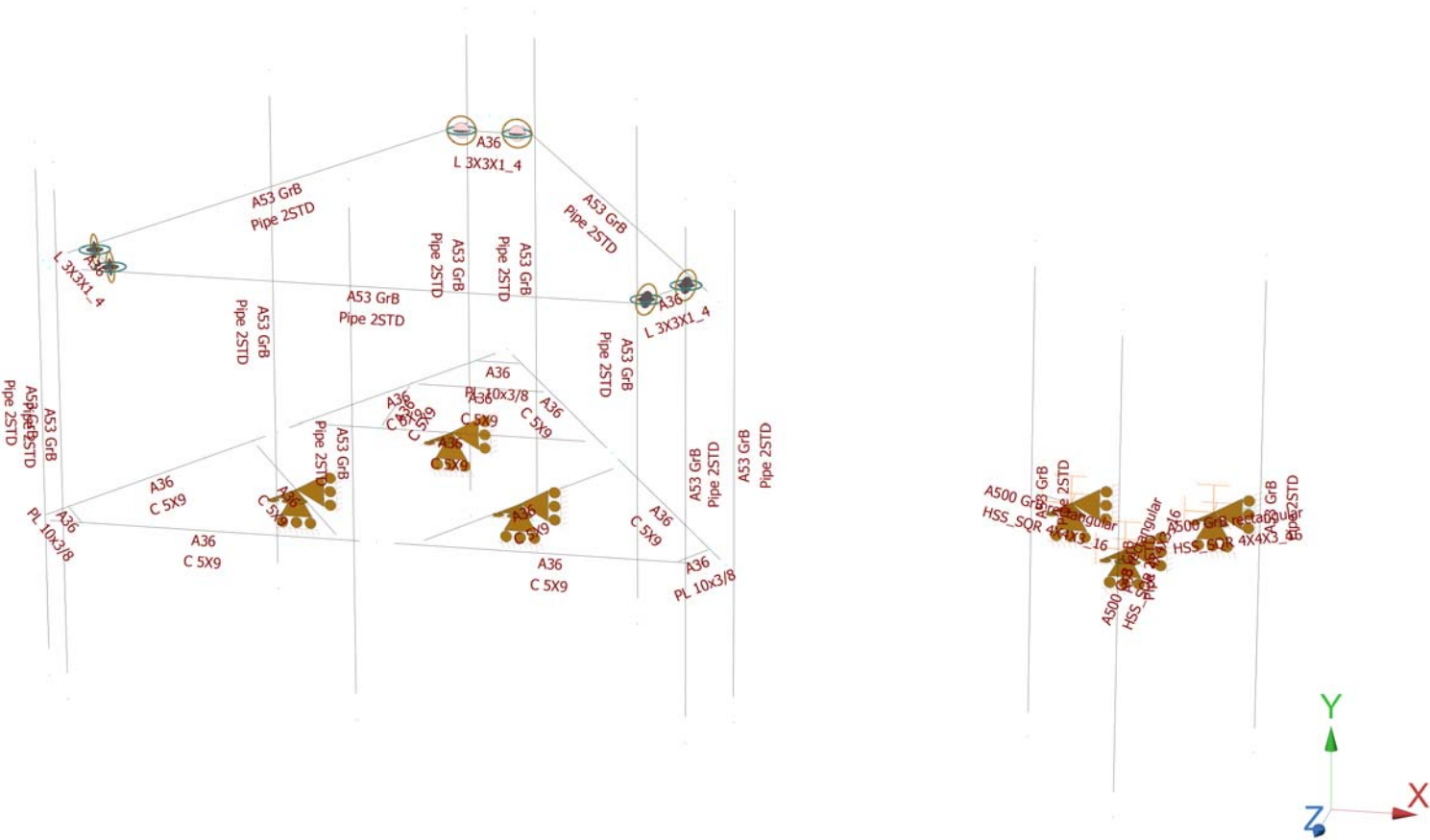


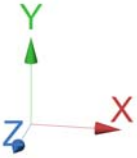
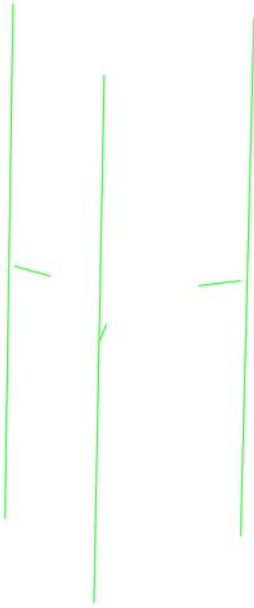
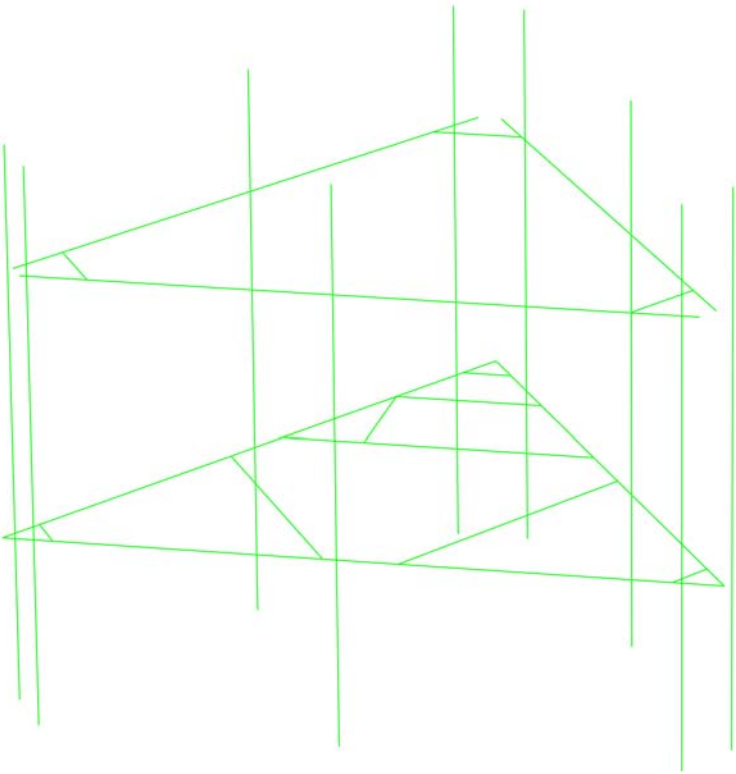
**EXISTING
ANTENNA MOUNT**

