

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

December 28, 2012

John Lawrence
New Cingular Wireless PCS, LLC
95 Ryan Drive, Suite #1
Raynham, MA 02767

RE: **EM-CING-003-121210** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 20 Seles Road, Ashford, Connecticut.

Dear Mr. Lawrence:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not more than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated December 6, 2012. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the



closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,



Linda Roberts
Executive Director

LR/CDM/cm

c: The Honorable Ralph H. Fletcher, First Selectman, Town of Ashford
Michael Gardner, Zoning Enforcement Officer, Town of Ashford



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

December 10, 2012

The Honorable Ralph H. Fletcher
First Selectman
Town of Ashford
5 Town Hall Road
Ashford, CT 06278

RE: **EM-CING-003-121210** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 20 Seles Road, Ashford, Connecticut.

Dear First Selectman Fletcher:

The Connecticut Siting Council (Council) received a request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72, a copy of which has already been provided to you.

If you have any questions or comments regarding the proposal, please call me or inform the Council by December 24, 2012.

Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts
Executive Director

LR/cm

c: Michael Gardner, Zoning Enforcement Officer, Town of Ashford



EM-CING-003-121210

Cingular Wireless
LLC
Surprise Drive
Il, Connecticut 06067

John Lawrence
Real Estate Consultant
95 Ryan Drive, Suite #1
Raynham, MA 02767
Phone: (781) 715-5532
jlawrence@clinellc.com

ORIGINAL

RECEIVED
DEC 10 2012
CONNECTICUT
SITING COUNCIL

December 6, 2012

Honorable Robert Stein, Chairman,
and Members of the Connecticut Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: Notice of Exempt Modification – Existing Telecommunications Facility at 20 Seles Road, Ashford CT 06278

Dear Chairman Stein and Members of the Council:

New Cingular Wireless PCS, LLC (“AT&T”) intends to modify the existing telecommunications antennas and associated equipment at an existing multicarrier telecommunications tower at 20 Seles Road, Ashford, CT 06278. AT&T operates under licenses issued by the Federal Communications Commission (“FCC”) to provide cellular and PCS mobile telephone service in Windham County, which includes the area to be served by AT&T’s proposed installation.

In order to accommodate technological changes, implement Long Term Evolution (“LTE”) capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC (“AT&T”) plans to modify the equipment configurations at many of its existing cell sites. LTE is a new high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

Please accept this letter as notification to the Council, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter is being sent to Ralph H. Fletcher, First Selectman of the Town of Ashford.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T’s operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

Existing Facility

The Ashford facility is located at 20 Seles Road, Ashford, CT 06278

The facility is owned by Cordless Data Transfer Inc.

The existing facility consists of a 190 foot guyed tower with an existing chain link fence around the tower compound fenced in compound. AT&T currently operates wireless communications equipment at the facility and has six (6) antennas mounted at the tower centerline height of 138'.

Statutory Considerations

The changes to the Ashford tower facility do not constitute a modification as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2) because they will not result in any substantial adverse environmental effect.

1. The height of the overall structure will be unaffected.
2. The proposed changes will not affect the property boundaries. All new construction will take place inside the existing fenced compound.
3. The proposed additions will not increase the noise level at the existing facility by six decibels or more.
4. LTE will utilize additional radio frequencies newly licensed by the FCC for cellular mobile communications. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, New Cingular Wireless respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A Section §16-50j-72(b)(2).

Respectfully yours,



John Lawrence
Real Estate Consultant

Enclosures:

Ralph H. Fletcher, First Selectman of the Town of Ashford



**New Cingular Wireless
PCS, LLC**
500 Enterprise Drive
Rocky Hill, Connecticut 06067

John Lawrence
Real Estate Consultant
95 Ryan Drive, Suite #1
Raynham, MA 02767
Phone: (781) 715-5532
jlawrence@clinellc.com

December 6, 2012

Ralph H. Fletcher, First Selectman
Town of Ashford
5 Town Hall Road
Ashford, CT 06278

**Re: Notice of Exempt Modification – Existing Telecommunications Facility at 20 Seles
Road Ashford CT 06278**

Dear Mr. Fletcher,

New Cingular Wireless PCS, LLC (“AT&T”) intends to replace telecommunications antennas and associated equipment at an existing telecommunications tower, owned and operated by Cordless Data Transfer, Inc.

A Notice of Exempt Modification has been filed with the Connecticut Siting Council as required by Regulations of Connecticut State Agencies (“R.C.S.A.”) Section 16-50j-73. Please accept this letter as notification to the Town of Ashford under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The attached letter fully sets forth the AT&T proposal. However, if you have any questions or require any further information on the plans for the site or the Siting Council’s procedures, please contact John Lawrence at (781) 715-5532 or Linda Roberts, Executive Director of the Connecticut Siting Council, at (860) 827-2935.

Sincerely,

John Lawrence
Real Estate Consultant

Enclosure

CC: Honorable Robert Stein, Chairmen of the Connecticut Siting Council



C Squared Systems, LLC
65 Dartmouth Drive, Unit A3
Auburn, NH 03032
(603) 644-2800
support@csquaredsystems.com

Calculated Radio Frequency Emissions



CT5701

(Ashford South Central)

20 Seles Road, Ashford, CT 06278

December 4, 2012

Table of Contents

1. Introduction.....	1
2. FCC Guidelines for Evaluating RF Radiation Exposure Limits.....	1
3. RF Exposure Prediction Methods	2
4. Calculation Results	3
5. Conclusion.....	4
6. Statement of Certification.....	4
Attachment A: References	5
Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)	6
Attachment C: AT&T Antenna Data Sheets and Electrical Patterns.....	8

List of Tables

Table 1: Carrier Information	3
Table 2: FCC Limits for Maximum Permissible Exposure (MPE)	6

List of Figures

Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE).....	7
---	---

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modifications to the existing AT&T antenna arrays mounted on the guyed tower located on 20 Seles Road in Ashford, CT. The coordinates of the tower are 41° 51' 48.2" N, 72° 10' 58.1" W.

AT&T is proposing the following modifications:

- 1) Install three multi-band (700/850/1900/2100 MHz) antennas for their LTE network (one per sector).

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/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B 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.

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:

$$\text{Power Density} = \left(\frac{1.6^2 \times \text{EIRP}}{4\pi \times R^2} \right) \times \text{Off Beam Loss}$$

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

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna pattern

These calculations assume that the antennas are operating at 100 percent capacity and power, and that all channels are transmitting simultaneously. 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 finished modifications.

4. Calculation Results

Table 1 below outlines the power density information for the site. Because the proposed AT&T antennas are directional in nature, the majority of the RF power is focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to Attachment C for the vertical patterns of the proposed AT&T antennas. The calculated results for AT&T in Table 1 include a nominal 10 dB off-beam pattern loss to account for the lower relative gain below the antennas.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	ERP Per Transmitter (Watts)	Power Density (mw/cm ²)	Limit	%MPE
AT&T UMTS	140	880	1	500	0.0092	0.5867	1.56%
AT&T GSM	140	1900	2	427	0.0157	1.0000	1.57%
AT&T GSM	140	880	4	296	0.0217	0.5867	3.70%
Verizon	192	875	19	100	0.0185	0.5833	3.18%
Nextel	182	851	9	100	0.0098	0.5673	1.72%
Sprint	173	1962.5			0.0161	1.0000	1.61%
AT&T UMTS	138	880	2	565	0.0021	0.5867	0.36%
AT&T UMTS	138	1900	2	875	0.0033	1.0000	0.33%
AT&T LTE	138	734	1	1771	0.0033	0.4893	0.68%
AT&T GSM	138	880	1	283	0.0005	0.5867	0.09%
AT&T GSM	138	1900	4	525	0.0040	1.0000	0.40%
						Total	8.37%

Table 1: Carrier Information^{1 2 3}

¹ The existing CSC filing for AT&T should be removed and replaced with the updated AT&T technologies and values provided in Table 1. The power density information for carriers other than AT&T was taken directly from the CSC database dated 7/26/2012. Please note that %MPE values listed are rounded to two decimal points. 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. Blanks in Table 1 indicate omitted information in the CSC database.

² In the case where antenna models are not uniform across all 3 sectors for the same frequency band, the antenna model with the highest gain was used for the calculations to present a worse-case scenario.

³ Antenna height listed for AT&T is in reference to the Fred A. Nudd Corporation Structural Analysis dated November 12, 2012.

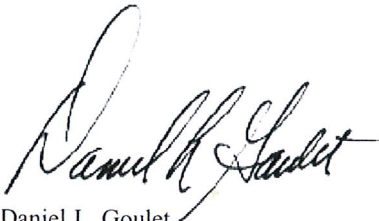
5. Conclusion

The above analysis verifies that emissions from the existing site will be below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at ground level is **8.37% of the FCC limit**.

As noted previously, obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished modifications.

6. 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. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

A handwritten signature in black ink, appearing to read 'Daniel L. Goulet'.

Daniel L. Goulet
C Squared Systems, LLC

December 4, 2012

Date

Attachment A: References

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

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

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

(A) Limits for Occupational/Controlled Exposure⁴

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 Exposure⁵

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 2: FCC Limits for Maximum Permissible Exposure (MPE)

⁴ 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.

⁵ 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.

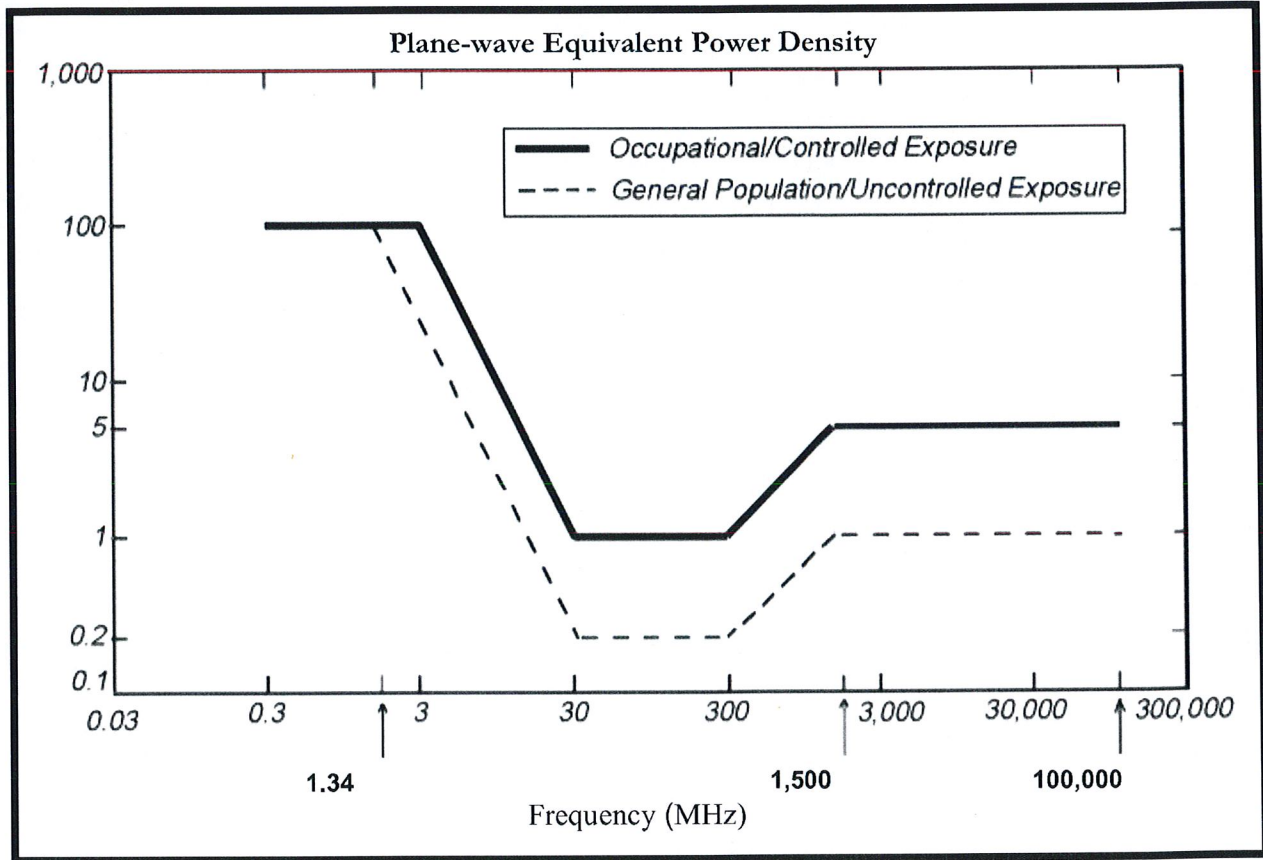
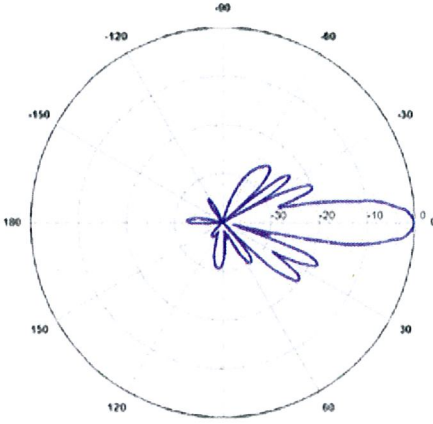
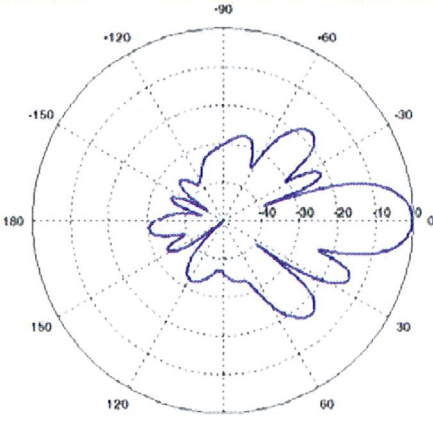
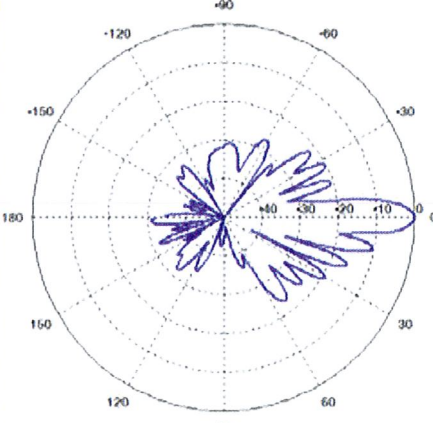
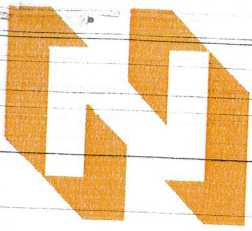


Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

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

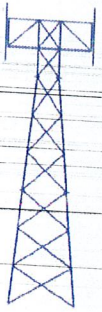
<p>700 MHz</p> <p>Manufacturer: KMW Model #: AM-X-CD-17-65-00T-RET Frequency Band: 698-806 MHz Gain: 14.65 dBd Vertical Beamwidth: 10° Horizontal Beamwidth: 66° Polarization: Dual Slant ± 45° Size L x W x D: 96.0" x 11.8" x 6.0"</p>	
<p>850 MHz</p> <p>Manufacturer: Powerwave Model #: 7770.00 Frequency Band: 824-896 MHz Gain: 11.5 dBd Vertical Beamwidth: 15° Horizontal Beamwidth: 82° Polarization: Dual Linear ± 45° Size L x W x D: 55.0" x 11.0" x 5.0"</p>	
<p>1900 MHz</p> <p>Manufacturer: Powerwave Model #: 7770.00 Frequency Band: 1850-1990 MHz Gain: 13.4 dBd Vertical Beamwidth: 7° Horizontal Beamwidth: 86° Polarization: Dual Linear ± 45° Size L x W x D: 55.0" x 11.0" x 5.0"</p>	



FRED A. NUDD CORPORATION

1743 ROUTE 104, BOX 577
ONTARIO, NY 14519
(315) 524-2531 FAX (315) 524-4249

www.nuddtowers.com



Mark LeGault
Cordless Data Transfer, Inc.
600 Old Hartford Road
Colchester, CT 06415
November 12, 2012

Nudd Job Number: 112-13241

Site Location: Ashford, CT (Lat. & Long. = 41 15 48, -72 10 57)

Subject: Structural Analysis of an existing 190 ft Guyed Tower

Fred A. Nudd Corporation has completed a three-dimensional, finite element model structural analysis of the above noted guyed tower. This tower was analyzed considering appurtenance loads noted in the appurtenance loading table on the following page. The design loading criteria and strength design are per the TIA/EIA-222-F standard, which is the recommended design standard per the 2003 International Building Code (Sec. 1609 & 3108), including 2005 Connecticut Building Code Amendments and the 2008 Connecticut Supplement. Additional standards used in this analysis include the AISC Manual for Steel Construction, Allowable Stress Design, 9th Ed. and ACI 318-05, Building Code Requirements for Structural Concrete and Commentary. Tower and foundation dimensions have been taken from drawings by Fred A. Nudd, project number 00-6111A-1 & 98-6111-2, dated July 28, 2000 & June 1998, respectively. Geotechnical information was taken from a subsurface exploration report by Tower Engineering Professionals, Inc., project number 090004.13, dated September 22, 2009. Design criteria per each analysis are noted on the following page. The tower is assumed to be in good, undamaged and equivalent to as new condition and has been maintained / inspected per criteria by TIA-222.

The purpose of this analysis is to determine the structure's ability to support new AT&T Mobility equipment installed at a rad center of 138 ft above ground level (AGL). The new equipment to be installed, which includes antennas, diplexers, and associated hardware are listed on the following page in the appurtenance loading table.

Results of the analysis indicate the tower will be able to support the design loads noted in the appurtenance loading table on the following page. Specific section design loads, capacities and stress ratios are provided on the following pages. Maximum member usage was found to be 95%.

The tower base foundation and anchors were analyzed considering onsite soil information from the aforementioned geotechnical report. Based on this analysis, the foundation and anchors will be able support the proposed appurtenance loading, in addition to the existing wireless equipment and tower superstructure. Specific design loads, capacities and stress ratios are provided on the following pages.

In conclusion, the tower superstructure and substructure can support the listed existing and proposed appurtenance loading.

We trust this report satisfies your needs. Please contact us with any questions or concerns regarding this report.

Best Regards,



Fred. A. Nudd Corporation

Code Design Criteria

TIA-222-F

Windspeed = 85 mph, fastest mile

Exposure = C

Radial Ice = 0.5 inch

Ice Windspeed = 74 mph, fastest mile

Appurtenance Loading – Existing and To Remain on Tower

Elevation (ft) ¹	Antenna	Mount	Coax (in)
190	(3) Antel BXA-70063-6CF (2) Antel LPA-80080-4CF (4) Antel LPA-80063-4CF (1) Antel BXA-171085-8BF (2) Antel BXA-171063-8BF (6) RFS FD9R6004/2C-3L	(3) 12 ft Sector Frame	(12) 1-5/8
178	(9) Swedcom ALP-E-9011	(3) 12 ft Boom / Frame	(9) 1-1/4
167	(9) Decibel DB980H90	(3) 12 ft Boom / Frame	(9) 1-5/8
150	-	(3) 12 ft Boom / Frame	-
138	(6) Powerwave 7770 (6) TMA (6) Diplexors	(3) 12 ft Boom / Frame	(12) 1-5/8

¹Note elevation is measured from grade to center of antenna

Proposed Appurtenance Loading – AT&T Mobility

Elevation (ft) ¹	Antenna	Mount	Coax (in) ²
138	(3) KMW AM-X-CD-17-65-00T-RET (1) Raycap DC6-48-60-18-8F (6) Ericsson RRU11	(3) 12 ft Sector Frame	(2) 3/4 DC Cables (1) 3/8 Fiberline

¹Note elevation is measured from grade to center of antenna

²Any new coax replacing old coax should be installed in the same manner and orientation as the coax it is replacing

Maximum Member Usage Results

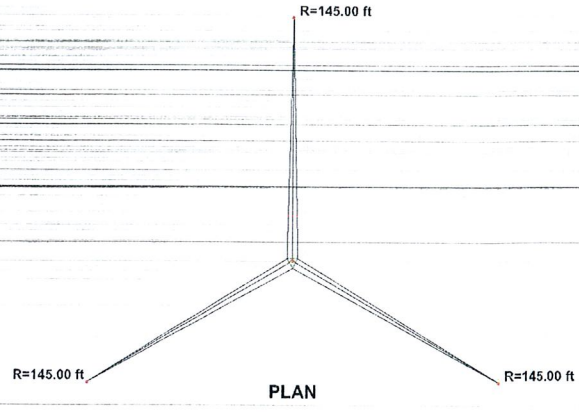
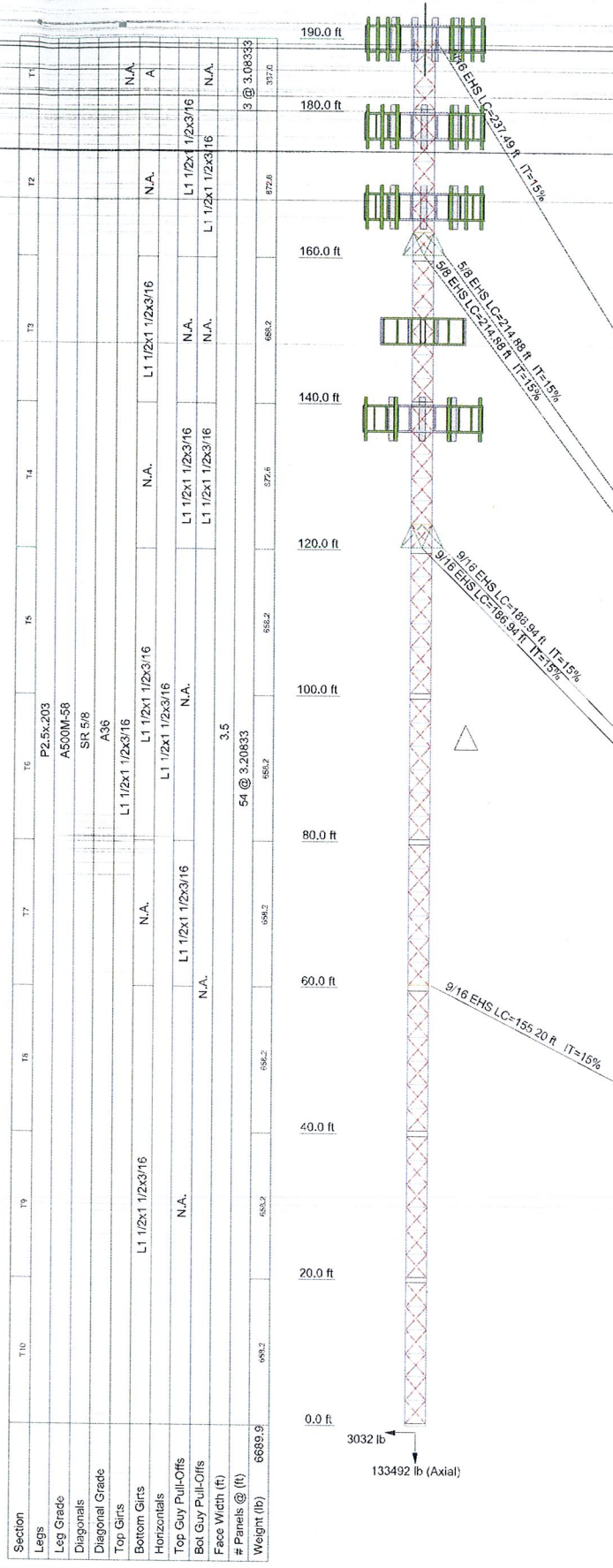
Member	Usage (%) ¹
Leg	95
Diagonal	90
Horizontal	60
Guy Wires	82
Bolts	52
Anchor Rod	85

¹Usage above 100% indicates the applied design load exceeds the member strength capacity and requires strengthening.

Foundation Usage Results

Base Reaction	Capacity (kips)	Analysis (kips)	Usage (%) ¹
Compression	211.8	133.5	64
Uplift	65.3	51.4	79
Shear	64.5	59.6	92

¹Usage above 100% indicates the applied design load exceeds the member strength capacity and requires strengthening.



SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	L1 1/2x1 1/2x3/16		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A500M-58	58 ksi	70 ksi	A36	36 ksi	58 ksi

- TOWER DESIGN NOTES**
1. Tower is located in Windham County, Connecticut.
 2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
 3. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
 4. Deflections are based upon a 50 mph wind.
 5. Weld together tower sections have flange connections.
 6. TOWER RATING: 95.1%

3032 lb
133492 lb (Axial)

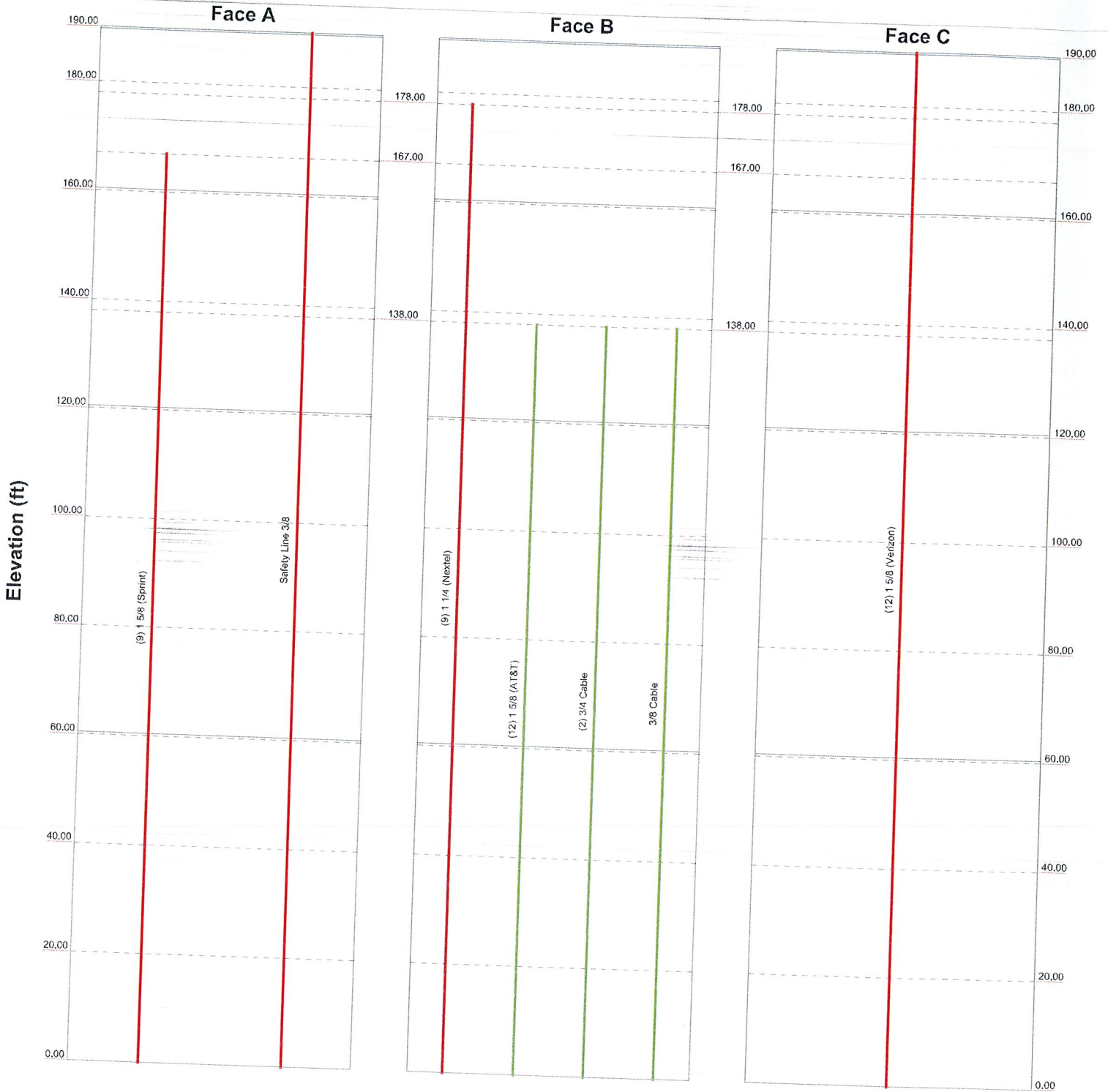
51397 lb
78679 lb
59571 lb
R=145.00 ft

Job: 112-13241		
Project: Ashford, CT		
Client: CDT	Drawn by: ..	App'd:
Code: TIA/EIA-222-F	Date: 11/12/12	Scale: NTS
Phone: --	Path:	Dwg No. E-1
FAX: --		

Feedline Distribution Chart

0' - 190'

— Round
 — Flat
 — App In Face
 — App Out Face
 — Truss Leg



--	Job: 112-13241		
--	Project: Ashford, CT		
--	Client: CDT	Drawn by: --	App'd:
Phone: --	Code: TIA/EIA-222-F	Date: 11/12/12	Scale: NTS
FAX: --	Path:		Dwg No. E-7

RISATower	Job	112-13241	Page	1 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 190.00 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 3.50 ft at the top and 3.50 ft at the base.

This tower is designed using the TIA/EIA-222-F standard.

The following design criteria apply:

Tower is located in Windham County, Connecticut.

Basic wind speed of 85 mph.

Nominal ice thickness of 0.5000 in.

Ice density of 56 pcf.

A wind speed of 74 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 50 mph.

Weld together tower sections have flange connections..

Tension only take-up is 0.0313 in.

Pressures are calculated at each section.

Safety factor used in guy design is 2.

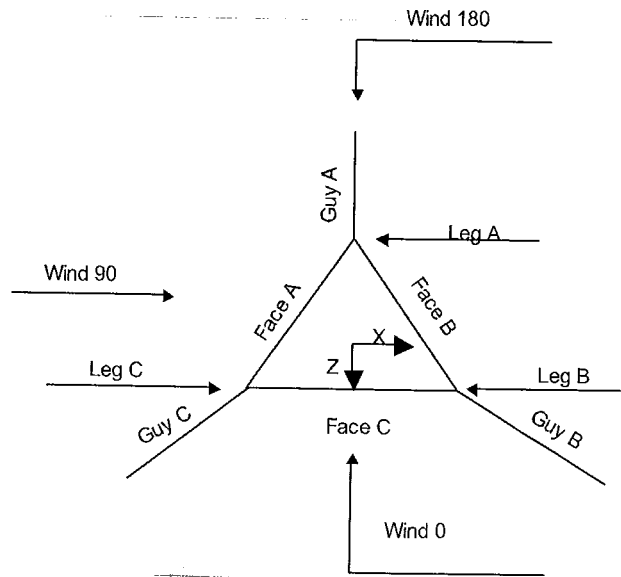
Stress ratio used in tower member design is 1.333.

Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Options

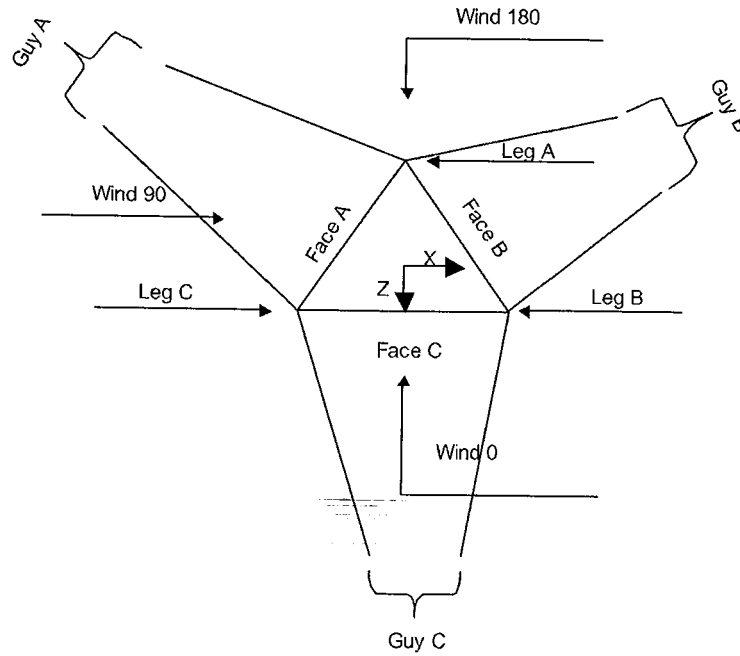
- | | | |
|--|--|---|
| <ul style="list-style-type: none"> Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification √ Use Code Stress Ratios √ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile √ Include Bolts In Member Capacity √ Leg Bolts Arc At Top Of Section √ Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) Add IBC .6D+W Combination | <ul style="list-style-type: none"> Distribute Leg Loads As Uniform Assume Legs Pinned √ Assume Rigid Index Plate √ Use Clear Spans For Wind Area √ Use Clear Spans For KL/r √ Retension Guys To Initial Tension Bypass Mast Stability Checks √ Use Azimuth Dish Coefficients √ Project Wind Area of Appurt. √ Autocalc Torque Arm Areas SR Members Have Cut Ends Sort Capacity Reports By Component √ Triangulate Diamond Inner Bracing | <ul style="list-style-type: none"> Treat Feedline Bundles As Cylinder Use ASCE 10 X-Brace Ly Rules √ Calculate Redundant Bracing Forces Ignore Redundant Members in FEA SR Leg Bolts Resist Compression √ All Leg Panels Have Same Allowable Offset Girt At Foundation √ Consider Feedline Torque Include Angle Block Shear Check <li style="padding-left: 20px;">Poles Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets |
|--|--|---|

RISATower	Job	112-13241	Page	2 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--



Corner & Starmount Guyed Tower

RISATower	Job	112-13241	Page	3 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--



Face Guyed

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T1	190.00-180.00			3.50	1	10.00
T2	180.00-160.00			3.50	1	20.00
T3	160.00-140.00			3.50	1	20.00
T4	140.00-120.00			3.50	1	20.00
T5	120.00-100.00			3.50	1	20.00
T6	100.00-80.00			3.50	1	20.00
T7	80.00-60.00			3.50	1	20.00
T8	60.00-40.00			3.50	1	20.00
T9	40.00-20.00			3.50	1	20.00
T10	20.00-0.00			3.50	1	20.00

Tower Section Geometry (cont'd)

RISA Tower	Job	112-13241	Page	4 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	190.00-180.00	3.08	TX Brace	No	Yes	4.5000	4.5000
T2	180.00-160.00	3.21	TX Brace	No	Yes	4.5000	4.5000
T3	160.00-140.00	3.21	TX Brace	No	Yes	4.5000	4.5000
T4	140.00-120.00	3.21	TX Brace	No	Yes	4.5000	4.5000
T5	120.00-100.00	3.21	TX Brace	No	Yes	4.5000	4.5000
T6	100.00-80.00	3.21	TX Brace	No	Yes	4.5000	4.5000
T7	80.00-60.00	3.21	TX Brace	No	Yes	4.5000	4.5000
T8	60.00-40.00	3.21	TX Brace	No	Yes	4.5000	4.5000
T9	40.00-20.00	3.21	TX Brace	No	Yes	4.5000	4.5000
T10	20.00-0.00	3.21	TX Brace	No	Yes	4.5000	4.5000

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 190.00-180.00	Pipe	P2.5x.203	A500M-58 (58 ksi)	Solid Round	5/8	A36 (36 ksi)
T2 180.00-160.00	Pipe	P2.5x.203	A500M-58 (58 ksi)	Solid Round	5/8	A36 (36 ksi)
T3 160.00-140.00	Pipe	P2.5x.203	A500M-58 (58 ksi)	Solid Round	5/8	A36 (36 ksi)
T4 140.00-120.00	Pipe	P2.5x.203	A500M-58 (58 ksi)	Solid Round	5/8	A36 (36 ksi)
T5 120.00-100.00	Pipe	P2.5x.203	A500M-58 (58 ksi)	Solid Round	5/8	A36 (36 ksi)
T6 100.00-80.00	Pipe	P2.5x.203	A500M-58 (58 ksi)	Solid Round	5/8	A36 (36 ksi)
T7 80.00-60.00	Pipe	P2.5x.203	A500M-58 (58 ksi)	Solid Round	5/8	A36 (36 ksi)
T8 60.00-40.00	Pipe	P2.5x.203	A500M-58 (58 ksi)	Solid Round	5/8	A36 (36 ksi)
T9 40.00-20.00	Pipe	P2.5x.203	A500M-58 (58 ksi)	Solid Round	5/8	A36 (36 ksi)
T10 20.00-0.00	Pipe	P2.5x.203	A500M-58 (58 ksi)	Solid Round	5/8	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 190.00-180.00	Equal Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)	Equal Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T2 180.00-160.00	Equal Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)	Equal Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T3 160.00-140.00	Equal Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)	Equal Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T4 140.00-120.00	Equal Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)	Equal Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T5 120.00-100.00	Equal Angle	L1 1/2x1 1/2x3/16	A36	Equal Angle	L1 1/2x1 1/2x3/16	A36

RISATower	Job	112-13241	Page	5 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T6 100.00-80.00	Equal Angle	L1 1/2x1 1/2x3/16	(36 ksi) A36	Equal Angle	L1 1/2x1 1/2x3/16	(36 ksi) A36
T7 80.00-60.00	Equal Angle	L1 1/2x1 1/2x3/16	(36 ksi) A36	Equal Angle	L1 1/2x1 1/2x3/16	(36 ksi) A36
T8 60.00-40.00	Equal Angle	L1 1/2x1 1/2x3/16	(36 ksi) A36	Equal Angle	L1 1/2x1 1/2x3/16	(36 ksi) A36
T9 40.00-20.00	Equal Angle	L1 1/2x1 1/2x3/16	(36 ksi) A36	Equal Angle	L1 1/2x1 1/2x3/16	(36 ksi) A36
T10 20.00-0.00	Equal Angle	L1 1/2x1 1/2x3/16	(36 ksi) A36	Equal Angle	L1 1/2x1 1/2x3/16	(36 ksi) A36

Tower Section Geometry (cont'd)

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 190.00-180.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T2 180.00-160.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T3 160.00-140.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T4 140.00-120.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T5 120.00-100.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T6 100.00-80.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T7 80.00-60.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T8 60.00-40.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T9 40.00-20.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)
T10 20.00-0.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L1 1/2x1 1/2x3/16	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _j	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
T1 190.00-180.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T2 180.00-160.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T3	0.00	0.0000	A36	1	1	1	36.0000	36.0000

RISATower	Job	112-13241	Page	6 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
ft	ft ²	in						
160.00-140.00			(36 ksi)					
T4	0.00	0.0000	A36	1	1	1	36.0000	36.0000
140.00-120.00			(36 ksi)					
T5	0.00	0.0000	A36	1	1	1	36.0000	36.0000
120.00-100.00			(36 ksi)					
T6	0.00	0.0000	A36	1	1	1	36.0000	36.0000
100.00-80.00			(36 ksi)					
T7 80.00-60.00	0.00	0.0000	A36	1	1	1	36.0000	36.0000
80.00-60.00			(36 ksi)					
T8 60.00-40.00	0.00	0.0000	A36	1	1	1	36.0000	36.0000
60.00-40.00			(36 ksi)					
T9 40.00-20.00	0.00	0.0000	A36	1	1	1	36.0000	36.0000
40.00-20.00			(36 ksi)					
T10 20.00-0.00	0.00	0.0000	A36	1	1	1	36.0000	36.0000
20.00-0.00			(36 ksi)					

Tower Section Geometry (cont'd)

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	Legs	K Factors ¹									
				X Brace Diags	Y Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace		
				X	Y	X	Y	X	Y	X	Y	X	Y
T1	No	Yes	1	1	1	1	1	0.65	0.65	1	1	1	1
190.00-180.00								0.65	0.65	1	1	1	1
T2	No	Yes	1	1	1	1	1	0.65	0.65	1	1	1	1
180.00-160.00								0.65	0.65	1	1	1	1
T3	No	Yes	1	1	1	1	1	0.65	0.65	1	1	1	1
160.00-140.00								0.65	0.65	1	1	1	1
T4	No	Yes	1	1	1	1	1	0.65	0.65	1	1	1	1
140.00-120.00								0.65	0.65	1	1	1	1
T5	No	Yes	1	1	1	1	1	0.65	0.65	1	1	1	1
120.00-100.00								0.65	0.65	1	1	1	1
T6	No	Yes	1	1	1	1	1	0.65	0.65	1	1	1	1
100.00-80.00								0.65	0.65	1	1	1	1
T7	No	Yes	1	1	1	1	1	0.65	0.65	1	1	1	1
80.00-60.00								0.65	0.65	1	1	1	1
T8	No	Yes	1	1	1	1	1	0.65	0.65	1	1	1	1
60.00-40.00								0.65	0.65	1	1	1	1
T9	No	Yes	1	1	1	1	1	0.65	0.65	1	1	1	1
40.00-20.00								0.65	0.65	1	1	1	1
T10	No	Yes	1	1	1	1	1	0.65	0.65	1	1	1	1
20.00-0.00								0.65	0.65	1	1	1	1

¹Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

Tower Section Geometry (cont'd)

RISA Tower	Job	112-13241	Page	7 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 190.00-180.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75
T2 180.00-160.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75
T3 160.00-140.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75
T4 140.00-120.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75
T5 120.00-100.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75
T6 100.00-80.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75
T7 80.00-60.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75
T8 60.00-40.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75
T9 40.00-20.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75
T10 20.00-0.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 190.00-180.00	Flange	0.7500	4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T2 180.00-160.00	Flange	0.7500	4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T3 160.00-140.00	Flange	0.7500	4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T4 140.00-120.00	Flange	0.7500	4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T5 120.00-100.00	Flange	0.7500	4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T6 100.00-80.00	Flange	0.7500	4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T7 80.00-60.00	Flange	0.7500	4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T8 60.00-40.00	Flange	0.7500	4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T9 40.00-20.00	Flange	0.7500	4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T10 20.00-0.00	Flange	0.7500	4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0

Guy Data

RISATower	Job	112-13241	Page	9 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	
	Phone: -- FAX: --			

Guy Elevation	Cable Weight A	Cable Weight B	Cable Weight C	Cable Weight D	Tower Intercept A	Tower Intercept B	Tower Intercept C	Tower Intercept D
ft	lb	lb	lb	lb	ft	ft	ft	ft
160.375	174.48	174.48	174.48		2.92	2.92	2.92	
120.375	125.27	125.27	125.27		2.9 sec/pulse 2.21	2.9 sec/pulse 2.21	2.9 sec/pulse 2.21	
60.375	104.01	104.01	104.01		2.6 sec/pulse 1.53	2.6 sec/pulse 1.53	2.6 sec/pulse 1.53	
189.625	159.15	159.15	159.15		2.1 sec/pulse 3.56	2.1 sec/pulse 3.56	2.1 sec/pulse 3.56	
					3.3 sec/pulse	3.3 sec/pulse	3.3 sec/pulse	

Guy Data (cont'd)

Guy Elevation	Calc K Single Angles	Calc K Solid Rounds	Torque Arm		Pull Off		Diagonal	
			K _x	K _y	K _x	K _y	K _x	K _y
160.375	No	No	1	1	0.65	0.65	1	1
120.375	No	No	1	1	0.65	0.65	1	1
60.375	No	No			0.65	0.65	1	1
189.625	No	No			0.65	0.65	1	1

Guy Data (cont'd)

Guy Elevation	Torque-Arm				Pull Off				Diagonal			
	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U
160.375	0.7500 A325N	2	0.0000	1	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	1
120.375	0.7500 A325N	2	0.0000	1	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	1
60.375	0.6250 A325N	0	0.0000	0.75	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	1
189.625	0.6250 A325N	0	0.0000	0.75	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	1

Guy Pressures

Guy Elevation	Guy Location	z	q _s	q _i	Ice Thickness
ft		ft	psf	psf	in
160.375	A	80.19	24	18	0.5000
	B	80.19	24	18	0.5000
	C	80.19	24	18	0.5000
120.375	A	60.19	22	16	0.5000
	B	60.19	22	16	0.5000
	C	60.19	22	16	0.5000
60.375	A	30.19	18	14	0.5000
	B	30.19	18	14	0.5000

RISATower	Job	112-13241	Page	10 of 53
--	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Guy Elevation ft	Guy Location	z ft	q _z psf	q _z Ice psf	Ice Thickness in
189.625	C	30.19	18	14	0.5000
	A	94.81	25	19	0.5000
	B	94.81	25	19	0.5000
	C	94.81	25	19	0.5000

Guy-Mast Forces (Excluding Wind) - No Ice

Guy Elevation ft	Guy Location	Chord Angle °	Guy Tension Top Bottom lb	F _x lb	F _y lb	F _z lb	M _x lb-ft	M _y lb-ft	M _z lb-ft	
160.375	A	48.2735	6490.22	-104.64	4882.39	-4274.84	-9865.97	15173.38	-17088.36	
			6360.00	104.64	4882.39	-4274.84	-9865.97	-15173.38	17088.36	
	B	48.2735	6490.22	3754.44	4882.39	2046.79	19731.94	15173.38	0.00	
			6360.00	3649.79	4882.39	2228.04	-9865.97	-15173.38	-17088.36	
	C	48.2735	6490.22	-3649.79	4882.39	2228.04	-9865.97	15173.38	17088.36	
			6360.00	-3754.44	4882.39	2046.79	19731.94	-15173.38	0.00	
	120.375	A	40.0857	5330.67	-99.04	3469.21	-4046.08	-7010.33	14361.42	-12142.24
				5250.00	99.04	3469.21	-4046.08	-7010.33	-14361.42	12142.24
		B	40.0857	5330.67	3553.53	3469.21	1937.27	14020.66	14361.42	0.00
				5250.00	3454.49	3469.21	2108.82	-7010.33	-14361.42	-12142.24
		C	40.0857	5330.67	-3454.49	3469.21	2108.82	-7010.33	14361.42	12142.24
				5250.00	-3553.53	3469.21	1937.27	14020.66	-14361.42	0.00
60.375	A	22.8926	Sum:	0.00	20815.27	0.00	-0.00	0.00	0.00	
			5290.46	0.00	2102.12	-4854.90	-4247.81	0.00	0.00	
	B	22.8926	5290.46	4204.47	2102.12	2427.45	2123.90	0.00	-3678.71	
			5250.00	-4204.47	2102.12	2427.45	2123.90	-0.00	3678.71	
	C	22.8926	5290.46	0.00	6306.36	0.00	0.00	0.00	0.00	
			5250.00	0.00	4322.16	-3198.73	-8733.90	0.00	0.00	
189.625	A	52.9833	5377.07	2770.18	4322.16	1599.36	4366.95	0.00	-7563.78	
			5250.00	-2770.18	4322.16	1599.36	4366.95	-0.00	7563.78	
	B	52.9833	5377.07	0.00	12966.47	0.00	0.00	0.00	0.00	
			5250.00	0.00	12966.47	0.00	0.00	0.00	0.00	

RISATower	Job	112-13241	Page	11 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Guy-Mast Forces (Excluding Wind) - Ice

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom lb	F _x	F _y	F _z	M _x	M _y	M _z
ft		°	lb	lb	lb	lb-ft	lb-ft	lb-ft	lb-ft
160.375	A	48.2735	8233.12 7992.84	-132.12	6215.76	-5397.33	-12560.35	19157.63	-21755.17
	A	48.2735	8233.12 7992.84	132.12	6215.76	-5397.33	-12560.35	-19157.63	21755.17
	B	48.2735	8233.12 7992.84	4740.29	6215.76	2584.24	25120.71	19157.63	0.00
	B	48.2735	8233.12 7992.84	4608.16	6215.76	2813.09	-12560.35	-19157.63	-21755.17
	C	48.2735	8233.12 7992.84	-4608.16	6215.76	2813.09	-12560.35	19157.63	21755.17
	C	48.2735	8233.12 7992.84	-4740.29	6215.76	2584.24	25120.71	-19157.63	0.00
120.375			Sum:	0.00	37294.58	0.00	-0.00	0.00	0.00
	A	40.0857	6777.01 6618.32	-125.38	4435.90	-5122.00	-8963.74	18180.36	-15525.66
	A	40.0857	6777.01 6618.32	125.38	4435.90	-5122.00	-8963.74	-18180.36	15525.66
	B	40.0857	6777.01 6618.32	4498.47	4435.90	2452.42	17927.48	18180.36	0.00
	B	40.0857	6777.01 6618.32	4373.09	4435.90	2669.58	-8963.74	-18180.36	-15525.66
	C	40.0857	6777.01 6618.32	-4373.09	4435.90	2669.58	-8963.74	18180.36	15525.66
60.375			Sum:	0.00	26615.41	0.00	-0.00	0.00	0.00
	A	22.8926	6717.98 6638.39	0.00	2700.07	-6151.50	-5456.09	0.00	0.00
	B	22.8926	6717.98 6638.39	5327.35	2700.07	3075.75	2728.05	0.00	-4725.12
	C	22.8926	6717.98 6638.39	-5327.35	2700.07	3075.75	2728.05	-0.00	4725.12
			Sum:	0.00	8100.20	0.00	0.00	0.00	0.00
	A	52.9833	6845.85 6595.87	0.00	5522.71	-4045.41	-11159.87	0.00	0.00
189.625	B	52.9833	6845.85 6595.87	3503.43	5522.71	2022.71	5579.94	0.00	-9664.73
	C	52.9833	6845.85 6595.87	-3503.43	5522.71	2022.71	5579.94	-0.00	9664.73
			Sum:	0.00	16568.12	0.00	0.00	0.00	0.00

Guy-Mast Forces (Excluding Wind) - Service

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom lb	F _x	F _y	F _z	M _x	M _y	M _z
ft		°	lb	lb	lb	lb-ft	lb-ft	lb-ft	lb-ft
160.375	A	48.2735	6490.22 6360.00	-104.64	4882.39	-4274.84	-9865.97	15173.38	-17088.36
	A	48.2735	6490.22	104.64	4882.39	-4274.84	-9865.97	-15173.38	17088.36

RISATower	Job	Page
		12 of 53
	Project	Date
	Ashford, CT	23:13:44 11/12/12
Client	Designed by	
Phone: -- FAX: --	CDT	

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom lb	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		lb	lb	lb	lb-ft	lb-ft	lb-ft
	B	48.2735	6360.00 6490.22 6360.00	3754.44	4882.39	2046.79	19731.94	15173.38	0.00
	B	48.2735	6490.22 6360.00	3649.79	4882.39	2228.04	-9865.97	-15173.38	-17088.36
	C	48.2735	6490.22 6360.00	-3649.79	4882.39	2228.04	-9865.97	15173.38	17088.36
	C	48.2735	6490.22 6360.00	-3754.44	4882.39	2046.79	19731.94	-15173.38	0.00
			Sum:	0.00	29294.33	0.00	-0.00	0.00	0.00
120.375	A	40.0857	5330.67 5250.00	-99.04	3469.21	-4046.08	-7010.33	14361.42	-12142.24
	A	40.0857	5330.67 5250.00	99.04	3469.21	-4046.08	-7010.33	-14361.42	12142.24
	B	40.0857	5330.67 5250.00	3553.53	3469.21	1937.27	14020.66	14361.42	0.00
	B	40.0857	5330.67 5250.00	3454.49	3469.21	2108.82	-7010.33	-14361.42	-12142.24
	C	40.0857	5330.67 5250.00	-3454.49	3469.21	2108.82	-7010.33	14361.42	12142.24
	C	40.0857	5330.67 5250.00	-3553.53	3469.21	1937.27	14020.66	-14361.42	0.00
			Sum:	0.00	20815.27	0.00	-0.00	0.00	0.00
60.375	A	22.8926	5290.46 5250.00	0.00	2102.12	-4854.90	-4247.81	0.00	0.00
	B	22.8926	5290.46 5250.00	4204.47	2102.12	2427.45	2123.90	0.00	-3678.71
	C	22.8926	5290.46 5250.00	-4204.47	2102.12	2427.45	2123.90	-0.00	3678.71
			Sum:	0.00	6306.36	0.00	0.00	0.00	0.00
189.625	A	52.9833	5377.07 5250.00	0.00	4322.16	-3198.73	-8733.90	0.00	0.00
	B	52.9833	5377.07 5250.00	2770.18	4322.16	1599.36	4366.95	0.00	-7563.78
	C	52.9833	5377.07 5250.00	-2770.18	4322.16	1599.36	4366.95	-0.00	7563.78
			Sum:	0.00	12966.47	0.00	0.00	0.00	0.00

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
1 5/8 (Verizon)	C	Yes	Ar (CfAe)	190.00 - 0.00	0.0000	0.25	12	6	1.0000 0.5000	1.9800		1.04
1 5/8 (Sprint)	A	Yes	Ar (CfAe)	167.00 - 0.00	0.0000	0.25	9	6	1.0000 0.5000	1.9800		1.04
1 1/4 (Nextel)	B	Yes	Ar (CfAe)	178.00 - 0.00	0.0000	-0.25	9	9	1.0000 0.5000	1.5500		0.66
Safety Line 3/8	A	No	Ar (CfAe)	190.00 - 0.00	0.0000	0	1	1	0.3750	0.3750		0.22

RISATower	Job	112-13241	Page	13 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	
Phone: -- FAX: --				

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#		$C_A A_1$ ft ² /ft	Weight plf
1 5/8 (AT&T)	B	No	CaAa (Out Of Face)	138.00 - 0.00	0.0000	0.1	12	No Ice	0.20	1.04
3/4 Cable	B	No	CaAa (Out Of Face)	138.00 - 0.00	0.0000	0.1	2	1/2" Ice	0.30	2.55
								No Ice	0.08	0.19
								1/2" Ice	0.16	0.88
3/8 Cable	B	No	CaAa (Out Of Face)	138.00 - 0.00	0.0000	0.1	1	No Ice	0.04	0.19
								1/2" Ice	0.16	0.88

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft ²	A_F ft ²	$C_A A_1$ In Face ft ²	$C_A A_1$ Out Face ft ²	Weight lb
T1	190.00-180.00	A	0.313	0.000	0.000	0.000	2.20
		B	0.000	0.000	0.000	0.000	0.00
		C	9.900	0.000	0.000	0.000	124.80
T2	180.00-160.00	A	7.555	0.000	0.000	0.000	69.92
		B	20.925	0.000	0.000	0.000	106.92
		C	19.800	0.000	0.000	0.000	249.60
T3	160.00-140.00	A	20.425	0.000	0.000	0.000	191.60
		B	23.250	0.000	0.000	0.000	118.80
		C	19.800	0.000	0.000	0.000	249.60
T4	140.00-120.00	A	20.425	0.000	0.000	0.000	191.60
		B	23.250	0.000	0.000	46.143	353.70
		C	19.800	0.000	0.000	0.000	249.60
T5	120.00-100.00	A	20.425	0.000	0.000	0.000	191.60
		B	23.250	0.000	0.000	51.270	379.80
		C	19.800	0.000	0.000	0.000	249.60
T6	100.00-80.00	A	20.425	0.000	0.000	0.000	191.60
		B	23.250	0.000	0.000	51.270	379.80
		C	19.800	0.000	0.000	0.000	249.60
T7	80.00-60.00	A	20.425	0.000	0.000	0.000	191.60
		B	23.250	0.000	0.000	51.270	379.80
		C	19.800	0.000	0.000	0.000	249.60
T8	60.00-40.00	A	20.425	0.000	0.000	0.000	191.60
		B	23.250	0.000	0.000	51.270	379.80
		C	19.800	0.000	0.000	0.000	249.60
T9	40.00-20.00	A	20.425	0.000	0.000	0.000	191.60
		B	23.250	0.000	0.000	51.270	379.80
		C	19.800	0.000	0.000	0.000	249.60
T10	20.00-0.00	A	20.425	0.000	0.000	0.000	191.60
		B	23.250	0.000	0.000	51.270	379.80
		C	19.800	0.000	0.000	0.000	249.60

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	$C_A A_1$ In Face ft ²	$C_A A_1$ Out Face ft ²	Weight lb
T1	190.00-180.00	A	0.500	1.146	0.000	0.000	0.000	7.53
		B		0.000	0.000	0.000	0.000	0.00
		C		2.483	12.417	0.000	0.000	353.35

RISATower Phone: -- FAX: --	Job	112-13241	Page	14 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	$C_i A_i$ In Face ft ²	$C_o A_o$ Out Face ft ²	Weight lb
T2	180.00-160.00	A	0.500	4.030	8.692	0.000	0.000	197.34
		B		3.825	30.600	0.000	0.000	387.93
		C		4.967	24.833	0.000	0.000	706.70
T3	160.00-140.00	A	0.500	7.258	24.833	0.000	0.000	535.80
		B		4.250	34.000	0.000	0.000	431.04
		C		4.967	24.833	0.000	0.000	706.70
T4	140.00-120.00	A	0.500	7.258	24.833	0.000	0.000	535.80
		B		4.250	34.000	0.000	73.169	1029.37
		C		4.967	24.833	0.000	0.000	706.70
T5	120.00-100.00	A	0.500	7.258	24.833	0.000	0.000	535.80
		B		4.250	34.000	0.000	81.299	1095.85
		C		4.967	24.833	0.000	0.000	706.70
T6	100.00-80.00	A	0.500	7.258	24.833	0.000	0.000	535.80
		B		4.250	34.000	0.000	81.299	1095.85
		C		4.967	24.833	0.000	0.000	706.70
T7	80.00-60.00	A	0.500	7.258	24.833	0.000	0.000	535.80
		B		4.250	34.000	0.000	81.299	1095.85
		C		4.967	24.833	0.000	0.000	706.70
T8	60.00-40.00	A	0.500	7.258	24.833	0.000	0.000	535.80
		B		4.250	34.000	0.000	81.299	1095.85
		C		4.967	24.833	0.000	0.000	706.70
T9	40.00-20.00	A	0.500	7.258	24.833	0.000	0.000	535.80
		B		4.250	34.000	0.000	81.299	1095.85
		C		4.967	24.833	0.000	0.000	706.70
T10	20.00-0.00	A	0.500	7.258	24.833	0.000	0.000	535.80
		B		4.250	34.000	0.000	81.299	1095.85
		C		4.967	24.833	0.000	0.000	706.70

Feed Line Shielding

Section	Elevation ft	Face	A_R ft ²	A_R Ice ft ²	A_F ft ²	A_F Ice ft ²
T1	190.00-180.00	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.412	2.110	0.495	0.745
T2	180.00-160.00	A	0.294	1.454	0.303	0.456
		B	0.887	4.798	0.915	1.506
		C	0.839	4.154	0.866	1.304
T3	160.00-140.00	A	0.839	4.154	0.866	1.304
		B	0.986	5.332	1.017	1.673
		C	0.839	4.154	0.866	1.304
T4	140.00-120.00	A	0.839	4.154	0.866	1.304
		B	0.986	5.332	1.017	1.673
		C	0.839	4.154	0.866	1.304
T5	120.00-100.00	A	0.839	4.154	0.866	1.304
		B	0.986	5.332	1.017	1.673
		C	0.839	4.154	0.866	1.304
T6	100.00-80.00	A	0.839	4.154	0.866	1.304
		B	0.986	5.332	1.017	1.673
		C	0.839	4.154	0.866	1.304
T7	80.00-60.00	A	0.839	4.154	0.866	1.304
		B	0.986	5.332	1.017	1.673
		C	0.839	4.154	0.866	1.304
T8	60.00-40.00	A	0.839	4.154	0.866	1.304
		B	0.986	5.332	1.017	1.673
		C	0.839	4.154	0.866	1.304

RISATower	Job	112-13241	Page	15 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	

Section	Elevation	Face	A_R	A_R	A_F	A_F
	ft		ft ²	Ice ft ²	ft ²	Ice ft ²
T9	40.00-20.00	A	0.839	4.154	0.866	1.304
		B	0.986	5.332	1.017	1.673
		C	0.839	4.154	0.866	1.304
T10	20.00-0.00	A	0.839	4.154	0.866	1.304
		B	0.986	5.332	1.017	1.673
		C	0.839	4.154	0.866	1.304

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X	CP_Z
	ft	in	in	Ice in	Ice in
T1	190.00-180.00	-2.9946	3.8953	-2.1949	2.5376
T2	180.00-160.00	-1.4359	-1.6082	-0.9628	-1.6245
T3	160.00-140.00	-1.9369	-3.5573	-1.3213	-3.0027
T4	140.00-120.00	3.2475	0.9978	3.5497	1.2681
T5	120.00-100.00	3.4410	1.1677	3.7258	1.4224
T6	100.00-80.00	3.4410	1.1677	3.7258	1.4224
T7	80.00-60.00	3.4410	1.1677	3.7258	1.4224
T8	60.00-40.00	3.4410	1.1677	3.7258	1.4224
T9	40.00-20.00	3.4410	1.1677	3.7258	1.4224
T10	20.00-0.00	3.4410	1.1677	3.7258	1.4224