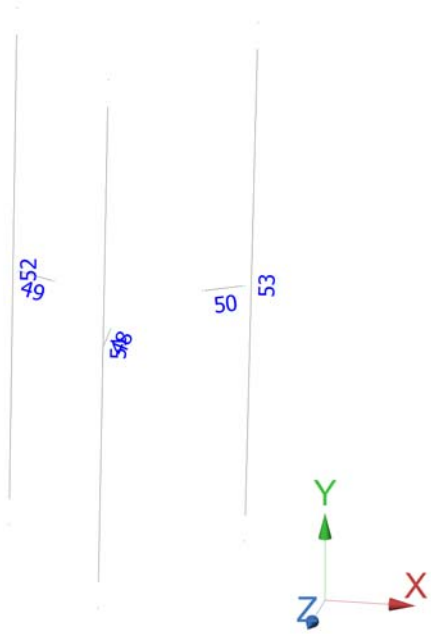
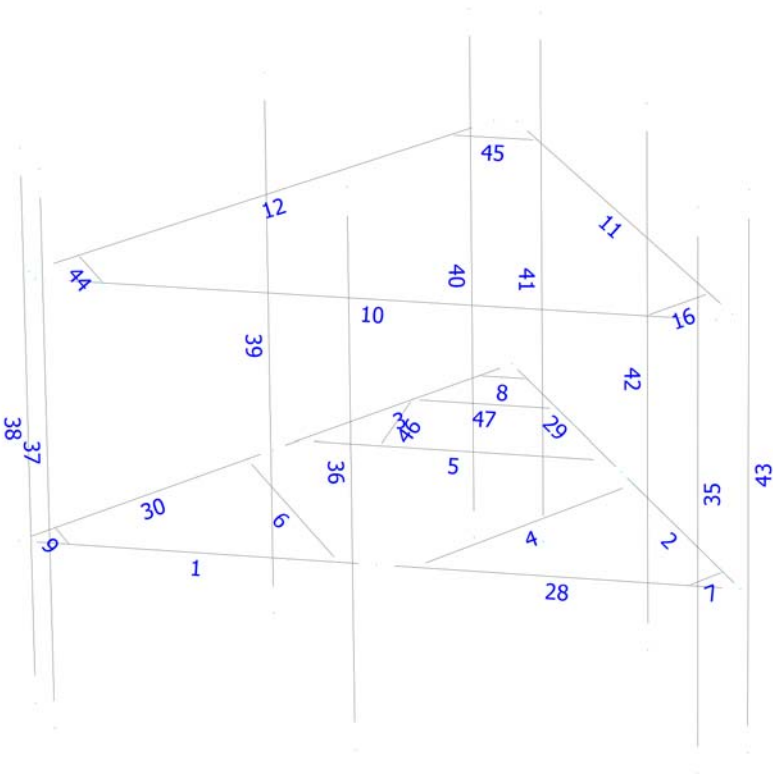


**PROPOSED
RRH MOUNT**











Load data

Load Conditions

Condition	Description	Comb.	Category
DL	Dead Load	No	DL
W0	Wind Load 0/60/120 deg	No	WIND
W30	Wind Load 30/90/150 deg	No	WIND
Di	Ice Load	No	LL
Wi0	Ice Wind Load 0/60/120 deg	No	WIND
Wi30	Ice Wind Load 30/90/150 deg	No	WIND
WL0	WL 30 mph 0/60/120 deg	No	WIND
WL30	WL 30 mph 30/90/150 deg	No	WIND
LL1	250 lb Live Load Center of Mount	No	LL
LL2	250 lb Live Load End of Mount	No	LL
LLa1	250 lb Live Load Antenna 1	No	LL
LLa2	250 lb Live Load Antenna 2	No	LL
LLa3	250 lb Live Load Antenna 3	No	LL

Distributed force on members

Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
DL	1	y	-0.01	-0.01	0.75	No	4.75	No
	2	y	-0.01	-0.01	0.75	No	4.75	No
	3	y	-0.01	-0.01	0.75	No	4.75	No
	4	y	-0.01	0.00	0.00	No	0.00	No
	5	y	-0.01	0.00	0.00	No	0.00	No
	6	y	-0.01	0.00	0.00	No	0.00	No
	7	y	-0.01	0.00	0.00	No	0.00	No
	8	y	-0.01	0.00	0.00	No	0.00	No
	9	y	-0.01	0.00	0.00	No	0.00	No
	28	y	-0.01	-0.01	0.55	No	4.55	No
W0	29	y	-0.01	-0.01	0.55	No	4.55	No
	30	y	-0.01	-0.01	0.55	No	4.55	No
	1	z	-0.044	0.00	0.00	No	0.00	No
	2	z	-0.044	0.00	0.00	No	0.00	No
	3	z	-0.044	0.00	0.00	No	0.00	No
	4	z	-0.044	0.00	0.00	No	0.00	No
	5	z	-0.044	0.00	0.00	No	0.00	No
	6	z	-0.044	0.00	0.00	No	0.00	No
	7	z	-0.003	0.00	0.00	No	0.00	No
	8	z	-0.003	0.00	0.00	No	0.00	No
	9	z	-0.003	0.00	0.00	No	0.00	No
	10	z	-0.012	0.00	0.00	No	0.00	No
	11	z	-0.012	0.00	0.00	No	0.00	No
	12	z	-0.012	0.00	0.00	No	0.00	No
	16	z	-0.026	0.00	0.00	No	0.00	No
	28	z	-0.044	0.00	0.00	No	0.00	No
	29	z	-0.044	0.00	0.00	No	0.00	No
	30	z	-0.044	0.00	0.00	No	0.00	No
	35	z	-0.012	0.00	6.00	No	0.00	No

W30	36	z	-0.012	-0.012	0.00	No	1.50	No
		z	-0.012	-0.012	4.50	No	100.00	Yes
	37	z	-0.012	0.00	6.00	No	0.00	No
	38	z	-0.012	0.00	0.00	No	0.00	No
	39	z	-0.012	0.00	0.00	No	0.00	No
	40	z	-0.012	0.00	0.00	No	0.00	No
	41	z	-0.012	0.00	0.00	No	0.00	No
	42	z	-0.012	0.00	0.00	No	0.00	No
	43	z	-0.012	0.00	0.00	No	0.00	No
	44	z	-0.026	0.00	0.00	No	0.00	No
	45	z	-0.026	0.00	0.00	No	0.00	No
	46	z	-0.044	0.00	0.00	No	0.00	No
	47	z	-0.044	0.00	0.00	No	0.00	No
	48	z	-0.022	0.00	0.00	No	0.00	No
	49	z	-0.022	0.00	0.00	No	0.00	No
	50	z	-0.022	0.00	0.00	No	0.00	No
	51	z	-0.012	0.00	0.00	No	0.00	No
	52	z	-0.012	0.00	0.00	No	0.00	No
	53	z	-0.012	0.00	0.00	No	0.00	No
	2	x	-0.044	0.00	0.00	No	0.00	No
	3	x	-0.044	0.00	0.00	No	0.00	No
	4	x	-0.044	0.00	0.00	No	0.00	No
	5	x	-0.044	0.00	0.00	No	0.00	No
	6	x	-0.044	0.00	0.00	No	0.00	No
	7	x	-0.003	0.00	0.00	No	0.00	No
	8	x	-0.003	0.00	0.00	No	0.00	No
	9	x	-0.003	0.00	0.00	No	0.00	No
	11	x	-0.012	0.00	0.00	No	0.00	No
	12	x	-0.012	0.00	0.00	No	0.00	No
	16	x	-0.026	0.00	0.00	No	0.00	No
	29	x	-0.044	0.00	0.00	No	0.00	No
	30	x	-0.044	0.00	0.00	No	0.00	No
	35	x	-0.012	0.00	0.00	No	0.00	No
	36	x	-0.012	0.00	0.00	No	0.00	No
	37	x	-0.012	0.00	0.00	No	0.00	No
	38	x	-0.012	0.00	0.00	No	0.00	No
	39	x	-0.012	0.00	0.00	No	0.00	No
	40	x	-0.012	0.00	0.00	No	0.00	No
	41	x	-0.012	0.00	0.00	No	0.00	No
	42	x	-0.012	0.00	0.00	No	0.00	No
	43	x	-0.012	0.00	0.00	No	0.00	No
	44	x	-0.026	0.00	0.00	No	0.00	No
	45	x	-0.026	0.00	0.00	No	0.00	No
	46	x	-0.044	0.00	0.00	No	0.00	No
	47	x	-0.044	0.00	0.00	No	0.00	No
	48	x	-0.022	0.00	0.00	No	0.00	No
	49	x	-0.022	0.00	0.00	No	0.00	No
	50	x	-0.022	0.00	0.00	No	0.00	No
	51	x	-0.012	0.00	0.00	No	0.00	No
	52	x	-0.012	0.00	0.00	No	0.00	No
	53	x	-0.012	0.00	0.00	No	0.00	No
Di	1	y	-0.011	0.00	0.00	No	0.00	No
	2	y	-0.011	0.00	0.00	No	0.00	No
	3	y	-0.011	0.00	0.00	No	0.00	No
	4	y	-0.011	0.00	0.00	No	0.00	No
	5	y	-0.011	0.00	0.00	No	0.00	No
	6	y	-0.011	0.00	0.00	No	0.00	No
	7	y	-0.019	0.00	0.00	No	0.00	No
	8	y	-0.019	0.00	0.00	No	0.00	No
	9	y	-0.019	0.00	0.00	No	0.00	No
	10	y	-0.006	0.00	0.00	No	0.00	No
	11	y	-0.006	0.00	0.00	No	0.00	No