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horiz Lateral Vert	Azimuth Adjustment	Placement	$C_d A_d$ Front	$C_d A_d$ Side	Weight	
			ft	°	ft	ft ²	ft ²	lb	
Antel BXA-70063-6CF (Verizon)	A	From Leg	3.00	0.0000	190.00	No Ice	7.73	2.94	17.00
			0.00			1/2" Ice	8.19	3.40	59.00
			0.00						
Antel BXA-70063-6CF (Verizon)	B	From Leg	3.00	0.0000	190.00	No Ice	7.73	2.94	17.00
			0.00			1/2" Ice	8.19	3.40	59.00
			0.00						
Antel BXA-70063-6CF (Verizon)	C	From Leg	3.00	0.0000	190.00	No Ice	7.73	2.94	17.00
			0.00			1/2" Ice	8.19	3.40	59.00
			0.00						
Sector Frame Mount (Verizon)	A	From Leg	1.50	0.0000	190.00	No Ice	13.60	13.60	465.00
			0.00			1/2" Ice	18.40	18.40	600.00
			0.00						
Sector Frame Mount (Verizon)	B	From Leg	1.50	0.0000	190.00	No Ice	13.60	13.60	465.00
			0.00			1/2" Ice	18.40	18.40	600.00
			0.00						
Sector Frame Mount (Verizon)	C	From Leg	1.50	0.0000	190.00	No Ice	13.60	13.60	465.00
			0.00			1/2" Ice	18.40	18.40	600.00
			0.00						
(2) Antel LPA-80080-4CF (Verizon)	A	From Leg	3.00	0.0000	190.00	No Ice	1.51	6.79	12.00
			0.00			1/2" Ice	1.81	7.14	45.10

RISATower	Job	142-13241	Page	16 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _A A _s Front	C _A A _s Side	Weight	
			Horz	Lateral						
			ft	ft	°	ft	ft ²	ft ²	lb	
			0.00							
(2) Antel LPA-80063/4CF (Verizon)	B	From Leg	3.00		0.0000	190.00	No Ice 1/2" Ice	7.00 7.36	3.48 3.82	20.00 72.60
			0.00							
(2) Antel LPA-80063/4CF (Verizon)	C	From Leg	3.00		0.0000	190.00	No Ice 1/2" Ice	7.00 7.36	3.48 3.82	20.00 72.60
			0.00							
Antel BXA-171085-8BF (Verizon)	A	From Leg	3.00		0.0000	190.00	No Ice 1/2" Ice	2.94 3.25	1.49 1.80	10.50 29.30
			0.00							
Antel BXA-171063-8BF (Verizon)	B	From Leg	3.00		0.0000	190.00	No Ice 1/2" Ice	2.94 3.25	1.49 1.80	10.50 29.30
			0.00							
Antel BXA-171063-8BF (Verizon)	C	From Leg	3.00		0.0000	190.00	No Ice 1/2" Ice	2.94 3.25	1.49 1.80	10.50 29.30
			0.00							
(2) RFS FD9R6004/2C-3L (Verizon)	A	From Leg	3.00		0.0000	190.00	No Ice 1/2" Ice	0.37 0.44	0.08 0.12	2.60 4.90
			0.00							
(2) RFS FD9R6004/2C-3L (Verizon)	B	From Leg	3.00		0.0000	190.00	No Ice 1/2" Ice	0.37 0.44	0.08 0.12	2.60 4.90
			0.00							
(2) RFS FD9R6004/2C-3L (Verizon)	C	From Leg	3.00		0.0000	190.00	No Ice 1/2" Ice	0.37 0.44	0.08 0.12	2.60 4.90
			0.00							
Sector Frame Mount (Sprint)	A	From Leg	1.50		0.0000	167.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	465.00 600.00
			0.00							
Sector Frame Mount (Sprint)	B	From Leg	1.50		0.0000	167.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	465.00 600.00
			0.00							
Sector Frame Mount (Sprint)	C	From Leg	1.50		0.0000	167.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	465.00 600.00
			0.00							
(3) Decibel DB980H90 (Sprint)	A	From Leg	3.00		0.0000	167.00	No Ice 1/2" Ice	3.90 4.28	2.29 2.73	8.00 29.00
			0.00							
(3) Decibel DB980H90 (Sprint)	B	From Leg	3.00		0.0000	167.00	No Ice 1/2" Ice	3.90 4.28	2.29 2.73	8.00 29.00
			0.00							
(3) Decibel DB980H90 (Sprint)	C	From Leg	3.00		0.0000	167.00	No Ice 1/2" Ice	3.90 4.28	2.29 2.73	8.00 29.00
			0.00							
Sector Frame Mount (Nextel)	A	From Leg	1.50		0.0000	178.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	465.00 600.00
			0.00							
Sector Frame Mount (Nextel)	B	From Leg	1.50		0.0000	178.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	465.00 600.00
			0.00							
Sector Frame Mount (Nextel)	C	From Leg	1.50		0.0000	178.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	465.00 600.00
			0.00							
(3) Swedcom ALP-E-9011 (Nextel)	A	From Leg	3.00		0.0000	178.00	No Ice 1/2" Ice	2.72 3.00	3.34 3.63	20.00 43.80
			0.00							
(3) Swedcom ALP-E-9011 (Nextel)	B	From Leg	3.00		0.0000	178.00	No Ice 1/2" Ice	2.72 3.00	3.34 3.63	20.00 43.80
			0.00							

RISATower	Job	112-13241	Page	17 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A ₁ Front ft ²	C _A A ₁ Side ft ²	Weight lb
(3) Swedcom ALP-E-9011 (Nextel)	C	From Leg	0.00 3.00 0.00 0.00	0.0000	178.00	No Ice 2.72 1/2" Ice 3.00	3.34 3.63	20.00 43.80
Sector Frame Mount (AT&T)	A	From Leg	1.50 0.00 0.00	0.0000	138.00	No Ice 13.60 1/2" Ice 18.40	13.60 18.40	465.00 600.00
Sector Frame Mount (AT&T)	B	From Leg	1.50 0.00 0.00	0.0000	138.00	No Ice 13.60 1/2" Ice 18.40	13.60 18.40	465.00 600.00
Sector Frame Mount (AT&T)	C	From Leg	1.50 0.00 0.00	0.0000	138.00	No Ice 13.60 1/2" Ice 18.40	13.60 18.40	465.00 600.00
(2) Allgon 7770.00 (AT&T)	A	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 5.88 1/2" Ice 6.25	2.93 3.29	35.00 67.60
(2) Allgon 7770.00 (AT&T)	B	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 5.88 1/2" Ice 6.25	2.93 3.29	35.00 67.60
(2) Allgon 7770.00 (AT&T)	C	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 5.88 1/2" Ice 6.25	2.93 3.29	35.00 67.60
(2) Powerwave LGP21401 (AT&T)	A	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 1.95 1/2" Ice 2.11	0.53 0.63	31.00 30.30
(2) Powerwave LGP21401 (AT&T)	B	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 1.95 1/2" Ice 2.11	0.53 0.63	31.00 30.30
(2) Powerwave LGP21401 (AT&T)	C	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 1.95 1/2" Ice 2.11	0.53 0.63	31.00 30.30
(2) Powerwave LGP21901 (AT&T)	A	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 0.27 1/2" Ice 0.33	0.13 0.18	25.00 30.30
(2) Powerwave LGP21901 (AT&T)	B	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 0.27 1/2" Ice 0.33	0.13 0.18	25.00 30.30
(2) Powerwave LGP21901 (AT&T)	C	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 0.27 1/2" Ice 0.33	0.13 0.18	25.00 30.30
Sector Frame Mount (Empty Mount)	A	From Leg	1.50 0.00 0.00	0.0000	150.00	No Ice 13.60 1/2" Ice 18.40	13.60 18.40	465.00 600.00
Sector Frame Mount (Empty Mount)	B	From Leg	1.50 0.00 0.00	0.0000	150.00	No Ice 13.60 1/2" Ice 18.40	13.60 18.40	465.00 600.00
Sector Frame Mount (Empty Mount)	C	From Leg	1.50 0.00 0.00	0.0000	150.00	No Ice 13.60 1/2" Ice 18.40	13.60 18.40	465.00 600.00
Lightning Rod	C	None		0.0000	190.00	No Ice 1.00 1/2" Ice 2.02	1.00 2.02	40.00 49.26
KMW AM-X-CD-17-65-00T-RET (AT&T)	A	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 11.31 1/2" Ice 11.93	6.80 7.48	25.00 86.40
KMW AM-X-CD-17-65-00T-RET (AT&T)	B	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 11.31 1/2" Ice 11.93	6.80 7.48	25.00 86.40

RISATower	Job	112-13241	Page	18 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _A A _A Front	C _A A _S Side	Weight
			Horz	Lateral Vert					
			ft	ft	°	ft	ft ²	ft ²	lb
KMW AM-X-CD-17-65-00T-RET (AT&T)	C	From Leg	3.00	0.0000	138.00	No Ice	11.31	6.80	25.00
			0.00			1/2" Ice	11.93	7.48	86.40
			0.00						
(2) Ericsson RRUS11 (AT&T)	A	From Leg	3.00	0.0000	138.00	No Ice	2.99	0.36	25.00
			0.00			1/2" Ice	3.19	0.48	38.50
			0.00						
(2) Ericsson RRUS11 (AT&T)	B	From Leg	3.00	0.0000	138.00	No Ice	2.99	0.36	25.00
			0.00			1/2" Ice	3.19	0.48	38.50
			0.00						
(2) Ericsson RRUS11 (AT&T)	C	From Leg	3.00	0.0000	138.00	No Ice	2.99	0.36	25.00
			0.00			1/2" Ice	3.19	0.48	38.50
			0.00						
Raycap DC6-48-60-18-8F (AT&T)	A	From Leg	3.00	0.0000	138.00	No Ice	1.47	1.47	25.00
			0.00			1/2" Ice	1.67	1.67	47.60
			0.00						

Tower Pressures - No Ice

$G_H = 1.117$

Section Elevation	z	K _z	q _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face	C _A A _A Out Face
ft	ft		psf	ft ²		ft ²	ft ²	ft ²		ft ²	ft ²
T1 190.00-180.00	185.00	1.636	30	37.396	A	1.630	6.462	4.792	59.21	0.000	0.000
					B	1.630	6.150		61.59	0.000	0.000
					C	1.135	15.637		28.57	0.000	0.000
T2 180.00-160.00	170.00	1.597	30	74.792	A	2.550	19.609	9.583	43.25	0.000	0.000
					B	1.937	32.386		27.92	0.000	0.000
					C	1.987	31.308		28.78	0.000	0.000
T3 160.00-140.00	150.00	1.541	29	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	0.000
					C	1.987	31.308		28.78	0.000	0.000
T4 140.00-120.00	130.00	1.48	27	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	-46.143
					C	1.987	31.308		28.78	0.000	0.000
T5 120.00-100.00	110.00	1.411	26	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270
					C	1.987	31.308		28.78	0.000	0.000
T6 100.00-80.00	90.00	1.332	25	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270
					C	1.987	31.308		28.78	0.000	0.000
T7 80.00-60.00	70.00	1.24	23	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270
					C	1.987	31.308		28.78	0.000	0.000
T8 60.00-40.00	50.00	1.126	21	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270
					C	1.987	31.308		28.78	0.000	0.000
T9 40.00-20.00	30.00	1	18	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270

RISATower	Job	112-13241	Page	19 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--

Section Elevation	z	K _Z	q _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _s A _i In Face	C _s A _i Out Face
ft	ft		psf	ft ²		ft ²	ft ²	ft ²		ft ²	ft ²
T10 20.00-0.00	10.00	1	18	74.792	C	1.987	31.308	9.583	28.78	0.000	0.000
					A	1.987	31.933		28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270
					C	1.987	31.308		28.78	0.000	0.000

Tower Pressure - With Ice

$G_H = 1.117$

Section Elevation	z	K _Z	q _z	t _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _s A _i In Face	C _s A _i Out Face
ft	ft		psf	in	ft ²		ft ²	ft ²	ft ²		ft ²	ft ²
T1 190.00-180.00	185.00	1.636	23	0.5000	38.229	A	1.630	12.221	6.458	46.63	0.000	0.000
						B	1.630	11.076		50.83	0.000	0.000
						C	13.302	11.449		26.09	0.000	0.000
T2 180.00-160.00	170.00	1.597	22	0.5000	76.458	A	11.088	24.582	12.917	36.21	0.000	0.000
						B	31.947	21.032		24.38	0.000	0.000
						C	26.382	22.819		26.25	0.000	0.000
T3 160.00-140.00	150.00	1.541	21	0.5000	76.458	A	26.382	25.110	12.917	25.08	0.000	0.000
						B	35.179	20.924		23.02	0.000	0.000
						C	26.382	22.819		26.25	0.000	0.000
T4 140.00-120.00	130.00	1.48	21	0.5000	76.458	A	26.382	25.110	12.917	25.08	0.000	0.000
						B	35.179	20.924		23.02	0.000	73.169
						C	26.382	22.819		26.25	0.000	0.000
T5 120.00-100.00	110.00	1.411	20	0.5000	76.458	A	26.382	25.110	12.917	25.08	0.000	0.000
						B	35.179	20.924		23.02	0.000	81.299
						C	26.382	22.819		26.25	0.000	0.000
T6 100.00-80.00	90.00	1.332	18	0.5000	76.458	A	26.382	25.110	12.917	25.08	0.000	0.000
						B	35.179	20.924		23.02	0.000	81.299
						C	26.382	22.819		26.25	0.000	0.000
T7 80.00-60.00	70.00	1.24	17	0.5000	76.458	A	26.382	25.110	12.917	25.08	0.000	0.000
						B	35.179	20.924		23.02	0.000	81.299
						C	26.382	22.819		26.25	0.000	0.000
T8 60.00-40.00	50.00	1.126	16	0.5000	76.458	A	26.382	25.110	12.917	25.08	0.000	0.000
						B	35.179	20.924		23.02	0.000	81.299
						C	26.382	22.819		26.25	0.000	0.000
T9 40.00-20.00	30.00	1	14	0.5000	76.458	A	26.382	25.110	12.917	25.08	0.000	0.000
						B	35.179	20.924		23.02	0.000	81.299
						C	26.382	22.819		26.25	0.000	0.000
T10 20.00-0.00	10.00	1	14	0.5000	76.458	A	26.382	25.110	12.917	25.08	0.000	0.000
						B	35.179	20.924		23.02	0.000	81.299
						C	26.382	22.819		26.25	0.000	0.000

Tower Pressure - Service

$G_H = 1.117$

Section Elevation	z	K _Z	q _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _s A _i In Face	C _s A _i Out Face
ft	ft		psf	ft ²		ft ²	ft ²	ft ²		ft ²	ft ²

RISATower	Job	112-13241	Page	20 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	

Section Elevation	z	K _Z	q _z	A _G	F a c e	A _F	A _R	A _{Ice}	Leg %	C _A A _A In Face	C _A A _A Out Face
ft	ft		psf	ft ²		ft ²	ft ²	ft ²		ft ²	ft ²
T1 190.00-180.00	185.00	1.636	10	37.396	A	1.630	6.462	4.792	59.21	0.000	0.000
					B	1.630	6.150		61.59	0.000	0.000
					C	1.135	15.637		28.57	0.000	0.000
T2 180.00-160.00	170.00	1.597	10	74.792	A	2.550	19.609	9.583	43.25	0.000	0.000
					B	1.937	32.386		27.92	0.000	0.000
					C	1.987	31.308		28.78	0.000	0.000
T3 160.00-140.00	150.00	1.541	10	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	0.000
					C	1.987	31.308		28.78	0.000	0.000
T4 140.00-120.00	130.00	1.48	9	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	46.143
					C	1.987	31.308		28.78	0.000	0.000
T5 120.00-100.00	110.00	1.411	9	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270
					C	1.987	31.308		28.78	0.000	0.000
T6 100.00-80.00	90.00	1.332	9	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270
					C	1.987	31.308		28.78	0.000	0.000
T7 80.00-60.00	70.00	1.24	8	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270
					C	1.987	31.308		28.78	0.000	0.000
T8 60.00-40.00	50.00	1.126	7	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270
					C	1.987	31.308		28.78	0.000	0.000
T9 40.00-20.00	30.00	1	6	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270
					C	1.987	31.308		28.78	0.000	0.000
T10 20.00-0.00	10.00	1	6	74.792	A	1.987	31.933	9.583	28.25	0.000	0.000
					B	1.836	34.612		26.29	0.000	51.270
					C	1.987	31.308		28.78	0.000	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _F	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
T1 190.00-180.00	127.00	336.97	A	0.216	2.542	0.594	1	1	5.468	778.63	77.86	C
			B	0.208	2.569	0.592	1	1	5.271			
			C	0.449	1.976	0.673	1	1	11.653			
T2 180.00-160.00	426.44	658.24	A	0.296	2.306	0.615	1	1	14.605	1544.04	77.20	B
		TA 214.38	B	0.459	1.959	0.677	1	1	23.876			
			C	0.445	1.982	0.671	1	1	22.997			
T3 160.00-140.00	560.00	658.24	A	0.454	1.968	0.675	1	1	23.538	1572.62	78.63	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
T4 140.00-120.00	794.90	658.24	A	0.454	1.968	0.675	1	1	23.538	2920.38	146.02	B
		TA 214.38	B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
T5 120.00-100.00	821.00	658.24	A	0.454	1.968	0.675	1	1	23.538	2933.71	146.69	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
T6 100.00-80.00	821.00	658.24	A	0.454	1.968	0.675	1	1	23.538	2770.24	138.51	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
T7 80.00-60.00	821.00	658.24	A	0.454	1.968	0.675	1	1	23.538	2578.30	128.92	B
			B	0.487	1.917	0.691	1	1	25.757			

RISATower	Job	112-13241	Page	21 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
T8 60.00-40.00	821.00	658.24	C	0.445	1.982	0.671	1	1	22.997	2341.98	117.10	B
			A	0.454	1.968	0.675	1	1	23.538			
			B	0.487	1.917	0.691	1	1	25.757			
T9 40.00-20.00	821.00	658.24	C	0.445	1.982	0.671	1	1	22.997	2079.81	103.99	B
			A	0.454	1.968	0.675	1	1	23.538			
			B	0.487	1.917	0.691	1	1	25.757			
T10 20.00-0.00	821.00	658.24	A	0.454	1.968	0.675	1	1	23.538	2079.81	103.99	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
Sum Weight:	6834.34	6689.93								21599.53		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
T1 190.00-180.00	127.00	336.97	A	0.216	2.542	0.594	0.8	1	5.142	763.46	76.35	C
			B	0.208	2.569	0.592	0.8	1	4.945			
			C	0.449	1.976	0.673	0.8	1	11.426			
T2 180.00-160.00	426.44	658.24 TA 214.38	A	0.296	2.306	0.615	0.8	1	14.095	1518.99	75.95	B
			B	0.459	1.959	0.677	0.8	1	23.488			
			C	0.445	1.982	0.671	0.8	1	22.599			
T3 160.00-140.00	560.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	1550.20	77.51	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T4 140.00-120.00	794.90	658.24 TA 214.38	A	0.454	1.968	0.675	0.8	1	23.141	2898.87	144.94	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T5 120.00-100.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	2913.20	145.66	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T6 100.00-80.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	2750.87	137.54	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T7 80.00-60.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	2560.27	128.01	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T8 60.00-40.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	2325.60	116.28	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T9 40.00-20.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	2065.27	103.26	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T10 20.00-0.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	2065.27	103.26	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
Sum Weight:	6834.34	6689.93								21411.99		

Tower Forces - No Ice - Wind 90 To Face

RISATower	Job	112-13241	Page	22 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb	e						ft ²	lb	plf	
T1 190.00-180.00	127.00	336.97	A	0.216	2.542	0.594	0.85	1	5.223	767.25	76.73	C
			B	0.208	2.569	0.592	0.85	1	5.027			
			C	0.449	1.976	0.673	0.85	1	11.482			
T2 180.00-160.00	426.44	658.24	A	0.296	2.306	0.615	0.85	1	14.222	1525.25	76.26	B
		TA 214.38	B	0.459	1.959	0.677	0.85	1	23.585			
			C	0.445	1.982	0.671	0.85	1	22.699			
T3 160.00-140.00	560.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	1555.81	77.79	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T4 140.00-120.00	794.90	658.24	A	0.454	1.968	0.675	0.85	1	23.240	2904.25	145.21	B
		TA 214.38	B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T5 120.00-100.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	2918.33	145.92	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T6 100.00-80.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	2755.71	137.79	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T7 80.00-60.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	2564.78	128.24	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T8 60.00-40.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	2329.70	116.48	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T9 40.00-20.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	2068.90	103.45	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T10 20.00-0.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	2068.90	103.45	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
Sum Weight:	6834.34	6689.93								21458.88		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb	e						ft ²	lb	plf	
T1 190.00-180.00	360.90	521.56	A	0.362	2.143	0.637	1	1	9.415	1006.88	100.69	C
			B	0.332	2.213	0.626	1	1	8.567			
			C	0.647	1.782	0.784	1	1	22.275			
T2 180.00-160.00	1291.97	1013.22	A	0.467	1.947	0.681	1	1	27.829	2157.90	107.90	B
		TA 326.59	B	0.693	1.776	0.815	1	1	49.085			
			C	0.644	1.783	0.781	1	1	44.208			
T3 160.00-140.00	1673.54	1013.22	A	0.673	1.777	0.801	1	1	46.504	2249.65	112.48	B
			B	0.734	1.782	0.845	1	1	52.852			
			C	0.644	1.783	0.781	1	1	44.208			
T4 140.00-120.00	2271.87	1013.22	A	0.673	1.777	0.801	1	1	46.504	3837.32	191.87	B
		TA 326.59	B	0.734	1.782	0.845	1	1	52.852			
			C	0.644	1.783	0.781	1	1	44.208			
T5 120.00-100.00	2338.35	1013.22	A	0.673	1.777	0.801	1	1	46.504	3836.20	191.81	B
			B	0.734	1.782	0.845	1	1	52.852			
			C	0.644	1.783	0.781	1	1	44.208			
T6 100.00-80.00	2338.35	1013.22	A	0.673	1.777	0.801	1	1	46.504	3622.44	181.12	B
			B	0.734	1.782	0.845	1	1	52.852			
			C	0.644	1.783	0.781	1	1	44.208			

RISATower	Job	112-13241	Page	23 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Section Elevation	Add Weight	Self Weight	F a	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb	e						ft ²	lb	plf	
T7 80.00-60.00	2338.35	1013.22	A	0.673	1.777	0.801	1	1	46.504	3371.45	168.57	B
			B	0.734	1.782	0.845	1	1	52.852			
			C	0.644	1.783	0.781	1	1	44.208			
T8 60.00-40.00	2338.35	1013.22	A	0.673	1.777	0.801	1	1	46.504	3062.43	153.12	B
			B	0.734	1.782	0.845	1	1	52.852			
			C	0.644	1.783	0.781	1	1	44.208			
T9 40.00-20.00	2338.35	1013.22	A	0.673	1.777	0.801	1	1	46.504	2719.61	135.98	B
			B	0.734	1.782	0.845	1	1	52.852			
			C	0.644	1.783	0.781	1	1	44.208			
T10 20.00-0.00	2338.35	1013.22	A	0.673	1.777	0.801	1	1	46.504	2719.61	135.98	B
			B	0.734	1.782	0.845	1	1	52.852			
			C	0.644	1.783	0.781	1	1	44.208			
Sum Weight:	19628.40	10293.73								28583.50		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb	e						ft ²	lb	plf	
T1 190.00-180.00	360.90	521.56	A	0.362	2.143	0.637	0.8	1	9.089	886.63	88.66	C
			B	0.332	2.213	0.626	0.8	1	8.241			
			C	0.647	1.782	0.784	0.8	1	19.615			
T2 180.00-160.00	1291.97	1013.22 TA 326.59	A	0.467	1.947	0.681	0.8	1	25.611	1877.01	93.85	B
			B	0.693	1.776	0.815	0.8	1	42.696			
			C	0.644	1.783	0.781	0.8	1	38.932			
T3 160.00-140.00	1673.54	1013.22	A	0.673	1.777	0.801	0.8	1	41.228	1950.17	97.51	B
			B	0.734	1.782	0.845	0.8	1	45.816			
			C	0.644	1.783	0.781	0.8	1	38.932			
T4 140.00-120.00	2271.87	1013.22 TA 326.59	A	0.673	1.777	0.801	0.8	1	41.228	3549.83	177.49	B
			B	0.734	1.782	0.845	0.8	1	45.816			
			C	0.644	1.783	0.781	0.8	1	38.932			
T5 120.00-100.00	2338.35	1013.22	A	0.673	1.777	0.801	0.8	1	41.228	3562.11	178.11	B
			B	0.734	1.782	0.845	0.8	1	45.816			
			C	0.644	1.783	0.781	0.8	1	38.932			
T6 100.00-80.00	2338.35	1013.22	A	0.673	1.777	0.801	0.8	1	41.228	3363.63	168.18	B
			B	0.734	1.782	0.845	0.8	1	45.816			
			C	0.644	1.783	0.781	0.8	1	38.932			
T7 80.00-60.00	2338.35	1013.22	A	0.673	1.777	0.801	0.8	1	41.228	3130.57	156.53	B
			B	0.734	1.782	0.845	0.8	1	45.816			
			C	0.644	1.783	0.781	0.8	1	38.932			
T8 60.00-40.00	2338.35	1013.22	A	0.673	1.777	0.801	0.8	1	41.228	2843.63	142.18	B
			B	0.734	1.782	0.845	0.8	1	45.816			
			C	0.644	1.783	0.781	0.8	1	38.932			
T9 40.00-20.00	2338.35	1013.22	A	0.673	1.777	0.801	0.8	1	41.228	2525.31	126.27	B
			B	0.734	1.782	0.845	0.8	1	45.816			
			C	0.644	1.783	0.781	0.8	1	38.932			
T10 20.00-0.00	2338.35	1013.22	A	0.673	1.777	0.801	0.8	1	41.228	2525.31	126.27	B
			B	0.734	1.782	0.845	0.8	1	45.816			
			C	0.644	1.783	0.781	0.8	1	38.932			
Sum Weight:	19628.40	10293.73								26214.19		

RISATower	Job	112-13241	Page	24 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	

Tower Forces - With Ice - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
T1 190.00-180.00	360.90	521.56	A	0.362	2.143	0.637	0.85	1	9.170	916.69	91.67	C
			B	0.332	2.213	0.626	0.85	1	8.323			
			C	0.647	1.782	0.784	0.85	1	20.280			
T2 180.00-160.00	1291.97	1013.22 TA 326.59	A	0.467	1.947	0.681	0.85	1	26.165	1947.24	97.36	B
			B	0.693	1.776	0.815	0.85	1	44.293			
			C	0.644	1.783	0.781	0.85	1	40.251			
T3 160.00-140.00	1673.54	1013.22	A	0.673	1.777	0.801	0.85	1	42.547	2025.04	101.25	B
			B	0.734	1.782	0.845	0.85	1	47.575			
			C	0.644	1.783	0.781	0.85	1	40.251			
T4 140.00-120.00	2271.87	1013.22 TA 326.59	A	0.673	1.777	0.801	0.85	1	42.547	3621.71	181.09	B
			B	0.734	1.782	0.845	0.85	1	47.575			
			C	0.644	1.783	0.781	0.85	1	40.251			
T5 120.00-100.00	2338.35	1013.22	A	0.673	1.777	0.801	0.85	1	42.547	3630.63	181.53	B
			B	0.734	1.782	0.845	0.85	1	47.575			
			C	0.644	1.783	0.781	0.85	1	40.251			
T6 100.00-80.00	2338.35	1013.22	A	0.673	1.777	0.801	0.85	1	42.547	3428.33	171.42	B
			B	0.734	1.782	0.845	0.85	1	47.575			
			C	0.644	1.783	0.781	0.85	1	40.251			
T7 80.00-60.00	2338.35	1013.22	A	0.673	1.777	0.801	0.85	1	42.547	3190.79	159.54	B
			B	0.734	1.782	0.845	0.85	1	47.575			
			C	0.644	1.783	0.781	0.85	1	40.251			
T8 60.00-40.00	2338.35	1013.22	A	0.673	1.777	0.801	0.85	1	42.547	2898.33	144.92	B
			B	0.734	1.782	0.845	0.85	1	47.575			
			C	0.644	1.783	0.781	0.85	1	40.251			
T9 40.00-20.00	2338.35	1013.22	A	0.673	1.777	0.801	0.85	1	42.547	2573.88	128.69	B
			B	0.734	1.782	0.845	0.85	1	47.575			
			C	0.644	1.783	0.781	0.85	1	40.251			
T10 20.00-0.00	2338.35	1013.22	A	0.673	1.777	0.801	0.85	1	42.547	2573.88	128.69	B
			B	0.734	1.782	0.845	0.85	1	47.575			
			C	0.644	1.783	0.781	0.85	1	40.251			
Sum Weight:	19628.40	10293.73								26806.52		

Tower Forces - Service - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _C	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
T1 190.00-180.00	127.00	336.97	A	0.216	2.542	0.594	1	1	5.468	269.42	26.94	C
			B	0.208	2.569	0.592	1	1	5.271			
			C	0.449	1.976	0.673	1	1	11.653			
T2 180.00-160.00	426.44	658.24 TA 214.38	A	0.296	2.306	0.615	1	1	14.605	534.27	26.71	B
			B	0.459	1.959	0.677	1	1	23.876			
			C	0.445	1.982	0.671	1	1	22.997			
T3 160.00-140.00	560.00	658.24	A	0.454	1.968	0.675	1	1	23.538	544.16	27.21	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
T4 140.00-120.00	794.90	658.24 TA 214.38	A	0.454	1.968	0.675	1	1	23.538	1010.51	50.53	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
T5 120.00-100.00	821.00	658.24	A	0.454	1.968	0.675	1	1	23.538	1015.13	50.76	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			

RISATower	Job	112-13241	Page	25 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _F	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
T6 100.00-80.00	821.00	658.24	A	0.454	1.968	0.675	1	1	23.538	958.56	47.93	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
T7 80.00-60.00	821.00	658.24	A	0.454	1.968	0.675	1	1	23.538	892.15	44.61	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
T8 60.00-40.00	821.00	658.24	A	0.454	1.968	0.675	1	1	23.538	810.37	40.52	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
T9 40.00-20.00	821.00	658.24	A	0.454	1.968	0.675	1	1	23.538	719.66	35.98	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
T10 20.00-0.00	821.00	658.24	A	0.454	1.968	0.675	1	1	23.538	719.66	35.98	B
			B	0.487	1.917	0.691	1	1	25.757			
			C	0.445	1.982	0.671	1	1	22.997			
Sum Weight:	6834.34	6689.93								7473.89		

Tower Forces - Service - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
T1 190.00-180.00	127.00	336.97	A	0.216	2.542	0.594	0.8	1	5.142	264.17	26.42	C
			B	0.208	2.569	0.592	0.8	1	4.945			
			C	0.449	1.976	0.673	0.8	1	11.426			
T2 180.00-160.00	426.44	658.24	A	0.296	2.306	0.615	0.8	1	14.095	525.60	26.28	B
		TA 214.38	B	0.459	1.959	0.677	0.8	1	23.488			
			C	0.445	1.982	0.671	0.8	1	22.599			
T3 160.00-140.00	560.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	536.40	26.82	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T4 140.00-120.00	794.90	658.24	A	0.454	1.968	0.675	0.8	1	23.141	1003.07	50.15	B
		TA 214.38	B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T5 120.00-100.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	1008.03	50.40	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T6 100.00-80.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	951.86	47.59	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T7 80.00-60.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	885.91	44.30	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T8 60.00-40.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	804.71	40.24	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T9 40.00-20.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	714.63	35.73	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
T10 20.00-0.00	821.00	658.24	A	0.454	1.968	0.675	0.8	1	23.141	714.63	35.73	B
			B	0.487	1.917	0.691	0.8	1	25.390			
			C	0.445	1.982	0.671	0.8	1	22.599			
Sum Weight:	6834.34	6689.93								7408.99		

RISATower	Job	112-13241	Page	26 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: --- FAX: ---	Client	CDT	Designed by	---

Tower Forces - Service - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
T1 190.00-180.00	127.00	336.97	A	0.216	2.542	0.594	0.85	1	5.223	265.48	26.55	C
			B	0.208	2.569	0.592	0.85	1	5.027			
			C	0.449	1.976	0.673	0.85	1	11.482			
T2 180.00-160.00	426.44	658.24 TA 214.38	A	0.296	2.306	0.615	0.85	1	14.222	527.77	26.39	B
			B	0.459	1.959	0.677	0.85	1	23.585			
			C	0.445	1.982	0.671	0.85	1	22.699			
T3 160.00-140.00	560.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	538.34	26.92	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T4 140.00-120.00	794.90	658.24 TA 214.38	A	0.454	1.968	0.675	0.85	1	23.240	1004.93	50.25	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T5 120.00-100.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	1009.80	50.49	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T6 100.00-80.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	953.53	47.68	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T7 80.00-60.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	887.47	44.37	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T8 60.00-40.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	806.12	40.31	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T9 40.00-20.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	715.88	35.79	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
T10 20.00-0.00	821.00	658.24	A	0.454	1.968	0.675	0.85	1	23.240	715.88	35.79	B
			B	0.487	1.917	0.691	0.85	1	25.481			
			C	0.445	1.982	0.671	0.85	1	22.699			
Sum Weight:	6834.34	6689.93								7425.22		

Discrete Appurtenance Pressures - No Ice $G_H = 1.117$

Description	Aiming Azimuth °	Weight lb	Offset _x ft	Offset _y ft	z ft	K _z	q _z psf	C _A A _c Front ft ²	C _A A _c Side ft ²
Torque Arm Face C	180.0000	0.00	0.00	2.53	161.26	1.573	29	3.54	5.32
Torque Arm Face B	60.0000	0.00	2.19	-1.26	161.26	1.573	29	3.54	5.32
Torque Arm Face A	300.0000	0.00	-2.19	-1.26	161.26	1.573	29	3.54	5.32
Torque Arm Face C	180.0000	0.00	0.00	2.53	121.26	1.450	27	3.54	5.32
Torque Arm Face B	60.0000	0.00	2.19	-1.26	121.26	1.450	27	3.54	5.32
Torque Arm Face A	300.0000	0.00	-2.19	-1.26	121.26	1.450	27	3.54	5.32
Antel BXA-70063-6CF	0.0000	17.00	0.00	-5.02	190.00	1.649	30	7.73	2.94
Antel BXA-70063-6CF	120.0000	17.00	4.35	2.51	190.00	1.649	30	7.73	2.94
Antel BXA-70063-6CF	240.0000	17.00	-4.35	2.51	190.00	1.649	30	7.73	2.94
Sector Frame Mount	0.0000	465.00	0.00	-3.52	190.00	1.649	30	13.60	13.60
Sector Frame Mount	120.0000	465.00	3.05	1.76	190.00	1.649	30	13.60	13.60
Sector Frame Mount	240.0000	465.00	-3.05	1.76	190.00	1.649	30	13.60	13.60
Antel LPA-80080-4CF	0.0000	24.00	0.00	-5.02	190.00	1.649	30	3.02	13.58

RISATower	Job	112-13241	Page	27 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	

Description	Aiming Azimuth °	Weight	Offset ₁	Offset ₂	z	K _z	q _z	C _d A _c Front	C _d A _c Side
		lb	ft	ft	ft		psf	ft ²	ft ²
Antel LPA-80063/4CF	120.0000	40.00	4.35	2.51	190.00	1.649	30	14.00	6.96
Antel LPA-80063/4CF	240.0000	40.00	-4.35	2.51	190.00	1.649	30	14.00	6.96
Antel BXA-171085-8BF	0.0000	10.50	0.00	-5.02	190.00	1.649	30	2.94	1.49
Antel BXA-171063-8BF	120.0000	10.50	4.35	2.51	190.00	1.649	30	2.94	1.49
Antel BXA-171063-8BF	240.0000	10.50	-4.35	2.51	190.00	1.649	30	2.94	1.49
RFS FD9R6004/2C-3L	0.0000	5.20	0.00	-5.02	190.00	1.649	30	0.74	0.16
RFS FD9R6004/2C-3L	120.0000	5.20	4.35	2.51	190.00	1.649	30	0.74	0.16
RFS FD9R6004/2C-3L	240.0000	5.20	-4.35	2.51	190.00	1.649	30	0.74	0.16
Sector Frame Mount	0.0000	465.00	0.00	-3.52	167.00	1.589	29	13.60	13.60
Sector Frame Mount	120.0000	465.00	3.05	1.76	167.00	1.589	29	13.60	13.60
Sector Frame Mount	240.0000	465.00	-3.05	1.76	167.00	1.589	29	13.60	13.60
Decibel DB980H90	0.0000	24.00	0.00	-5.02	167.00	1.589	29	11.70	6.87
Decibel DB980H90	120.0000	24.00	4.35	2.51	167.00	1.589	29	11.70	6.87
Decibel DB980H90	240.0000	24.00	-4.35	2.51	167.00	1.589	29	11.70	6.87
Sector Frame Mount	0.0000	465.00	0.00	-3.52	178.00	1.619	30	13.60	13.60
Sector Frame Mount	120.0000	465.00	3.05	1.76	178.00	1.619	30	13.60	13.60
Sector Frame Mount	240.0000	465.00	-3.05	1.76	178.00	1.619	30	13.60	13.60
Swedcom ALP-E-9011	0.0000	60.00	0.00	-5.02	178.00	1.619	30	8.16	10.02
Swedcom ALP-E-9011	120.0000	60.00	4.35	2.51	178.00	1.619	30	8.16	10.02
Swedcom ALP-E-9011	240.0000	60.00	-4.35	2.51	178.00	1.619	30	8.16	10.02
Sector Frame Mount	0.0000	465.00	0.00	-3.52	138.00	1.505	28	13.60	13.60
Sector Frame Mount	120.0000	465.00	3.05	1.76	138.00	1.505	28	13.60	13.60
Sector Frame Mount	240.0000	465.00	-3.05	1.76	138.00	1.505	28	13.60	13.60
Allgon 7770.00	0.0000	70.00	0.00	-5.02	138.00	1.505	28	11.76	5.86
Allgon 7770.00	120.0000	70.00	4.35	2.51	138.00	1.505	28	11.76	5.86
Allgon 7770.00	240.0000	70.00	-4.35	2.51	138.00	1.505	28	11.76	5.86
Powerwave LGP21401	0.0000	62.00	0.00	-5.02	138.00	1.505	28	3.90	1.06
Powerwave LGP21401	120.0000	62.00	4.35	2.51	138.00	1.505	28	3.90	1.06
Powerwave LGP21401	240.0000	62.00	-4.35	2.51	138.00	1.505	28	3.90	1.06
Powerwave LGP21901	0.0000	50.00	0.00	-5.02	138.00	1.505	28	0.54	0.26
Powerwave LGP21901	120.0000	50.00	4.35	2.51	138.00	1.505	28	0.54	0.26
Powerwave LGP21901	240.0000	50.00	-4.35	2.51	138.00	1.505	28	0.54	0.26
Sector Frame Mount	0.0000	465.00	0.00	-3.52	150.00	1.541	29	13.60	13.60
Sector Frame Mount	120.0000	465.00	3.05	1.76	150.00	1.541	29	13.60	13.60
Sector Frame Mount	240.0000	465.00	-3.05	1.76	150.00	1.541	29	13.60	13.60
Lightning Rod	0.0000	40.00	0.00	0.00	190.00	1.649	30	1.00	1.00
KMW	0.0000	25.00	0.00	-5.02	138.00	1.505	28	11.31	6.80
AM-X-CD-17-65-00T-R ET									
KMW	120.0000	25.00	4.35	2.51	138.00	1.505	28	11.31	6.80
AM-X-CD-17-65-00T-R ET									
KMW	240.0000	25.00	-4.35	2.51	138.00	1.505	28	11.31	6.80
AM-X-CD-17-65-00T-R ET									
Ericsson RRUS11	0.0000	50.00	0.00	-5.02	138.00	1.505	28	5.98	0.72
Ericsson RRUS11	120.0000	50.00	4.35	2.51	138.00	1.505	28	5.98	0.72
Ericsson RRUS11	240.0000	50.00	-4.35	2.51	138.00	1.505	28	5.98	0.72
Raycap	0.0000	25.00	0.00	-5.02	138.00	1.505	28	1.47	1.47
DC6-48-60-18-8F									
Sum Weight:		8265.10							

Discrete Appurtenance Pressures - With Ice $G_H = 1.117$

Description	Aiming Azimuth °	Weight lb	Offset ₁ ft	Offset ₂ ft	z ft	K _z	q _z psf	C _d A _c Front ft ²	C _d A _c Side ft ²	t _c in
-------------	------------------------	--------------	---------------------------	---------------------------	---------	----------------	-----------------------	---	--	----------------------

RISATower	Job	112-13241	Page	28 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	

Description	Aiming Azimuth °	Weight lb	Offset _x ft	Offset _y ft	z ft	K _c	g _c psf	C _{AAC} Front ft ²	C _{AAC} Side ft ²	t _c in
Torque Arm Face C	180.0000	0.00	0.00	2.53	161.26	1.573	22	4.28	6.36	0.5000
Torque Arm Face B	60.0000	0.00	2.19	-1.26	161.26	1.573	22	4.28	6.36	0.5000
Torque Arm Face A	300.0000	0.00	-2.19	-1.26	161.26	1.573	22	4.28	6.36	0.5000
Torque Arm Face C	180.0000	0.00	0.00	2.53	121.26	1.450	20	4.28	6.36	0.5000
Torque Arm Face B	60.0000	0.00	2.19	-1.26	121.26	1.450	20	4.28	6.36	0.5000
Torque Arm Face A	300.0000	0.00	-2.19	-1.26	121.26	1.450	20	4.28	6.36	0.5000
Antel BXA-70063-6CF	0.0000	59.00	0.00	-5.02	190.00	1.649	23	8.19	3.40	0.5000
Antel BXA-70063-6CF	120.0000	59.00	4.35	2.51	190.00	1.649	23	8.19	3.40	0.5000
Antel BXA-70063-6CF	240.0000	59.00	-4.35	2.51	190.00	1.649	23	8.19	3.40	0.5000
Sector Frame Mount	0.0000	600.00	0.00	-3.52	190.00	1.649	23	18.40	18.40	0.5000
Sector Frame Mount	120.0000	600.00	3.05	1.76	190.00	1.649	23	18.40	18.40	0.5000
Sector Frame Mount	240.0000	600.00	-3.05	1.76	190.00	1.649	23	18.40	18.40	0.5000
Antel LPA-80080-4CF	0.0000	90.20	0.00	-5.02	190.00	1.649	23	3.62	14.28	0.5000
Antel LPA-80063/4CF	120.0000	145.20	4.35	2.51	190.00	1.649	23	14.72	7.64	0.5000
Antel LPA-80063/4CF	240.0000	145.20	-4.35	2.51	190.00	1.649	23	14.72	7.64	0.5000
Antel BXA-171085-8BF	0.0000	29.30	0.00	-5.02	190.00	1.649	23	3.25	1.80	0.5000
Antel BXA-171063-8BF	120.0000	29.30	4.35	2.51	190.00	1.649	23	3.25	1.80	0.5000
Antel BXA-171063-8BF	240.0000	29.30	-4.35	2.51	190.00	1.649	23	3.25	1.80	0.5000
RFS FD9R6004/2C-3L	0.0000	9.80	0.00	-5.02	190.00	1.649	23	0.88	0.24	0.5000
RFS FD9R6004/2C-3L	120.0000	9.80	4.35	2.51	190.00	1.649	23	0.88	0.24	0.5000
RFS FD9R6004/2C-3L	240.0000	9.80	-4.35	2.51	190.00	1.649	23	0.88	0.24	0.5000
Sector Frame Mount	0.0000	600.00	0.00	-3.52	167.00	1.589	22	18.40	18.40	0.5000
Sector Frame Mount	120.0000	600.00	3.05	1.76	167.00	1.589	22	18.40	18.40	0.5000
Sector Frame Mount	240.0000	600.00	-3.05	1.76	167.00	1.589	22	18.40	18.40	0.5000
Decibel DB980H90	0.0000	87.00	0.00	-5.02	167.00	1.589	22	12.84	8.19	0.5000
Decibel DB980H90	120.0000	87.00	4.35	2.51	167.00	1.589	22	12.84	8.19	0.5000
Decibel DB980H90	240.0000	87.00	-4.35	2.51	167.00	1.589	22	12.84	8.19	0.5000
Sector Frame Mount	0.0000	600.00	0.00	-3.52	178.00	1.619	22	18.40	18.40	0.5000
Sector Frame Mount	120.0000	600.00	3.05	1.76	178.00	1.619	22	18.40	18.40	0.5000
Sector Frame Mount	240.0000	600.00	-3.05	1.76	178.00	1.619	22	18.40	18.40	0.5000
Swedcom ALP-E-9011	0.0000	131.40	0.00	-5.02	178.00	1.619	22	9.00	10.89	0.5000
Swedcom ALP-E-9011	120.0000	131.40	4.35	2.51	178.00	1.619	22	9.00	10.89	0.5000
Swedcom ALP-E-9011	240.0000	131.40	-4.35	2.51	178.00	1.619	22	9.00	10.89	0.5000
Sector Frame Mount	0.0000	600.00	0.00	-3.52	138.00	1.505	21	18.40	18.40	0.5000
Sector Frame Mount	120.0000	600.00	3.05	1.76	138.00	1.505	21	18.40	18.40	0.5000
Sector Frame Mount	240.0000	600.00	-3.05	1.76	138.00	1.505	21	18.40	18.40	0.5000
Allgon 7770.00	0.0000	135.20	0.00	-5.02	138.00	1.505	21	12.50	6.58	0.5000
Allgon 7770.00	120.0000	135.20	4.35	2.51	138.00	1.505	21	12.50	6.58	0.5000
Allgon 7770.00	240.0000	135.20	-4.35	2.51	138.00	1.505	21	12.50	6.58	0.5000
Powerwave LGP21401	0.0000	60.60	0.00	-5.02	138.00	1.505	21	4.22	1.26	0.5000
Powerwave LGP21401	120.0000	60.60	4.35	2.51	138.00	1.505	21	4.22	1.26	0.5000
Powerwave LGP21401	240.0000	60.60	-4.35	2.51	138.00	1.505	21	4.22	1.26	0.5000
Powerwave LGP21901	0.0000	60.60	0.00	-5.02	138.00	1.505	21	0.66	0.36	0.5000
Powerwave LGP21901	120.0000	60.60	4.35	2.51	138.00	1.505	21	0.66	0.36	0.5000
Powerwave LGP21901	240.0000	60.60	-4.35	2.51	138.00	1.505	21	0.66	0.36	0.5000
Sector Frame Mount	0.0000	600.00	0.00	-3.52	150.00	1.541	21	18.40	18.40	0.5000
Sector Frame Mount	120.0000	600.00	3.05	1.76	150.00	1.541	21	18.40	18.40	0.5000
Sector Frame Mount	240.0000	600.00	-3.05	1.76	150.00	1.541	21	18.40	18.40	0.5000
Lightning Rod	0.0000	49.26	0.00	0.00	190.00	1.649	23	2.02	2.02	0.5000
KMW	0.0000	86.40	0.00	-5.02	138.00	1.505	21	11.93	7.48	0.5000
AM-X-CD-17-65-00T-R ET										
KMW	120.0000	86.40	4.35	2.51	138.00	1.505	21	11.93	7.48	0.5000
AM-X-CD-17-65-00T-R ET										
KMW	240.0000	86.40	-4.35	2.51	138.00	1.505	21	11.93	7.48	0.5000
AM-X-CD-17-65-00T-R ET										
Ericsson RRUS11	0.0000	77.00	0.00	-5.02	138.00	1.505	21	6.38	0.96	0.5000
Ericsson RRUS11	120.0000	77.00	4.35	2.51	138.00	1.505	21	6.38	0.96	0.5000
Ericsson RRUS11	240.0000	77.00	-4.35	2.51	138.00	1.505	21	6.38	0.96	0.5000

RISATower	Job	112-13241	Page	29 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Description	Aiming Azimuth °	Weight lb	Offset _x ft	Offset _y ft	z ft	K _z	q _z psf	C _A A _c Front ft ²	C _A A _c Side ft ²	t _z in
Raycap DC6-48-60-18-8F	0.0000	47.60	0.00	-5.02	138.00	1.505	21	1.67	1.67	0.5000
	Sum Weight:	11686.36								

Discrete Appurtenance Pressures - Service G_H = 1.117

Description	Aiming Azimuth °	Weight lb	Offset _x ft	Offset _y ft	z ft	K _z	q _z psf	C _A A _c Front ft ²	C _A A _c Side ft ²
Torque Arm Face C	180.0000	0.00	0.00	2.53	161.26	1.573	10	3.54	5.32
Torque Arm Face B	60.0000	0.00	2.19	-1.26	161.26	1.573	10	3.54	5.32
Torque Arm Face A	300.0000	0.00	-2.19	-1.26	161.26	1.573	10	3.54	5.32
Torque Arm Face C	180.0000	0.00	0.00	2.53	121.26	1.450	9	3.54	5.32
Torque Arm Face B	60.0000	0.00	2.19	-1.26	121.26	1.450	9	3.54	5.32
Torque Arm Face A	300.0000	0.00	-2.19	-1.26	121.26	1.450	9	3.54	5.32
Antel BXA-70063-6CF	0.0000	17.00	0.00	-5.02	190.00	1.649	11	7.73	2.94
Antel BXA-70063-6CF	120.0000	17.00	4.35	2.51	190.00	1.649	11	7.73	2.94
Antel BXA-70063-6CF	240.0000	17.00	-4.35	2.51	190.00	1.649	11	7.73	2.94
Sector Frame Mount	0.0000	465.00	0.00	-3.52	190.00	1.649	11	13.60	13.60
Sector Frame Mount	120.0000	465.00	3.05	1.76	190.00	1.649	11	13.60	13.60
Sector Frame Mount	240.0000	465.00	-3.05	1.76	190.00	1.649	11	13.60	13.60
Antel LPA-80080-4CF	0.0000	24.00	0.00	-5.02	190.00	1.649	11	3.02	13.58
Antel LPA-80063/4CF	120.0000	40.00	4.35	2.51	190.00	1.649	11	14.00	6.96
Antel LPA-80063/4CF	240.0000	40.00	-4.35	2.51	190.00	1.649	11	14.00	6.96
Antel BXA-171085-8BF	0.0000	10.50	0.00	-5.02	190.00	1.649	11	2.94	1.49
Antel BXA-171063-8BF	120.0000	10.50	4.35	2.51	190.00	1.649	11	2.94	1.49
Antel BXA-171063-8BF	240.0000	10.50	-4.35	2.51	190.00	1.649	11	2.94	1.49
RFS FD9R6004/2C-3L	0.0000	5.20	0.00	-5.02	190.00	1.649	11	0.74	0.16
RFS FD9R6004/2C-3L	120.0000	5.20	4.35	2.51	190.00	1.649	11	0.74	0.16
RFS FD9R6004/2C-3L	240.0000	5.20	-4.35	2.51	190.00	1.649	11	0.74	0.16
Sector Frame Mount	0.0000	465.00	0.00	-3.52	167.00	1.589	10	13.60	13.60
Sector Frame Mount	120.0000	465.00	3.05	1.76	167.00	1.589	10	13.60	13.60
Sector Frame Mount	240.0000	465.00	-3.05	1.76	167.00	1.589	10	13.60	13.60
Decibel DB980H90	0.0000	24.00	0.00	-5.02	167.00	1.589	10	11.70	6.87
Decibel DB980H90	120.0000	24.00	4.35	2.51	167.00	1.589	10	11.70	6.87
Decibel DB980H90	240.0000	24.00	-4.35	2.51	167.00	1.589	10	11.70	6.87
Sector Frame Mount	0.0000	465.00	0.00	-3.52	178.00	1.619	10	13.60	13.60
Sector Frame Mount	120.0000	465.00	3.05	1.76	178.00	1.619	10	13.60	13.60
Sector Frame Mount	240.0000	465.00	-3.05	1.76	178.00	1.619	10	13.60	13.60
Swedcom ALP-E-9011	0.0000	60.00	0.00	-5.02	178.00	1.619	10	8.16	10.02
Swedcom ALP-E-9011	120.0000	60.00	4.35	2.51	178.00	1.619	10	8.16	10.02
Swedcom ALP-E-9011	240.0000	60.00	-4.35	2.51	178.00	1.619	10	8.16	10.02
Sector Frame Mount	0.0000	465.00	0.00	-3.52	138.00	1.505	10	13.60	13.60
Sector Frame Mount	120.0000	465.00	3.05	1.76	138.00	1.505	10	13.60	13.60
Sector Frame Mount	240.0000	465.00	-3.05	1.76	138.00	1.505	10	13.60	13.60
Allgon 7770.00	0.0000	70.00	0.00	-5.02	138.00	1.505	10	11.76	5.86
Allgon 7770.00	120.0000	70.00	4.35	2.51	138.00	1.505	10	11.76	5.86
Allgon 7770.00	240.0000	70.00	-4.35	2.51	138.00	1.505	10	11.76	5.86
Powerwave LGP21401	0.0000	62.00	0.00	-5.02	138.00	1.505	10	3.90	1.06
Powerwave LGP21401	120.0000	62.00	4.35	2.51	138.00	1.505	10	3.90	1.06
Powerwave LGP21401	240.0000	62.00	-4.35	2.51	138.00	1.505	10	3.90	1.06
Powerwave LGP21901	0.0000	50.00	0.00	-5.02	138.00	1.505	10	0.54	0.26
Powerwave LGP21901	120.0000	50.00	4.35	2.51	138.00	1.505	10	0.54	0.26
Powerwave LGP21901	240.0000	50.00	-4.35	2.51	138.00	1.505	10	0.54	0.26
Sector Frame Mount	0.0000	465.00	0.00	-3.52	150.00	1.541	10	13.60	13.60
Sector Frame Mount	120.0000	465.00	3.05	1.76	150.00	1.541	10	13.60	13.60
Sector Frame Mount	240.0000	465.00	-3.05	1.76	150.00	1.541	10	13.60	13.60

RISA Tower	Job	112-13241	Page	30 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--
Phone: -- FAX: --				

Description	Aiming Azimuth °	Weight lb	Offset _x ft	Offset _y ft	z ft	K _z	q _z psf	C _{AAC} Front ft ²	C _{AAC} Side ft ²
Lightning Rod	0.0000	40.00	0.00	0.00	190.00	1.649	11	1.00	1.00
KMW	0.0000	25.00	0.00	-5.02	138.00	1.505	10	11.31	6.80
AM-X-CD-17-65-00T-R ET	120.0000	25.00	4.35	2.51	138.00	1.505	10	11.31	6.80
KMW	120.0000	25.00	4.35	2.51	138.00	1.505	10	11.31	6.80
AM-X-CD-17-65-00T-R ET	240.0000	25.00	-4.35	2.51	138.00	1.505	10	11.31	6.80
KMW	240.0000	25.00	-4.35	2.51	138.00	1.505	10	11.31	6.80
AM-X-CD-17-65-00T-R ET	0.0000	50.00	0.00	-5.02	138.00	1.505	10	5.98	0.72
Ericsson RRUS11	120.0000	50.00	4.35	2.51	138.00	1.505	10	5.98	0.72
Ericsson RRUS11	240.0000	50.00	-4.35	2.51	138.00	1.505	10	5.98	0.72
Raycap	0.0000	25.00	0.00	-5.02	138.00	1.505	10	1.47	1.47
DC6-48-60-18-8F									
Sum Weight:		8265.10							

Load Combinations

Comb. No.	Description
1	Dead Only
2	Dead+Wind 0 deg - No Ice+Guy
3	Dead+Wind 30 deg - No Ice+Guy
4	Dead+Wind 60 deg - No Ice+Guy
5	Dead+Wind 90 deg - No Ice+Guy
6	Dead+Wind 120 deg - No Ice+Guy
7	Dead+Wind 150 deg - No Ice+Guy
8	Dead+Wind 180 deg - No Ice+Guy
9	Dead+Wind 210 deg - No Ice+Guy
10	Dead+Wind 240 deg - No Ice+Guy
11	Dead+Wind 270 deg - No Ice+Guy
12	Dead+Wind 300 deg - No Ice+Guy
13	Dead+Wind 330 deg - No Ice+Guy
14	Dead+Ice+Temp+Guy
15	Dead+Wind 0 deg+Ice+Temp+Guy
16	Dead+Wind 30 deg+Ice+Temp+Guy
17	Dead+Wind 60 deg+Ice+Temp+Guy
18	Dead+Wind 90 deg+Ice+Temp+Guy
19	Dead+Wind 120 deg+Ice+Temp+Guy
20	Dead+Wind 150 deg+Ice+Temp+Guy
21	Dead+Wind 180 deg+Ice+Temp+Guy
22	Dead+Wind 210 deg+Ice+Temp+Guy
23	Dead+Wind 240 deg+Ice+Temp+Guy
24	Dead+Wind 270 deg+Ice+Temp+Guy
25	Dead+Wind 300 deg+Ice+Temp+Guy
26	Dead+Wind 330 deg+Ice+Temp+Guy
27	Dead+Wind 0 deg - Service+Guy
28	Dead+Wind 30 deg - Service+Guy
29	Dead+Wind 60 deg - Service+Guy
30	Dead+Wind 90 deg - Service+Guy
31	Dead+Wind 120 deg - Service+Guy
32	Dead+Wind 150 deg - Service+Guy
33	Dead+Wind 180 deg - Service+Guy
34	Dead+Wind 210 deg - Service+Guy
35	Dead+Wind 240 deg - Service+Guy
36	Dead+Wind 270 deg - Service+Guy

RISA Tower	Job	112-13241	Page	31 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--

Comb. No.	Description
37	Dead+Wind 300 deg - Service+Guy
38	Dead+Wind 330 deg - Service+Guy

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load	Force	Major Axis Moment	Minor Axis Moment		
				Comb.	lb	lb-ft	lb-ft		
T1	190 - 180	Leg	Max Tension	16	0.04	-1.26	0.11		
			Max. Compression	17	-15429.55	118.29	-72.24		
			Max. Mx	11	-9840.39	513.76	-2.36		
			Max. My	2	-558.84	-5.82	369.00		
			Max. Vy	11	-1370.40	513.71	-2.42		
			Max. Vx	2	-985.94	-5.82	369.00		
			Diagonal	Max Tension	5	3800.55	0.00	0.00	
				Horizontal	Max Tension	17	267.25	0.00	0.00
					Max. Compression	10	-4651.80	0.00	0.00
					Max. Mx	14	174.19	-5.12	0.00
				Max. My	24	257.25	0.00	0.00	
				Max. Vy	14	5.85	0.00	0.00	
			Bottom Girt	Max. Vx	24	-0.00	0.00	0.00	
				Max Tension	1	0.00	0.00	0.00	
				Max. Compression	8	-2461.94	0.00	0.00	
		Max. Mx		14	-2318.94	-5.12	0.00		
		Max. My		24	-2257.29	0.00	0.00		
		Max. Vy		14	5.85	0.00	0.00		
		Max. Vx		24	-0.00	0.00	0.00		
		Guy A		Bottom Tension	21	11852.90			
				Top Tension	21	12101.11			
				Top Cable Vert	21	9847.82			
			Top Cable Norm	21	7032.59				
			Top Cable Tan	21	0.13				
			Bot Cable Vert	21	-9236.88				
			Bot Cable Norm	21	7427.75				
			Bot Cable Tan	21	0.13				
			Guy B	Bottom Tension	25	12111.28			
				Top Tension	25	12359.43			
		Top Cable Vert		25	10053.18				
		Top Cable Norm		25	7189.52				
		Top Cable Tan		25	0.95				
		Bot Cable Vert		25	-9442.24				
		Bot Cable Norm		25	7584.67				
		Bot Cable Tan	25	0.95					
		Guy C	Bottom Tension	17	12072.19				
			Top Tension	17	12320.35				
			Top Cable Vert	17	10022.10				
			Top Cable Norm	17	7165.79				
			Top Cable Tan	17	1.08				
			Bot Cable Vert	17	-9411.16				
			Bot Cable Norm	17	7560.94				
			Bot Cable Tan	17	1.08				
			Top Guy Pull-Off	Max Tension	23	1689.90	0.00	0.00	
				Max. Compression	12	-2065.95	0.00	0.00	
Max. Mx	14	-539.74		-5.12	0.00				
Max. My	24	24.49		0.00	0.00				
Max. Vy	14	5.85		0.00	0.00				
Max. Vx	24	0.00		0.00	0.00				
T2	180 - 160	Leg		Max Tension	12	1050.83	76.71	41.17	
				Max. Compression	23	-38871.14	542.80	-211.06	