12	y	-0.006	0.00	0.00	No	0.00	No
16	y	-0.009	0.00	0.00	No	0.00	No
28	y	-0.011	0.00	0.00	No	0.00	No
29	y	-0.011	0.00	0.00	No	0.00	No
30	y	-0.011	0.00	0.00	No	0.00	No
35	y	-0.006	0.00	0.00	No	0.00	No
36	y	-0.006	0.00	0.00	No	0.00	No
37	y	-0.006	0.00	0.00	No	0.00	No
38	y	-0.006	0.00	0.00	No	0.00	No
39	y	-0.006	0.00	0.00	No	0.00	No
40	y	-0.006	0.00	0.00	No	0.00	No
41	y	-0.006	0.00	0.00	No	0.00	No
42	y	-0.006	0.00	0.00	No	0.00	No
43	y	-0.006	0.00	0.00	No	0.00	No
44	y	-0.009	0.00	0.00	No	0.00	No
45	y	-0.009	0.00	0.00	No	0.00	No
46	y	-0.011	0.00	0.00	No	0.00	No
47	y	-0.011	0.00	0.00	No	0.00	No
48	y	-0.012	0.00	0.00	No	0.00	No
49	y	-0.012	0.00	0.00	No	0.00	No
50	y	-0.012	0.00	0.00	No	0.00	No
51	y	-0.006	0.00	0.00	No	0.00	No
52	y	-0.006	0.00	0.00	No	0.00	No
53	y	-0.006	0.00	0.00	No	0.00	No

Concentrated forces on members

Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
<hr/>					
DL	35	y	-0.039	0.50	No
		y	-0.039	5.50	No
	36	y	-0.045	2.00	No
		y	-0.045	4.00	No
	37	y	-0.048	0.50	No
		y	-0.048	5.50	No
	38	y	-0.039	0.50	No
		y	-0.039	5.50	No
	39	y	-0.045	2.00	No
		y	-0.045	4.00	No
	40	y	-0.048	0.50	No
		y	-0.048	5.50	No
	41	y	-0.039	0.50	No
		y	-0.039	5.50	No
	42	y	-0.045	2.00	No
		y	-0.045	4.00	No
	43	y	-0.048	0.50	No
		y	-0.048	5.50	No
	51	y	-0.072	1.50	No
		y	-0.058	1.50	No
		y	-0.06	2.50	No
		y	-0.073	2.50	No
		y	-0.029	6.50	No
	52	y	-0.029	6.50	No
		y	-0.072	1.50	No
		y	-0.058	1.50	No
		y	-0.06	2.50	No
		y	-0.073	2.50	No
		y	-0.029	6.50	No

W0	53	y	-0.072	1.50	No
		y	-0.058	1.50	No
		y	-0.06	2.50	No
		y	-0.073	2.50	No
		y	-0.029	6.50	No
	35	z	-0.333	0.50	No
		z	-0.333	5.50	No
	36	z	-0.125	2.00	No
		z	-0.125	4.00	No
	37	z	-0.333	0.50	No
		z	-0.333	5.50	No
	38	z	-0.194	0.50	No
		z	-0.194	5.50	No
	39	z	-0.09	2.00	No
		z	-0.09	4.00	No
	40	z	-0.194	0.50	No
		z	-0.194	5.50	No
	41	z	-0.194	0.50	No
		z	-0.194	5.50	No
	42	z	-0.09	2.00	No
		z	-0.09	4.00	No
W30	43	z	-0.194	0.50	No
		z	-0.194	5.50	No
	51	z	-0.115	1.50	No
		z	-0.143	2.50	No
		z	-0.081	6.50	No
		z	-0.081	6.50	No
	52	z	-0.074	1.50	No
		z	-0.101	2.50	No
		z	-0.081	6.50	No
	53	z	-0.074	1.50	No
		z	-0.101	2.50	No
		z	-0.081	6.50	No
	35	x	-0.147	0.50	No
		x	-0.147	5.50	No
	36	x	-0.078	2.00	No
		x	-0.078	4.00	No
	37	x	-0.147	0.50	No
		x	-0.147	5.50	No
	38	x	-0.198	0.50	No
		x	-0.198	5.50	No
	39	x	-0.079	2.00	No
		x	-0.079	4.00	No
	40	x	-0.198	0.50	No
		x	-0.198	5.50	No
	41	x	-0.198	0.50	No
		x	-0.198	5.50	No
	42	x	-0.079	2.00	No
		x	-0.079	4.00	No
	43	x	-0.198	0.50	No
		x	-0.198	5.50	No
	51	x	-0.071	1.50	No
		x	-0.044	1.50	No
		x	-0.087	2.50	No
		x	-0.073	2.50	No
		x	-0.081	6.50	No
	52	x	-0.067	1.50	No
		x	-0.089	2.50	No
		x	-0.056	6.50	No
	53	x	-0.067	1.50	No
		x	-0.089	2.50	No
		x	-0.056	6.50	No

Di	35	y	-0.115	0.50	No
		y	-0.115	5.50	No
	36	y	-0.05	2.00	No
		y	-0.05	4.00	No
	37	y	-0.115	0.50	No
		y	-0.115	5.50	No
	38	y	-0.115	0.50	No
		y	-0.115	5.50	No
	39	y	-0.05	2.00	No
		y	-0.05	4.00	No
	40	y	-0.115	0.50	No
		y	-0.115	5.50	No
	41	y	-0.115	0.50	No
		y	-0.115	5.50	No
	42	y	-0.05	2.00	No
		y	-0.05	4.00	No
	43	y	-0.115	0.50	No
		y	-0.115	5.50	No
	51	y	-0.038	1.50	No
		y	-0.042	1.50	No
		y	-0.057	2.50	No
		y	-0.043	2.50	No
		y	-0.05	6.50	No
		y	-0.05	6.50	No
	52	y	-0.038	1.50	No
		y	-0.042	1.50	No
		y	-0.057	2.50	No
		y	-0.043	2.50	No
		y	-0.05	6.50	No
	53	y	-0.038	1.50	No
		y	-0.042	1.50	No
		y	-0.057	2.50	No
		y	-0.043	2.50	No
		y	-0.05	6.50	No
Wi0	35	z	-0.074	0.50	No
		z	-0.074	5.50	No
	36	z	-0.03	2.00	No
		z	-0.03	4.00	No
	37	z	-0.074	0.50	No
		z	-0.074	5.50	No
	38	z	-0.046	0.50	No
		z	-0.046	5.50	No
	39	z	-0.023	2.00	No
		z	-0.023	4.00	No
	40	z	-0.046	0.50	No
		z	-0.046	5.50	No
	41	z	-0.046	0.50	No
		z	-0.046	5.50	No
	42	z	-0.023	2.00	No
		z	-0.023	4.00	No
	43	z	-0.046	0.50	No
		z	-0.046	5.50	No
	51	z	-0.03	1.50	No
		z	-0.036	2.50	No
		z	-0.021	6.50	No
		z	-0.021	6.50	No
	52	z	-0.021	1.50	No
		z	-0.027	2.50	No
		z	-0.021	6.50	No
	53	z	-0.021	1.50	No
		z	-0.027	2.50	No
		z	-0.021	6.50	No

Wi30	35	x	-0.037	0.50	No
		x	-0.037	5.50	No
	36	x	-0.02	2.00	No
		x	-0.02	4.00	No
	37	x	-0.037	0.50	No
		x	-0.037	5.50	No
	38	x	-0.064	0.50	No
		x	-0.064	5.50	No
	39	x	-0.028	2.00	No
		x	-0.028	4.00	No
	40	x	-0.064	0.50	No
		x	-0.064	5.50	No
	41	x	-0.064	0.50	No
		x	-0.064	5.50	No
	42	x	-0.028	2.00	No
		x	-0.028	4.00	No
	43	x	-0.064	0.50	No
		x	-0.064	5.50	No
	51	x	-0.02	1.50	No
		x	-0.014	1.50	No
		x	-0.024	2.50	No
		x	-0.021	2.50	No
	52	x	-0.021	6.50	No
		x	-0.026	1.50	No
		x	-0.033	2.50	No
		x	-0.021	6.50	No
	53	x	-0.026	1.50	No
		x	-0.033	2.50	No
		x	-0.021	6.50	No
		x	-0.021	6.50	No
WL0	35	z	-0.023	0.50	No
		z	-0.023	5.50	No
	36	z	-0.009	2.00	No
		z	-0.009	4.00	No
	37	z	-0.023	0.50	No
		z	-0.023	5.50	No
	38	z	-0.014	0.50	No
		z	-0.014	5.50	No
	39	z	-0.007	2.00	No
		z	-0.007	4.00	No
	40	z	-0.014	0.50	No
		z	-0.014	5.50	No
	41	z	-0.014	0.50	No
		z	-0.014	5.50	No
	42	z	-0.007	2.00	No
		z	-0.007	4.00	No
	43	z	-0.014	0.50	No
		z	-0.014	5.50	No
	51	z	-0.008	1.50	No
		z	-0.01	2.50	No
		z	-0.006	6.50	No
		z	-0.006	6.50	No
	52	z	-0.005	1.50	No
		z	-0.007	2.50	No
		z	-0.006	6.50	No
		z	-0.006	6.50	No
	53	z	-0.005	1.50	No
		z	-0.007	2.50	No
		z	-0.006	6.50	No
		z	-0.006	6.50	No
WL30	35	x	-0.01	0.50	No
		x	-0.01	5.50	No
	36	x	-0.006	2.00	No
		x	-0.006	4.00	No
	37	x	-0.01	0.50	No

		x	-0.01	5.50	No
38		x	-0.02	0.50	No
		x	-0.02	5.50	No
39		x	-0.008	2.00	No
		x	-0.008	4.00	No
40		x	-0.02	0.50	No
		x	-0.02	5.50	No
41		x	-0.02	0.50	No
		x	-0.02	5.50	No
42		x	-0.008	2.00	No
		x	-0.008	4.00	No
43		x	-0.02	0.50	No
		x	-0.02	5.50	No
51		x	-0.005	1.50	No
		x	-0.003	1.50	No
		x	-0.006	2.50	No
		x	-0.005	2.50	No
		x	-0.006	6.50	No
52		x	-0.007	1.50	No
		x	-0.009	2.50	No
		x	-0.006	6.50	No
53		x	-0.007	1.50	No
		x	-0.009	2.50	No
		x	-0.006	6.50	No
LL1	1	y	-0.25	100.00	Yes
LL2	1	y	-0.25	0.00	Yes
LLa1	35	y	-0.25	50.00	Yes
LLa2	36	y	-0.25	50.00	Yes
LLa3	37	y	-0.25	50.00	Yes

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
DL	Dead Load	No	0.00	-1.00	0.00
W0	Wind Load 0/60/120 deg	No	0.00	0.00	0.00
W30	Wind Load 30/90/150 deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
Wi0	Ice Wind Load 0/60/120 deg	No	0.00	0.00	0.00
Wi30	Ice Wind Load 30/90/150 deg	No	0.00	0.00	0.00
WL0	WL 30 mph 0/60/120 deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30/90/150 deg	No	0.00	0.00	0.00
LL1	250 lb Live Load Center of Mount	No	0.00	0.00	0.00
LL2	250 lb Live Load End of Mount	No	0.00	0.00	0.00
LLa1	250 lb Live Load Antenna 1	No	0.00	0.00	0.00
LLa2	250 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	250 lb Live Load Antenna 3	No	0.00	0.00	0.00

Glossary

Comb : Indicates if load condition is a load combination



Existing Antenna Mount Steel Code Check

Summary - Group by member

Load conditions to be included in design :

LC1=1.2DL+W0
 LC2=1.2DL+W30
 LC3=1.2DL-W0
 LC4=1.2DL-W30
 LC5=0.9DL+W0
 LC6=0.9DL+W30
 LC7=0.9DL-W0
 LC8=0.9DL-W30
 LC9=1.2DL+Di+W0
 LC10=1.2DL+Di+W30
 LC11=1.2DL+Di-W0
 LC12=1.2DL+Di-W30
 LC13=1.4DL
 LC14=1.2DL+1.6LL1
 LC15=1.2DL+1.6LL2
 LC16=1.2DL+WL0+1.6LLa1
 LC17=1.2DL+WL30+1.6LLa1
 LC18=1.2DL-WL0+1.6LLa1
 LC19=1.2DL-WL30+1.6LLa1
 LC20=1.2DL+WL0+1.6LLa2
 LC21=1.2DL+WL30+1.6LLa2
 LC22=1.2DL-WL0+1.6LLa2
 LC23=1.2DL-WL30+1.6LLa2
 LC24=1.2DL+WL0+1.6LLa3
 LC25=1.2DL+WL30+1.6LLa3
 LC26=1.2DL-WL0+1.6LLa3
 LC27=1.2DL-WL30+1.6LLa3

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
C 5X9		1	LC2 at 94.77%	0.40	OK	
		2	LC1 at 89.55%	0.41	OK	
		3	LC1 at 94.77%	0.53	OK	
		4	LC4 at 50.00%	0.58	OK	
		5	LC1 at 50.00%	0.77	OK	
		6	LC2 at 50.00%	0.56	OK	
		28	LC4 at 10.45%	0.45	OK	
		29	LC1 at 10.45%	0.55	OK	
		30	LC1 at 10.45%	0.47	OK	
		46	LC7 at 100.00%	0.09	OK	
		47	LC1 at 100.00%	0.11	OK	
L 3X3X1_4		16	LC6 at 50.00%	0.01	OK	
		44	LC8 at 50.00%	0.01	OK	
		45	LC7 at 50.00%	0.01	OK	
Pipe 2STD		10	LC4 at 1.98%	0.42	OK	
		11	LC1 at 1.98%	0.49	OK	
		12	LC1 at 98.02%	0.47	OK	
		35	LC2 at 67.65%	0.60	OK	
		36	LC1 at 67.65%	0.56	OK	

37	LC4 at 67.65%	0.60	OK
38	LC3 at 67.65%	0.88	OK
39	LC1 at 67.65%	0.64	OK
40	LC4 at 67.65%	0.63	OK
41	LC2 at 67.65%	0.62	OK
42	LC1 at 67.65%	0.65	OK
43	LC3 at 67.65%	0.88	OK

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7	LC1 at 0.00%	0.57	OK
8	LC2 at 100.00%	0.49	OK
9	LC1 at 100.00%	0.58	OK



Proposed RRH Mount Steel Code Check Summary - Group by member

Load conditions to be included in design :