RISATower	Job	112-13241	Page	32 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Mx	24	-12437.36	634.35	-19.16
			Max. My	15	-14926.30	-60.22	688.66
			Max. Vy	24	1362.85	634.14	-19.50
			Max. Vx	15	1531.09	-60.22	688.66
		Diagonal	Max Tension	16	5780.18	0.00	0.00
		Horizontal	Max Tension	23	673.27	0.00	0.00
			Max. Compression	8	-4604.78	0.00	0.00
			Max. Mx	14	376.65	-5.12	0.00
			Max. My	24	640.10	0.00	0.00
			Max. Vy	14	5.85	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-2534.67	0.00	0.00
			Max. Mx	14	-2243.08	-5.12	0.00
			Max. My	24	-2179.29	0.00	0.00
			Max. Vy	14	5.85	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
		Guy A	Bottom Tension	21	14286.81		
			Top Tension	21	14525.66		
			Top Cable Vert	21	11018.59		
			Top Cable Norm	21	9464.95		
			Top Cable Tan	21	5.80		
			Bot Cable Vert	21	-10438.60		
			Bot Cable Norm	21	9754.41		
			Bot Cable Tan	21	6.92		
		Guy B	Bottom Tension	25	14403.78		
			Top Tension	25	14642.63		
			Top Cable Vert	25	11105.63		
			Top Cable Norm	25	9543.14		
			Top Cable Tan	25	5.13		
			Bot Cable Vert	25	-10525.63		
			Bot Cable Norm	25	9832.60		
			Bot Cable Tan	25	7.59		
		Guy C	Bottom Tension	17	14319.65		
			Top Tension	17	14558.49		
			Top Cable Vert	17	11042.93		
			Top Cable Norm	17	9487.00		
			Top Cable Tan	17	6.09		
			Bot Cable Vert	17	-10462.94		
			Bot Cable Norm	17	9776.46		
			Bot Cable Tan	17	6.63		
		Top Guy Pull-Off	Max Tension	1	0.00	0.00	0.00
			Max. Compression	23	-7067.69	0.00	0.00
			Max. Mx	14	-3654.93	-5.12	0.00
			Max. My	22	-3573.55	0.00	0.00
			Max. Vy	14	5.85	0.00	0.00
			Max. Vx	22	-0.00	0.00	0.00
		Bottom Guy Pull-Off	Max Tension	25	17.85	0.00	0.00
			Max. Compression	10	-3321.00	0.00	0.00
			Max. Mx	14	-1678.60	-5.12	0.00
			Max. My	22	-1548.84	0.00	0.00
			Max. Vy	14	5.85	0.00	0.00
			Max. Vx	22	-0.00	0.00	0.00
		Torque Arm Top	Max Tension	23	12737.26	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	24	12342.24	-12.18	0.00
			Max. My	16	9370.17	0.00	-0.04
			Max. Vy	24	10.26	0.00	0.00
			Max. Vx	16	-0.04	0.00	0.00
		Torque Arm Bottom	Max Tension	23	2671.05	0.00	0.00

RISA Tower	Job	Page
	112-13241	33 of 53
	Project	Date
Phone: -- FAX: --	Ashford, CT	23:13:44 11/12/12
	Client	Designed by
	CDT	--

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft	
T3	160 - 140	Leg	Max. Compression	17	-10143.13	0.00	0.00	
			Max. Mx	22	2101.54	-11.66	0.00	
			Max. My	16	-5329.91	0.00	-0.00	
			Max. Vy	22	13.33	0.00	0.00	
			Max. Vx	16	0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	23	-36594.32	138.64	-69.93	
			Max. Mx	24	-34933.80	-420.58	-34.04	
			Max. My	21	-27944.31	-21.95	479.92	
			Max. Vy	24	1361.90	123.17	11.91	
			Max. Vx	15	1530.43	9.44	115.08	
			Diagonal Horizontal	Max Tension	13	4402.35	0.00	0.00
		Max Tension		23	633.83	0.00	0.00	
		Max. Compression		10	-3572.40	0.00	0.00	
		Max. Mx		14	402.18	-5.12	0.00	
		Max. My		22	592.89	0.00	0.00	
		Max. Vy		14	5.85	0.00	0.00	
		Top Girt	Max. Vx	22	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	10	-2729.97	0.00	0.00	
			Max. Mx	14	-1700.49	-5.12	0.00	
			Max. My	22	-1553.40	0.00	0.00	
			Max. Vy	14	5.85	0.00	0.00	
		Bottom Girt	Max. Vx	22	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	8	-1985.11	0.00	0.00	
			Max. Mx	14	-1643.69	-5.12	0.00	
			Max. My	22	-1469.50	0.00	0.00	
			Max. Vy	14	5.85	0.00	0.00	
		T4	140 - 120	Leg	Max. Vx	22	-0.00	0.00
Max Tension	1				0.00	0.00	0.00	
Max. Compression	23				-56765.37	1016.88	-176.89	
Max. Mx	23				-24868.42	1183.07	-925.20	
Max. My	15				-23870.33	-256.21	1546.52	
Max. Vy	23				2419.52	1181.97	-927.31	
Max. Vx	15				3189.51	-256.21	1546.52	
Diagonal Horizontal	Max Tension				16	5374.91	0.00	0.00
	Max Tension				23	983.21	0.00	0.00
	Max. Compression				16	-3838.79	0.00	0.00
	Max. Mx				14	563.55	-5.12	0.00
	Max. My				22	898.95	0.00	0.00
	Max. Vy			14	5.85	0.00	0.00	
Top Girt	Max. Vx			22	-0.00	0.00	0.00	
	Max Tension			1	0.00	0.00	0.00	
	Max. Compression			8	-1937.03	0.00	0.00	
	Max. Mx			14	-1623.68	-5.12	0.00	
	Max. My			22	-1449.19	0.00	0.00	
	Max. Vy			14	5.85	0.00	0.00	
Guy A	Max. Vx			22	-0.00	0.00	0.00	
	Bottom Tension			21	12782.83			
	Top Tension			21	12940.63			
	Top Cable Vert			21	8469.54			
	Top Cable Norm			21	9784.01			
	Top Cable Tan			21	4.19			
	Bot Cable Vert			21	-8052.89			
	Bot Cable Norm			21	9927.32			
	Bot Cable Tan			21	4.27			
	Guy B			Bottom Tension	25	12513.08		
				Top Tension	25	12670.92		
		Top Cable Vert	25	8296.88				
Top Cable Norm		25	9576.74					

RISA Tower	Job	112-13241	Page	34 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Top Cable Tan	25	3.73		
			Bot Cable Vert	25	-7880.23		
			Bot Cable Norm	25	9720.05		
			Bot Cable Tan	25	4.73		
		Guy C	Bottom Tension	17	12676.83		
			Top Tension	17	12834.65		
			Top Cable Vert	17	8401.66		
			Top Cable Norm	17	9702.59		
			Top Cable Tan	17	3.92		
			Bot Cable Vert	17	-7985.01		
			Bot Cable Norm	17	9845.90		
			Bot Cable Tan	17	4.54		
		Top Guy Pull-Off	Max Tension	17	685.64	0.00	0.00
			Max. Compression	15	-5725.09	0.00	0.00
			Max. Mx	14	-2621.56	-5.12	0.00
			Max. My	21	-3894.28	0.00	-0.00
			Max. Vy	14	5.85	0.00	0.00
			Max. Vx	21	0.00	0.00	0.00
		Bottom Guy Pull-Off	Max Tension	17	1439.34	0.00	0.00
			Max. Compression	19	-3807.09	0.00	0.00
			Max. Mx	14	-1190.79	-5.12	0.00
			Max. My	15	255.95	0.00	0.00
			Max. Vy	14	5.85	0.00	0.00
			Max. Vx	15	-0.00	0.00	0.00
		Torque Arm Top	Max Tension	23	9491.68	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	17	8326.89	-12.16	0.00
			Max. My	16	6237.68	0.00	-0.06
			Max. Vy	17	10.25	0.00	0.00
			Max. Vx	16	-0.05	0.00	0.00
		Torque Arm Bottom	Max Tension	15	5086.15	0.00	0.00
			Max. Compression	20	-8927.36	0.00	0.00
			Max. Mx	15	-7080.03	-11.66	0.00
			Max. My	16	2561.55	0.00	-0.00
			Max. Vy	15	13.33	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
T5	120 - 100	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	23	-55021.27	191.04	-73.44
			Max. Mx	23	-28915.30	-635.89	522.17
			Max. My	15	-23882.95	158.78	-844.78
			Max. Vy	23	2423.63	273.36	-203.75
			Max. Vx	15	3194.00	-51.48	351.83
		Diagonal	Max Tension	15	7945.41	0.00	0.00
		Horizontal	Max Tension	23	953.00	0.00	0.00
			Max. Compression	15	-5439.20	0.00	0.00
			Max. Mx	14	582.35	-5.12	0.00
			Max. My	15	935.31	0.00	-0.00
			Max. Vy	14	5.85	0.00	0.00
			Max. Vx	15	0.00	0.00	0.00
		Top Girt	Max Tension	17	451.06	0.00	0.00
			Max. Compression	21	-3075.20	0.00	0.00
			Max. Mx	14	-1203.65	-5.12	0.00
			Max. My	15	-1985.13	0.00	0.00
			Max. Vy	14	5.85	0.00	0.00
			Max. Vx	15	-0.00	0.00	0.00
		Bottom Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	15	-1963.27	0.00	0.00
			Max. Mx	14	-1172.28	-5.12	0.00
			Max. My	15	-1314.85	0.00	-0.00
			Max. Vy	14	5.85	0.00	0.00

RISA Tower	Job	112-13241	Page	35 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft	
T6	100 - 80	Leg	Max. Vx	15	0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	21	-50395.76	-7.38	49.69	
			Max. Mx	23	-26188.15	-510.63	48.74	
			Max. My	15	-40034.92	121.61	-563.16	
			Max. Vy	23	1226.00	-50.93	16.31	
			Max. Vx	15	1429.78	3.44	-28.06	
			Diagonal	Max Tension	15	4060.59	0.00	0.00
				Max Tension	21	872.88	0.00	0.00
				Max. Compression	8	-2951.02	0.00	0.00
				Max. Mx	14	600.28	-5.12	0.00
				Max. My	16	851.89	0.00	0.00
		Max. Vy		14	5.85	0.00	0.00	
		Horizontal	Max. Vx	16	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	6	-1495.86	0.00	0.00	
			Max. Mx	14	-1161.25	-5.12	0.00	
			Max. My	15	-995.20	0.00	-0.00	
			Max. Vy	14	5.85	0.00	0.00	
		Top Girt	Max. Vx	15	0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	6	-1495.86	0.00	0.00	
			Max. Mx	14	-1161.25	-5.12	0.00	
			Max. My	15	-995.20	0.00	-0.00	
Max. Vy	14		5.85	0.00	0.00			
Bottom Girt	Max. Vx	15	0.00	0.00	0.00			
	Max Tension	1	0.00	0.00	0.00			
	Max. Compression	29	-1393.09	0.00	0.00			
	Max. Mx	14	-1124.93	-5.12	0.00			
	Max. My	16	-1091.30	0.00	0.00			
	Max. Vy	14	5.85	0.00	0.00			
T7	80 - 60	Leg	Max. Vx	16	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	21	-47696.95	-42.88	96.02	
			Max. Mx	17	-32243.16	-1178.58	408.85	
			Max. My	21	-32172.31	-281.82	-1223.86	
			Max. Vy	17	-2557.80	-1178.21	408.38	
			Max. Vx	21	-2676.91	-282.07	-1223.08	
			Diagonal	Max Tension	16	4745.60	0.00	0.00
				Max Tension	21	826.14	0.00	0.00
				Max. Compression	16	-3323.06	0.00	0.00
				Max. Mx	14	630.84	-5.12	0.00
				Max. My	16	817.83	0.00	0.00
		Max. Vy		14	5.85	0.00	0.00	
		Horizontal	Max. Vx	16	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	8	-1672.63	0.00	0.00	
			Max. Mx	14	-1114.18	-5.12	0.00	
			Max. My	16	-1212.38	0.00	0.00	
			Max. Vy	14	5.85	0.00	0.00	
		Top Girt	Max. Vx	16	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	8	-1672.63	0.00	0.00	
			Max. Mx	14	-1114.18	-5.12	0.00	
			Max. My	16	-1212.38	0.00	0.00	
Max. Vy	14		5.85	0.00	0.00			
Guy A	Max. Vx	16	-0.00	0.00	0.00			
	Bottom Tension	21	14235.43					
	Top Tension	21	14314.71					
	Top Cable Vert	21	5665.13					
	Top Cable Norm	21	13146.00					
	Top Cable Tan	21	3.85					
	Bot Cable Vert	21	-5408.21					
	Bot Cable Norm	21	13168.09					
	Bot Cable Tan	21	3.85					
	Guy B	Bottom Tension	25	14179.76				
		Top Tension	25	14259.04				
		Top Cable Vert	25	5643.59				
Top Cable Norm		25	13094.66					
Top Cable Tan		25	0.86					
Bot Cable Vert		25	-5386.67					
Bot Cable Norm	25	13116.76						
Bot Cable Tan	25	0.86						

RISATower	Job	112-13241	Page	36 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft		
T8	60 - 40	Guy C	Bottom Tension	17	14202.01				
			Top Tension	17	14281.29				
			Top Cable Vert	17	5652.20				
			Top Cable Norm	17	13115.18				
			Top Cable Tan	17	2.97				
			Bot Cable Vert	17	-5395.28				
			Bot Cable Norm	17	13137.27				
			Bot Cable Tan	17	2.97				
		Top Guy Pull-Off	Max Tension	15	5044.03	0.00	0.00		
			Max. Compression	8	-470.41	0.00	0.00		
			Max. Mx	14	1781.43	-5.12	0.00		
			Max. My	16	1926.83	0.00	0.00		
			Max. Vy	14	5.85	0.00	0.00		
			Max. Vx	16	-0.00	0.00	0.00		
			Max Tension	1	0.00	0.00	0.00		
		Leg	Max. Compression	25	-57362.88	-37.73	-23.32		
			Max. Mx	17	-39218.35	742.19	-301.90		
			Max. My	21	-39081.11	134.98	788.77		
			Max. Vy	17	-2563.96	-219.07	53.61		
			Max. Vx	21	-2684.00	-73.78	-218.16		
			Diagonal Horizontal	Max Tension	20	5678.51	0.00	0.00	
				Max Tension	25	993.55	0.00	0.00	
				Max. Compression	20	-3781.25	0.00	0.00	
				Max. Mx	14	677.87	-5.12	0.00	
				Max. My	16	977.36	0.00	0.00	
			Top Girt	Max. Vy	14	5.85	0.00	0.00	
				Max. Vx	16	-0.00	0.00	0.00	
				Max Tension	17	44.58	0.00	0.00	
				Max. Compression	21	-1807.17	0.00	0.00	
				Max. Mx	14	-722.26	-5.12	0.00	
		Bottom Girt	Max. My	16	-1031.81	0.00	0.00		
			Max. Vy	14	5.85	0.00	0.00		
			Max. Vx	16	-0.00	0.00	0.00		
			Max Tension	19	13.47	0.00	0.00		
			Max. Compression	8	-1662.07	0.00	0.00		
		T9	40 - 20	Leg	Max. Mx	14	-923.06	-5.12	0.00
					Max. My	16	-707.64	0.00	0.00
					Max. Vy	14	5.85	0.00	0.00
					Max. Vx	16	-0.00	0.00	0.00
					Max Tension	1	0.00	0.00	0.00
Max. Compression	25				-62698.85	-12.01	-8.97		
Diagonal Horizontal	Max. Mx			18	-26807.65	352.46	-4.85		
	Max. My			21	-34474.79	5.62	385.50		
	Max. Vy			17	-775.79	37.94	-20.06		
	Max. Vx			21	-886.74	14.39	53.72		
	Max Tension			2	2642.96	0.00	0.00		
	Max Tension			25	1085.98	0.00	0.00		
	Max. Compression			12	-2875.53	0.00	0.00		
	Max. Mx			14	695.52	-5.12	0.00		
	Max. My			16	1056.25	0.00	0.00		
	Max. Vy			14	5.85	0.00	0.00		
	Max. Vx			16	-0.00	0.00	0.00		
	Top Girt			Max Tension	1	0.00	0.00	0.00	
				Max. Compression	2	-1284.00	0.00	0.00	
				Max. Mx	14	-910.96	-5.12	0.00	
Max. My		16	-774.16	0.00	0.00				
Bottom Girt	Max. Vy	14	5.85	0.00	0.00				
	Max. Vx	16	-0.00	0.00	0.00				
	Max Tension	1	0.00	0.00	0.00				
	Max. Compression	8	-1362.48	0.00	0.00				
Max. Mx	14	-876.49	-5.12	0.00					

RISATower	Job	112-13241	Page	37 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	---

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft	
T10	20 - 0	Leg	Max. My	16	-691.87	0.00	0.00	
			Max. Vy	14	5.85	0.00	0.00	
			Max. Vx	16	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	25	-60994.15	-91.02	-49.01	
			Max. Mx	24	-44753.91	1385.71	418.34	
			Max. My	21	-44981.29	-66.60	-1506.55	
			Max. Vy	24	-3487.85	1385.71	418.34	
			Max. Vx	21	3883.08	-66.60	-1506.55	
			Diagonal	Max Tension	22	3593.44	0.00	0.00
				Max Tension	25	1056.45	0.00	0.00
				Max. Compression	8	-2719.10	0.00	0.00
		Max. Mx		14	716.27	-5.12	0.00	
		Max. My		16	1029.22	0.00	0.00	
		Max. Vy		14	5.85	0.00	0.00	
		Horizontal	Max. Vx	16	-0.00	0.00	0.00	
			Max Tension	23	58.22	0.00	0.00	
			Max. Compression	12	-1603.06	0.00	0.00	
			Max. Mx	14	-864.33	-5.12	0.00	
			Max. My	16	-757.08	0.00	0.00	
			Max. Vy	14	5.85	0.00	0.00	
		Top Girt	Max. Vx	16	-0.00	0.00	0.00	
			Max Tension	25	565.17	0.00	0.00	
			Max. Compression	35	-154.77	0.00	0.00	
			Max. Mx	14	173.70	-5.12	0.00	
			Max. My	16	-17.10	0.00	0.00	
			Max. Vy	14	5.85	0.00	0.00	
		Bottom Girt	Max. Vx	16	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	25	-3915.01	1524.83	3.70	
Max. Mx	21		-44873.33	-89517.06	-1483.44			
Max. My	23		-43999.14	-87812.86	1887.25			
Max. Vy	25		-45038.11	-89484.85	-10.42			
Base Beam	Max. Vx	23	898.23	-87812.86	1887.25			

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal X lb	Horizontal Z lb
Guy C @ 145 ft Elev 0 ft Azimuth 240 deg	Max. Vert	10	-3515.06	-2844.94	1645.56
	Max. H _x	10	-3515.06	-2844.94	1645.56
	Max. H _z	17	-51397.14	-51597.37	29772.34
	Min. Vert	17	-51397.14	-51597.37	29772.34
	Min. H _x	17	-51397.14	-51597.37	29772.34
	Min. H _z	10	-3515.06	-2844.94	1645.56
Guy B @ 145 ft Elev 0 ft Azimuth 120 deg	Max. Vert	6	-3504.74	2834.13	1632.81
	Max. H _x	25	-51374.06	51542.46	29765.64
	Max. H _z	25	-51374.06	51542.46	29765.64
	Min. Vert	25	-51374.06	51542.46	29765.64
	Min. H _x	6	-3504.74	2834.13	1632.81
	Min. H _z	6	-3504.74	2834.13	1632.81
Guy A @ 145 ft	Max. Vert	2	-3800.60	5.55	-3515.00

RISATower	Job	Page
	112-13241	38 of 53
	Project	Date
	Ashford, CT	23:13:44 11/12/12
Phone: -- FAX: --	Client	Designed by
	CDT	--

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Elev 0 ft Azimuth 0 deg					
	Max. H _x	24	-28757.33	1907.78	-32383.01
	Max. H _z	2	-3800.60	5.55	-3515.00
	Min. Vert	21	-51057.15	-21.65	-59312.43
	Min. H _x	18	-28766.77	-1908.23	-32401.07
	Min. H _z	21	-51057.15	-21.65	-59312.43
Mast	Max. Vert	17	133491.78	-2415.37	1413.15
	Max. H _x	24	132856.43	2820.17	64.74
	Max. H _z	15	131130.11	0.57	3017.17
	Max. M _x	1	0.00	13.73	10.16
	Max. M _z	1	0.00	13.73	10.16
	Max. Torsion	1	0.00	13.73	10.16
	Min. Vert	1	91163.08	13.73	10.16
	Min. H _x	18	132886.11	-2747.69	67.56
	Min. H _z	21	133343.66	27.97	-2794.05
	Min. M _x	1	0.00	13.73	10.16
	Min. M _z	1	0.00	13.73	10.16
	Min. Torsion	1	0.00	13.73	10.16

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
Dead Only	91163.08	-13.73	-10.16	0.00	0.00	0.00
Dead+Wind 0 deg - No Ice+Guy	95436.21	-4.65	-2488.51	0.00	0.00	0.00
Dead+Wind 30 deg - No Ice+Guy	96663.90	1243.40	-2080.43	0.00	0.00	0.00
Dead+Wind 60 deg - No Ice+Guy	96927.33	2110.53	-1225.99	0.00	0.00	0.00
Dead+Wind 90 deg - No Ice+Guy	96974.67	2416.76	-43.91	0.00	0.00	0.00
Dead+Wind 120 deg - No Ice+Guy	95769.41	2153.03	1233.59	0.00	0.00	0.00
Dead+Wind 150 deg - No Ice+Guy	96772.55	1169.15	2100.62	0.00	0.00	0.00
Dead+Wind 180 deg - No Ice+Guy	96791.71	-10.86	2430.92	0.00	0.00	0.00
Dead+Wind 210 deg - No Ice+Guy	96782.46	-1191.32	2110.10	0.00	0.00	0.00
Dead+Wind 240 deg - No Ice+Guy	95772.55	-2174.95	1240.56	0.00	0.00	0.00
Dead+Wind 270 deg - No Ice+Guy	96969.23	-2445.61	-43.06	0.00	0.00	0.00
Dead+Wind 300 deg - No Ice+Guy	96927.34	-2138.10	-1229.20	0.00	0.00	0.00
Dead+Wind 330 deg - No Ice+Guy	96644.47	-1260.14	-2081.77	0.00	0.00	0.00
Dead+Ice+Temp+Guy	119203.57	-33.65	-18.62	0.00	0.00	0.00
Dead+Wind 0 deg+Ice+Temp+Guy	131130.11	-0.57	-3017.17	0.00	0.00	0.00
Dead+Wind 30 deg+Ice+Temp+Guy	132593.99	1435.87	-2378.33	0.00	0.00	0.00
Dead+Wind 60 deg+Ice+Temp+Guy	133491.78	2415.37	-1413.15	0.00	0.00	0.00

RISATower	Job	112-13241	Page	39 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Load Combination	Vertical	Shear _x	Shear _y	Overtuning Moment, M _x	Overtuning Moment, M _y	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead+Wind 90	132886.11	2747.69	-67.56	0.00	0.00	0.00
dcg+Icc+Temp+Guy						
Dead+Wind 120	131496.85	2573.19	1474.32	0.00	0.00	0.00
deg+Ice+Temp+Guy						
Dead+Wind 150	132695.74	1315.66	2401.00	0.00	0.00	0.00
dcg+Icc+Temp+Guy						
Dead+Wind 180	133343.66	-27.97	2794.05	0.00	0.00	0.00
deg+Ice+Temp+Guy						
Dead+Wind 210	132673.06	-1356.84	2431.03	0.00	0.00	0.00
deg+Ice+Temp+Guy						
Dead+Wind 240	131431.20	-2631.45	1507.01	0.00	0.00	0.00
deg+Ice+Temp+Guy						
Dead+Wind 270	132856.43	-2820.17	-64.74	0.00	0.00	0.00
deg+Ice+Temp+Guy						
Dead+Wind 300	133486.47	-2483.51	-1420.18	0.00	0.00	0.00
deg+Ice+Temp+Guy						
Dead+Wind 330	132583.05	-1464.74	-2391.51	0.00	0.00	0.00
deg+Ice+Temp+Guy						
Dead+Wind 0 deg - Service+Guy	91473.99	-13.66	-870.59	0.00	0.00	0.00
Dead+Wind 30 deg - Service+Guy	91463.13	415.01	-750.90	0.00	0.00	0.00
Dead+Wind 60 deg - Service+Guy	91462.48	727.70	-436.59	0.00	0.00	0.00
Dead+Wind 90 deg - Service+Guy	91458.98	844.29	-9.64	0.00	0.00	0.00
Dead+Wind 120 deg - Service+Guy	91468.65	733.84	419.89	0.00	0.00	0.00
Dead+Wind 150 deg - Service+Guy	91459.15	415.86	730.07	0.00	0.00	0.00
Dead+Wind 180 deg - Service+Guy	91461.17	-13.53	842.99	0.00	0.00	0.00
Dead+Wind 210 deg - Service+Guy	91459.43	-443.12	730.29	0.00	0.00	0.00
Dead+Wind 240 deg - Service+Guy	91468.58	-761.46	420.12	0.00	0.00	0.00
Dead+Wind 270 deg - Service+Guy	91458.73	-872.13	-9.68	0.00	0.00	0.00
Dead+Wind 300 deg - Service+Guy	91462.05	-755.43	-436.91	0.00	0.00	0.00
Dead+Wind 330 deg - Service+Guy	91462.62	-442.47	-751.23	0.00	0.00	0.00

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
1	0.00	-24376.63	0.00	-0.01	24376.63	0.00	0.000%
2	0.00	-24577.07	-38306.25	-2.44	24573.37	38158.98	0.324%
3	19379.21	-24376.63	-33046.40	-19417.78	24374.24	32913.04	0.306%
4	33531.14	-24176.18	-19059.35	-33530.05	24176.32	19057.63	0.004%
5	38758.42	-24376.63	-0.00	-38665.16	24374.13	91.65	0.286%
6	33693.56	-24577.07	19153.13	-33578.39	24573.64	-19085.97	0.291%
7	19379.21	-24376.63	33046.40	-19248.63	24374.12	-33010.43	0.298%
8	0.00	24176.18	38118.71	0.76	24176.35	-38117.60	0.003%
9	-19379.21	-24376.63	33046.40	19250.20	24374.24	-33013.62	0.293%
10	-33693.56	-24577.07	19153.13	33577.17	24573.64	-19087.81	0.291%

RISATower	Job	112-13241	Page	40 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
Phone: -- FAX: --	Client	CDT	Designed by	--

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
11	-38758.42	-24376.63	0.00	38666.25	24374.16	90.55	0.282%
12	-33531.14	-24176.18	-19059.35	33530.16	24176.32	19057.05	0.006%
13	-19379.21	-24376.63	-33046.40	19415.16	24374.15	32911.58	0.307%
14	0.00	-46570.69	0.00	0.01	46570.69	0.00	0.000%
15	0.00	-46979.00	-47976.80	-6.89	46971.14	47769.39	0.309%
16	23319.48	-46570.69	-39997.90	-23382.46	46566.97	39828.26	0.276%
17	39889.88	-46162.38	-22803.75	-39902.97	46163.31	22812.00	0.024%
18	46638.96	-46570.69	-0.00	-46523.29	46566.86	125.53	0.259%
19	41941.76	-46979.00	23988.40	-41764.17	46971.25	-23884.63	0.305%
20	23319.48	-46570.69	39997.90	-23149.27	46566.73	-39958.48	0.266%
21	-0.00	-46162.38	45607.49	6.40	46163.33	-45624.05	0.027%
22	-23319.48	-46570.69	39997.90	23148.03	46567.12	-39968.71	0.265%
23	-41941.76	-46979.01	23988.40	41766.51	46971.50	-23893.02	0.296%
24	-46638.96	-46570.69	0.00	46526.19	46566.97	122.53	0.253%
25	-39889.88	-46162.38	-22803.75	39905.44	46163.34	22805.72	0.024%
26	-23319.48	-46570.69	-39997.90	23371.45	46566.68	39828.07	0.271%
27	0.00	-24445.98	-13254.76	-0.01	24445.95	13249.37	0.019%
28	6705.61	-24376.63	-11434.74	-6705.56	24376.61	11430.96	0.014%
29	11602.47	-24307.27	-6594.93	-11601.16	24307.27	6594.10	0.006%
30	13411.22	-24376.63	-0.00	-13408.01	24376.61	1.78	0.013%
31	11658.67	-24445.98	6627.38	-11654.09	24445.95	-6624.72	0.019%
32	6705.61	-24376.63	11434.74	-6702.45	24376.61	-11432.81	0.013%
33	-0.00	-24307.27	13189.86	-0.01	24307.27	-13188.29	0.006%
34	-6705.61	-24376.63	11434.74	6702.44	24376.61	-11432.82	0.013%
35	-11658.67	-24445.98	6627.38	11654.10	24445.95	-6624.73	0.019%
36	-13411.22	-24376.63	0.00	13408.02	24376.61	1.77	0.013%
37	-11602.47	-24307.27	-6594.93	11601.16	24307.27	6594.12	0.006%
38	-6705.61	-24376.63	-11434.74	6705.55	24376.61	11430.98	0.014%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	13	0.0000001	0.0000001
2	Yes	15	0.00135140	0.00078308
3	Yes	14	0.00138000	0.00064326
4	Yes	13	0.00034336	0.00020876
5	Yes	14	0.00131470	0.00056762
6	Yes	15	0.00118005	0.00068135
7	Yes	14	0.00135469	0.00061039
8	Yes	13	0.00034975	0.00021776
9	Yes	14	0.00133460	0.00059501
10	Yes	15	0.00117442	0.00068878
11	Yes	14	0.00130023	0.00056159
12	Yes	13	0.00033259	0.00020176
13	Yes	14	0.00138251	0.00064861
14	Yes	13	0.00000001	0.00000001
15	Yes	19	0.00129336	0.00064260
16	Yes	17	0.00123911	0.00067097
17	Yes	13	0.00089478	0.00089788
18	Yes	17	0.00116270	0.00054750
19	Yes	19	0.00128817	0.00061411
20	Yes	17	0.00118946	0.00057272
21	Yes	13	0.00090517	0.00102838
22	Yes	17	0.00119370	0.00063828
23	Yes	19	0.00124485	0.00060239