LC1=1.2DL+W0
LC2=1.2DL+W30
LC3=1.2DL-W0
LC4=1.2DL-W30
LC5=0.9DL+W0
LC6=0.9DL+W30
LC7=0.9DL-W0
LC8=0.9DL-W30
LC9=1.2DL+Di+W0
LC10=1.2DL+Di+W30
LC11=1.2DL+Di-W0
LC12=1.2DL+Di-W30
LC13=1.4DL
LC14=1.2DL+1.6LL1
LC15=1.2DL+1.6LL2
LC16=1.2DL+WL0+1.6LLa1
LC17=1.2DL+WL30+1.6LLa1
LC18=1.2DL-WL0+1.6LLa1
LC19=1.2DL-WL30+1.6LLa1
LC20=1.2DL+WL0+1.6LLa2
LC21=1.2DL+WL30+1.6LLa2
LC22=1.2DL-WL0+1.6LLa2
LC23=1.2DL-WL30+1.6LLa2
LC24=1.2DL+WL0+1.6LLa3
LC25=1.2DL+WL30+1.6LLa3
LC26=1.2DL-WL0+1.6LLa3
LC27=1.2DL-WL30+1.6LLa3

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X3_16	48	LC2 at 0.00%	0.05	OK	
		49	LC1 at 0.00%	0.05	OK	
		50	LC1 at 0.00%	0.05	OK	
	Pipe 2STD	51	LC2 at 50.00%	0.35	OK	
		52	LC3 at 50.00%	0.24	OK	
		53	LC3 at 50.00%	0.24	OK	



Geometry data

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
1	0.00	0.00	-6.125	0
2	-5.3044	0.00	3.0625	0
3	5.3044	0.00	3.0625	0
4	4.5544	0.00	3.0625	0
5	0.375	0.00	-5.4755	0
6	-4.9294	0.00	2.413	0
7	-4.5544	0.00	3.0625	0
8	4.9294	0.00	2.413	0
9	-0.375	0.00	-5.4755	0
10	0.5544	0.00	3.0625	0
11	2.375	0.00	-2.0114	0
12	-2.9294	0.00	-1.0511	0
13	-0.5544	0.00	3.0625	0
14	2.9294	0.00	-1.0511	0
15	-2.375	0.00	-2.0114	0
16	-4.9456	4.00	3.0625	0
17	5.125	4.00	2.7518	0
18	-0.1794	4.00	-5.8143	0
19	0.1794	4.00	-5.8143	0
20	-5.125	4.00	2.7518	0
21	4.9456	4.00	3.0625	0
50	0.00	0.00	3.0625	0
51	2.6522	0.00	-1.5313	0
52	-2.6522	0.00	-1.5313	0
61	4.75	5.75	3.375	0
62	4.75	-2.75	3.375	0
63	-0.2772	5.75	3.375	0
64	-0.2772	-2.75	3.375	0
65	-4.75	5.75	3.375	0
66	-4.75	-2.75	3.375	0
67	-5.2978	5.75	2.4261	0
68	-5.2978	-2.75	2.4261	0
69	-2.7842	5.75	-1.9276	0
70	-2.7842	-2.75	-1.9276	0
71	-0.5478	5.75	-5.8011	0
72	-0.5478	-2.75	-5.8011	0
73	0.5478	5.75	-5.8011	0
74	0.5478	-2.75	-5.8011	0
75	3.0614	5.75	-1.4474	0
76	3.0614	-2.75	-1.4474	0
77	5.2978	5.75	2.4261	0
78	5.2978	-2.75	2.4261	0
79	3.9456	4.00	3.0625	0
80	4.625	4.00	1.8857	0
81	-4.625	4.00	1.8857	0
82	-3.9456	4.00	3.0625	0
83	0.6794	4.00	-4.9482	0
84	-0.6794	4.00	-4.9482	0
86	-1.125	0.00	-2.0114	0
87	-1.125	0.00	-4.1764	0

88	1.125	0.00	-4.1764	0
91	11.00	4.00	2.0167	0
92	11.00	-4.00	2.0167	0
93	11.00	0.00	1.25	0
94	11.00	0.00	1.9167	0
95	9.9175	0.00	-0.625	0
96	9.3401	0.00	-0.9583	0
97	12.0825	0.00	-0.625	0
98	12.6599	0.00	-0.9583	0
99	9.2535	4.00	-1.0083	0
100	9.2535	-4.00	-1.0083	0
101	12.7465	4.00	-1.0083	0
102	12.7465	-4.00	-1.0083	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
93	1	1	1	1	1	1
95	1	1	1	1	1	1
97	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
1	2	50		C 5X9	A36	0.00	0.00	0.00
2	3	51		C 5X9	A36	0.00	0.00	0.00
3	1	52		C 5X9	A36	0.00	0.00	0.00
4	10	14		C 5X9	A36	0.00	0.00	0.00
5	11	15		C 5X9	A36	0.00	0.00	0.00
6	12	13		C 5X9	A36	0.00	0.00	0.00
7	4	8		PL 10x3/8	A36	0.00	0.00	0.00
8	5	9		PL 10x3/8	A36	0.00	0.00	0.00
9	6	7		PL 10x3/8	A36	0.00	0.00	0.00
10	16	21		Pipe 2STD	A53 GrB	0.00	0.00	0.00
11	17	19		Pipe 2STD	A53 GrB	0.00	0.00	0.00
12	18	20		Pipe 2STD	A53 GrB	0.00	0.00	0.00
16	79	80		L 3X3X1_4	A36	0.00	0.00	0.00
28	50	3		C 5X9	A36	0.00	0.00	0.00
29	51	1		C 5X9	A36	0.00	0.00	0.00
30	52	2		C 5X9	A36	0.00	0.00	0.00
35	61	62		Pipe 2STD	A53 GrB	0.00	0.00	0.00
36	63	64		Pipe 2STD	A53 GrB	0.00	0.00	0.00
37	65	66		Pipe 2STD	A53 GrB	0.00	0.00	0.00
38	67	68		Pipe 2STD	A53 GrB	0.00	0.00	0.00
39	69	70		Pipe 2STD	A53 GrB	0.00	0.00	0.00
40	71	72		Pipe 2STD	A53 GrB	0.00	0.00	0.00
41	73	74		Pipe 2STD	A53 GrB	0.00	0.00	0.00
42	75	76		Pipe 2STD	A53 GrB	0.00	0.00	0.00
43	77	78		Pipe 2STD	A53 GrB	0.00	0.00	0.00
44	81	82		L 3X3X1_4	A36	0.00	0.00	0.00
45	83	84		L 3X3X1_4	A36	0.00	0.00	0.00
46	87	86		C 5X9	A36	0.00	0.00	0.00
47	88	87		C 5X9	A36	0.00	0.00	0.00

48	93	94	HSS_SQR 4X4X3_16	A500 GrB rectangular	0.00	0.00	0.00
49	95	96	HSS_SQR 4X4X3_16	A500 GrB rectangular	0.00	0.00	0.00
50	97	98	HSS_SQR 4X4X3_16	A500 GrB rectangular	0.00	0.00	0.00
51	91	92	Pipe 2STD	A53 GrB	0.00	0.00	0.00
52	99	100	Pipe 2STD	A53 GrB	0.00	0.00	0.00
53	101	102	Pipe 2STD	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
1	180.00	0	0.00	0.00	0.00
2	180.00	0	0.00	0.00	0.00
3	180.00	0	0.00	0.00	0.00
7	90.00	0	0.00	0.00	0.00
8	90.00	0	0.00	0.00	0.00
9	90.00	0	0.00	0.00	0.00
16	90.00	0	0.00	0.00	0.00
28	180.00	0	0.00	0.00	0.00
29	180.00	0	0.00	0.00	0.00
30	180.00	0	0.00	0.00	0.00
44	90.00	0	0.00	0.00	0.00
45	90.00	0	0.00	0.00	0.00

Hinges

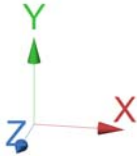
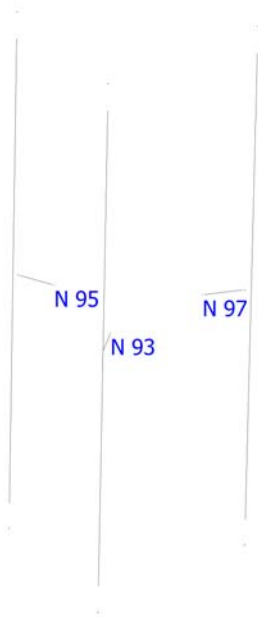
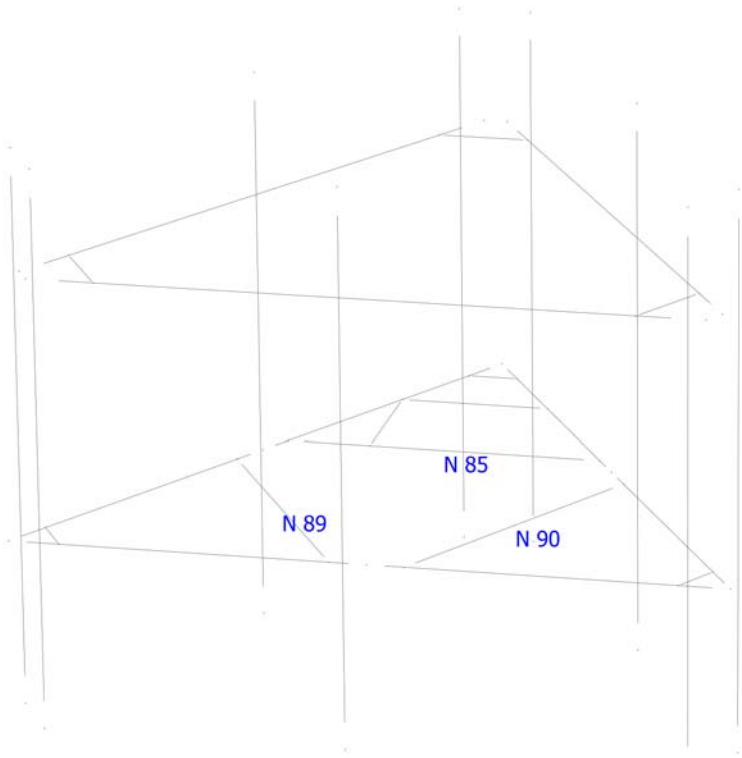
Member	Node-J				Node-K				TOR	AXL	Axial rigidity
	M33	M22	V3	V2	M33	M22	V3	V2			
16	1	1	0	0	1	1	0	0	0	0	Full
44	1	1	0	0	1	1	0	0	0	0	Full
45	1	1	0	0	1	1	0	0	0	0	Full

Glossary

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z



Connection Check



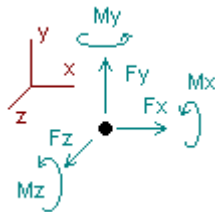


Analysis result

Nodes

Envelope for nodal reactions

Note.- I_c is the controlling load condition



Direction of positive forces and moments

Envelope of nodal reactions for :

LC1=1.2DL+W0
LC2=1.2DL+W30
LC3=1.2DL-W0
LC4=1.2DL-W30
LC5=0.9DL+W0
LC6=0.9DL+W30
LC7=0.9DL-W0
LC8=0.9DL-W30
LC9=1.2DL+Di+W0
LC10=1.2DL+Di+W30
LC11=1.2DL+Di-W0
LC12=1.2DL+Di-W30
LC13=1.4DL
LC14=1.2DL+1.6LL1
LC15=1.2DL+1.6LL2
LC16=1.2DL+W0+1.6LLa1
LC17=1.2DL+W30+1.6LLa1
LC18=1.2DL-W0+1.6LLa1
LC19=1.2DL-W30+1.6LLa1
LC20=1.2DL+W0+1.6LLa2
LC21=1.2DL+W30+1.6LLa2
LC22=1.2DL-W0+1.6LLa2
LC23=1.2DL-W30+1.6LLa2
LC24=1.2DL+W0+1.6LLa3
LC25=1.2DL+W30+1.6LLa3
LC26=1.2DL-W0+1.6LLa3
LC27=1.2DL-W30+1.6LLa3

Node		Forces						Moments					
		Fx	Ic	Fy	Ic	Fz	Ic	Mx	Ic	My	Ic	Mz	Ic
		[Kip]		[Kip]		[Kip]		[Kip*ft]		[Kip*ft]		[Kip*ft]	
85	Max	2.941	LC6	4.816	LC1	1.270	LC1	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-2.942	LC8	-3.238	LC7	-1.289	LC3	0.00000	LC1	0.00000	LC1	0.00000	LC1
89	Max	1.012	LC2	3.630	LC2	2.410	LC5	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-1.018	LC8	-2.193	LC8	-2.398	LC7	0.00000	LC1	0.00000	LC1	0.00000	LC1

90	Max	1.146	LC6	3.616	LC4	2.315	LC1	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-1.138	LC4	-2.204	LC6	-2.308	LC7	0.00000	LC1	0.00000	LC1	0.00000	LC1
93	Max	0.467	LC2	0.714	LC11	0.516	LC1	-0.14293	LC5	0.35142	LC6	0.32885	LC4
	Min	-0.467	LC4	0.320	LC6	-0.516	LC3	-0.56631	LC11	-0.35142	LC8	-0.32885	LC2
95	Max	0.315	LC2	0.629	LC10	0.365	LC5	0.28499	LC1	0.23737	LC1	-0.03012	LC8
	Min	-0.315	LC8	0.293	LC6	-0.365	LC7	-0.02454	LC7	-0.23739	LC3	-0.47527	LC10
97	Max	0.315	LC2	0.629	LC10	0.365	LC1	0.28499	LC1	0.23739	LC3	0.47527	LC12
	Min	-0.315	LC8	0.293	LC5	-0.365	LC3	-0.02454	LC7	-0.23737	LC1	0.03012	LC6

Date: 10/10/2024
Project Name: WINSTED/WINCHESTER
Project No.: CTL01071
Designed By: KSBM Checked By: MSC



CHECK EXISTING CONNECTION CAPACITY (Worst Case)

Reference: AISC Steel Construction Manual 14th Edition (ASD)

Bolt Type = A325 3/4" Bolt (Assumed)

Allowable Tensile Load =

$$F_{Tall} = 19880 \text{ lbs.}$$

Allowable Shear Load =

$$F_{Vall} = 11928 \text{ lbs.}$$

TENSILE FORCES

Reactions in Z direction: 1289 lbs. (See Bentley Output)

SHEAR FORCES

Reactions in X direction: 2942 lbs. (See Bentley Output)

Reactions in Y direction: 4816 lbs. (See Bentley Output)

Resultant: 5644 lbs.

No. of Supports = 1

No. of Bolts / Support = 3

Tension Design Load /Bolts =

$$f_t = 429.67 \text{ lbs.} < 19880 \text{ lbs.} \text{ Therefore, OK !}$$

Shear Design Load / Bolts=

$$f_v = 1881.17 \text{ lbs.} < 11928 \text{ lbs.} \text{ Therefore, OK !}$$

CHECK COMBINED TENSION AND SHEAR

$$\begin{array}{ccccccc} f_t / F_T & + & f_v / F_V & \leq & 1.0 \\ 0.022 & + & 0.158 & = & 0.179 & < & 1.0 \text{ Therefore, OK !} \end{array}$$

Date: 10/10/2024
 Project Name: WINSTED/WINCHESTER
 Project No.: CTL01071
 Designed By: KSBM Checked By: MSC



CHECK PROPOSED CONNECTION CAPACITY (Worst Case) → RRH MOUNT

Reference: AISC Steel Construction Manual 14th Edition (ASD)

Bolt Type = A325 5/8" Bolt

Allowable Tensile Load =

$F_{Tall} = 13806$ lbs.