RISATower	Job	Page
	112-13241	41 of 53
--	Project	Date
--	Ashford, CT	23:13:44 11/12/12
Phone: -- FAX: --	Client	Designed by
	CDT	

24	Yes	17	0.00113494	0.00053365
25	Yes	13	0.00084552	0.00050426
26	Yes	17	0.00120704	0.00058910
27	Yes	13	0.00000001	0.00006307
28	Yes	13	0.00000001	0.00005418
29	Yes	13	0.00000001	0.00004455
30	Yes	13	0.00000001	0.00004872
31	Yes	13	0.00000001	0.00005841
32	Yes	13	0.00000001	0.00005181
33	Yes	13	0.00000001	0.00004792
34	Yes	13	0.00000001	0.00005382
35	Yes	13	0.00000001	0.00005994
36	Yes	13	0.00000001	0.00004861
37	Yes	13	0.00000001	0.00004238
38	Yes	13	0.00000001	0.00005208

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	190 - 180	1.917	37	0.0617	0.0514
T2	180 - 160	1.783	37	0.0692	0.0390
T3	160 - 140	1.494	29	0.0501	0.0246
T4	140 - 120	1.360	29	0.0390	0.0470
T5	120 - 100	1.204	33	0.0141	0.0706
T6	100 - 80	1.235	33	0.0023	0.1519
T7	80 - 60	1.163	33	0.0343	0.2152
T8	60 - 40	0.981	27	0.0359	0.2609
T9	40 - 20	0.854	27	0.0505	0.2969
T10	20 - 0	0.536	27	0.1040	0.3180

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190.00	Antel BXA-70063-6CF	37	1.917	0.0617	0.0514	58807
189.63	Guy	37	1.912	0.0621	0.0509	58807
178.00	Sector Frame Mount	37	1.753	0.0690	0.0368	42784
167.00	Sector Frame Mount	37	1.582	0.0584	0.0269	30261
160.38	Guy	29	1.497	0.0505	0.0246	17072
150.00	Sector Frame Mount	29	1.421	0.0439	0.0330	79318
138.00	Sector Frame Mount	29	1.344	0.0374	0.0489	30463
120.38	Guy	33	1.206	0.0146	0.0696	14290
60.38	Guy	27	0.984	0.0359	0.2601	29976

Maximum Tower Deflections - Design Wind

RISATower	Job	Page
	112-13241	42 of 53
	Project	Date
-- -- Phone: -- FAX: --	Ashford, CT	23:13:44 11/12/12
	Client	Designed by
	CDT	--

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	190 - 180	7.391	24	0.2499	0.1705
T2	180 - 160	6.887	24	0.2687	0.1352
T3	160 - 140	5.858	18	0.1997	0.1434
T4	140 - 120	5.387	18	0.1468	0.2559
T5	120 - 100	5.080	19	0.0617	0.4060
T6	100 - 80	5.731	15	0.0976	0.8952
T7	80 - 60	5.828	15	0.1398	1.1395
T8	60 - 40	5.210	15	0.1550	1.3890
T9	40 - 20	4.529	15	0.2839	1.6231
T10	20 - 0	2.788	15	0.5486	1.7229

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190.00	Antel BXA-70063-6CF	24	7.391	0.2499	0.1705	21180
189.63	Guy	24	7.373	0.2510	0.1691	21180
178.00	Sector Frame Mount	24	6.777	0.2671	0.1290	16528
167.00	Sector Frame Mount	24	6.169	0.2293	0.1233	8661
160.38	Guy	18	5.871	0.2011	0.1418	5088
150.00	Sector Frame Mount	18	5.593	0.1735	0.1990	17560
138.00	Sector Frame Mount	18	5.335	0.1400	0.2640	11247
120.38	Guy	19	5.076	0.0611	0.3995	3156
60.38	Guy	15	5.222	0.1546	1.3839	6885

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load lb	Ratio Load Allowable	Allowable Ratio	Criteria
T1	190	Leg	A325N	0.7500	4	0.01	19433.20	0.000	1.333	Bolt Tension
T2	180	Leg	A325N	0.7500	4	0.00	19438.10	0.000	1.333	Bolt Tension
		Torque Arm Top@160.375	A325N	0.7500	2	6368.63	9277.52	0.686	1.333	Bolt Shear
		Torque Arm Bottom@160.375	A325N	0.7500	2	5071.56	9277.52	0.547	1.333	Bolt Shear
T3	160	Leg	A325N	0.7500	4	0.00	19421.40	0.000	1.333	Bolt Tension
T4	140	Leg	A325N	0.7500	4	0.00	19436.50	0.000	1.333	Bolt Tension
		Torque Arm Top@120.375	A325N	0.7500	2	4745.84	9277.52	0.512	1.333	Bolt Shear
		Torque Arm Bottom@120.375	A325N	0.7500	2	4463.68	9277.52	0.481	1.333	Bolt Shear
T5	120	Leg	A325N	0.7500	4	0.00	19364.20	0.000	1.333	Bolt Tension
T6	100	Leg	A325N	0.7500	4	0.00	19423.50	0.000	1.333	Bolt Tension
T7	80	Leg	A325N	0.7500	4	0.00	19432.10	0.000	1.333	Bolt Tension

RISATower -- -- Phone: -- FAX: --	Job	112-13241	Page	43 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load lb	Ratio Load Allowable	Allowable Ratio	Criteria
T8	60	Leg	A325N	0.7500	4	0.00	19385.50	0.000 ✓	1.333	Bolt Tension
T9	40	Leg	A325N	0.7500	4	0.00	19433.10	0.000 ✓	1.333	Bolt Tension
T10	20	Leg	A325N	0.7500	4	0.00	19435.20	0.000 ✓	1.333	Bolt Tension

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension lb	Breaking Load lb	Actual T lb	Allowable T _a lb	Required S.F.	Actual S.F.
T1	189.63 (A) (615)	9/16 EHS	5250.00	35000.04	12101.10	17500.00	2.000	2.892 ✓
	189.63 (B) (614)	9/16 EHS	5250.00	35000.04	12359.40	17500.00	2.000	2.832 ✓
	189.63 (C) (613)	9/16 EHS	5250.00	35000.04	12320.30	17500.00	2.000	2.841 ✓
T2	160.38 (A) (586)	5/8 EHS	6360.00	42399.99	14525.70	21200.00	2.000	2.919 ✓
	160.38 (A) (587)	5/8 EHS	6360.00	42399.99	14303.90	21200.00	2.000	2.964 ✓
	160.38 (B) (580)	5/8 EHS	6360.00	42399.99	14446.00	21200.00	2.000	2.935 ✓
	160.38 (B) (581)	5/8 EHS	6360.00	42399.99	14642.60	21200.00	2.000	2.896 ✓
	160.38 (C) (574)	5/8 EHS	6360.00	42399.99	14533.30	21200.00	2.000	2.917 ✓
	160.38 (C) (575)	5/8 EHS	6360.00	42399.99	14558.50	21200.00	2.000	2.912 ✓
T4	120.38 (A) (604)	9/16 EHS	5250.00	35000.04	12940.60	17500.00	2.000	2.705 ✓
	120.38 (A) (605)	9/16 EHS	5250.00	35000.04	12306.30	17500.00	2.000	2.844 ✓
	120.38 (B) (598)	9/16 EHS	5250.00	35000.04	12483.10	17500.00	2.000	2.804 ✓
	120.38 (B) (599)	9/16 EHS	5250.00	35000.04	12670.90	17500.00	2.000	2.762 ✓
	120.38 (C) (592)	9/16 EHS	5250.00	35000.04	12387.00	17500.00	2.000	2.826 ✓
T7	120.38 (C) (593)	9/16 EHS	5250.00	35000.04	12834.60	17500.00	2.000	2.727 ✓
	60.38 (A) (612)	9/16 EHS	5250.00	35000.04	14314.70	17500.00	2.000	2.445 ✓
	60.38 (B) (611)	9/16 EHS	5250.00	35000.04	14259.00	17500.00	2.000	2.455 ✓
	60.38 (C) (610)	9/16 EHS	5250.00	35000.04	14281.30	17500.00	2.000	2.451 ✓

Compression Checks

RISATower	Job	Page
	112-13241	44 of 53
-- --	Project	Date
-- Phone: -- FAX: --	Ashford, CT	23:13:44 11/12/12
	Client	Designed by
	CDT	--

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _w ft	Kl/r	Mast Stability Index	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P/P _a
T1	190 - 180	P2.5x.203	10.00	3.08	39.1 K=1.00	1.00	29.626	1.7040	-15429.50	50483.70	0.306
T2	180 - 160	P2.5x.203	20.00	3.21	40.6 K=1.00	1.00	29.339	1.7040	-38871.10	49995.20	0.777
T3	160 - 140	P2.5x.203	20.00	3.21	40.6 K=1.00	1.00	29.339	1.7040	-36594.30	49995.20	0.732
T4	140 - 120	P2.5x.203	20.00	3.21	40.6 K=1.00	1.00	29.339	1.7040	-56765.40	49995.20	1.135
T5	120 - 100	P2.5x.203	20.00	3.21	40.6 K=1.00	0.99	29.075	1.7040	-55021.30	49545.00	1.111
T6	100 - 80	P2.5x.203	20.00	3.21	40.6 K=1.00	0.99	29.039	1.7040	-50395.80	49484.00	1.018
T7	80 - 60	P2.5x.203	20.00	3.21	40.6 K=1.00	0.99	29.016	1.7040	-47696.90	49444.70	0.965
T8	60 - 40	P2.5x.203	20.00	3.21	40.6 K=1.00	0.99	29.016	1.7040	-57362.90	49444.30	1.160
T9	40 - 20	P2.5x.203	20.00	3.21	40.6 K=1.00	0.99	29.025	1.7040	-62698.80	49459.80	1.268
T10	20 - 0	P2.5x.203	20.00	3.21	40.6 K=1.00	0.99	29.012	1.7040	-60994.10	49438.30	1.234



Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _w ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P/P _a
T1	190 - 180	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-4621.42	7695.87	0.601*
T2	180 - 160	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-4293.99	7695.87	0.558*
T3	160 - 140	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-3434.32	7695.87	0.446*
T4	140 - 120	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-3319.96	7695.87	0.431*
T5	120 - 100	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-5439.20	7695.87	0.707
T6	100 - 80	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-2666.76	7695.87	0.347*
T7	80 - 60	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-2768.03	7695.87	0.360*
T8	60 - 40	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-3781.25	7695.87	0.491
T9	40 - 20	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-2381.35	7695.87	0.309*
T10	20 - 0	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-2413.94	7695.87	0.314*



RISA Tower	Job	112-13241	Page	45 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--
	Phone: -- FAX: --			

Section No.	Elevation	Size	L	L _n	Kl/r	F _a	A	Actual P	Allow. P _a	Ratio P/P _a
	ft		ft	ft		ksi	in ²	lb	lb	
					K=0.65					✓

* DL controls

Top Girt Design Data (Compression)

Section No.	Elevation	Size	L	L _n	Kl/r	F _a	A	Actual P	Allow. P _a	Ratio P/P _a
	ft		ft	ft		ksi	in ²	lb	lb	
T2	180 - 160	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-2277.33	7695.87	0.296*
T3	160 - 140	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-2729.97	7695.87	0.355
T4	140 - 120	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-1760.49	7695.87	0.229*
T5	120 - 100	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-3075.20	7695.87	0.400
T6	100 - 80	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-1407.38	7695.87	0.183*
T7	80 - 60	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-1387.19	7695.87	0.180*
T8	60 - 40	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-1807.17	7695.87	0.235
T9	40 - 20	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-1258.24	7695.87	0.163*
T10	20 - 0	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-1237.44	7695.87	0.161*

* DL controls

Bottom Girt Design Data (Compression)

Section No.	Elevation	Size	L	L _n	Kl/r	F _a	A	Actual P	Allow. P _a	Ratio P/P _a
	ft		ft	ft		ksi	in ²	lb	lb	
T1	190 - 180	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-2351.41	7695.87	0.306*
T3	160 - 140	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-1774.24	7695.87	0.231*
T5	120 - 100	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-1963.27	7695.87	0.255
T6	100 - 80	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-1389.12	7695.87	0.181*
T8	60 - 40	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-1259.81	7695.87	0.164*
T9	40 - 20	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-1239.23	7695.87	0.161*

RISATower	Job	112-13241	Page	46 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--
	Phone: -- FAX: --			

Section No.	Elevation ft	Size	L ft	L _n ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P/P _a
T10	20 - 0	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-127.28	7695.87	0.017*

* DL controls

Top Guy Pull-Off Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _n ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P/P _a
T1	190 - 180	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-2065.95	7695.87	0.268
T2	180 - 160	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-7067.69	7695.87	0.918
T4	140 - 120	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-5725.09	7695.87	0.744
T7	80 - 60	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-470.42	7695.87	0.061

Bottom Guy Pull-Off Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _n ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P/P _a
T2	180 - 160	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-3321.00	7695.87	0.432
T4	140 - 120	L1 1/2x1 1/2x3/16	3.50	3.26	86.7 K=0.65	14.594	0.5273	-3807.09	7695.87	0.495

Torque-Arm Bottom Design Data

Section No.	Elevation ft	Size	L ft	L _n ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P/P _a
T2	180 - 160 (578)	L3x3x1/4	3.50	3.38	68.5 K=1.00	16.584	1.4400	-9859.39	23880.20	0.413
T2	180 - 160 (579)	L3x3x1/4	3.50	3.38	68.5 K=1.00	16.584	1.4400	-9709.25	23880.20	0.407
T2	180 - 160 (584)	L3x3x1/4	3.50	3.38	68.5 K=1.00	16.584	1.4400	-10143.10	23880.20	0.425
T2	180 - 160 (585)	L3x3x1/4	3.50	3.38	68.5 K=1.00	16.584	1.4400	-10032.40	23880.20	0.420
T2	180 - 160 (590)	L3x3x1/4	3.50	3.38	68.5 K=1.00	16.584	1.4400	-10033.60	23880.20	0.420

RISATower -- -- -- Phone: -- FAX: --	Job	112-13241	Page	47 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio $\frac{P}{P_a}$
					K=1.00					✓
T2	180 - 160 (591)	L3x3x1/4	3.50	3.38	68.5	16.584	1.4400	-10038.00	23880.20	0.420
					K=1.00					✓
T4	140 - 120 (596)	L3x3x1/4	3.50	3.38	68.5	16.584	1.4400	-8005.49	23880.20	0.335
					K=1.00					✓
T4	140 - 120 (597)	L3x3x1/4	3.50	3.38	68.5	16.584	1.4400	-8009.70	23880.20	0.335
					K=1.00					✓
T4	140 - 120 (602)	L3x3x1/4	3.50	3.38	68.5	16.584	1.4400	-8786.10	23880.20	0.368
					K=1.00					✓
T4	140 - 120 (603)	L3x3x1/4	3.50	3.38	68.5	16.584	1.4400	-8754.33	23880.20	0.367
					K=1.00					✓
T4	140 - 120 (608)	L3x3x1/4	3.50	3.38	68.5	16.584	1.4400	-8892.04	23880.20	0.372
					K=1.00					✓
T4	140 - 120 (609)	L3x3x1/4	3.50	3.38	68.5	16.584	1.4400	-8927.36	23880.20	0.374
					K=1.00					✓

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio $\frac{P}{P_a}$
T1	190 - 180	P2.5x.203	10.00	3.08	39.1	34.800	1.7040	0.04	59300.90	0.000
T2	180 - 160	P2.5x.203	20.00	3.21	40.6	34.800	1.7040	1050.83	59300.90	0.018

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio $\frac{P}{P_a}$
T1	190 - 180	5/8	4.66	4.35	333.7	21.600	0.3068	3368.31	6626.80	0.508*
T2	180 - 160	5/8	4.75	4.42	339.7	21.600	0.3068	5780.18	6626.80	0.872
T3	160 - 140	5/8	4.75	4.42	339.7	21.600	0.3068	4402.35	6626.80	0.664
T4	140 - 120	5/8	4.75	4.42	339.7	21.600	0.3068	5374.91	6626.80	0.811
T5	120 - 100	5/8	4.75	4.42	339.7	21.600	0.3068	7945.41	6626.80	1.199
T6	100 - 80	5/8	4.75	4.42	339.7	21.600	0.3068	4060.59	6626.80	0.613

RISATower --- --- Phone: --- FAX: ---	Job	112-13241	Page	48 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	---

Section No.	Elevation ft	Size	L ft	L _n ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio $\frac{P}{P_a}$
T7	80 - 60	5/8	4.75	4.42	339.7	21.600	0.3068	4745.60	6626.80	0.716
T8	60 - 40	5/8	4.75	4.42	339.7	21.600	0.3068	5678.51	6626.80	0.857
T9	40 - 20	5/8	4.75	4.42	339.7	21.600	0.3068	2642.96	6626.80	0.399
T10	20 - 0	5/8	4.75	4.42	339.7	21.600	0.3068	3593.44	6626.80	0.542

* DL controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _n ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio $\frac{P}{P_a}$
T1	190 - 180	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	267.25	11390.60	0.023
T2	180 - 160	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	673.27	11390.60	0.059
T3	160 - 140	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	633.83	11390.60	0.056
T4	140 - 120	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	983.21	11390.60	0.086
T5	120 - 100	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	953.00	11390.60	0.084
T6	100 - 80	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	872.88	11390.60	0.077
T7	80 - 60	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	630.84	11390.60	0.055
T8	60 - 40	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	993.55	11390.60	0.087
T9	40 - 20	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	1085.98	11390.60	0.095
T10	20 - 0	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	1056.45	11390.60	0.093

* DL controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _n ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio $\frac{P}{P_a}$
T5	120 - 100	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	451.06	11390.60	0.040
T8	60 - 40	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	44.58	11390.60	0.004

RISA Tower -- Phone: -- FAX: --	Job	112-13241	Page	49 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P P _a
T10	20 - 0	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	58.22	11390.60	0.005

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P P _a
T8	60 - 40	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	13.47	11390.60	0.001
T10	20 - 0	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	565.16	11390.60	0.050

Top Guy Pull-Off Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P P _a
T1	190 - 180	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	1689.90	11390.60	0.148
T4	140 - 120	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	685.64	11390.60	0.060
T7	80 - 60	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	5044.03	11390.60	0.443

Bottom Guy Pull-Off Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P P _a
T2	180 - 160	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	17.85	11390.60	0.002
T4	140 - 120	L1 1/2x1 1/2x3/16	3.50	3.26	85.7	21.600	0.5273	1439.34	11390.60	0.126

Torque-Arm Top Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P P _a
-------------	-----------------	------	---------	----------------------	------	-----------------------	----------------------	----------------	-----------------------------	---------------------------

RISATower -- -- Phone: -- FAX: --	Job	112-13241	Page	50 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P P _a
T2	180 - 160 (576)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	12561.40	24840.00	0.506
T2	180 - 160 (577)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	12714.20	24840.00	0.512
T2	180 - 160 (582)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	12475.40	24840.00	0.502
T2	180 - 160 (583)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	12507.40	24840.00	0.504
T2	180 - 160 (588)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	12549.50	24840.00	0.505
T2	180 - 160 (589)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	12737.30	24840.00	0.513
T4	140 - 120 (594)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	9350.67	24840.00	0.376
T4	140 - 120 (595)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	9454.68	24840.00	0.381
T4	140 - 120 (600)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	9320.77	24840.00	0.375
T4	140 - 120 (601)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	9451.68	24840.00	0.381
T4	140 - 120 (606)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	9256.34	24840.00	0.373
T4	140 - 120 (607)	L2x2x5/16	4.75	4.59	91.6	21.600	1.1500	9491.68	24840.00	0.382

Torque-Arm Bottom Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P P _a
T2	180 - 160 (578)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	2417.98	31104.00	0.078
T2	180 - 160 (579)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	2271.06	31104.00	0.073
T2	180 - 160 (584)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	2671.05	31104.00	0.086
T2	180 - 160 (585)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	2527.47	31104.00	0.081
T2	180 - 160 (590)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	2538.40	31104.00	0.082
T2	180 - 160 (591)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	2539.32	31104.00	0.082
T4	140 - 120 (596)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	4370.59	31104.00	0.141
T4	140 - 120 (597)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	4277.03	31104.00	0.138
T4	140 - 120 (602)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	5057.15	31104.00	0.163
T4	140 - 120 (603)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	4668.36	31104.00	0.150

RISATower -- -- Phone: -- FAX: --	Job	112-13241	Page	51 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	--

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P P _a
T4	140 - 120 (608)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	4791.16	31104.00	0.154
T4	140 - 120 (609)	L3x3x1/4	3.50	3.38	43.6	21.600	1.4400	5086.15	31104.00	0.164

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	SF*P _{allow} lb	% Capacity	Pass Fail	
T1	190 - 180	Leg	P2.5x.203	1	-15429.50	67294.77	22.9	Pass	
		Diagonal	5/8	33	3368.31	6626.80	50.8	Pass	
		Horizontal	L1 1/2x1 1/2x3/16	26	-4621.42	7695.87	60.1	Pass	
		Bottom Girt	L1 1/2x1 1/2x3/16	9	-2351.41	7695.87	30.6	Pass	
		Guy A@189.625	9/16	615	12101.10	17500.00	69.1	Pass	
		Guy B@189.625	9/16	614	12359.40	17500.00	70.6	Pass	
		Guy C@189.625	9/16	613	12320.30	17500.00	70.4	Pass	
		Top Guy	L1 1/2x1 1/2x3/16	6	-2065.95	10258.59	20.1	Pass	
		Pull-Off@189.625							
		T2	180 - 160	Leg	P2.5x.203	34	-38871.10	66643.60	58.3
Diagonal	5/8			57	5780.18	8833.52	65.4	Pass	
Horizontal	L1 1/2x1 1/2x3/16			86	-4293.99	7695.87	55.8	Pass	
Top Girt	L1 1/2x1 1/2x3/16			38	-2277.33	7695.87	29.6	Pass	
Guy A@160.375	5/8			586	14525.70	21200.00	68.5	Pass	
Guy B@160.375	5/8			581	14642.60	21200.00	69.1	Pass	
Guy C@160.375	5/8			575	14558.50	21200.00	68.7	Pass	
Top Guy	L1 1/2x1 1/2x3/16			50	-7067.69	10258.59	68.9	Pass	
Pull-Off@160.375									
Bottom Guy	L1 1/2x1 1/2x3/16			41	-3321.00	10258.59	32.4	Pass	
T3	160 - 140	Torque Arm	L2x2x5/16	589	12737.30	33111.72	38.5	Pass	
		Top@160.375					51.5 (b)		
		Torque Arm	L3x3x1/4	584	-10143.10	31832.30	31.9	Pass	
		Bottom@160.375					41.0 (b)		
		Leg	P2.5x.203	94	-36594.30	66643.60	54.9	Pass	
		Diagonal	5/8	151	4402.35	8833.52	49.8	Pass	
T4	140 - 120	Horizontal	L1 1/2x1 1/2x3/16	146	-3434.32	7695.87	44.6	Pass	
		Top Girt	L1 1/2x1 1/2x3/16	98	-2729.97	10258.59	26.6	Pass	
		Bottom Girt	L1 1/2x1 1/2x3/16	101	-1774.24	7695.87	23.1	Pass	
		Leg	P2.5x.203	154	-56765.40	66643.60	85.2	Pass	
		Diagonal	5/8	177	5374.91	8833.52	60.8	Pass	
		Horizontal	L1 1/2x1 1/2x3/16	206	-3319.96	7695.87	43.1	Pass	
		Top Girt	L1 1/2x1 1/2x3/16	158	-1760.49	7695.87	22.9	Pass	
		Guy A@120.375	9/16	604	12940.60	17500.00	73.9	Pass	
		Guy B@120.375	9/16	599	12670.90	17500.00	72.4	Pass	
		Guy C@120.375	9/16	593	12834.60	17500.00	73.3	Pass	
T5	120 - 100	Top Guy	L1 1/2x1 1/2x3/16	169	-5725.09	10258.59	55.8	Pass	
		Pull-Off@120.375							
		Bottom Guy	L1 1/2x1 1/2x3/16	162	-3807.09	10258.59	37.1	Pass	
		Pull-Off@120.375							
		Torque Arm	L2x2x5/16	607	9491.68	33111.72	28.7	Pass	
		Top@120.375					38.4 (b)		
		Torque Arm	L3x3x1/4	609	-8927.36	31832.30	28.0	Pass	
		Bottom@120.375					36.1 (b)		
		Leg	P2.5x.203	214	-55021.30	66043.48	83.3	Pass	
		Diagonal	5/8	271	7945.41	8833.52	89.9	Pass	
Horizontal	L1 1/2x1 1/2x3/16	266	-5439.20	10258.59	53.0	Pass			

RISATower	Job	142-13241	Page	52 of 53
	Project	Ashford, CT	Date	23:13:44 11/12/12
	Client	CDT	Designed by	

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	SF*P _{allow} lb	% Capacity	Pass Fail	
T6	100 - 80	Top Girt	L1 1/2x1 1/2x3/16	218	-3075.20	10258.59	30.0	Pass	
		Bottom Girt	L1 1/2x1 1/2x3/16	221	-1963.27	10258.59	19.1	Pass	
		Leg	P2.5x.203	276	-50395.80	65962.17	76.4	Pass	
		Diagonal	5/8	331	4060.59	8833.52	46.0	Pass	
		Horizontal	L1 1/2x1 1/2x3/16	325	-2666.76	7695.87	34.7	Pass	
T7	80 - 60	Top Girt	L1 1/2x1 1/2x3/16	279	-1407.38	7695.87	18.3	Pass	
		Bottom Girt	L1 1/2x1 1/2x3/16	280	-1389.12	7695.87	18.1	Pass	
		Leg	P2.5x.203	336	-47696.90	65909.78	72.4	Pass	
		Diagonal	5/8	357	4745.60	8833.52	53.7	Pass	
		Horizontal	L1 1/2x1 1/2x3/16	351	-2768.03	7695.87	36.0	Pass	
T8	60 - 40	Top Girt	L1 1/2x1 1/2x3/16	339	-1387.19	7695.87	18.0	Pass	
		Guy A@60.375	9/16	612	14314.70	17500.00	81.8	Pass	
		Guy B@60.375	9/16	611	14259.00	17500.00	81.5	Pass	
		Guy C@60.375	9/16	610	14281.30	17500.00	81.6	Pass	
		Top Guy	L1 1/2x1 1/2x3/16	340	5044.03	15183.67	33.2	Pass	
		Pull-Off@60.375							
		Leg	P2.5x.203	395	-57362.90	65909.25	87.0	Pass	
T9	40 - 20	Diagonal	5/8	450	5678.51	8833.52	64.3	Pass	
		Horizontal	L1 1/2x1 1/2x3/16	446	-3781.25	10258.59	36.9	Pass	
		Top Girt	L1 1/2x1 1/2x3/16	398	-1807.17	10258.59	17.6	Pass	
		Bottom Girt	L1 1/2x1 1/2x3/16	400	-1259.81	7695.87	16.4	Pass	
		Leg	P2.5x.203	455	-62698.80	65929.91	95.1	Pass	
T10	20 - 0	Diagonal	5/8	511	2642.96	8833.52	29.9	Pass	
		Horizontal	L1 1/2x1 1/2x3/16	505	-2381.35	7695.87	30.9	Pass	
		Top Girt	L1 1/2x1 1/2x3/16	459	-1258.24	7695.87	16.3	Pass	
		Bottom Girt	L1 1/2x1 1/2x3/16	460	-1239.23	7695.87	16.1	Pass	
		Leg	P2.5x.203	515	-60994.10	65901.25	92.6	Pass	
		Diagonal	5/8	527	3593.44	8833.52	40.7	Pass	
		Horizontal	L1 1/2x1 1/2x3/16	531	-2413.94	7695.87	31.4	Pass	
		Top Girt	L1 1/2x1 1/2x3/16	519	-1237.44	7695.87	16.1	Pass	
		Bottom Girt	L1 1/2x1 1/2x3/16	522	565.16	15183.67	3.7	Pass	
Summary									
						Leg (T9)	95.1	Pass	
						Diagonal (T5)	89.9	Pass	
						Horizontal (T1)	60.1	Pass	
						Top Girt (T5)	30.0	Pass	
						Bottom Girt (T1)	30.6	Pass	
						Guy A (T7)	81.8	Pass	
						Guy B (T7)	81.5	Pass	
						Guy C (T7)	81.6	Pass	
						Top Guy	68.9	Pass	
						Pull-Off (T2)			
						Bottom Guy	37.1	Pass	
						Pull-Off (T4)			
						Torque Arm Top (T2)	51.5	Pass	
						Torque Arm Bottom (T2)	41.0	Pass	
						Bolt Checks	51.5	Pass	
						RATING =	95.1	Pass	