Allowable Shear Load =

$F_{vall} = 8283$ lbs.

CONNECTION PLATE CONFIGURATION (4-BOLTS)

$N_{BOLT\ ROWS} = 2$ rows $d_y = 6$ in
 $N_{BOLT} = 2$ Bolts/row $d_x = 6$ in

TENSILE FORCES

Moment in X axis: 566 lb-ft. (See Bentley Output)
 Couple Reaction from M_x : 1132 lbs.
 Moment in Y axis: 351 lb-ft. (See Bentley Output)
 Couple Reaction from M_y : 702 lbs.
 Reaction in Z direction: 516 lbs. (See Bentley Output)

Resultant per Bolt: 1046 lbs.

SHEAR FORCES

Moment in Z axis: 329 lb-ft. (See Bentley Output)
 Couple Reaction from M_z : 658 lbs.
 Reaction in X direction: 467 lbs. (See Bentley Output)
 Reaction in Y direction: 714 lbs. (See Bentley Output)

Resultant per Bolt: 378 lbs.

Tension Design Load / Bolts =

$f_t = 1046.00$ lbs. < 13806 lbs. Therefore, OK !

Shear Design Load / Bolts =

$f_v = 377.79$ lbs. < 8283.5 lbs. Therefore, OK !

CHECK COMBINED TENSION AND SHEAR

$f_t / F_T + f_v / F_v \leq 1.0$
 0.076 + 0.046 = 0.121 < 1.0 Therefore, OK !

108 OAKDALE AVE

Location 108 OAKDALE AVE

Mblu 028/ 151/ 002-1/ /

Acct# 103466

Owner STOW WILLIAM P TRUSTEE

Assessment \$178,640

Appraisal \$255,200

PID 4991

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2023	\$45,600	\$209,600	\$255,200
Assessment			
Valuation Year	Improvements	Land	Total
2023	\$31,920	\$146,720	\$178,640

Owner of Record

Owner STOW WILLIAM P TRUSTEE
Co-Owner

Sale Price \$0
Certificate

Address C/O AMERICAN TOWER #302506
PO BOX 723597
ATLANTA, GA 31139

Book & Page 0411/0779
Sale Date 03/12/2013
Instrument 29

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
STOW WILLIAM P TRUSTEE	\$0		0411/0779	29	03/12/2013
STOW WILLIAM P & RICHARD D	\$0		00260/0171		11/16/1995

Building Information

Building 1 : Section 1

Year Built: 2004
Living Area: 360
Replacement Cost
Less Depreciation: \$17,400

Building Attributes	
Field	Description
Style:	Warehse Prefab
Model	Ind/Comm
Grade	Average
Stories:	1
Occupancy	1.00

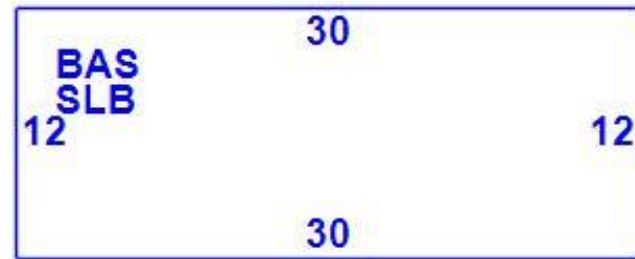
Exterior Wall 1	Pre-cast Concr
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Metal/Tin
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete Slab
Interior Floor 2	
Heating Fuel	Gas/Oil
Heating Type	Hot Air-no Duc
AC Type	None
Struct Class	
Bldg Use	Tele Tower
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	106I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	NONE
Ceiling/Wall	NONE
Rooms/Prtns	LIGHT
Wall Height	12.00
% Comn Wall	

Building Photo



(https://images.vgsi.com/photos/WinchesterCTPhotos/\0010\IMG_7508_10)

Building Layout



(ParcelSketch.ashx?pid=4991&bid=5553)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	360	360
SLB	Slab	360	0

		720	360
--	--	-----	-----

Extra Features

Extra Features				<u>Legend</u>
Code	Description	Size	Value	Bldg #
		0.00		1

Land

Land Use

Use Code	4310
Description	Tele Tower
Zone	RR
Alt Land Appr Category	No

Land Line Valuation

Size (Acres)	3.39
Depth	
Assessed Value	\$146,720
Appraised Value	\$209,600

Outbuildings

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
SHD8	Shd Com Mas			252.00 S.F.	\$6,700	1
SHD8	Shd Com Mas			252.00 S.F.	\$6,700	1
FN4	Fence-8' Chain			380.00 L.F.	\$9,400	1
				0.00		1

SHD8	Shd Com Mas			336.00 S.F.	\$5,400	1
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Valuation History

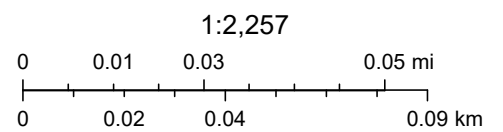
Appraisal			
Valuation Year	Improvements	Land	Total
2023	\$45,600	\$209,600	\$255,200
2022	\$45,600	\$209,600	\$255,200
2021	\$34,900	\$109,600	\$144,500

Assessment			
Valuation Year	Improvements	Land	Total
2023	\$31,920	\$146,720	\$178,640
2022	\$31,920	\$146,720	\$178,640
2021	\$24,430	\$76,720	\$101,150

108 Oakdale Ave



March 3, 2025



DOCKET NO. 138 - An application of SNET Cellular, Inc., for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of cellular facilities in the Towns of Plymouth, Harwinton, Winchester, and New Milford, Connecticut.

Connecticut

Siting

Council

November 26, 1990

DECISION AND ORDER

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council finds that the effects associated with the construction, operation, and maintenance of four cellular telecommunications towers and associated equipment at the proposed Plymouth, Harwinton, New Milford, and alternate Winchester sites including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife need not be in conflict either alone or cumulatively with other effects, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need (Certificate), as provided by section 16-50k of the Connecticut General Statutes (CGS), be issued to SNET Cellular Inc., for the construction, operation, and maintenance of a cellular telecommunications tower, associated equipment, and building at the proposed Plymouth, Harwinton, New Milford, and alternate Winchester sites.

The facilities shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The facilities shall be constructed in accordance with the State of Connecticut Basic Building Code.
2. The self-supporting monopole towers shall be no taller than necessary to provide the proposed communication service and in no event shall the Plymouth, Harwinton, and Winchester tower structures exceed 192-feet or the New Milford tower structure exceed 162 feet above ground level (AGL), including antennas and appurtenances.
3. The Certificate Holder shall prepare a Development and Management (D&M) Plan, for approval by the Council, for these sites in compliance with sections 16-50j-75 through 16-50j-77 of the Regulations of State Agencies (RSA). The D&M Plan shall include detailed plans for the towers, tower pedestals, tower foundations, soil boring reports, antenna structures, equipment buildings, access roads, security fences, erosion and sedimentation control plans

consistent with the Connecticut Guidelines of Soil Erosion and Sedimentation Control, and landscaping plans where necessary to screen the equipment building from adjacent land uses.

At the proposed Harwinton site, the accessway shall be designed to avoid a direct sight-line of the entire tower structure from the adjacent Fowler residence. To further mitigate the visibility of the facility, the tower's site shall be moved as close to the electric transmission line right-of-way as safety clearances allow.