Site Name: Ashford, CT

Job Number: 112-13241

Engineer: BKL

Date: 11/12/2012

Design Base Loads (Unfactored) per TIA-222-F

Foundation Mapped:	N		
Moment (M):	0.0 k-ft	Concrete Compressive Strength (f'_c):	3000 psi
Shear/Leg (V):	3.0 k	Vertical Steel Rebar Size #:	5
Compression/Leg (P):	133.5 k	Vertical Steel Rebar Area:	0.31 in ²
Uplift/Leg (U):	0.0 k	# of Vertical Steel Rebars:	8
Tower Type (GT / SST):	GT	Vertical Steel Rebar Yield Strength (F_y):	60 ksi
Diameter of Prismatic Portion of Pier (d):	2.0 ft	Tie / Stirrup Size #:	4
Depth to Base of Foundation:	4.5 ft	Tie / Stirrup Area:	0.20 in ²
Pier Height Above Ground (h):	1.00 ft	Tie / Stirrup Spacing:	10.0 in
Length / Width of Pad (w):	5.5 ft	Tie / Stirrup Steel Yield Strength (F_y):	40 ksi
Thickness of Pad (t):	1.5 ft	Rebar Cage Diameter:	16.0 in
Depth Below Ground Surface to Water Table (w):	20.0 ft	Bending/Tension Reduction Factor (ϕ_B):	0.90
Unit Weight of Concrete:	150.0 pcf	Shear Reduction Factor (ϕ_v):	0.75
Unit Weight of Water:	62.4 pcf	Compression Reduction Factor (ϕ_c):	0.65
Unit Weight of Soil Above Water Table:	115.0 pcf	Wind Design Factor:	1.30
Unit Weight of Soil Below Water Table:	50.0 pcf	Steel Elastic Modulus:	29000 ksi
Friction Angle of Uplift from Top of Pad:	33 Degrees	Pad Steel Rebar Size #:	5
Friction Angle of Uplift from Base of Pad:	33 Degrees	Pad Steel Rebar Area:	0.31 in ²
Uplift Angle Started at Top or Base of Pad (T/B):	B	Pad Steel Rebar Yield Strength (F_y):	60 ksi
Allowable Skin Friction:	0 psf	# of Rebar in Top of Pad:	0
Allowable Compressive Bearing Pressure:	7000 psf	# of Rebar in Base of Pad:	5
Capacity Increase (Due to Transient Loads):	1.00	Pad Clear Cover:	3 in

Axial Capacities and Design Moment

Weight of Concrete (Bouyancy Considered):	8.7 k
Weight of Soil (Bouyancy Considered):	31.9 k
Allowable Skin Friction Resistance:	0.0 k
Controlling Failure Mode (Top / Base):	Base
Allowable Uplift Capacity per Leg:	22.9 k
Compressive Design Load:	135.9 k
Allowable Compression Capacity per Leg:	211.8 k
Uplift Design Load/Uplift Capacity:	0.00 Result: OK
Compression Design Load/Compression Capacity:	0.64 Result: OK

Depth (ft)		Ultimate Lateral	Increment	γ_{Soil}	Cohesion	ϕ
Top	Bottom	Bearing Pressure (psf)	(psf/ft)	(pcf)	(psf)	(degree)
0.0	2.0	0.0	115.0	115	0	0
2.0	3.0	780.2	390.1	115	0	33

Inflection Point (Below Ground Surface):	3.0 ft
Unfactored Design Moment At Inflection Point:	6.8 k-ft

Pad Strength Capacity

β :	0.85 ACI318-05 - 10.2.7.3
Lower Pad Flexural Reinforcement Ratio:	0.0016 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0000 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Lower Pad Flexural Reinforcement Spacing:	15 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Upper Pad Flexural Reinforcement Spacing:	0 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
One Way Design Shear (V_u):	16.9 k
One Way Shear Capacity (ϕV_c):	81.2 k - ACI318-05 - 11.3.1.1
$V_u / \phi V_c$:	0.21 Result: OK
Punching Design Shear (V_u):	125.9 k
Nominal Punching Shear Capacity ($\phi_c V_n$):	293.3 k - ACI318-05 - 11.12.2.1
$V_u / \phi V_c$:	0.43 Result: OK
Flexural Loading Due to Soil Pressure (M_u):	49.2 k-ft
Lower Steel Pad Moment Capacity (ϕM_n):	100.5 k-ft - ACI318-05 - 10.3
$M_u / \phi M_n$:	0.49 Result: OK
Flexural Loading Due to Uplift (M_u):	0.0 k-ft
Upper Steel Pad Moment Capacity (ϕM_n):	0.0 k-ft - ACI318-05 - 10.3
$M_u / \phi M_n$:	0.00 Result: OK

Pier Strength Capacity

Design Moment (M_u):	8.8 k-ft
Nominal Moment Capacity ($\phi_B M_n$):	88.9 k-ft - ACI318-005 - 10.2
$M_u / \phi_B M_n$:	0.10 Result: OK
Design Shear (V_u):	3.9 k
Nominal Shear Capacity ($\phi_V V_n$):	67.9 k - ACI318-05 - 11.3.1.1 or 11.5.7.2
$V_u / \phi_V V_n$:	0.06 Result: OK
Design Tension (T_u):	0.0 k
Nominal Tension Capacity ($\phi_T T_n$):	133.9 k - ACI318-05 - 10.2
$T_u / \phi_T T_n$:	0.00 Result: OK
Design Compression (P_u):	173.5 k
Nominal Compression Capacity ($\phi_P P_n$):	701.9 k - ACI318-05 - 10.3.6.2
$P_u / \phi_P P_n$:	0.25 Result: OK
Pier Reinforcement Ratio:	0.005 Reinforcement Ratio is Satisfactory - ACI318-05 - 10.9.1 & 10.8.4
$M_u / \phi_B M_n + T_u / \phi_T T_n$:	0.10 Result: OK

Site Name: Ashford, CT

Site Number: 112-13241

Engineer: BKL

Date: 11/12/2012

Design Standard per TIA-222-F

Uplift (Unfactored):	51.4 k
Shear (Unfactored):	59.6 k
Anchor Base Depth (d):	8.0 ft
Width of Anchor (W):	5.5 ft
Length of Anchor (L):	11.5 ft
Thickness of Anchor (t):	2.0 ft
Depth Below Ground Surface to Water Table (w):	20.0 ft
Soil Uplift at Base / Top of Anchor (B/T):	T
Unit Weight of Concrete:	150.0 pcf
Unit Weight of Soil Above Water Table:	115.0 pcf
Unit Weight of Water:	62.4 pcf
Submerged Soil Unit Weight:	50.0 pcf
Internal Angle of Friction:	33 Degrees
Cohesion:	0 psf
Allowable Skin Friction of Pad Sides to Soil:	450 psf
Ultimate Coefficient of Shear Friction:	0.30
Maximum Top Conical Failure Angle:	33 Degrees
Maximum Base Conical Failure Angle:	33 Degrees
Allowable Capacity Increase:	1.00 (Due to Transient Loads)

Uplift

Weight of Concrete (Buoyancy Effect Considered):	19.0 k
Weight of Soil (Buoyancy Effect Considered):	100.3 k
Uplift Resistance from Skin Friction:	20.3 k
Allowable Uplift Resistance (FS = 1.5 to 2):	65.3 k
Uplift Design Load/Allowable Uplift Resistance:	0.79 Result: OK

Shear

Ultimate Shear Friction Resistance Due to Normal Force - Uplift:	3.4 k
Ultimate Passive Pressure:	5461 psf
Ultimate Passive Pressure Resistance:	125.6 k
Allowable Shear Resistance (FS = 1.5 to 2):	64.5 k
Shear Design Load/Allowable Shear Resistance:	0.92 Result: OK

Anchor Rod Capacity

# of Anchor Rods:	1
Anchor Rod Gross Area:	2.41 in ²
Anchor Rod Net Area:	2.41 in ²
Anchor Rod Yield Strength:	48 ksi
Anchor Rod Ultimate Strength:	62 ksi
Allowable Stress Increase:	1.33
Resultant Tensile Load:	78.7 k
Anchor Rod Tensile Resistance:	92.4 k
Resultant Tensile Load / Anchor Rod Tensile Resistance:	0.85 Result: OK

Strength Analysis of Reinforced Concrete

Concrete Compressive Strength (f'_c):	3000 psi
Longitudinal Rebar Yield Strength:	60000 psi
# Longitudinal Rebar (Top):	6
# Longitudinal Rebar (1 Side):	5
Rebar Size:	4
Wind Load Factor:	1.3
Strength Reduction Factor for Shear (ϕ_v):	0.75
Strength Reduction Factor for Flexure (ϕ_b):	0.9
Compression Zone Factor (β_1):	0.85
Area of Single Rebar:	0.20 in ²
One Way Shear due to Shear Load (V_u):	21.3 k
Nominal One Way Shear Capacity for Shear Load ($\phi_c V_n$):	122.3 k
$V_u/\phi_v V_n$:	0.17 Result: OK
One Way Shear due to Uplift (V_u):	28.6 k
Nominal One Way Shear Capacity for Uplift ($\phi_c V_n$):	108.4 k
$V_u/\phi_v V_n$:	0.26 Result: OK
Pad Flexure due to Shear Load (M_u):	111.3 k-ft
Nominal Flexural Capacity for Shear Load ($\phi_b M_n$):	279.0 k-ft
Pad Flexure due to Uplift (M_u):	96.0 k-ft
Nominal Flexural Capacity for Uplift ($\phi_b M_n$):	107.9 k-ft
$M_u/\phi_b M_n$ (Max.):	0.89 Result: OK

PROJECT INFORMATION

SCOPE OF WORK: TELECOMMUNICATIONS FACILITY UPGRADE (LTE):
 1. INSTALL (3) NEW LTE ANTENNAS, (6) RRH'S, (1) SURGE ARRESTOR, (1) FIBER LINE, (2) DC POWER LINES & (1) GPS ANTENNA
 2. INSTALL (1) LTE 6601 CABINET & (1) DC POWER PLANT

SITE ADDRESS: 20 SELES ROAD
 ASHFORD, CT 06278

LATITUDE: 41.86339 N 41° 51' 48.2" N
 LONGITUDE: 72.18280 W 72° 10' 58.1" W

CURRENT USE: TELECOMMUNICATIONS FACILITY
 PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: CT5701
SITE NAME: ASHFORD SOUTH CENTRAL

DRAWING INDEX

REV

VICINITY MAP

GENERAL NOTES

T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	COMPOUND AND EQUIPMENT PLAN	1
A-2	ELEVATION AND ANTENNA PLAN	1
A-3	DETAILS	1
A-4	DETAILS	1
G-1	PLUMBING DIAGRAM & GROUNDING DETAILS	1

DIRECTIONS TO SITE:
 HEAD NORTHEAST ON ENTERPRISE DR TOWARD CAPITOL BLVD. 0.4 MILES. TURN LEFT ONTO CAPITOL BLVD. 0.3 MILES. TURN LEFT ONTO WEST ST. 0.2 MILES. MERGE ONTO I-91 N VIA THE RAMP ON THE LEFT TOWARD HARTFORD. 7.8 MILES. MERGE ONTO CT-15 N VIA EXIT 29 TOWARD I-84 E/E. HARTFORD/BOSTON. 2.1 MILES. CT-15 N BECOMES I-84 E. 18.9 MILES. TAKE THE CT-74 EXIT, EXIT 69, TOWARD US-44/WILLINGTON. 0.3 MILES. TURN RIGHT ONTO TOLLAND TURNPIKE/CT-74. CONTINUE TO FOLLOW CT-74. 7.0 MILES. TURN SHARP LEFT ONTO SELES RD. 0.1 MILES. 20 SELES RD IS ON THE RIGHT.



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 REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL
 BEFORE YOU DIG 
 CALL TOLL FREE 1-800-922-4455 OR DIAL 811

UNDERGROUND SERVICE ALERT



SITE NUMBER: CT5701
SITE NAME: ASHFORD SOUTH CENTRAL
 20 SELES ROAD
 ASHFORD, CT 06278
 WINDHAM COUNTY



NO.	DATE	REVISIONS	BY	CHK APP'D
1	10/30/12	ISSUED FOR PERMITTING	CC	DC DPM
0	08/08/12	ISSUED FOR REVIEW	RM	DC DPH

AT&T	
TITLE SHEET (LTE)	
JOB NUMBER	DRAWING NUMBER
5701.01	T-1
REV	1

1600 OSGOOD STREET
 BUILDING 20 NORTH, SUITE 3090
 N. ANDOVER, MA 01845
 TEL: (978) 557-5563
 FAX: (978) 856-5386

UniTek GLOBAL SERVICES company
 800 MARSHALL PHELPS ROAD UNIT#: 2A
 WINDSOR, CT 06095

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

SCALE: AS SHOWN DESIGNED BY: DC DRAWN BY: RM

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) LIGHTNING 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) 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 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 THE BRIDGE AND THE TOWER 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 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE 1/2" OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR - NEXLINK
 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. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
 16. CONSTRUCTION SHALL COMPLY WITH UMS SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T MOBILITY 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: 2003 IBC WITH 2005 CT SUPPLEMENT & 2009 CT AMENDMENTS
 ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS
 LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS
- 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, NINTH EDITION;
 - TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARDS FOR STEEL
 - ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

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	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE	TYP	TYPICAL
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED		

1600 OSGOOD STREET
 BUILDING 20 NORTH, SUITE 3090
 N. ANDOVER, MA 01845
 TEL: (978) 557-5552
 FAX: (978) 356-5586

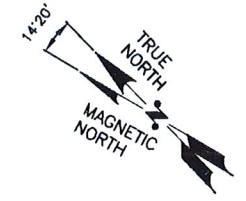
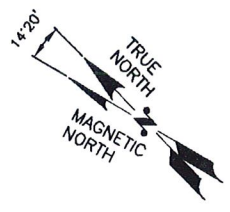
a UniTek GLOBAL SERVICES company
 800 MARSHALL PHELPS ROAD UNIT#: 2A
 WINDSOR, CT 06095

SITE NUMBER: CT5701
SITE NAME: ASHFORD SOUTH CENTRAL
 20 SELES ROAD
 ASHFORD, CT 06278
 WINDHAM COUNTY

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

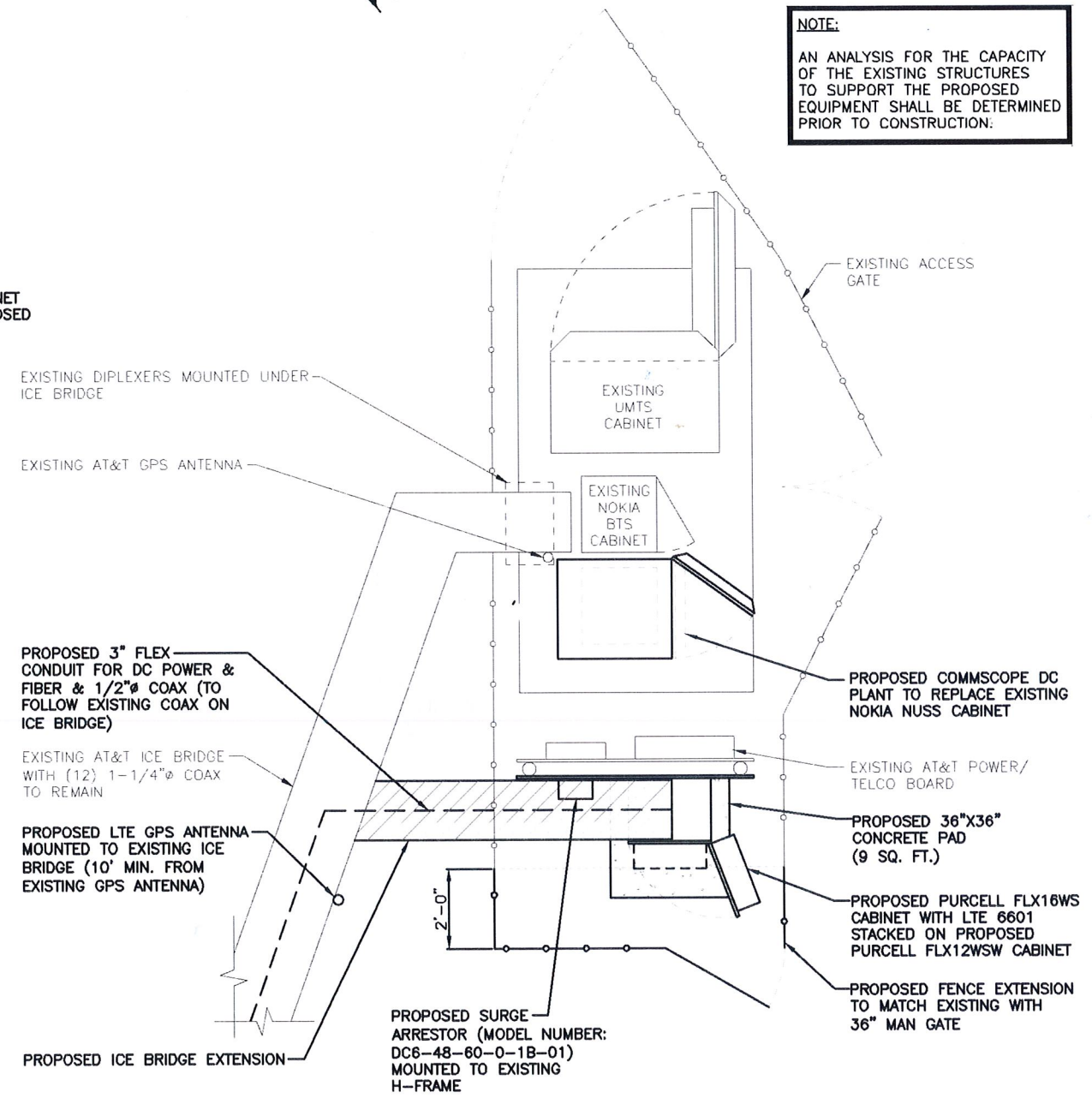
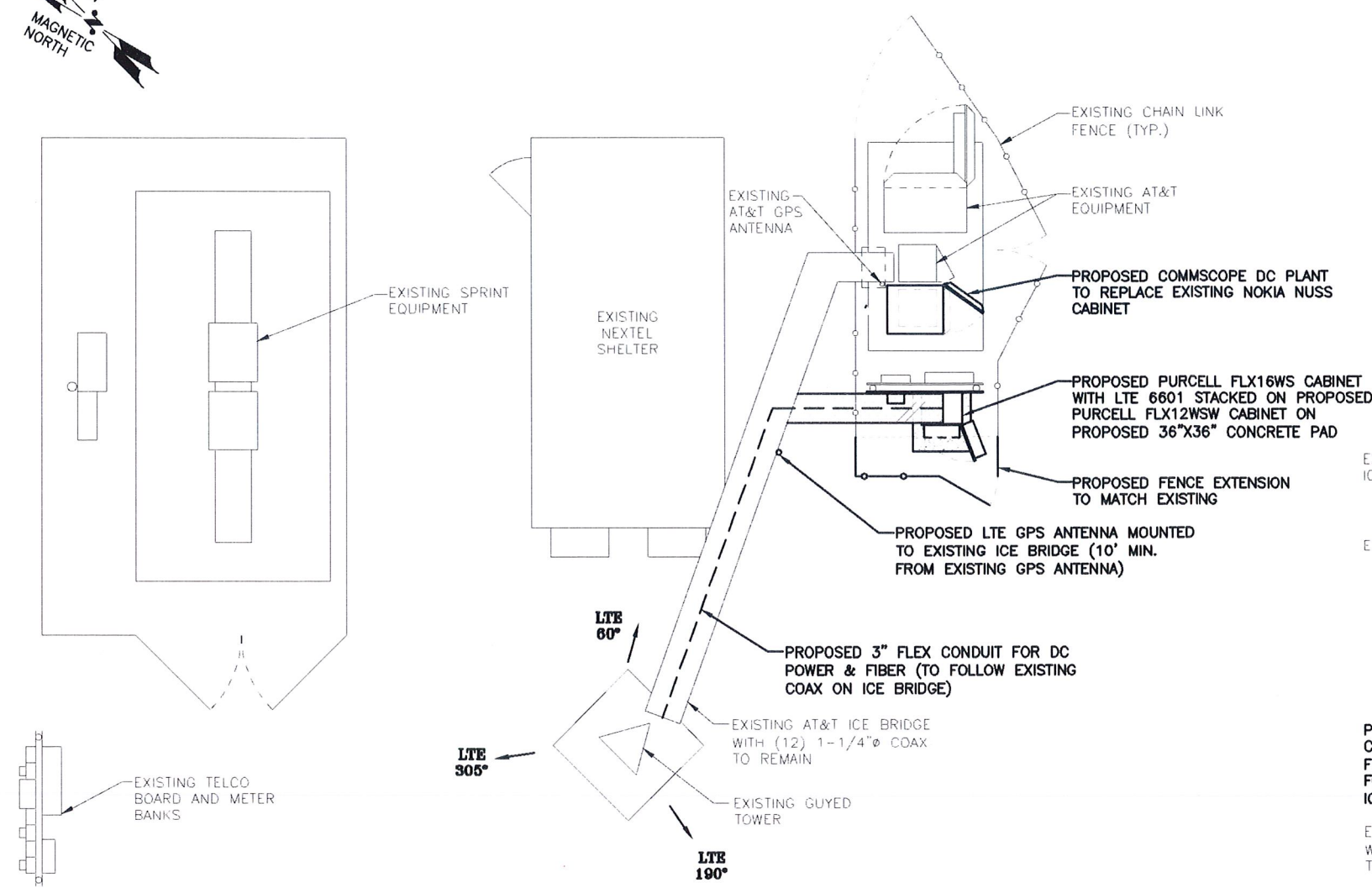
NO.	DATE	REVISIONS	BY	CHK	APP'D
1	10/30/12	ISSUED FOR PERMITTING	DC	DC	DPH
0	08/08/12	ISSUED FOR REVIEW	RM	DC	DPH
SCALE: AS SHOWN		DESIGNED BY: DC	DRAWN BY: RM		

AT&T		
GENERAL NOTES (LTE)		
JOB NUMBER	DRAWING NUMBER	REV
5701.01	GN-1	1



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

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



COMPOUND PLAN
SCALE: 1/4"=1'-0"



EQUIPMENT PLAN
SCALE: 1/2"= 1'-0"



Hudson Design Group
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090
N. ANDOVER, MA 01845
TEL: (978) 557-5552
FAX: (978) 336-5586

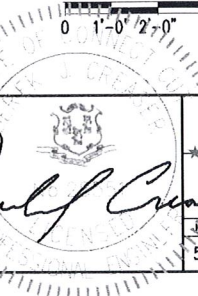
NEXLINK
GLOBAL SERVICES
a UniTek GLOBAL SERVICES company
800 MARSHALL PHELPS ROAD UNIT#: 2A
WINDSOR, CT 06095

SITE NUMBER: CT5701
SITE NAME: ASHFORD SOUTH CENTRAL
20 SELES ROAD
ASHFORD, CT 06278
WINDHAM COUNTY

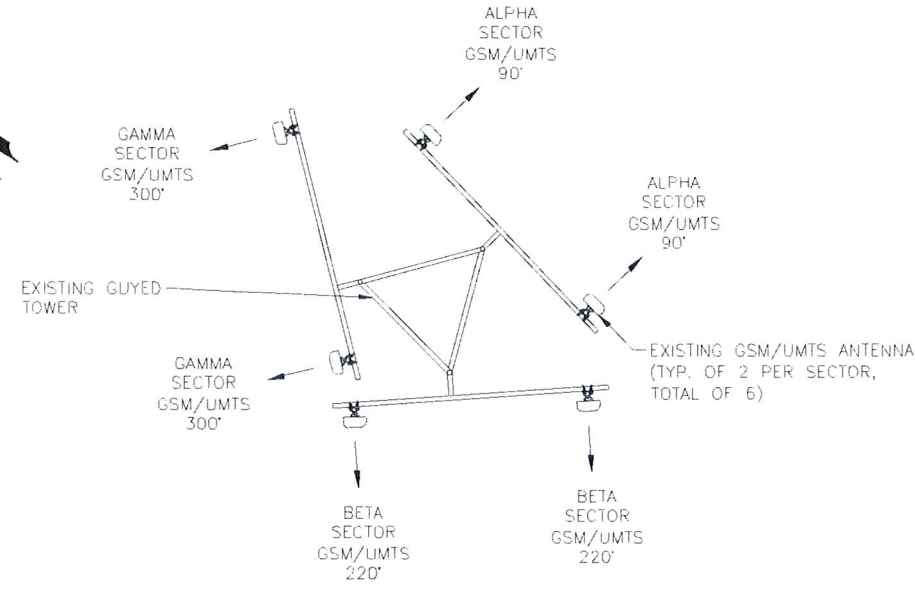
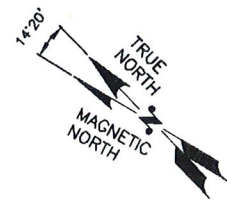
at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	10/30/12	ISSUED FOR PERMITTING	DC	DC	DPH
0	08/08/12	ISSUED FOR REVIEW	RM	DC	DPH

SCALE: AS SHOWN DESIGNED BY: DC DRAWN BY: RM



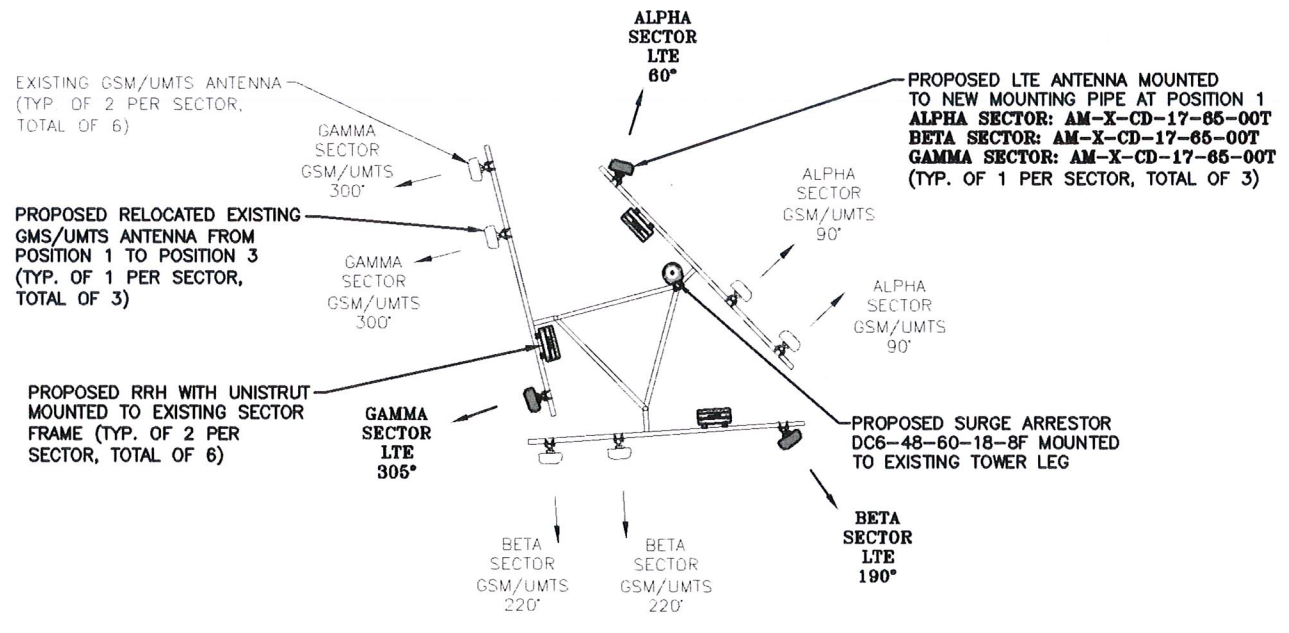
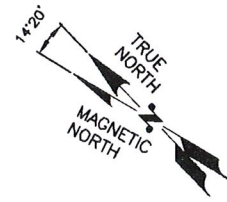
AT&T		
COMPOUND AND EQUIPMENT PLAN (LTE)		
JOB NUMBER	DRAWING NUMBER	REV
5701.01	A-1	1



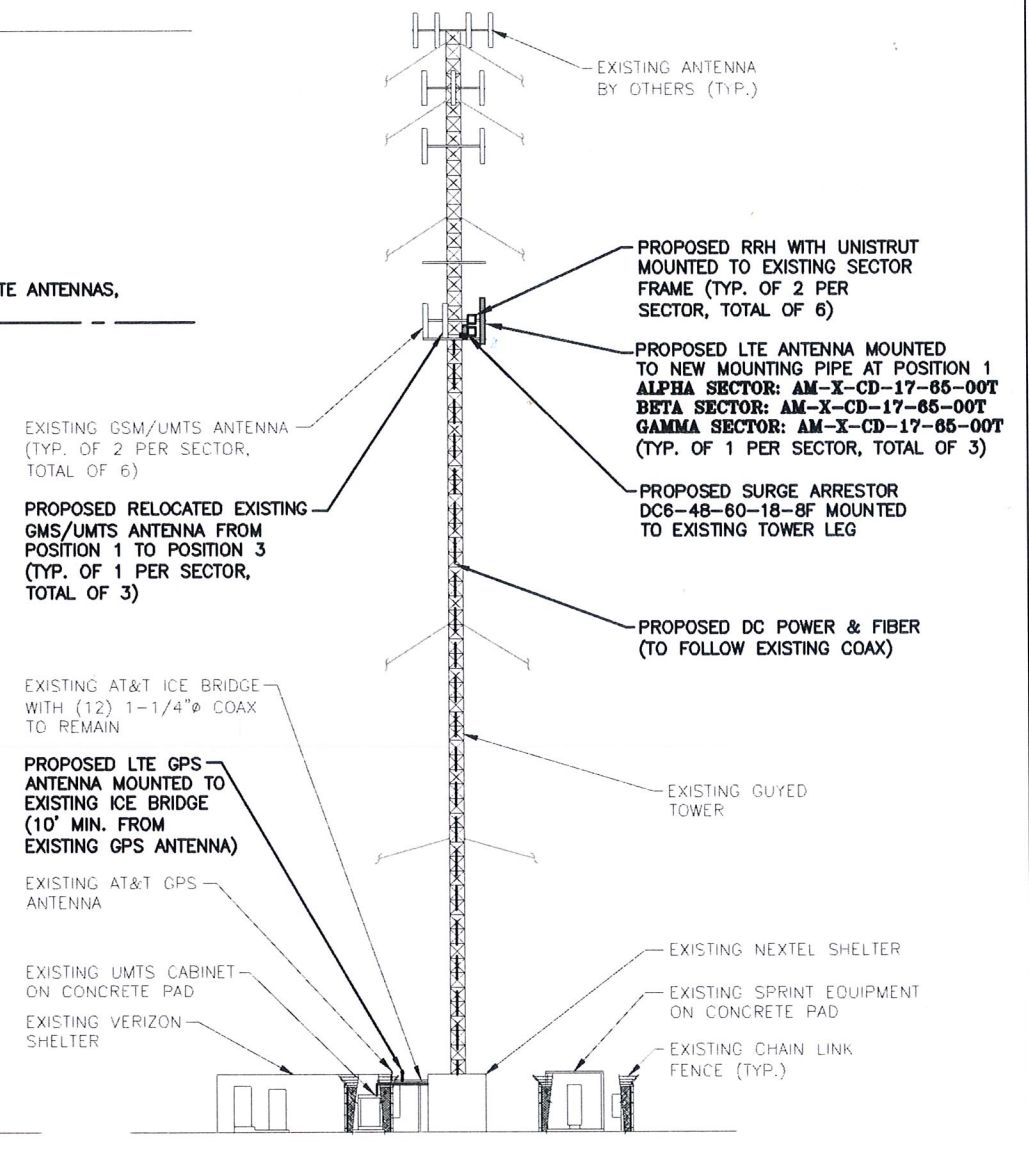
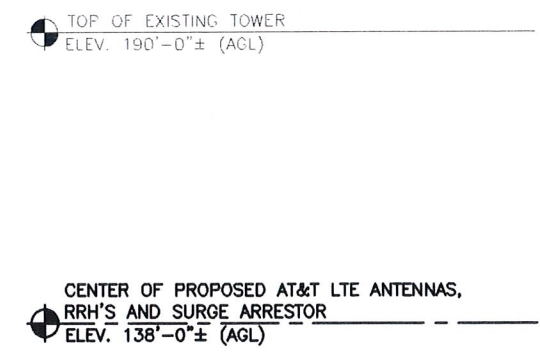
EXISTING GSM/UMTS ANTENNA PLAN
SCALE: N.T.S.

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

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



PROPOSED LTE ANTENNA PLAN
SCALE: N.T.S.



NORTHEAST ELEVATION
SCALE: 1/16"=1'-0"



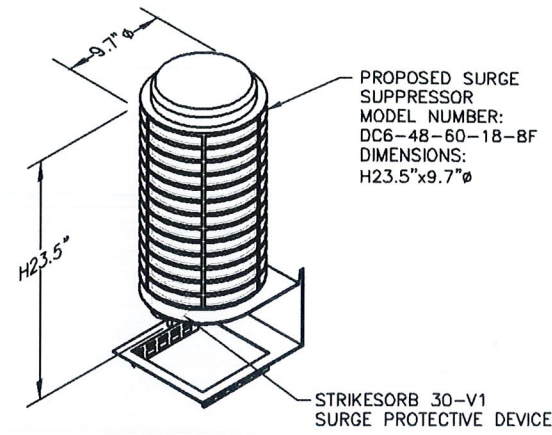
Hudson
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090
N. ANDOVER, MA 01845
TEL: (978) 557-5552
FAX: (978) 336-5586

NEXLINK
GLOBAL SERVICES
a Unitek GLOBAL SERVICES company
800 MARSHALL PHELPS ROAD UNIT#: 2A
WINDSOR, CT 06095

SITE NUMBER: CT5701
SITE NAME: ASHFORD SOUTH CENTRAL
20 SELES ROAD
ASHFORD, CT 06278
WINDHAM COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

				AT&T		
				ELEVATION & ANTENNA PLAN (LTE)		
NO.	DATE	REVISIONS	BY	CHK	APP'D	REV
1	10/30/12	ISSUED FOR PERMITTING	CD	DC	DPH	
0	08/08/12	ISSUED FOR REVIEW	RM	DC	DPH	
SCALE: AS SHOWN				DESIGNED BY: DC	DRAWN BY: RM	
				JOB NUMBER: 5701.01		DRAWING NUMBER: A-2
						1

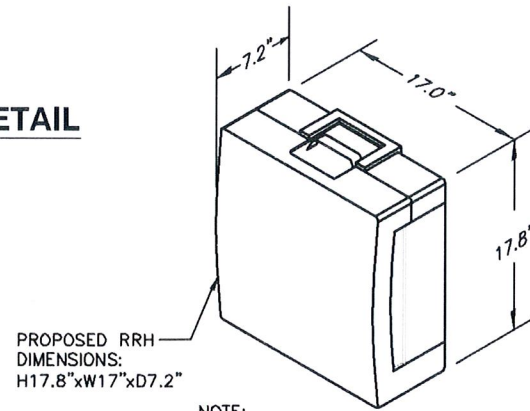


PROPOSED SURGE SUPPRESSOR
MODEL NUMBER:
DC6-48-60-18-BF
DIMENSIONS:
H23.5"x9.7"φ

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL

SCALE: N.T.S.

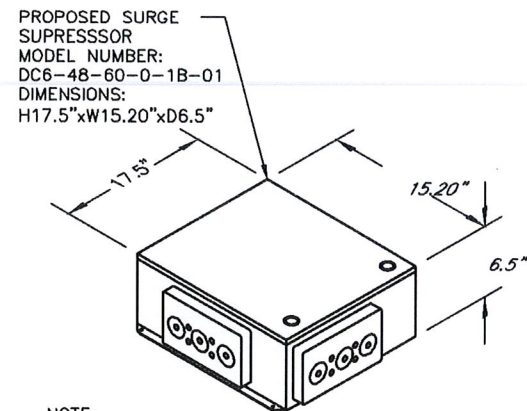


PROPOSED RRH
DIMENSIONS:
H17.8"xW17"xD7.2"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

RRH DETAIL

SCALE: N.T.S.



PROPOSED SURGE SUPPRESSOR
MODEL NUMBER:
DC6-48-60-0-1B-01
DIMENSIONS:
H17.5"xW15.20"xD6.5"

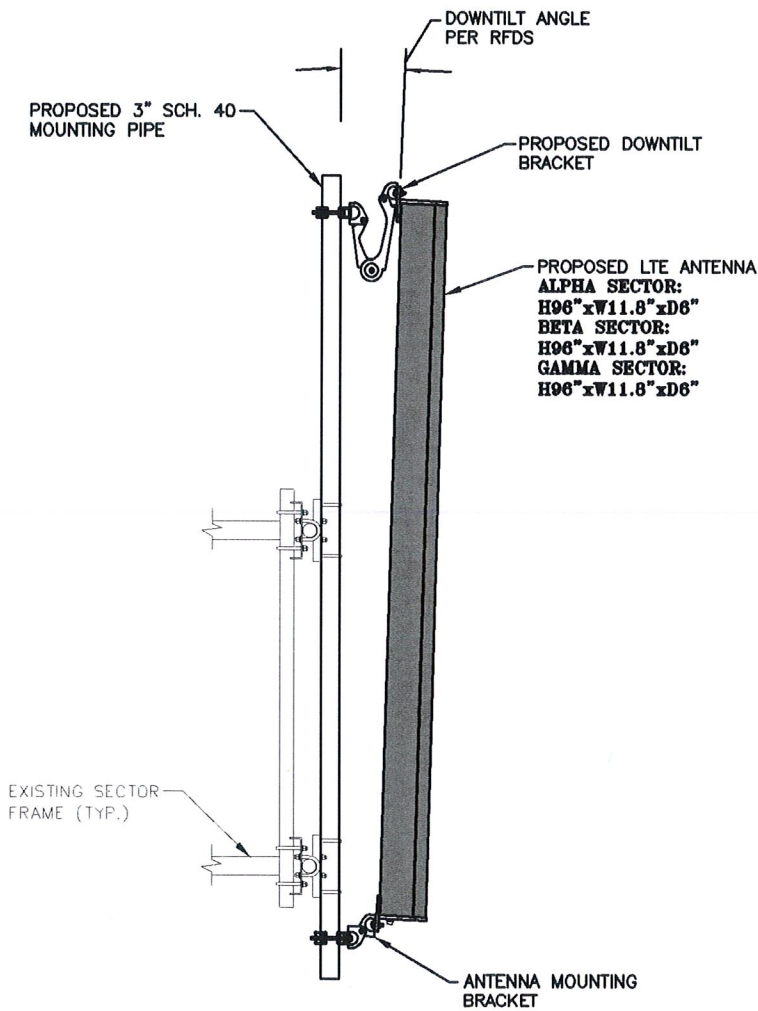
NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

SURGE SUPPRESSOR DETAIL

SCALE: N.T.S.

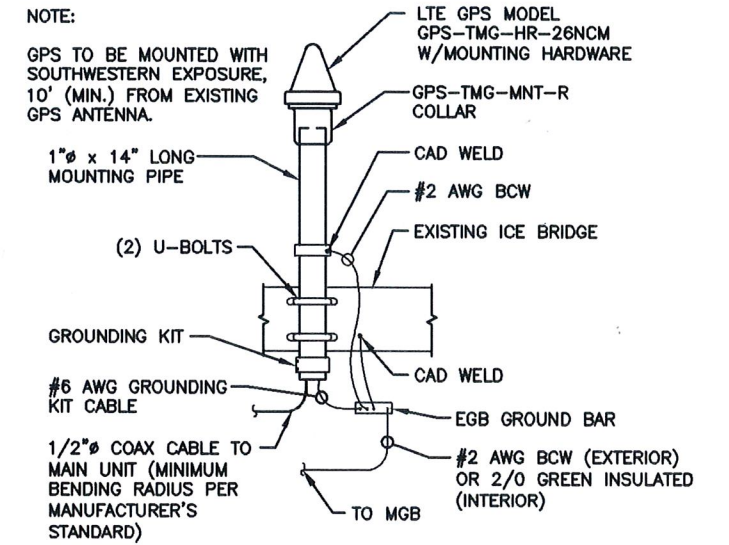
NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



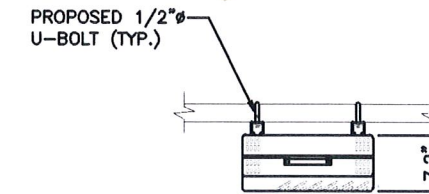
PROPOSED LTE ANTENNA DETAIL

SCALE: N.T.S.

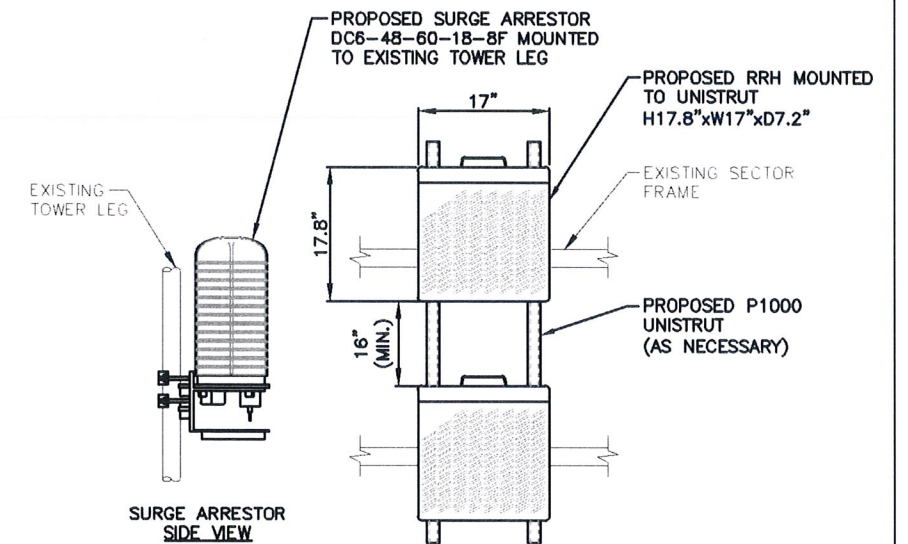


GPS MOUNTING DETAIL

SCALE: N.T.S.



PROPOSED 1/2"φ U-BOLT (TYP.)

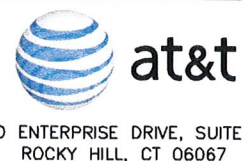


PROPOSED RRH & SURGE ARRESTOR MOUNTING DETAIL

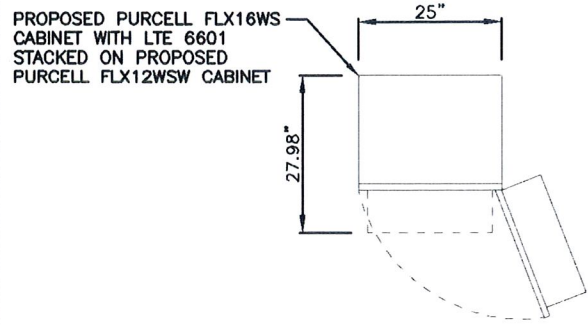
SCALE: N.T.S.



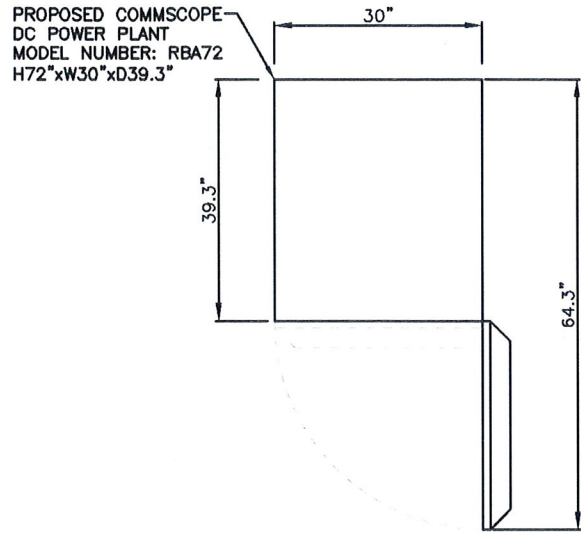
SITE NUMBER: CT5701
SITE NAME: ASHFORD SOUTH CENTRAL
20 SELES ROAD
ASHFORD, CT 06278
WINDHAM COUNTY



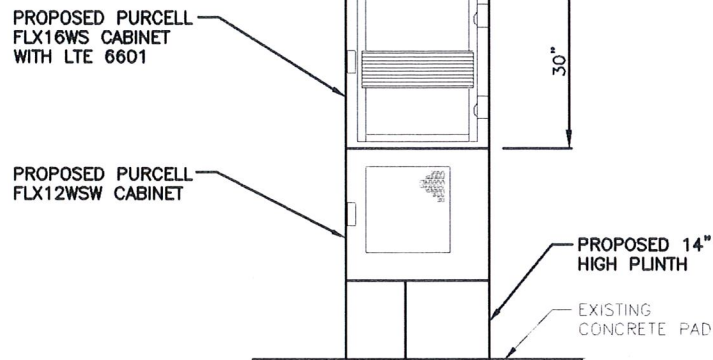
				AT&T	
				DETAILS (LTE)	
NO.	DATE	REVISIONS	BY	CHK	APP'D
1	10/30/12	ISSUED FOR PERMITTING	CO	DC	DPH
0	08/08/12	ISSUED FOR REVIEW	RM	DC	DPH
SCALE: AS SHOWN			DESIGNED BY: DC	DRAWN BY: RM	
JOB NUMBER			DRAWING NUMBER		REV
5701.01			A-3		1



NOTE:
 1. MOUNT PROPOSED EQUIPMENT PER MANUFACTURER'S SPECIFICATIONS
 2. CONTRACTOR TO PROVIDE MOUNTING HARDWARE.



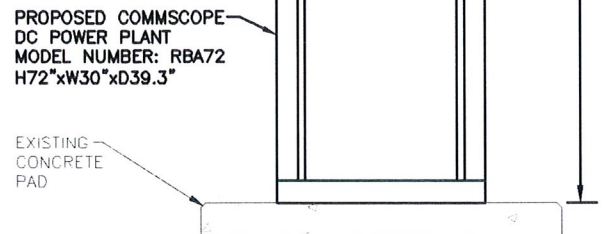
NOTE:
 MOUNT PROPOSED EQUIPMENT PER MANUFACTURER'S SPECIFICATIONS



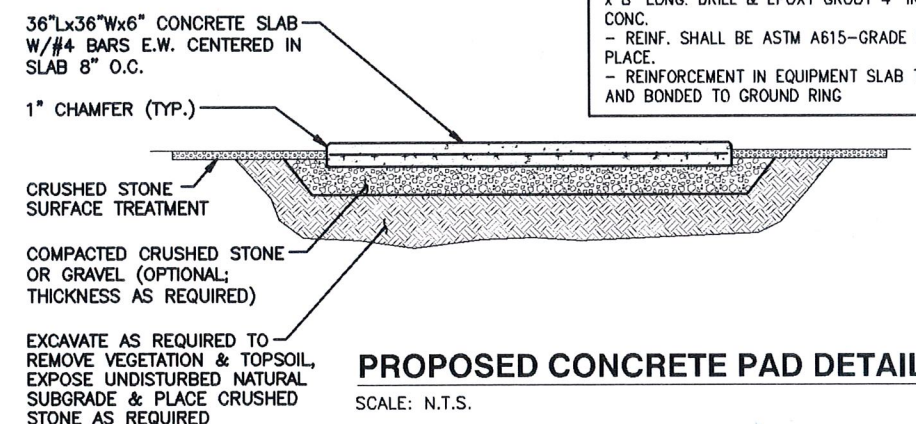
PROPOSED EQUIPMENT MOUNTING DETAIL
 SCALE: N.T.S.

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

NOTE:
 AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



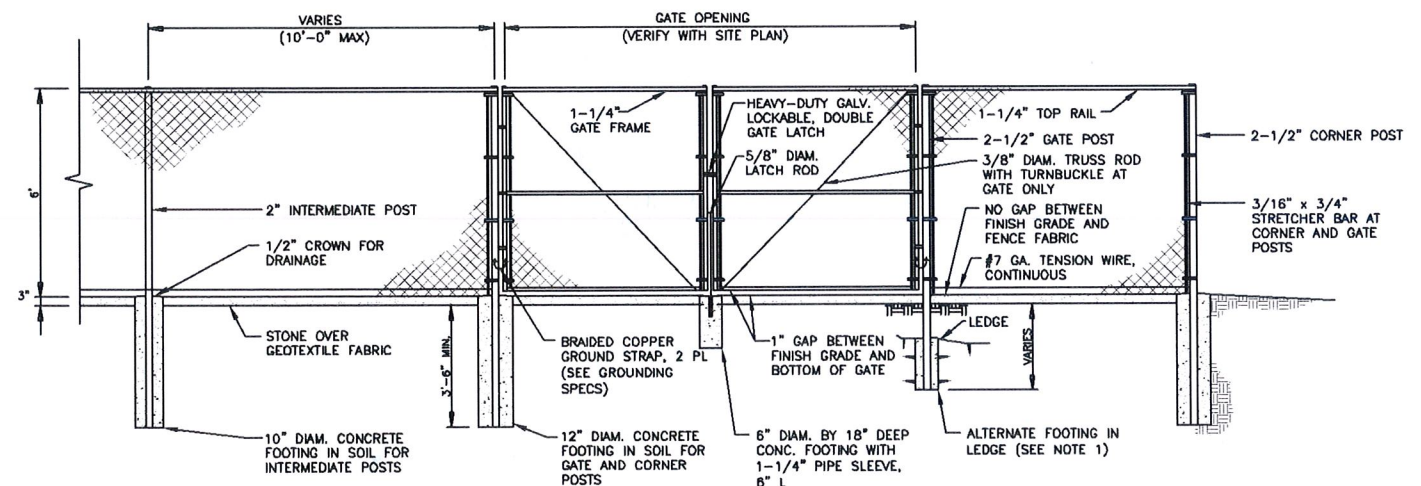
PROPOSED DC POWER PLANT DETAIL
 SCALE: N.T.S.



NOTE:
 - ATTACH EQUIPMENT TO CONCRETE PER MANUFACTURER'S SPECIFICATIONS.

NEW CONC. PAD NOTES:
 - REINF. W/ #4's @ 8" O.C. EA. WAY (MID-DEPTH).
 - DOWEL NEW CONC. TO EXIST. W/ #4's @ 8" O.C. x 8" LONG. DRILL & EPOXY GROUT 4" INTO EXIST. CONC.
 - REINF. SHALL BE ASTM A615-GRADE 60. SECURE IN PLACE.
 - REINFORCEMENT IN EQUIPMENT SLAB TO BE WELDED AND BONDED TO GROUND RING

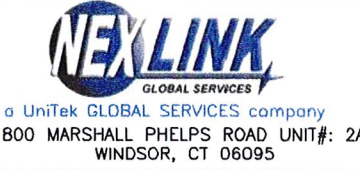
PROPOSED CONCRETE PAD DETAIL
 SCALE: N.T.S.



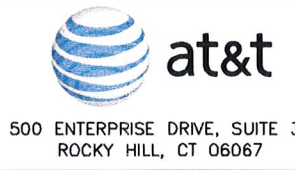
FENCE NOTES

- ALTERNATE FOOTINGS FOR ALL FENCE POSTS IN LEDGE: IF LEDGE IS ENCOUNTERED AT GRADE, OR AT A DEPTH SHALLOWER THAN 3'-6", CORE DRILL AN 8" DIA HOLE 18" INTO THE LEDGE. CENTER POST IN THE HOLE AND FILL WITH CONCRETE OR GROUT. IF LEDGE IS BELOW FINISH GRADE, COAT BACKFILLED SECTION OF POST WITH COAL TAR, AND BACKFILL WITH WELL-DRAINING GRAVEL.
- ATTACH EACH GATE WITH 1-1/2 PAIR OF NON-LIFT-OFF TYPE, MALLEABLE IRON OR FORGING, PIN-TYPE HINGES. ASSEMBLIES SHALL ALLOW FOR 180' OF GATE TRAVEL.

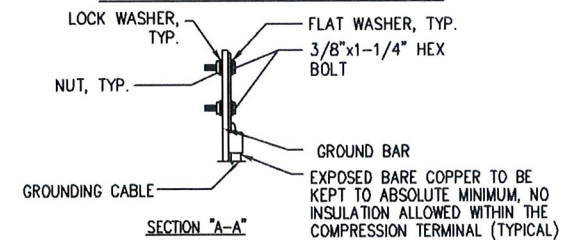
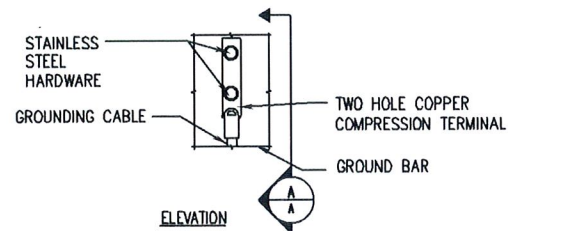
CHAIN LINK FENCE DETAIL
 SCALE: N.T.S.



SITE NUMBER: CT5701
SITE NAME: ASHFORD SOUTH CENTRAL
 20 SELES ROAD
 ASHFORD, CT 06278
 WINDHAM COUNTY



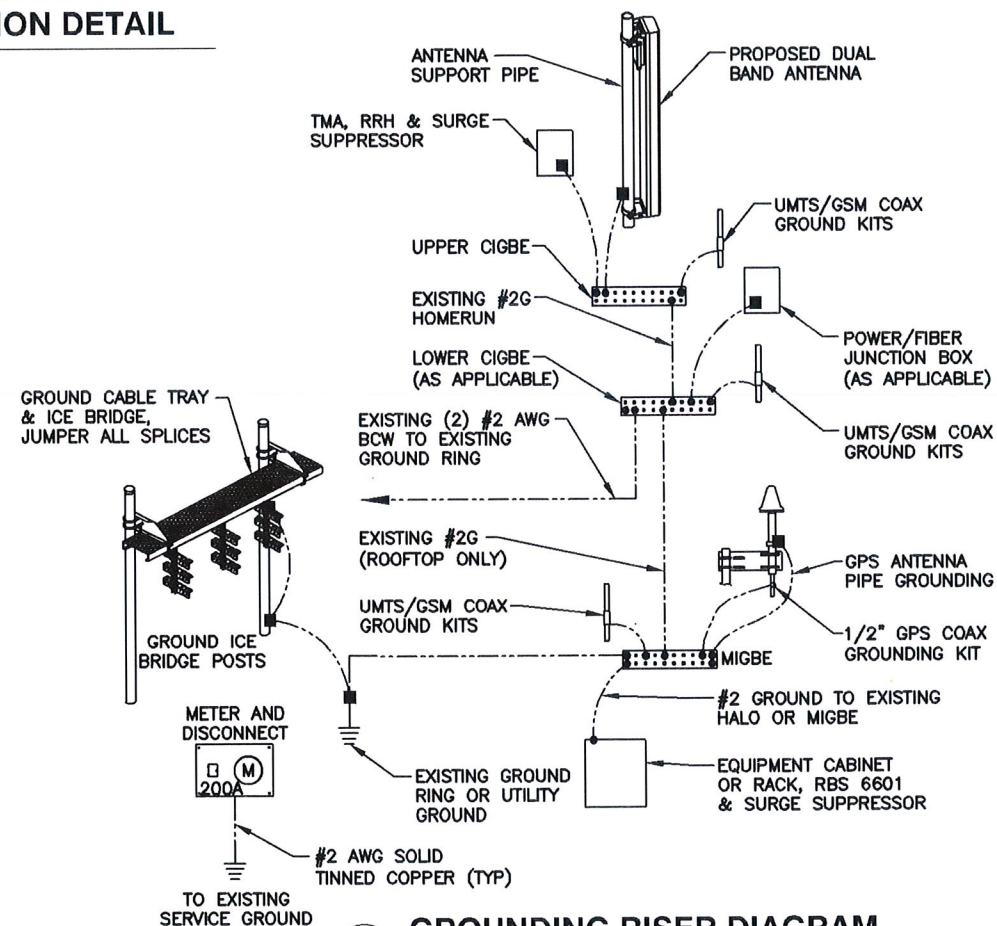
				AT&T	
				DETAILS (LTE)	
NO.	DATE	REVISIONS	BY	CHK	APP'D
1	10/30/12	ISSUED FOR PERMITTING	CC	DC	DPH
0	08/08/12	ISSUED FOR REVIEW	RM	DC	DPH
SCALE: AS SHOWN			DESIGNED BY: DC	DRAWN BY: RM	
JOB NUMBER: 5701.01			DRAWING NUMBER: A-4		REV: 1



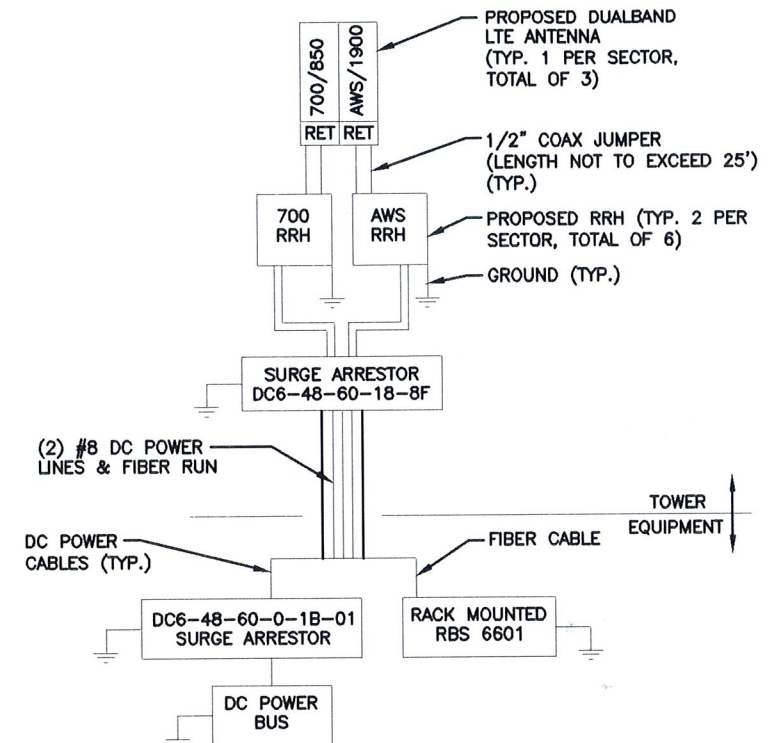
NOTE:
 1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
 3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.

TYPICAL GROUND BAR CONNECTION DETAIL

1
—
N.T.S.



GROUNDING RISER DIAGRAM
3
—
N.T.S.



NOTE:
 CONTRACTOR TO CONFIRM ALL PARTS & INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS.

LTE PLUMBING DIAGRAM

2
—
N.T.S.

WIRELESS SOLUTIONS INC.				
NO.	REQ.	PART NO.	DESCRIPTION	
1	1	HLGB-0420-IS	SOLID GND. BAR (20"x4"x1/4")	
2	2		WALL MTG. BRKT.	
3	2		INSULATORS	
4	4		5/8"-11x1" H.H.C.S.	
5	4		5/8 LOCKWASHER	

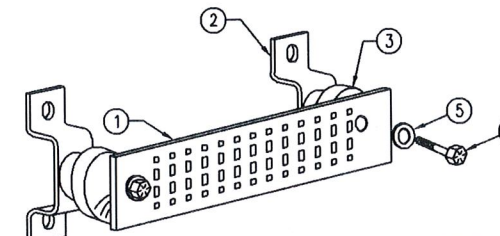
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

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

SECTION "A" - SURGE ABSORBERS

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



GROUND BAR DETAIL

4
—
N.T.S.

Hudson
 1600 OSGOOD STREET
 BUILDING 20 NORTH, SUITE 3090
 N. ANDOVER, MA 01845
 TEL: (978) 557-5552
 FAX: (978) 336-5586

NEXLINK
 GLOBAL SERVICES
 a UniTek GLOBAL SERVICES company
 800 MARSHALL PHELPS ROAD UNIT#: 2A
 WINDSOR, CT 06095

SITE NUMBER: CT5701
SITE NAME: ASHFORD SOUTH CENTRAL
 20 SELES ROAD
 ASHFORD, CT 06278
 WINDHAM COUNTY

at&t
 500 ENTERPRISE DRIVE, SUITE 3A
 ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK/APP'D
1	10/30/12	ISSUED FOR PERMITTING	CO	DC DPH
0	08/08/12	ISSUED FOR REVIEW	RM	DC DPH

SCALE: AS SHOWN DESIGNED BY: DC DRAWN BY: RM

AT&T
 PLUMBING DIAGRAM & GROUNDING DETAILS
 (LTE)
 JOB NUMBER: 5701.01 DRAWING NUMBER: C-1 REV: 1