At the alternate Winchester site, the Certificate Holder shall design the accessway to avoid a direct sight-line from the northern end of Oakdale Avenue. Prior to construction, the Certificate Holder shall secure all necessary permits and approvals to construct a crossing of the Tennessee Gas Company's underground gas transmission line. Prior to any necessary blasting activities, the Certificate Holder shall secure all necessary permits and shall conduct such blasting in accordance with State regulations. Copies of all permits and approvals shall be forwarded to the Council immediately upon receipt.

4. The Certificate Holder shall comply with any existing and future radio frequency (RF) standard promulgated by State or federal regulatory agencies. Upon the establishment of any new governmental RF standards, the facilities granted in this Decision and Order shall be brought into compliance with such standards.
5. The Certificate Holder shall provide the Council a recalculated report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power densities above the levels originally calculated and provided in the application.
6. The Certificate Holder shall permit public or private entities to share space on the proposed towers for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
7. If the facilities do not initially provide, or permanently cease to provide cellular service following completion of construction, this Decision and Order shall be void, and the tower(s) and all associated equipment shall be dismantled and removed or reapplication for any new use shall be made to the Council before any such new use is made.
8. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order or within three years after all appeals to this Decision and Order have been resolved.

Pursuant to Section 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The New Milford Times, The Bristol Press, The Registrar-Citizen, and The Danbury News-Times.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of State Agencies.

The parties to this proceeding are:

(PARTIES)

SNET Cellular, Inc.

(ITS REPRESENTATIVES)

Peter J. Tyrrell
Senior Attorney
SNET Cellular, Inc.
227 Church Street
Room 1021
New Haven, CT 06506

(INTERVENORS)

Pikeville Cellular Partnership

Charles Wolf, Esq.
Robinson & Cole
One Commercial Plaza
Hartford, CT 06103-3597

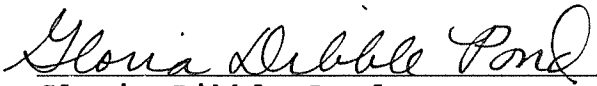
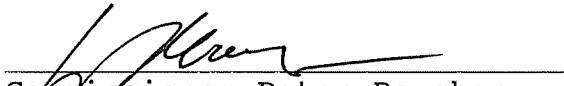


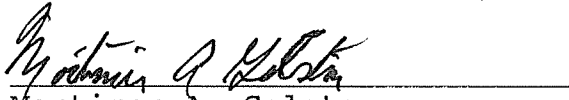

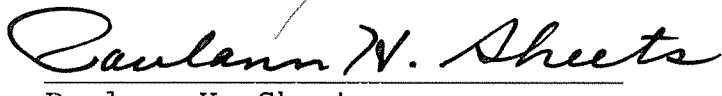
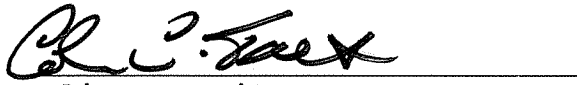
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4886E-1-3

CERTIFICATION

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case in Docket No. 138 or read the record thereof, and that we voted as follows:

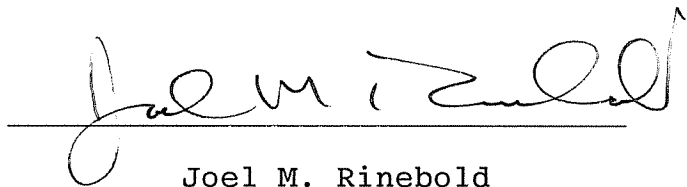
Dated at New Britain, Connecticut the 26 day of November, 1990.

<u>Council Members</u>	<u>Vote Cast</u>
 Gloria Dibble Pond Chairperson	YES
 Commissioner Peter Boucher Designee: Mark Marcus	YES
 Commissioner Leslie Carothers Designee: Brian Emerick	YES
 Harry E. Covey	YES
 Mortimer A. Gelston	YES
 Daniel P. Lynch, Jr.	YES
 Paulann H. Sheets	YES
 William H. Smith	ABSENT
 Colin C. Tait	YES

STATE OF CONNECTICUT)
 :
ss. New Britain, Connecticut
COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the Decision and Order issued by the Connecticut Siting Council, State of Connecticut.

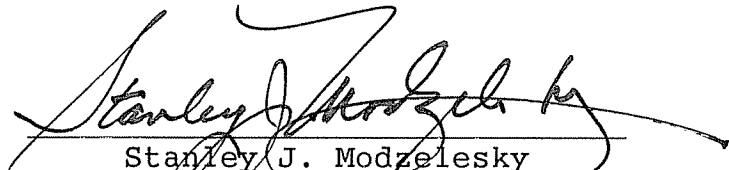
ATTEST:

A handwritten signature in dark ink, appearing to read "Joel M. Rinebold", is written over a horizontal line.

Joel M. Rinebold
Executive Director
Connecticut Siting Council

I certify that a copy of the Findings of Fact, Opinion, and Decision and Order in Docket No. 138 have been forwarded by Certified First Class Return Receipt Requested mail on December 3, 1990, to all parties of record as listed on the attached service list, dated August 22, 1990.

ATTEST:

A handwritten signature in dark ink, appearing to read "Stanley J. Modzelesky", is written over a horizontal line.





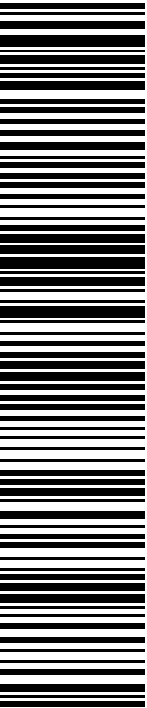

Stanley J. Modzelesky
Executive Assistant
Connecticut Siting Council

Date: August 22, 1990





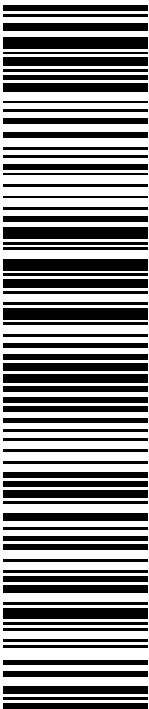

Docket No. 138



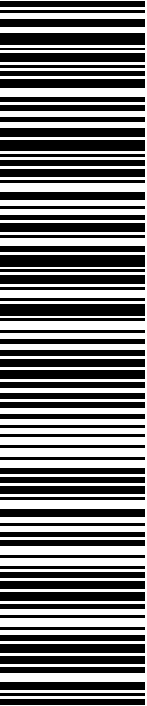

LIST OF PARTIES AND INTERVENORS - SERVICE LIST

Status Granted	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Party <input checked="" type="checkbox"/>	SNET Cellular, Inc.	Peter J. Tyrrell Senior Attorney SNET Cellular, Inc. 227 Church Street Room 1021 New Haven, CT 06506
Intervenor <input type="checkbox"/>		
Party <input type="checkbox"/>	Pikeville Cellular Partnership	Charles Wolf, Esq. Robinson & Cole One Commercial Plaza Hartford, CT 06103-3597
Intervenor <input checked="" type="checkbox"/>		
Party <input type="checkbox"/>		
Intervenor <input type="checkbox"/>		



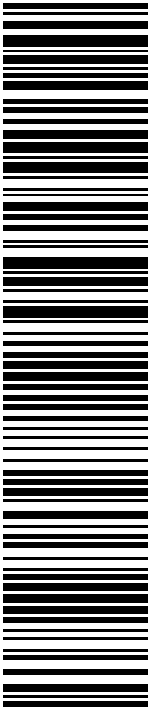

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